

MADRAS RECORD OFFICE.

Government of Madras.

Public DEPARTMENT.

G.O. No.	790	Page	113
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Not to be folded or roughly handled

No. 790.

FROM

THE HONORABLE R. S. ELLIS, C. B.,
Chief Secretary to the Government of Fort Saint George,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
 HOME DEPARTMENT.

SIR,

I am desired by the Governor in Council to submit, for the information of His Excellency the Governor General in Council, the enclosed Minutes by the Members of this Government, on the subject of the formation of an establishment of Sanitary Officers in the Districts of this Presidency, the appointment of a Consulting Engineer for Sanitary Works, and for the consolidation and development of the Provincial Dispensaries.

2. I am to observe that, if the general principles of the proposals contained in the Minute of His Excellency the Governor meet with the approval of the Government of India, a detailed scheme, exhibiting the exact number of Officers required and the expenditure involved, will be prepared by this Government and submitted for the consideration and sanction of His Excellency the Governor General in Council.

I have the honor to be,

Sir,

Your most obedient Servant,

FORT SAINT GEORGE,

2nd July 1868.

Chief Secretary.

MINUTE by the Right Honorable the PRESIDENT, dated 26th April 1868.

• It will probably not be thought extraordinary if I have hesitated in laying before the Members of Government my present suggestions for the institution of Sanitary Agencies in this Presidency. The last attempt of the kind failed before the decision of the Government of India only two years ago. We had no reason to believe that the sentiments of the Viceroy and his advisers had materially altered in the interval. The creation of offices for important duties without funds at their disposal is an abortive policy. The finances of India had not been in such a state as to justify us in expecting much help from Imperial sources, and local taxation had been carried to a limit which, in the opinion of most, it would not for the present be wise to transgress. The evils which it would be the task of a sanitary establishment to correct were notorious. They were denounced in striking terms by the Royal Commission on the sanitary state of the Army in India, and they had been examined in detail by the Sanitary Commissioners in their successive reports upon the state of the capital, the cantonments, and the provincial towns. We were fully informed of the neglects and abuses which we have to contend against. Without money we could do nothing, and there seemed to be little hope of getting money. I may add that a practical and, as I think, equitable proposal for the improvement of Madras, by placing it, with reference to State assist-

ance for the purposes of conservancy, on the same footing as the Provincial Municipalities had been negatived; while the License Tax, to which we looked for many useful local objects, had been again embodied in the general Budget of India.

2. Notwithstanding these discouragements, it has been represented to me that the time has now come when it may be permitted to revive an unsuccessful issue and to roll the returning stone up hill again. A department for sanitary matters has been created in the Indian Council, and the deliberations of that body may justify the Government of India in modifying their previous resolution. On the other hand, the Supreme Government has itself manifested a desire to control the sanitary dangers connected with fairs and pilgrimages, and such control can hardly be exerted efficiently without a special executive agency. At any rate, the voice of this Government may be raised without reproach, even if it is raised without success. The worst that can happen to us is to see our counsels rejected.

3. In contemplating the organization of a sanitary establishment for this Presidency, the Government ought, in my humble judgment, to keep in view the following objects:—

- (1). The nomination of a Consulting Engineer for Sanitary Works.
- (2). The appointment of a Sanitary Inspector in each District.
- (3). The consolidation and development of the Provincial Dispensaries.

4. The introduction of a better system for maintaining public health would necessitate many works connected with water supply and drainage. For these undertakings the co-operation of a competent Engineer would be indispensable, and he would have to be brought from England for the purpose. The present Staff of Engineer Officers are already fully occupied, and their energies will be taxed to the uttermost by the numerous irrigation schemes and other public works which are under consideration. Nor must it be forgotten that the Engineer Officers at our disposal have not, for the most part, made a special study of this branch of their science. We need an Officer conversant with the last developments of Engineering in connexion with sanitation. I propose that he should have his head-quarters at Madras; that he should receive his salary from Government; that his services should be gratuitously placed at the disposal of the Municipalities and Districts where necessary; and that he should communicate with Government, like the Consulting Engineer for Railways, through the Department for Public Works, maintaining, at the same time, a correspondence with the Sanitary Commissioner. It may be hoped that an Engineer, with the qualifications which I have described, could be obtained for about Rupees 800 per mensem, with the prospect of increase and pension.

5. It seems impossible to associate the duties of local sanitary inquiry and management with any existing agency. The Deputy Inspectors General of Hospitals, the Deputy Inspectors General of Police, the Superintendents of the District and Central Jails, the Medical Officers in charge of Civil Stations, the Subordinate Revenue Officers are all so fully occupied with their respective functions, or so fettered in their movements, that they could not possibly undertake a charge which would involve no small amount of investigation and correspondence, and frequent excursions from head-quarters. If the duties of sanitary inspection were laid upon any class of existing functionaries, either those duties would be imperfectly performed, or the Public Service would suffer in some other respect. It seems to me impossible to avoid the conclusion that special agents must be selected for this special duty, and I feel equally convinced that those agents should, if possible, be Natives. The proceedings of the Sanitary Inspector

will bring him into close contact with the Native population in their domestic, social, and religious relations. We could not afford to entertain Englishmen with the knowledge, prudence, temper, and discrimination which would be desirable, and the multiplication of English residents and officials of a subordinate character is by no means expedient for many reasons. It may be urged that the Natives would have to be taught. So would Englishmen. We have no competent Sanitary Officers of any nationality formed to hand. But Natives would learn as quickly; they would be more tractable; they would have more local information to begin with; they would be more acceptable to their own countrymen; they would be more settled and trustworthy in some respects, though not in all. I consider too that it is most important to associate the Natives as much as possible with all the social innovations which the Government is engaged in prosecuting; for thus we shall raise their intelligence and gratify their self-esteem, and create allies for our ideas instead of adversaries, and approach the masses through less suspected channels.

The creation of a new Administrative Department centralized at Madras would, I think, be an error. It would be conducted without sufficient local intelligence, and it would tend to diminish the authority of the District Magistrate, in whom the people ought to respect the impersonation of superior power. The Collector and Magistrate ought never, in my opinion, to be severed from any business which concerns the welfare of the people under his charge. The country is perhaps already too much governed from a distance and by regulation, and too little by men. The District Sanitary Inspector should be directed in the performance of his duties by the District Magistrate, and to the latter his reports should be addressed. The Magistrate would forward them to the Sanitary Commissioner at Madras, by whom they would be submitted to Government through the Chief Secretary. There should be a Sanitary Inspector in each district. His duties would be to survey the sanitary condition of the towns and the country; to report upon the prevalence of maladies among men and cattle; to compile the statistics of disease; to superintend the march and lodging of traders and pilgrims; to receive and administer the dues which may be levied on them; to superintend the execution of minor sanitary works not within municipal limits, and not of sufficient importance to be entrusted to the Department of Public Works; to prepare the Budget of sanitary expenditure and submit it to the District Magistrate, by whom it would be transmitted to Government.

The Sanitary Inspector of the District would have a right of inspection and inquiry within the bounds of the Municipalities, and would report on their sanitary condition; but he would not have any executive or financial charge in Municipalities which possess their own Officers for those purposes. His position with regard to military cantonments would be similar. The conservancy of cantonments would remain subject to the Military and Municipal Authorities as at present. The sanitary expenditure in districts not within municipal limits would be defrayed from the Imperial Revenues, until the Supreme Government, by relinquishing the license duty, shall provide us with a competent source of local taxation, or until some other means can be devised. The salary of the District Sanitary Inspector might be fixed in the first instance at Rupees 200 per mensem, with a provision for increase. It might not be possible to provide all the districts at once with competent Inspectors. In that case, I would deal with those first in which the public health is exposed to the greatest hazards.

6. The execution of sanitary works and the sustained control of the District Sanitary Inspector would be measures of a preventive character, and would check the rise and dissemination of disease. But the Government ought not to stop short here: they ought to attempt something more directly of a remedial nature; they ought to make a serious effort to bring the benefits of European medical science within the reach of the whole Native community. With this object in view, I do not see any better method, as a commencement, than to give greater stability and scope to the Provincial Dispensaries. I would secure them in the possession of competent resources, and make them primary schools of Medicine and Surgery.*

The Dispensaries are by common consent on an unsatisfactory financial footing. Some of these establishments are supported from the interest of sums collected for their endowment without current subscriptions; some by endowment with current subscriptions of a greater or less amount; some by current subscriptions alone. The Government in all cases pays the salaries of the Medical Officers and supplies the medicines. Where the Dispensary is supported from the interest of invested funds wholly or chiefly, its utility and operations are regulated by its means, and not by public necessity: something stationary and contracted seems to creep into the management. Where the Dispensary is supported wholly or chiefly by current subscriptions, it ought to have more vitality and a more expansive character; but such revenues are in this country very insecure, and they are procured by a system of solicitation and influence which is liable to objection. Where the Medical Officers in charge have been men of superior intelligence and zeal, and where the District Magistrates have shown a generous interest in the welfare of the institution, the condition of the Dispensary is sometimes extremely commendable, and reflects credit on the Government and its Officers. But this result is not attained without pecuniary sacrifices on the part of the Medical Officer, which it is unjust to impose on him, while the Magistrate and the English community bear perhaps a larger share of the outlay than is proportionate or equitable if the character and objects of the Dispensary be regarded. Where the subscriptions of the Natives are considerable and regularly paid, it may be apprehended that in many cases the Magistrate and the Medical Officer have, from a sense of duty, been driven to practise a system of persuasion and authority which are repugnant to their feelings, and from which they ought to be exonerated. As far as my personal observation has gone, and as far as I can judge from official reports, I consider that the supposed voluntary system of support has not maintained the Dispensaries, as a rule, in an efficient condition, even on their present limited footing, and that the same system would prove altogether incommensurate if the functions and the expenditure of these establishments were extended. In the opinion of the Inspector General, which I am at liberty to cite, "the voluntary system is a total failure." Under these circumstances, I consider that the Government should affirm the following principles:—

(1). That the Provincial Dispensaries should be thrown for support upon local rates, in so far as they are not at present supported by Government.

(2). That when the Dispensary is within the limits of a Municipality, half the expenditure should be borne by the municipal rates and half by the district rates.

* NOTE.—In the Government Dispensary at Madura, an attempt has been made to give a general medical education to Native youths. The Free Church Medical Mission in Black Town has several lads under instruction, who go out as Native Physicians into the Districts. The Reverend Mr. Chester, American Medical Missionary at Dindigul, affords a course of instruction at his Dispensary. Attempts of the same nature may, perhaps, be made in other Dispensaries which are unknown to me.

(3). That when the Dispensary is situated not in a Municipality but in a district, the whole expenditure should be borne by the district rates.

(4). That until district funds can be provided by local taxation, the sources of which are not at present open, the amount chargeable to the district shall be paid from the Imperial Revenue.

The Dispensaries which at present possess endowments would, of course, retain them.

The financial position of the Dispensaries having once been settled on a secure basis, the Government could proceed with confidence to enlarge their field of action. It has often been remarked that if European medical treatment is to be rendered extensively acceptable to the Natives of this country, it must be through Native Agencies already accredited and familiar, and that no better instrumentality offers itself than the hereditary popular physician. The Native Doctor or his son* should be attracted to a European School, in which he might be disabused of his gross superstitions, and instructed in the minor operations of Surgery, as well as in the use of the common medicines for prevailing maladies. Instruction might also be afforded to the Native midwife.†

The introduction of a system of elementary teaching at the Dispensaries would involve an augmentation of expenditure under three heads at least:—

(1). The existing buildings would have to be expanded by the addition of lecture rooms and operating rooms.

(2). Some additional allowance would have to be made to the Medical Officers in charge in consideration of their increased duties as lecturers, and additional Medical Subordinates would have to be appointed.

(3). It would be necessary, in the first instance, to grant some small stipend or allowance to the pupils, in order to attract and retain them at the Medical School.

I invite the Government to affirm, in general terms, the expediency of giving to the Provincial Dispensaries the character of elementary Medical Schools, and I propose the nomination of a Commission of Medical Officers to prepare a practical scheme under which this design may hereafter be carried into effect.

7. It is, of course, impossible at present to estimate with accuracy the increase of charge which would be involved in a scheme of sanitary establishments embracing the appointment of a Consulting Engineer, the nomination of Sanitary Inspectors in each District, and the reorganization of the Provincial Dispensaries. The expenditure for the Engineer and the Inspectors on the scale which I have suggested would amount to about Rupees 60,000 per annum. The cost of the Dispensaries to Government, whether temporary or permanent, under the proposed new system, can only be estimated when the Medical Committee referred to above shall have matured their project.

8. The scheme for a Public Health Establishment, which I have here submitted to the judgment of my colleagues, differs materially from that project which, at a former period, obtained the sanction of this Government, and was rejected by the Government of India. The establishment which I advocate is simpler, and would, in my opinion, harmonize better with existing institutions. It remains for

* NOTE.—This subject was brought under the notice of Government by the Inspector General of Hospitals, Indian Department, in an interesting paper, under date of April 21st, 1867.

† NOTE.—Instruction in Midwifery is imparted in the Dispensaries of Cuddalore and Cuddapah, at the Lying-in-Hospital at Madras, and perhaps elsewhere.

Government to determine whether they consider themselves pledged to their former recommendations, and, if not, whether they prefer the alternative now suggested for their consideration.

(Signed) NAPIER.

MINUTE by His Excellency the COMMANDER-IN-CHIEF, dated 1st May 1868.

There can be no doubt that, however beneficial have been the improvements in the sanitary condition of the troops in Madras since 1860, still gradually increasing, much remains to be done in this difficult and important matter. It requires to be dealt with firmly and with a liberal expenditure. With a rigid attention to the latter, and to some extent taking advantage of the appliances at hand afforded by medical and scientific men, so far as these are concerned, in military cantonments, I believe, setting aside the more important consideration of humanity, that economy in the end will be obtained.

2. In districts and towns inhabited altogether by Natives, it would be necessary wholly to avail ourselves of Native agency; but in those towns where there are European Magistrates, and in military cantonments, I would associate Natives with selected European Officers. The duty of the latter is manifestly to assist Government without extra charge. Such is the case in all camps and garrisons at Home and abroad, where the Military Committees, in addition to the conservancy within their own limits, visit localities in the neighbourhood of the above, and place themselves in communication with the Civil Authorities and Local Boards of Health, and rules are laid down for the details of this duty.

3. I agree with the President generally in his Minute on the desirability of associating the Natives with Europeans in all undertakings in which they have a mutual interest. I have been much struck with the want of sympathy shown by the wealthy Natives in this Presidency—with a few honorable and generous exceptions—in favor of their countrymen. I am afraid the Dispensaries in general are very feebly supported by the influential and more substantial class of Natives, who leave these Institutions principally to be supported by the Government, supplemented by subscriptions from the European residents.

4. I fully agree with the President in his proposal regarding the support of Provincial Dispensaries by local rates. If Natives cannot be induced, except by undue solicitation—so repugnant to the feelings of those who solicit—to support what, on sanitary and humane grounds, is absolutely necessary, the Government can only adopt means of obtaining desirable results by a moderate mode of taxation, and holding out inducements to Natives to study the medical profession.

(Signed) W. A. McCLEVERTY.

MINUTE by the Honorable H. D. PHILLIPS, dated 8th May 1868.

I was a party to the unsuccessful application to the Supreme Government for a sanitary staff, to which His Lordship the President alludes. It seems to me that, since then, matters have a good deal changed for the better. It will not escape notice that, owing to the healthful influence of our municipal arrangements, and the general miscellaneous improvements on sanitation effected by them, there ought now to be fewer reasons than then existed for fastening on the State the cost of a Government Establishment of special Sanitary Officers. It is also to be noted that there is an unmistakeable tendency in the communications of the Government of India to transfer to municipal funds the expense of movements which this Government, rightly or wrongly, have regarded as imperial measures calling for some small

outlay of State Funds. This feeling on their part has gone the length of indicating an intention of charging against our Municipalities the outlay necessary, under the system to be enforced by the "Contagious Disease Act," for preserving the health of the European soldiery. With all this before us, I should be disposed to doubt whether the present is a fitting opportunity for again seeking approval for costly plans, which only three years ago found so little favor in their sight.

2. It is true that we have received from Calcutta certain narratives of measures adopted for preventing epidemics at celebrated places of pilgrimage, at fairs, and at religious festivals, but in all these we do not find that a permanent Sanitary Staff have been employed. All that has been done—as has been the case on our own side—has been done mainly by a cordial co-operation between the Magistracy and the Police working under their guidance and control, the actual cost of some special sanitary arrangements having been met by a special grant of Government money. It occurs to me that with aid of this kind at these periodical festivals, and the measures which the local Municipalities will yearly be more and more desirous of themselves adopting, we are doing a great deal towards the general sanitation of our principal towns. Still, if the Council should be of opinion that we shall not be incurring a second time the risk of mistaking the disposition in this respect of the Supreme Government, I will not object to join in a renewed application for paid Sanitary Officers; but I should prefer reviving the former proposal and plans, which, with much deference for His Lordship's propositions, appear to me better calculated to secure the end in view than the wider, more comprehensive, and by consequence more costly, measures sketched in His Lordship's Minute.

(Signed) H. D. PHILLIPS.

MINUTE by the Honorable A. J. ARBUTHNOT, dated 11th May 1868.

I have no objection to the scheme proposed by His Excellency the Governor being submitted to the Supreme Government for their orders. It may perhaps be advisable to ask them to sanction a part of the scheme as an experiment, to be extended if it succeeds. I would apply, in the first instance, for authority to appoint a Sanitary Engineer and four or five Sanitary Inspectors, the latter on salaries ranging from Rupees 200 to Rupees 300.

(Signed) A. J. ARBUTHNOT.

No. 620.

FROM

THE PRESIDENT OF THE SANITARY

COMMISSION FOR BENGAL,

To

THE SECY. TO THE GOVERNMENT OF INDIA,

HOME DEPARTMENT.

Dated Calcutta, 5th September, 1864.

SIR,

We have lately submitted to the Government of India, in the Military Department, propositions regarding the Sanitary Administration of Military Cantonments.* We now propose to lay before the Government our recommendations for the organization of a system of sanitary supervision in the towns and districts under the jurisdiction of the Civil Authorities.

* Proceedings of Sanitary Commission for Bengal, No. 170, dated 28th July 1864. forwarded with letter from President Sanitary Commission, to Secy. to Govt. of India, Military Dept., No. 604, dated 31st August 1864.

2. The following quotation from the Report of the Commissioners appointed to inquire into the Cholera Epidemic of 1861, will serve as an introduction to the present subject, and will show generally the purpose which we have in view :—

“ If we desire to render the sanitary condition of our European Soldiers really satisfactory, we must not, when we come to practical measures of improvement, ignore, as we have hitherto done, the existence of the masses of Native population in the midst of which our Soldiers must generally live. It is hopeless to expect that we can guard against the attacks of epidemic disease by any amount of care in our Cantonments, if every sanitary precaution is neglected in the Native cities and towns close by. For practical purposes we may consider that in this respect up to the present time nothing has been done at all. Here and there an active Magistrate carries into

Home 1868 Dept.

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From Government of

Fort St. George.

Dated 2nd July.

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Submitting, for information, Minutes by the Members of the Madras Government, on the subject of the institution of Sanitary Agencies in the Madras Presidency.

effect some not unimportant measure of sanitary improvement, but its benefits seldom continue for any length of time. It happens, as often as not, that his successor takes no interest in such matters, and allows every thing to revert to its original state. So it is in our Cantonments. Some Commanding Officers show themselves to be fully aware of the importance of measures for the prevention of disease; others, perhaps in the same Station and at the same time, look with indifference upon everything of the kind. Notwithstanding the extraordinary progress which Sanitary Science has lately made in England, public education in this respect remains generally at a very low ebb. We have passed the time in which people venture to deny the importance of these questions, but there is not yet a general recognition of their urgent practical necessity. The isolated and uncombined efforts of individuals can do little. Until the importance of all questions which concern the Public Health be distinctly acknowledged by the Government, and measures be taken for establishing a properly organised system of Sanitary Administration upon uniform principles, we shall arrive at no satisfactory results. This is not the proper place for entering into further details regarding this subject, but we believe that there would be little difficulty and little expense in carrying out measures, which, although they might not be complete, would nevertheless be of the highest present utility, and which would serve as the commencement of a work the benefit of which would go on constantly increasing. Throughout the whole of Northern India, not only in our Military and Civil Stations, but in the Native cities and villages, machinery already exists which might be made available for the collection of the facts which form the basis of sanitary knowledge. To a great extent it is even true that the money necessary for carrying out practical measures of sanitary improvement is ready also. The municipal and local funds that are actually available for such purposes are very considerable, and they are capable,

ment of a comprehensive, and, so far as may be possible, a uniform system of sanitary administration throughout the country. The interests of the community at large are as much concerned as those of the

Army; every step wisely taken towards the improvement of the public health will be a step towards better civilization and better Government. *"

3. We shall endeavour so to frame our present propositions that they may in all respects harmonize with those that we have already laid before the Government, regarding the Sanitary Administration of Military Cantonments. The system followed in Cantonments, although its actual management must be in a great measure independent, must be made to fit into and form a portion of the general sanitary system of the country. We do not think that it is now the duty of this Commission to draw up any theoretically perfect scheme of Sanitary Administration. Our present recommendations will aim at little more than the foundation of a system which, with no pretensions to completeness, shall be useful as far as it goes, and which shall be capable of gradual future development. The immediate adoption of great and expensive measures of sanitary improvement in our Indian towns and cities is evidently a work which the Government cannot undertake. Nor, if this were possible, would it be expedient. Attempts to force such measures upon people who cannot appreciate their value, will defeat their own object unless made with great caution and discretion. At the same time, there is no reason for supposing that the people of this country have any special dislike to sanitary improvements. In many parts of India the advantages of having clean, well paved, and well drained streets, good water, and freedom from objectionable nuisances, are to a very considerable extent appreciated by the people, or at least by the more influential classes. Even in Europe the progress of

* No. 1044, dated 29th February 1864, from Secretary to Government of India, Military Department, to President, Sanitary Commission for Bengal.

under proper management, of being largely increased, without any pressure upon any class of the community, and without the introduction of any new system of local taxation. Whatever expenditure it might be necessary for the Government to incur, in turning to useful account the means which already exist, and in establishing a comprehensive system of Sanitary Administration, there can be no doubt that putting aside all other considerations, such as the cost of the expenditure, if judiciously conducted, would be in reality an absolute economy of money.*

Much stress has been laid upon the same points in the Report of the Royal Commissioners appointed to inquire into the Sanitary state of the Army in India, and they have shown that the question of the health of the Army cannot be separated from that of the sanitary condition of the native population. The necessity that better arrangements should be made for the protection of the public health outside the limits of Cantonments, has also been frequently represented by His Excellency the Commander-in-Chief. It is not necessary, however, that we should insist further upon these considerations, because their truth has already been fully recognized by the Government. "The diminution of the mortality in the Army,"—we quote from the instructions issued by the Government of India when this Commission was first constituted—"and the improvement generally of its sanitary state, is the primary object which the Government has had in view; but the full improvement in the health of the European Troops which the Government hopes to see effected, cannot be brought about by measures which are solely directed to the amelioration of the sanitary condition of the Soldiers as such. No amount of care in Cantonments will be effectual, if all sanitary precautions are neglected in the cities and towns which lie adjacent. A great system of successful sanitary administration cannot be created in a day. But this will gradually grow up, and the ultimate result to which the Government look is the establish-

sanitary knowledge has been slow, and few improvements have been carried out without more or less opposition and difficulty. If our measures in this country are taken judiciously, and people are not worried into opposition by indiscreet attempts to accomplish too much at once, there is no reason why sanitary improvements should not go on steadily and rapidly.

4. Works of sanitary improvement in the towns and districts of India must be looked upon as matters of essentially local and municipal interest, and this is necessary, not merely because it is obviously impossible that the Government should provide the funds or the other means for carrying out such undertakings, but because it is clearly better for the people themselves that it should be so. It may reasonably be anticipated that the recognition of the necessity of proper Sanitary Administration will lead to important developments of existing municipal institutions, and among all the excellent results to which we look forward, we believe that this may form one of the most valuable. Sanitary progress ought to signify progress by the people in the management of their own local affairs. It appears to us that, as a general rule, the whole cost of local works of sanitary improvement, as well as the cost of the establishments required for carrying on the local sanitary service, must be borne by the municipal and other local funds, and that the only expense which the Government ought to incur is that which is necessary for central establishments of general supervision and control.

The cost of local works of sanitary improvement to be borne by municipal and local funds, and not by the Government.

5. Whatever be the details of the system of Sanitary Administration that may be adopted, the whole must rest upon a basis of law. Therefore, before proceeding further, it is desirable that we should show to what extent the existing laws afford the means of enforcing the mea-

Means afforded by existing laws for the enforcement of sanitary measures.

asures that are necessary for the protection of the public health.

6. For the more serious offences affecting the public health, safety, convenience, decency, and morals, ample provision is made in Chapter XIV of the Indian Penal Code, and in the Code of Criminal Procedure. Of these general laws, we need not speak in detail. They afford the means of dealing with positive offences that have been committed, but it is no part of their object to provide for the systematic prevention of acts injurious to the public health, or for the regulation of the numerous matters of sanitary importance for which provision must be made whenever large communities of men are collected together.

7. In all places included within the limits of Military Cantonnements, the means of enforcing measures necessary for the protection of the public health may be looked upon as complete. Act XXII of 1864, which has lately become law, has given to the Government full authority to make local Rules and Regulations for all such matters. The Commission has already made a full report to the Government upon this part of the subject.

8. Outside the limits of Military Cantonnements, the law, in the greater part of this Presidency, is in a less satisfactory state. Except in Bengal, of which we shall speak further on, the only law of any general applicability bearing upon the subject is Act XXVI of 1850. The object of this Act is to enable the inhabitants of towns, excepting Calcutta, Madras, and Bombay, to make provision "for making, repairing, cleaning, lighting, or watching any public streets, roads, drains, or tanks, or for the prevention of nuisances, or for improving the said town or suburb in any other manner". The first step necessary for the introduction of the Act into any place is an application for the purpose to the local Government. Notice is then given in the

Government Gazette and by proclamation, "setting forth the purposes of the application, and giving reasonable time for all inhabitants of such town or suburb, who are minded to declare themselves for or against the adoption of the Act therein for such purposes or any of them." The local Government "shall take all such declarations into due consideration, and after the time allowed for receiving the same, shall make a final order, which shall be published in the *Government Gazette*, and also notified by proclamation within such town or suburb, to the effect that the application appears, or does not appear, to be according to the wishes of the inhabitants, either wholly, or in respect to one or more of the purposes in respect of which it is made; and if the whole or any part of it shall appear to be according to the wishes of the inhabitants, then that this Act shall be henceforth in force in such town or suburb, for such purposes only as shall be mentioned in the order." After such order has been made, the Act comes into operation, and the local Government then proceeds to appoint Commissioners for putting the Act in force and for preparing Bye-laws. The Bye-laws are to provide for the appointment of the necessary servants, the manner and amount of taxation to be imposed for local purposes, the control of the expenditure, the definition and prohibition of nuisances, and the imposition of penalties.

This Act, we believe, was specially intended to meet the requirements of stations in the hills, and of places where there was a large European population, and it is only during the last few years that it has been introduced into many of the towns of Upper India. There can be no doubt that the Act is very defective, and little suitable to the circumstances of Indian towns. It is well known that the local Governments have frequently been very unwilling to put it in force. They have felt that, in almost all cases, the profession of consulting the wishes of the inhabitants is an empty and undignified form, which every body knows

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to be meaningless, and which can tend neither to the credit of the Government, nor to increased respect for law. But there have been no other means of action at the disposal of the local Governments, and since the provisions of the Act are certainly beneficial in their results, it has often been thought desirable to accept the Act with its faults, rather than have nothing at all. It is not necessary to enlarge upon the other defects of Act XXVI of 1850. The means which it gives for regulating the numerous matters of local importance for which provision ought to be made in all large communities, are very imperfect.

9. In some of the Non-Regulation Provinces the defects of Act XXVI of 1850 have been to some extent obviated by means of orders of the Government which were issued before the passing of the Indian Councils Act, and which have therefore the force of law. In the Punjab, in particular, municipal institutions have thus received, in many places, very important development, and better practical results have probably been obtained than in almost any other part of India. But it is not always easy to say how far these municipal systems rest upon a legal basis, and although this may not hitherto have led to much actual inconvenience, it is not the less a serious defect.

10. In Bengal Proper there is now a more complete and satisfactory law. Act III of 1864 of the Bengal Council, known as the "District Municipal Improvement Act," came into force a few months ago. It is too soon to speak from actual experience of its operation, but it appears to provide very completely for nearly all matters affecting the public health and convenience which require local regulation. Although there are some points in which it appears to the Commission that the success of the Act may be questionable, there can, we imagine, be no doubt that it will prove generally

very beneficial. This Act may be put in force in any place in Bengal, excepting Calcutta, to which the Lieutenant Governor may think fit to extend it.

11. The only other law of general applicability bearing upon the present subject is Act XX of 1856, commonly known as the Chowkeedaree Act. This Act is primarily intended to provide for the maintenance of Town Police. After all charges for that purpose have been defrayed, "the Magistrate may, with the sanction of the Commissioner of Circuit, appropriate any sum which may be available, to the purpose of cleansing the city, town, or place, or of lighting or otherwise improving the same." This provision has, in some places, enabled the Magistrate to make improvements of considerable importance; but the available funds are almost always small, and the system of taxation prescribed by the Act has been generally inefficient, and extremely unpopular. The tax levied in any place to which the Act has been extended, "may be either an assessment according to the circumstances and the property to be protected of the person liable to the same, or a rate on houses and grounds according to the annual value thereof." The desire of avoiding these unpopular methods of raising money has been, in many places, one of the principal causes for the introduction of Act XXVI of 1850.

12. The only other law to which reference need be made is Act XVIII of 1864, which provides for the appointment of a Municipal Committee for the City of Lucknow. This Act may be extended to any place under the immediate administration of the Government of India. The powers given by the Act to the Municipal Committee of making Bye-laws, with the approval of the Chief Commissioner, are very extensive, and it will probably be found that they are sufficient to provide for the management and supervision of almost all matters connected with the care of the public health

which require regulation. This Act was passed only a few months ago, and we have no information to show how far it has been acted upon. With this Act as with Act XXVI of 1850, everything practically depends upon the manner in which the Bye-laws are framed.

13. It should be noticed that there is a ^{Calcutta Municipal Act.} separate local law for regulating the municipal administration of Calcutta.* So far as the substantive law is concerned, ample provision has been made for the care of the public health, but, if we may judge by the results, it may be doubted whether the means of carrying the necessary measures into execution are satisfactory.

14. The existing law in the Upper Provinces, in regard to municipal and local administration, is, in our opinion, very defective, and we think that some general legislation upon the subject is necessary. The basis of good sanitary administration must be a good system for the management of local municipal affairs. As we have said elsewhere, it is impossible to draw any definite line between questions that affect the public health and those which affect the public safety, convenience, and decency, and if we were to make propositions in detail upon so large a question as that of municipal administration in India, it might be considered that we were going beyond our proper province. Unless, therefore, the Government should desire us to do so, we think it right not to enter into this subject.

In explanation, generally, of our views, it is sufficient at present that we should refer to Sections I, III, and IV, of Chapter III, of the Rules and Regulations for the Sanitary Administration of Military Cantonments, which we have lately submitted to the Government, and a copy of which accompanies this letter. We think that the law ought to provide the means of enforcing, in every place to which such

* Act VI of 1863, Bengal Council

measures are properly applicable, regulations for the protection of the public health similar to those referred to. It appears to us that this should be done, for the most part, by positive enactment of the necessary provisions by the Legislature, and that it is not desirable to leave everything to be provided for by Bye-laws. At the same time it is doubtless necessary, in some matters, to give the Local Authorities power to make Bye-laws suitable to special local circumstances.

In the North-Western Provinces, in the Punjab, in the Central Provinces, and in Oudh, although the law appears to us defective, there is, nevertheless, no doubt that the most important sanitary regulations that are now necessary might be enforced in many places by Rules or Bye-laws made under the existing laws. The Commission has already brought this to the notice of the Local Governments, in forwarding, for their consideration, the Rules and Regulations proposed for Military Cantonments. In Bengal, it is believed that everything, or almost everything that is necessary for the protection of the public health, may be done without infringement of the existing law.

15. We proceed to describe generally ^{Measures recommended for carrying on Sanitary Administration.} the measures which we propose for the consideration of the Government. If the Government should give its approval, we can hereafter submit recommendations in greater detail.

The principles involved in our propositions regarding the Sanitary Administration of Military Cantonments are equally applicable to places outside the Cantonment limits. In the Cantonment the responsible head is the Commanding Officer. A Sanitary Officer and a Committee composed of the most competent Officers available are appointed to advise the Commanding Officer and to help him to come to true conclusions, without, however, interfering with his responsibility, or with his power of independent action. Executive Officers are appointed to carry out the measures that are necessary. The only

check upon the Commanding Officer is the obligation of strictly obeying the Rules and Regulations laid down in accordance with law, for his observance.

Outside the Cantonment limits, a similar system should, we think, be adopted. The first thing wanted is a code of regulations, which shall form the legal basis of the whole Sanitary Administration. The Magistrate of the District, as the principal local Executive Officer, must be responsible for carrying these regulations into effect, and he must have the means given him of obtaining the best available opinions on matters affecting the public health. There must be advisers who will perform the same service outside the Cantonment which the Sanitary Officer and the Sanitary Committee perform inside its limits. There is this difference, however, outside the Cantonment, that, no Military considerations being involved, it may be proper to place checks upon the Magistrate which could not rightly be placed upon the Commanding Officer.

16. In all towns, civil stations, and other places or circles in which the local Government may consider such course desirable, Committees should be appointed for the purpose of carrying on the municipal and sanitary service. The Magistrate of the District should be the Chairman and responsible executive head of all these Municipal or Sanitary Committees, and he should be charged with the enforcement of all the Rules and Regulations laid down for the protection of the public health. In all places in which such Committees are appointed, the law must afford the means of providing for all the matters affecting the public health and convenience which are described in Chapter III of the proposed Rules for Military Cantonments. These matters comprise the regulation of the management and expenditure of the local municipal funds; the appointment of the necessary servants and establishments; the definition, prevention, and prohibition of public nuisances; the mainte-

nance generally of the place or circle in a proper sanitary condition; the prevention and cure of disease; the management and regulation of the public roads, conservancy, and drainage; the regulation and inspection of public and private necessities, urinals, cesspools, drains, and all places in which filth or rubbish is deposited; of slaughter-houses, public markets, burial and burning grounds, and of all offensive or dangerous trades and occupations; the prevention of the sale of unwholesome food and drink; the inspection and control of houses of ill-fame, and the prevention of the spread of venereal disease; the supervision and regulation of public wells, tanks, springs, or other sources from which water is or may be made available for public use; the execution and promotion of works of public utility and convenience; the registration of deaths, and making and recording observations important for the public health and interests. Of other matters of municipal interest which have no special sanitary importance, we need not speak.

17. There should be appointed in each District a Health Officer. His duties would be in many respects similar to those which the Sanitary Officer will have to perform in Military Cantonments.

He would be appointed—first, that through him the local authorities may be duly informed of such influences as are acting against the healthiness of the population of the District and of such steps as Sanitary and Medical Science can advise for their removal; secondly, to execute such special functions as may devolve upon him by the orders under which he is appointed; thirdly, to contribute to that general stock of knowledge with regard to the sanitary condition of the people, and to the preventible causes of sickness and mortality, which, when collected, methodized, and reported, may guide the Government in the extension and amendment of sanitary law and regulation.

It will be the duty of the Officer of Health to make himself familiar with the natural and acquired features of the District, its soil, levels, and meteorological peculiarities : with the previous sanitary state of the troops and of the population generally, and with all its existing sanitary conditions : the distribution in all places of importance within the District, of Civil and Military buildings, open spaces, drains, sewers, and water-supply ; with the nature of the manufacturing and other industrial establishments ; with the nature of the house and other accommodation of the inhabitants ; the facilities for bathing and washing ; the arrangements for the disposal of the dead ; with the sanitary state of all hospitals, dispensaries, and other public institutions ; with the arrangements for ensuring the proper cleansing of roads, thoroughfares, and other places, whether they be public or private property ; for the regulation of markets, slaughter-houses, latrines, and all other places, of which the supervision is, on sanitary grounds, specially necessary ; for the prevention of the sale of unwholesome food or drink ; and generally with all the regulations in force for maintaining the place in a proper sanitary condition, and for preventing disease. He will take the best means in his power for keeping himself at all times informed of the amount of sickness and mortality in the District, more especially with respect to epidemic diseases, and he will inquire to what extent diseases have depended on removable causes. He will furnish such periodical Returns and Reports as may be prescribed, and he will keep the local Government and the Sanitary Commission for Bengal constantly informed of all matters of sanitary interest that occur in the District.

We understand that the question of establishing a general system for the registration of deaths is under the consideration of the Government. Among all the measures of sanitary interest that can be undertaken, there is perhaps nothing more important than this. It might be desirable to entrust to the Health Officer of the District

the supervision of the duties connected with this branch of the Department of Public Health. Under present circumstances, however, it appears proper that we should leave this subject for separate consideration. We also purposely refrain from now discussing the important question of the best means of establishing a uniform system of meteorological observations. We addressed the Asiatic Society upon this subject some months ago, and hope that recommendations may before long be laid before the Government.

The Health Officer would be *ex-officio* a Member of every Committee appointed in the District for municipal and sanitary purposes. It would sometimes be desirable that certain Magisterial powers should be given to him, so that he might be able to give more efficient help to the Magistrate of the District, and in some cases he should act as Secretary to the local Committee and as its special Sanitary Officer. The Health Officer should also be a Member of the Sanitary Committees appointed in Military Cantonments, so that he may have the means of making himself acquainted with every thing of importance to the public health in all parts of the District.

Thus, the sanitary service of the District would be conducted by a number of Municipal Committees, each charged with the administration of a certain place or circle, and each possessing its own establishments for sanitary purposes, with the Magistrate of the District as its responsible executive head, and the Health Officer as its general sanitary adviser.*

* The following remarks are quoted from a Note submitted to the Government in October 1862 by the President of this Commission :—

“ In the Report of the Cholera Commission, it is stated that not only in our Military and Civil Stations, but in the Native towns and villages, the means already, to a great extent, exist of carrying out measures of sanitary improvement, and that those means are easily capable of further development. A few remarks may be made in explanation of this statement. Under a proper system of Sanitary Administration two things are necessary ; first, the collection and record of the facts and statistics which form the basis of sanitary knowledge, and second, the means of carrying out practical measures of sanitary improvement. With regard to the first of those desiderata, it appears to me that means already exist for obtaining very much of what we want. But these means must be regulated and organized instead of being, as they now are, for the most

18. With the object of ensuring uniformity and harmony of action in the Sanitary Administration of the District, and as a means of connecting together the interests of all the Committees, both inside and outside the limits of Cantonments, and helping them to co-operate with each other, there should be appointed in each District a Board of Health, consisting of the principal Civil, Military, and Medical Officers of the District or Division, and of such other Members as the local Government might appoint. The Board would be mainly a consultative body for the discussion of questions affecting the health of the District; it would exercise a general supervision over the proceedings in sanitary matters of all the local Civil and Military Committees of the District, and would make grants of money to them for special sanitary purposes. The Secretary to the Board

part, thrown away. Thus, we have already Medical Returns and Reports from every Regiment, European and Native, and from the Jails, Dispensaries, and Hospitals in all parts of the country. In every Regimental Hospital, Dispensary, and Jail Meteorological Registers are kept, and through an immense extent of country a daily record of rain-fall and wind is prepared at the principal Revenue and Police Offices, many hundreds in number. These various observations are now almost useless, because it is nobody's business to supervise them, or to turn them to account when they are made. It would cost almost nothing to render this great mass of observations most useful and valuable. Other machinery exists in Northern India which might be employed in the collection of sanitary statistics. Thus, I believe that there would be little difficulty, in a great portion of the North-Western Provinces and the Punjab, in obtaining Returns of Mortality, which, although not absolutely correct, would be sufficiently so to be extremely valuable. Such Returns may be considered the basis of Sanitary Science; without them, our knowledge of the laws on which public health depends must remain altogether imperfect. In the towns of Northern India there are almost everywhere Municipal Establishments of one kind or other, maintained by local taxation. In every village or circle of villages there is the Putwarce, or Village Accountant. Even now, in many places, these Establishments maintain Registers of births and deaths, and I believe that such Register might be maintained in almost every district of Northern India at a very trifling charge to the local funds, and without any charge at all to the Government. Let a Department of Public Health be constituted under a responsible Officer, and the means will gradually be found for carrying out all such objects as these of which I have been speaking. The same may be said regarding actual works of sanitary improvement. The local funds that are already available for such works, both in our Military Cantonments and in the Native cities, are considerable, and it may be confidently anticipated that they will go on increasing.

would be the Health Officer, and all the executive duties of the Board would be performed by him.

19. There should be formed in each District in which a Board of Health is appointed, a fund called the "General Sanitary Fund." This Fund would be formed by contributions from various local sources; it would only be under special circumstances that it would receive anything from the imperial revenues. Subject to such rules as might be laid down by the local Government, the administration and expenditure of the fund would rest with the District Board of Health. The sources from which the fund might properly be formed are the following :—

1st.—Such portion of the proceeds of any taxes levied in any places within the limits of the District under Act XXVI of 1850, Act XX of 1856, Act XVIII of 1864, Act III of 1864 of the Bengal Council, or other lawful authority, for municipal or local purposes, as shall be declared to be payable to the General Sanitary Fund.

2nd.—Such portion of the surplus receipts from cattle pounds, established under Act III of 1857, or by other lawful authority, as shall be declared to be payable to the General Sanitary Fund.*

3rd.—Such portion of the proceeds of fines and penalties levied within the limits of the District from persons convicted of public nuisances under Chapter XIV of the Indian Penal Code, or under Sections 311 and 312 of the Code of Criminal Procedure, or under Section 34 of Act V of 1861, or under the Rules made in accordance with Clause 4, Section 7 of Act XXVI of 1850, or under the Bye-laws for the prohibition and removal of nuisances, or for the management of matters connected with conservancy made in accordance with Section 15 of Act

* This cannot be done without alteration of the existing law. Under Act V of 1860, the surplus receipts from cattle pounds can only be applied "to the construction and repair of roads and bridges, and other works of a like nature." It appears as proper that these funds should be expended for the protection of the public health, as on roads and bridges.

XVIII of 1864, or under Sections 55 to 79 of Act of the Bengal Council, No. III of 1864, or under the Bye-Laws made for the management of matters connected with conservancy, in accordance with Section 84 of the said Act of the Bengal Council, or under the Rules and Regulations made under Clauses 5, 6, 7, 8, 9, and 10, of Section XIX, or under Section XXV of Act XXII of 1864, as shall be declared by lawful authority to be payable to the General Sanitary Fund.*

4th.—Any sums derived from other miscellaneous local sources at the disposal of the local Civil, Military, or Municipal Authorities, which shall be declared by lawful authority to be payable to the General Sanitary Fund.

5th.—Any sums that may be specially granted by the Government from the Public Revenues as contributions to the General Sanitary Fund.

20. The purposes for which the General Sanitary Fund might be expended would be the following:—

Purposes for which the General Sanitary Fund may be expended.

1st.—For the payment of the salary of the Health Officer of the District and of the necessary Office Establishments.

2nd.—For making grants for special sanitary purposes to any of the local Committees of the District.

21. We have no reason to doubt that the local funds of the District will ordinarily be able to bear the charges proposed in

Contribution by one District to another, and grants from general Sanitary Fund in aid of local Committees.

the last preceding paragraph. If, however, in any District this should be found impracticable, it appears to us that other Districts might properly be expected to contribute for this purpose from their local funds. The protection

* It should be noticed that the proposed appropriation to local purposes of fines levied in accordance with the provisions of Acts of the Government of India, would require the sanction of the Governor General in Council. We have thought that the Government may not be disinclined to allow the principle that fines imposed for offences of a local character should be paid to the Local Funds.

of the public health is a matter of universal importance, and the inhabitants of every District have a direct and immediate interest in the sanitary condition of the people of other parts of the country. It is upon this same principle that we have proposed to give the District Board of Health the means of helping from the General Sanitary Fund of the District any of the local Committees the resources of which are insufficient. This will be one of the most useful functions of the District Board of Health. Grants of this kind may not unfrequently be made with especial propriety to the local Cantonment Sanitary Funds. It often happens that in the immediate vicinity of a Cantonment possessing hardly any local means of raising money, there is a Native town with large Municipal funds. In such cases, it appears to us proper that the town should help the Cantonment. As we have said elsewhere, the real interests of the population, inside and outside the limits of the Cantonment, are, in matters affecting the public health, identical, and a large proportion of the disease which attacks our Cantonments has its origin in the Native towns in the vicinity. Every District has, not only upon sanitary grounds, an immediate interest in the preservation of the health of the troops allotted for its protection.

22. The time may come when it will be possible to appoint to every District a separate Health Officer, whose whole time can be devoted to the duties of the post. In some Districts, containing large cities and possessing large local Municipal funds, this may be done at once. In other Districts this will not be possible, and in these cases, we think that the Civil Surgeon should ordinarily be appointed Health Officer of the district. The amount of remuneration which he is to receive for the performance of these additional duties may, we think, properly be determined by the local Governments, with reference to the funds

Civil Surgeon ordinarily to act as Health Officer.

that are actually available and the amount of work to be performed. An allowance to the Civil Surgeon, varying from Rs. 50 to Rs. 100 per mensem, would probably be ordinarily sufficient. A small allowance for Office Establishment would also be necessary.

23. So far as the purely local Sanitary Administration is concerned, it will be seen that our present recommendations involve no expenditure by the Government. Some central Establishments for general supervision and control must, however, also be maintained, and we think that the cost of these may properly be borne by the Imperial Revenues.

The practical work of Executive Sanitary Administration must, as the Government of India has laid down in the instructions issued when this Commission was first constituted, be carried on under the orders of the local Governments.* The same instructions state that it will be the duty of this Commission, after communication with these Authorities, to submit to the Government of India plans for supervising the whole Sanitary Administration, and that, so far as may be practicable, existing establishments should be made use of, so that no needless expenditure be entailed.

24. The Indian Jail Committee has noticed in its Report the propriety of constituting a separate branch of the public service for the management of jails, and it has suggested the possibility of combining this service with the Department of Public Health. A proposition to the same effect was made by the President of the Cholera Commission in 1862. How far it may hereafter be practicable to carry out this idea we need not now consider, but it appears to us that to some extent it might be at once acted upon with advantage. In Bengal, in the North-

Appointment of Inspector General of Prisons in each Province to be Principal Officer of Health.

* Secretary to Government of India, Military Department, to President, Sanitary Commission, No. 10,000, dated 21st March 1861, p. 10, 21.

Western Provinces, in the Punjab, in the Central Provinces, and in Oudh, there are now Inspectors General of Prisons. All of these are Medical Officers of experience, selected on account of the special qualifications which they possess. Their duties oblige them to visit, as frequently as may be practicable, almost every District in the country, for there is hardly a District in which there is not a jail to be inspected. Almost every large Native City or Military Cantonment has a jail in its neighbourhood. In the jails of this Presidency there are more than 50,000 prisoners, for whose sanitary supervision the Inspectors General are responsible. There are no other Officers who possess such facilities for making themselves acquainted with the state of the public health in all parts of the country, or whose duties more necessarily involve the study of the principles and practice of Sanitary Science. The District Health Officers that we have proposed to appoint will ordinarily be the Civil Surgeons, who are for the most part in charge of the District jails, and for this reason also there is a special propriety in making the Inspector General of Prisons the head of the Department of Public Health. There is another point of practical importance that it is right to notice. There are in India special difficulties in carrying out the necessary every day operations of conservancy. In the jails of Northern India, and in the jails alone, these difficulties have been surmounted, after careful study of the subject, and after experiments carried on for many years. Although the conservancy of our barracks and hospitals, and of Military Cantonments generally, is very much better than it was, it is usually far from being as complete as that of the jails, and it may safely be asserted that it is from the jails all the principal improvements have been derived.*

* The Commissioners appointed to enquire into the Cholera Epidemic of 1861 noticed in their Report the remarkable contrast between the conservancy arrangements in the Central Prison of Lahore and those in the Military Cantonment of Meerut, and the same was more or less true in many other

Independently of the wants of Military Cantonments, the introduction and maintenance of a proper system of conservancy in Native towns is a work of urgent necessity, and we believe that in carrying out the requisite measures, the experience gained in the jails will be of the highest value.

These views have already been, to some extent, acted upon in the Punjab. In 1861, Dr. Hathaway, Inspector General of Prisons, was appointed a Special Commissioner for the purpose of examining into the sanitary condition of all the Military Stations in the Punjab. Dr. Hathaway performed for a time many of the duties which would devolve under our present scheme upon the Principal Officer of the Department of Public Health, and the practical results of his appointment were, as the Government well knows, most excellent and valuable.

25. The Commission would therefore propose, as the most efficient and at the same time the most economical plan that can be adopted, that the Inspector General of Prisons under each of the local Governments and Administrations should be appointed Principal Officer of Health. This Officer would be the Head of the Department of Public Health in each Province. He would be the chief adviser of the local Government in all matters affecting the health of the Province; he would recommend the execution of measures of sanitary improvement of every description; it would be his duty to ensure, by careful supervision, the constant observance of all Sanitary Rules and

Stations. Although these differences may be less striking now than they were three years ago, they have not ceased to exist. "The conservancy of the prison," it is stated in the Report, "may be called perfect. The contrast was great between the sanitary arrangements made for these 2,010 prisoners, and those made for about the same number of European soldiers at a distance of three or four miles. The mass of abominations in the shape of cess-pools and latrines among which the soldiers had to live has been described. In the Central Prison it is hardly possible to discover an offensive smell, even in the latrines that are in constant use."—*Report of Cholera Commission*, page 14.

Regulations that might be laid down; to obtain periodically, from the Health Officers of all Districts, Reports and Returns showing the amount of disease and mortality among the various classes of the population; generally to make himself acquainted with all questions affecting the public health which arose within the Province, and to bring everything of importance to the notice of the local Government. Through this Officer, the local Government would possess the means of exercising a proper control and supervision over the Sanitary Administration in all parts of the Province.

26. The Principal Officers of Health thus appointed would furnish to the Sanitary Commission for Bengal, in such forms and at such times as might be prescribed, full information regarding the sanitary condition of every part of the Presidency. The Sanitary Commission in its turn would submit reports to the Government of India upon all matters of importance. Thus, while the whole of the actual executive work of Sanitary Administration would be left to the local Governments, the Government of India would be kept informed of all that was going on, and would be able to exercise a general supervision over the whole sanitary service of the Presidency.

27. The expense of these arrangements will not be heavy in Provinces in which the Inspector General of Prisons can undertake the proposed additional duties without entailing the necessity of appointing fresh Officers to the Jail Department. In the Central Provinces, in Oudh, and probably in the Punjab, we imagine that there would be no necessity of this kind, and that it would be sufficient to give to the Inspector General an additional allowance in consideration of the additional work imposed upon him, and to appoint such Office Establishment as was necessary. We should hope that

this might also be practicable in the North-Western Provinces. The charge of the Inspector General in those Provinces is doubtless an onerous one, but it has probably been somewhat lightened by the transfer of the Saugor and Nerbudda Territories to the Central Provinces, and by the transfer of the Delhi Division to the Punjab, while the extension of Railway communication has diminished the labor of visiting the various Districts. In the case of Bengal, the Province is so extensive, and the means of communication are so imperfect, that we imagine that the proposed plans could hardly be carried into effect without involving increased expenditure in the Jail Department. We have not at present sufficient information to enable us to give any opinion regarding the arrangements that might be suitable for British Burmah. These, however, are questions for the consideration of the local Governments and Administrations, and it is not now necessary that we should enter into them. If in any Province the Inspector General of Prisons cannot undertake the duties of Principal Officer of Health, in addition to those of his present office, without interfering with the efficiency of his supervision of the jails, we think that the measures which we have recommended should still be adopted, but that in this case such additional Officers should be appointed as will enable the Inspector General to carry on the duties of both Departments. We believe that this may be done without any sacrifice of efficiency in the management of the jails. Difficulties of this kind will not, as it appears to the Commission, be a reason for rejecting the plan that has been recommended; and although they would doubtless add to its expense, it would still, we believe, be found to be a more economical one than any other which would be likely to prove efficient.

28. We have thought it undesirable to address the local Governments and Administrations upon the sub-

Opinions of local Governments and Administrations to be invited.

jects discussed in the present letter until we know something of the views of the Government of India. If the main features of the plans that we have now proposed should be generally approved, we would suggest that the opinions of the local Governments and Administrations should be invited. If the Government of India should think fit so to order, we might then, with the help of the additional knowledge that these opinions would give us, and after full communication upon the whole subject with the Commissions at Madras and Bombay, endeavour to draw up in detail a complete scheme for establishing a system of Sanitary Administration in all the Provinces of the Bengal Presidency.*

* The system which we have recommended in this letter resembles, in many respects, that which was established in France in 1848, and which has since that time been in force. In every *arrondissement* there is a Council of Health, (*Conseil d'hygiène publique et de salubrité*), consisting of from seven to fifteen members, nominated by the Prefect. At the headquarters of the Prefecture, there is a similar Council for the Department. The Prefect presides over all the Councils. The "*Conseil d'arrondissement*" advises the Prefect on all matters affecting the public health. Among the subjects upon which the Council is especially to be consulted are the following:—Measures required for improving the sanitary condition of all inhabited places within the *arrondissement*; the prevention of endemic, epidemic, and contagious diseases, and of epizootic and other diseases of animals; the encouragement of vaccination; affording medical aid to the sick poor; the improvement of the sanitary condition of the working and the agricultural classes; the healthiness of schools, hospitals, lunatic asylums, barracks, arsenals, prisons, poor houses, &c.; the quality of food, drink, condiments, and drugs offered for sale; dangerous and unwholesome trades; the sanitary state of public establishments, schools, prisons, barracks, canals, reservoirs, fountains, markets, sewers, burial grounds, &c., &c. It is the duty of these Councils to collect information of every kind regarding the public health in all parts of the *arrondissement*, regarding the relations between the prevalence of disease and local physical conditions, meteorological phenomena, the distribution of the population, the amount and causes of mortality among the various classes of the community, and generally regarding all matters of sanitary interest. They send periodical Returns and Reports to the Prefect, who again transmits them to the Minister of Agriculture and Commerce. The *Conseil du département* advises the Prefect upon all questions affecting the public health which may be referred to it, and upon all questions in which the whole department or several *arrondissements* are concerned; it receives through the Prefect the Reports from the *Conseils d'arrondissement*, examines and analyzes them, and submits every year to the Prefect, for transmission to the Minister, a full Report regarding the sanitary condition of the whole Department. The expense of these Establishments is defrayed from local funds voted by the *Conseils Généraux*. The Minister of Agriculture and Commerce, assisted by a Consultative Committee of Public Health, is entrusted with the supervision of the whole sanitary system of the country.

29. The following is a recapitulation of the principal conclusions and recommendations contained in this letter :—

Recapitulation.

1st.—That the interests of the community at large, as well as those of the Army, demand the establishment of a comprehensive system of Sanitary Administration, and that the system followed in Cantonments must fit into and form a portion of the general sanitary system of the country.

2nd.—That it is neither expedient nor possible that the Government should undertake to carry out generally, by means of its own Officers, and at its own expense, works of sanitary importance in the towns and districts of India, and that these matters must be looked upon as essentially local and municipal.

3rd.—That, as a general rule, the whole cost of local works of sanitary improvement, and of carrying on the local sanitary service, must be borne by the local funds, and that the only expense which the Government ought to incur is that which is necessary for Central Establishments of general supervision and control.

4th.—That the whole system of Sanitary Administration must rest upon a basis of good Municipal Law; and that fresh legislation is required to make it possible everywhere to enforce all the Regulations necessary for the protection of the public health, safety, and convenience.

5th.—That for carrying on the Municipal and Sanitary Service, Committees should be appointed in all places or circles in which the local Government shall so order; that the Magistrate of the District, as the principal local Executive Officer, should be the responsible Head of all these Committees, and that he should be charged with the enforcement of all Sanitary Regulations that may be laid down.

6th.—That there should be appointed in each District a Health Officer, whose

duty it would be to make himself at all times acquainted with the sanitary condition of all parts of the District; to advise the local Authorities in all matters affecting the public health; and to keep the local Government and the Sanitary Commission for Bengal constantly informed of all matters of sanitary interest that occur in the district.

7th.—That there should be appointed in each District a Board of Health, consisting of the principal Civil, Military, and Medical Officers of the District or Division, and of such other Members as the local Government may appoint, with the Health Officer as Secretary and Executive Officer. This Board, which would be mainly a consultative body, would discuss all questions affecting the health of the District; it would exercise a general supervision over the proceedings in sanitary matters of the local Civil and Military Committees; it would make grants of money to these Committees for special sanitary purposes; it would maintain uniformity and harmony of action in the Sanitary Administration of the district; it would be a means of connecting together the interests of all the Committees of the District, both inside and outside Cantonments, and would help them to co-operate with each other.

8th.—That there should be formed in each district, from certain Local and Municipal funds at the disposal of the local Government, a Fund called the General Sanitary Fund, for the purpose of paying the salary of the Health Officer and the necessary Establishments, and for making special grants for sanitary purposes to any of the local Committees of the District, and that subject to such Rules as might be laid down, the administration and expenditure of this Fund should be entrusted to the District Board of Health.

9th.—That if the local funds of any District be insufficient to bear these charges, other Districts should contribute from their local funds, on the principle that

the protection of the public health is a matter of universal importance, and that the inhabitants of every District have a direct interest in the sanitary condition of the people of other parts of the country.

10th.—That, when possible, a separate Health Officer should be appointed in each District, but that in Districts in which the local funds are unable to bear the charge, the Civil Surgeon should ordinarily be appointed Health Officer of the District, receiving such additional remuneration as the local Government may determine, with reference to the funds actually available, and to the amount of work to be performed.

11th.—That the work of Executive Sanitary Administration must be carried on under the orders of the local Governments, and that such Central Establishments should be maintained, at the cost of the Imperial Revenues, as may enable each local Government to supervise and control the whole sanitary service of the Province.

12th.—That there are special reasons of importance which make it desirable to unite in the same hands the management of the Department of Public Health and that of the Jails, and that the most efficient and economical mode of enabling the local Government to exercise supervision and control over the former would be the appointment of the Inspector General of Prisons to be Principal Officer of Health, with such Office Establishment as may be required; and that if it be necessary to do so, such additional Officers should be appointed as may prevent any injury to the efficiency of the Jail Department.

13th.—That the Principal Officer of Health should be the Head of the Department of Public Health in each Province, and act as the chief adviser of the local Government in all matters affecting that Department; that he should furnish to the Sanitary Commission for Bengal, in such forms and at such times as may be prescribed, full information regarding

the sanitary condition of the Province; that the Sanitary Commission should submit reports upon all subjects of importance to the Government of India, and that while the actual executive work of Sanitary Administration would be left to the local Governments, the Government of India should thus be kept informed of all that was going on, and be enabled to exercise a general supervision over the whole sanitary service of the Presidency.

14th.—That if the main features of the proposed plans should meet the approval of the Government of India, the opinions of the local Governments and Administrations should be invited upon the subject, and that the Commission might then proceed, after full communication upon the subject with the Commissions at Madras and Bombay, to draw up in detail a complete scheme for establishing a system of Sanitary Administration in all the Provinces of the Bengal Presidency.

I have the honor to be,

Sir,

Your most obedient Servant,

J. STRACHEY, *President,*

Sanitary Commission for Bengal.

POSTSCRIPT.

Since this letter was written, the Commission has seen the Resolution of the Governor General in Council, in the Financial Department, No. 2215, dated Simla, 31st August 1864, on the subject of Municipal Police. This Resolution has a most important bearing upon the questions that have been under the consideration of the Commission. It does not appear necessary, however, that any alteration should be made in the present letter, more especially since the opinions which it expresses regarding Municipal Administration appear to be generally in accordance with the principles which have been laid down by the Government.

J. STRACHEY, *President,*

Sanitary Commission for Bengal.

CALCUTTA,

14th September 1864.

(True Copy)

Secretary,

Sanitary Commission for Bengal.

PUBLIC—SEPT. 5, 1865.

No. 3. From E. C. BAYLEY, Esquire, Secretary to the Government of India,
To the Secy. to the Govt. of Bengal, No. 1676,
To the Secy. to the Govt. of N.W. Provinces, No. 1677,
To the Secy. to the Govt. of Punjab, No. 1678,
To the Chief Commr. of British Burmah, No. 1679,
To the Chief Commr. of Oude, No. 1680,
To the Chief Commr. of Central Provinces, No. 1681,
To the Resident at Hyderabad, No. 1682,
To the Commr. of Mysore, No. 1683,
Dated Simla, the 5th Sept. 1865.

I AM directed to transmit for consideration, and for the adoption of any measures in the direction of the suggestions made therein which may appear feasible, the accompanying copy of a Report* of the Sanitary Commission for Bengal, on the organization of a system of sanitary supervision in the towns and districts under the jurisdiction of the Civil Authorities.

2. The Governor General in Council is not able to hold out any prospect of expenditure from the general revenues in the payment of salaries to special Officers, or of additional allowances to Officers already existing, for the furtherance of sanitary measures, and he doubts whether such payments can be advantageously afforded by local funds, but this will be a matter for His

* Bengal ... } the careful consideration of the
N. W. Provinces ... } Lieutenant-Governor.
Punjab ... }
British Burmah ... }
Oude ... }
Central Provinces ... } your careful consideration.
Hyderabad ... }
Mysore ... }

Excellency in Council considers, however, that much may be done even without the special machinery proposed by the Sanitary Commission if the Local Governments and Administrations can induce District Officers and their Assistants, and

also the Medical Officers of the Government, to take a real interest in the matter, and to obtain the co-operation of influential Natives.

3. I am directed to draw special attention to paragraph 14 of the Report of the Sanitary Commission, and to request an expression of opinion as to the expediency of any fresh legislation. If such should be thought necessary, a sketch of the measure proposed should be submitted.

* Bengal ... } the views of the Lieutenant-
N. W. Provinces ... } Governor
Punjab ... }
British Burmah ... }
Oude ... }
Central Provinces ... } your views
Hyderabad ... }
Mysore ... }

4. The Governor General in Council requests that a report of * on the subject, and of any measures that may have been taken, may be made before the close of the year.

THE PRESIDENT OF THE SANITARY
COMMISSION FOR BENGAL

THE SECRETARY TO THE GOVT. OF
INDIA, HOME DEPARTMENT

N. O. 620, dated 5th September 1864.

Propositions for the Organization of a System
of Sanitary Administration in the Bengal Presi-
dency.

1/2 M 1 2 1635 1/6

Simla, the 28th August 1865.

MY DEAR GREY,—I think that the difficulties in introducing something like a Sanitary system throughout the country are not so great as you think, or as would appear from a perusal of this Report. No doubt there are many real difficulties, of which the greatest is that of the want of money. Still, I think, that a good deal might be done at no great cost, for a good deal has been done in many places.

I would circulate, as you propose, the Report to Lieutenant-Governors and Chief Commissioners, and urge on them to do as much as they can with the means at their disposal. I doubt much if more legislation be wanted. What is really required is administrative action, carrying the people with the work, as far as may be practicable.

I would give no additional salaries in any case to any of our English Officers, for this will set up any little money which may be available. Inspectors of Jails, Civil Surgeons, Magistrates and their Assistants should each in his vocation help in the work. I would not have here large Committees, they don't work well. The close machinery, with a few of the leading Natives, would suffice.

I would ask for a report at the end of the year, showing what had been arranged to do—what the machinery—the means what was required in the way of help from Government, and then give the year 1866 for the experiment.

Your's sincerely,
(Signed) JOHN LAWRENCE.

DRAFT a Circular submitting the Report to the consideration of the Local Governments and Administrations (not Madras and Bombay,) and for the adoption of any measures in the direction of the suggestions made by the Sanitary Commission which may appear feasible. The Governor General in Council is not able to hold out any prospect of expenditure from the general Revenues in the payment of salaries to special Officers, or of additional allowances to Officers already existing for the furtherance of his work; and he doubts whether such payments can be advantageously afforded by Local Funds, but this will be a matter for the careful consideration of —. But His Excellency in Council considers that much may be done even without the special machinery proposed by the Sanitary Commission, if the Local Governments can induce District Officers and their Assistants, and also the Medical Officers of the Government, to take real interest in the matter, and to obtain the co-operation of influential Natives.

Attention should be drawn to paragraph 14, and an opinion requested as to the expediency of any fresh legislation; and if such should be thought necessary, a sketch of the measure proposed should be submitted. A report should be asked for before the close of the year. Draft a Circular to the above effect.

W. G., 29.

A

HOME (1865) DEPT.

Public.

To the Secy. to the Govts. of Bengal, N. W. Provinces, and the Punjab; to the Chief Commissioners of British Burmah, Oude and the Central Provinces; the Resident at Hyderabad, and the Commissioner of Mysore.

Nos. 1676 to 1683.

Dated 5th Sept.

Proceedings — Sept.

No. 3.

In Pub. No. 1635 of 1867.

From Lieutenant-Colonel A. P. PHAYRE, C. B., Chief Commissioner of British Burmah and Agent to the Governor General, to E. C. BAYLEY, Esquire, Secretary to the Government of India,—No. 345, dated Rangoon, the 2nd October 1865.

I HAVE the honor to acknowledge the receipt of your letter No. 1679, dated the 5th ultimo, with its enclosure, being copy of a Report of the Sanitary Commission for Bengal, on the organization of a system of sanitary supervision in the towns and districts under the jurisdiction of the Civil Authorities in India.

2. The question of providing for sanitary supervision and work by means of local funds is one which has for some years engaged my earnest attention. The expense incurred must, of course, be defrayed from the ordinary Municipal Fund of each town separately. The most difficult places, in which to establish and maintain effective sanitary measures in British Burmah, are those which require them the most, namely, the large sea-port towns. The great difficulty consists in the want of adequate funds. In this respect the town of Rangoon is, on the whole, better provided than most other places, but from local causes, not here necessary to enumerate, comparatively larger sums are necessary there than elsewhere. Moulmein possesses local advantages, and a moderate amount for local fund is now raised annually. Akyab, the other large sea-port of the Province, has no Municipal Fund, and is, or was until lately, in a disgraceful state of filth. In these three towns I have toiled for years to induce the leading European inhabitants to consent to more funds being raised, by taxes on horses, carriages and so on, sufficient to maintain Conservancy Establishments, with reference to the preservation of the health of the inhabitants. They have, however, always refused to support me in any such measures. I have, therefore, finally determined that it is better to go on steadily and quietly improving the existing financial resources, and gradually devoting more funds to the necessities of conservancy, and the requirements of general sanitary measures, and attending less to the luxuries of smooth but expensive roads.

3. Rangoon is becoming gradually improved. Additional sources for raising money, by means of ferries, licensed slaughter-houses, and other indirect local taxes, are affording funds for Conservancy Establishments. It is probable that these very improvements will render the inhabitants less likely to desire a Municipality than if affairs were worse. For the great majority of the European merchants, shop-keepers, traders and others, reside within the town; and unless the sanitary condition thereof were at least tolerable, they would rouse themselves and determine to have efficient Establishments. The same remarks also apply to Moulmein. At Akyab it is different. There the Europeans do not reside within the town, though they have their places of business in it. The consequence is they take no interest in the town. No Municipal Tax exists, and the inhabitants have refused to apply for or to admit of any. The town I found last year to be in a filthy state,—a condition it certainly was not in when I knew it some years ago. I have reason to believe, however, that quite lately some measures have been adopted to improve it.

4. In regard to towns in the interior, every town having 5,000 inhabitants and more, in the Pegu Division, has a Municipal Fund. The funds are raised almost entirely by a rate upon each house. In several towns also public bazaars exist, and the profit on the rent of stalls, after retaining a reserve for repair to buildings, is available for general Municipal purposes. For the towns in the interior of Pegu, therefore, a fair amount, if not absolutely sufficient for all wants, is available for ordinary sanitary administration, at least for the present. The funds are administered by the Civil Officer at each place in communication with the principal inhabitants, but not with regularly constituted Committees. At the small sea-port towns of Tavoy and Mergui also, in the Tenasserim Division, similar funds exist.

5. In regard to the legal basis on which the sanitary administration now stands, and, with reference to paragraph 3 of your letter, I beg to state as follows:—Some years ago the several Sections of Act XIV. of 1856, which contain sanitary provisions, were made applicable to the town of Rangoon. They have also been enforced in Moulmein, and generally in the towns of the interior. With these and the general laws, as referred to in paragraphs 5 and 6 of the letter from the President of the Sanitary Commission of the 5th of

September 1864, I consider that the Province of British Burmah must rest contented for the present. What I should really desire to see is an efficient Municipality at each principal sea-port town, with an annual income sufficient to retain the services of a scientific Health Officer and a sanitary staff which would ensure the prompt carrying out of all that might be legally enforced. Such a state of things could only be brought about by a special Act of the Legislature for British Burmah, and I see no immediate probability of the inhabitants agreeing to any such Act. The leading inhabitants at the sea-port towns object to the payments required, and I would not force such payments from them. Under these circumstances, I do not recommend any legislative enactment for this Province. I prefer going on gradually improving the local financial resources, and adding sanitary measures year by year to those which already occupy the attention, and demand the care, of the Deputy Commissioners and other local Municipal Authorities. But each town community, especially at the sea-ports, is unwilling to bear any additional expense; it would resent any attempt to force such expense upon it, and therefore in my opinion, had better be let alone for the present. To attempt, in fact to lay down by a legislative Act, a Sanitary Code which could not be enforced for want of funds, and which funds the people would not willingly give, would place the Government in a false position.

6. I beg to take this opportunity of submitting, for the information of His Excellency the Viceroy and Governor General in Council, a printed copy of the Reports on the state of wealth of the principal towns of British Burmah for the year 1864-65. These Reports made by the Civil Surgeons will show what has been done in some towns, and what is wanting in all. The Returns of births and deaths, in 13 of the principal towns, have been carefully made out in my Office from the local Statements. It is expected that, in future years, these will be more correct than those now rendered. But these, it is believed, are on the whole approximately correct. The Reports by the several Civil Surgeons contain many valuable remarks, and I trust they will show that sanitary measures, though restricted from want of funds, have not been neglected in this Province.

Sanitary Report from the Civil Surgeon, Bassein, for the year ending 30th April 1865, by A. Calloway Nisbett, Esquire, Civil Surgeon.

THE Commissioner is too well acquainted with Bassein to require any information from me about its topography, climate, or ordinary atmosphere phenomena. In lieu therefore of such a general description of the place, as would otherwise be expected from me, I shall briefly allude to alterations, of more or less sanitary interest, which have been made recently; the chief of which are drainage of the east side of the station into the Zaiy-kyoung creek, the new road leading towards Padouk, the alteration at the Jail, and the Bassein Charitable Dispensary.

1. *The Zaiy-kyoung Creek cutting.*—The atmosphere of the Jail and neighbourhood, including the whole east end of the Station, is already sensibly purified by this very useful work, though it is not yet completed. Its effect has been to drain the numerous swamps in this direction, and convert them into dry pasture land.

Formerly after the rains the stagnant water of these swamps was a most unwholesome feature of the locality. The cutting, though now only a mere drain 10 feet wide, might easily be converted into a useful highway for traffic.

It is spanned by two substantial bridges which improve the appearance of the neighbourhood.

2. *The Padouk-kyoung Road.*—Another recent local improvement, labors unfortunately under the drawback of running close by extensive rice godowns, and the huts of a large Native population employed at them. The paddy husk from these godowns thrown into the stagnant water of the swampy hollow lining the road, combined with the dirty habits of the people who swarm about the place, render this, otherwise excellent, road often impassable by reason of the insalubrious odours pervading the neighbourhood. Very little attention to the drainage of the road would correct much of this; and if suitable accommodation were provided, at the godowns for conservancy purposes, the defilement of the public thoroughfares might soon be put a stop to.

The rice godowns, both here and at Akyab, are annually visited by cholera. Last year at Bassein it was confined to such localities exclusively; and this year, though cholera and choleraic diarrhoea have been more wide spread, not one of the rice godowns escaped.

I think the decomposition of the paddy husk, which, under the operation of heat and moisture, is going on all the rice season at these places, has something to do with producing the disease.

If the Padouk-kyoung Road were properly drained, and carried on round to form a junction with the old Pagodah road to the eastward, it would be a sanitary desideratum attained which is much needed here, viz., a ride or drive for exercise and recreation.

3. *The Jail.*—The Jail buildings have been entirely re-constructed anew, almost within the year, upon a temporary but very useful scale, while accommodation of a very elaborate kind and of the most durable materials is in course of construction.

The sanitary state of the Jail, although it compares favorably with that of former years, and even with that of the rest of the Station this year, is still very capable of improvement. The mortality among the prisoners is still high, about 20 in a thousand. Much has been done in the way of sanitary improvement, but much remains to be accomplished before the state of the Jail can be pronounced perfectly satisfactory. However, by the removal of the old buildings and a lofty bamboo palisade, which shut out from them the air and light; the addition of oil to the Prison dietary; the avoidance of over-crowding by the falling off in the number of prisoners; and by the substitution of wholesome well-ventilated dormitories for the wretched tumbling-down sheds of the previous year, by, or at least concurrently with, these changes occurred a noticeable alteration for the better in the Jail Sanitary Returns.

It is satisfactory to note also that these Returns indicate a remarkable exemption from diseases, usually attributed to atmospheric poison, as it is fair to attribute this in some measure to the sanitary provisions of the Jail. Outside the Jail walls the case is altogether different, as I shall have occasion to notice in another place.

It gives me great satisfaction to note also that Jail atrophy, an anomalous disease or decline of adolescent and adult life, a disease which prevailed and proved very fatal in the Jail during the previous years, did not this year once occur,—an exemption which I still consider attributable in some measure to the oil now expressly ordered to be given with the prisoners' food.

Not quite one per cent. of the prisoners admitted were suffering at the time from venereal affections. They all did well under ordinary medical treatment in Hospital.

4. *The Bassein Charitable Dispensary.*—Had been in operation barely three months at the close of the financial year. It already promises to be a thriving and useful Institution.

With only one dormitory for the use in common of Europeans and Natives, and the arrangements for drainage, ventilation, conservancy and water supply—very faulty in the solitary building allowed for the Dispensary; with a few servants and no Medical Staff as yet recognised, by the agency merely of the Jail Native Doctor without pay, and an Apprentice upon three Rupees per month, I, as the Superintendent of the Charity, feel surprise and much gratification at being able to state that much useful Dispensary business has been done, while the support the Institution has received in the shape of donations and voluntary contributions has exceeded all expectation.

The Dispensary building, formerly the quarters of the Apothecary of a Hospital adjoining, which is now used as a Police Office, has good natural capabilities for being made an wholesome habitation for a few sick people. It is to be regretted that the Medical Officer's opinion was not more consulted with that object in view, when the building arrangements were in progress or being planned.

Nearly 1,000 attendances of patients at the Dispensary were registered by the close of the year—from 179 out and 22 in-patients.

The receipts from paying patients amounted to Rupees 132, and the voluntary contributions to Rupees 292 up to the same period.

The Government allowance to the Medical Staff and Establishment, when complete, is Rupees 90 per month, viz., a Native Doctor on Rupees 30 per mensem and for servants Rupees 30 a month, with Rupees 30 a month allowance to the Superintendent and Secretary to the Committee of Audit and Management. The routine of medical duties at the Dispensary devolve upon the Jail Native Doctor, my only Assistant for the Jail and Civil Medical duties; but it is abundantly evident that he is quite unequal to the double duty thus imposed upon him, for which it appears too he is to be allowed no extra pay.

The attendances at the Dispensary are beginning to fall off, in consequence probably of the Native Doctor being often engaged elsewhere; when application is made for medical aid, a competent person should be always on the spot, as patients cannot be brought to attend at the Dispensary punctually at regular hours as they do in England. The only person in charge, when the Native Doctor is away, is an Apprentice, who cannot be trusted with the performance of the most trifling professional duty without supervision.

No applicants for vaccination ever come to me now, for the reason, I fear, that the operation has always failed in my hands and in the hands of my predecessors at Bassein.

Inoculation, however, is largely practised and is more popular with Barmese; and I may add, with others who knowing better, prefer their individual to the public protection from the contagion of small-pox.

No cases of cholera or of any other epidemic have presented themselves for medical treatment at the Dispensary. An out-patient, who was attended at his own house by the Native Doctor in consequence of my own indisposition at the time, died from cholera; and I observe by the Registration Returns for April, 39 deaths occurred from it in the town and on the river. This is not the only valuable lesson which these Returns teach. These yearly visitations, from so fearful a scourge as cholera, are significant and alarming. We are now in a position to estimate the extent to which they affect the local death rate.

Sanitary state of the Town.—The Registration Returns, which are believed to be tolerably trustworthy, at Bassein, have brought to light facts more in accordance with my first impression regarding the insalubrity of, than with the excellent sanitary reputation always attributed to, the locality.

These Returns have not as yet revealed a very high death rate as compared with other places in India, but they show that a very large proportion of the recorded deaths in the town were due to causes of malarious origin, to causes, in other words, which rarely exist in connection with wholesome air, water supply, food, dwellings, pursuits; while, therefore, we cannot, as in the case of the Jail, congratulate ourselves on the absence of endemic poisons from our bazaars and native quarters of the town, it is satisfactory to know, whatever this morbid agent may be, that it is of a remediable or preventible nature, and can, in all human probability, be banished from our midst by attention to the elementary principles of sanitation abovementioned.

The preventible character of our local disease, therefore, is a fact which conveys an useful lesson for our future guidance, in connection with the equalid, ill-raised, ill-drained, ill-ventilated habitations of our Native population, and with the abominations now reeking in the early rain which surround them.

Much has been done towards the purification of the thoroughfares by convict labor, but the present Conservancy Establishment appears to be quite unequal to cope with the Herculean task of a thorough clearing off of the town filth and rubbish.

Two things appear to me to be needed in order to keep the purification of the Native quarters within the capabilities of any moderately strong and well-organized Conservancy Establishment—

1st.—On local building enactments providing for the construction of houses well raised and well ventilated by the Native population of the town in all future erections, and the gradual introduction of

2nd.—A system of thorough house drainage, including the filling in and raising of all soil lower than high water mark by means of the earth obtained by widening and deepening the intramural creeks and drains which are numerous.

These two measures appear to me very practicable without being costly; but without presuming to judge dogmatically upon these points, as they are out of my sphere, I will only say that, in a sanitary point of view, the advantages which would accrue from their adoption would, in my opinion, amply compensate for a very considerable outlay.

Another objectionable feature of the houses of the Natives, as now constructed, is the shelter they afford to venomous reptiles, from which cause alone the deaths are remarkably numerous in Bassein.

Intramural burial of the dead.—The general salubrity of the Station cannot but be seriously affected by the practice of burying the dead in or near the houses of the living, and in almost every case in graves of insufficient depth, which unhappily obtains. We have grave-yards in every possible direction; so that, let the wind blow from what point it may, it is more or less impregnated with the exhalations from imperfectly constructed graves. These exhalations are at this season characterised by so offensive an effluvia that the passer-by hastens on his way with a shudder. I would recommend a dozen different burying grounds in or near Bassein, while two at most (placed out of the path of prevailing winds) would and should suffice.

Sale of the milk or meat of diseased animals.—The veriest carrion finds a ready market in the Bassein bazaar—meat that a well-conditioned dog would reject—seasoned with spices and flavored with rotten fish is eaten by the Burmese with relish; such food cannot be good for any human being, whatever his idiosyncracies or habits. Authorities differ, however, upon the question, not whether diseased meat, or rather the meat of diseased animals, is better than the meat of healthy animals, but whether it be not in some cases better than none. There is no doubt that, if the Natives here refused all but meat of good quality, they would seldom or never eat meat at all, which to an omnivorous being would be certainly a calamity. On the whole, I am inclined to think that stringent Police Regulations in this matter would be inapplicable here, though as a possible source of disease it required some notice at my hands.

Sale of poison by retail in the Bazaar.—Numerous deaths are traceable to the facility with which opium, arsenic, and its salts and *nuxvomica*, can be obtained. There appears to be no check upon the sale of the two latter; whereas, in my opinion, all such sales in small quantities should be prohibited without a licence, and the holder of such licence register his transactions however small, noting the date and name of buyer, together with his place of residence.

Means of improving the sanitary state of the town.—Some improvement might be confidently expected to follow the adoption of some such measures as I have suggested,—to render the construction of more wholesome dwellings for the Natives compulsory, and to keep them free from the abominations which at present obtain; also by introducing latrines on the dry earth plan all over the town, and by increasing the Conservancy Establishment to an efficient scale. But without authoritative supervision the best measures, however stringent and comprehensive, will fail, as what is wanted for the purification of the town is not so much a crusade to spread new opinions, but to have well and efficiently carried out in practice the most simple and evident sanitary truths with the view rather to avoid disease than to take physic, and to be freed from pain rather than to find ease by remedies. The measure, therefore, which, beyond all others, is best calculated to effect this object is the appointment of an Officer of Health, with powers in proportion to the responsibility of the functions entrusted to him, and independent by position from local influences of every kind.

The time, however, has hardly arrived, perhaps, for people to be arbitrarily coerced for their own good, or for any prospective advantage to their own health; but I am persuaded

that, until such powers are accorded and freely exercised, the public health must remain in an unsatisfactory state.

In conclusion, I will take occasion to observe that, in framing this Report, it has seemed to me my duty to give the freest possible expression to my views upon every branch of the subject of it; and, unless I greatly deceive myself, I have had but one object in doing so, viz., to further its objects and purposes to the fullest extent of my ability.

I disclaim any intention of reflecting offensively upon any of my colleagues in the Public Service, except when I have felt that, to avoid all appearance of doing so, would be silently to accept a position derogatory to my official position and efficiency.

(Signed) A. CALLOWAY NISBET,

Civil Surgeon.

The 17th May 1865.

Annual Report by A. J. Cowie, Esquire, Civil Surgeon, on the health of the people of Rangoon for the year 1864-65.

THIS is the first time, as far as I can ascertain, a Report on public health for the town of Rangoon has been called for by the Local Government. It is not because we have been behind hand however, or idle, with regard to the public health, that we have no records on the subject. Our sanitary activity takes date from the commencement of the laying out of the Town of Rangoon. Our Local Authorities have been by no means backward. I cannot now quote the orders of the Local Government, as so many proofs of sanitary activity and the regard paid to public health; but although doubtless fragmentary, still enough is visible to show that a vast amount of labor and judgment has been applied to make the town what it now is.

2. In treating of so important a subject as public health, to do so efficiently requires considerably more time than I have had placed at my disposal. I shall, however, cursorily touch upon most of the subjects, into which I have divided this Report, noticing more particularly those points of interest to the general welfare of the community, and make the whole as complete and as serviceable as possible.

3. I have chosen the following division of the subject of public health to be treated of seriatim, as I think it is a good one:—

- | | |
|-----------|----------------|
| 1. Water. | 5. Habitation. |
| 2. Air. | 6. Climate. |
| 3. Food. | 7. Disease. |
| 4. Soil. | |

Water.—It is unnecessary here to remark on the importance to a large town of a good and abundant supply of wholesome drinkable water. In this respect Rangoon is lamentably deficient. It may be said that nine-tenths of the population have no means of obtaining such an article in sufficient abundance. There are a few wells situated in the laterite soil from which most obtain their supplies for drinking purposes, the source of greatest repute being Rebecca's well. An examination of the water from all the chief supplies shows, however, that the majority of the wells are bad, and those reported as good might be better.

4. Some delay has taken place in the submission of this Report for the want of a good microscope. I had wished to give an extended analysis of the several waters used in Rangoon for household purposes, but time will not now admit of my doing so; I have, however, sufficiently completed the investigation to be enabled to arrive at certain conclusions, as to the wholesomeness or otherwise of many of the sources of supply.

5. The permanganate of potash clearly proved that the water, from a large number of the wells in this town, is unfit to drink. I would, as the wells are now managed, condemn the whole as unfit for use. Some doubtless would be much improved if the Natives were at once prohibited from bathing near them, much filth must necessarily percolate back into the wells so long as this practice is allowed to continue. The water from Rebecca's well is much discolored by the addition of the nitrate of silver, and doubtless the habit of bathing in its vicinity is partly the cause. The best water in Rangoon, and the most wholesome, being almost free from organic matter, is that obtained from wells situated in the laterite soil.

6. We must now, however, calculate upon our wells as the only source of water supply for Rangoon, especially in the town itself. The water obtained from wells in crowded places can never be pure and wholesome. We must, therefore, seek some other source of supply. There being no running stream of good fresh water, which can be diverted on this direction, I would recommend as the best plan—that suggested by the Chief Commissioner—viz., that the lakes should be deepened, and a small reservoir constructed on high enough ground in the immediate neighborhood to admit of the water, when raised by a small engine, to flow by means of pipes over the town. Small tanks in vacant spaces in each street could be made, into which the water would constantly run for the use of the inhabitants, the surplus finding its way into the drains at the sides of the roads by means of small conduits; artisan wells also, perhaps, would have to be sunk to keep up the supply in sufficient quantities during the dry weather, the filtering apparatus would have to be attended to at the same time.

7. It is strange that the only supply of water available for the shipping is obtained from the Dallah tank. Numerous complaints were made during the past dry season regarding its unwholesomeness, and with much truth. But then a large profit was made by certain proprietors of water boats by the sale of the water, and surely it was their place to see that it was not polluted. The elephants belonging to the gentlemen renting the Dock-yard, it is reported, are allowed to bathe in the tank, and I have seen numerous Natives, on several occasions, performing their ablutions in it also; surely those who supply the water from this tank to the shipping often at a very high rate should be obliged to look after its purity.

8. *Air.*—Air is more important to life than water. The former is perhaps slower in its operations than the latter in the production of disease, but nevertheless it is a source of much greater mischief. Our town is laid out admirably with a view to thorough ventilation save in one point, viz., there should have been no narrow streets. For it is in them that overcrowding takes place and filth accumulates. It is in quarters inhabited by Natives of India that the greatest amount of filth is discovered to exist. Perhaps one of the filthiest parts of the town, engendering more stenches than any other, is the BoGalay Bazaar. I do not wish, however, here to speak of the condition of the houses. Some limit will have to be placed on the numbers allowed to occupy houses in certain quarters.

9. People will suffer if they cannot be supplied with at least 2,000 cubic feet of fresh air every hour, by ventilation to secure healthy existence. This is a difficult problem to solve. Air is not only vitiated by overcrowding, but is made impure by various effluvia—these are organic and inorganic. The living are those which arise from disease, and microscopic animals and plants; whilst the dead come from decomposing substances, whether animal or vegetable. The remedy, therefore, necessary to secure pure air is no difficult matter to understand.

10. There are many places in Rangoon from which such emanations as those referred to can arise, and not the least of them is the canal. It would, however, in this Report be invidious to suggest what is already being done to ameliorate the evil. The Public Works Department is filling up swamps and excavating tanks, wherever such works are required, with the greatest rapidity at their command.

The cleanliness of the town has nothing to do with this Department, and to the Conservancy Officer alone must we look for efficiency in this respect. But to clear out underneath and behind the numerous houses is a sheer impossibility if greater power be not given to some one to interfere, when interference is necessary.

Householders should be required by Police regulations, in the absence of an Officer of Health, to keep their enclosures clean. The large bazaar too requires constant attention; and it is a question of vital importance to the community whether grapes should be allowed to be continued to be sold in the very heart of the population, the horrible stenches which emanate from the quarter cannot be healthy.

11. The custom of people desecrating the soil in every direction, and the subject of how to provide the best plans of privies and urinals for public and separate use, has already been reported on fully.

12. *Food.*—I do not intend to recommend any thing under this head with reference to the diet of the people, the subject of "Food used by the free and Jail populations" was fully reported on by me in 1862, and forwarded to the Secretary of State through the Medical Department, extracts from which have since been published by the Indian Government. I would merely draw attention to the fact that dead animals and other injurious meats are still sold as food.

The different kinds of fruits and vegetables sold in the Rangoon markets are not so numerous as might be wished. They are, moreover, frequently too high in price. Encouragement and the law of supply and demand will, there is little doubt, soon remedy this. The bread sold is too often mixed with rice, and the deleterious compound sold as milk is frequently composed of the most unwholesome ingredients.

13. *Soil.*—Perhaps one of the most healthy soils is the laterite. Next to granite I should certainly rank it in importance. It is a strange fact that, where this soil exists, cholera is seldom seen in an epidemic form. The soil of Rangoon is eminently laterite in its composition; and although in some parts of the town alluvial deposit is found, it is of small extent in comparison, and many of the low-lying situations which have been recently filled in have been so with the former.

14. *Habitation.*—In speaking of houses, I wish to confine myself chiefly to the Native huts. Europeans build generally a superior class of houses, although often defective in many respects as regards ventilation. The Natives are allowed to build too closely together; in my idea there should be some rule to prevent this, by providing that a space of at least eight feet be left vacant between each dwelling. The Natives of India crowd their houses together to such an extent as to preclude cleanliness, fresh air, and inspection altogether. In fact they live or exist in a mass of crowded filth. The gharry-wallah's stalls are also a hot bed of impurities. The also certain private dwellings of well-to-do Natives, the filth of which would astonish the dirtiest individual with the dirtiest imagination, yet such is really the case and far more frequently so than one likes to believe.

15. In visiting patients in these places suffering from diseases, the result doubtless of their own neglect of cleanliness, I have tried to impress upon them the necessity of reform, but without effect; and I have long since come to the conclusion that what the Natives cannot see, we must see and remedy for them. Nothing will do, but the power to inspect, as given to the Health Officers in London and other large towns, to cure this dangerous apathy. Some one must be permitted by law to inspect the houses of the poor, and out-buildings and enclosures of the better-to-do classes of the community. We have no fires now to make a clean sweep of everything, and place a layer of fresh charcoal over the soil. If we are, therefore, to keep the town healthy and free from those endemic and epidemic pestilences, which take their origin from the mere existence of communities of people, we must attend to the conservancy a little more effectually than has hitherto been the case.

16. *Climate.*—Much has already been written about the climate of Burmah, and especially of its seaboard. Sir R. Martin condemns Arracan and Rangoon because they possess ferruginous

soils. Ferruginous soils however I have already, in a former Report to the Chief Commissioner some years ago, proved to be harmless in themselves. Doubtless, when swamps and decomposing animal and vegetable matters are added to them, they become a dangerous source of fevers and bowel complaints.

17. Colonel Phayre has sufficiently established, by the application of his system of thorough drainage of the super-soil, that ferruginous rocks can be made harmless as a place of residence for man. I will instance Akyab as one of the Stations he rendered healthy by his admirable plan of drainage.

18. Rangoon again has profited by his experience gained after years of trial in Arracan, one of the most deadly of all climates perhaps in the world. Rangoon, I have no hesitation in saying, possesses a good climate in which a man, with anything of a constitution, can keep his health, provided he takes the common precautions necessary to be observed in all hot countries.

19. European women and children born of European parents do not, however, appear to thrive well in Rangoon. Much sickness is met with amongst them. Perhaps the reason for this is that the women do not, or are unable to, take sufficient exercise to keep in health, and the children lack proper nourishment. The change from excessive heat to excessive moisture is frequently so sudden that weakly constitutions generally give way at such times. It is at the setting in of the monsoon that the children and unacclimatized especially suffer.

20. Dr. Ranking showed, and I have proved by actual facts, that by thorough sanitation the death rate in Rangoon can be reduced to a minimum. Up to the present date the deaths in the Jail have not amounted to two per cent. this year, and that too among a class of persons presumed to be the most unhealthy in the country.

21. *Disease.*—No epidemic outbreak has visited Rangoon during the year. Small-pox and chicken-pox were both introduced from out-stations, but did not spread. Cholera also made its appearance in isolated cases. During the early part of the year 1864 the people were, comparatively speaking, very healthy. Signs of disease showed themselves as soon as the water supply became deficient, several cases of cholera were observed, and bowel complaints became very general. On the setting in of the monsoon, diarrhoea and dysentery prevailed for the first two months, but not with any very great severity. Towards the middle and decline of the monsoon a healthy state seemed to be restored to the Station until the commencement of the cold weather, when severe cases of fever, bronchitis and chest affections were observed.

22. During the past hot and very dry season the same difficulty occurred, in regard to the supply of water, as was experienced in the previous year; and much sickness in consequence resulted. Bowel complaints and cholera (sporadic) were very numerous among all classes; dysentery, although not very fatal, has this year assumed a severe type. Bronchitis, pneumonia and a low typhoid fever, have been almost epidemic, especially the former. Bronchitis was no doubt due to the sudden change of temperature and the early setting in of the rains.

Pneumonia in several instances,—a disease which is incipient, but more often a sequent of bronchitis. What I do not like to see in Rangoon is the low form which the fevers now generally assume, and the reduced state of health noticed after sudden attacks of disease,—these signs point to a vitiated atmosphere, overcrowding and bad water. I speak now with reference to all classes: These severe types of disease have not, however, been observed in the Jail; on the contrary, sanitation having been carried out to the utmost perfection there, the inmates have enjoyed the highest standard of health. It is a fact, patent to all who may choose to enquire, that the Jail is invariably free from those diseases generally prevalent outside its walls.

General Remarks.—This Report I admit is imperfect, but I hope that the Chief Commissioner will be satisfied with my first attempt to comply with his wishes. There are many subjects which might have been discussed with propriety here, but which form the theme of other and special reports. I would, in conclusion, call attention to the sub-division of subjects in the several annual documents submitted from my Office this year, and suggest that some better arrangement be made. For instance would it not be better to embody the report on the registration of births and deaths with the present one in future.

(Signed) A. J. COWIE,
Civil Surgeon.

Annual Report by Mr. W. H. Yarde, Assistant Apothecary, in Medical charge of the Civil Station, on the Sanitary state of the Town of Myanong for the year 1864-65.

Town of Myanong, its position, &c.—Myanong is situated on the right bank of the Irrawaddy, in Latitude 18°18' north, and 95°26' east Longitude; its altitude above the level of the sea is some 80 feet. It is bounded on the east by the river, on the west by the Irrawaddy embankment, on the north by the village of Malakagoung, and on the south by the Khyoung lau Choung, a deep nullah that divides it from the village of Shadoh, situated on a low range of hills extending about three miles in a south-westerly direction, covered with low timber and underwood, interspersed with pine-apple and plantain gardens.

Two or three small villages occur on the skirts of these hills, and they are also studded here and there with pagodas and the residences of Burmese priests. From immediately behind the Station the country expands into a vast and almost uninterrupted champaign to the foot of the Arracan chain of mountains, and is chiefly cultivated with paddy.

The Northern Division of the town extends nearly two miles from north to south, and occupies a low narrow strip lying immediately between the river and the embankment. It

contains 725 houses. The bazaar, circuit-house, Court-houses (two in number) Jail lock-up, Police lines, Forest Office, the Telegraph Office, and the quarters of the European Officers and other European residents, are also situated in this Division of the town.

The Southern Division, called Shwe-Boungthagoun, extends nearly half a mile from north to south, is of a hilly nature, and the soil is sandy. It contains 267 houses. The river runs in front of it, and it is bounded on the south and west by the Shad h Hills and the embankment; on the north by the upper division of the town. Here are to be seen a few relics of by-gone grandeur in the shape of pagodas, khayungs and flower and fruit gardens; and it is doubtless still the best part of the town. It is higher and cleaner, and possesses better natural drainage than any other adjacent part. I would also observe here that if the town extended in a south-westerly direction and occupied the hilly ground already described, instead of being situated on the bank, it would have been far more imposing in appearance, and healthier than the present town.

Opposite the Station the river is about one mile in breadth; during the months of July, August and September, it rises on a level with, or overflows and inundates, the Northern Division of the town,—the natural drainage is towards the west, away from the river.

From the month of November it begins to fall steadily, till in the months of April and May it is some 30 feet below the level of the Station. A ridge of sandstone conglomerate now crops out of the bed of the river, opposite the north end of the Civil Station, and extends for about 500 yards under the right bank. Here also the banks are subject to erosion, large portions disappear yearly.

Climate and Season, their influence on the public health.—The climate has always been stated to be salubrious, and I have had no reason for considering it otherwise during my residence here for the past three years. There were no dense jungle or permanent marshes in the vicinity, and no obstructions to the free circulation of air. During the year under review, however, both the town and the Station have been considerably inundated, and continued damp and swampy for a longer period than usual after the cessation of the rains. This was owing to the embankment, erected behind the Station, confining the water resulting from the overflow of the river and to the absence of drains.

Like all other parts of Burmah the climate is damp and warm; but, situated as Myanounge is about midway between Rangoon and Thavet Myo, the climate is milder, the monsoons are not nearly so heavy as they are at Rangoon, nor do such extremes of temperature occur here as are experienced at Thavet Myo. The temperature during the hot months of March and April varies from 85° to 100° in the shade, being doubtless elevated some five or six degrees by the extensive jungle fires occurring in the neighborhood during these months. During the rest of the year the temperature varies from 50° the minimum to 85° the maximum.

The seasons are divided into the cold, the hot, and the rainy. They are too well known to require a particular description here. The south-west monsoon usually begins about the middle of May; after the first burst of rain, generally attended with equally weather and sharp thunder and lightning, it becomes steady. In the month of August the rain sets in more heavy and more constant, and ceases altogether about the end of October. The cold weather begins about the middle of November, and lasts till the end of February. Almost throughout the year the mornings and evenings are pleasant. The rain-fall during the year was 49.01.

The public health is doubtless more or less influenced by the climate. For instance during the rains, commonly from exposure to wet and damp, sudden diurnal alternations of temperature and insufficient clothing, diarrhoea, catarrhal fevers, dysentery and rheumatism, are more prevalent than at other periods. From immediately after the rains and during the cold season, malarious fevers; and in some years, cholera and small-pox are of more common occurrence than at other times; during the present year, for instance, small-pox prevailed epidemically. Again in the hot weather, catarrhal ophthalmia, and sometimes cholera, are more prevalent than in the cold or wet season.

Population.—The population of Myanounge town for 1863-64 was 1913; for the present year 1864-65, 5,125. Of this number there are 1,382 men, 1,759 women, 1,065 boys and 919 girls, showing an increase on the previous year of 212 souls.

Occupation.—The people of Myanounge, with a few exceptions, are agriculturists and laborers. Rice is the staple article of cultivation. The principal working season is the rains. After a fair fall of rain the men plough the fields, and afterwards convey the seedling for transplantation. The women and children transplant, and subsequently watch the fields, while the paddy is ripening, against the intrusion of birds and animals,—the men occasionally join. After harvest, in the labors of which the women and children take a share, the men are variously engaged in sealing the produce of their fields, tending their cattle, and repairing their houses; frequently they engage themselves as boatmen in cargo boats, or otherwise as laborers, during the remainder of the year; the women in cooking and weaving for their own consumption, in short, in attending to all their petty domestic arrangements.

The wealthiest inhabitants set up small shops and bazaars, and deal in miscellaneous goods. This is how the people of Myanounge are chiefly employed. They are, with few exceptions, poor and uneducated. Myanounge is not a manufacturing town.

Occupation how influencing their health.—That a certain amount of risk is incurred by exposure to wet there can be no doubt; but labor in the fields, not over-taxing or compulsory but cheerfully undertaken and performed, appears to me to have a wholesome effect generally and to make the people hardy.

Food and clothing, their influence on health.—It is needless here to reiterate what is generally well known. There can be no doubt that the more common articles of food used by

the people are neither very wholesome nor sufficiently nutritious. Though robust in appearance, they possess but little stamina. They are incapable of continued or great physical exertion; their health is easily deranged; they are more susceptible to malarious influence than Europeans are, and more readily succumb to diseases—having a tendency to exhaust. The want of more nutritious and wholesome food, than they are accustomed to, is the chief cause of their constitutional debility.

Fish is said to afford but insufficient nutrition. Fish-eating nations, though they may be very prolific, are not remarkable for longevity I believe.

Rice is not as nourishing as wheat is, as might be inferred, from comparing the sturdy Up-country Native of Bengal with the puny Native of Madras whose chief food is rice. Now fish and rice, as is well known, form the principal food of the Burmese; they, however, do not scrupulously confine themselves to such,—occasionally they use the flesh of fowls and animals; but if they did so more frequently, it would make all the difference, would more than compensate the dietetic errors they commonly commit. Again it is a well known fact that fish, more or less putrid, is almost daily partaken of; I mean the common gnapee of the country, and occasionally the flesh of animals dying of disease or old age. Healthy nutritious blood cannot be formed out of such unfit material; their systems are consequently under par and inadequate to the wear and tear to which they are exposed in the common avocations of life.

Why is it that they are so passionately fond of acid fruit and vegetables? Seemingly because they are instinctively led to use them as they probably exert an antiseptic influence on their blood,—acids are believed to do in scorbutic diseases in which the blood is proved to be deteriorated.

Again it is well known that a too free use of acids leads to derangement of the digestive organs, and ultimately to permanent impairment or organic disease. Debility of constitution is the result; and in the case of the Burmese the evil does not end here, but the debility of constitution, arising from numerous errors in diet, is handed down from parent to offspring, and so goes on multiplying, and, in co-operation with other circumstances, manifests itself in the startling fact that the people are very slowly increasing in number.

I would also observe that another cause is in co-operation with that already mentioned, in favoring debility of constitution among the Burmese, viz., neglect of clothing. Admitting that the adults both men and women are adequately clothed, that is, that they are sufficiently protected from the effects of the climate and season of Burmah, their children however are not. From the infant to the child of eight years of age, they are but insufficiently clothed.

After seasons of severe illness, in which the chest or bowels have been affected, or after epidemics of small-pox, fever, &c., the bad effects of such neglect are to be seen in the slow, lingering and imperfect recoveries often occurring under exposure to weather, and doubtless such as to produce permanent feebleness of constitution.

The people are, however, slowly becoming aware of their defects; and with European customs and habits of industry before them, with the increased security afforded them under the British Government, the advantages of education, establishment of Government charities, and the labors of Missionaries and Medical men in the country, the domestic evils under which they labor are, doubtless, destined to pass away.

The prevalence of vice.—Of all the demoralizing and destructive vices with which the Burmese have been initiated, that of opium eating is the worst. Owing to their original want of stamina; it destroys them faster than it would any body else. Wherever there are Chinese, opium eating and opium smoking become wide-spreading evils among the Burmese; and at Myanounge, unhappily, such is the case.

No less than 17 opium eaters (prisoners) have been under treatment in the Lock-up during the year, and about double that number incarcerated for crimes which they were doubtless led to commit from being addicted to this vice.

Habitation.—There are 992 houses in the town.

Those of the poorer classes are generally small bamboo huts with grass thatched roofs; they might be valued at from 10 to 20 Rupees each. The houses of the middle classes are larger and more commodious, and are divided into two or three rooms with a verandah in front; they might be valued from 50 to 70 Rupees each.

The houses of those who are comparatively rich, very few indeed, are larger and better constructed than the rest. The uprights or posts consist of pyincadoe or iron wood, and they might be valued at from 70 to 170 Rupees each.

On the whole, the people are generally well-housed; and, so far as it can be expected, the poor are not destitute, comparatively speaking, of comfortable houses.

Conservancy.—The original arrangement of the town has been found defective, as it did not admit of a sufficient number of roads and streets, and the houses were consequently crammed and badly ventilated. By the new arrangement, which is now being carried out, the houses are to run parallel with the river, and there are to be three parallel roads and seven commodious streets running from the east to west.

The town is generally clean; and the practices of the people, as well as I can judge, do not tend to render it necessary to have a Conservancy Establishment in the place. Police supervision would be sufficient to check any rising sanitary evils. Drainage, however, is an important desideratum, as I shall presently show.

A registration of births and deaths in the town has been recently established.

There are no slaughter-houses in the town, and beef is but a rare luxury at Myanounge. When animals are killed, however, it is done as a rule far away from the town, and is not therefore a source of nuisance.

There are three dilapidated public latrines behind the town. Notwithstanding their tottering condition, they are still largely resorted to; each consists of a shallow excavation in the ground, surmounted by a wooden platform, and is enclosed by planked walls. They are objectionable as they are favorable to large accumulations of soil, the decomposition of which constantly impregnates the atmosphere with the concentrated effluvia arising therefrom, —they are consequently likely to prove great sources of disease in the town. It would be far more conducive to the health and comfort of the people if these public latrines, and all minor ones on the premises or individuals, in the town were to be disallowed, as far as practicable,—for they can, at the best, be but sources of considerable nuisance, as there is no scavenger class of people among the Burmese to remove their household ordure.

It would be far more in accordance with sanitary science for the people to resort to the open fields than to public latrines which, however, ingeniously devised, can, at the best, be but improperly managed; and in a rural town like Myanong there can be but little objection to the practice of resorting to the waste ground and open fields.

To do this during the rains and in times of sickness would, I allow, be very inconvenient; and the absence of latrines would probably lead to the committal of nuisances along the streets and roads or under the houses.

If a rule for covering the soil with dry earth can be enforced among the Burmese, then the objection to both public and private latrines might be waived I think. For it is well known now that there is not a more perfect disinfectant, and none more easy of application; and when the removal of soil becomes necessary, than when thus treated, it is not so odorous in the least.

The bazaar is well situated and kept tolerably clean, there are no foul accumulations in the neighbourhood. The principal objection to it is that it is a combustible building.

The waste ground between the town and the embankment is not as clean as it should be, for the people make a convenience of it, this, they are doubtless encouraged to do for the shelter it affords from being over-grown with grass and underwood. Here are also to be seen numerous excavations, some two or three feet deep, made during the year when the embankment was under construction.

These excavations become full during the rains and are very slow in drying; and, unless the growth of rank vegetation is perfectly destroyed, the locality is likely to pass into a permanent marsh; thus, together with the people making a convenience of it, may tend to seriously compromise the public health.

There are at present three burial-grounds in the town. One at Shew Bounz-tha-goung, another at Mudgeezoo, and one beyond the embankment at the back of the Civil Station. The two first are objectionable as they encroach on the precincts of the town, are not sufficiently far removed from the houses, and are not enclosed. That behind the Civil Station is on slightly rising ground, and is well situated. The Christian community would like to have it consecrated and enclosed for the burial of their dead,—already there have been a few interments made here.

The Municipality should be desired (for their own sakes) to select other burial-grounds, at the distance of at least a quarter of a mile from the town, instead of those now existing, and to enclose them.

It was brought to my notice during the year that graves were occasionally not dug sufficiently deep; also that animals dying of disease, if not eaten, were thrown into the river or left to rot in the open air.

This should be prevented by enforcing a rule that graves should be invariably dug six feet deep, and that all animals dying of disease should be carted away far out of the town and buried deep in the ground.

There are no wells in the town. The people use the excellent and wholesome water of the river for all purposes. During the rains it becomes muddy and requires to be filtered. I am not aware that there are any bad practices carried on here to contaminate the water. As it is a beautiful flowing river throughout the year, the contamination of its waters would be a very difficult matter I think.

Drainage.—There are no existing arrangements for draining the town and Station. Drainage, however, is much required now; for, since the construction of the bund behind the Station, the natural drainage of the place is entirely impeded,—all the superfluous rain and river water, resulting from the river overflowing its banks opposite Myanong, is diverted upon and confined in the Station so as to inundate it to a depth of some two or three feet generally. This, together with the muddy condition of the roads, in short of all parts of the town from the long continued saturation which the soil underwent from the want of drains, greatly inconvenienced the working people by impeding locomotion during the months of July, August, and part of September. Then, again, as the stagnant water, impregnated with animal and vegetable remains, subsequently dried, the atmosphere became highly tainted with pestiferous odors.

The inundation of the town can only be prevented by constructing a bund, some three feet high along the bank, in front of the Station, and carrying it as far as the village of Malakazoung, and connecting it with the main embankment across the northern limits of this village. Owing to the erosion of the banks above the Station, this bund would require constant supervision and repair. Surely the cost of its construction and repairs might easily be borne by the Municipality.

Besides this Municipal bund, the construction of culverts and drains by the sides of the roads and streets, all eventually leading to the nullah named the Loothah-choung, which

divides the upper from the lower half of the town and empties itself into the river, would be all that is essential to secure the drainage of the town I think.

Public Health.—The state of the public health in the town and Station of Myanong continued very good during the first seven months of year,—a few cases of fever and slight disorders of the stomach and bowels occasionally occurred, and a few casualties chiefly among the aged and infirm.

But since the month of August down to the present period small-pox, very virulent in character, has occurred epidemically in the town and District, and caused a great number of deaths, chiefly among infants and children.

Through the kindness of the Deputy Commissioner, I am in possession of a list of the number of children that died from this dreadful scourge, both at Myanong and Kyanghen. At Myanong out of a total of 1,984 children 179 deaths occurred, showing a death rate of 99 per 1,000 children from small-pox alone, and at Kyanghen out of a total of 1,882 infants and children, 1,001 were attacked and 186 died, 575 recovered, giving a lamentable death rate of 258 per 1,000 children from small-pox alone.

I am unable, from the absence of a registration of births and deaths, to ascertain what ratio the one bears to the other. Owing to the severe visitation already alluded to, the death rate must necessarily be unusually large for the year.

Public Dispensary.—There is no public Dispensary at Myanong, but one is to be erected shortly. Monthly subscriptions, amounting to some thirty Rupees, will be contributed towards it by the European community here, consisting of but a few individuals. Until the people learn to appreciate its usefulness I apprehend the Dispensary will have to be supported entirely at the Government expense. The people here are very poor; yet, notwithstanding when they have had sufficient opportunity of seeing the benefits they derive from such an Institution, I am confident they will eventually come forward to support it, if necessary.

The efficacy of European medicines, and the experience of English Doctors, are steadily gaining the ascendancy over their own nostrums and barbarous empiricism. They already place greater confidence in English Doctors, than the prejudiced Natives of India do. Frequent applications for advice and treatment are made from the remotest parts of the District.

Towards the close of the official year a liberal supply of European medicines to meet the present requirements of the people, till the Dispensary is erected, was furnished, and notice sent to the people to the effect that gratuitous treatment is now available.

The number of applicants already treated is as follows:—For intermittent fever 24, small-pox two, diseases of the lungs 13, diseases of the stomach and bowels 28, intestinal worms 14, diseases of the liver one, disease of the brain one, dropsy one, rheumatism 10, venereal diseases 10, abscesses and ulcers four, wounds and injuries three, diseases of the eye four, female irregularities two, other diseases 10: total 127, cured 106, relieved one, ceased to attend two, died one, remaining under treatment 17.

Of the 24 cases of the fever treated, all were of the quotidian type, of malarious origin, and were chiefly contracted in the interior of the district while passing over marshy grounds or staying at villages in the vicinity of swamps; in all, the disease was of several days' duration, and was attended with marked debility and considerable emaciation of body; recovery, though somewhat protracted, eventually took place in all under the use of quinine.

Small-pox two cases, one recovered, one died. Owing to the fears and prejudices of the people, I was not generally consulted during the prevalence of this scourge. I have already stated that it occurred as a severe epidemic in the town; I now add that the want of drainage probably favored the virulence of the disease.

Diseases of the lungs 13; of these 11 recovered, one was relieved and one continues under treatment. They were chiefly cases of chronic bronchitis and severe catarrhs, apparently brought on by exposure to wet, and neglected for a long time.

Diseases of the stomach and bowels 28, cured 24, under treatment four. They were chiefly cases of dyspepsia, diarrhoea and dysentery, caused by errors in diet, such as the use of acid fruit and vegetables, either in a raw state, or but partially cooked.

Intestinal worms 14 cases; all cured. Children from one to five years old are frequently brought for treatment, with large tumid bellies, and wasted limbs, said to be suffering from chronic dysentery which, in most instances, is traceable to worms. It is surprising to see the number which many children have. I have frequently counted 90 worms, from six to ten inches in length, expelled within eight or ten days. Trash, consisting of sugar or jaggery, and long exposed to the access of flies; fruit and vegetables impregnated with the larva and ova of insects, are probably the means by which these entozoa find their way into the stomach and bowels. Masked under the form of diarrhoea, dysentery, convulsion, and low kinds of fever, worms appear to me to be one of the chief sources of high mortality among infants and children in this District. Frequently up to the seventh month, fine chubby looking babes are to be seen; after this period they are fed with rice chewed by the mother, and stuffed with such trash as I have already mentioned, the consequence is that their health begins to fail, and they are frequently carried to an untimely grave without the real cause being known; as it is masked in the manner I have already described, it is erroneously attributed, but too frequently, to the irritation of teething. Venereal diseases 10, all cured; none of these were of the more formidable kinds of the disease; and, in the majority of instance, were contracted at Henzadah or Rangoon. There are no prostitutes at Myanong.

Vaccination.—The number of persons vaccinated during the year was 277; of this number 45 were infants under one year of age, 175 children from one to 10 years of age, and adults 57; Europeans and Eurasians 18, Natives of India 10, Burmese 249. The failures were 42, owing to the recent epidemic of small-pox here. Inoculation had been largely

resorted to, leaving but few cases available for vaccination in the town and suburbs of Myanong. During the prevalence of the disease almost every one of the 144 successful cases of vaccination in the Burmese of the previous year resorted to inoculation. In many of these the non-occurrence of any of the symptoms usually observed after inoculation seemed to have a good effect in favor of vaccination, and now that the people are beginning to understand that vaccination can be performed on very young infants without the risk frequently incurred by inoculation, and to appreciate it as a prophylactic, and, furthermore, to see that the Government employ Vaccinators to go among them, it is my impression that they will eventually be but too glad more generally to adopt it, instead of doggedly adhering to inoculation.

(Signed) W. H. YARDE,
Assistant Apothecary.

Annual Report by Dr. F. Barber, Civil Surgeon, on the Public Health of the Town of Prome for 1894-95.

In forwarding my Annual Report for the official year of 1894-95, I have to record that the state of the public health at this Station has not been so satisfactory as to enable me to show a large increase in the population, as will be seen from the accompanying Return of the Register of births and deaths, showing 788 births and 777 deaths. Notwithstanding every measure has been taken by the Municipal Authorities here to improve the sanitary condition of the town by the clearing of jungle, digging tanks where necessary, making drains, raising roads, and by a partial filling up of the old nullah and removal of the land—likewise render available large areas of ground for building purposes—I would recommend the speedy execution of the filling up of the old nullah, which at present is a most unsightly object, and is liable to be rendered the receptacle of all kinds of nuisance. This town and District will have to be thankful for the Dispensary when it shall be established, the want of which is at present greatly felt. The site of ground allotted for this purpose is favorably situated between two large fresh water tanks in the proximity of the Deputy Commissioner's Court-house and the Strand Road, free of Burmese huts and other obnoxious buildings, the improvement of which would be greatly enhanced by the planting of some trees of quick growth, which would not only afford shade, but likewise assist in carrying off the effect of malaria.

With regard to the bazaar for the sale of provisions, meats, fish and vegetables, &c., and as a due precaution to ensure the market supplying the inhabitants with good wholesome animal food, I would suggest that all cattle intended for that purpose, and prior to their being slaughtered, be inspected by the Inspector of Police; for there is no doubt that at times meat of very inferior quality, and perhaps cattle that have died from disease, is sold to the public to the serious detriment of the health of the inhabitants.

I stated in my last Annual Report that the mortality among the population of Prome was, during the cold season, the period in which the deaths were, on an average, nearly double of what they were during the other portion of the year, but I did not then attempt to explain, or refer to the supposed cause or causes, for their increased mortality.

Admitting that malarious influences are in operation; that the air is contaminated by vaporous emanations from the soil, from decayed vegetable and refuse matter, left after evaporation of stagnant waters, to be a source of disease and of death to those living in the vicinity of such unhealthy localities (and such localities there doubtless are in the eastern side of this town), yet I cannot arrive at the conclusion that much of the sickness and mortality that have prevailed in Prome during the cold season is due to this cause, for many of those who fell sick and died during this period in Prome were residents in localities remote from this source (malarious disease). On the contrary, I believe that the principal cause must be referred to undue exposure to the low wave of temperature which prevails here at this season during the nights, and against which Burmese, from a total disregard or ignorance of the consequences, ill-defend themselves—living as they have hitherto done since I have been at this Station in small frail huts, constructed of bamboo matting, many of them from their dilapidated condition freely admitting chilly currents of air during the night; sleeping on their bamboo floor with little else than a mat of the same material to lie upon, and with scarcely sufficient clothing to protect themselves from a painful consciousness of cold.

In no other country have I seen a people who appeared so totally indifferent to, or ignorant of, the hurtful effects of cold as the Burmese are; their raiments or clothing, generally a thin cotton putsoo, differing little or nothing, as far as my general observation of the Burmese of this town extends, whether it be the hot or the cold season of the year.

Now scantiness of clothing, and exposure to the night air in the cold season, cannot but act injuriously on the human system, even to those who are previously in good health it often manifests its hurtful effects; then how much more hurtfully will it tell upon those who are in a state of low or impaired health, or on those suffering from visceral derangements, or in those who are pre-disposed to attacks of fever, or in those who are ill-nourished, &c., &c.; and hence it is that such who are of weakly constitutions, or who are the subjects of incipient disease in one or other of its forms, and the aged, are at this season carried off by the depressing effects of a cold temperature, and against which they make no provision to protect themselves. Potent as malaria and dirt may be in engendering fever and zymotic diseases among a people, yet I believe that cold, or a low wave of temperature, when it invades a whole population, is a greater destroyer of life than either of the above causes, since its sphere of action

is without limits. I cannot refrain from making the following extract from a recent Essay by B. W. Richardson, M. A., M. D., entitled—"Waves of Health and Waves of Death," as it has a direct bearing on the hypothesis that I have advanced:—

"Three Factors," says Dr. Richardson, "are at work whenever a low wave of temperature surrounds the animal organism, abstraction of heat from the body, and, beyond what is natural, arrest of chemical action and of combustion, mechanical contraction of the vessels most exposed."

"We cannot view the extent of these changes in the organic life, as induced by the low wave of temperature, without seeing at once the sweep of mischief which exposure to the wave may effect."

"It extends an influence on healthy life in the middle aged man, and know of no disease which it does not influence disastrously. Is the man healthy, it tends to produce internal congestion; has he a weak point in the vascular systems of his brain, it renders that point liable to pressure and rupture, with apoplexy as the sequence; is he suffering from bronchial disease, and obstruction in his air-passages,—here is a means by which the evils are doubled; has he a feeble worn heart, it is unable to bear the pressure that is put upon it; has he partial obstruction of bowels, or, is he indifferently fed, he is attacked with diarrhoea. It is from this extent of action that the mortality of all diseases run up so fast, when the low wave temperature rolls over the population, taking, as we have seen, the feeble first * * *

"The wave of low temperature rolling over a given population finds inevitably a certain number of persons of all ages and conditions on whom to exert its power. It catches them, too often, when they least expect it. * * *

"While our Sanitarians are busily occupied in pointing out these evils of our social condition on which many diseases rest—that need never be seen or developed but for our own misdoing, and which it is our duty to listen to what they have to say, and to follow the simple precepts which they lay down for our guidance—it is well not to lose sight of the all-important fact that there are certain influences at work in the production of diseases over which the Sanitarian has no control. * * * * *

In regard to spreading diseases we have now almost exclusively one or two causes, as drains and the smells thereof. The evidence is conclusive that certain disorders, as some forms of continued fever for instance, are due to emanation from sewers and drains; and it is possible that some other communicable diseases are, under special circumstances, communicated by the same emanation; but, after all, the drains is only one means of the propagation of a limited class of spreading disorders, and if we continue looking only into the drain for all this class, as we have been looking for some few years past, we should lose by our devotion to the contemplation more than we ever gained by being first directed to that line of research. We will not forget the drain however, nor the bad smell, nor bad water, nor uncleanness in general, as causes of diseases. That would, indeed, be mistaken policy; but we will suppose all the drains pure, all the water unexceptionable, and every dwelling-house and the body itself clean, and what then? Physical Millennium? No,—Death finds dirt an ally, but he can do without it, and although cleanliness is sometimes opponent, it is more commonly a neutral.

Without a word against some sanitary science, I want on this occasion to point out that there are in nature certain agencies at work which determine many of our common and fatal diseases, and which lie apart from the ordinary social control of man according to his present wisdom and acquirement. We may take an illustration of this fact, the most frequent disease—common cold, whence comes it? Why should a Forester of England wake in the morning with cold? Why, for some weeks past, should sore-throat have been so prevalent that scarcely any one could be met who, on enquiry, would not be found with back of the throat unduly red, and the tonsils large? Why in a given village or town shall the Medical men be summoned on some particular day to two or half a dozen places, perhaps at once, to visit children with croup? What is the reason that many cases of sudden death by so called "apoplexy," crowd together in a few hours? Why in a given day or week are shoals of the aged swept away, the young live as before? These are questions which are above the answering of curative and preventive medicine alike. * * * * *

The cause is too generally, too overwhelming, too grasping. It is like the lightning stroke in its distance from our command; but it is diffused, not pointed, a concentrated, prolonged not instantaneous, and by virtue of these properties it is so much the more subtle and devastating.

How the decline of temperature acts obnoxiously to the persistence of health, and it swells the mortality of a population, the author takes pains to explain its *modus operandi*, but the explanation involves the detail of physical logical processes that are connected with the phenomena, and I therefore cannot detail his views *in extenso*, and shall content myself with merely stating in open terms the fact that the fall of temperature produces a series of results by reducing the force of the living organism and disposing it to die.

Now to speak of a more hopeful future as regards improvement in the general health of the population of Prome.—Much may be expected on this head from what is now in progress here, I mean the recent removal by the Civil Authorities of those frail bamboo huts of which, by far the greater part of this town has been for three years constructed, and the re-placement of them of properly constructed houses of a more durable material, wood for many instances, and of brick too. This is certainly one of the most important and salutary measures that could be devised towards the attainment of a great object, namely an improvement in the public health.

This measure has, I am aware, been only deferred till the present time to enable its inhabitants, who lost their all in the fire of April 1861, to acquire the means of re-constructing for themselves suitable habitations of which the conflagration had deprived them.

Although the first removal of the old huts, here spoken of, began at the close of the last rains, the town already presents a very good aspect; the new houses now already up are unexceptionable for healthy domestic occupation of those they are intended for. Several of them are of large dimensions for ordinary Burmese houses, and appear to be by no means deficient in the means of ventilation.

Of course the houses, or rather huts, on the borders of the town and its suburbs, from the general poverty of their occupants, cannot yet undergo the same metamorphosis as those of the towns-people, though improvement among these will doubtless be from time to time effected.

P R O M E :
The 15th May 1865. }

(Signed) P. BARLOW, M. D.,
Civil Surgeon.

Extract from the Report upon the Health of the District and Town of Tounghoo for the year ending 30th April 1865, and Remarks upon the Death and Birth Statistics of the Town of Tounghoo for the same period.

THE Deputy Commissioner informs me that it has been on the whole healthy. Fever has been, of course, the prevailing disease. I have seen numbers of cases amongst people who contracted it in the district. It was of a severe paroxysmal type, and directly and indirectly has caused many deaths,—indirectly especially from the anemic condition in which the subjects of it are left after an attack, pre-disposing them to diarrhoea, dropsical affections, &c., &c. Small-pox I have not heard of, but a few cases said to be cholera (but which, I believe, were merely cases of bad diarrhoea) have been reported. The infantile mortality has arisen, as usual, from diseases of lungs.

The town is kept cleaner than any Native town I know of. The Deputy Commissioner has constructed good drains and roads in every direction; householders are made to keep the ground under, and in the immediate vicinity of, their houses clean; rubbish has been burned regularly. A privy with tubs has been constructed near the market place; and for the privilege of using which each stall-holder pays annually a small sum which defrays the cost of daily cleansing.

The Deputy Commissioner is about to erect another privy at O-gone, which is just outside the Fort ditch, as it is the halting-place for Shan travellers who pass through in thousands every year; it is much wanted, as they are in the habit of resorting to the neighbouring Fort ditch at present.

On the whole, sanitary matters, as far as they are under the control of the Deputy Commissioner, are satisfactory; but I fear the domestic arrangements are not equally conducive to good health, and they are entirely beyond control.

The total deaths during the seven months we have been registering them, all ages and sexes included, have been 169 (106 males and 63 females,) or at the rate of 30.11 per 1,000 per annum. This, taking the entire period since 1st October, gives an improved average from the last Report, when the deaths for the three months ending 31st December 1864 were at the rate of 36.56 per 1,000 per annum. The deaths in this latter period were very high, but the lower death rate since 1st January 1865, viz., at the rate of 25.32 per 1,000 per annum, has restored the balance.

Of the seven months, October has produced the heaviest mortality bill, viz., 36; and March the lightest, viz., 16. In my last Report I noticed the great disparity there was between the male and female death rate; this has been found not to have been the case for the last four months. The births have been again in excess of the deaths, viz., 135 births to 81 deaths, giving for the seven months ending 30th April 267 births to 169 deaths, or births in excess of deaths at the rate of 168 per annum.

No statistics regarding the infantile mortality can be given, as the infantile population has not been taken separately. Nor can the causes of death reported be all depended upon as correct; eight women have died in child-birth and 57 children under five years of age, nearly all of whom died of diseases of the lungs; they are reported by the Burman, who registers the births and deaths, as having all died of asthma! The Civil Dispensary is now open, and I hope it will help to diminish the total mortality for the year; it is resorted to by numbers of out-patients, they all know the benefit to be derived from the "white fever medicine;" and if we can induce them to adopt our dietetic system of treatment also when they are ill good results may be looked for.

T O U N G H O O :
The 7th June 1865. }

(Signed) W. KELLY, Asst. Surgeon, 3rd Regt., L. I.,
Offy. Civil Surgeon.

Public Sanitary Report of the Town of Shoaughyen for the year ending 30th April 1865.

THE Town of Shoaughyen has the reputation of being one of the most unhealthy in British Burmah. It is situated in a hollow to the south of the Military Cantonment. It is badly drained; no attention is paid to sanitary measures by its inhabitants; but there is reason to hope that the expected introduction of the Municipal Tax will tend to relieve that apathy, so natural to the Burmese race, in all matters connected with cleanliness so essential to health. Since the introduction of the registration system in October last, there were 156 births and 109 deaths; showing an increase of 47 to the general population.

The principal cause of mortality amongst the inhabitants during the past seven months has been fever, combined more or less with head symptoms and bowel complaints attributable in a great measure to neglect within the limits of their own buildings, which are invariably badly ventilated, filthily kept, badly drained, and the back of their houses are always more or less filled with over-grown vegetation and rubbish of all kinds, which they never attempt to clear or remove. The diet of the inhabitants is of a very meagre character, living, as they do, chiefly on carbonaceous (vegetable) diet, combined with fish, occasionally fresh but generally decomposed; in fact they scarcely partake of a meal without the use of gnappee or dried salt-fish, neither of which containing nutriment.

To these causes may be principally attributed the large amount of mortality so common among them. There are also other causes which operate in the production of a large number of deaths annually, and among these may be enumerated meddlesome or rude midwifery, in most instances marked by a gross display of ignorance and bad treatment, which, among a large number of children, tend to the production of convulsions, invariably terminating in death.

Vaccination during the year has been very successful, 465 in all underwent the operation; of this number only 85 proved a failure. I regret to say that the Vaccinator I had first engaged afforded me but little assistance, and I was obliged subsequently to dismiss him for incompetence and repeated neglect of duty.

I am unable to offer any opinion regarding the general health of the District, as owing to my transfer to Tounghoo, during the last cold season, I had not been able to make my customary tour.

S H O A U G H Y E N :
The 1st May 1865. }

(Signed) D. KEARNEY,
Asst. Surgeon in Civil Medical Charge.

Annual Medical Report on the Moulmein General Hospital for the year 1864-65.

Position and condition of Building.—A more convenient position for a public Hospital does not, perhaps, exist in Moulmein. It is equi-distant from both extremities of the town, and sufficiently removed from Native houses and public highways to secure quiet to the inmates. Its elevated position likewise secures at all seasons a refreshing breeze, and admits of a full view of the town, the river, and the hills in the distance.

The building consists of two stories; the lower is set apart entirely for Native patients and the upper for Europeans. The building is old and partially decayed, but is kept in habitable condition by constant petty repairs. When the new Hospital, now planned and estimated for, is in existence, the accommodation for in-patients, male and female, will be much more extensive; and as rooms have been provided in it for patients in the middle ranks of life, I have no doubt, many who are now obliged to secure private and expensive medical attendance at their own houses, will then prefer the regular and prompt attendance to be obtained at a public Hospital.

In March last our sick were removed temporarily to the Artillery barracks in the Cantonment, to admit of repairs to the Hospital; this occurred on the 20th March, and up to the 1st May the building had not been pronounced fit for re-occupation.

Establishment.—This consists of Mr. Assistant Apothecary H. Wells, and a staff of servants composed of freemen and convicts, the latter work well under direct supervision, but are unequal to independent action. There is neither a Dresser nor Native Doctor attached to the Establishment; and if Mr. Wells should at any time be incapacitated for duty, there is no one to take his place.

Medicines.—Are procured annually by Indent on the Rangoon Medical Store; and as there is no private Dispensary in the town, the General Hospital is the only source of supply for the inhabitants generally. To paupers, Government Officers and their families, medicines are issued gratis; all others are charged according to a tariff sanctioned by the Deputy Inspector General of Rangoon in August 1863.

Hospital how supported.—The Hospital draws its income from various sources. Up to January 1865 Government granted an allowance of Rupees 100 for the dieting of pauper patients, and Rupees 20 for contingencies; this has now been withdrawn, and the Hospital depends for its support solely on paying patients, and donations from shipping. This latter is demanded from each ship sending one or more sick to Hospital according to tonnage,—10 Rupees if under, and 20 Rupees if in excess of, 500 tons. In addition to this, Commanders of Vessels pay one Rupee for seaman, one Rupee eight annas for mates, and two Rupees for themselves, per diem, so long as they remain under treatment in Hospital. Native seamen, and other Natives who are in a position to afford it, pay eight annas per diem.

Public Health.—The town suffered severely from an epidemic of cholera, which commenced in February and continued with very little intermission until the commencement of the south-west monsoon in the latter end of April. It made its appearance in the District of Obo, the most northerly, crowded, and unhealthy locality in Moulmein; and, after raging there with great severity for several days, began its march in a southerly direction along the banks of the river. There the houses were most crowded together, and cleanliness least regarded, the disease prevailed with the greatest virulence. One District in the neighbourhood of the Jail, that of Nyabusthee, a low-lying and badly drained locality, where the aerial currents in calm weather seldom penetrate, afforded an opportunity for the disease to display its most deadly effects, which it did not neglect to lay hold of. Here alone, by account, there were more casualties than in all the southern portion of the town put together.

It would, indeed, be a great boon to Moulmein if this Native part of the town could be completely cleared away; its open cess-pools and choked-up drains are the fruitful source of fever and bowel affections to hundreds who live in the vicinity. It has been asserted that cholera and small-pox never exist, in an epidemic form, in the same locality and at the same time; and that the atmosphere favorable to the one is ungenial to the propagation and extension of the other. Last year small-pox, in an epidemic form, with its cognate diseases, measles and chicken-pox, preceded and co-existed with the epidemic of cholera; and although there were only a few casualties from small-pox, its seizures were numerous.

Notwithstanding the apparently general prevalence and mortality of both these diseases among the Native population of the low-lying Districts, the Quarterly Registration Return of Deaths exhibited only, up to the 31st March, 64 deaths from cholera and 32 deaths from small-pox for the whole town of Moulmein. Such a small mortality from, and it may be inferred, a correspondingly mild type of these diseases can only be ascribed to the improved sanitary condition of the town.

Operations of the Conservancy Gang.—The conservancy gang have been steadily at work throughout the year; and although their operations have been chiefly confined to maintaining the ditches, drains and pathways near the main thoroughfares in a cleanly condition, still I think that, considering the limited number of the gang, and the restrictions they are placed under with respect to entering and inspecting private enclosures, they have effected much good towards the maintenance of public health.

It must, however, be admitted that the town is very far from having attained that degree of cleanliness which its advantages as to position and soil would lead one to expect. The condition of the drains and pathways, near public highways, may be carefully attended to; but if the occupants of houses in the vicinity do not co-operate in providing for the safe disposal of the refuse of their houses, the efforts of the conservancy gang are at once nullified. There are no Regulations, I believe, by which the Native population can be compelled to attend to the sanitary conditions of their dwellings; and, in the absence of such, they invariably make use of the nearest excavation for the reception of all sewage matter.

Season.—Independent of these epidemic sources of disease, the seasons have exerted their usual influence on the public health. During the rainy season, which last year commenced early in May, and terminated in the end of September, affections of the stomach and bowels were the most prevalent causes of sickness; from the end of the rains until the end of January, during the easterly winds, fevers predominated; and again during the hot seasons from February to May. The Native inhabitants appeared to enjoy comparative exemption from sickness, if, we except the epidemics of cholera and small-pox which made their appearance at this period of the year.

Fall of Rain, hot season following.—Last year has been characterized by an unusually heavy monsoon, 20 inches having been registered as the season's fall of rain,—the heaviest fall, 60 inches, having occurred in the month of July; and, by an inordinately high temperature during the hot season, the thermometer in shade having frequently stood as high as 96° and 98°.

Immigrants.—From September to December, inclusive, there is annually an influx of a large number of immigrants from the Coromandel Coast. These unfortunate individuals are, from the want of any public provision being made for them, crowded into badly ventilated houses, in differently clothed, and insufficiently fed,—as a consequence, large numbers of them die off during the first few months of their residence here. My Hospital Returns show that several hundred out-patients applied for relief in those months on account of fever and affections of the stomach and bowels, and that a large number of in-patients came under treatment for the same cause. The majority of these cases were Hindoo and Mahomedan coolies who had recently arrived from India.

Sanitary condition of the Town with reference to Public Health.—The town of Moulmein stretches over an area of about seven miles in length, and $\frac{1}{2}$ mile in breadth. It is bounded on the east by a range of hills, and on the west by the river, formed by the junction of the Gyne Attaran and Salween. The Native portion of the town extends along, and occupies, the entire bank of the river; the residences for Civil Officers, merchants and others being more inland, at the base and along the declivity of the hills. This area is intersected at irregular intervals by nullahs or water-courses, the majority of which are subject to tidal influence, and whose sides, banks and beds are covered over with silt deposited from the river water at each flood-tide. This noxious material not only exists in the nullahs, but also under the houses on the lowland, near the river-bank, which, at high spring tides, is completely submerged.

The houses in these localities are generally, on this account, much more elevated above the ground than others on a higher level. Still the tide often reaches as high as the floor of the dwellings, and on subsiding leaves on a deposit of mud on the posts and ground underneath. With such a large surface of decomposable matter, malaria, in all its intensity, must be rapidly and abundantly evolved. It is accordingly found that those who reside in dwellings situated on lowland in the vicinity of the river's bank, or near nullahs, suffer more from sickness than others differently circumstanced. It would be vastly conducive to public health if these marshy localities could be shut out from the influence of the tide by a sea wall, and the beds and sides of the nullahs converted into clean channels by brick work raised, so as to allow the water to have free exit.

Most prevalent diseases in Moulmein.—Natives of India, in their closely packed and badly ventilated dwellings, suffer more comparatively from miasmatic diseases than Burmese who

live in open and widely scattered bamboo or wooden buildings, and it is accordingly found that both among in and out-patients, the former are much more frequent applicants for medical aid than the latter.

During the past year, intermittent fever, rheumatism, diarrhoea, atrophy, syphilis, ulcers, and incised wounds, have been the diseases of greatest prevalence among the Native in-patients; and among the out-patients, fever, diarrhoea, syphilis, constipation and ulcers. The casualties among the Native in-patients have amounted in all to 55; 24 of these have occurred from diarrhoea, two from acute dysentery, two from cholera, one from secondary syphilis, five from anasarca, one from paralysis, one from pneumonia, one from acute inflammation of liver, and 18 from atrophy. It is almost unnecessary to add that, in a large proportion of these cases, the diseases had been of such long standing, and had so thoroughly undermined the patient's constitution, that treatment proved of little avail.

Of out-patients 2,949 have applied for relief, which, with 17 remaining on the List on the 30th April 1864, gives a total treated of 2,966. Of these 2,942 have been discharged as cured, 16 ceased to attend, and eight still remain under treatment. The result of the treatment in cases of out-patients it is impossible accurately to ascertain; their attendance often ceases abruptly, and there is no means of finding out how their cases terminated, no doubt many of those discharged cured suffered from relapses which terminated fatally.

The number of Native in-patients is slightly less this year than what was exhibited in the Return for the year ending 30th April 1864, but the number of out-patients exceeds that shown last year by 1,000.

European Patients.—Among European patients there have been seven deaths, two from typhoid fever, two from cholera, one from delirium tremens, one from sun-stroke, and one from poisoning, out of a total of 335 treated. The two fatal cases of typhoid fever occurred in the month of September. The Vessels to which these men belonged had been moored close to a large mud bank and swampy ground at Moopoon, and no doubt they contracted their diseases from this source. Five other instances of this disease were admitted from Vessels similarly circumstanced to the others, but they recovered. The two cases of cholera were brought to Hospital in the collapsed stage, and died,—one an hour after admission, and the other after a few hours. One death from delirium tremens in the person of a habitual drunkard; one casualty from sun-stroke in the person of a robust and plethoric seaman,—he was brought to Hospital in a comatose condition, and never rallied; one death from poisoning by opium,—the Mate of a Vessel; he had swallowed four ounces of laudanum, and a bottle of gin at 9 o'clock A. M., and was not brought to Hospital till 2 P. M. He was then comatose and moribund. Treatment by the stomach-pump, emetics, &c., proved of no avail, and he died at 5 P. M.

The Hospital depends almost entirely on the shipping for this class of patients. The daily number of sick being rather an index of the number of Vessels in Port than of the prevalence of disease among Europeans in Moulmein. Fever, diseases of the stomach and bowels, and syphilis, are the diseases usually contracted by seamen,—and exposure to the sun, with intemperance in eating, drinking, and sensual indulgence the exciting cause.

Compared with last year the admissions and casualties are as follows:—

	1863-64.	1864-65.
Total of—Europeans	113	335
Native in-patients	589	526
Native out-patients	1,997	2,966
Deaths	64	62

The cause of this increase is no doubt attributable to,—first, a larger number of European Vessels in Port; second, a better understanding among Natives of the rules in force regarding payment for medicines. When these Regulations were first introduced, in August 1863, there was a general impression that rich and poor were to be charged alike.

Conservancy.—During last year I introduced the dry system of privy, both among Europeans and Natives. This consists of one building divided in the centre by a wooden partition,—in the European half night chairs are the receptacles of the ordure; but for the natives I have employed glazed earthenware chatties, one behind for fecal matter, and one in front for urine, placed at regular intervals round the interior of the building on a laterite floor. The contents of these vessels are removed in glazed earthenware jars morning and evening, and deposited in the jungle. The privy is above 20 yards distance from the Hospital, and a covered-way affords protection to the patients to and from the building.

Vaccination.—I have reported separately on this subject. The Establishment, consisting of two Burmese and one Hindoo Vaccinator, and the Assistant Apothecary at the General Hospital as Superintendent, have been hard at work since the 25th December 1864. The result of their labors I have transmitted to the Deputy Inspector General at Rangoon.

Registration of Births and Deaths.—With regard to the registration of births and deaths, and the causes which have given rise to the latter, the information is as yet too meagre to form any definite conclusions as to the general results to the population. I may, however, mention their unfavorable nature as yet, as far as regards increase of population, the deaths for the two Quarters which have been registered, holding a preponderance over the births, which no healthy town ought to exhibit. The total deaths registered for two Quarters amounted to 550, and the births for the same period amounted to only 403, giving an excess of deaths over births of 147; and with reference to the nature of the casualties, the 1st Quarter, terminating on the 31st December 1864, exhibited fever, old age, atrophy, small-pox, and dropsy, as the chief causes of mortality; 241 deaths out of 289 having been occasioned

by these diseases, whereas in the 2nd Quarter, terminating 31st March 1865, atrophy, cholera, fever, small-pox, and old age, were the prevailing causes of death, amounting for 208 casualties out of a total of 261. In the 1st Quarter fever seemed to be the disease of greatest prevalence and fatality, and in the 2nd, cholera and small-pox.

Conduct of Establishment.—Mr. 2nd Apothecary Sausman, my Assistant at the General Hospital, was, on his promotion in April last to his present rank, removed to do duty with Her Majesty's 60th Rifles at Rangoon, and Mr. Assistant Apothecary H. Wells was appointed by Government order to take his place. Mr. Wells has held his post for too short a time for me to give an estimate of his capabilities; but, judging from his antecedents in the Military branch of the service, I think there is little doubt of his performing the duties of his appointment with credit to himself and advantage to the Institution. The convict servants and freemen do their duty well, the former have been attached to the Institution for years, and, by long practice and experience, have become valuable members of the Establishment.

Finances.—The funds now in the Treasury at the Hospital's credit amount to Rupees 4,900-7-0; this sum is the result of successive accumulations from three sources:—*first*, donations from shipping; *second*, sale of medicines, and *third*, paying patients. The sum realised up to date for the first amounts to Rupees 2,890, for the second Rupees 1,610-7-0, and for the third Rupees 400. Besides this there is a balance in hand of Rupees 144-13-4. The total receipts for the year, including Government subscription, amount to Rupees 5,262-7-0; and the total disbursements, excluding pay of Establishment, Superintendent's allowance, and pay of servants, Rupees 2,821.

MOULMEIN;
The 1st May 1865. }

(Signed) GEORGE MARR, M. D.,
Civil Surgeon.

Annual Report on the Sanitary state of the District of Tavoy during 1864-65.

DURING the year there have been only 2,376 admissions into the Civil Charitable Dispensary; of these 308 were for fevers, 528 for bowel complaints, 74 for chronic and acute rheumatism, 161 for lungs, 148 for disease of the eye, which have been the prevailing disease. Besides these, the following diseases have been admitted, viz., disease of the skin, liver, spleen, ear, venereal, ulcers, wounds and other diseases,—these cases of liver and spleen were of a simple painless character, except two liver complaints; the other cases were of a mild character and yielded readily by the ordinary treatment. By far the larger proportion of these were residents in the town, about 300 of the cases treated were from the interior of the District.

The thermometer has ranged between 96° in April and 84° in December. The rainy monsoon commenced about the usual period, viz., 10th May, and terminated about the 16th October. The amount of rain during the year was 151½ inches,—the greatest amount registered in any one day was 4½ inches on the 14th July; the greatest fall in any single month was 50½ inches in July.

The Vaccinator C. Appasawmy has performed the vaccine operation to a great number of children both in the town and in the District, the total number vaccinated from 1st August to 30th April was 211, of which 143 proved successful, 54 unsuccessful; 14 cases were doubtful. The vaccine matter first made use of was sent from Calcutta, but was of no use. The Superintendent of Police at Tavoy brought with him some fresh matter from the Moulmein Hospital, which was used with success; he himself also was vaccinated at Moulmein, and the operation has been most successful; several persons here were vaccinated from this, so the supply was kept up.

There were only two cases of small-pox. It was brought from Moulmein; both were children who were attacked, but it was very mild and did not spread further.

Public Health.—The Station has been free from any kind of epidemic visitation during the year.

The Civil Hospital building was described in Civil Surgeon J. P. Cromarty's Report of 1863-64, dated 10th May 1864, but no answer has yet been received, and I think the building will shortly become unserviceable.

TAVOY;
The 15th June 1865. }

(Signed) SHAIK KHADUN HOOSSAIN,
Native Doctor.
C. APPASAWMY,
Vaccinator.

Sanitary Report upon the Town of Mergui for the year ending the 30th of April 1865.

Position of the Town.—The town of Mergui occupies a site, which, in tropical countries, cannot but be regarded, at first sight, as highly insalubrious. It stands on the northern extremity, close to the sea, of a small island formed by the divergence of two branches of the Tenasserim River, and their subsequent reunion just before they discharge themselves into the sea near the Archipelago of the same name. Its position presents in itself the most complete combination, it is possible to imagine, of all those circumstances which, experience has shown, prove detrimental to the development of man's physical and mental endowments, the rearing and bringing up of children, and the duration itself of human existence. There is an elevation in it of but a few feet above the level of the sea, with a close proximity to its coast. There is in its near vicinity the embouchure of a large river, whose ebb-tide daily exposes to the solar beams banks of mud upon which its receding waters have deposited a layer of

decaying animal and vegetable substances of immense extent; there is a deep, rich, and absorbent soil which teems with the lower grades of animal creation, to the nourishment and generation of which a rank and exuberant vegetation contributes; and there is a surrounding country sparsely cultivated and covered, for the most part, by dense jungle. Yet Mergui is an eminently healthy town in spite of all this, and its inhabitants (mongrel race though they be) vigorous and robust, abundantly intelligent, and displaying in their appearance no tendency to premature decay *individually*, and assuredly the absence of sturdy children from the streets would not fill a visitor with any apprehensions for them *collectively* on this head, or strike him as by any means a noticeable feature in the town.

2. *Climate.*—An attempt to fully explain this anomaly would carry me beyond the scope of this Report, and would be open to the objection that, however interesting to me, it might be a trespass on valuable time elsewhere; while it cannot be denied that it offers a very encouraging prospect of success, when we reflect how numerous and how complex are the conditions which the word *climate* embraces, and how comparatively few of those atmospheric changes and states which exercise an important influence upon it admit of ascertainment otherwise than by a long series of attentive and minute observations, which demand, at the hands of those who would make them to any purpose, not alone patience and accuracy, not alone a logical mind and a trained understanding, not alone a thorough acquaintance with the pure as well as the natural sciences, but a quality which is much more rare than these (and these are, in truth, sufficiently uncommon)—a quality which is satisfied to see honest mediocrity appropriate the prizes of life, and the training of the Grammar School sufficient for the occupation with dignity of a seat in the high places; the quality of *enthusiasm* which sees in its own peculiar occupation neither the road to wealth, distinction, or fame, nor yet again a life of toil, or drudgery, or thankless labor; but rather the source of the most enjoyable of human pleasures, and the noblest of human pursuits.—A quality, I may observe, which has conferred great benefits on mankind, but has seldom brought to the individual who possessed it any remarkable degree of prosperity. The man, of old, who avowed his belief in the superior excellence of leather possessed the faculty in an eminent degree. He made good boots. I am confident, and so was a benefactor of his fellows; but that he was an unsuccessful tradesman, and that, sharing the fate of enthusiasts in general, he sank into abject poverty in his old age, I have not the slightest shadow of doubt.

3. In lieu of the attempt alluded to I may be permitted to suggest the sources whence this salubrity is acquired—

First.—The coast line, running for many miles in a direction north-east and south-west, dips inland on either side of the town, constituting its position a small head-land or cape, and so giving the trade winds, at all seasons of the year, the character of a sea breeze, and an unobstructed course over it, whilst the easterly winds are completely shut out by a range of hills at no great distance from the Station.

Secondly.—The production of vertical movements in the atmosphere, by means of the horizontal currents of air which set in motion by the ever-varying relative temperatures of the gulf of Siam and the Mergui Archipelago, are constantly passing to and fro above the town. That such horizontal currents do exist may be proved on any fine still-day; all the year round the light fleecy clouds in the upper regions of the atmosphere will be seen travelling either from east to west, or west to east, though there be not a breath of air stirring near the earth, or even though there be a strong breeze blowing from the south or the north. That the ascending columns of air, which receive their motion from the higher currents more than from their own rarefaction, should carry away with them (to be diffused through the upper strata of the atmosphere) not alone those gaseous emanations which, extricated by heat from dead animal and vegetable matter, ordure, ditches, drains, &c., act unfavorably on the human constitution, but even actual portions of such matter dissolved in the suspended moisture, as well as all those noxious exhalations from swamps, and land lately cleared and exposed to the sun's rays whence originate some of the most fatal diseases with which man has been afflicted, scarcely admits of doubt.

Thirdly.—The substratum on which the soil I have described rests is composed of alternating layers of micaceous sand, gravel and mud mingled with sandstones of small size. This formation—produced in all probability by the *debris* of the underlying and adjacent rocks, detritus deposited by sub-marine currents, and alluvium brought down every successive wet season by the river—is well calculated to allow the rain to percolate through it, washing, thus, away all decomposing substances, and rendering their disintegration no longer a source of danger or annoyance.

Fourthly.—The surrounding country, though uncultivated and covered with jungle, is diversified by numerous and lofty ranges of hills, to whose sides and summits—in order to feed the luxuriant vegetation (much of which has no other source of nutriment) which clothes them—are attracted fogs, and mists, and vapors. Here, under the influence of the sun's light, these are decomposed and purified. Their aqueous particles are parted with to supply the wants of growing vegetable tissues; the dead of myriads of insects, and the minute decaying organisms which float in them, are deposited upon the foliage and rootlets of epiphytes for the same end, and their noxious gases are exchanged for one on which depends the vigour and health of all air-breathing animals.

Fifthly, and lastly.—The mean temperature is not high, and the variations in it are not great. There is never great heat and there is never—what I am strongly inclined to regard as not a whit less injurious to the health of the races dwelling on these coasts—great cold. The nights are always cool enough to remove from the system the effects produced by the days'

heat, but seldom so cold as to depress it, and leave it towards morning a prey to whatever morbid influence may reach it.

4. *Features of the Town.*—Mergui is composed of what were originally really distinct villages, but are now semi-detached districts still retaining their old names, is built in a somewhat circular form round the base of a hill which may be roughly described as about one hundred and twenty feet high, half a mile in length, and a hundred yards or so in width. It is surrounded through a great part of its circumference by the river, and a large creek so called but really a stream which falls into the Tenasserim south of the town. Down to the water's edge of these, the houses are erected in the usual Burmese manner without reference to any thing like regularity. They are surrounded too after the same manner, each by a small plot of ground which is covered with wild and rank vegetation, and made to support in every available nook and corner a fruit tree of some kind, but most generally a coconut or betel nut tree.

5. Several good roads run through the town, and they are pierced by well built brick culverts, and have tolerable drains along their edges; but the lanes and bye-ways are neither good nor well kept.

6. There are no public (and but very few private) latrines, and no sewerage, while in many places the surface drainage is extremely defective. Nor are there Scavenger-carts, or any Conservancy Establishment, whatever to compensate for this state of things.

7. *Population and Health.*—The population numbered during the year 1857; and though the number of deaths which occurred was large, still when we consider that a very large proportion of them took place amongst very young children, and were far more attributable to unsuitable alimert, bad nursing and general want of maternal care, than to actual disease or morbid atmospheric influences, it will not be unfair to describe the health of the people to have been extremely good.

8. *Prevailing Diseases.*—The only diseases that can be described under this head were those which are the prevalent diseases all over Burmah, intermittent fevers and disorders of the digestive system. When the former of these proves fatal here, it is almost invariably complicated with the latter.

9. No epidemic or unusual source of disease appeared during the year.

10. *Future Conservancy.*—Though the condition of things which I have attempted to describe is, on the whole, not unsatisfactory, I would, before concluding, earnestly recommend to the Chief Commissioner's notice the very great advantages that must of necessity result from a proper system of Conservancy being adopted in this town for the future.

I do not mean any very expensive or elaborate system, or such as the Bazaar Fund could not be made to support. The main features of such a one as I would suggest would be the erection of a public privy in each District (and from conversations I have had with residents of some of these Districts, I am inclined to think that the people themselves would willingly subscribe money sufficient for such buildings, provided the management of the whole matter was left in their own hands) the provision of two good Scavenger-carts for the whole town, and its entire and complete control centred in the Sanitary Officer.

MERGUI;
The 15th May 1865.

(Signed) J. McNEALE DONNELLY, M. D.,
Civil Surgeon.

Report on the Sanitary state of the Town of Akyab.

This town has attained an unenviable notoriety for filth and general want of Conservancy arrangements. I propose to inquire into the condition of the several quarters into which the town is divided,—and first I may remark on the state of the market places properly so called, of which there are three.

Market Bazaars, No. 1.—Immediately on entering the town by the Strand Road from the south stands the bazaar on the right, known as Halliday Bulloch's Bazaar, which, like the one adjacent to it, has a frontage to the river. The atmosphere in this vicinity is charged with noxious effluvia, which at once address themselves to the olfactory nerves. An inspection of the interior speedily satisfies as to the origin of all the smells of the neighbourhood. In the first place the enclosure is much too crowded with stalls, and early in the morning it is scarcely passable from the number of purchasers resorting to it; secondly, the rows of sheds are absurdly close to each other, there being little more than 12 feet of an interval for ventilation and traffic,—this interval is further closed in here and there by matting as a protection from the sun; thirdly, the evil effects of crowding and deficient ventilation might be partially neutralised were the bazaar kept clean, but I may unhesitatingly say that I have seldom witnessed in the District Indian village a more filthy state of things than is here observed,—decaying vegetable and animal matters seem to form the surface soil, and exposed as it is to the direct rays of the sun the resulting effluvia may readily be imagined. There is an utter want of surveillance, apparently on Drainage and Conservancy arrangements; so, taking it as a whole, I look upon this bazaar as a nuisance to the neighbourhood. [This market has recently been thoroughly cleaned up, as reported by the Commissioner.]

No. 2.—The Government Bazaar, in immediate proximity to the last, is spacious, roomy and well-ventilated and moderately clean, though there is still room for improvement in the latter particular. With all its advantages, however, it is strange how few buyers and sellers resort to it, and I fancy the greater latitude and cheaper accommodation they enjoy in the private bazaar are the sources of its success and of the failure of the other. Until the supervision of the former is undertaken by Government, and sanitary measures insisted on, few will be induced to open shops in the public market.

No. 3.—The Shwoay Bya Bazaar near the Cherogia Creek is still in its infancy as far as buildings are concerned, there is but one pucca shed for the sale of fish, the others being tumbled-down rows of stalls. It is not much frequented. There is here also a want of cleanliness; but, from the character of the buildings composing the market, it is more to be excused than in the case of the others already noticed.

Public Bazaars, No. 1.—The high road to the Cherogia Creek passes through the heart of the town, dividing it unequally into a right and left quarter. The Fisherman's Creek again crosses this road at right angles subdividing these parts. The Jahoung or old bazaar extends in length from Messrs. Halliday Bulloch's Bazaar to the Fisherman's Creek, a distance of about 800 yards, and in breadth from the main road to the river bank about 250 yards, comparatively speaking it is the most crowded portion of the town, and affords ample scope for sanitary improvements, especially along the river face. The receding tide leaves behind it a broad expanse of mud and decaying animal and vegetable matters thrown out from the dwellings adjacent or carried down by the river. The rear of the houses in this locality are in a very filthy state, and being out of view escape observation. Refuse of all kinds is thrown out and left to rot in the sun, decomposition being favored by frequent admixture with filth from the houses. The beach seems to be the general resort of the inhabitants for purposes of nature, since the Police have been more on the alert for nuisances committed in the public streets. Such is the state of the beach as far as Fisherman's Creek. This creek requires also special mention as a most likely source of noxious pestilential odours. Its bottom consists of black mud, which is left by the receding tide fully exposed to the rays of a hot sun; as it is much frequented by boats, the refuse filth thrown overboard forms, with this decomposing matter and mud, any thing but an inert compound. There is an objectionable system of little offshoots from this creek stretching into the very heart of the bazaar, up which the Natives haul their boats and thus effectually choke up the little drainage there is into the main creek. In addition, these little offshoots afford a nidus for rank vegetation, filth and stagnant water, foeted sources of bad unwholesome smells and malaria.

The old bazaar is much intersected by roads and cross-roads, I notice some improvement in the cleanliness of these passages, especially in quarters inhabited by Chinese, but there is yet much to be done by efficient Conservancy arrangements. Though the thoroughfares are possibly clean, yet underneath the houses and in the compounds much may be done in the way of cleaning and cleansing. Seldom do householders see the necessity of this,—rubbish of all kinds which is thrown under the houses and there it accumulates, so it is with vegetation which is allowed to grow unheeded till choked by its very luxuriance. This latter state pertains especially to that part of the old bazaar near the Fisherman's Creek.

No. 2.—The Shwoay Bya Division of the town is that extending on the right of the main road from the Fisherman's Creek to the Cherogia. It is of greater extent and more thinly populated in proportion than the others, it is mainly inhabited by Mussulmen, and is by far the cleanest part of the town. This doubtless is due to the smaller population and to its proximity to the river bank, but the houses and compounds appear to be in better order, and the cross-roads and open spaces do not appear to be so frequented for filthy purposes.

No. 3.—There seems to be some difference of opinion as to the nomenclature applied to the other part or parts of the town, but as a distinct idea of the quarter alluded to is all that is requisite in this Report, I shall designate all that portion to the left of the high road to Cherogia as the Ruagye Quarter. What I have already remarked in connection with the old bazaar refers even in a greater degree to this; it is not so thickly populated as the other, and in consequence there are many open jungle spots which, as evidenced by the horrible smells, are the morning and evening resort of the inhabitants, and the receptacle of refuse and filth of every description. Here, too, the terminal branches of the Fisherman's Creek ramify invitingly in like manner through a reception of filth, and encouraging the growth of rank grass and weeds which choke the little drainage there is, and convert what might be made useful streams of water into stagnant loathsome nuisances.

As in the old bazaar first noticed, so is it here, but to a much greater extent, these narrow creeks are converted by the inhabitants into docks for their boats, which may be seen moored in large numbers wherever water is found sufficient to float them.

At the present season, of course, they are all nearly dry; but nevertheless the muddy basin forms a ready means of transit for boats.

Opium and Toddy Shops.—I may here remark on the condition of opium and toddy shops, by saying that one and all are miserable, dirty, ill-ventilated hovels. The only aim of the proprietors seem to be to make money at the expense of the comfort, and well-being of their customers. The opium shop more especially deserves the stigma of the filthiest hovel in the bazaar.

Considering the large profits realised by the proprietors of these Establishments, it would be but fair to insist that better accommodation be provided, and that cleanliness and ventilation be scrupulously attended to.

Drainage.—The ditches throughout the town require more attention. They are of irregular depth and width, and are far from clean; consequently during the rains they seem to lodge water rather than carry it off. This brings us to the difficult questions of drainage, difficult on account of the low-lying position of many parts of the town. I confess I scarcely know how it could be satisfactorily drained; but my idea would be to have several large and deep tanks dug throughout the town, each with a system of concentric drains leading to it. It would be the least expensive system; and in the dry whether the tanks would serve as reservoirs of water, the porosity of the soil would obviate the probability of the tanks overflowing during the rains under any system, the supply of manual labor would require to be liberal owing to the very

rapid and luxuriant growth of vegetation during the damp weather, which would soon choke up the drains and convert the tanks into huge fermentation vats. The quarters of the town fronting the river are sufficiently elevated to admit of drainage into the river; and were the present drains deepened, and kept in good order, the result I think would be all that could be wished for. I have already alluded to the practice of hauling up boats into the off-shoots of the Fisherman's Creek. This should at once be put a stop to, and boats on no account should be allowed to pass beyond the second bridge. The offshoots might then be thoroughly cleaned, and rendered of some utility as drains.

Privies.—The subject of public privies is one of equal importance with drainage; and until some regular system is established, we cannot hope for any degree of sanitary improvements to ensure success. These privies would require to be numerous, scrupulously clean, and well attended to. They should be in the proportion of eight to ten seats per 100 of inhabitants, any nuisance committed in the public streets should be most severely punished.

Conservancy Staff.—In connection with a system of drainage and privies a regular Conservancy Staff of coolies, men and carts, under the direction of well-paid, intelligent and active Supervisors, would require to be organised. The work of cleaning would at first be great; but when once fairly started, it would be regular and easy. Certain localities might be selected, and householders enjoined there to deposit, at their own expense, all their domestic refuse, which again would be carried off to a distance from the bazaar by the carts every morning. In this way house-owners might be held responsible, not only for the state of their own dwellings, but for the road immediately fronting them.

The convict gang, as at present constituted, is utterly useless, and should be stopped forthwith. They are not strictly supervised, consequently do an infinitesimal quantity of work, enjoying at the same time the society of their relatives and friends in the bazaar. No wonder, then, that the town gang should be much sought after by the prisoners.

The sanitary condition of the bazaar is a subject of much moment, and one which influences the moral as well as physical welfare of the whole population.

I would, therefore, in conclusion, beg to draw the earnest attention of the Chief Commissioner to its most unsatisfactory state.

AKYAB;
The 1st May 1865.

(Signed) L. H. LEES, M. D.,
Civil Asst. Surgeon.

Statistics of Births and Deaths in the principal Towns of British Burmah for the seven months ending 30th April 1865.

Division.	Town.	Population.	Total of Births and Deaths for seven months ending 30th April 1865.		No. of Births and Deaths.		Rates per thousand for a year.	Difference between the Births and Deaths for seven months.
					Males.	Females.		
Arracan.	Akyab	15,510	Births	364	199	165	40.2	+ 61
			Deaths	303	186	117	33.5	
	Rangoon	63,256	Births	577	328	249	15.6	+ 58
			Deaths	519	298	221	14.4	
Pegu.	Bassein	24,907	Births	552	284	268	38.2	+ 225
			Deaths	327	173	154	22.5	
	Prome	22,213	Births	506	294	207	38.9	+ 15
			Deaths	521	294	207	40.1	
Toungoo.	Thayet-Myo*		Births	1,755	937	818		+ 328
			Deaths	1,447	732	695		
	Henzada	9,239	Births	170	98	72	31.5	+ 37
			Deaths	133	72	61	24.8	
Tenasserim.	Myanong	5,125	Births	13	6	7	30.4	+ 7.0
			Deaths	20	10	10	46.8	
	Toungoo	9,628	Births	267	166	101	47.5	+ 98
			Deaths	169	106	63	39.1	
Tenasserim.	Moulmein	68,309	Births	419	249	170	10.5	+ 139
			Deaths	558	330	228	14.1	
	Tavoy	13,336	Births	345	166	179	44.3	+ 220
			Deaths	125	61	64	16.7	
Tenasserim.	Mergui	9,657	Births	295	152	143	52.4	+ 113
			Deaths	182	99	83	32.3	
	Shoogyen	7,702	Births	156	71	85	34.7	+ 47
			Deaths	109	55	54	24.3	

* Thayet-Myo includes (3) three towns (besides Thayet-Myo beyond Municipal limits.) The aggregate population of which appears to be inaccurately recorded, and is therefore omitted.

RANGOON;
The 1st August 1865.

(Signed) G. E. FRYER,
Asst. Secy. to the Chief Commr. of British Burmah.

Return of Births and Deaths among different Races in the principal Towns of the Province of British Burmah for the seven months ending 30th April 1865.

Towns.	Division.	Arracan.		Pegu.		Tenasserim.		Burmes.		Toungoo.		Moulmein.		Shoogyen.		Mergui.		Tavoy.		Total.		Remarks.
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Akyab	Arracan.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	Sexes not given separately.
Rangoon	Pegu.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	Under Thayet-Myo are included Thayet-Myo beyond municipal limits, Thayet-Myo within municipal limits, Mong Ong Kama, and Munday.
Bassein	Pegu.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	The particulars are given for one month.
Prome	Pegu.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	Sexes by races not given for the months of October, November and December 1864.
Thayet-Myo	Pegu.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	Of these 136 were Burmes. Sexes of the races not given.
Myanong	Pegu.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	
Henzada	Pegu.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	
Shwedong	Pegu.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	
Toungoo	Pegu.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	
Moulmein	Tenasserim.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	
Shoogyen	Tenasserim.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	
Mergui	Tenasserim.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	
Tavoy	Tenasserim.	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	100	129	

(Signed) G. E. FRYER,
Asst. Secy. to the Chief Commr. of British Burmah.

RANGOON;
The 1st August 1865.

HOME

(1865)

DEPT.

Public.

From the Chief Commissioner of British Burmah

No. 315.
1 printed Enclure

Dated 2nd } October.
Recd. 13th }

Acknowledges letter No. 1679, dated the 5th ultimo, and reports on the subject of Sanitary Supervision in the towns of British Burmah.

29 July 1865

to P. L. No. 1635 of 1865

Prog. Sept. 1865, Nos. 2 and 3.

From C. BERNARD, Esquire, Secretary to the Chief Commissioner of the Central Provinces, to E. C. BAYLEY, Esquire, Secretary to the Government of India,—No. 3914—328, dated Camp Jubbulpore, the 16th December 1866.

I AM desired by the Chief Commissioner to acknowledge the receipt of your letter No. 1681 of the 5th September 1865, to which your No. 4490 of the 12th ultimo calls attention, on the subject of sanitary supervision in the towns and districts under the jurisdiction of the Civil Authorities; and to report, as follows, for the information and orders of His Excellency the Governor General of India in Council.

2. The scheme proposed by the Sanitary Commission for Bengal in their letter No. 620 of the 5th September 1864, which formed the enclosure of your first letter under acknowledgment, appears to be the organization of a general sanitary system for the whole country, with the system followed in Military Cantonments fitting into it, and forming an integral whole. Thus in the interior, in all places or circles fixed by the Local Government, there would be local Committees with the Magistrate of the District as the responsible head of all. At the head quarters of each district there would be Committees formed of the principal Civil, Military and Medical Officers of the District or Division, the Civil Surgeon being Health Officer or Secretary of the District Committee. At the head quarters of the Administration there would be a Department of Public Health under the orders of the Local Government for the supervision and control of the sanitary service of the Province, with the Inspector of Prisons as the Principal Health Officer at the head of the Department. As regards finance, the cost of all local works of sanitary improvement, and of carrying on the local sanitary service, would be borne by the local funds,—the only expense proposed to be charged to Government being the cost of the Central Establishments of general supervision and control. And, finally, that the whole system of sanitary administration should rest on a basis of good Municipal Law, making it possible everywhere to enforce all the Regulations necessary for the protection of the public health, safety, and convenience, to which end fresh legislation was required.

3. Such a system, on such a basis, is, no doubt, a great desideratum, and in its main features has probably met the approval of the Government of India. It was in view to the establishment of some such a system that I was desired, by the Chief Commissioner to submit, with this Office letter No. 599—60 of the 11th February 1865, a draft "Bill to provide for the appointment of Municipal Committees for cities and towns in the Central Provinces," on which no expression of the pleasure of Government has yet been communicated. In that letter it was shown that though, under the Foreign Department despatch No. 5084 of the 27th October 1860, authority existed for the levy of town duties in any large town in the Province of Nagpore on condition that the proceeds of such duties were devoted to Municipal purposes, which authority had the force of law under Section 25 of the India Councils Act, yet there was no law under which evasion or refusal to pay those duties could be punished, or which authorized the formation of local Committees with power to frame bye-laws on matters connected with conservancy, or for the prohibition and removal of nuisances which are not public or common nuisances under the Indian Penal Code.

4. The defect is in a measure remedied by the extension to such octroi paying towns of Section 34 of Act V. of 1861 which provides for the punishment of nuisances committed, as defined in that Section. The local Committees composed of the more influential Native gentlemen resident in such Mofussil towns, with the Tehsildar in most places as Vice-President, and the Native Doctor in charge of the Dispensary, where such an Institution happens to exist in the town, as Member—acting through the Police, are thus enabled to enforce the observance of conservancy; and in this they are moreover, guided by a set of simple rules prescribed in this Office Book Circular* No. V., dated 27th March 1865, for general information and guidance. But the sphere of

* This copy may be obtained from the Central Provinces Government Office, or from the Secretary to the Government of India, or from the Secretary to the Government of the Central Provinces.

and published in the Central Provinces Gazette.

action of these Mofussil Committees is still limited; and the absence of power to frame bye-laws having the force of law, to suit local peculiarities and requirements, is much felt.

5. A good beginning has, however, been made, and a foundation laid for the establishment of a general sanitary system throughout the country, such as that sketched by the Sanitary Commission for Bengal, should the Government of India in its legislative capacity approve and give legal basis to the scheme. The progress made under the existing system, such as it is, though not all that could be desired, is yet in most places as much as could be expected from the funds available for the maintenance of good conservancy and local improvements generally. The Chief Commissioner has during his tours seen many of these cities and towns in the interior, and has addressed the Commissioners of Division on many points connected with what had been done, well or ill, and what seemed to be further required. Lists of the Members of these local Committees, composed of Native gentlemen, are published annually, as revised, in the Central Provinces' *Gazette*. The appointments are generally looked upon as honorable; every Member of such a Committee is entitled to a chair at Durbars, and ranks above his fellow-townsmen. The service voluntarily rendered is becoming popular, as the cause is better and better understood. The interest too which has been excited by the working of these local Institutions and the dissemination of sanitary information by means of vernacular circulars and otherwise, has elicited some co-operation from the wealthy classes in the construction of works of public utility at their own expense; such as the building and repair of tanks, or of weirs, for improving the water supply of towns and other works of sanitary importance. Every encouragement has been given to private effort of this kind, and its further development may fairly be hoped for wherever in these Mofussil towns self-government, or what may be only an approach to self-government, has been bestowed on the people.

6. Before quitting this head of the subject, I should mention that there are 99 towns in which funds are raised for Municipal purposes under authority of the Foreign Department Despatch above quoted; which defray the cost of their own Police and conservancy, and which have Committees of Native gentlemen appointed for the management of their Municipal affairs under the control and guidance of the District Local Committees of which the Magistrate is the responsible head.

7. The formation of these District Local Committees, and the Rules for their guidance, were sanctioned in Foreign Department Despatch No. 271 of the 16th May 1863. From those Rules it will be seen that the spirit of the recommendations, made by the Sanitary Commission for Bengal in the 5th, 6th and 7th clauses of paragraph 29 of their letter No. 620 of the 5th September 1864, above adverted to, has been already carried out in these Provinces. The Civil Surgeon of the District is ex-officio Member and Sanitary Officer of such Committees, and advises the local authorities in all matters affecting the public health. The Local Committees thus may be said to perform the functions of District Boards of Health; and, through the position of their President, the Magistrates of the District obtain that co-operation from all the Municipalities in the interior of the district which is so desirable.

8. But the system is so far incomplete that it provides only for the conservancy and sanitary improvement of the towns and Civil stations forming the head quarters of the Deputy Commissioner of each District, and the larger towns in the interior in which Municipal duties are levied, and to which Section 34 of Act V. of 1861 has been extended. Beyond the defined Municipal limits of these several local centres, there are more or less considerable tracts of country in which there are neither funds nor means for the establishment of a sanitary service, or for enforcing the observance of strict conservancy. In such tracts there are often wealthy towns, with a Police party stationed therein; but as they are distant from the residence of a stipendiary or Honorary Magistrate, it has not been considered advisable to extend to them the Section of the Police Act above mentioned for the enforcement of conservancy.

9. It has, however, been attempted to remedy this evil, to some extent, by the circulation, in vernacular form, of a plain set of Conservancy Rules for observance in all villages in the interior. District Officers, through their influence with the principal landholders, have been able to do something towards the establishment of a rough conservancy system even in these outlying places. At first a few of the principal villages were selected in each Tehsil or Pergunnah for the introduction of the system. After some progress and familiarity with the rules had been established in these, the adjoining villages were induced to take up the practice, and thus gradually it may be possible, with patience, to widen the sphere of operations.

10. It cannot be said that entire success, perhaps hardly even general success, has followed from this plan as yet, though it may be too soon to judge of a measure which was begun only in 1865.

11. There has certainly been a fair measure of success in some places, owing as much, perhaps, to judicious management on the part of the District Officer, as to the willingness of the people to act with him. The cases of the Districts of Saugor and Dumoh may be cited as instances. I am to append copies of letters which the Chief Commissioner caused to be addressed to the local authorities after inspecting those districts; and, as a rule, it may be said that, in most districts, there is more or less of conservancy attempted in the villages of the interior.

12. On the other hand, there are natural difficulties in some localities which the best local effort would fail, unaided, thoroughly to remove. Such localities are, moreover, about the poorest in the country. A prominent instance of this kind was only lately brought to the notice of Government, viz., the want of potable water over wide tracts in the Chutteesghur Districts. The periodical ravages from disease in these tracts have been very deadly. If there have been other causes in operation, the use of impure tank water contaminated by both man and beast to the last extent must certainly have contributed not a little to swell the account. To combat this evil the aid of Government seemed to be urgently needed; and it was given in the grant of rent-free plots to persons willing to sink wells for the public use. These grants have been readily applied for, and the work is fast progressing all over the country under special supervision.

13. In other ways, too, it has been possible to enlist popular sympathies with the establishment of sanitary measures of one kind or another. Thus, for instance, in the promotion of arboriculture by the grant of the usufruct of the groves and avenues planted and maintained by them at their own expense on the berme of our high roads.

14. For tracts like these, far away from Municipal centres, it may be impossible to do much more than is contemplated by the scheme now being gradually introduced, and extended as above explained. In villages spread over a wide area, and inhabited by a purely agricultural population, the levy of a rate for conservancy purposes would probably be much felt, and to fritter away among outlying hamlets the small means made available in the larger towns for their own use and improvement would be contrary to the principles of Municipal taxation.

15. The Chief Commissioner is, therefore, not quite prepared to recommend any general mapping out of the country into circles for the establishment of a sanitary system to be maintained out of the funds raised in a particular town within the circle, as proposed by the Sanitary Commission. In certain parts of the country, where the villages are near each other, and are inhabited by a mixed population of traders and agriculturists, some such plan might be feasible, and to some extent fair; but if there were no difficulties of legislation to be overcome, it would still be doubtful whether any efficient agency could be organized to cover so much ground with hope of advantage, even if it could be paid from the limited funds raised under the sanction of existing law.

16. In the foregoing paragraphs I have, at the Chief Commissioner's desire, endeavoured to show (1), that a fair conservancy system has been established in towns and cities, in the Central Provinces, under the protection of Section 34 of the Police Act; the system being administered by Municipal

Committees instructed and controlled by District Local Committees, and supported by funds raised under orders having the force of law under the Indian Councils Act, which system might be improved and legalized were the draft Municipal Bill for the Central Provinces, now before Government, made law; and (2), that a system analogous on all main points has been prescribed, and is being gradually extended in villages lying over wide tracts of country, not enforced under sanction of any law, but put in practice through the influence of the District Officer with the concurrence of the people; which system it is not proposed to disturb. It only remains then to describe (3), the system followed in particular places under the sanction of express law.

17. No detailed account of the sanitary administration followed under the prescription of Act XVIII. of 1864, and Act XXII. of the same year, is, however, necessary. The system is laid down in the Acts themselves. Act XVIII. of 1864, with the bye-laws framed under authority of the Act, is in force within the Civil limits of the city and suburbs of Nagpore, the Civil and Military limits of Jubbulpore, and the Military limits of the Cantonment of Kamptee, so far as the raising and expending of the octroi income is concerned, by special authority of Government extending the Act to those places. In the Military Cantonments of Kamptee, Jubbulpore and Saugor, Act XXII. of 1864 is in force, and Chapters I. to IV. of the "Rules and Regulations" framed under Section 19 of the Act by the Simla Committee, and approved by the Government of India, will come into force in supersession of the existing system as soon as the Cantonment Committees have been formed under orders of the Military Authorities; while Chapter V., framed under the same Section, relating to Lock Hospitals, has already been brought into operation. The funds raised in all these places, Civil and Military separately, or Civil and Military combined, are from the octroi, or duties levied on articles brought within the local limits for consumption and sale. In the Military Cantonment of Jubbulpore, where a Cantonment Committee will be formed separate from the Municipal Committee at the same place, a fair proportion of the funds raised under the Municipal Act will be made over to it for the purposes described in the Cantonment Act. Similarly at Saugor funds will be allotted to be paid by the District Local Committee. At Kamptee the entire funds raised under the Municipal Act within its limits will be made over to the Cantonment Committee, as it is at present made over to the Military Committee, which now administers those funds. At Nagpore there is only a Detachment of Military Troops, for which separate conservancy provision will not be necessary.

18. This Office letter No. 2988—262 of the 8th September 1866, to Foreign Department, will have placed before Government the results of the first year's registration of vital statistics in principal towns and select rural tracts in these Provinces. Such registration will now be compulsory in the three Military Cantonments of Kamptee, Jubbulpore, and Saugor, under the provisions of Clause 10, Section 19, of the Cantonment Act above mentioned. The attention of the local authorities has been specially drawn to perfecting existing arrangements in those places, and it may be hoped that, before long, the registration will be complete for all parts of the country under the jurisdiction of the Civil Authorities.

19. The only other special sanitary measure in operation in these Provinces which seems to require separate mention is the system of vaccination. That system which had been found to work so successfully in Kumaon, of limiting vaccination to a defined area till it had therein firmly established itself, and then of progressively widening the sphere of operations, was sanctioned in Government letter No. 387 of the 17th February 1864, from Foreign Department. It was first put in force in the tract comprising the Districts of Nagpore and Chindwara in May 1865. The results have been laid before Government in the Annual Dispensary Reports; and though it cannot be said to have been so completely established with the existing limits to make it advisable to extend the field of labor, a fair degree of progress has been attained. Meanwhile vaccination has not ceased in other places. Medical Officers in all the Districts, and Native Doctors in charge of Branch Dispensaries in the interior, carry on the process, and only recently the

subject was specially recommended to all Municipalities in view to separate vaccination arrangements being made within their limits at their own expense.

20. I am now only to refer to the subject of your 2nd paragraph, viz., the remuneration of Officers employed in sanitary administration. The Government having decided that salaries to special Officers or additional allowances to Officers already existing cannot be paid from the general revenues, it has to be considered (1) whether the central controlling agency recommended by the Sanitary Commission is required; and (2) whether any additional cost on account of allowances and establishments can be met from local funds.

21. In regard to the first, Mr. Temple thinks that any separate controlling agency for the whole Province, though it would undoubtedly secure vigor and uniformity in the observance of all sanitary rules; and though the Inspector of Jails and Dispensaries might be able to find time to take the duties of head of a Department of Public Health, yet, considering the present initiatory stage of matters every where, the necessity for gradually adapting the rules to local peculiarities; the desirability of encouraging free and independent action on the part of the local Boards and Municipalities, and the increase of establishments that would be required; the creation of a Central Controlling Department might not be thought immediately or urgently required; and secondly, that, however desirable it would be to see the scheme of a sanitary service advocated by the Sanitary Commission fully established hereafter, the local funds of these Provinces cannot at present afford the expenditure which such a scheme would involve.

22. Finally, with regard to your 3rd paragraph, enquiring whether it was thought that further or fresh legislation was necessary, I am to solicit attention to the first part of this letter, in which the desirability of having a good Municipal law for the whole of these Provinces in the form of the draft bill submitted with this Office letter No. 599—60 of the 11th February 1865, is fully set forth.

23. In conclusion, I am to apologize for the delay which has taken place in the submission of this Report.

BOOK CIRCULAR No. V.

From C. BERNARD, Esquire, Secretary to the Chief Commissioner of the Central Provinces, to all Commissioners and Deputy Commissioners, Central Provinces,—Dated Nagpore, the 27th March 1865.

I AM directed to forward, for your information and guidance, a brief manual of sanitary rules for the preservation of the public health in towns and villages. A vernacular translation of the rules is also forwarded.

2. The gradual extension of municipal conservancy to the smaller towns in the interior of districts, and the formation of Municipal Committees at those towns,—which Committees are evincing an early appreciation of their duties,—render it desirable to furnish them with easy directions for their general guidance. But further, it has been frequently represented to the Chief Commissioner, both by Civil and by Medical Authorities, that conservancy is more or less needed in the villages as well as in the towns of the interior; and more especially in those of the Nagpore country. Again, the Local Authorities in the Chutteesghur country have more than once represented that the natural increase of the population is retarded by the dirt and neglect of the village sites. And in most parts of these Provinces it is believed that the prevalence of particular epidemics, and even of endemic disease, might be mitigated, if the people could be induced to keep their villages cleaner than they now do. Some Deputy Commissioners, especially the Deputy Commissioner of Chanda, have succeeded in inducing the people to practise conservancy in their villages. When the people have been assembled at durbars, and such like occasions, the Chief Commissioner has himself impressed upon them the expediency of keeping the villages more clean than at present. And they have generally professed themselves aware that outbreaks of disease are frequently arising from want of public cleanliness, and have usually promised to attend to whatever plain and simple rules might be devised for this end.

3. The rules now forwarded are believed to be suited to the existing condition of the towns and villages in most parts of these Provinces. They are certainly plain, and, if acted upon, they would conduce to the health of the people, and would probably tend to diminish disease.

4. In now forwarding them for your information, the Chief Commissioner does by no means intend that they should be sent broad-cast among the villages, or that they should be actually enforced. And he requests that you will be careful to avoid doing this. He desires

that, in the first place, you will communicate them to the Police at those particular places where Section 31 of Act V. of 1861 may have been lawfully introduced. Next, that you will communicate them to the various Municipal Committees, whether at the Headquarters or in the interior of your district. Then you should show them and explain them to the most intelligent and respectable of the landholders of your district, on whose public spirit and zeal for the welfare of their tenantry and dependants you can best rely. If such men can be induced to get such rules acted up to in their villages, then the benefit will be apparent, and there will be set an example which other and smaller villages may ultimately be willing to follow. But it is probable that a good result will be obtained only by gradually instructing the people in conservancy, by first persuading the principal places to keep the neighbourhood of their habitations clean, and then by inducing other villages to do likewise.

5. But it will probably not be of any use to communicate the rules to landholders residing in wild or hilly parts, such as those of the Mundla, Seiner, Chindwara, and Baitool districts, or in other wild and remote places, where the subject of conservancy is not likely to be appreciated or understood. And the rules are not to be published in the Sumbulpore or Sironcha districts.

6. Although it is believed that these rules are more or less applicable to most parts of these Provinces, still there may, of course, be room for amendment in reference to local circumstances. After, therefore, showing these rules to your various Municipal Committees and your principal landowners, you will be good enough to report specially, through the divisional Commissioner, as to how far these rules are suited to your district, and how far they are likely to be adopted by the people.

7. It is to be remembered, also, that there is no intention of enforcing the observance of these rules by any thing like compulsion, or of unduly pressing them so as to cause any trouble or annoyance. All due care and forbearance in this respect must therefore be shown. The object rather is to call attention to facts of which the people are already well aware, to convince them of the necessity of taking greater precautions for the public health, and of gradually obtaining their co-operation therein. Mr. Temple accordingly relies upon you and your subordinates to show that degree of patience and judgment which is requisite for this purpose.

8. The Chief Commissioner will be glad to receive the special report called for in paragraph 6 of this Circular, as you shall have had time to test the applicability of this short manual of rules.

VILLAGE CONSERVANCY RULES.

GENERAL REMARKS.

Disease is often generated, and its virulence is increased, by breathing impure drinking impure water.

2. Air and water are rendered impure by contact with, or proximity to, decaying animal or vegetable matter. If such decaying matter be damp, when it comes in contact with air, its effect upon the air is more noxious than if it were dry.

3. If the air breathed by the people of a village, and the water they drink, could be kept pure, such a village would have every chance of escaping disease; and if disease came to such a village, it would come in its mildest form.

4. The evil effects of bad air are always greater at night than in the day. The effects or evil influence of bad air does not reach to any distance, unless carried by wind; if, therefore, the matters which make the air bad can be removed to a distance from the village, and pure currents of air can pass through the village, then bad air and its evil influence will not reach the village.

5. The following rules for securing pure air and pure drinking water to a village are prescribed:—

CONCERNING ABADDEES.

6. If there are any trees in the village site (abadee), or within one hundred yards round it, cut off every year their branches within 20 feet of the ground, lop and prune any branches which may hang down to within 12 feet of the ground.

7. But if there is a belt of trees or jungle between a village and a tank, it should be preserved as a barrier between the village and the bad air of the tank.

8. Let no bushes, high grass, weeds, or underwood grow in the abadee or within 100 yards of it. If there are any hedges in the abadee, or within a hundred yards of it, let them be trimmed and cut down twice a year to a height of not more than 3 feet (two fathoms).

9. Let the holes in every enclosure be filled up with earth, and the enclosure levelled; and let a ditch, to carry off rain water from the enclosure (chatta) be made. Let there be no holes anywhere in the abadee, or within one hundred yards of it; if there are any, let them be filled up. Let the ditches for draining rain water through the village be put in order twice a year, once in June and once in August.

10. Any heaping up of refuse inside the abadee must be entirely stopped. And existing heaps must be removed outside.

CONCERNING MANURE AND REFUSE.

11. Let every man carry the sweepings of his house, his enclosure, and his cow-house, early every morning to a hole in a fixed spot 100 yards outside the abadee. If tenants wish to keep their sweepings to manure their fields, the Malgoozar must allot them places to throw their refuse. These sweepings will be more useful as manure if they are thrown into and kept in holes. Such places to be to the east of the village, and not to be within one hundred yards of the abadee, or within fifty yards of any tank or stream.

12. The making of cow-dung into cakes for fuel, or the drying or stacking of it when made, is not to be allowed within one hundred yards of the abadee.

13. The Malgoozar is to assign to each sex a locality, distant at least, three hundred yards from the village, to the eastward, and in these localities alone may the villagers answer the calls of nature. Such localities should be some distance from all roads or paths. And on no account should villagers or travellers be allowed to obey the calls of nature in a road or path. If any villager erects a "tatty" in his own enclosure, he will have daily to remove its sweepings to the refuse holes outside the village.

14. The Malgoozar will assign a place for travellers to pass the night outside his village; but if the place be within one hundred yards of the abadee, he will take care that their refuse is removed in the morning to some refuse heap outside the village.

15. When cattle or any animals die in or near the abadee, the Kotwar, or whoever receives the skin, must drag the carcase, before skinning it, to some place east of the abadee, and distant three hundred yards from the abadee.

CONCERNING WELLS.

16. Where villagers drink from wells, a sufficient number of wells must be set apart for drinking purposes—no washing of clothes, or bathing, or watering of cattle, must be allowed at any wells so set apart; a wooden grating should be placed over drinking wells to prevent leaves and dirt from getting in.

17. The forming of muddy pools round any wells in the abadee should be prevented; and cattle should be watered at some well outside the abadee, if there is no tank or stream at which they can be watered.

18. If a well can be dug by taking tuccavee, or by any other way, a well for drinking water should be dug in every village; for, beyond all doubt, well water is, as a rule, more wholesome than tank or river water.

CONCERNING TANKS.

19. Where a village drinks tank water, and there is more than one tank in the village, one tank must be set apart for drinking purposes alone, and must be cleared out and deepened by the labor of the villagers once every year, just before the rains. This tank must be staked by the labor of the villagers once every year, just before the rains. This tank must be staked or hedged round; and no washing, bathing, or cattle watering must on any pretence be allowed at this tank. If possible, stones should be put down along the paths and sides of the tank where people go to draw water.

20. Where there is only one large tank in a village on which the people depend for drinking-water, and no possibility of digging another tank or sinking a well, a part of that tank nearest the village must be set aside for drinking. That part must be staked off towards the village, and no washing, bathing, or cattle watering must, on any account, be allowed there.

21. Cattle must be watered at some tank distant three hundred yards from the village; or, where there is only one tank, they must be watered at the end furthest from the village and the drinking place. Washing and bathing, too, must be done at some distance from the place staked off for drinking.

22. When there is only one tank in a village, the steeping of hemp, or growing singarah in that tank, cannot, on any account, be allowed. Singarah must never be grown in drinking-water tanks. Where there are several tanks, hemp must be steeped at the tank furthest from the village.

CONCERNING STREAMS.

23. Where a village drinks water from a river or stream, the whole of the village washing, bathing, and cattle watering must be done below the village, and water for drinking must be brought from above the village.

24. Where there is a stream or river, hemp must not be steeped above the village, or above the place where the cattle are watered. If another village is on the same stream within two miles down, steeping of hemp in the stream cannot be allowed at all.

CONCERNING BURIALS AND CREMATION.

25. Let every Malgoozar assign a small locality three hundred yards from the abadee, to the east of the village, and at a distance from any road, tank, stream, or well, where the bodies of Hindoos may be burnt; where the bodies of poor Hindoos may be buried; and if there are any Mussulmans in the village, they must have a burying place chosen under similar conditions.

CONCERNING EPIDEMICS.

26. When any epidemic disease is about, all the villagers must "keep" their houses and enclosures within and without twice a week. If the walls of any of the houses are built of bamboos or stakes, such walls must be plastered once a week with fresh mud.
27. When epidemic disease is in or near a village, fires of dry grass, straw, twigs, cow-dung, wool, or dry leaves must be burnt outside every house door at nightfall.
28. When epidemic attacks a village, the sick should, as far as possible, be put in separate houses from the healthy. Special care should be taken to remove, to a distance from the village, and to bury under earth, as quickly as possible, the excretions of the sick, and to burn or bury the bodies of any who may die of the disease.
29. When an epidemic disease is about, excretions must always be buried under dry earth as soon after they are passed as possible.

Selection of letters written in the year 1865-66, by order of the Chief Commissioner, Central Provinces, to the address of the Commissioner, Nagpore Division, regarding Local Improvements in the Districts of that Division.

The Chief Commissioner having recently visited the ground near the Railway Station at Poolgaon, in company with the Deputy Commissioner of the Wardah District, and the Resident Engineer of the Railway Department; I am directed to communicate to you the following observations and instructions.

2. It were superfluous to call to your recollection the probable future importance of Poolgaon, as being the point where the produce from the large tracts of Arvee and Deolee will converge; and as forming, as it were, the western gate of the Central Provinces. The ground around the Railway Station is for the most part a barren plain. But ere long that plain may become covered with buildings, streets, and factories. Now therefore is the fitting time to see that the requisite ground is properly taken into the future town and its environs are designed and laid out with due forecast and consideration. And it is with this object that Mr. Temple now directs me to address you.
3. The Deputy Commissioner should be duly instructed by you to take the whole matter in hand as soon as possible. In this, he may derive much useful assistance from the Resident Railway Engineer, Mr. R. M. Brereton. The points which occur to the Chief Commissioner as specially requiring notice are as follows:—
4. The roads from Arvee and from Deolee, respectively, as they approach the Railway Station, have been already marked off. This business should be concluded by fixing the exact spot for the level crossing near the Railway Station. This should be done now in communication with Mr. Brereton, and the demarcation of the two roads should be completed.
5. The sites for the main streets of the possible new town should be chosen; so that building sites for natives and others may be allotted as soon as applied for. The sinking of Wells should be taken in hand with a view to the early planting of trees, at the right season. The Officers of the Customs Department should be consulted as to what ground is required for their Department. Sites should be chosen for the possible Dispensary, School-house and other public buildings. The site for a Serai and travellers Rest-house has already been selected. Ground for the reception of produce intended for the Railway should be reserved. Also ground should be kept which may seem likely to be wanted for cotton machinery and European factories.
6. Lastly, there should be an approach marked off from the Railway Station to the river Wardah close at hand. If this be well done, it is possible that some wealthy native gentleman may hereafter be induced to build some handsome flight of steps to the water's edge. In reference hereto I am also to draw your attention to the rocky bed of the river near the old Hindu Temple, which seems to offer a favourable situation for a causeway to serve both for the storage of water and the passage across the stream.
7. Other points will doubtless suggest themselves to you as the enquiry proceeds; and hereafter the Chief Commissioner will be glad to receive a report from you of what may be effected in this matter.

Conservancy.—I am directed to forward for information copies of the marginally noted letters* addressed to the Commissioner of the Jubbulpore Division regarding the present state of Village Conservancy in the Districts of Damoh, Saugor and Jubbulpore.

2. The Chief Commissioner hopes that considerable progress in Conservancy of villages will, by this time, have been made in the several Districts of the Nagpore Division; and that the progress made there, will be found equal to, that in the three Districts of the Jubbulpore Division above enumerated.
3. But I am to request that the particular attention of the Deputy Commissioners of your Division, be drawn to the custom which, as will be seen from the enclosed copies of letters maintains in the Jubbulpore Division, of plastering the houses with grey earth ("chooe muttee") or with yellow earth ("peelee muttee.") Mr. Temple is doubtful as to the practicability of carrying this out in your Division, not being aware whether the same

kind of earth is or is not obtainable; sufficiently near to bring it within the reach of the lower classes. But even should it be found that the chooe muttee is not so procurable he would suggest that some suitable substitute may possibly be found.

4. In the towns and villages of the Jubbulpore Division, the houses are almost invariably roofed with tiles, thatched roofs being but seldom seen. In this respect I am to observe, the old Nagpore Province is far behind the Northern Districts. Some improvement certainly has been effected in this respect, but yet the results obtained are not quite so good as Mr. Temple could have wished; notwithstanding that, destructive fires year after year give warning to the people of the disadvantages of the too common thatch. The Deputy Commissioners should be directed to give this matter their best and earliest attention. Certainly it may be urged that earth suitable for making tiles is with difficulty procurable in the Nagpore Division. This is more or less the case; and the tiles will probably never be so good as those of the Northern Districts. Still even such tiles, as can be, and are made in the Nagpore country are far preferable to the thatch now commonly used there.

Chanda.—The Chief Commissioner having recently examined the Municipal improvements of the town of Chanda in your Division, I am directed to communicate the following observations:—

2. The main streets have been very much opened out and improved; side drains and many draw bridges have been provided. The new School-house, though very plain externally is a spacious and commodious structure. The Dispensary building has been repaired, and rendered efficient. A small garden inside the town has been restored. The tombs of the Gond kings have been cleaned up—a very good public garden outside the town has been commenced; the Latrines seem to be better placed now than they were.
3. So far the progress is good; but there is one important matter, wherein, though something perhaps has been done; yet the result is far short of what is wanted; and this matter is the substitution of tiles for thatch. Despite all the injunctions which have been issued, a large portion of the city of Chanda, consists of thatched houses. The consequence of course is the occurrence of accidental fires and the loss of property. Advantage should now be taken of an extensive fire which recently happened, and the Deputy Commissioner must insist on the rebuilding being accompanied by tiling. If necessary some aid from Municipal funds can be given to poorer house-holders; but the present opportunity must not on any account be lost. It would also be very desirable that the frontage of many of the better houses along the main streets, were rendered more worthy of their situation. In many quarters there are broken down, indeed, tumble down and seemingly ownerless houses and tenements; these should be demolished and the ground cleared. And all the houses great and small should be plastered and coloured as much as possible.
4. There is a plan for diverting a part of the waters of the Erye river into the old tank to the north of the town: the waters of which tank again if augmented, would be available for garden cultivation within the city walls.
5. The Station roads are generally well, and the young trees on the road-sides are properly tended.
6. On the whole, excepting matters of thatched roofing, the Chief Commissioner considers the external condition of the town of Chanda to be creditable to the Deputy Commissioner Captain Lucie Smith.

Wurora.—I am directed to express the Chief Commissioner's approval of the Municipal improvements which he recently inspected at Wurora in the Chanda District.

2. The large Circular Bazar and market place now under construction and the clearing and levelling of the low bad ground adjacent thereto; will be useful works, and they are conveniently near to one end of the large tank.
3. Still there might something more be done to improve the main street of the old town. The partial demolition of a house here and there, (after payment of compensation), would give a straight and regular appearance to the street line, and then the roadway might be metalled.
4. Most of the houses are tiled which is a satisfactory sign; but the tiles are very poorly constructed.
5. The School-house is a very fair building; though the Chief Commissioner doubts whether it is not perhaps a little too far from the Town.

Armorer.—The Chief Commissioner having recently visited the town of Armorer in the Chanda District; I am directed to communicate the following observations:—

2. Armorer situated on the left bank of the Wyngunga is a kind of entrepot for the peculiar products, coming from the wild Eastern Districts, and from Bustar: while it receives for distribution eastwards the cotton, the "notions," and such like products from the more civilized Districts on the West. Thus its commercial situation is good. It has also a colony of weavers; and some local manufacture of cloths and the like. The population must amount to four or five thousand souls.
3. Yet for a place of its size the Armorer Municipality is perhaps the most backward of any now existing in the Central Provinces. The Chief Commissioner explained to the leading inhabitants that they had not a street nor a straight road-way nor any public building; nor market place; nor a tank; nor even one single house or habitation of a respectable style;

men with transactions extending over many marts being content to live in huts, with walls of split bamboo and mud; and roofs of grass. There is a place mis-called a tank; but its water is unfit for drinking; and it is so placed, as to receive the sewage of the town:—

4. The Deputy Commissioner has now formed a plan for a new market place; which will, it is hoped, be the beginning of improvement. The School-house too is being added to.

5. There is a site for a Tank near the market place. If that be approved on examination and if funds could be found; the construction of some such work would be very desirable.

New Station of Warbh.—In continuation of his office letter No. 1689-155, dated 9th June 1866, expressing the approbation of the Chief Commissioner at the opening of the new Station of Warbh, I am directed to state that the Chief Commissioner has now inspected the Station, and the inspection fully bore out the expectation he had formed, and confirmed the opinion he had previously entertained regarding the good management on the part of Mr. Jones, the Deputy Commissioner.

2. Mr. Temple fully approves of the new squares and streets which have been marked out, and he is also glad to see that so large a weekly bazar and market has been established.

3. Mr. Temple hopes that early in the ensuing cold season, the people will convert their present temporary houses into habitations of proper style and size. Wells are numerous, with water near the surface of the ground. There is also a site of an old tank close at hand, and a new tank might easily be formed here.

4. The Deputy Commissioner is doubtless aware that at the present season hundreds of young trees ought to be planted out. At a new Station like this, arboriculture is a thing primarily to be attended to, otherwise there will be a distressing want of shade hereafter.

5.—I am also to state that it is necessary to *met* the road from the Railway Station to the Cutcherry, and from the Cutcherry to the Police lines and to the Town, otherwise the soil is very troublesome for the traffic after even a heavy shower of rain.

Hingunghat.—The Chief Commissioner on the occasion of his visit to Hingunghat on the 13th June last, was pleased to take into consideration the subject of the supply of water for the new town; and now directs me, with reference to that question, to communicate the following remarks and suggestions.

2. Very soon after the site of the new town was determined on some five years ago, Well-digging was regularly taken in hand, and since that time several Wells annually have been excavated, until at the present date there are, in the several parts of the town more than twenty Wells of different descriptions. These Wells during the cold months appear to be all that could be desired, but so soon as the hot weather sets in they one and all become dry and useless.

Some of the above Wells have been sunk to a considerable depth, but with little or no result. And there is no doubt that the Geological formation of the ground, on which the new town is situated, is such, that unless Wells are dug to a very great depth no permanent supply of water can be obtained.

3. Although it is very difficult to foretell to what depth Wells will have to be sunk to reach an inexhaustible supply of water, yet, Mr. Temple thinks that, two or three of the existing Wells should be taken in hand and excavated until water shall be plentifully obtained.

4. I am, however, here to remark that, judging from the contour of the ground, it would appear that the high land, on which the new town of Hingunghat is situated, is formed of a series of strata, of compact trap and other rock, highest to the South near the Telissee, and gradually inclining downwards to the River to the West and North, and to the low ground to the East. Through fissures in the rock and between the strata, the water finds its way down to the Wunna River.

5. Seeing the great difficulties to be encountered in sinking Wells in the new town, two or three years ago the principal inhabitants of the place suggested that a canal should be dug to bring the waters of the Wunna through the very centre of the town. They urged that by going up the river above the village of Adjanta a sufficient altitude would be attained to bring the water into the middle of the town at a high level locality.

However on this being inspected the plan suggested by the inhabitants was found to be impracticable.

6. Since the above suggestion was made the Great Indian Peninsula Railway has approached, and will shortly be opened, to within a few miles of Hingunghat; with it have come immensely increased facilities for procuring machinery and other heavy articles which previously could only be obtained with very great risk and expense. Furthermore the proximity of an open Railway will always ensure the presence, within a day's journey, of skilled Mechanical Engineers, who will be able to direct the repairs of machinery.

7. Under the above circumstances I am directed to request that during the present season, when Local Works must be more or less suspended, a scheme be prepared for erecting on the banks of the Wunna a double set of force pumps, to raise water for the new town of Hingunghat.

The Engineer preparing the scheme, will, of course, be able to decide whether the machinery should be worked by steam, wind or water, but in all probability either wind or water will be found the best and most economical.

8. It is perhaps unnecessary to point out the advisability of dividing the pumping machinery into two or more entirely independent parts; so that in the event of one portion getting out of order there will still remain one or more engines to keep up the supply of water. The water thus pumped up from the river would be conducted by iron pipes to the new Town; which is not more than a mile distant. The erection of two large Reservoirs, one near the pumps and the other in the town, to contain a reserve of water, may be a point worthy of consideration.

9. During the hot-season, which has just passed, the inhabitants of the new Town of Hingunghat were put to very considerable inconvenience by the scanty supply of water; and unless something be done there is every reason to suppose that they will be no better off next year.

Mr. Temple therefore trusts that the scheme for pumping up water will be taken up with promptitude and vigor, so that, if possible, before the commencement of next dry season, the project will be completed and the pumps at full work.

Machi Satti.—The Chief Commissioner this morning inspected the "Machi Satti" or meat market and found it in a state anything but satisfactory:—

2. Mr. Temple is aware that this place was once a swamp which has been reclaimed through the exertions of the Deputy Commissioner; and thus far the work was well done. Now, however, the state of the place is such, as to be a source of the most serious inconvenience to the people who frequent it: for, although, but little rain has fallen yet the surface of the ground is covered with several inches of tenacious mud.

3. I am to request that the attention of the Municipal Committee may be at once drawn to this locality, and that early steps be taken to lay down metal and execute such drainage and other repairs as may be necessary to put the market place into good order.

Goorgung.—This morning the Chief Commissioner visited the Goorgung and inspected the Boodwaree Bazar which is now held there every Wednesday.

2. Mr. Temple observed that not only were all the Chabootras, already made, filled with the various stalls, but that for a considerable distance in either direction the Goorgung road was lined with squatters exposing for sale their divers wares.

An open space, a little to the east of the Goorgung Chabootras, was also filled with grain-sellers and other traders.

3. I am directed to suggest that early arrangements be made to afford sufficient accommodation for this important weekly market, and that the Municipal Committee be moved to erect new Chabootras in the vicinity of those already existing in the Goorgung. A large accession to the amount of the present Chabootra accommodation is apparently required.

General Conservancy.—With reference to several of the letters, circulated in the printed selection of those written in 1866 and addressed to the Commissioner of Jubbulpore Division, regarding Local improvements, and in continuation of this office No. 1010-100, dated 17th April 1866. I am directed to communicate the following observations:—

2. Since the 10th of May last, the day on which, after an absence of several months, the Chief Commissioner first re-entered the Nagpore Division, the subject of the general Conservancy of the Towns and Villages of this Division has forced itself upon his notice.

3. In the selection of letters above alluded to, the great progress made in Town and Village Conservancy, and the good results obtained in the Districts of the Jubbulpore Division, has been fully entered into.

4. You have already been addressed regarding the principal Towns and Villages in your Division, which have recently been inspected by the Chief Commissioner, and I am now to confine my remarks and suggestions to the external appearance of the city of Nagpore alone.

5. During a few weeks immediately preceding the late Exhibition, creditable commencement was made in sundry improvements to the exterior of the houses and habitations in the City of Nagpore. Some houses were colored, some white-washed, some plastered (leaped), some retiled, some roofed with tiles for the first time and others generally repaired and smartened up. But the commencement thus made has not been followed up. And at this day however high the Nagpore City may stand in respect of Public Works generally: it is far behind Saugor and Jubbulpore, in respect to external polish, so to speak, that is, in respect to the plastering and the brightening up of the habitations generally. While the two last named cities look bright and smart: Nagpore looks comparatively dingy. Yet such cleaning up of habitations conduces to ends far more important than ornament. Not that ornamentation is to be despised for it civilizes the people and raises their taste. But further such measures improve the health of the place. In all public buildings plastering and white-washing are sedulously attended to on sanitary grounds. The principle must, therefore, be equally applicable to private dwellings. Looking to all that has been so well done at Nagpore by the Local Authorities, the Chief Commissioner cannot doubt that the public spirit of the municipality and the good sense of the citizens will effect the improvement which in this particular he desires to see. And for such a purpose, Nagpore must possess equal facilities with the other cities named.

water of the stream becomes very low, then the town is much in want of water. The ancient well serve also, either for a crossing in ordinary weather, or as the foundation for a bridge to connect the old town with the new.

6. Taking the ancient bridge as a centre, there should run one road to the new Tehseel Cutcherry (under construction) to meet the Arvee and Kowtah Road near the cotton mart; the ground is favorable for the making of such a road. From the ancient bridge again, the old street leading eastward, with one branch towards Karinja, and one towards Anjee, should be levelled and have side drains.

7. The new bazar street, going past the proposed town Police station, though generally wide enough, yet wants making out; and should have side drains.

8. If after these works are done there is still money available, it should be given to the construction of a Serai.

9. In the Educational Department you will be informed that some additions are required to the new School-house.

10. You will perceive from the above, that the Chief Commissioner is unable to regard the external condition of Arvee as satisfactory, and that he relies on your exertions to ensure a due commencement being made. He hopes to hear within a month that this has been effected.

Ashtee.—The Chief Commissioner recently visited, with much interest, some Musaulman tombs of considerable antiquity, situated in the town of Ashtee in the Wurdah District.

2. These buildings belong to a family of Pathans, whose ancestors once held sway in the northern tracts of the Wurdah Valley. The present generation are very poor, and quite unable to keep their fathers' tombs in repair. As the buildings are, in this part of country, quite unique, as well as architecturally good, I am to suggest that some portion of the credit taken in the Wurdah District budget for the repair of subjects of antiquity might appropriately be devoted to the preservation of these tombs.

3. The Pathan owners take some pride in these heirlooms, and if the sum granted were entrusted to them it would probably be fairly spent.

4. The buildings are doubtless known to you; and the Chief Commissioner would be glad to know what your opinion, after consulting the Wurdah Local Committee, may be on this suggestion.

Bishnoor.—The Chief Commissioner having recently visited the town of Bishnoor, directs me to convey to you the following instructions:—

2. The great road between Nagpore and Oomrawuttee crosses the Wurdah at Bishnoor, and though the railway will materially decrease the importance of this line of traffic, yet the ghat at Bishnoor will always be one of the chief crossings of the Wurdah River. The approach to the ford on the Bishnoor side is still very steep and uneven; it should be sloped off, and smoothed, and provided with side drains.

3. Immediately above the ford, there is the enclosure wall of what was once a fine building belonging to the Nagpore firm of Kishendial Pookhr Mull. The walls and gateway are still in good preservation; the inner buildings are more or less out of repair; but the enclosure is spacious, and the situation is convenient for a Serai. The owners, it is believed, make no use of the building, and they would probably be quite willing to make it over to the public for a Serai. If they would do this, and also make some subscription towards putting the place in order, the municipal funds of Bishnoor and other places on the road might make up the necessary sum.

4. The cost of the alterations and repairs which may be wanted would not be great, and the usefulness of the building to a really large traffic would be considerable. If the building be turned into a Serai, a short approach from the road to the gateway will be necessary.

5. The Chief Commissioner would be glad to hear from you before the end of next month, whether the owners agree to these arrangements. If they do, and if they also subscribe towards completing the building, then the Serai should bear their name.

Karinja.—The Chief Commissioner having recently visited the town of Karinja in the Wurdah District, directs me to convey to you the following instructions:—

2. No expenditure, other than on Town Police, has yet been incurred for the benefit of the people of Karinja out of the town duties they contribute. The Committee of the town seem to have recommended that a well should be dug in the town for the public convenience, as there is for two or three months of the year a grievous want of water in Karinja. But, up to the present date, the Committee have not been favored with orders on their recommendation.

3. Since they submitted their scheme, however, they have changed their minds; and as the want of water tells more, they say, on the cattle than on the men of Karinja, they now wish to devote any money that can be spared from the town duties to deepening and repairing an old tank outside the town. The tank is situated most favorably both in reference to supply of water and to the convenience of the townsfolk and travellers, by the important highway on which Karinja stands.

4. All that will be necessary will be to build a masonry weir of moderate dimensions across the stream, which in the rainy season flows out of the south-western corner of the tank, and to deepen the tank, and throw the excavated earth on to the bund. The cost of the work may, perhaps, be beyond the funds of the Karinja Municipality; but as the tank will be useful to travellers along an important road, some help might be given by neighbouring municipalities, or from the general local funds of the district. The townsfolk themselves would, doubtless, subscribe towards the tank. A Marwaree of Karinja, named Harpal, offered to subscribe 1,000 rupees towards this work, while the matter was being discussed by the Committee in Mr. Temple's presence.

5. Should any further funds be available, the attention of the Committee may suitably be directed to the formation of a "Chowk," or market-place, in front of the building where the school is at present held. One or two shops may have to be demolished, and compensation would be given; but the gain would be considerable to the whole town.

6. You have been addressed in the Educational Department with reference to the Karinja school building. But I am to observe here, that the Chief Commissioner considers the interior of the old Fort, or "Gurree," to be an excellent site for the new school building. The mud wall (which is already crumbling) of the fort facing the "Chowk" should be levelled, and a good prospect over the town towards the north secured for the school house.

7. The Marwaree Harpal, referred to above, showed the Chief Commissioner a fine "bowlee," or well, which had been begun at the road side by a former Tehseeldar, Toorab Beg, and had been continued and kept in repair at a considerable annual cost by the Marwaree himself. The Marwaree wanted to procure five acres of land round the "bowlee" to plant a grove on. On enquiry from the townspeople and the Tehseeldar, appeared that Toorab Beg had made over the "bowlee" to this Marwaree, who had a great name for liberality in the neighbourhood, and that he (the Marwaree) had been put to, and was still incurring, considerable expense in completing the work.

8. It further appeared that Harpal had applied to the District Authorities to grant him, or obtain for him, the land required for his grove, but his application had been in vain, as the Patel, a Kshatee, had opposed him.

9. It seems that a man who has done so much for his town and for travellers as this Marwaree appears to have done, should have been noticed prominently in the district improvement report, and a "khillut," or, at least, an honorary letter from the Chief Commissioner, should have been procured for him.

10. It is believed that the Tehseeldar was able, at the Chief Commissioner's instance, to arrange for the Koshtee Patel's granting for a suitable consideration to the Marwaree the land required for a grove. But the Chief Commissioner desires me to bring the case prominently to your notice, as one of a large class in which legitimate influence may be used, without any injury to private parties, to secure considerable benefit to the public. In cases connected with land, the legitimate use of such influence is the more necessary, because the people themselves have not yet thoroughly learnt the relative positions and rights of the various parties interested in the land, and are not always aware that they have a right to dispose of, or sell, their land as private property.

11. Further, I am to observe that close on the west corner of the town there runs a stream, the crossing of which is very bad. If practicable, this should be improved.

12. I am to request that you will, in due course, report whatever may be practically effected in these matters. At present Karinja is a very inferior place, externally, to the neighbouring town of Bazaargaon. If Karinja could be made to look as well as Bazaargaon looks, then some steps would be made towards the civilization of the inhabitants of the former place.

Bazaargaon.—The Chief Commissioner having recently visited the town of Bazaargaon in the Nagpore District, desires me to offer the following remarks upon its improvement.

2. The general appearance and condition of the town are a credit to the Malgoozar, and to the inhabitants generally.

3. One alteration in the houses of the principal street is, however, absolutely necessary: The "Chubootras" or raised platforms in front of the verandahs of the shops and houses are unequal, and their discordance spoils the appearance of the street. In many points, too, these "Chubootras" have seriously encroached on the roadway, and no particular steps appear yet to have been taken to prevent such encroachments. The Chubootras should be cut short and trimmed; the street would thereby gain in breadth, as well as in general appearance. If means admit, there should be a drain cut straight along each side of the street. And a few occasional inequalities in the roadway itself should be removed.

4. The School Committee have prepared a rough estimate, forwarded herewith, of the cost of putting the school-house in thorough repair. The present site is a good one, and the building, if the inner room were not so dark, would be fairly suitable for a village school. The Committee state that an expenditure of Rupees 300 would make the school-house light and commodious, and would put it into such repair that further expenditure on it would be unnecessary for some years. If a play-ground be added, the extra expense will be Rupees 200, bringing up the whole estimate to Rupees 500. Local subscriptions, town duties, and the

building fund, or the 2 per cent. cess, could, doubtless, make up the necessary Rupees 300, and the repair of the building might be begun under the superintendence of the School Committee.

5. The Chief Commissioner himself showed the Malguzar the alterations required in the building, and the work could be entrusted to the Malguzar. The Director of Public Instruction will be informed accordingly.

6. The Chief Commissioner could not ascertain whether any addition to the building was contemplated by the District authorities, because the Deputy Commissioner had (it was said) taken away the Visitors' book during the Dewallee holidays, and had not returned it to the school.

7. The fine tank, which is a credit to its constructor, Girmaje Naik, might be still further utilized,—if its water could be conducted to the town. The Naik had, Mr. Temple learnt, intended to lay pipes for supplying the town with water, but his death prevented his carrying out the design. The water-tower below the tank and the escape arrangements would facilitate its execution, and if the Municipality could afford to carry out Girmaje's intention, the gain to the town would be great. An estimate of the cost of supplying the town with water might be framed, and the work might be executed as funds permit, its cost being stretched over two or more years. Probably, the inhabitants would subscribe something considerable towards such a work.

8. If the work be quite beyond the present means of the Local Municipality, still its execution at some future time might be kept in view.

9. The Chief Commissioner would be glad to learn from you, at an early date, what steps have been taken to give effect to the suggestions made in this letter.

Kondallee.—The Chief Commissioner having recently visited the town of Kondallee in the Nagpore District, desires me to address you regarding its improvement.

2. No town duties are now levied in Kondallee; but as the town contains over 1,000 houses, and about 5,000 inhabitants, I am to write on the assumption that, at the revision of the list of Oetrol towns recently ordered, Kondallee will, in respect of local resources, be placed on a par with towns of the same size in other parts of your division.

3. A separate letter, addressed to you in the Educational Department, has drawn your attention to the necessity for providing Kondallee with a decent school-house. Some subscription, and granted from the 2 per cent. cess (for the Kondallee school ranks as a village school) for this purpose.

4. Another improvement to which the attention of the Municipal Committee might be easily directed, is the formation of a central "Chowk," or market-place. The site of the building, where the school is now held, would be the North-east corner of the "Chowk," and on that site the new school-house might be erected; but it should front southward towards the Chowk instead of eastward towards another street, as it now does. A few houses on the south-east and west of the Chowk may have to be demolished, but the advantage gained will be well worth the expenditure on compensation.

5. The Chief Commissioner himself pointed out to the Tehseeldar the place most convenient for a Chowk in which the bazar might be held.

6. The attention of the Municipal Committee might hereafter be directed to damming up, by a masonry weir, the stream which flows to the east of Kondallee.

7. Such a weir would serve, too, as a crossing for the road from Nagpore, which road enters Kondallee at this point. If the Tehseeldar and the Committee could induce the inhabitants to use this for their houses, as the residents of Bazaargan do, the advantage to Kondallee would be considerable.

8. When any of these improvements are taken in hand, the Chief Commissioner would be glad to receive a report from you on the matter. The present external condition of Kondallee is hardly creditable to the Nagpore District. The Deputy Commissioner would do well to observe the appearance of the neighbouring town of Bazaargan, and strive to bring Kondallee up to the same standard; and Mr. Temple hopes now to hear that something has been done with this view.

PASSES THROUGH HILL RANGES IN BHUNDARA.

I am directed to forward a note on the Passes which lead out of the valleys of the Wyne Gunga and Bagh Rivers on to the uplands which stretch westward and northward from Sala Taikree, and on the Passes through the ranges which separate the same valleys from the lowlands of Chutteesghur known as the "Khalotee." The information contained in this note is fairly reliable, as it was compiled in the office of Civil Secretary from the statements of people acquainted with these tracts.

2. I am to beg that, if possible, the particular bad places in these Passes may be smoothed down by blasting; some, at any rate, of these ghats might be made passable this year. The Tehseeldar of Kampta might be deputed to see to the prosecution of these works.

3. The Chief Commissioner will be glad to hear, at the end of April, what may have been done during the coming three months in this regard.

NOTE ON GHATS FROM HUTTAH TO THE MUNDLA PERGUNNAH OF OOGLEE.

Tetwa or Sumnapore Ghat.—The straightest road from the Huttah plain to Khas Mundla and the country thereabouts, is by way of Sumnapore, by the villages of Mogdurra, Tetwa, leaving Kuttagaon on the right about $\frac{3}{4}$ of a mile, and thence on to Maudpore.

The Bahamungaon Zemindar went to Mundla Khas last year by this road; leaving Mogdurra he was met by the Tetwa Hill and Pass. For 50 yards of the road after leaving Mogdurra he had to take the cattle out of the carts and have the loads and carts carried by men. At the beginning of these 50 yards of stony ground there was a bank of stone about 3 feet high, on to the top of which the carts had to be lifted.

Once past these 50 yards of rough ground, there were about 50 yards more of bad ground, on which bullocks went with difficulty, and then a clear good road runs all the way to Mundla.

An overseer has been sent from Bhundara to estimate the cost of levelling this "ghat."

Ragheba, servant of the Huttah Zemindar, confirms this.

Labanas frequent this route but little; when they do travel by it, their bullock loads are lightened. No rice bullocks come this way, but only a few tobacco bullocks.

Panchalla Ghat.—There are four bad pieces of ascent like steps; carts now go to Panchalla, and thence their loads are taken on men's backs to Sonore, 10 miles beyond, in the Mundla districts. Thence carts can be procured to go to the Bahair bazar.* The cheap hill grains come down on men's shoulders to the lowlands of Huttah.

The bad piece of the ascent is not much more than 100 yards long.

This ghat is also called the Pailee Ghat, it ascends the range between the two villages of Pailee and Panchalla.

This is an approach to the table land, which is accessible to a laden man, but it is very little frequented. It starts from Ruttan straight up the range. The Kaveyloo Zemindar persuaded Mr. Munton that this was an eligible road, but it appears he had in view the benefit that would ensue to his own Zemindarree. The cost would be at least Rupees 15,000; Rupees 500 were spent without any effect two years ago (1862).

Gae Ghat.—So called because cows only can go by it, and it is the only ghat for miles each way by which cows can go to their grazing grounds on the table land above. Only one cow can go at once; the path is about 2 feet wide, with a precipice above and a precipice below. The Pass is about $1\frac{1}{2}$ miles long, and would cost a large sum. The village marked Geeda is only a wooded hill; there is not a single Goud hut there now.

This ghat starts from Kondar by the little village of Nowargaon.

Godree Ghat.—This ghat runs along the vale of the Deo Nuddee, and it has been travelled by an empty cart. This road is much travelled by Banjarries; it would soon be levelled and made good by the constant traffic, if the small piece (20 yards long) of abrupt stony ground were levelled. There is a sheer abrupt ascent of stone about three feet high which stops the cart traffic.

This is the notice of the ghats into the Mundlah country. The two ghats, Sumnapore and Godree, would be the easiest to level and make passable, and they would be the most useful. The one would suit the Huttah, Sumnapore, Thurora travellers. The other (Godree) would suit the Sanjee people—a part of the Kampta travellers.

The Bahamungaon Zemindar (a Rajpoot), who is a sensible man, says that the opening of these ghats would make the table land above habitable, and a few years would see these lands cultivated: for the soil is good, and the sugar-cane and maize grown there is excellent.

Ghats from Toonsur and the Wyne Gunga Valley into the Khalotee (lowlands) which stretch from the Sanjee Hills to the Mahanuddy Valley.

There are three great traffic routes:—

(i).—Enters the Bhundara District at Kotra, and comes by Buggurbun and Bodulkussa over the Daiwarra ford to Toonsur. On this road there are no great obstacles, but the road wants levelling here and there, and sloped approaches to streams are wanted at many places. The traffic on this route is very great.

(ii).—Over the Kurlass Ghat (Pass) through Ambgaon crossing the Wyne Gunga at the Kurreda ford.

This road is travelled by carts, but there is a stony rocky ghat† at Kourdass of about two miles long, which, as it now stands, is a great trouble to carts. If this were levelled, then the Kourdass road would be much travelled.

(iii).—The most northerly route is that from Lanjee into the Nandgaon Zemindarree known as the "Dhoro Manglee" road. At present it is frequented only by foot passengers and by pack bullocks. So much traffic is there over this ghat, that a trade statistic writer has been stationed there. Thousands of loads of cotton came this road this year to Sanjee and

* Lalta Bore and Jusoda Bore, Zemindariens.

† Gurjat Sing.

‡ Five miles east of Peeprce.

Kampta. But it is an excellent and direct route, and would be much travelled by carts, were it not for the two obstacles known as the Dhuree Mangles ghat. The first is in the Bhundara District, just east of the village of Nandoora, and 10 miles east of Lanjee. The second is 10 miles in the Ra pore territory (the Nandgaon Zemindarree) just west of the village of Teela Tolah.

At each of these places there is a rocky stony piece of road about 50 yards long. If they were levelled, this road would much benefit the Lanjee and Kampta tracts and the central valley of the Bagh Nuddee.

Tharsa.—Recently Mr. Temple, when visiting Tharsa in the Nagpore District, in company with the Deputy Commissioner, observed that the approach to the crossing over the stream which passes by Tharsa was not properly sloped. Mr. Low stated that it was in contemplation to put this and other similar approaches in proper order. Mr. Temple would be glad to hear at an early date that these intentions have been carried into effect; and he would suggest that the opportunity should be taken to make a fascine roadway over this stream. Such a roadway would be a great convenience to the very large traffic which passes by Tharsa.

2. I am also to suggest for your consideration the usefulness of turning the walled enclosure, which is now a waste in the middle of the village, into a Serai for the convenience of travellers between Toomsur and Kamptee. Possibly Gunga Bacc, the owner of Tharsa, would do this herself, if it were suggested to her. If she cannot find the requisite funds, the Local Committee of Nagpore might take the matter into their consideration. The Lady would, doubtless, make the place over to them for a public purpose of this kind.

Tanda Moregaon.—Recently when marching from Tharsa to Tanda Moregaon in the Nagpore District, Mr. Temple observed by the side of the road, which is very extensively travelled, a masonry well, with steps leading down to it ("a bowlee," which for some reason or other had fallen out of repair.

2. As this road is much frequented in the hot weather, and as there is no water for two or three miles on either side of this "bowlee," I am to suggest, for the consideration of the Local Committee, whether, if the water is sweet, the necessary repairs to the "bowlee" might not be made from Local funds.

3. The Chief Commissioner would be glad to know, at an early date, what action the Local Committee take on this suggestion.

Moharee.—Mr. Temple having recently visited the town of Moharee in the Bhundara District in company with yourself, directs me to request you will convey to Captain Newmarch the expression of his approval of the general appearance of the town. The school-building is a good one, and its situation is well chosen; the conservancy arrangements of the town appear to be generally good.

2. I am, however, to request that Captain Newmarch's attention may be drawn to the expediency of making side drains in new streets, wherever it may be possible to do so. No opportunity should be lost of impressing on the residents the advantage of substituting tiles for the thatch which is so generally employed as roofing in Moharee.

3. Captain Newmarch evidently understands the subject of municipal improvement; and Mr. Temple has every confidence that the town of Moharee will improve as rapidly as Moharee has done, now that the principle of spending town duties on the town that raises them is enforced.

4. The formation of an anicut across the stream which flows to the south of Moharee ought early to receive the attention of the Committee. Such an anicut would serve as a bridge across the stream, and would also ensure a supply of fresh water for the inhabitants. Mr. Temple would be glad to know if there is any possibility of accomplishing this work during the present open season.

Toomsur.—I am directed to request you will convey to the Deputy Commissioner of Bhundara an expression of the satisfaction derived by Mr. Temple from his recent visit to the town of Toomsur.

The remarks made in my letter No. 8658-2346 of to-day's date, regarding Moharee, apply equally to Toomsur.

2. The new gunj which is being laid out will be a great convenience to traders, and I am to suggest that, when new and broad roads are being opened out through the town, advantage be taken of the opportunity to induce traders and other residents to erect for themselves solid and handsome buildings to face the new roads.

3. Now that the town duty funds of this place will be spent entirely on the place itself, the Chief Commissioner hopes that the appearance of Toomsur will become worthy of its position, as the second town in importance in the district.

Bhundara.—I am directed to request that you will convey to the Deputy Commissioner of Bhundara the expression of the Chief Commissioner's approval of the municipal improvements which he witnessed on the occasion of his recent visit to that place. The manner in which the roadways have been drained and metalled, not only in the main streets and bazars but also in the side streets and alleys, is highly creditable to both the late Deputy Commissioner,

Mr. Master, and the present Deputy Commissioner, Captain Newmarch. The completion of the new school-house is also satisfactory, and the new gunj and market-place under erection will be a great improvement.

2. The only point requiring criticism from the Chief Commissioner, appeared to be this, that the exterior of the building which the people are erecting to the memory of Mr. Master ought to have a more ornamental exterior. The interior of the building is excellent, but the exterior is at present very plain.

3. As the external condition of the Bhundara city has doubtless received your supervision, and as Captain Newmarch evidently understands the subject, Mr. Temple does not consider it necessary to make further observations in detail beyond expressing, generally, his confidence in the municipal management of that city.

Thurora.—While marching recently from Thurora in the Bhundara District to Bhundara, Mr. Temple observed that the sloped approaches to crossings over rivers and streams were in many places too narrow for carts to pass. They were cut through the high river banks, and the slopings were so far good; but they should be considerably widened before they can be regarded as complete. Moreover, in every case, side drains should be cut to the roadway of these approaches.

Pohonee.—Recently Mr. Temple visited Pohonee in the Bhundara District, and he was glad to see that some important local works had been begun. The school-house is a good building, but the appearance of the streets, and of the town generally, was hardly equal to that of Moharee or Toomsur.

2. The ghats down to the river Wyne Gunga are fast falling out of repair; these ghats are not only ornamental and ancient structures, but they are useful and convenient for the residents of Pohonee. The municipal funds might very legitimately be devoted to their repair. The Committee themselves appeared to be anxious to spend money on the ghats. When Mr. Temple visited the ghats, they were thickly covered with the mud and deposit left by the river at the end of the rains. While he was there the Committee ordered laborers on to the ghats, to clear them; and it is to be hoped that, in future years, these ghats may be cleared at the end of the rains.

3. The condition of the large tanks outside the town on the west of the Koolara Gate should be brought to the notice of the Committee, and it will be for them to decide whether its repair should be undertaken by the municipality or left to the landowners.

4. Now that the whole of the Pohonee town duties are to be spent on the town, its appearance ought to improve. It may, moreover, be a question whether so large a force of town police (10 Constables and two Head Constables) is absolutely requisite for the watch and ward of the town.

FASCINE ROADWAY OVER THE WYNE GUNGA.

When recently marching in company with yourself in the Bhundara District, from Toomsur to Thurora, Mr. Temple crossed the Wyne Gunga River at the ford, known as the Oomurwarra, or Kurroda Ghat, and he learnt from you that it was in contemplation to lay down a fascine roadway across the river bed at that ford.

2. I am now directed to express to you Mr. Temple's hope that this work may be taken in hand at an early date. If such a roadway is to be laid at all this year, it should be ready for traffic by the 1st March at latest.

3. But I am to suggest, for the consideration of the Bhundara Local Committee, that the roadway to be laid over the fascines should be of moorum, or gravel, and not of sand. The roadway on the fascines laid across the bed of the Wyne Gunga opposite to Bhundara is made (to all appearances, at any rate) of very light earth. A foot or a foot and half of this material has, it would appear, been laid on the fascines. This being much exposed to the action of the atmosphere, is becoming very dry, and may prove but little better for cart wheels than the river bed around it.

4. Since visiting the place, the Chief Commissioner has learnt that cartmen, as yet, prefer the river bed to the fascine roadway, and do not use the latter. It will be desirable to observe exactly as to how far the carts really use the fascine.

5. It may be that the roadway was originally made of gravel, and that the sand now covering it was blown there by the wind. If this is really the case, then, at the Oomurwarra ford, and in future years at the Bhundara ford, such a defacement of the roadway might be obviated by rearing on each side of the roadway a matting or wattled bamboo wall a foot high above the roadway.

6. The Chief Commissioner would be glad to know, at an early date, whether a fascine roadway across the river bed at Oomurwarra is to be undertaken this year; and he would wish to know to what, if the above description be correct, the present condition of the Bhundara fascine roadway is attributable.

Oomair.—The Chief Commissioner having lately visited Oomair in the Nagpore District, I am directed to convey the expression of his general approval of the municipal improvements which are being carried out there, and which are creditable to the Deputy Commissioner and

his Assistants. The excavation of the old tank, the conversion of the old fort and square into a public garden, the formation of the new market-place, together with the new roads and streets already made, will greatly improve this town. The school-house is a very good building, and will be better still, if the ground round it shall be cleared. The site for the new Tehseel Cutcherry has been well chosen. It is hoped that a Dispensary will soon be erected.

2. The only thing which occurred to the Chief Commissioner was this, that the arrangements commenced for the new market-place will present a somewhat plain exterior. By arranging the sheds, so as to form a sort of hollow square, the appearance will be much improved.

Blawgh.—On the occasion of a recent visit to Blawghurh, the Chief Commissioner observed that there are some old tombs, either belonging to the Gond kings or chiefs, on the bank of the river Pochi, and also the remains of a small palace. It was noted with satisfaction that the Deputy Commissioner had previously caused the clearance of the jungle from the tombs.

2. I am now to request that you will be good enough to cause all these interesting ruins, both tombs and palace, to be regularly kept clear of brushwood and rubbish. This can easily be done from the local funds.

Parsee.—I am directed to inform you that recently the Chief Commissioner in company with the District Officer visited the small town of Parsee in the Nagpore District.

2. The yield of the town duties is small, and, therefore, the municipal improvements can hardly be expected to be considerable. But the improvement on the small square in the centre of the place is going on rightly. And the repair of two old wells, one of them a fine structure, and the commencement of a new well, are to be regarded with satisfaction.

Patunsaongee.—I am directed to inform you that the Chief Commissioner in company with the Deputy Commissioner visited Patunsaongee in the Nagpore District, and inspected the local improvements at that place.

2. The new "Chubootras," with stone masonry facings, for the weekly bazar, and the new travellers' rest-house, will be useful works. But in both cases care and attention will be needed to the quality of the workmanship, which is not altogether of the best. Some of the ground round the new school-house, too, requires clearing.

3. The income from town duties at this place is small; and much in the way of municipal works can hardly be expected. Perhaps the Deputy Commissioner may be able occasionally to induce the wealthier inhabitants to execute some small works of public utility.

Khappa.—I am directed to inform you that the Chief Commissioner has in company with the District Officer examined the municipal improvements in the town of Khappa in the Nagpore District, and to convey the expression of Mr. Temple's general satisfaction thereat. The Municipal Committee were reported by the Deputy Commissioner to have been zealous and efficient in the performance of their duty.

2. The raised "Chubootras" with stone masonry facings, erected for the weekly bazar; the new travellers' rest-house, the new roads or rather streets being opened out from the centre of the town towards Patunsaongee, towards Saonair, towards Khelode, and towards the river, are all useful works, and will constitute real improvements.

3. The only point which occurs to the Chief Commissioner for present suggestion is this, that great care must be taken about the side drainage of the new streets. This is not at all being attended to already; but the matter is one demanding special supervision of the European Officers, inasmuch as the native members of the Committee are not likely to think of it much for themselves.

Saonair.—I am directed to inform you that the Chief Commissioner has in company with the Deputy Commissioner visited Saonair in the Nagpore District, and inspected the municipal improvements at that place. These improvements are of a superior kind, and in vigour and design surpass comprehensiveness of those of any rural town which Mr. Temple has yet seen in the interior of the Nagpore Province.

2. The extensive clearances and excavations to prepare the site for the new bazar; the conducting of the drainage water by a covered channel; the constructing of two new street roads, conveying on the principal ford over the river, by the partial filling up and widening and levelling of two extensive ravines, the various drain bridges under design or execution,—all redound to the credit of the native members of the Municipal Committee, and give clear indication of effective supervision on the part of the Deputy Commissioner and his Assistants. These improvements will, in fact, entirely change the external aspect of the place.

3. The Chief Commissioner hopes that great care will be taken with the side drains of the new roads, and with the approaches on either side to the new school-house. Also, besides the improvements now in hand, the construction of a causeway at the ford over the river will be worthy of consideration.

4. There appears to be a good system of conservancy established at Saonair. Still it is to be feared that the existence of public necessities inside the town is of doubtful propriety. These places, which are of a temporary character, might easily be moved to a little distance.

5. As cholera was prevalent there at the time, the Chief Commissioner took the opportunity of warning the people that the preservation of cleanliness in the thickly inhabited parts is the chief safeguard against epidemics; and urged them particularly to prevent any, even the smallest, accumulation of refuse and rubbish.

Chimoor.—The Chief Commissioner having recently visited Chimoor in the Chanda District, I am directed to convey to you the following observations:—

2. The town is somewhat broken down, and has the reputation of unhealthiness. The insalubrity is no doubt in part, at least, attributable to the swamp which forms behind the dam of the large tank: close to which swamp again there lies the town. The swamp, though not extensive, is evidently pernicious. It was bad enough when Mr. Temple saw it, after some heavy spring showers. What it must be in the autumn, after the rains, can be imagined. Yet it might be drained or partially filled up at no very great cost.

3. It seems not quite fixed as to whether town duties will be levied in Chimoor. If they are, their yield will not be very great. But they might yield something towards such a purpose as that above described; considering the immediate benefit of the work, too, some such subscription might be raised among the townspeople to supplement the local fund.

4. The attention of the Deputy Commissioner might be directed to the above matter.

Armorie.—During his recent visit to the Chanda District, the Chief Commissioner learnt with much regret that the flourishing mart of Armorie, on the Wyne Gunga River, had been severely damaged by accidental fire. It was ascertained from the principal townspeople (who were specially assembled) that the cause of this accident was none other than the circumstance that the roofs of the houses were almost all of thatch, and that tiling had been but little resorted to.

2. Considering that this place has a commanding position for the trade of the wild districts east of the Wyne Gunga; that it is, as it were, the last out-post of civilization before we enter on the great central wilderness of these Provinces.—Mr. Temple thinks that its due preservation ought always to have the solicitude of the Deputy Commissioner of Chanda.

3. The present opportunity should be diligently used by Captain Lucie Smith, to induce the people, when re-building their burnt houses, to use tiles and to abandon thatch.

4. Now, too, that town duties are to be levied, something should be speedily done towards improving the streets. The improvement of the approach from the town to the river may also be worthy of consideration.

Berhamporee.—The Chief Commissioner having recently examined in company with the Deputy Commissioner, Captain Lucie Smith, the town of Berhamporee (in the Chanda District) and its neighbourhood, I am directed to convey to you the following instructions:—

2. As you are aware a new Tehseel Cutcherry is to be very shortly built at this place, the selection of a site for this building is a matter of local importance. On the whole, Mr. Temple agreed with the Deputy Commissioner that the best site will be found inside the old fort, where the existing temporary Cutcherry now stands, and where the new school building has recently been constructed.

3. Hereafter, too, the Police Station-house will be built opposite the school-house.

4. Thus these buildings, viz., the Tehseel Cutcherry, the Police Station-house, and the Town School-house, will form three sides of a square.

5. But round the space to be occupied by the square, there stands the remains of the fort wall. All these should be carefully levelled, so as to allow a free circulation of air.

6. On the north side of this space, there is the tank, lying underneath the old bastions. If the wall, as above described, shall be levelled, then there will be free access from the square to the tank; down to which latter there should hereafter be constructed a flight of steps.

7. The space occupied by the square having been thus prepared, will stand at a higher elevation than the surrounding ground, and will be very suitable for the purpose in view.

8. It is understood that some subscription might be raised among the wealthier inhabitants for the improvement of the tank just alluded to.

9. Town duties are now to be levied in Berhamporee, where the trade is considerable. The proceeds will be in part available for improving the ground of the old fort, which will be so much resorted to by the inhabitants.

10. The streets of Berhamporee are at present very narrow and confined. But the town duty proceeds should enable the Local Committee shortly to open out, at least, one tolerable street leading to the fort square.

Bhewapore.—The Chief Commissioner having recently inspected the town of Bhewapore (on the estate of Baba Chitkojee Rao Goojur) in the Nagpore District, I am directed to communicate the following observations:—

2. The bazar held there periodically is a fine one, and is well attended; the local manufactures of cloths is also good, and is much encouraged by the Baba himself; and a Municipal Committee has been formed.

3. A commencement has been made with the erection of a sort of market-place, that is to say, a square has been formed with raised platforms (Chubootras) all round. But the facings of these platforms, intended to be stonework, are really of the most inferior kind, and

fit for little more than a temporary purpose. On the outer edge of the platform, a commencement has been made with mud walls, intended originally (as it would seem) to support some sort of roofing.

4. Mr. Temple thinks that substantial stone facing of well cut material should be added, and that the surface of the platform should be of the best bed red gravel, or of some such material: that the mud walls, which have not been far advanced, should be removed; that no attempt should be made to erect any structure on the platform: but that all available resources should be devoted to making the platforms of a handsome and permanent character, fit for the holding of a large periodical market. Further, Mr. Temple suggests that the standard which here, as elsewhere, is erected in the centre to denote the market place, should rest on a substantial stone pedestal and pillar.

5. Mr. Temple has dwelt so far on the above points, by way of the practical enforcement of the principle that these local works are designed, not only to facilitate the transactions, but also to elevate the taste of the people, and improve their notions of architecture. It would be worse than useless to execute work in a mean and unattractive manner, or to attempt more than could be done in a really good style. This principle will, doubtless, be appreciated by the District Officers and by yourself.

6. The repairs to the handsome old lowice well near the market-place have the Chief Commissioner's approval.

7. The new school-house seemed to be substantially erected, though still unfinished.

8. I must, lastly, beg attention to the propriety of devoting some of the Municipal fund of the place to the widening of one or other of the principal streets, and to the rearing or improving of the large swamp which lies at the foot of the dam of the large tank; and to the restoration of the old tank, of which there are the remains outside the town to the north.

LAKES AND TANKS OF THE WYNE GUNGA VALLEY.

The Chief Commissioner having recently visited parts of what may be termed the Tank, or rather the Lake Region of the Chanda District, I am directed to communicate to you certain observations as follows:—

2. Mr. Temple inspected in company with the Deputy Commissioner, Captain Lucie Smith, nearly all the largest tanks in the Gurboree Pergunnahs, some of those in the Chimoor and Boorhanpooree Pergunnahs, and one very fine tank of the Mhool Pergunnah. The number and size of these tanks is certainly remarkable. In some parts, they even cluster thick round the feet of Hill Ranges. From the summit of the hill, locally called Perzaghur, many of them can be seen at once; on the day that the Chief Commissioner saw the view, no less than thirty-seven tanks were counted as distinctly visible.

3. These tanks are indeed the pride and ornament of the district. They are, as the people themselves told the Chief Commissioner, the very life of the place. They are the object to which much of the industry and capital of the people are devoted; and are the main source of agricultural wealth. The two staples are rice and sugar-cane. And both are entirely dependant on the water supply for irrigation from the tanks.

4. It is to the lasting honor of the Koihree tribe that they were the men originally instrumental in constructing the tanks, and of the Gond dynasty, that these undertakings were initiated under their rule. Not only have large, indeed sometimes very extensive, sheets of water been formed by damming up streams by heavy earthwork dykes, but masonry escapes and sluices and channels have been constructed. Some of the sluices, as head works for irrigation channels, present an almost elaborate apparatus, creditable to the skill and ingenuity of the people; considering the amount of labor and capital required for each one of these tanks; considering, too, the number of the tanks, our surprise is excited at the immense aggregate value represented by the total of the tanks in this part of the district. When, moreover, it is remembered that before any village in these parts could have been founded, the tank must have been constructed; our respect is enhanced for the people who, despite scarcity of population and a hundred other disadvantages, did yet succeed in founding so many villages in the midst of the wilderness.

5. The foregoing considerations will readily show you that, in the Chief Commissioner's estimation, the repair and preservation of tanks existing, the restoration of old ones occasionally gone to ruin, and the designing and constructing of new ones, whenever required, form a very important part of the duties of the Deputy Commissioner of Chanda.

6. Mr. Temple was happy to find that with many, perhaps with most, of the largest tanks, the works were in good, even capital repair. The following are the places where he saw the irrigation works in a condition creditable to the villagers and the district authorities:—

Peepurdah.

Rajolee.

Sindwee.

Doongergaon.

Aliwee.

Mungroor.

Uddar.

At the above places the tanks and their irrigation appliances are really very fine indeed, if the remoteness of the locality and the isolation of the people be borne in mind. Many other smaller tanks were also seen by the Chief Commissioner in good condition. All this is so far satisfactory, and it is hoped that this state of things may be fully maintained.

7. On the other hand, other tanks were heard of as being out of repair. And the Chief Commissioner himself witnessed with regret two instances of tanks having broken down some years ago, and not having been restored. Of these, one was at Sarunguh, at the foot of the Perzagurh Hill; the other was at a point midway between Uddar and Berhamporee; in the first case, the proprietor of the village offered to restore the tank, provided he could obtain a tucavee loan, on the usual conditions, and this matter was commended by the Chief Commissioner to the immediate consideration of the Deputy Commissioner; for the second case, further enquiry was needed, which the Deputy Commissioner was directed to make. It is hoped that Captain Lucie Smith's zeal and energy may be relied upon to prevent the recurrence of such cases, which, to some extent, must constitute blots on the district administration. If there be other cases of a similar character, the Deputy Commissioner will readily know them, and understand how to apply a prompt and effective remedy.

8. There is a tank some miles to the east of Chanda, which was some time ago repaired under the supervision of the Public Works Department. The Chief Commissioner learnt that these repairs are still insufficient, and that further patching up is needed. He authorized the Deputy Commissioner to expend 1,000 Rupees at his discretion for this purpose, in time to catch the rain supply of the coming monsoon.

9. The Chief Commissioner further impressed on the Deputy Commissioner the expediency of making the people thoroughly understand that they can obtain tucavee loans, provided that they can satisfy the district authorities of the reasonableness of the application; such loans, too, may be granted on the security of the village itself, unless additional security be required. The loans, too, may be applied to extensive repairs, enlargements or extensions required to existing tanks; but should be more particularly devoted, either to the restoration of old ruined tanks, or to the construction of new ones.

10. The policy of Government in respect to Tuccavee was further explained by the Chief Commissioner to the landholders in Darbar. It is important that the District Officer should see that the principles thus expounded should be carried out in practice. At the same time it is perhaps hardly necessary to caution an Officer of Captain Lucie Smith's experience, in respect to the care and caution needed to ensure Tuccavees being properly granted and faithfully laid out.

11. At the same time, it is most desirable that the people should give attention to Wells as well as to Tanks. However good the tank may be for irrigation or for watering cattle, it is the well which can alone (in these localities) supply pure, and wholesome drinking water to the villagers. It were superfluous to point out how important this is to the health of the population. This consideration also was impressed by the Chief Commissioner upon the landholders in Darbar.

12. Lastly, I am to observe that the condition, progress, and prospects of the tanks should be pointedly dwelt upon by the Deputy Commissioner of Chanda in his Annual Revenue Report.

13. Mr. Temple confidently anticipates that the subject matter of this despatch will receive your constant and vigilant supervision.

I am directed to request that you will secure the attention of the Deputy Commissioner of Nagpore to the repair of the Wells and "Bowlees," on the road between Nagpore and Oomrair, and the road between Nagpore and Koohee. Mr. Temple has remarked, that these useful structures were erected by the public spirit and liberality of private parties, for the benefit of travellers on much frequented roads where there is much need of water in the hot season, when traffic is most brisk.

2. Either the representatives of the original founders should be asked to keep up these structures, or else failing such, then the requisite repairs should be undertaken by the Local Committee of the district.

Nurkheir.—When recently visiting Nurkheir in the Nagpore District, the Chief Commissioner was glad to observe that some commencement had been made in the way of municipal improvement. The design of a square in the centre of the town, and facing the river, appeared to be a good one. The river frontage should be kept clear, and should be protected from the floods; the approach of the bank should be well made. The road running past the new school-house and through the town should be widened.

2. The Municipal Committee appeared to be alive to its duties.

Mohpa.—The Chief Commissioner has recently inspected the site where the Nuwab proposes to construct a small anicut at Mohpa in the Nagpore District. That site is no doubt a good one for preserving a perpetual supply of water and for cheap and a easy construction.

2. But it may be a question as to whether some hundred yards lower down the stream a site might not be found where an anicut would not only ensure a supply of water, but would also serve as a causeway for the crossing of the main road which runs through Mohpa. To decide this question, would require further examination than Mr. Temple was able to give. But he requests that you will be good enough to instruct the Deputy Commissioner to have the point examined and decided.

3. If it be decided in the affirmative, then the cost might be defrayed partly by the road fund, and partly by the Nuwab. If in the negative, then the Nuwab should be urged to construct, without delay, the small anicut on the site which he has chosen.

Mowar.—Recently, on visiting the town of Mowar in the Nagpore District the Chief Commissioner was glad to see that an active commencement, in the way of Municipal improvement, has been made.

2. The first object appears to have been to secure a space of suitable extent for the large bazar and market which are held at Mowar. This ground being on the very bank of the river Wurdah, is liable to serious incursions from the river in the flood season. The Deputy Commissioner is therefore endeavoring to prevent this in future, by diverting and regulating the floods by means of defensive works of earthwork and rubble stone constructed a short distance up-stream. It is hoped that these works may prove successful; but they will require careful watching for the first year or two.

3. When these are done, then it will be desirable to open one fairly broad street through the town, leading from the east (i. e., the Nagpore direction) to the market-place on the bank of the river.

4. The Malgozar, as the head of the Municipal Committee, appeared to take an interest in the improvements.

Kowtah.—The Chief Commissioner having recently visited the ground near the Railway Station at Kowtah, in company with the Deputy Commissioner of the Wurdah District and the Resident Engineer of the Railway Department, I am directed to communicate to you the following observations and instructions:—

2. It were superfluous to call to your recollection the probable future importance of Kowtah, as being the point where the produce from the large markets of Arrer and Deolee will converge, and as forming, as it were, the western Gate of the Central Provinces. The ground around the Railway Station is for the most part a barren plain. But, ere long, that plain may become covered with buildings, streets, and factories. Now therefore is the fitting time to see that the requisite ground is properly taken up; that the future town and its environs are designed and laid out with due forecast and consideration. And it is with this object that Mr. Temple now directs me to address you.

3. The Deputy Commissioner should be duly instructed by you to take the whole matter in hand as soon as possible. In this he may derive much useful assistance from the Resident Railway Engineer, Mr. R. M. Brereton. The points which occur to the Chief Commissioner, as specially requiring notice, are as follows:—

4. The roads from Arree and from Deolee, respectively, as they approach the Railway Station, have been already marked off. This business should be concluded by fixing the exact spot for the level crossing near the Railway Station. This should be done now in communication with Mr. Brereton, and the demarcation of the two roads should be completed.

5. The lines for the main streets of the possible new town should be chosen, so that building sites for natives and others may be allotted as soon as applied for. The sinking of wells should be taken in hand, with a view to the early planting of trees at the right season. The Officers of the Customs Department should be consulted as to what ground is required for their Department. Sites should be chosen for the possible Dispensary, School-house, and other public buildings. The site for a Serai and travellers' Rest-house has already been selected. Ground for the reception of produce intended for the Railway should be reserved. Also ground should be kept which may seem likely to be wanted for cotton machinery and European factories.

6. Lastly, there should be an approach marked off from the Railway Station to the river Wurdah close at hand. If this be well done, it is possible that some wealthy native gentleman may hereafter be induced to build some handsome flight of steps to the water's edge. In reference hereto, I am also to draw your attention to the rocky bed of the river, near the old Hindoo Temple, which seems to offer a favorable situation for a causeway to serve both for the storage of water and the passage across the stream.

7. Other points will doubtless suggest themselves to you as the enquiry proceeds; and hereafter the Chief Commissioner will be glad to receive a report from you of what may be effected in this matter.

Nachengau.—The Chief Commissioner having recently passed through the small town of Nachengau in the Wurdah District in company with the Deputy Commissioner, Mr. Jones, I am directed to communicate to you the expression of Mr. Temple's general satisfaction at the municipal improvements recently effected there.

2. Nachengau was formerly a place of much more importance than at present, and its traffic may possibly be diverted towards Kowtah where the Railway Station has been fixed. But still there will be considerable habitation remaining, and the efforts made to improve the place are commendable.

3. There are the remains of several old tanks in the neighbourhood; the restoration of all these (if indeed it be ever accomplished) must be a work of time. But the restoration of the tank which is nearest the town has been much advanced.

4. The enclosure within which the Tehseel Establishment (now to be removed elsewhere) were once accommodated is to be converted into a Serai for the use of travellers. This arrangement is very proper, inasmuch as the enclosure contains a fine old Well and *Bowlee*. In front of this enclosure a new square and market-place is being formed, the requisite space being cleared by the demolition of old houses; and one new street is being made.

5. The road which leads from Deolee to Kowtah Railway Station, and passes by Nachengau, must be aligned solely with regard to the straightest approach to the Railway Station. That road will, of course, continue imperial. And the road which has been marked out as leading to the town of Nachengau, from the Deolee direction, and which again goes from Nachengau (to join the Imperial Line towards the Railway Station), will be considered local. The Executive Engineer will be instructed accordingly from this Office. And it will be well that you should instruct the Deputy Commissioner in the same sense.

Ramteak.—The Chief Commissioner having inspected the town of Ramteak, directs me to convey the following observations:—

2. The principal feature in the Municipal improvements consists of the roads. The road from Munsur to Ramteak, thence through the town on to the site of the Fair, also the branch road past the Tehseel Cutcherry up the hill to the Bungalow, are well made, and constitute a great improvement.

3. An open space in the centre of the town has been cleared. Three large Wells (*Bowlees*) have been repaired, and a good school-house has been built. The new Tehseel Cutcherry is a very useful structure. The Bungalow on the crest of the hills will cause the place to be frequented by European visitors.

4. The Municipal Committee seem to have evinced an interest in the works, and to have behaved well.

5. All the above points are creditable to the District Authorities. In addition to these, the following points appear to require attention:—

1st.—The new road and street in the town should be metalled with the fine red gravel with which the hill-side abounds; masonry drains, too, should be made hereafter, as funds may be available.

2nd.—There should be a street opened out to connect the school-house with the open space (Chowk of the town on one side, and the Tehseel Cutcherry on the other).

3rd.—There is an old (*Bowlee*) Well, the repair of which was adverted to by the Chief Commissioner on previous occasions. The entire repair of this fine old work may be too expensive; but the rubbish might be cleared out from the bottom, without much cost perhaps. And then a straight road from the main street to the entrance of the *Bowlee* might be made.

4th.—The school-house interior is commodious, but the exterior is plain in the extreme. Some wooden pilasters and other inexpensive ornaments might be added. The same remark may be made of the Bungalow on the hill.

5th.—The bridge road from the Amballa Tank up to the Bungalow on the hill might be improved.

SUPPLEMENTARY SELECTION OF LETTERS, 1865-66.

Nurkheir.—When recently visiting Nurkheir in the Nagpore District, the Chief Commissioner was glad to observe that some commencement had been made in the way of municipal improvement. The design of a square in the centre of the town, and facing the river, appeared to be a good one. The river frontage should be kept clear, and should be protected from the floods; the approach of the bank should be well made. The road running past the new School-house and through the town should be widened.

2. The Municipal Committee appeared to be alive to its duties.

Mohpa.—The Chief Commissioner has recently inspected the site where the Nuwab proposes to construct a small anicut at Mohpa in the Nagpore District. That site is, no doubt, a good one for preserving a perpetual supply of water, and for cheap and easy construction.

2. But it may be a question, as to whether some hundred yards lower down the stream a site might not be found where an anicut would not only ensure a supply of water, but would also serve as a causeway for the crossing of the main road which runs through Mohpa. To decide this question would require further examination than Mr. Temple was able to give. But he requests that you will be good enough to instruct the Deputy Commissioner to have the point examined and decided.

3. If it be decided in the affirmative, then the cost might be defrayed partly by the road fund and partly by the Nuwab. If in the negative, then the Nuwab should be urged to construct, without delay, the small anicut on the site which he has chosen.

Mowar.—Recently, on visiting the town of Mowar in the Nagpore District, the Chief Commissioner was glad to see that an active commencement, in the way of municipal improvement, has been made.

2. The first object appears to have been to secure a space of suitable extent for the large bazar and market which are held at Mowar. This ground, being on the very bank of the river Wurdah, is liable to serious incursions from the river in the flood season. The Deputy Commissioner is, therefore, endeavoring to prevent this in future, by diverting and regulating the floods by means of defensive works of earth-work and rubble stone constructed a short distance up-stream. It is hoped that these works may prove successful; but they will require careful watching for the first year or two.

3. When these are done, then it will be desirable to open one fairly broad street the length of the town, leading from the east (i.e., the Nagpore direction) to the market-place on the bank of the river.

4. The Malgozair, as the head of the Municipal Committee, appeared to take an interest in the improvements.

Kowtah.—The Chief Commissioner having recently visited the ground near the Railway Station at Kowtah in company with the Deputy Commissioner of the Wurdah District and the Resident Engineer of the Railway Department, I am directed to communicate to you the following observations and instructions:—

1. It were superfluous to call to your recollection the probable future importance of Kowtah, as being the point where the produce from the large marts of Arvee and Deolee will converge, and as forming, as it were, the Western Gate of the Central Provinces. The ground around the Railway Station is for the most part a barren plain. But, ere long, that plain may become covered with buildings, streets, and factories. Now, therefore, is the fitting time to see that the requisite ground is properly taken up; that the future town and its environs are designed and laid out with due forecast and consideration. And it is with this object that Mr. Temple now directs me to address you.

2. The Deputy Commissioner should be duly instructed by you to take the whole matter in hand as soon as possible. In this he may derive much useful assistance from the Resident Railway Engineer, Mr. R. M. Brereton. The points which occur to the Chief Commissioner as specially requiring notice are as follows:—

3. The roads from Arvee and from Deolee, respectively, as they approach the Railway Station, have been already marked off. This business should be concluded by fixing the exact spot for the level crossing near the Railway Station. This should be done now in communication with Mr. Brereton, and the demarcation of the two roads should be completed.

4. The lines for the main streets of the possible new town should be chosen, so that building sites for Natives and others may be allotted as soon as applied for. The sinking of wells should be taken in hand with a view to the early planting of trees at the right season. The Officers of the Customs Department should be consulted as to what ground is required for their Department. Sites should be chosen for the possible Dispensary, School-House, and other public buildings. The site for a Serai and Travellers' Rest-house has already been selected. Ground for the reception of produce intended for the Railway should be reserved. Also ground should be kept which may seem likely to be wanted for Cotton machinery and European Factories.

5. Lastly, there should be an approach marked off from the Railway Station to the river Wurdah close at hand. If this be well done, it is possible that some wealthy Native gentleman may hereafter be induced to build some handsome flight of steps to the water's edge. In reference hereto, I am also to draw your attention to the rocky bed of the river near the old Hindoo Temple, which seems to offer a favorable situation for a causeway to serve both for the storage of water and the passage across the stream.

6. Other points will doubtless suggest themselves to you as the enquiry proceeds; and hereafter the Chief Commissioner will be glad to receive a report from you of what may be effected in this matter.

Nachengaoon.—The Chief Commissioner having recently passed through the small town of Nachengaoon in the Wurdah District, in company with the Deputy Commissioner, Mr. Jones, I am directed to communicate to you the expression of Mr. Temple's general satisfaction at the municipal improvements recently effected there.

1. Nachengaoon was formerly a place of much more importance than at present, and its traffic may possibly be diverted towards Kowtah, where the Railway Station has been fixed. But still there will be considerable habitation remaining, and the efforts made to improve the place are commendable.

2. There are the remains of several old tanks in the neighbourhood; the restoration of all these (if indeed it be ever accomplished) must be a work of time. But the restoration of the tank which is nearest the town has been much advanced.

3. The enclosure within which the Tehseel Establishment (now to be removed elsewhere) were once accommodated is to be converted into a Serai for the use of travellers. The arrangement is very proper, inasmuch as the enclosure contains a fine old well and *Bowlee*. In front of this enclosure a new square and market place is being formed, the requisite space being cleared by the demolition of old houses; and one new street is being made.

4. The road which leads from Deolee to Kowtah Railway Station, and passes by Nachengaoon, must be aligned solely with regard to the straightest approach to the Railway Station. That road will, of course, continue Imperial. And the road which has been marked out as leading to the Town of Nachengaoon (to join the Imperial Line towards the Railway Station) will be again goes from Nachengaoon (to join the Imperial Line towards the Railway Station) will be considered local. The Executive Engineer will be instructed accordingly from this Office. And it will be well that you should instruct the Deputy Commissioner in the same sense.

Hingunghat.—As many of the letters which the Chief Commissioner has caused to be addressed to you regarding municipal improvements in the various towns of the Wurdah District convey strictures on the shortcomings in this respect in some places, it seems fair to that

district to note the progress which the Chief Commissioner has, on various occasions, noticed at Hingunghat, which is the largest town in that district, and to which the efforts of the local authorities have been largely devoted.

1. I am accordingly to state that, on the several occasions on which the Chief Commissioner has visited that place, he has observed, with satisfaction, the comprehensive manner in which municipal improvement has been carried out there. Indeed, the old town has been entirely given up as irreclaimable, and a new town has been constructed on a new site altogether. The new site has been arranged in broad streets with squares, wells and tanks have been made, rows of trees have been planted, the towns-people have built new houses on improved plans, and with tiled roofs, as a precaution against fire. All these points are highly creditable to the District authorities and to the Municipality. In these respects, indeed, no town in the Nagpore country has done better than Hingunghat,—indeed, perhaps, none has done so well.

2. But several of the public buildings at this place, such as the Serai and the School-house, proved very defective in structure. It is hoped that by this time these defects have been remedied.

Ramteak.—The Chief Commissioner, having inspected the town of Ramteak, directs me to convey the following observations:—

1. The principal feature in the municipal improvements consist of the roads. The road from Munsur to Ramteak, thence through the town on to the site of the fair, also the branch road past the Tehseel Cutcherry up the Hill to the Bungalow, are well made, and constitute a great improvement.

2. An open space in the centre of the town has been cleared. Three large wells (*Bowlees*) have been repaired, and a good School-house has been built. The new Tehseel Cutcherry is a very useful structure. The Bungalow on the crest of the hills will cause the place to be frequented by European visitors.

3. The Municipal Committee seem to have evinced an interest in the works, and to have behaved well.

4. All the above points are creditable to the District authorities. In addition to these, the following points appear to require attention:—

1st.—The new road and street in the town should be metalled with the fine red gravel with which the hill-side abounds; masonry drains, too, should be made hereafter, as funds may be available.

2nd.—There should be a street opened out to connect the School-house with the open space (Chowk) of the town on one side, and the Tehseel Cutcherry on the other.

3rd.—There is an old (*Bowlee*) well, the repair of which was adverted to by the Chief Commissioner on previous occasions. The entire repair of this fine old work may be too expensive; but the rubbish might be cleared out from the bottom, without much cost perhaps; and then a straight road from the main street to the entrance of the *Bowlee* might be made.

4th.—The School-house interior is commodious, but the exterior is plain in the extreme. Some wooden pinnacles and other inexpensive ornaments might be added. The same remark applies to the exterior of the Bungalow on the Hill.

5th.—The bridge road from the Amballa Tank up to the Bungalow on the hill might be improved.

Selection of letters written in the year 1866, by order of the Chief Commissioner, Central Provinces, to the address of the Commissioner, Jubbulpore Division, regarding local improvements in the Districts of that Division.

In reference to previous correspondence regarding the Bazar dues in the Seonee District, I am directed to communicate to you the following decision, which the Chief Commissioner has arrived at, after conferring with yourself and the Deputy Commissioner during his recent visit to that District.

1. These dues are very important, and the Deputy Commissioner should endeavour to develop and increase them year by year, so that they may become a growing source of local revenue, and be expended solely for the benefit of the places where they are raised.

2. At the principal of the rural towns, the Deputy Commissioner can, at his discretion, erect market places, to be covered buildings. Such buildings must not be mere tiled sheds or barns; but they must be built after an appropriate design (some such design as that which the Deputy Commissioner showed the Chief Commissioner.) It is an object to elevate the ideas and tastes of the rural population, by showing before them structures built with due regard to external appearance.

3. At other places, it will suffice to make raised platforms with masonry flankings; and to set up a good flagstaff in the centre.

4. If people choose to build shops, around the market place, they must do so, according to a general plan to be prescribed by the Deputy Commissioner, a square, a circle, or the like. But for the form of their own shops, they need not follow any uniform design, provided that they build tolerably good structures.

5. If there be surplus funds, they may be devoted to opening out streets, or improving approaches.

7. With these general instructions, the Deputy Commissioner may put these local improvements in hand as soon as he can, so that the current season may not be lost.

Seonee.—The Chief Commissioner, having inspected the local works and improvements at the Town and Station of Seonee, I am directed to convey to you the following observations:—

2. The streets and drains of the town are in fair condition. The two market places called respectively Boodhwaree and Bhyongunj, are useful structures, of fair appearance, constituting a great addition to the place. The roads round the Dal Sangor tank, and the Boodhwaree tank, are well arranged. The progress with the new Boodhwaree tank is satisfactory. The public garden promises to be an excellent one. The new School-house and the new Dispensary are good buildings; the addition of the female ward to the latter will be the means of increased usefulness.

3. All the above points reflect credit on the Seonee District. These improvements were originated through the energy of Captain Thompson. They have been successfully and properly carried on by Lieutenant-Colonel Denney.

4. There still exist certain defects which the Deputy Commissioner will, by continuous effort, be able to remedy. These are as follows:—

(i).—The spoil banks of earth between the road and the new Dispensary are unsightly. The Executive Engineer has been instructed to remove a part. The rest must be done by the District Officer. By these means, the level space between the new School-house and the Boodhwaree market place will be gradually filled up.

(ii).—The Nuzul land at the eastern side of the Dal Sangor tank is in a very untidy condition. The Deputy Commissioner may sell a part, and with the proceeds improve the remainder.

(iii).—The young trees planted out are in good order; but there are strange to say, no nurseries of young trees kept up at the Station. This is contrary to existing orders about Arboriculture, and must be set right.

(iv).—The old Serai has been permitted to lapse into a state of dirt and disorder. As the building has been in use, this oversight should not have occurred. It is hoped, that the Deputy Commissioner will see that the new Serai is properly kept up.

(v).—The hedges of the enclosures, public and other, at the Station of Seonee, are extraordinarily untidy. So far as Municipal influence can be exerted, the Deputy Commissioner should provide that this defect be gradually remedied.

Jubbulpore.—The Chief Commissioner having recently inspected the city of Jubbulpore I am directed to convey the following observations:—

2. The main streets of the city are in very good order. The masonry side drains are excellent. In many places the house-holders and shop-keepers are building fire-bricks for their houses with superior designs; which is a satisfactory circumstance. The new bazaar and market place, known as Nembhard Gunj, are among the best things of the kind in the Provinces. In the vicinity of Malony Gunj considerable improvements have been made from that point as far as the Serai and the Dispensary. Both these last named buildings were found in good order. The same remark applies to the Police Office and Station House.

The new well and garden, made by Bugwan Doss in the encamping ground, will be very useful. The new public garden at the end of the city, nearest the Cantonment, will be a great addition to the place.

3. These various improvements place Jubbulpore in the very first rank among the cities of these Provinces. They were mostly originated, and to a large extent carried out by the late Deputy Commissioner Major Nembhard, to whom great credit is due. But they have excellently advanced under the present Deputy Commissioner Mr. C. Grant. The Chief Commissioner now expects that succeeding Deputy Commissioners will prosecute the good work, and follow the example which has been set.

4. There are of course many points still claiming early or immediate attention,—among them are the following:—

(i).—The erection of a Normal School-house, on a site near the Town School-house. The design should be a suitable one, combining a respectable appearance with a reasonable regard to economy. The Town School-house has been erected on the plainest, perhaps even the ugliest, plan possible. Its roof should be modified so as to break the bare outline, and impart something at least of ornament to the structure.

(ii).—A town hall is to be erected. The design which the Chief Commissioner saw will be suitable. The district authorities must bear in mind that such structures are not to be built with repulsive plainness. To build them thus would be to lower the taste, and to do the minds of the very people whom it is our duty to educate. We should set them a good example by constructing our own Municipal buildings in a manner which shall be becoming and appropriate, as well as economical.

(iii).—A Lunatic Asylum must be provided. The Chief Commissioner fears that the existing proposal of inducing a private individual to build a house, which is afterwards to be rented by Government for the institution, will not work well. He prefers that the present city Dispensary be used as a Lunatic Asylum, for which purpose its plan is particularly suited; and that a new Dispensary be erected in the heart of the city. You are requested to make a separate proposal on this head.

(iv).—A Lunatic Asylum must be provided. The Chief Commissioner fears that the existing proposal of inducing a private individual to build a house, which is afterwards to be rented by Government for the institution, will not work well. He prefers that the present city Dispensary be used as a Lunatic Asylum, for which purpose its plan is particularly suited; and that a new Dispensary be erected in the heart of the city. You are requested to make a separate proposal on this head.

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(ix).—The front and the surrounding banks of the tank nearly opposite the Serai, should be improved. If this work be connected with the improvement near the Serai itself, the general effect on that part of the city will be excellent.

(x).—The present encamping ground was wretched in the extreme until Bugwan Doss's Well was built, and is now very bad. The whole place should be taken in hand.

(xi).—The next thing to be done in the way of streets is to connect Malony Gunj and O'Brien Gunj with Nembhard Gunj. This will require a new street to be cut through a mass of huts and gardens. It will be a work of time and expense, but should be borne in mind steadily.

(xii).—In the lesser streets and alleys, drains are required, and should be added by degrees.

5. Mr. Temple hopes that continuous attention will be given to the rendering of Jubbulpore a city worthy of its position at the joint terminus of two Railways.

Punagur.—The Chief Commissioner, having recently passed through the town of Punagur in the Jubbulpore District, directs me to communicate the following instructions:—

2. This place is of some size, containing several thousands of inhabitants. It has a large weekly market. Though it has no large traders, yet it is not otherwise than flourishing, and it has some trade in country iron ware. Its situation on the high road, and near a future Railway Station, is excellent. Its streets are tolerably clean (cleaner indeed by far than the generality of streets in the interior of the country), and the plastering (photta) of the houses with a greyish calcareous earth gives a good appearance to the place, and, doubtless, adds to its salubrity.

3. As yet, however, almost nothing has been done for the Municipal improvement of the place. There is a house tax for the Town Police, yielding a small sum of Rupees 350 a year, and a subscription was raised some short time ago for the repairs which have been executed to the tank near the Town. On the whole, however, there are few places of this size in these Provinces where so little has been done in these respects.

4. It is now time that a commencement should be made, and that the authorities and the people should be awakened to the requirements of the case. The points more particularly requiring attention appear to be the following:—

(i).—The main street running at right angles to the road, originally a broad one, has been so encroached upon by small raised earthen platforms (Chabootras) that it has now become narrow and irregular. These Chabootras should be removed, and the original width of the road restored.

(ii).—The weekly market place is held here. The townspeople professed before the Chief Commissioner their wish to get a square made here. The Deputy Commissioner should see whether this resolution cannot be carried into effect. Compensation of course being duly awarded to those whose houses fall within the line of the projected improvement.

(iii).—A road should be carried through the town from the main road to the new Railway station.

(iv).—Certain additional repairs are wanted to the Tank, which has been already repaired.

(v).—Additions are required to the passage underneath the Railway leading from the Town to the Tank. The Deputy Commissioner should address the Railway Department hereon.

(vi).—A Railway Serai near the Station will be needed.

(vii).—The Town School-house, though spacious, has a bad roof. The building was erected by subscription. A good roof should be hereafter added from Government funds. The Director of Public Instruction will be separately addressed on this subject. An enclosure and play ground should be added.

(viii).—The Deputy Commissioner should consider whether Town Duties cannot advantageously be substituted for the existing House Tax.

Sehora.—The Chief Commissioner, having recently visited the Town of Sehora in the Jubbulpore District, directs me to communicate the following remarks:—

2. The roadway of the principal streets is in fair order, and so far the result is creditable to the District authorities.

3. The design of a square and market place in the centre of the Town, and thence of a broad street leading past the Tank direct to the main imperial road, is a very good one. It has not yet been practically commenced. The Deputy Commissioner should see that a commencement is now made on a broad design. The prosecution of the work will for some little time absorb all the resources of the place. When completed, it will be a great improvement, and the exertions of the Municipal Committee should be concentrated thereon.

4. The Town School-house, though spacious, had a roof of the plainest description. The building was erected chiefly by subscription. The Director of Public Instructions will be requested to contribute some Government funds for its improvement.

5. The Serai is on the whole a good one; but, as usual, the tiling of the roof of the verandah is wretched, and should be improved. The Site for the new Serai near the Railway Station has been well chosen.

6. An old bungalow has been well repaired for the accommodation of visitors.

7. As Sohara is on the main imperial road, and close to a Railway Station, Mr. Temple hopes that the District Authorities will strive to render it worthy of its situation.

Sleemana.—The Chief Commissioner, having recently inspected the Town of Sleemana-bad in the Jubbulpore District, directs me to convey the following remarks:—

2. The town is a small one, but being on the main imperial road, and the residence of a Sub-Collector, (Tehsildar,) and also near to a Railway Station, it should be improved so far as may be practicable.

3. Already one or two small streets near the Tehsildar Station house have been made, side drains, (even of earth work if masonry cannot be afforded) are much needed.

4. A place should be cleared, of suitable dimensions, for the weekly market to assemble in. This might probably be done at the point where the branch road to the Railway Station at Bunde is to break off from the imperial road.

5. The existing Serai, though spacious, has a wretched roof. A proper roof should be added whenever funds shall be available.

Moorwarra.—The Chief Commissioner having recently visited the town of Moorwarra (in the Jubbulpore District), I am directed to draw your attention to the future Municipal improvement of that place.

2. Moorwarra is on the high road, close to the future Railway Station, and is likely to flourish. It has a large weekly market, and must have a population of more than three thousand souls. The narrow lanes and alleys were certainly narrow and well kept when the Chief Commissioner saw them, but as yet nothing has been done to make the place worthy of the name of town. There does not even seem to be any land tax for the Town Police; there is no house tax, and there is nothing but the common village watch Kotawar so far as the Chief Commissioner could learn. It is now time that some serious facts, similar to those raised in other places, should be improved. If indeed the market shall continue to be held there. But it may be preferable to try to induce the people to open out a square in the midst of the old town, on the margin of the imperial road.

4. The School-house is as bad in respect to the roof as the other School-houses in the neighbourhood. It also wants an enclosure and compound. The Director of Public Instruction will be addressed separately on this subject.

5. The establishment of a Dispensary here is creditable to the District Authorities. A building for this institution should, however, be erected as soon as possible.

6. The formation of a road from the town to the Railway Station should be taken into early consideration. Mr. Temple observed that a site had been properly selected for the new Serai near the Railway Station. The old Serai in the town, though spacious, had a very insufficient roof.

Bijairagoghur.—The Chief Commissioner, having visited the town and neighbourhood of Bijairagoghur attached to the Jubbulpore District, desires me to direct your attention to the following points:—

(i).—The roadways of the streets through the town have recently been well made, and now contribute to redeem the appearance of a place, which has to some extent unavoidably decayed, since the rebellion of the late ruler and his consequent dethronement. It will be further desirable to extend one street as far as the bathing ghat on the stream and by.

(ii).—Some progress has been made in restoring the old garden attached to the Fort. The Luchimon Bagh, also Government property near the town, should be maintained. These gardens have valuable trees planted under Native Rule. The work should be constantly proceeded with, and the produce be disposed of to advantage, so as to form a fund for the improvement of the gardens, and the gradual clearance of all the surroundings of the old fort and enclosure now much overgrown with brushwood.

(iii).—The buildings inside the Fort, which once formed a place, and which are now occupied by the civil establishments, must be kept in a state of proper repair. Those portions of the structures which are not capable of repair should be demolished. Such, for instance, is the ruined bungalow in one of the gardens outside the town.

(iv).—A careful register should be made of the Nuzul land and buildings in and about Bijairagoghur as being now Government property. If there be any claimants thereof, from among the late Chief's family or others, such claims should be enquired into, and finally disposed of.

(v).—Some attempts had been made to improve the road from Bijairagoghur towards Jokai. A part of this road runs over an old dam belonging to some tanks and water works constructed by the late Chief. The occasion should be taken to preserve, and, perhaps, even to improve these useful works.

(vi).—There is a dam in the stream near the Fort. This was constructed during the rebellion, and has been since breached by our troops. The entire breach need probably not be repaired, lest the water above the dam should be rendered too deep, but the work should be finished off, so that it may cease to have a broken appearance.

Belhari.—The Chief Commissioner having recently visited the town of Belhari, in the Jubbulpore District, desires me, with reference thereto, to make the following remarks:—

2. This town is of great antiquity, and evidently was once a place of considerable importance. In it are many ancient temples, wells and bowlees, a fine tank and some extensive groves of mango and tamarind trees. And in every street and house are to be seen old stones beautifully carved, and now inserted into the modern masonry. These stones are the remains of temples destroyed some centuries ago.

3. Mr. Temple, however, did not observe that any thing has been done by the District authorities to preserve any of these interesting remains of by-gone ages, although they appear to be worthy subjects on which to expend some of the funds annually set aside in the Local Funds Budget (under Book Circular LXI. of 1862) for the preservation of "Architectural remains of antiquity and interest."

4. Some of the inhabitants of this town stated that, some years ago, a large stone, bearing a long sanscrit inscription, was taken away by the district authorities, and was for some time afterwards lying near the Deputy Commissioner's Cutcherry in Jubbulpore; the Chief Commissioner will be glad to hear what has become of this stone, and whether it was sent to the Central Museum at Nagpore.

5. In many cases the Executive Engineer has removed many stones, which were lying about for use in the Public Works. To this there is no objection, provided that no carved or sculptured stones are removed. Special caution, in this respect has been enjoined on that Officer.

6. The Chief Commissioner has selected a few stones to be sent to the Nagpore Museum, and the Executive Engineer has been requested to have this done.

7. In conclusion I am to request that the Deputy Commissioner be instructed to take the necessary steps to preserve from ruin, the most interesting remains now to be found in this town.

Dumoh.—The Chief Commissioner having recently inspected the town of Dumoh and its environs, I am directed to convey to you the following observations:—

2. In former years, much had been done to render this place (originally poor and small) in some degree worthy of its position, as the Head Quarters of the District. Since Mr. Temple last saw it in 1862-63, considerable improvements in addition have been made.

3. The principal streets have been in some places widened. A really excellent Dispensary has been made. Two School-houses have been got ready. A really excellent Dispensary has been built. Some old buildings on the bank of the Poreyna tank have been cleared away. The public garden has been improved. A new circle of shops and houses, in an improved style has been commenced. And in general, the whole appearance of the town has been smartened up by plastering and whitewashing, which will also doubtless have a good sanitary effect.

4. All the above points are creditable to the present Deputy Commissioner Mr. Read, and to his predecessors, especially to Colonel Maclean and Major Ashburner. There are also certain points which the Chief Commissioner considers to still be in need of attention as follows:—

5. It seems doubtful whether the whole circle of the Circular bazar can either be finished, or will be required, at present. In that case it will suffice to finish half the circle in good style, and to have an open market place within the area of the circle. The ground is well suited for the purpose, but it will require some filling up. There are the remains of a tank close by, which may be further excavated, and the spoil earth made use of for the market place. It would further be desirable to make a road all round the Poreyna tank; for this considerable clearance would be required, and the work may be one of time; but, if done, it would constitute a marked improvement. The Serai is in good order, but the building is but a poor and shabby one for such a place. Its improvement might be commenced by the construction of a proper gateway, perhaps with stone material and with two apartments for European travellers; then a new and better roof should be given to the compartments where the Native travellers now put up.

Hutta.—I am directed to communicate to you the following observations regarding the town of Hutta in the Dumoh District, which the Chief Commissioner has recently visited.

2. The town is of some size, containing about seven thousand inhabitants, and a considerable traffic passes by it. Still the produce of the Town Duties does not amount to much (some Rupees 2,097 per annum), inasmuch as they can only be levied on the goods brought into the town for consumption, and not on the goods in transit, which latter item seems to constitute the bulk of the traffic. It cannot, therefore, be expected that any very large or costly improvements should be effected.

3. Still something has been done. The streets are clean and well kept; the houses much brightened up by plastering, which must also doubtless conduce to salubrity; and buildings for two institutions, the school and the dispensary, have been partly got ready. And the bridge now being built over the stream, leading into the town on the Dumoh road, will be of great use;—all this is so far creditable to the District administration.

4. The Tehsildar and Police Cutcheries, and the Serai, were built when the District was under the Government of the North-Western Provinces; they are excellent structures.

5. The points to which attention might now be directed by the Municipal Committee appear to be as follows:—The streets are generally narrow and angular. Every proper opportunity should be taken to cut off corners, to remove protruding "Chabootras" and the like, due compensation being awarded to the householders; and thus the streets might be gradually widened. Also if a small square could be formed in front of the present Town Police Station, a point where several streets converge, that would be a great improvement; and this could be effected by the demolition of two or three houses of no great value. Or compensation would be given to the owners. Greater attention should be paid than has heretofore been the case to the several flights of steps leading down to the River Sonar. These places (Ghats) are, of course, much resorted to for bathing; and as the waters subside after cessation of the annual rains, the damages done by the floods should be repaired. The two Ghats, namely the "Logan" and the "Sorab," are much out of repair. The space for the market place in front of the Fort should be smartened up. A substantial flag staff should be erected on a masonry pedestal; and some raised terraces (Chabootras) should be made for the stalls as means shall permit.

Gurakottah.—The Chief Commissioner having recently marched through the town of Gurakottah in the Saugor District directs me to draw your attention to the following points which seem worthy of notice:—

2. The approaches by the river into the town from the Saugor direction are very indifferent, and require considerable improvement before they become suitable approaches to a town of such importance. At the crossing of the River Sonar which divides Gurakottah from Hurder Nugger, the old masonry steps, built years ago by the Natives, have been allowed to fall out of repair. This should meet with immediate attention; and on this spot a plan for making a causeway, which shall serve at once as a crossing, and as a dam for retaining a portion of the River water, should be considered.

3. The work recently executed at Rehlee, and the work now being constructed at Deores, will serve as models for the causeway above indicated.

4. The building recently erected near to the place where the Fair is held is good; it could, however, be considerably improved by more doors being let in both to the front and rear into compartments, divided by roads from each other. This would facilitate the maintaining of order during the annual concourse. Also some raised terraces (Chabootras) might be erected with masonry flankings for the accommodation of the booths and stalls at the Fair.

5. The streets of the town are, as a rule, narrow and irregular; I am, therefore, to suggest that, as opportunities offer, the streets may be widened, and the metalling and drainage of them improved. At some points, too, rough stone metalling has been put down and has become rough from want of subsequent repair and consolidation.

6. The small Serai for travellers, recently erected, is an useful building. The School-house too is well built, save that the style of the gateway and enclosure is quite out of taste and keeping.

7. The town seemed generally to be clean, and the houses smart and white-washed.

8. It will be in your recollection that the income derived from the annual Fair is considerable. The Chief Commissioner hopes it will be devoted to the improvement of the place itself, and of the direct road leading thereto from Saugor.

Koraie.—The Chief Commissioner, having, on the 9th and 10th of March, visited the town of Koraie in the Saugor District, desires me to make the following observations:—

2. Mr. Temple is, on the whole, well pleased with the aspect of this place, which he considers in many respects far excels the majority of the Towns of the Central Provinces. The streets are broad, straight and strongly metalled, and are altogether exceedingly well laid out. A tolerably good School-house has been provided; but a new one is in contemplation. A new dispensary building is being erected. The conservancy and drainage arrangements also are very good. The stone frontage of the houses of the principal streets is uniform and excellent. These improvements were commenced by British Officers many years ago, and have since been well sustained. The place now affords an example of what may be effected for even rural towns by the civilizing influence of British rule.

3. There are, however, a few improvements, which I am directed to suggest for future execution.

4. The new market place inside the town, and in the centre of the four cross roads, seems too small and confined for the growing requirements and trade of the place; it cannot now be enlarged. But a new market place might be made outside the town: to consist of a square, with a structure in the midst roofed in and of a suitable design. In the Nagpore Province several such places have recently been constructed.

5. The banks and steps leading down to the large tank appeared to the Chief Commissioner to be of an inferior description and out of repair; it would add considerably to the general convenience of the town were these to be renewed and improved.

6. The ground on which the great annual Cattle Fair is held should, as soon as funds can be made available for the purpose, be regularly marked off into roads and squares. The squares might be slightly raised, and stone posts be erected at each corner.

7. It is the custom of the inhabitants of Koraie to white-wash and color every thing indiscriminately. Rough mud walls and fine stone pillars meet with the same treatment in this respect. It might be explained to these people that, for good stone-work, coloring is quite unnecessary, and that only cleanliness is required to show it off to the best advantage.

8. The Town Duties will increase as the trade of the place prospers; and thus means for the further execution of improvements will accrue. But there are also several rich bankers and others, natives of the place, who informed the Chief Commissioner that they would be willing to render aid in its improvement. The District Officer should take care to avail himself of the public spirit of these gentlemen.

Saugor.—The Chief Commissioner having recently inspected the City of Saugor, I am directed to convey to you the following remarks:—

2. Mr. Temple is, on the whole, well satisfied with the condition of this place. The streets are well drained and metalled. The broad street leading from the Fort towards the Cantonment, and now known as the Kutra Bazar, is planted with trees on either side. The market place known as Brown Gunj has been completed. The public garden with serpentine water, on the edge of the City, has been constructed; and thereby a place of recreation for the towns-people has been afforded; and that which was once a noxious swamp at the corner of the lake and close to the City has been converted into a pleasure ground. These improvements, some undertaken in former years, and others recently carried out, have contributed to render Saugor one of the best towns in these Provinces.

3. The general conservancy order, and smartness of the town, are creditable to the District authorities.

4. But improvement must never stand still; the efforts of late years must be fully maintained; and the Municipal Officers must constantly be turning their minds to the fresh requirements that will be continually presenting themselves.

5. The following points have occurred to the Chief Commissioner:—
(i).—Of all Cities, this is the one for a good water supply. A large part of it is situated below the main dam of the lake, consequently there is a good head of water; and excellent fountains might be set up in that quarter. The experience of the Nagpore Exhibition should have shown the Municipal authorities how easily the designs for metal fountains with iron piping may be adapted to the uses of this country.

(ii).—Greater attention than heretofore should be paid to the sluices and to the masonry works in the dam of the Lake; these are frequently falling out of repair, whereby valuable water is allowed to escape. These useful works should be kept in a state of thorough repair.

(iii).—The present Dispensary building, though tolerable, is not a structure worthy of such a town. Hereafter it might be sold, or otherwise disposed of, a more suitable building might be erected. A poor house for the reception of the indigent; and the better prevention of vagrancy should be provided. Perhaps on the erection of a new Dispensary with a suitable design, the present Dispensary might answer temporarily as a poor house.

(iv).—The streets in the neighbourhood of the present salt market, chiefly belonging to old Saugor, are very inferior to the streets at the East end near the Civil Station. Perhaps the former may be gradually improved; the matter, however, would require consultation with the people, and the Chief Commissioner cannot say more at present than invite consideration to it.

(v).—Endeavour should be made to impart better taste to the people in respect to the colouring and white-washing of their houses. At present they are sometimes in the habit of white-washing stone work and solid wood work; the latter too they sometimes paint over with gaudy staring colours. All this is quite wrong of course. Good stone work should not be coloured at all; and wood work should be either painted black or else varnished over with oil and water, as is the fashion in the Mahratta Districts. It is only the brick, or plaster, or mud walls that should be white-washed; and even then the colour should not be glaring white, but should be either straw coloured or grey. Attention to a few plain and simple points like these will greatly improve the appearance of a Town.

Bheraghat.—The Chief Commissioner having recently visited Bheraghat on the Nerbudda near Jubbulpore, otherwise known as the Marble Rocks, desires me to make the following suggestions for the improvement of the accommodation for the numerous tourists who visit that most interesting locality.

2. The approach from the main road to the Bungalow is already very fair, but it would be improved were the crests of some of the slopes removed, and the gradients rendered more gentle.

3. The new Circular Chabootra in front of the bungalow might be made more durable and appropriate by being faced with stone. In its present state, it is not only unsightly, but is also extremely fragile, and will constantly require repair. The facing should be formed of the marble from the vicinity.

4. As you are aware, a boat is kept for the use of the visitors to the Rocks. The large boat now in use is spacious and serviceable. But one boat will hardly suffice for the growing requirements of the place. A second boat of similar, though smaller, construction should be supplied.

5. At present, there is no way of reaching the boat, except by passing over many yards of rough rocks which form a path always disagreeable, and occasionally somewhat dangerous. The Chief Commissioner would suggest that a regular causeway be made from the bottom of the steps leading down from the bungalow to the point where the boat is moored. This might be constructed from the marble which is there so abundant.

6. The Chief Commissioner hopes it is superfluous to remind the local authorities of the need of vigilance in the destruction of the swarms of bees which settle in the rocks, and owing to which more than one serious accident is on record. This matter must be strictly attended to.

7. The Chief Commissioner also visited the Hindoo ruins on the summit of the hillock, situated to the south of the village, and observed that part of the ancient structure had recently fallen down, but that no steps had been taken to repair the damage. This part of the building is no longer used as a place of worship, but it is of some antiquity and considerable interest.

8. The Supreme Government was pleased to sanction a Maafes Grant to Daves Poorsee Mohunt, with the understanding that he should keep the locality in order. This should not be lost sight of, and the responsibilities of the Maafedar should be enforced.

Gurrah.—The Chief Commissioner having recently passed through the town of Gurrah, near Jubbulpore, directs me to communicate the following remarks:—

2. The market place recently constructed in the centre of the town is well designed and built, and the ground around it is fairly laid out. The drainage and conservancy arrangements also appear to be good.

3. The fine old Gond Tank, situated to the east of the village, requires attention; the steps leading down to the water's edge are nearly all out of repair, and the banks are altogether rough and un-urged for. Indeed in one place the bund is so low that, during the monsoon, the water flows over it close to the high road. If this defect be not remedied before the ensuing monsoon, it is quite within the range of possibility that the dam might be damaged, and the village flooded. Some moderate repair should certainly be executed. The Chief Commissioner would further suggest that some influential Native may possibly be found who would gladly undertake the construction of the ghats near the road and the care of the tank generally.

4. The inhabitants complained to the Chief Commissioner that the water of this tank is subject to defilement from pigs and other causes. The attention of the Deputy Commissioner should be drawn to the general conservancy rules relating to tanks which are of much sanitary importance.

Jubbulpore and Kuttungee.—The Chief Commissioner has observed with regret the state of disrepair into which the road between Jubbulpore and Kuttungee has fallen, and, with reference thereto, directs me to make the following remarks:—

2. This road is certainly imperial, and therefore should have been repaired by the Executive Engineer; and the present state of the road is certainly not creditable to that Officer and his predecessors. The requisite steps for the remedying of the defect have now been taken in the Department Public Works; this fact, however, by no means exonerates the local authorities from all blame.

3. The road is unsafe for traffic for want of annual repairs which should have been executed in November last, and which might have thus been easily executed. There can scarcely be a doubt that the Divisional and District authorities have frequently passed along this road, and have seen the many broken bridges, the rugged metal and breached earthwork. Mr. Temple cannot understand how the District authorities can have allowed such a state of things to exist, without bringing it to the notice of the Commissioner; and he would have hoped that you would have seen fit to represent it to the Superintendent of Works and insist on the necessary repairs being executed.

4. Perhaps you did represent it to that Officer, and Mr. Temple trusts that you did; but if such was the case, then it would have been well if you had reported the matter to the Chief Commissioner, when you found that your representations were not attended to.

5. The Chief Commissioner fears that the local authorities under a misapprehension have fallen into the habit of taking no notice of any matter that appertains to the Department Public Works, notwithstanding that such matters may be of immediate local importance. This, I am to observe, should not be the case; the Civil authorities should be aware that they are bound to notice everything within their boundaries that affects local interests.

6. Mr. Temple understands that the state of the road between Jubbulpore and Ghansee Ghat is much the same as that of the Kuttungee Road; this he hopes is not the case; but if it be so, then he trusts that early steps will be taken by the Executive Engineer to effect some improvement; and that if this be not done, the Civil Officers will bring it to notice.

Dumoh.—I am directed to inform you that the Chief Commissioner has witnessed with satisfaction the efforts which have been so far successfully made by the Deputy Commissioner of Dumoh for carrying out the recent orders for the Conservancy of Villages. Mr. Temple has passed by many scores of villages in that District, and in every one he has observed some traces of improvement.

2. The conservancy measures have been mainly of the following kinds:—

(i).—The fixing of sites for public privies, or, as they are sometimes called, "ordure fields."

(ii).—The removal of sweepings, dung and the like, to a moderate distance from the village.

(iii).—The plastering over of the houses.

3. Of the above, the most striking is the third, or plastering over of the houses. This is done by the following processes—*firstly*, the coating of the walls with a mixture of mud and cow-dung or similar ("chupāee"); *secondly*, the coating of cow-dung or similar ("chupāee"); *thirdly*, the white-washing ("pothāee"); done with a greyish lime "choee muttee" or with a yellowish plaster "peelee muttee." These processes are applied both inside and outside the houses in every village. There seems to be but very slight expense incurred, and the thing appears to be willingly done by the villagers; and its advantages are appreciated by them. It must add to the salubrity of the villages—and, by adding so remarkably to the appearance of the dwellings, it must tend to civilize and to raise the tastes of the peasantry.

4. The Deputy Commissioner, Mr. Read, deserves credit for all this, and he will doubtless take care to carry the people with him, and to introduce improvement cautiously and gradually, and to be content at first with laying the foundation of reform.

Jubbulpore, Saugor, and Dumoh.—I am directed by the Chief Commissioner to convey to you the following remarks regarding the Town and Village conservancy of the marginally noted Districts of your Division.

2. In the completeness of conservancy arrangements, the first place has certainly been won by Dumoh, which in this respect has advanced with long strides since Mr. Temple marched through the District in 1862-63. In the villages of this district not only are the ordinary conservancy rules attended to, the streets kept scrupulously clean, the drains clear from rubbish, and the whole neighbourhood free from obnoxious smells, &c, but the houses also are almost invariably neatly plastered inside and outside with grey earth, commonly called "choee muttee." This system of plastering not only averts impurities from the dwellings, and produces a capital sanitary effect, but also imparts a general finish to the towns and villages, and gives them an air of comfort, which could scarcely be obtained in any other way. It even improves the general appearance of the country. Much credit is due to Mr. H. Read in this respect, whose operations have been separately commended in this Office letter No. 574-63 of the 9th March 1866.

3. Next to Dumoh, Mr. Temple considers that Saugor has made the most progress in the conservancy of its towns and villages. It, perhaps, falls a little, though very little, short of Dumoh in the general cleanliness of the villages, and in the universality of the practice of house plastering, alluded to above. Still the general result is very good; and much credit is due to Colonel Maclean.

4. The Jubbulpore District is equal to Dumoh and to Saugor in the general cleanliness of its towns; yet the Chief Commissioner is not so sure that it is equal to the other two in respect of village conservancy,—the system of white-washing and plastering the houses is certainly not so much practised in Jubbulpore. This plastering of the houses may, at first sight, appear to be a matter of but lesser consequence. Such, however, is not the case, for there can be no doubt that, where the outside of the houses are kept so very clean, the inside also, and the neighbouring streets, &c., will not be allowed to remain in a dirty state. Care should, however, be taken that the colouring is not to be glaring white, but should rather be either light straw colour or light grey. The immediate attention of the Deputy Commissioner should be called to this.

5. I am here to observe that, although of the three districts, Dumoh stands first, Saugor, second, and Jubbulpore, third, in the above respect, yet the Chief Commissioner considers that all three Districts have done very fairly and can be surpassed by few, if any, Districts in the Central Provinces. The Deputy Commissioners however must not rest content with what they have already done, but should endeavour to carry out to perfection what they have so ably begun. It is, the Chief Commissioner hopes, superfluous to impress on these Officers the absolute necessity of carrying the people with them in their arrangements, and of making the object of these measures widely known.

6. In conclusion, I am to request that the attention of the Deputy Commissioners of Seonee and Mundlah be drawn to the several points above referred to. In the Seonee District there is considerable room for Conservancy improvement even in the villages and towns bordering on the great northern road.

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Minute by His Excellency the Right Hon'ble the Governor General of India, concurred in by the other Members of Council, dated 9th January 1866.

THE object of the present Minute is to state the measures which I would propose to adopt with the view of establishing, on a satisfactory basis, a system for ensuring proper care and supervision of the public health in India.

The reasons which led to the appointment of Sanitary Commissions in the three Presidencies are well known. The primary object which the Government had in view, was the improvement of the sanitary state of the Army, but it was obvious that this object could not be fully attained unless measures were also taken to guard against the numerous removeable causes of disease which almost everywhere exist outside the limits of our cantonments. It was impossible suddenly to create the machinery for carrying out all that was required, not only for the immediate protection of the health of the troops, but for the care of the public health generally. It was desirable to proceed gradually, and to learn by experience what was the character of the measures which ought to be adopted. I consider that this experience has now been gained, and that the time has come in which the Government ought to take further steps for establishing a system which shall ensure constant attention to the requirements of the public health throughout India, and shall provide the means of carrying into effect the more important practical measures of sanitary improvement.

I have received from Mr. Ellis, President of the Madras Sanitary Commission, now on leave in England, a memorandum which he has written on this subject. It is desirable that this should be briefly noticed.

Mr. Ellis proposes to constitute a Department of Public Health under the Government of India, and under the Governments of Madras and Bombay, and to appoint the President of the Sanitary Commission in each case to be a Secretary to Government in the Public Health Department. "What is advocated," he says, "is the recognition by the Home authorities and by the Government of India, of the importance of the sanitary administration, by placing personal responsibility on its representative, and by admitting him to the same means of influence as other heads of Departments occupy and exercise" * * * "In short, let the head of the Public Health Department hold an influential position, such as will secure attention to his work and prevent measures of public health depending upon the good-will of the head of some other department already over-worked, and from whom it will hardly be expected that he will make sanitary administration, and the study of the requirements of the public health of the Civil and Military communities his first and principal object."

Mr. Ellis does not propose to do away with the Sanitary Commissions. The only change would be that the President would become a Secretary to Government, and in that capacity he would personally lay before the Government the reports of the Commission. It is further suggested that all the business connected with prisons, and with the superintendence of the working of municipal bodies, which is now performed by the Secretaries in various departments, might be made over to the Secretary in the Department of Public Health.

Although many of Mr. Ellis's remarks regarding defects in existing arrangements are undeniably true, the measures which he proposes would be altogether insufficient. The state of things with which we have to deal on this side of India is essentially different from that in the minor Presidencies. Although in the Bengal Presidency the Government of India holds in its own hands the administration of the Army, it exercises no more direct authority over the ordinary civil administration of the greater part of the country than it exercises in Madras and Bombay. A Secretary to Government, or any other Officer immediately subordinate to the Government of India, could no more supervise in detail the sanitary administration in non-military matters of Bengal, of the North-Western Provinces, and of the Punjab, or of the provinces under the Chief Commissioners, than he could supervise that of Madras and Bombay.

Mr. Ellis has also mistaken the position which is held by the Secretaries to the Government of India. He writes as if they formed "a sort of Cabinet," and as if they were responsible Ministers holding the administrative charge of departments like the Secretaries of State at Home. This is not the position of an Indian Secretary to Government. Undoubtedly he may, and often does, if he be a man of ability, exercise very considerable influence; but he has no executive power, and is in no sense head of the department to which he is attached. At the same time it may be admitted that the measure which Mr. Ellis suggests would, in some respects, be useful, and the plan which I propose to adopt includes somewhat similar arrangements.

The President of the Sanitary Commission for Bengal, or the Chief Sanitary Officer of the Government, by whatever name he may be called, must necessarily hold an entirely different position in regard to matters affecting the sanitary interest of the Army and of the civil population respectively. With regard to the former, he properly submits his recommendations to the Government of India. With regard to the latter, neither he nor the Government of India can have any immediate means of action; all action must come from the authorities with whom the actual administration of the country rests. In respect, therefore, of sanitary improvements among the civil population, the essential thing is to provide the Local Governments and Administrations with the necessary machinery. I would do this in the following manner:—

First, there should be in each district a Health Officer. I is not now necessary to describe in detail the duties that he would have to perform, but their character will be sufficiently obvious. It may be stated generally that it would be his duty to make himself acquainted with the sanitary conditions and requirements of his station and district, and to advise the local authorities accordingly. The opportunity afforded by the revision of the salaries of all Medical Officers in civil employment has already been taken to declare that these duties will form a part of the ordinary charge of all Civil Surgeons. No additional expenditure will be involved by this arrangement, and there can be no doubt that, as a general rule, the duties of Health Officer can be efficiently discharged by the Civil Surgeon without any interference with his other work. In exceptional cases, where municipal funds are rich, where the duties are heavy, and the necessity for stronger sanitary establishments is felt by the municipal authorities, it may be found desirable to have separate Health Officers paid from the local funds.

The cost of carrying out works of sanitary improvement in towns and districts would necessarily fall upon local funds, under such checks as may be found necessary. It would only be in very peculiar cases, where the health of the troops was immediately involved, or for some other special cause, that the Imperial revenues could be expected to bear a portion of such charges.

In order to provide the Local Governments and Administrations with the means of exercising proper control over all the District Officers of Health, I would appoint the Inspector General of Prisons to be Principal Officer of Health in each province. He would act as the chief adviser of the Local Government in all matters affecting the public health. This plan would be more effectual, convenient, and economical than any other that has been suggested. Its advantages have been described by Mr. J. Strachey, President of the Bengal Sanitary Commission, as follows:—"In Bengal, in the North-Western Provinces, in the Punjab, in the Central Provinces, and in Oudh, there are now Inspectors-General of Prisons. All of these are Medical Officers of experience, selected on account of the special qualifications which they possess." Their duties obliged them to visit, as frequently as may be practicable, almost every district in the country, for there is hardly a district in which there is not a Jail to be inspected. Almost every large Native City, or Military Cantonment, has a Jail in its neighbourhood. In the Jails of this Presidency there are more than 50,000 prisoners, for whose sanitary supervision the Inspectors-General are responsible. There are no other Officers who possess such facilities for making themselves acquainted with the state of the public health in all parts of the country, or whose duties more necessarily involve the study of the principles and practice of sanitary science. The District Health Officers will "ordinarily be the Civil Surgeons, who are for the most part

"in charge of the District Jails, and for this reason also there is a special propriety "in making the Inspector-General of Prisons the head of the Department of "Public Health."

In 1861 these duties were, to a considerable extent, actually performed in the Punjab by Dr. Hathaway, Inspector-General of Prisons. He was appointed a Special Sanitary Commissioner and with excellent results. It may also be noticed that this plan of appointing the Inspectors-General of Prisons to be Principal Officers of Health, was discussed and approved by the Indian Jail Committee in 1861. This Committee consisted of Officers whose opinion on such a point was very valuable.

The Principal Officer of Health would ordinarily have nothing to say to general questions affecting the health of the Army, but he would properly deal with local causes of disease. Thus, for example, it would be no part of his duty to propose changes in the diet and clothing of the troops, but it would be his duty to point out the existence of local nuisances and defects, the removal of which fell within the province of the Local Government.

It would obviously be inexpedient, except perhaps to an unimportant extent, to give the Principal Officer of Health any independent executive authority. He would act as the Sanitary Adviser of the Local Government, and would obtain the orders of the head of the Government on all questions of sanitary importance which were reported by the District Health Officers, or which were otherwise brought to his knowledge. With the object of giving him better opportunities of access to the head of the Government and of increasing his usefulness, it will, in my opinion, be desirable to appoint the Principal Officer of Health to be in each case a Deputy Secretary to the Local Government. This plan would not affect his position as Inspector-General of Prisons. In this capacity he is a responsible administrative Officer, which as Secretary he would not be, and this responsibility ought not to be weakened.

I have lately proposed to modify the rates of pay allowed to the Inspectors-General of Prisons, and to fix their salaries prospectively in this Presidency at the following sums:—

2	Inspectors-General, Bengal Proper, at Rs. 1,500 per mensem.	
1	" N. W. Provinces "	1,500 "
1	" Punjab "	1,500 "
1	" Oudh "	1,000 "
1	" Central Provinces "	1,000 "

I consider, as I have stated elsewhere, that these salaries are sufficient for the duties to be performed by the Inspectors-General of Prisons. As remuneration for their duties in the Health Department, I propose to give to each of them in this Presidency an allowance not in any case exceeding Rupees 300 per mensem. They would thus be in as good a position as before in respect of their total emoluments.

To complete the organization of the Public Health Department, the following arrangements should be adopted in connection with the Government of India:—

Propositions for modifying the constitution of the Sanitary Commissions were sent to the Secretary of State in October last. Under the plan that was then proposed, there will be no paid Members in the Commissions, and the President will become a Sanitary Commissioner, with a Medical Officer as Secretary. This Sanitary Commissioner should, for the reasons already explained, deal only with matters affecting the health of the Army. He should be termed Sanitary Commissioner for the Army, and he should make his reports and recommendations as at present to the Military Department. The Military Department cannot properly or conveniently deal with questions affecting the civil population. Many such questions under the plans that have now been detailed, will no doubt, however, come up to the Government of India from the Local Governments and Administrations in this Presidency. These questions should be disposed of in the Home Department, and the most suitable and convenient plan to ensure their being promptly and effectively dealt with, will be to appoint the Sanitary Commissioner for the Army to be also a Deputy Secretary to the Government of India in the Home Department. Under

this arrangement he will also be at all times able to bring to the immediate notice of the Government of India, every subject of sanitary importance which may appear to him to demand attention. Every necessary object will thus be gained as completely and more conveniently and economically than by creating an entirely new Department of Public Health.

In these proposals I have referred only to the Local Governments and Administrations in the Bengal Presidency, and to the central authority of the Government of India.

So far as the Civil Administration is concerned, Madras and Bombay, although called separate Presidencies, are, in some respects, less onerous charges than the Provinces under Lieutenant-Governors of Bengal, the North-Western Provinces, the Punjab, and arrangements for the care of the public health which are considered sufficient in the latter cases will hardly appear insufficient in the former. There is, however, this difference in Madras and Bombay, that there are separate Armies under the control of the Local Governments. I would therefore recommend that the arrangements under the Madras and Bombay Governments should be placed upon a footing similar to that adopted under the Government of India. The President of the Sanitary Commission should become Sanitary Commissioner for the Army, and should make his reports to the Local Government in the Military Department, and he should also be appointed a Deputy Secretary to the Government for the discharge of the sanitary duties connected with the Civil Department. The plans proposed regarding District Health Officers would be equally applicable in Madras and Bombay, and the Sanitary Commissioner, in his capacity of Deputy Secretary to Government, would discharge the duties which, under the Local Governments in the Bengal Presidency, will fall to the Inspector-General of Prisons as Principal Officer of Health.

I would make no change in the salaries proposed for the Sanitary Commissioners in the Despatch to the Secretary of State, dated 21st October last, or in any of the other arrangements which were then recommended for altering the constitution of the Sanitary Commissions. The present scheme will in all respects conform with the former proposals.

I anticipate that the whole cost of carrying out the plans that have now been

	Present monthly charges.	Monthly charges proposed in Despatch of 21st October 1866.
	Rs.	Rs.
President, Sanitary Commission for Bengal	2,500	2,500
President, Sanitary Commission for Madras	2,000	2,000
President, Sanitary Commission for Bombay	2,000	2,000
9 Members of the Sanitary Commissions in the three Presidencies, at Rs. 300 each	2,700	
Total	12,200	6,500
Monthly saving Rupees		5,700.

proposed will be more than covered by the savings which will follow from adopting the arrangements recommended in the Despatch of the 21st October. Those savings will ultimately amount to Rupees 5,700 per mensem, as shewn in the margin. The monthly charges on account of the allowances proposed for the Inspectors-General of Prisons as Principal Officers of Health, will amount only to Rupees 1,500 per mensem. There is, thus, a large margin left for meeting any other necessary expenses on account of Office Establishment, &c.

I think that the arrangements detailed in this Minute should be carried out with as little delay as possible, and I propose to address the Secretary of State accordingly.

(Signed) JOHN LAWRENCE,
 " W. R. M.
 " H. S. M.
 " G. N. T.
 " W. N.

The 10th January 1866.
 The 11th January 1866.
 The 12th January 1866.
 The 13th January 1866.

Minute by the Hon'ble W. GREY, dated 11th January 1866.

I AGREE entirely in the proposals made by the Governor General in this paper, with exception of the proposal to have two instead of one Inspector-General of Prisons in Bengal. I freely admit that the question is a doubtful one, and that there is much to be said in support of His Excellency's view; but as the Lieutenant-Governor has expressed himself to be decidedly averse to the change, and as the substitution of two Inspectors-General for one must involve a considerable expense, I am of opinion that the matter should be allowed to remain as at present. It is beyond question that the Jails have been very well administered in Bengal during the last ten years or so, and therefore I think there is not sufficient ground for insisting on a change which the Local Government is averse to, and which involves an increased expenditure. If it should be said that the large mortality in the Bengal Jails may suggest a doubt whether the administration has really been efficient, my answer would be, that any number of Inspectors-General would fail to influence that point, so long as the Jail accommodation remains as insufficient, and as bad of its kind as it is at present. This evil, it may be hoped, is in course of being removed by the construction of the eight new Central Jails, which the Government of India and the Secretary of State have sanctioned.

Should it be determined, as I hope it may be, to leave the present arrangement of one Inspector-General for the Lower Provinces untouched, I think no one will say that so onerous an appointment is overpaid at its present salary;* but it will not be necessary to give any addition on account of the new position and duties to be given to the Inspector-General in connection with the public health. Having regard to the much larger charge which he will have than any of the other Inspectors-General, his salary as Inspector-General might be fixed at Rupees 2,000, and the salary attached to the office of Principal Health Officer at Rupees 500, thus leaving him practically as he now is.

(Signed) W. GREY.

Minute by Colonel the Hon'ble H. M. DURAND, C. B., dated 11th January 1866.

I HAVE no objection to the proposals in the Minute of His Excellency the Governor General, provided that in all questions affecting in any way the Forces of Her Majesty, whether European or Native serving in India, the Sanitary Commissioner report to the Secretary in the Military Department, as at present the case.

In assenting to this experiment I must guard against its being supposed that the experience gained from our Sanitary Commissions is of any positive value in my estimation.

(Signed) H. M. D.

I PROPOSE that copy of Mr. Grey's and Colonel Durand's Notes should be converted into Minutes should they wish it, and go Home, or be incorporated in the letter to the Secretary of State. I am much in favor of two Inspectors for the Bengal Lieutenant-Governorship, and consider that it is impossible that one can properly supervise 61 Jails spread over so wide an area, in much of which travelling is extremely difficult. If one be only allowed by the Secretary of State, I agree to his getting Rupees 2,000 as Inspector of Jails, and Rupees 500 as Health Officer. As regards Colonel Durand's remarks, it is not intended that the Deputy Secretary should correspond with the Military Department as such, but that, as Sanitary Commissioner, he should send his letters to the Military Secretary; and in respect to the division of his salary, that should be a question for the decision of the Finance Member. Mr. Grey expressed a wish that this reference should go to the Secretary of State in the Home Department, to which I have no objection. Take copies of these documents and transfer.

The 13th January 1866.

(Signed) J. L.

Copy of a Despatch from the Government of India to the Right Hon. the Secretary of State for India, — No. 121, dated 2nd June 1866.

We forward herewith copies of Minutes noted in the margin, stating the measures we would propose to adopt with the view of establishing on a satisfactory basis a system for ensuring proper care and supervision of the public health in India.

2. Copies of these Minutes accompanied our letter in the Financial Department, No. 13 of the 22nd January last, in which we stated our views in regard to the duties, salaries, and appointments of Inspectors-General of Prisons; but it would appear that our Despatch in the Military Department, No. 102 of the 21st October 1865, has been held to convey our entire views on the important question of which it treats.

3. Should this be the case, it will be a matter of regret to us that in forwarding that letter we did not at the time enter as fully into all the grounds on which a modification of the system appeared desirable as we should have done, had not the question been also under consideration with reference to the administration of Prisons, which, in its sanitary aspect, is so intimately connected with the general question of sanitation.

4. We now solicit your attention to the views contained in the Minutes referred to—copies of which are again forwarded for your consideration.

5. Your Lordship will perceive that the proposals of the Governor General in his Minute are in accordance with the recommendations contained in our Despatch of 21st October 1865 in the Military Department, while in the Minute above-quoted are also set forth the grounds for the proposed changes in the general sanitary arrangements in India, both civil and military.

PUBLIC.

INDIA OFFICE,

London, the 30th April 1867.

To His Excellency the Right Hon. the Governor General of India in Council.

SIR,

PARA. 1. I have considered in Council your Despatch in the Military Department (Separate, No. 121, dated 2nd June 1866, with the accompanying Minutes embodying the proposals of your Government, with a view to the establishment of a system for the supervision of the public health throughout India.

2. The late Royal Commission on the sanitary state of the Army in India very justly considered that the result of its labours would be incomplete, unless measures corresponding in character to those which were recommended for the improvement of the health of the Army were at the same time extended to the country generally; and I am happy to observe that, in your opinion, this may be accomplished at very little expense, by using, as far as practicable, the instrumentality of the existing authorities.

3. Sanitary improvement has by no means been neglected up to the present time. Besides the measures which are constantly in progress on a small scale under the direction of the magistrates and other local officers of Government, measures of conservancy have been introduced in a large and increasing number of towns in the Mofussil through the instrumentality of the municipalities which have been established within the last few years; while in the Presidency cities, and in some of the more important towns, large and costly schemes have either been completed, or are in progress, for providing a plentiful supply of pure water for the use of the inhabitants, and the promotion of other measures calculated to improve the public health.

4. So much having already been accomplished, and so great and increasing a readiness having been manifested by the Native community throughout the country to co-operate with the officers of Government in the introduction of measures of sanitary improvement, even though the expense of those measures has to be defrayed by means of local taxation, I notice with much satisfaction that your

Excellency in Council in the measures which you propose for a more systematic supervision of sanitary measures on behalf of Government does not contemplate, except under extraordinary circumstances, the expenditure of imperial funds on local improvements.

5. I proceed to make a few remarks on the plan sketched out in your Excellency's Minute for the establishment of a Public Health Department throughout India. I do not propose to examine your proposals in detail, for it is evident that the most suitable arrangements will be best arrived at by your Government in communication with the Governments of the subordinate Presidencies and with the several Lieutenant-Governors; and any measures at first decided on will necessarily be held subject to revision from time to time as practical experience may suggest.

6. Your proposal to constitute the Sanitary Commissioners in the several Presidencies to be the chief Officers of Health of your Government and of the Governments of Madras and Bombay respectively, seems quite proper; and I apprehend that there will, in practice, be little or no difficulty in so separating the duties which those officers will have to discharge as chief Officers of Health for military and for civil purposes respectively, as to avoid any inconvenience in practice or any risk of collision between the civil and military authorities.

7. With regard to the officers to whom the duty should be entrusted in Bengal, the North-West Provinces, the Punjab, and Oudh, in which there are no Sanitary Commissioners, or at least none in official connexion with the Local Governments, I should be disposed to think that the Inspectors-General of Hospitals, having under them in direct official subordination the Deputy Inspectors, would be better fitted than the Inspectors of Jails for the position of principal officers of health; and I have to request that the consideration of your Government may be given to this question, but I leave the matter for your decision.

8. It seems to me that no practical advantage would be gained by constituting the principal officers of health of your Government and of the Local Governments to be Deputy Secretaries to their respective Governments, and I should accordingly wish this part of your plan to be given up.

9. I am of opinion that the duties of the principal officers of health should be consultative only, and that any measures which may be determined on in consequence of their advice, should be carried into effect through the officers of the several departments of Government to which the subject may most appropriately belong.

10. By recent orders the Civil Surgeons of the several stations will be available for aiding in the promotion of sanitary measures in their respective neighbourhoods, and you are of opinion that such duties can be discharged by them efficiently without interfering with their other work.

11. I would only further remark that, while it is quite right to lay down general principles of management which shall be applicable to all parts of India, circumstances differ so much in the different Presidencies, that it would, in my opinion, be a mistake to require anything like a strict uniformity in their application to the detailed arrangements which may be required for giving effect to them.

12. In now conveying, subject to the above remarks, my general approval to the scheme which you have placed before me, I have to request that I may be made acquainted with the arrangements which may ultimately be adopted for securing that general extension of sanitary measures throughout India, and that due supervision of them on the part of the several Governments, which your Government had in view in the proposals which you have placed before me.

I have, &c.,

(Signed) STAFFORD H. NORTHCOTE.

No. 3969.

FROM

E. C. BAYLEY, Esq.,

Secretary to the Government of India,

TO

THE SECRETARY TO THE GOVERNMENT OF BENGAL.

Home Dept.

SIMLA, the 27th August 1867.

SIR,

REFERRING to your letter No. 2213, dated 29th March 1866, which conveyed the views of the Hon'ble the (late) Lieutenant-Governor on the system of general sanitary supervision proposed by the Sanitary Commission, I am directed to forward, for the information of the Lieutenant-Governor, copies of the Minute and Despatches marginally noted.

Minute by His Excellency the Governor General, dated 9th January 1866.
Military Despatch to Secretary of State, No. 121, dated 2nd June 1866.
Public Despatch from Secretary of State, No. 40, dated 30th April 1867.

2. From these, it will be seen that the Secretary of State has approved, generally, the scheme proposed by His Excellency the Governor General, but has left the arrangement of details to the Government of India in communication with the Local Governments and Administrations.

3. On one important point the Secretary of State differs from the Government of India, namely, in recommending that the Inspector-General of Hospitals, rather than the Inspector-General of Jails, should in each Province be its principal Officer of Health. On this point you will be addressed separately hereafter.

4. The Governor General in Council will be glad if the Lieutenant-Governor could give his attention to the immediate initiation of a system of sanitation, generally, for Bengal.

A separate letter has been recently sent to you from this Office (No. 2822, dated 27th July), on the subject of sanitary measures in certain districts which have recently been severely visited by malarious fever.

To some extent the views expressed in that letter will afford a guide to the wishes of the Government of India, but, of course, no particular measures can be prescribed of general application to territories so wide and so differing, both in their character and in their population, as those comprised in the Lieutenant-Governorship of Bengal. Briefly, it may be said that attention should be directed to those features in the character of the country

which are likely to produce malaria, and to measures for their improvement, or removal by clearance of jungle, drainage, embankments, and similar measures; attention should likewise be paid to the habits of the people of the country, and to their general condition, so far as these tend to induce or propagate disease, and to their improvement by advice, example, and education.

As regards the machinery by which such measures as may be considered expedient should be effected, the Governor General in Council does not doubt that no real reform can be worked out save through the agency of the people themselves. The part of the Government and its Officers cannot extend far beyond enlisting the sympathies and energies of the wealthy, and the co-operation of the more intelligent of the middle classes, and of organizing and directing their efforts.

But no doubt Officers of energy and ability can do much in this way, and by themselves moving about among the people. The Governor General in Council trusts that all Local Officers will exert themselves to the utmost, and use all their personal influence in the cause; he would especially urge upon them the far greater effect which that influence has when immediately exerted upon the spot.

Effective results may not immediately be apparent, but His Excellency cannot doubt that such efforts—zealously, patiently, and continuously exerted—will eventually produce most important impressions and add greatly to the material well-being of the people.

5. His Excellency in Council concurs with the Hon'ble the late Lieutenant-Governor in thinking that, for the present at least, further legislation is not required for Bengal, and that the extension of the Municipal system under (Bengal) Act III. of 1864, will sufficiently provide for the sanitary requirements of the head quarters of districts and the large towns in their interior. The Governor General in Council perceives, however, that not much progress has been made recently in the application of this law; if this has resulted from any difficulties discovered by experience, the Governor General in Council trusts that the Lieutenant-Governor's Council will be ready to remove them.

6. But the Governor General in Council cannot concur in the opinion that unobjectionable sanitary measures are alike impracticable and unnecessary in the case of scattered agricultural populations far from Municipal centres and without Local Funds.

7. Even among these the essential features of the sanitary system may, it is thought, be introduced, not perhaps by legal measures, but by the dissemination of simple Vernacular Conservancy Rules, and by the influence of District Officers, judiciously exerted, in persuading the heads of these rural societies to adopt them.

8. For the information of the Hon'ble the Lieutenant-Governor on this subject, I am directed to forward copies of a short Manual of Sanitary

Rules for village use, and of the Circular which accompanied them, issued by the late Chief Commissioner of the Central Provinces, whose action in the matter has the entire approbation of the Government of India.

9. In conclusion, I am directed to repeat the conviction of His Excellency in Council that although, as stated in your letter under acknowledgment, the circumstances of the country and want of Local Funds prevent, for the present, the complete adoption of the scheme suggested by the Commission, most valuable progress may yet be made towards attaining the object in view, by the careful enforcement of existing regulations, by gradually familiarizing the people with sanitary principles, and, above all, by the personal zeal of executive Officers in every grade of the Service.

I have the honor to be,

SIR,

Your most obedient Servant,

J. E. C. Bayley

Secretary to the Government of India.

No. 3970.

FROM

E. C. BAYLEY, Esq.,
Secretary to the Government of India,

TO

THE SECY. TO THE GOVT. OF THE N. W. PROVINCES.

Home Dept.

SIMLA, the 29th August 1867.

SIR,

WITH reference to your letter No. 292A., dated 24th January 1866, which conveyed the views of the Hon'ble the Lieutenant-Governor on the system of general sanitary supervision proposed by the Sanitary Commission, and in continuation of my letter No. 1622, dated 17th February 1866, and (extra official) No. 1623, of the same date, I am directed to forward, for the information of the Lieutenant-Governor, copies of the Despatches marginally noted.

Military Despatch to Secretary of State, No. 121, dated 2nd June 1866.
Public Despatch from Secretary of State, No. 40, dated 30th April 1867.

2. From these it will be seen that the Secretary of State has approved, generally, the scheme proposed by His Excellency the Governor General, but has left the arrangement of details to the Government of India in communication with the Local Governments and Administrations.

3. On one important point the Secretary of State differs from the Government of India, namely, in recommending that the Inspector-General of Hospitals, rather than the Inspector-General of Jails, should in each Province be its principal Officer of Health. On this point you will be addressed separately hereafter.

4. The Governor General in Council is glad to learn that the Lieutenant-Governor has already directed his attention to a system of sanitation, generally, for the North-Western Provinces; but His Excellency wishes that, if possible, immediate steps may be taken for its practical initiation.

5. A letter has been recently sent to the Government of Bengal from this Office (No. 2822, dated 27th July), on the subject of sanitary measures in certain districts of that Province which have recently been severely visited by malarious fever.

6. As the views expressed in that letter indicate, to some extent, the wishes of the Government of India on the subject of general sanitation, I am directed to forward a copy of it for information and guidance.

7. As regards the machinery by which such measures as may be considered expedient should be effected, the Governor General in Council is convinced that no real reform can be worked out save through the agency of the people themselves. The part of the Government and its Officers cannot extend far beyond enlisting the sympathies and energies of the wealthy, and the co-operation of the more intelligent of the middle classes, and of organizing and directing their efforts.

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8. But no doubt Officers of energy and ability can do much in this way, and by themselves moving about among the people. The Governor General in Council trusts that all Local Officers will exert themselves to the utmost, and use all their personal influence in the cause; he would especially urge upon them the far greater effect which that influence has, when immediately exerted upon the spot.

9. Effective results may not immediately be apparent, but His Excellency cannot doubt that such efforts—zealously, patiently, and continuously exerted—will eventually produce most important impressions and add greatly to the material well-being of the people.

10. His Excellency in Council concurs with the Hon'ble the Lieutenant-Governor in thinking that immediate fresh legislation, or the adoption of any compulsory sanitary measures, is inexpedient, and that the present object must be the gradual enlightenment of the people, and extension of sound sanitary measures through existing municipal institutions.

11. But although such institutions will sufficiently provide for the sanitary requirements of the head quarters of districts, and the large towns in their interior, their influence will not extend to scattered agricultural populations, far from Municipal centres and without Local Funds of their own.

12. Even among these, however, the essential features of the sanitary system may, it is thought, be introduced, not perhaps by legal measures, but by the dissemination of simple Vernacular Conservancy Rules, and by the influence of District Officers, judiciously exerted, in persuading the heads of these rural societies to adopt them.

13. The Governor General in Council quite approves of the action of the Hon'ble the Lieutenant-Governor, which is described in the 6th paragraph of your letter under reference, and in furtherance of the object desired, I am directed to forward copies of a short Manual of Sanitary Rules for village use, and of the Circular which accompanied them, issued by the late Chief Commissioner of the Central Provinces, whose action in the matter has the entire approbation of the Government of India.

14. In conclusion, I am directed to repeat the conviction of His Excellency in Council that although the circumstances of the country and want of Local Funds may prevent, for the present, the complete adoption of the scheme suggested by the Commission, most valuable progress may yet be made towards attaining the object in view by the careful enforcement of existing regulations, by gradually familiarizing the people with sanitary principles, and, above all, by the personal zeal of executive Officers in every grade of the Service.

I have the honor to be,

SIR,

Your most obedient Servant,

E. C. Bayley
Secretary to the Govt. of India.

No. 3971.

FROM

E. C. BAYLEY, Esq.,

Secretary to the Government of India,

TO

THE SECRETARY TO THE GOVERNMENT, PUNJAB.

Home Dept.

SIMLA, the 29th August 1867.

SIR,

I AM directed to acknowledge the receipt of your letter No. 2169, dated 24th October 1866, which conveyed the views of the Hon'ble the Lieutenant-Governor on the system of general sanitary supervision proposed by the Sanitary Commission, and in reply to forward, for the information of the Lieutenant-Governor, copies of the Minute and Despatches marginally noted.

Minute by His Excellency the Governor General, dated 9th January 1866.
Military Despatch to Secretary of State, No. 121, dated 2nd June 1866.
Public Despatch from Secretary of State, No. 40, dated 30th April 1867.

2. From these it will be seen that the Secretary of State has approved generally, the scheme proposed by His Excellency the Governor General, but has left the arrangement of details to the Government of India in communication with the Local Governments and Administrations.

3. On one important point the Secretary of State differs from the Government of India, namely, in recommending that the Inspector-General of Hospitals, rather than the Inspector-General of Jails, should in each Province be its principal Officer of Health. On this point you will be addressed separately hereafter.

4. The Governor General in Council will be glad if the Lieutenant-Governor could give his attention to the extension of the system of general sanitation which, His Excellency is glad to learn, has already been initiated in the Punjab.

5. A letter has been recently sent to the Government of Bengal from this Office (No. 2822, dated 27th July), on the subject of sanitary measures in certain districts of that Province which have recently been severely visited by malarious fever.

6. As the views expressed in that letter indicate to some extent the wishes of the Government of India on the subject of general sanitation, I am directed to forward a copy for information and guidance.

7. As regards the machinery by which such measures as may be considered expedient should be effected, the Governor General in Council is convinced that no real reform can be worked out save through the agency of the people themselves. The part of the Government and its Officers cannot extend far beyond enlisting the sympathies and energies of the wealthy, and the co-operation of the more intelligent of the middle classes, and of organizing and directing their efforts.

8. But no doubt Officers of energy and ability can do much in this way, and by themselves moving about among the people. The Governor General in Council trusts that all Local Officers will exert themselves to the utmost, and use all their personal influence in the cause; he would especially urge upon them the far greater effect which that influence has when immediately exerted upon the spot.

9. Effective results may not immediately be apparent, but His Excellency cannot doubt that such efforts—zealously, patiently, and continuously exerted—will eventually produce most important impressions and add greatly to the material well-being of the people.

10. His Excellency in Council does not object to the proposals contained in paragraphs 6—10 of your letter under reply, for the appointment of an Assistant Commissioner to be the District Health Officer where the Civil Surgeon is unable to undertake the duties of the post; the grant to the Health Officer of travelling allowance from local funds; the formation of District Boards of Health, and of a Provincial Sanitary Fund; but any deductions from Municipal Funds for this latter purpose would seem to be opposed to Section 8, Act XV. of 1867. Neither can a cess on the land or on houses be levied without separate legislation, to which the Governor General in Council considers it inexpedient to have recourse, at any rate until experience has shewn its necessity. His Excellency also thinks that no extra allowance should be given to the Health Officer beyond his actual travelling expenses.

11. I am, however, to observe that these measures do not perhaps sufficiently provide for scattered agricultural populations far from Municipal centres, and without Local Funds of their own.

12. Even among these the essential features of the sanitary system may, it is thought, be introduced, not perhaps by legal measures, but by the dissemination of such simple Vernacular Conservancy Rules as are referred to in the concluding paragraph of your letter, and by the influence of District Officers, judiciously exerted, in persuading the heads of these rural societies to adopt them.

13. For the information of the Hon'ble the Lieutenant-Governor on this subject, I am directed to forward copies of a short Manual of Sanitary Rules for village use, and of the Circular which accompanied them, issued by the late Chief Commissioner of the Central Provinces, whose action in the matter has the entire approbation of the Government of India.

14. In conclusion, I am directed to repeat the conviction of His Excellency in Council that although circumstances of the country and want of Local Funds may prevent, for the present, the complete adoption of the scheme suggested by the Commission, most valuable progress may yet be made towards attaining the object in view, by the careful enforcement of existing regulations, by gradually familiarizing the people with sanitary principles, and, above all, by the personal zeal of executive Officers in every grade of the Service.

I have the honor to be,

SIR,

Your most obedient Servant,

J. E. C. M. P.

Secretary to the Government of India.

Jan 16 35

E. C. BAYLEY, Esq.,
Secretary to the Government of India,

THE CHIEF COMMISSIONER OF OUDH.

SIMLA, *the 29th August 1867.*

REFERRING to letter No. 318, dated 20th January 1866, which conveyed the views of the late Chief Commissioner on the system of general sanitary supervision proposed by the Sanitary Commission, and in continuation of my letter No. 2311, dated 10th March 1866, and (extra-official) No. 2310 of the same date, I am directed to forward, for your information, copies of the Despatches marginally noted.

Military Despatch to Secretary of State, No. 121,
dated 2nd June 1966.
Public Despatch from Secretary of State, No. 40,
dated 30th April 1967.

2. From these it will be seen that the Secretary of State has approved, generally, the scheme proposed by His Excellency the Governor General, but has left the arrangement of details to the Government of India in communication with the Local Governments and Administrations.

3. On one important point the Secretary of State differs from the Government of India, namely, in recommending that the Inspector-General of Hospitals, rather than the Inspector-General of Jails, should in each Province be its principal Officer of Health. On this point you will be addressed separately hereafter.

4. The Governor General in Council is glad to acknowledge the attention that has already been paid to the initiation of a system of sanitation, generally, for Oudh.

5. A letter has been recently sent to the Government of Bengal from this Office (No. 2822, dated 27th July), on the subject of sanitary measures in certain districts of that Province which have recently been severely visited by malarious fever.

6. As the views expressed in that letter indicate, to some extent, the wishes of the Government of India on the subject of general sanitation, I am directed to forward a copy of it for your information and guidance.

7 As regards the machinery by which such measures as may be considered expedient should be effected, the Governor General in Council is convinced that no real reform can be worked out save through the agency of the people themselves. The part of the Government and its Officers cannot extend far beyond enlisting the sympathies and energies of the wealthy, and the co-operation of the more intelligent of the middle classes, and of organizing and directing their efforts.

8. But no doubt Officers of energy and ability can do much in this way, and by themselves moving about among the people. The Governor General in Council trusts that all Local Officers will exert themselves to the utmost, and use all their personal influence in the cause; he would especially urge upon them the far greater effect which that influence has, when immediately exerted, upon the spot.

9. Effective results may not immediately be apparent, but His Excellency cannot doubt that such efforts—zealously, patiently, and continuously exerted—will eventually produce most important impressions and add greatly to the material well-being of the people.

10. Since the date of the letter under reference, the Act XV. of 1867 has been made applicable to Oudh. His Excellency in Council concurs with the late Chief Commissioner in thinking that, for the present at least, further legislation is not required for Oudh, and is of opinion that the extension of the Municipal system under that Act and under the Lucknow Act XVIII. of 1864, will sufficiently provide for the sanitary requirements of the head quarters of districts and the large towns in their interior.

11. But the Governor General in Council cannot concur in the opinion that it would be premature to attempt to introduce a regular system of conservancy in the smaller towns which are without Municipalities and Town Police.

12. Even among these, and among scattered agricultural populations far from Municipal centres, and without Local Funds of their own, the essential features of the sanitary system, may, it is thought, be introduced, not perhaps by legal measures, but by the dissemination of simple Vernacular Conservancy Rules, and by the influence of District Officers, judiciously exerted, in persuading the heads of these rural societies to adopt them.

13. For your information on this subject, I am directed to forward copies of a short Manual of Sanitary Rules for village use, and of the Circular which accompanied them, issued by the late Chief Commissioner of the Central Provinces, whose action in the matter has the entire approbation of the Government of India.

14. In conclusion, I am directed to repeat the conviction of His Excellency in Council that although the circumstances of the country and want of Local Funds may prevent, for the present, the complete adoption of the scheme

suggested by the Commission, most valuable progress may yet be made towards attaining the object in view, by the careful enforcement of existing regulations, by gradually familiarizing the people with sanitary principles, and, above all, by the personal zeal of executive Officers in every grade of the Service.

I have the honor to be,

SIR,

Your most obedient Servant,

J. E. C. Bayley

Secretary to the Government of India.

No. 3973.

FROM

E. C. BAYLEY, Esq.,

Secretary to the Government of India,

TO

THE OFFICIATING CHIEF COMMISSIONER OF THE
CENTRAL PROVINCES.

Home Dept.

SIMLA, the 29th August 1867.

SIR,

REFERRING to your letter No. 3914-328, dated 16th December 1866, which conveyed the views of the late Chief Commissioner on the system of general sanitary supervision proposed by the Sanitary Commission I am directed to forward, for your information, copies of the Minute and Despatches marginally noted.

Minute by His Excellency the Governor General, dated 9th January 1866.
Military Despatch to Secretary of State, No. 121, dated 2nd June 1866.
Public Despatch from Secretary of State, No. 40, dated 30th April 1867.

2. From these it will be seen that the Secretary of State has approved generally, the scheme proposed by His Excellency the Governor General, but has left the arrangement of details to the Government of India in communication with the Local Governments and Administrations.

3. On one important point the Secretary of State differs from the Government of India, namely, in recommending that the Inspector-General of Hospitals, rather than the Inspector-General of Jails, should in each Province be its principal Officer of Health. On this point you will be addressed separately hereafter.

4. The Governor General in Council will be glad if you could give your early attention to the extension of the system of general sanitation which has been successfully initiated in the Central Provinces.

5. A letter has been recently sent to the Government of Bengal from this Office (No. 2822, dated 27th July), on the subject of sanitary measures in certain districts in that Province which have recently been severely visited by malarious fever.

6. As the views expressed in that letter indicate, to some extent, the wishes of the Government of India on the subject of general sanitation, I am directed to forward a copy of it for your information and guidance.

7. As regards the machinery by which such measures as may be considered expedient should be effected, the Governor General in Council is convinced that no real reform can be worked out save through the agency of the people themselves. The part of the Government and its Officers cannot extend far beyond enlisting the sympathies and energies of the wealthy, and the co-operation of the more intelligent of the middle classes, and of organizing and directing their efforts.

8. But no doubt Officers of energy and ability can do much in this way, and by themselves moving about among the people. The Governor General in Council trusts that all Local Officers will exert themselves to the utmost, and use all their personal influence in the cause; he would especially urge upon them the far greater effect which that influence has, when immediately exerted, upon the spot.

9. Effective results may not immediately be apparent, but His Excellency cannot doubt that such efforts—zealously, patiently, and continuously exerted—will eventually produce most important impressions and add greatly to the material well-being of the people.

10. His Excellency in Council has observed with much satisfaction that, as stated in paragraph 5 of your letter No. 3914-328, dated 16th December 1866, a good beginning has been made and a foundation laid for the establishment of a general system throughout the Central Provinces.

11. The Governor General in Council entirely concurs in the opinion that while the extension of the Municipal system will sufficiently provide for the sanitary requirements of the head quarters of districts and of the large towns in their interior, even among scattered agricultural populations, far from Municipal centres, and without Local Funds of their own, the essential features of the sanitary system may be introduced, not perhaps by legal measures, but by the dissemination of simple Vernacular Conservancy Rules, and by the influence of District Officers, judiciously exerted, in persuading the heads of these rural societies to adopt them.

12. How much can be accomplished in this respect by personal zeal, has been shown by the very interesting selection of letters addressed to Commissioners of Divisions which with a Manual of Sanitary Rules for village use was appended to the letter under reference, and I am to observe that the action taken by the late Chief Commissioner on this point has the entire approbation of the Government of India.

13. In conclusion, I am directed to repeat the conviction of His Excellency in Council that although the circumstances of the country and want of Local Funds may prevent, for the present, the complete adoption of the

scheme suggested by the Commission, most valuable progress may yet be made towards attaining the object in view, by the careful enforcement of existing regulations, by gradually familiarizing the people with sanitary principles, and, above all, by the personal zeal of executive Officers in every grade of the Service.

I have the honor to be,

SIR,

Your most obedient Servant,

J. E. P. R.

Secretary to the Government of India.

No. 3974.

FROM

E. C. BAYLEY, Esq.,

Secretary to the Government of India,

TO

THE CHIEF COMMISSIONER OF BRITISH BURMAH.

Home Dept.

SIMLA, the 29th August 1867.

SIR,

I AM directed to acknowledge the receipt of your letter No. 345, dated 2nd October 1866, which conveyed the views of the late Chief Commissioner on the system of general sanitary supervision proposed by the Sanitary Commission, and in reply to forward, for your information, copies of the Minute and Despatches marginally noted.

Minute by His Excellency the Governor General, dated 9th January 1866.
Military Despatch to Secretary of State, No. 121, dated 2nd June 1866.
Public Despatch from Secretary of State, No. 40, dated 30th April 1867.

2. From these it will be seen that the Secretary of State has approved, generally, the scheme proposed by His Excellency the Governor General, but has left the arrangement of details to the Government of India in communication with the Local Governments and Administrations.

3. On one important point the Secretary of State differs from the Government of India, namely, in recommending that the Inspector-General of Hospitals, rather than the Inspector-General of Jails, should in each Province be its principal Officer of Health. On this point you will be addressed separately hereafter.

4. The Governor General in Council will be glad if you could give your attention to the immediate initiation, as far as may be practicable, of a system of sanitation, generally, for British Burmah.

5. A letter has been recently sent to the Government of Bengal from this Office (No. 2822, dated 27th July), on the subject of sanitary measures in certain districts in that Province which have recently been severely visited by malarious fever.

6. As the views expressed in that letter indicate, to some extent, the wishes of the Government of India on the subject of general sanitation, I am directed to forward a copy of it for your information and guidance.

(2)

7. As regards the machinery by which such measures as may be considered expedient should be effected, the Governor General in Council is convinced that no real reform can be worked out save through the agency of the people themselves. The part of the Government and its Officers cannot extend far beyond enlisting the sympathies and energies of the wealthy, and the co-operation of the more intelligent of the middle classes, and of organizing and directing their efforts.

8. But no doubt Officers of energy and ability can do much in this way, and by themselves moving about among the people. The Governor General in Council trusts that all Local Officers will exert themselves to the utmost, and use all their personal influence in the cause; he would especially urge upon them the far greater effect which that influence has, when immediately exerted, upon the spot.

9. Effective results may not immediately be apparent, but His Excellency cannot doubt that such efforts—zealously, patiently, and continuously exerted—will eventually produce most important impressions and add greatly to the material well-being of the people.

10. His Excellency in Council is willing to accept the opinion of the late Chief Commissioner that, for the present at least, further legislation for British Burmah is inexpedient, and that the extension of the Municipal system will sufficiently provide for the sanitary requirements of the large seaport towns and the head quarters of districts, but every effort should be made to induce the inhabitants of these towns (especially of Akyab) to give their assistance in sanitary measures.

11. But such a measure will not reach the wants of the smaller towns which are without Municipalities and Town Police, or of scattered agricultural populations far from Municipal centres, and without Local Funds of their own.

12. Even among these however the essential features of the sanitary system may, it is thought, be gradually introduced, not perhaps by legal measures, but by the dissemination of simple Vernacular Conservancy Rules, and by the influence of District Officers, judiciously exerted, in persuading the heads of these rural societies to adopt them.

13. For your information on this subject, I am directed to forward copies of a short Manual of Sanitary Rules for village use, and of the Circular which accompanied them, issued by the late Chief Commissioner of the Central Provinces, whose action in the matter has the entire approbation of the Government of India.

14. In conclusion, I am directed to repeat the conviction of His Excellency in Council that although the circumstances of the country and want of Local Funds may prevent, for the present, the complete adoption of the scheme suggested by the Commission, most valuable progress may yet be

(3)

made towards attaining the object in view, by the careful enforcement of existing regulations, by gradually familiarizing the people with sanitary principles, and, above all, by the personal zeal of executive Officers in every grade of the Service.

I have the honor to be,

SIR,

Your most obedient Servant,

J. E. C. Bayley

Secretary to the Government of India.

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E. C. BAYLEY, Esq.,

To

Home Dept.

SIR,

Minute by His Excellency the Governor General, dated 9th
January 1866.
Military Despatch to Secretary of State, No. 121, dated
2nd June 1866.
Public Despatch from Secretary of State, No. 40, dated
30th April 1867.

2. From these it will be seen that the Secretary of State has approved, generally, the scheme proposed by His Excellency the Governor General, but, has left the arrangement of details to the Government of India in communication with the Local Governments and Administrations.

3. On one important point the Secretary of State differs from the Government of India, namely, in recommending that the Inspector-General of Hospitals, rather than the Inspector-General of Jails, should in each Province be its principal Officer of Health. On this point separate orders will be issued hereafter.

4. The Governor General in Council is glad to learn that attention has already been paid to this subject in the larger towns of Berar; but His Excellency wishes that, if possible, you could give your attention to the immediate initiation of a system of sanitation, generally, for all the towns and districts under your Administration.

5. A letter has been recently sent to the Government of Bengal from this Office (No. 2822, dated 27th July), on the subject of sanitary measures in certain districts of that Province which have recently been severely visited by malarious fever.

6. As the views expressed in that letter indicate, to some extent, the wishes of the Government of India on the subject of general sanitation, I am directed to forward a copy of it for your information and guidance.

7. As regards the machinery by which such measures as may be considered expedient should be effected, the Governor General in Council is convinced that no real reform can be worked out save through the agency of the people themselves. The part of the Government and its Officers cannot extend far

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beyond enlisting the sympathies and energies of the wealthy, and the co-operation of the more intelligent of the middle classes, and of organizing and directing their efforts.

8. But no doubt Officers of energy and ability can do much in this and by themselves moving about among the people. The Governor General in Council trusts that all Local Officers will exert themselves to the utmost and use all their personal influence in the cause; he would especially upon them the far greater effect which that influence has when immediately exerted upon the spot.

9. Effective results may not immediately be apparent, but His Excellency cannot doubt that such efforts—zealously, patiently, and continuously—will eventually produce most important impressions and add greatly to the material well-being of the people.

10. His Excellency in Council has no doubt that the extension of the Municipal system will sufficiently provide for the sanitary requirements of the head quarters of the Berar districts and the large towns in their interior.

11. But such a measure will not reach the wants of the smaller towns, which are without Municipalities and Town Police, and of scattered agricultural populations far from Municipal centres and without Local Funds of their own. The Governor General in Council entirely concurs in the opinion expressed by His Excellency (when presiding over the Administration of the Central Provinces) that even among these the essential features of the sanitary system might be introduced not perhaps by legal measures, but by the dissemination of simple Village Sanitary Rules, and by the influence of District Officers, judiciously assisted in persuading the heads of these rural societies to adopt them.

12. In conclusion, I am directed to repeat the conviction of His Excellency in Council that although the circumstances of the country and want of Local Funds may prevent, for the present, the complete adoption of the scheme suggested by the Commission, most valuable progress may yet be made towards attaining the object in view, by the careful enforcement of existing regulations, by gradually familiarizing the people with sanitary principles, and, above all, by the personal zeal of executive Officers in every grade of the Service.

I have the honor to be,

SIR,

Your most obedient Servant

Secretary to the Government of India.

No. 3976.

FROM

E. C. BAYLEY, Esq.,
Secretary to the Government of India.

TO

THE OFFG. COMMISSIONER OF MYSORE.

Home Dept.

SIMLA, the 29th August 1867.

SIR,

I AM directed to acknowledge the receipt of your letter No. 7005-109, dated 14th March 1867, which conveyed your views on the

Minute by His Excellency the Governor General, dated 9th January 1866.
Military Despatch to Secretary of State, No. 121, dated 2nd June 1866.
Public Despatch from Secretary of State, No. 40, dated 30th April 1867.

system of general sanitary supervision proposed by the Sanitary Commission, and in reply to forward, for your information, copies

of the Minute and Despatches mentioned above.

2. From these it will be seen that the Secretary of State has approved, generally, the scheme proposed by His Excellency the Governor General, but has left the arrangement of details to the Government of India in communication with the Local Governments and Administrations.

3. On one important point the Secretary of State differs from the Government of India, namely, in recommending that the Inspector-General of Hospitals, rather than the Inspector-General of Jails, should in each Province be its principal Officer of Health. On this point you will be addressed separately hereafter.

4. The Governor General in Council is glad to see that considerable attention has been already paid to the initiation of a system of sanitation, generally, for Mysore.

A malarious letter has been recently sent to the Government of Bengal from the Government of India (No. 2532, dated 27th July), on the subject of sanitary measures in certain districts of that Province which have recently been severely visited by malarious fever.

6. As the views expressed in that letter indicate, to some extent, the wishes of the Government of India on the subject of general sanitation, I am directed to forward a copy of it for your information and guidance.

12. 11. 1867

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7. As regards the machinery by which such measures as may be considered expedient should be effected, the Governor General in Council is convinced that no real reform can be worked out save through the agency of the people themselves. The part of the Government and its Officers cannot extend far beyond enlisting the sympathies and energies of the wealthy, and the co-operation of the more intelligent of the middle classes, and of organizing and directing their efforts.

8. But no doubt Officers of energy and ability can do much in this way, and by themselves moving about among the people. The Governor General in Council trusts that all Local Officers will exert themselves to the utmost, and use all their personal influence in the cause; he would especially urge upon them the far greater effect which that influence has, when immediately exerted, upon the spot.

9. Effective results may not immediately be apparent, but His Excellency cannot doubt that such efforts—zealously, patiently, and continuously exerted—will eventually produce most important impressions and add greatly to the material well-being of the people.

10. His Excellency in Council is of opinion that, for the present at least, further legislation is not required for Mysore, and that the extension of the Municipal system will sufficiently provide for the sanitary requirements of the head quarters of districts and the large towns in their interior.

11. But such a measure will not reach the wants of the smaller towns which are without Municipalities and Town Police, or of scattered agricultural populations far from Municipal centres and without Local Funds of their own.

12. Even among these however the essential features of the sanitary system may, it is thought, be introduced not perhaps by legal measures, but by the dissemination of simple Vernacular Conservancy Rules, and by the influence of District Officers, judiciously exerted, in persuading the heads of these rural societies to adopt them.

13. On this point His Excellency in Council fully concurs with you in approving of Major Elliot's proposal to compile a simple sanitary Manual for the guidance of administrative and executive Officers, and to distribute a Vernacular precis of it to every village in the Province.

14. For your information on this subject I am directed to forward copies of a short Manual of Sanitary Rules for village use, and of the Circular which accompanied them, issued by the late Chief Commissioner of the Central Provinces, whose action in the matter has the entire approbation of the Government of India.

15. In conclusion, I am directed to repeat the conviction of His Excellency in Council that although the circumstances of the country and want of Local Funds may prevent, for the present, the complete adoption

of the scheme suggested by the Commission, most valuable progress may yet be made towards attaining the object in view, by the careful enforcement of existing regulations, by gradually familiarizing the people with sanitary principles, and, above all, by the personal zeal of executive Officers in every grade of the Service.

I have the honor to be,

Sir,

Your most obedient Servant,

D. E. C. Bayley

Secretary to the Government of India.

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The 23 September 1852

in relation to a system of
general Military Supervision

Receiving Co.

11/13/1913

16 The Exp^{ts} of Fort St. George.

[illegible]

28 July 1959-1960

X
10-11-1968

11
specie for important duties
without funds. Their
disposal is a serious
burden. The finances of
India have not been in such
a state as to justify as in
expensive means. Help from
Imperial moneys and local
taxation has been carried to
a limit which in the
opinion of most it would
not for the present be
wise to transgress. The
evils which it would be
the task of a Sanitary
Commissioner to correct are
extensive. They were denounced
in striking terms by the
Royal Commission on the
Sanitary State of the
Army in India and they
have been examined
in detail by the
Sanitary Commissioners
in their successive reports
upon the state of the

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Capital, the Cantonments,
and the provincial
towns. We have been
fully informed of the
neglects and abuses
which we have to contend
against, without money
we could do nothing
and there seemed to be
little hope of getting
money. I may add
a) that practical and, as
I think, equitable
proposals for the
improvement of Madras
by placing it with reference
to State Apportionment for
the purposes of Casserney
on the same footing
as the Provincial
Municipalities has
recently been suggested
while the License Tax
to which we looked
for this and other
many useful local

objets has been again
embodied in the annual
Budget of India.

II. Notwithstanding these
discouragements it has been
represented to me that the
time has now come when
it may be permitted to
revise or unaccept the
issue and to roll the
returning stone up hill
again. A department
for Sanitary matters
has been created in the
Indian Council and the
deliberations of that body
may have some influence
at Simla. On the other
hand the Supreme Government
has manifested a desire
to control the Sanitary
dangers connected with
fairs and pilgrimages
and such control can

can hardly be exerted
efficiently without a
special executive agency.
at any rate the voice of
this Government may be
raised without reproach
even if it is raised
without success. The worst
that can happen to us
is to see our counsels
rejected. -

III. In contemplating
the organisation of a
Sanitary establishment
for this Presidency the
Government ought in
my humble judgment
to keep in view the
following points

- (1) The nomination of
a Consulting Engineer
for Sanitary works.
- (2) The appointment

of a Sanitary inspector
in each District.

3/ The construction and
development of the
Provincial Dispensaries.

IV. The introduction of
a better system for
maintaining public health
would necessitate many
works connected with water
supply and drainage. For
these undertakings the
cooperation of a competent
engineer would be
indispensable and he
would have to be brought
from England for the
purpose. The present staff
of Engineer officers are already
fully occupied and their
energies will be taxed to
the uttermost by the
numerous irrigation
schemes and other

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public works which are
under consideration. It
must not be forgotten
that the Engineer officers
at our disposal have
not for the most part
made a special study
of this branch of their
service. We need an
officer conversant with
the latest developments
of engineering in
connection with sanitation.
I propose that he should
have his head quarters
at Madras, that he
should receive his salary
from Government, that
his services should be
gratuitously placed at
the disposal of the
Municipalities and
Districts where necessary
and that he should

communicate with Government
like the Consulting Engineer
for Railways through
the Department for
Public Works maintaining
at the same time a
correspondence with the
Sanitary Commission. It
may be hoped that an
Engineer with the qualifications
which I have described
could be obtained for
about £7800 per annum
with the prospect of
increase and pension.

V. It seems impossible to
associate the duties of
local sanitary enquiry
and management with
any existing agency.
The Deputy inspectors
general of Hospitals, the
Deputy Inspectors general
of Police, the Superintendents

of the District and
Central jails, the
Medical Officers in charge
of Civil Stations, the
Subordinate Revenue
Officers are all so fully
occupied with their
respective functions or
so fettered in their
movements that they could
not happily undertake
a charge which would
involve so small amount
of investigation and
correspondence and frequent
excursions from head
quarters. If the duties of
sanitary inspection were
laid upon any class of
existing functionaries, the
those duties would be
imperfectly performed
or the time would
be respect

It seems to me impossible
to avoid the conclusion that
special agents must be
selected for this special
duty and I feel equally
convinced that those agents
should if possible be
natives. The proceedings
of the Sanitary Inspector
will bring him into close
contact with the native
population in their domestic
social and religious relations
we could not expect to
entertain Englishmen
with the knowledge
prudence, temper and
discrimination which
would be desirable in
the multiplication of
English Residents and
officials of a subordinate
character is by no means
expedient for many reasons.
It may be urged that

the natives would have
to be taught. So would
Englishmen. We have no
competent Sanitary
officers of any nationality
formed to hand. But
natives would learn
as quickly, they would
be more tractable, they
would have more
local information to
begin with, they would
be more acceptable to
their own countrymen,
they would be more
settled and trustworthy
in some respects though
not in all. I consider
that it is most important
to associate the natives
as much as possible with
all the social innovation
which the Government
is engaged in prosecuting
for thus we shall raise

their intelligence and
gratify their self-esteem
and create allies for our
ideas instead of
adversaries and approach
the masses through
less suspected channels.

The creation of a
new administrative
Department centralized
at Madras would, I think
be an error. It would be
conducted in that inefficient
local intelligence and it
would tend to diminish
the authority of the
District Magistrate in
whom the people ought to
respect the impersonation
of superior power. The
Collector and Magistrate
ought never in any opinion
to be severed from any
business which concerns
the welfare of the people
under his charge. The

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The Country is perhaps
already too much
governed from a
distance and by
regulation and too
little by men. The
District Sanitary
Inspector should be
directed in the performance
of his duties by the
District Magistrate
and to the latter his
reports should be
addressed. The Magistrate
would forward them
to the Sanitary Commission
at Madras by whom
they would be submitted
to Government through
the Chief Secretary.
There should be a Sanitary
Inspector in each District.
His duties would be
to survey the Sanitary
condition of the Towns and

the country, to report
upon the prevalence
of diseases among men
and cattle, to compile
the statistics of disease,
to superintend the
march and lodging
of traders and pilgrims,
to receive and administer
the dues which may be
levied on them, to
superintend the execution
of minor sanitary works
not within Municipal
limits and not of sufficient
importance to be entrusted
to the Department of
Public works, to prepare
the Budget of Sanitary
Expenditure and submit
it to the District Magistrate
by whom it would be
transmitted to Government.

The Sanitary Inspector of
the District would have
a right of inspection and
enquiry within the bounds
of the Municipalities,
and could report on their
Sanitary condition but
he would not have
any execution or
financial charge on
Municipalities which
depend their own funds
for those purposes.
His position with regard
to Military Cantonments
would be similar. The
conveyance of Cantonments
would remain subject
to the Military and
Municipal Authorities
as at present. The
Sanitary expenditure
in Districts not within
Municipal limits
would be defrayed

from the Imperial
Revenues until the
supreme government
by relinquishing the
licence duty shall
provide us with a
competent source of
local taxation or
until some other means
can be devised. The
Salary of the District
Sanitary Inspector might
be fixed in the first
instance at Rs. 200 per
month with a provision
for increase. It might
be possible to provide all
the Districts at once with
competent inspectors. In
that case I would deal
with those first in which
the public health is
exposed to the greatest
hazards. -

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VI. The execution of
Sanitary works and the
sustained control of
the District Sanitary
Inspector would be
measures of a preventive
character and would
check the rise and
dissemination of disease
but the government
might not stop short
here, they might to
attempt something more
directly of a remedial
nature, they might
- make a serious effort
to bring the benefits
of European Medical
Science within the
reach of the whole
native community.
With this object in view
I don't see any better

When
 in the year 1870
 the National Board
 has been made to give a
 medical education
 to the people.

has been in the
general medical
education of the
people which medical
instruction has under
the several local unions
of the district.
The Rev. Mr. Chester
American Medical
Institution at Andover
funds a course of
instruction at his
disposal. The same rate
attempts of the same rate.
may perhaps be made.
Other disbursements are
are unknown to me.

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is the hospital where
the Medical officers in charge
have been men of superior
intelligence and zeal
and where the District
Magistrates have shown
a generous interest in the
welfare of the institution.
The condition of the Dispensary
is sometimes extremely
commendable and reflects
credit on the Government
and its officers. But
this result is not attained
without recurring sacrifices
on the part of the Medical
Officers which it is unjust
to impose on him while the
Magistrate and the English
Community bear perhaps
a larger share of the
outlay than is proportionate
or equitable if the character
and objects of the Dispensary
be regarded. Where the
subscriptions of the Natives are

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are considerable and
regularly paid it may
be apprehended that in
many cases the Magistrate
and the Medical Officer
have for a sense of duty
been driven to practise
a system of persuasion
and authority which are
repugnant to their
feelings and upon which
they ought to be
concentrated. As far as
my personal observation
has gone and as far as
I can judge from official
reports I consider that
the supposed voluntary
system of support has
not maintained. The
Dispensaries, as a rule,
in an efficient condition
even on their present
limited footing

and that the same
system would prove
altogether incommensurate
to the nature and the
expenditure of these
establishments were
extended. In the opinion
of the Inspector General
which I am at liberty
to cite "the voluntary
system is a total failure."

Under these circumstances,
I consider that the
Government should
affirm the following
principles.

1st. That the Provincial
Dispensaries should be
thrown for support upon
local rates in so far
as they are not at
present supported by
Government.

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(2) That when the
Dispensary is within
the limits of a Municipality
half the expenditure
should be borne by the
Municipal rates and
half by the District
rates.

(3) That when the
Dispensary is situated
not in a Municipality
but in a District,
the whole expenditure
should be borne by
the District rates.

(4) That until District
funds can be provided
by local taxation, the
sources of which are not
at present open, the
amount chargeable to
the District shall be
paid from the Imperial

Revenue.

The Dispensaries which at present hopelessly endowments would I conceive retain them.

The financial position of the Dispensaries having once been settled on a secure basis the government could proceed with confidence to enlarge their field of action. It has often been remarked that if European medical treatment is to be rendered extensively acceptable to the Natives of this country it must be through native agencies already accredited and familiar and that no better instrumentality offers itself than the hereditary healers.

X date.
This subject was brought under the notice of Genl by the Director General of the Medical Department in an interesting paper under date of April 24. 1885.

X date.
Instruction in midwifery is conducted in the Dispensaries of the Indian Department and should be kept and see to it elsewhere.

Physicians. The Native Doctor or his son should be attracted to a European school in which he might be disabused of his gross superstitions and instructed in the minor operations of surgery as well as in the use of the common medicines for prevailing maladies. Instruction might also be afforded to the Native Midwife.

The introduction of a system of elementary teaching at the Dispensaries would involve an augmentation of expenditure under three heads at least.

(1) The existing buildings would have to be expanded.

and the reorganisation
of the Provincial
Dispensaries. The
expenditure for the
Engineer and the
Inspectors on the scale
which I have suggested
would amount to about
Rs. 60,000. I enclose
the cost of the Dispensaries
to Government, whether
temporary or permanent,
under the proposed new
System can only be
estimated when the
Medical Committee
referred to above
shall have matured
their project.

VIII. The scheme for
a Public Health
Establishment which
I have here submitted
to the judgment of my

Colleague differs materially
from that project which
at a former period
obtained the sanction of
this Government and was
repeated by the Government
of India. The establishment
which I advocate is
simpler and would in
my opinion harmonize
better with existing
institutions. It remains
for Government to
determine whether
they consider themselves
pledged to their
former recommendations
and if not whether
they prefer the alternative
now suggested for
their consideration.

April 26. Napier
1868.

Public Letter to Gov 14th July 1868

Respectfully
 Excellency
 Governor
 Secy
 Esq. Mr. Macart.

Health.

There can be no doubt that however beneficial have been the improvements in the sanitary condition of the Troops in Madras, since 1860, still gradually increasing, much remains to be done in this difficult and important matter: it requires to be dealt with firmly and with a liberal expenditure. With a rigid attention to the latter and to some extent taking advantage of the appliances at hand afforded by medical and scientific men, so far as these are concerned, in Military Cantonments, I believe, setting aside the more important consideration of humanity, that economy in the end will be obtained.

In districts and Towns inhabited altogether by natives it would be necessary wholly to avail ourselves of Native Agency, but in those Towns where there are European Magistrates

and in military Cantonments, I would
 associate Natives with selected European
 Officers; ~~whose~~ ^{the} duty, ^{of the latter} is manifestly to
 assist Government without extra-
 charge. Such is the case in all
 Camps and Garrisons at home and
 abroad, where the military authorities,
 in addition to the emergency within
 their own limits, visit localities in
 the neighbourhood of the army, and
 place themselves in communication
 with the Civil authorities and local
 Boards of health, and rules are laid
 down for the details of the work.

I agree with the President
 generally in his estimate, and the
 desirability of associating the Natives
 with Europeans in all undertakings,
 in which they have a mutual interest.
 I have been much struck with the
 want of sympathy shown to
 healthy Natives in this Presidency -
 with a few honorable and generous
 exceptions - in favor of those who have

I am afraid the Dispensaries in general
 are very feebly supported by the influential
 and more substantial class of ~~the~~
 Natives, who leave these Institutions
 principally to be supported by the
 Government, supplemented by subscrip-
 tions from the European residents.

I fully agree with the President
 in his proposal regarding the support
 of Provincial Dispensaries by local
 rates. If Natives cannot be induced
 except by undue solicitation - so repug-
 nant to the feelings of those who solicit -
 to support what, on sanitary and humane
 grounds, is absolutely necessary, the
 Government can only adopt means of
 obtaining desirable results by a mode-
 rate mode of taxation and holding
 out inducements ^{to Natives} to study the Medical
 Profession.

W. H. Murray
 May 1. 1863

I was a party to the unsuccessful
 application to the Supreme Court for
 a temporary staff, to which the Lordship,
 the President, alludes. It seems to me
 that since the weather has a good
 deal changed for the better. It
 will not escape notice that owing
 to the headful influence of our
 municipal administrations and the
 general miscellaneous improvement
 in sanitation effected by them, there
 ought now to be fewer reasons than
 there existed for fastening on the

State, the cost of a Government establishment
 of special sanitary officers. It is
 also to be noted that there is an un-
 mistakable tendency in the ~~com~~^{com}
 of the Govt of India to transfer to
 municipal funds, the expense of
 monuments, which this Govt. rightly
 viewing, have regarded as imperial
 measures, calling for some small
 outlay of State funds. This feeling
 on their part, has from the length
 of indicating an intention of charging
 against our municipalities, the
 outlay necessary under the system
 to be enforced by the "Contagious Disease
 Act", for preserving the health of
 the European community. With all

Public Health to Govt. July 1878
 of 1878.

Public Health to Govt. July 1878

Public Health to Govt. July 1878

Public Health to Govt. July 1878

Public Health to Govt. July 1878

thus before us, I should be disposed
to doubt whether the present is a
fitting opportunity for a plain see being
advanced for costly plans which in
three years ago, found so little favor
in their sight. -

It is true that we have declined from
calculating certain variations of measures
adopted ~~in the past~~, for preventing
epidemics at celebrated places of
pilgrimage, at fairs, & at religious
festivals, but now there are doubts
if a permanent sanitary
staff have been employed. All that

had been done, - as has been the case on
our own side - has been done mainly
by a cordial cooperation between the
Magistrate, and the Police working under
their guidance & control, the actual cost
of some special Sanitary arrangements
having been met by a special grant of
~~the money~~. It occurs to me that with
aid of this kind at the Periodical
festivals, and the measures of the local
municipalities, which I fear become
less desirous of themselves adopting,
we are doing a great deal towards
the general sanitation of our principal
towns. Still, if the Council should be
of opinion that we shall not be

incurring a second time the risk
of mistaking the disposition of
the Council, of the Sanitary Board
not being to join in a renewed
application for paid Sanitary
officers. But, I should prefer
reviving the former proposal of
plans, which, with much deference
for the Council's suggestions, appear
to me better-calculated to secure
the best in view than the wider, &
more comprehensive, & by comparison
more costly measures sketched in
the Council's Minute.

W.D.

I have in addition to the
Scheme proposed in the Sanitary
the former being submitted
to the Sanitary Board for
their review. It may perhaps
be advisable to ask them to
sanction a part of the Scheme
as an experiment & to
submit it if it succeeds.
might apply to the Sanitary Board
for authority to appoint a

[Handwritten signature]

c. Memorandum on the present position of the Sanitary Administration in India, and on the several proposals that have from time to time been made for its improvement.

The annexes make
the Memorial as to
the subject more fully
known. It presents
a complete and full
administration of the
the subject of
the subject - the

In 1864, Sanitary Commissions, consisting of a President, an Engineer officer, a Military and Medical officer, and a Secretary who was also a Medical officer, were appointed at each of the Presidencies of Bengal, Madras and Bombay.

These Sanitary Commis-
sions owe their existence
to the strong public feeling
excited in England by
the Report presented by
the Royal Commission
on the Sanitary state of
the

proci, 3000 M.

M. S. = E. A. 14. 1. July. 1796.

James M. The Worcester
Mass. Phila.

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1870

James

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the Army in India. The high rate of mortality of the European troops in India, deduced from the evidence laid before the Royal Commission, caused the adoption of all their recommendations for the amelioration of the soldiers' condition; and the most prominent of these recommendations was the appointment of these Sanitary Commissions.

The Secretary of State indicated the subjects which were immediately to occupy the attention of the Sanitary Commissions, and these, as was natural from the origin of the Commissions and on their first institution, were almost entirely subjects relating directly to the Health of the Army, such

such as, the application of sanitary science to the selection of sites for military stations and to their drainage, the construction of new and the improvement of old Barracks; the distribution of troops in India involving considerations of a sanitary as well as of political and strategical character; the clothing and dieting of troops; their machinery both in time of peace and war; the best means of checking intemperance and disease in the Army in India.

But while directing the immediate attention of the Indian Sanitary Commissions to the preservation of the health of the soldier, it was also declared that "although the diminution of mortality in the Army was

was the primary object of
the Government, the full
improvement in the health
of the European Troops
could not be brought about
by measures which are
solely directed to the amelioration of the sanitary
condition of the soldiers
as such", and it was
added that "no amount
of care in Cantonments
will be effectual if all
sanitary precautions are
neglected in the cities and
towns which lie adjacent."
The Govt of India therefore
announced that it looked
forward to the establishment
of a comprehensive
and, as far as may be
possible, an uniform system
of sanitary administration
throughout the country"

In the Minute of the
Governor General (Sir J.
Lawrence) calling the
Indian Sanitary Commission
into existence, the truth
was fully admitted "that
the interests of the community at large are as much
concerned as those of the
Army; and that every
step wisely taken towards
the improvement of the
public health will be a
step towards better civiliza-
tion and better govern-
ment."

The Sanitary Commissions
were created in March 1864,
and pending the approval
of the Secretary of State were
abolished in April 1866.
During the time they were
in existence they collected
information upon questions
affecting

affecting the health and well being of the European soldier serving in India; they advised the Govt. upon the alterations required in existing Barracks and Hospitals; and took up serially most of the subjects to which their attention had been called by the Secretary of State. They also advised their respective Governments on the condition of the Presidency towns, on the necessity for increased Jail accommodation, and on many questions affecting the health of the Civil population. From the first these Sanitary Commissions were regarded with disfavour by the other departments of the Administration.

It was thought that
the

the creation of these Sanitary Commissions was more a concession to an exaggerated public feeling in England on the subject of the mortality of the European soldier in India, than to any necessity or intention of actual serious sanitary administration. The advice tendered by the Sanitary Commissions on various subjects either referred to them, or to which they thought the attention of Govt. should be directed, increased the work in several departments, and it not unfrequently happened that negligence on the part of executive officers was brought to light by the enquiries and inspections of the Sanitary Commissions.

The military authorities were not disposed to regard with favor a Commission composed principally of military officers occupying a quasi-independent position and venturing to find fault with arrangements which had escaped the notice, or had received the approval, of superior military authority.

Further, almost all the recommendations of the Sanitary Commissions involved heavy expenditure for which no provision had been made in the Budget, a condition which favored the postponement of their consideration.

I speak more particularly of this Presidency, where few important questions were referred to

the

the Sanitary Commission for their advice, and where little encouragement was offered to the Commission to initiate reform or amelioration. In Bengal, where Sir J. Lawrence strongly supported the President of the Sanitary Commission, many subjects connected with the health of the Army were referred to the Sanitary Commission as is shown by the published Proceedings.

But with all the support afforded to the Sanitary Commission, that body came into something like official collision, and the Govt. of India recommended, in consequence, a modification of the constitution of the Sanitary Commissions in India.

Continued

Modification is the term used by the Governor General, but the recommendation consisted in the abolition of the Sanitary Commissions, which pending the sanction of the ^{Meeting of the} ~~Governor General~~ was carried into effect in April last in Bengal and Madras, the President and Secretary of the Commissions only being retained, the former assuming the title of Sanitary Commissioner.

The Govt of Bombay has I believe refrained from altering the constitution of ^{Sanitary Commission} that Presidency, whilst the orders of the Secretary of State have been received.

That I am not exaggerating the description I have given of the feeling borne towards the Sanitary

Sanitary Commissions, I may refer to a Minute by the late Governor of Madras of 20 February 1866, and to a Minute by the Military Member of the Supreme Council, Colonel Darnley, of 11 January 1866.

What has been written above is as regards the result of the Sanitary Commissions as the advisers of the Govt. as a Consultative. It remains to notice what has been done towards accomplishing the avowed intention of the Govt. of India of improving the public Health, every step towards this being declared to be "a step towards better civilization and better government."

In

In the Governor General's
Minute of 9 January 1866,
it is stated that the time
has come in which the
Govt. ought to take fur-
ther steps for establish-
ing a system which shall
ensure constant attention
to the requirements of
the Public Health throughout
India and shall provide
the means of carrying
into effect the more prac-
tical measures of sani-
tary improvement.

Sir John Lawrence
proposes to provide the
local Governments with
the necessary machinery
for effecting sanitary
improvements among
the Civil population. If
I may venture to pass
an opinion upon this
scheme, I should say
that

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that its sole recommenda-
tion is that it will cost
nothing. It consists in
adding the whole work
of Sanitary administration
to the duties performed
by the Inspector General
of Sails and by the Civil
Surgeons. It seems to
have been overlooked
that Civil Surgeons are
obliged to remain at
their stations for they
have medical charge of
Sails, so that Sir J.
Lawrence's scheme will
only secure Health officers
in the Civil Stations and
provides no machinery
for the sanitary adminis-
tration and supervision
of the rural districts and
of large native cities
and towns where there
are no Civil Surgeons.

However

Moreover it makes the Public Health a mere addition to the duties of Civil Surgeons and Inspectors of Prisons, instead of recognizing it as a separate and very important part of the general administration.

Before Sir J. Lawrence proposed this scheme, the Madras Govt. had submitted for the approval of the Govt. of India under date 6 January 1866 (vide Pro: of the Madras Govt. Public Deptt) proposals made by the President of the Sanitary Commission for the establishment of a Public Health Service for the Madras Presidency. This scheme was somewhat modified by the Madras Govt. and was

was recommended for the sanction of the Govt. of India. It involved, as modified by the Govt, an expenditure of 5000 Rs per mensem or 60000 Rs per annum, and the sanction of the Supreme Govt. was not accorded.

I believe that a comparison of the two proposals will satisfy most persons that the Madras Scheme contained the foundation for effectual sanitary administration, while that proposed by Sir J. Lawrence would produce no real result except in a few ^{military and} Civil Stations.

Public Department

PROCEEDINGS of the MADRAS GOVERNMENT.

Read the following letter

Memo to the Hon. the President of the Council 26th April 1868

By the Hon. the Chief Minister
by the Hon. & C. the Secy.
A. J. Selva Raju

Order Number 2nd July 1868 No 489

Resolved that the
following letter be addressed
to the Government of India

No 490-

The Secy. to the Government of India
Home Department.

Wm

I am directed by the
Governor in Council

to submit for the in-
formation of His Excel-
lency the Governor General
in Council, the enclosed
minutes by the members
of the Government on the
subject of the formation
of an establishment
of Sanitary Officers in the
Districts of this Presidency,
the appointment of a
consulting Engineer for
Sanitary works and
for the consolidation and
development of the
Provincial Expenditure.
I am to observe that
of the general principles
of the proposal contained
in the minutes of the
Governor in Council
met with the approval
of

of the Government of
India, a detailed scheme
exhibiting the exact
number of officers
required and the
duties to be performed
be prepared by the
Government and
submitted for the
consideration
of the Government
in Council.

For Lt. Genl.
2^d June 1888

MM

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