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Reports on the

Arts and Industries.

Madras Presidency

by

E. B. Havell during

1885-88

1909

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SELECTIONS FROM THE RECORDS

OF THE

MADRAS GOVERNMENT.

NEW (REVENUE) SERIES.

No. VI.

REPORTS

SUBMITTED BY MR. E. B. HAVELL DURING THE YEARS 1885—1888

ON THE

ARTS AND INDUSTRIES

OF CERTAIN DISTRICTS OF THE

MADRAS PRESIDENCY.

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REPORTS SUBMITTED BY MR. E. B. HAVELL DURING THE
YEARS 1885—1888 ON THE ARTS AND INDUSTRIES
OF CERTAIN DISTRICTS OF THE
MADRAS PRESIDENCY.

I

G.O., No. 1044, Revenue, dated 16th September 1884.

Read—the following papers :—

Letter—from T. W. HOLDERNESS, Esq., C.S., Under Secretary to the Government of India, Revenue and Agricultural Department (Agriculture).
To—the Secretary to the Government of Madras, Revenue Department.
Dated—Simla, the 7th July 1884.
No.—596-A.

In continuation of the letter from this department, No. 193-A, of the 17th March 1884, I am directed to forward copy of a despatch, No. 75 (Statistics and Commerce), dated 22nd May 1884, from the Secretary of State for India, and to request that the information called for in paragraph 4 may be supplied to the Secretary of State.

ENCLOSURE.

Despatch—from the Right Hon'ble the EARL OF KIMBERLEY, Her Majesty's Secretary of State for India (Statistics and Commerce).
To—His Excellency the Most Honourable the Governor-General of India in Council.
Dated—India Office, London, the 22nd May 1884.
No.—75.

I have considered in Council your letter No. 67, Finance and Commerce, dated 4th March last, recommending for my approval proposals of the Madras Government for the temporary appointment of a Government Reporter on Arts and Manufactures, and of a Government Mineralogist for that Presidency.

2. The Government of Madras express their concurrence with the Famine Commissioners that it is desirable to encourage a diversity of occupations, and to develop new branches of industry in the Presidency. I am far from dissenting from their view as a general proposition, but I am not very sanguine that these objects will be secured by the creation of the appointments contemplated particularly by that of a Reporter on Arts and Manufactures. Unless the gentleman nominated to this post possesses qualifications for it, it is not impossible that he may do more harm than good ; and the period of his employment now proposed seems scarcely to be sufficient to enable him to acquire that experience of the people and country without which it would be unreasonable to expect him to achieve any considerable practical results.

3. Looking, however, to the importance attached to their proposals by the Government of Madras, and the complete concurrence in them of Your Excellency in Council, I will not refuse my sanction to the arrangements you have recommended.

4. I desire that the information referred to in the last paragraph of your letter may be supplied, and that I may be informed whether my assistance is needed to select gentlemen to fill the proposed appointments.

No. 1808, dated 26th June 1884.

Copy, together with a copy of the despatch to which it is a reply, forwarded to the Revenue and Agricultural Department for the issue of necessary orders to the Government of Madras.

(By order, &c.)

J. E. O'CONOR,
Asst. Secy. to the Govt. of India,
Dept. of Finance and Commerce.

Letter—from H. E. STOKES, Esq., Secretary to the Government of Madras, Revenue Department.
To—the Secretary to the Government of India, Revenue and Agricultural Department.
Dated—Ootacamund, the 21st July 1884.
No.—3140.

With reference to your letter No. 596-A, of the 7th instant, I am directed to request that you will be so good as to furnish to this Government copies of the marginally-noted papers which have not been received here.

Despatch to the Secretary of State, 4th March 1884,
No. 67-F and C.
Your letter No. 193-A, dated 17th March 1884.

Letter—from T. W. HOLDERNESS, Esq., C.S., Under Secretary to the Government of India, Revenue and Agricultural Department (Agriculture).
To—the Secretary to the Government of Madras.
Dated—Simla, the 6th August 1884.
No.—734-A.

In compliance with the request contained in your letter No. 3140, of the 21st ultimo, I am directed to forward copies of the papers noted in the margin, regarding the appointment of a Government Reporter on Arts and Manufactures and a Government Mineralogist for the Madras Presidency.

Copy of despatch No. 67, dated 4th March 1884, from the Department of Finance and Commerce, with enclosures.
This department letter No. 193-A, dated the 17th March 1884.

ENCLOSURES.

Letter—from the Government of India, Department of Finance and Commerce—Salaries, &c. (Minor Departments).
To—Her Majesty's Secretary of State for India.
Dated—Calcutta, the 4th March 1884.
No.—67.

With reference to Part II, Chapter VI, Section I of the Report of the Indian Famine Commission, in which the Commission expressed its views as to the desirability of encouraging a diversity of occupations and the development of new branches of industry in India, the Government of Madras in November 1882 submitted certain proposals which embraced the temporary appointment at an early date of a Government Reporter on Arts and Manufactures and a Government Mineralogist for the Madras Presidency.

2. While completely concurring with the opinions of the Madras Government, as expressed in its Proceedings, No. 1330 (Revenue), dated the 28th November 1882, we asked, before submitting the proposals to Your Lordship, to be furnished with an approximate estimate of the cost of the proposed appointments, and to be assured that the charge is one which, with a due regard to the financial needs of the Presidency, can be borne by the Provincial Revenues.

3. The Madras Government has replied that, with every regard for the more pressing financial needs of the Presidency, a sum of Rs. 25,000 can be spared annually for three years for the purposes explained in the enclosures of its letter No. 1331, dated the 28th November 1882.

4. We have the honor to enclose a copy of the correspondence * which has taken place on the subject, and beg to recommend the proposals of the Madras Government for Your Lordship's favorable consideration. In the event of their meeting with Your Lordship's approval, we propose to instruct the Government of Madras to supply Your Lordship with more definite information as to the qualifications of the officers whom it is sought to appoint.

Letter—from T. W. HOLDERNESS, Esq., C.S., Officiating Secretary to the Government of India, Revenue and Agricultural Department (Agriculture).
To—the Secretary to the Government of Madras.
Dated—Calcutta, the 17th March 1884.
No.—193-A.

In acknowledging the receipt of your letter No. 32 of the 11th January, I am directed to enclose, for the information of His Excellency the Governor in Council, a copy of a despatch which has been addressed to the Secretary of State, recommending the proposals submitted by the Government of Madras to give effect to the views of the Famine Commission as to the desirability of encouraging a diversity of occupations and the development of new branches of industry in India.

2. I am at the same time to invite attention to paragraph 3 of Mr. Buck's letter No. 257 of the 8th March 1883, and to ask that, in the event of the appointments being sanctioned by the Secretary of State, the officers appointed may be associated with the Agricultural Department of the Government of Madras, and the arrangements for their work made in communication with the Government of India. The Government of Madras is aware † that the Government of India has under preparation a standard dictionary of economic products, and that it is desired that the various collections of such products in the different museums throughout the country should be so numbered as to correspond with the dictionary, which will thus serve the purposes of both a guide and descriptive catalogue to all the principal collections in India. As it is quite possible that the work of the officers whose appointment to Madras has now been recommended to the Secretary of State may ultimately be extended beyond that Presidency, or that investigations such as they will make may be undertaken elsewhere, it is desirable that the work should be systematised from the outset on some such lines as have been laid down in connection with the dictionary and collections of economic products.

No. 1579, dated 17th July 1884.

Transferred to the Revenue Department.

(By Order.)

J. H. A. TREMENEERE,
Ag. Assistant Secretary.

Order—No. 1044, Revenue, dated 16th September 1884.

Miscellaneous.

In deference to the opinion expressed by the Secretary of State as to the qualifications requisite for a Reporter on Arts and Manufactures, the Government will defer for the present application for the appointment of such an officer, but they resolve to depute the Superintendent of the School of Industrial Arts on special duty for some months during next cold weather for the purpose of making a tour of inspection through the Madras Presidency, and collecting preliminary information as to arts and manufactures which may be of use to Government in determining on what lines further operations shall proceed. The results of his inquiries should be reported from time to time to Government through the Director of Agriculture. The Public Department will accordingly be requested to make arrangements to place Mr. Havell's services at the disposal of this department for the purpose contemplated. While so employed he will draw a deputation allowance of Rs. 100 per mensem, with the regulated travelling allowance.

(True Extract.)

H. E. STOKES,
Secretary to Government.

II

G.O., No. 463, Revenue, dated 24th April 1885.

Read—the following papers :—

G.O., No. 791, Public, dated 30th March 1885.

ABSTRACT.—Works of Art.—Directing Mr. Havell to renew his application for a further grant of funds required to complete the collection representing the industries of the places visited by him when the proper time for his travelling returns.

Letter—from E. B. HAVELL, Esq., Superintendent, School of Arts (on special duty).

To—the Director of Revenue Settlement and Agriculture.

Dated—Madras, the 21st February 1885.

No.—78.

I have the honour, with reference to G.O., Mis. No. 2221, Public Department, 13th October 1884, to submit my report on the arts and industries carried on in the districts of North Arcot, Salem, Tanjore, Trichinopoly and Madura. The towns and villages noted in the margin are those which I have visited.

Tirupati.
Kalahasti.
Chandragiri.
Kallur.
Suddum.
Punganur.
Palmaner.
Gudiyattam.
Chittoor.
Vellore.
Kulgherry.
Wálanjagar.
Arcot.

Arni.
Wandiwash.
Salem.
Razipur.
Shendamangalam.
Námakal.
Tiruchengód.
Dharmapuri.
Tirupattur.
Váníyambádi.
Krishnagiri.
Hosur.

Tanjore.
Mannargudi.
Negapatam.
Nagore.
Ayyampet.
Kumbakonam.
Kuttalam.
Máayavaram.
Shiyáli.
Trichinopoly.
Uraiyur.
Utatoor.

Perambalur.
Kurumbalur.
Ariyalur.
Udayarpálaiyam.
Jayankonda.
Madura.
Sivaganga.
Tirupattur.
Mána Madura.
Pernagudi.
Pámban.
Ramesvaram.

2. The general condition of these industries is altogether unsatisfactory. Hardly one of them can be said to be really flourishing. Many of them seem to be fast dying out.

General condition.

3. Dealing with the weaving industry first, as it is by far the most important in respect of the numbers employed in it, I find that a great variety of textile

manufacture is carried on in these districts—silk and cotton cloths, cotton and woollen carpets, silver and gold lace, satin, reed mats, coarse cotton cloths and cumblies.

4. That this industry has suffered very considerably from the competition daily growing stronger and stronger of the cheap cotton and woollen goods which are being poured into the country and that many weavers have been forced to abandon their trade for other pursuits is already a well-known fact, and it will only be necessary to see to what extent it has affected each branch of the industry.

5. The European goods have their great advantage in point of cheapness, and consequently the native manufacturer who supplies the wants of the low caste and poorer classes has suffered most.

6. Two kinds of white cloth for personal wear are produced by the native weaver: first, a plain white cloth with a narrow border of colored cotton, and

sometimes with a broader band woven across each end, which are worn by the low caste poor; and, secondly, superior cloths of fine texture in which the borders are broader and of silk, and generally embroidered with a simple pattern, and the bands at each end either of silk or of silver lace. These cloths, originally intended for Brahmins only, are now indiscriminately worn by the wealthier classes of every caste.

7. The first of these has been almost entirely superseded for general wear by English long cloth, which is cheaper than the native cloth by about one half. Still the manufacture is carried on throughout the districts on a very small scale, for the

native cloth is always worn by those who can afford it on occasions of ceremony and by some it is preferred on account of its superior durability and thicker texture.

8. The manufacture of the finer cloths still occupies a very large proportion of the weavers, and is extensively carried on in and around about Madura and Salem.

The prosperity of this industry has also been affected to a less extent by the cheapness of European goods, in a similar way, that whereas a well-to-do native would formerly have four or six country cloths in constant wear, many now reserve the more expensive costume for the religious and domestic ceremonies at which a Hindu would expose himself to ridicule if he appeared in other than his traditional dress. But as these cloths are only within the reach of the wealthier classes, it is probable that the spread of Western ideas and mode of dress has had more prejudicial effect on the industry than the mere cheapness of European goods. Both in the fine, but more especially in the inferior cloths, the profits of the weaver seem to be reduced to a very low margin.

9. The manufacture of female cloths is carried on on a very extensive scale, and has not declined to such an extent as the other, for though the industry has

Female Cloths.

suffered considerably in the inferior kinds by the competition of English and French cheap printed cotton goods, European manufacturers have not hitherto produced anything which can at all compete with the finer cloths of Tanjore, Kuttalam and Kuranád, and other places. While the more gorgeous beauties of the textile manufactures of the north, such as those of Benares, Surat and Gujerat, have been fully recognised, it is a pity that the more sober, though none the less remarkable, artistic qualities of these fine cloths and their adaptability in many ways to decorative purposes have not been better appreciated.

10. Artistically speaking a decline is only noticeable in the cotton female cloths, most of which have lost their characteristic beauty by the use of European dyed thread. The Madura female cloths, however, are an exception.

11. Before turning to another branch of the industry, I must allude to signs which show that, however unsatisfactory may be the present condition, the native manufacture of cloths has nothing to hope for in the future. The great objection among Hindus to European long cloth, apart from its want of durability, is that the colored and embroidered border of the native cloth is wanting. So, as I have mentioned before, on occasions of ceremony the native cloth is still used. But within the last year or two, cloths have been introduced into the market exactly similar in outward appearance to the common country bordered white cloth, and selling at two-thirds the price or less. Even the finer cloths with silk embroidered borders, which, on account of the combination of silk and cotton being difficult to work by machinery at a cheap rate, have hitherto escaped the competition of cheap and vulgar imitations, are now being closely reproduced with borders of colored cotton exactly similar in design. Similarly the women's cloths have until recently only had to compete with glaring printed cottons, which, though injuring native trade in cloths for low caste wear, cannot have affected the industry in the finer manufacture. But lately European cloths woven, instead of printed in imitation of some of the Kuttalam and Kuranád patterns, have been brought into the market, selling at prices with which the native manufacture could not possibly compete.

12. Owing to agents of European firms who have been busy lately buying up native cloths as patterns, the weavers, in nearly every place I visited, looked upon my inquiries with great suspicion; and in some cases refused to allow me to see their looms.

13. The effect of this new departure will no doubt tend to greatly hasten the decline in native weaving. In fact it is obvious that in no very short time the whole of the native industry in the low caste or purely cotton cloths must give away and only a remnant of the finer manufacture in which silk is partly or wholly used will be able to hold its own to any extent against the cheaper, though vastly inferior in every way, European goods.

Woollen Carpets.

14. With regard to woollen carpets a great decline is also noticeable. Ayyampet, in the Tanjore district, was once an important centre for the manufacture of the woollen mats or small carpets for which the district is famous, and about ten years ago 107 families were employed in the industry. Now twelve families only are engaged in it.

15. The patterns and colors of the carpets now made or not, as far as I could judge from the few examples available, so good as those to be found in old carpets, but this is probably the effect rather than the cause of the decline in prosperity which is owing more to native preference for inferior European manufactures.

16. These carpets do not ever appear to have found much favor in the European market. The patterns and colors which are very bold and striking do not suit the taste of the many, who, in their painful anxiety to eschew anything vulgar or in bad taste, fall back on so-called "aesthetic" muddiness of color and monotony of pattern.

17. The Tanjore district was also once well known for silk carpets of remarkable beauty. This industry seems to have disappeared entirely. At all events, I was not able to discover any workmen engaged in it.

18. At Wálajánagar, also an old seat of the industry, there are now only two workmen employed in it. Inferior designs and the use of aniline dyes are the only noticeable features in their productions.

19. Probably the proximity of Vellore Jail, which must have once competed strongly with local manufacture, has been the chief cause of the commercial ruin of the Wálajá carpet trade. The restrictions recently placed on jail manufactures, in this case, came too late.

20. In this jail the methods employed and the dyes used are purely native. But the patterns are too miscellaneous and not always good, and the arrangement of colors is altogether wanting in that essential of perfect harmony which is so conspicuous in unsophisticated native manufacture.

21. Cotton carpets are made at Arcot, Wálajánagar (North Arcot district), Ayyampet (Tanjore district) and Ranjangudi (Trichinopoly district); but the industry is declining commercially and artistically. The patterns, in nearly all cases, are good and appropriate, but at Arcot and Wálajá aniline dyes have completely ruined the industry artistically. The Ayyampet carpets are good, and those of Ranjangudi are the best I have seen both in design and color. It is worth noticing that country cotton is always used in this manufacture.

22. Satin is manufactured at Ayyampet, Arcot and Wálajánagar and at Ariyalúr, Trichinopoly district. It is a beautiful industry which has hitherto attracted little notice. The weavers seem to be of northern origin both from type of features and language, the latter a dialect strongly mixed with Gujerati. The material produced at the three first places is worn by Muhammadans for trousers, the principal trade being with Hyderabad. The arrangement of color is very bold and brilliant, but always in good taste. The Ariyalúr satin is distinct in style and of remarkable beauty in color, as well as tasteful in the simple patterns woven generally in stripes across it. The *ravikkai* (Hindi, *choli*) worn by native ladies is made of it.

Only two men are engaged in this industry, which, as far as I am aware, has never been noticed before.

23. A kind similar in style but inferior in color and execution is produced in the town of Trichinopoly embroidered with patterns in silver lace.

24. The only branch of weaving which has hitherto escaped European competition is the reed-mat industry carried on chiefly at Shiyáli and Wandiwash. Those made at Shiyáli are the best and are remarkable for their fine designs and good dyes. The Wandiwash mats are familiar to the Madras bazaar. The patterns are also very good, but the common use of aniline dyes has had disastrous effect.

Reed Mats.

25. There are two branches of industry closely connected with weaving, cotton-spinning and the manufacture of gold and silver lace, which have sunk from great importance to complete insignificance.

*Cotton-spinning.**Gold and Silver lace.*

Machine cotton is universally used in the manufacture of all but the coarsest kind of cloth and in cotton carpets; and similarly the gold and silver lace so much used in the manufacture of the finer male and female cloths is almost entirely European, though there are a few native workmen to be found in Madura and Arcot.

26. The industry of cotton printing is tolerably widely diffused throughout these districts, though it is in a sadly neglected condition. There are two distinct classes

Cotton printing.

of work, the hand-painted or block-printed cloth, used either for personal wear or as bed-covers (palampores) and the hand-painted representations of mythological subjects for adorning the Hindu cars and temples or for wall-hangings on festive occasions. The former are made at Kumbakóram, Nagore, Uraiyur (a suburb of Trichinopoly), Mána Madura, Permagudi, Pámban, Wálajánagar and Arcot; and the latter at Kálahasti, Salem, and Madura. At Kumbakónam and Nagore the cloths are all hand-painted.

The best of them are exceedingly tasteful in design. The trade which is entirely an export one chiefly with Singapore and Penang has diminished enormously during the last twenty years, probably to the extent of 80 per cent. English printed cottons have supplanted the more costly native productions.

27. The cloths and handkerchiefs of Permagudi, Mána Madura and Pámban are also hand-painted, but quite distinct in style from the last.

Their fine lace-like patterns when drawn or painted by hand with the first preparation of wax, with great dexterity and facility, are exceedingly effective. But owing to the fineness of the patterns they become almost indistinguishable after the cloth receives its deep red and blue dyes. However, there is one man working at Mána Madura whose designs are generally bolder and more suitable for the process.

28. At Uraiyur some good block-printed palampores are produced by some half-dozen families; but the industry is declining, and the best workman has lately abandoned his trade and left the place.

Uraiyur.

29. The cloths of Wálajánagar and Arcot are all block-printed. The industry here must have been once very extensive and important. In nearly every house where the work is carried on, I found old blocks of very elaborate and beautiful patterns, many of them of Persian origin, piled up in corners or in the roof covered with dust, or in some cases cut in pieces and utilized for the patterns now in use, which are very poor and altogether inferior to the old ones. In one case there were as many as 72 blocks to form the pattern of one palampore. I was able to secure some 200 of these fine old blocks.

30. In this case also the trade is almost entirely an export one and the decline which has affected the industry artistically in such a remarkable way seems to have taken place within the last twenty years. The cloths now produced when finished are often so blurred that the patterns are altogether lost.

31. The second kind of painted cloth, used in Hindu sacred ceremonies, is very interesting and remarkable. The best are produced at Kálahasti in North Arcot.

Kálahasti.

The quaint illustrations of scenes from the Hindu epics, the Ramayanam and the Mahabharata are exact reproductions of the style of Hindu temple sculptures with the same richness of architectural frame-work and elaboration of jewellery. But apart from their interest the wonderful effect of the arrangement of color gives them an

artistic value of a high order. Similar ones differing only in color but not drawn with the same dexterity are produced at Salem. In both these places a few good patterns of palampore without figures are made in which the sacred tree and swan or the lotus form the leading motif. Those of this latter kind made at Salem are excellent in design and superior in this respect to the Kálahasti ones. The Kálahasti palampores attracted some attention at the last Calcutta Exhibition, but those of Salem are, I believe, quite unknown. There is also one old man at Madura who formerly produced painted cloth of a similar character, but he has now given up the work as there is no demand for it.

32. With regard to metal-work, that in brass and bronze is the most extensive industry. Commercially it has declined

Metal-work.

little, except that kerosine lamps are fast taking the place of the old native oil ones. But the fine ornamental work for which the south is famous has become almost a lost art. Even the ornaments and vessels of the temple service, which have always, as in other countries, called forth the highest skill of the artificer, are now in the case of the former generally inferior in design and rudely executed, and of the latter entirely without ornamentation.

33. The Hindu custom of melting down all old vessels every two or three years has nearly destroyed all vestige of the work of previous generations, so that one must look for examples of the fine old work not in temples nor in the houses of the rich, but among the waste metal of the brass bazaar doomed to the melting pot, or in the houses of the low caste poor who generally look upon these with superstitious veneration and rarely consent to part with them.

34. The little demand which still exists is chiefly confined to the lower castes, and the tendency being more towards cheap production than excellence of design or workmanship, it is not surprising that modern work is altogether inferior. The inlaid copper and silver ware of Tirupati is the only purely native work for which there is now any demand. It has degenerated completely in style and execution.

Tirupati.

35. The encrusted work of Tanjore is probably not entirely of native origin. It is strictly fancy work, not always in the best of taste, and as the demand for it is entirely European, consequently its prosperity does not appear to have been affected at all.

Tanjore.

36. A few brass-workers there are who have found exercise for their skill in the making of locks and safes ingeniously contrived. One man is at Dindigul who has acquired considerable reputation, another at Máyavaram, Tanjore district, and a third at Ramnad.

Locksmiths.

Dindigul.

Máyavaram.

Ramnad.

37. The Madras Museum possesses some magnificent specimens of arms and armour which show to what a high state of perfection the ironsmiths of the south once brought their art.

Iron-work.

38. Now three workmen at Sivaganga, in the Madura district, are the sole descendants who retain somewhat of the skill of their forefathers or who find any employment for it. And just as the skilled workman in bronze, brass and iron is now reduced to the level of common workmen, so the wood-carver is obliged to maintain himself in great part by doing the work of an ordinary carpenter, for it is no longer the fashion for the wealthy merchant to adorn the interior of his house with rich carvings, and the architectural decoration of the Rajah and the Zemindar never aspires higher than an imitation of that bold and often grotesque travesty of the Italian style which characterizes Anglo-Indian buildings.

Wood-carving.

39. The goldsmith is still to be found at work in every town and village of importance, and his art has probably suffered least of all, for the women, more

Goldsmiths.

conservative, have not given up their traditional ornaments or exchanged them for European jewellery. On the other hand where, as at Trichinopoly, a European demand for his work has sprung up, he has become, artistically speaking, completely ruined, and has not even attained to that high mechanical finish and polish which is the only excellence in the type of jewellery he strives to imitate.

Trichinopoly.

40. Pottery of an ornamental character is made only at Kulgherry in North Arcot. Unfortunately the two men who

Pottery.

Kulgherry.

produce it seem to have been made the subjects of the crude experiments of every European who has come in contact with them; and their pottery is only remarkable for its inferiority to old Arcot ware and for its strange perversions of European forms.

41. A complete list of these and other minor industries I have attached to this report in Appendix A, and a notice of some of the processes in Appendix B.

42. I have already noticed to some extent the causes of the decline which is so

Causes of decline.

clearly marked in nearly every branch of native art. The production of articles of necessity, such as the native cloths, has suffered most by direct European competition. Industries in articles of luxury, such as wood-carving, carpet-weaving and ornamental metal-work, have been affected to some extent by the decline of many old native Zemindaries and States, but more from the spread of European education and ideas, which lead many of the better class of natives to throw aside their national dress and decorate their houses in a pseudo-European style with glaring Brussels carpets and ill-designed furniture, and either to look upon all native art as beneath their notice or with condescending benevolence to supply the workmen with designs culled from the pattern books and catalogues of European manufacturers. In this way the native industries have suffered as much by loss of prestige as by European competition or from any other cause.

43. In the north of India the beauty of its industries has always commanded a certain amount of admiration with a few, but in this Presidency it is only of late years that the idea has generally gained ground that there is any native art, much less that any good is to be found in what little there may be. The majority of Europeans know nothing of it, except those few who benefit by its commercial ruin; and the means of obtaining any information with regard to it are very scanty. It is a remarkable sign of the indifference with which it has hitherto been treated, that while South Kensington, the finest Art Museum in the world, has thought Indian and Oriental art worthy of the largest proportion of its space, neither in Madras, Bombay, or Calcutta has there been, until quite recently, even a small collection to represent to any extent the resources of the country in its arts and industries.

The collection at the School of Arts, to which one would naturally look for an index to the industries of the Presidency, consists principally of a mediocre collection of casts from the antique and details of Italian and Gothic ornament.

44. The specimens of native industry which I have purchased from the grant sanctioned for that purpose will make a beginning in the right direction; but I would strongly recommend that the survey which I have commenced may be continued; that provision be made for an annual grant for the additions to the collection which are needed; and that a museum be formed in connection with the school representative of all that is best in native art, and especially in that of Southern India. With regard to the question of its connection with the School of Arts, it is to be considered that there is ample space for a very considerable collection and a staff available, and that a large collection of the best examples of native design in every branch is absolutely essential for the future success of the school. Such a collection must, as is the case at the National Art Training School at South Kensington, be the most important teaching agency. To place this collection in any other building would practically render it of very little value to the students and add seriously to my work of superintendence, which is already very heavy.

45. That a museum of this kind would do much good to native industry can hardly be doubted. Indeed, I am convinced that properly directed its influence would be far more beneficial than that exercised by International Exhibitions, which, though of great value in many ways, tend to lower the artistic standard by creating an indiscriminating demand. It would give a prestige to native art in the eyes of the natives themselves, and create an interest with regard to it by affording information in every branch of it, which now it is almost impossible for a European to obtain; it would be the means of preserving those examples of a period when art attained a much higher standard than is generally to be found at the present time, and which are daily being destroyed and becoming more difficult to obtain; it would thus create and maintain among the artisans themselves a higher standard of design and workmanship; and it would afford the means of enlightening that class of artistically ignorant Anglo-Indians, dilettanti, and manufacturers, who persist in attempting to teach where they have much to learn, and who, if they possessed but a little of the artistic instinct of the native artisan, would shudder at the mischief which they work.

ENCLOSURES.

APPENDIX A.

List of Arts and Industries carried on in the Districts of North Arcot, Salem, Tanjore, Trichinopoly and Madura.

In nearly all the towns and villages mentioned below goldsmiths and wood-carvers are to be found more or less skilful. I have noted the places where their work is particularly remarkable.

Industries marked † are those which are little or quite unknown (as carried on in the locality referred to), or which have been unrepresented in previous International Exhibitions.

NORTH ARCOT.

Arcot.

Weaving—
(Fine and common female cloths.)
Imitation silver and gold lace—
(Sometimes stamped in simple patterns. Worn by Muhammadan children for caps, &c.)
Manufacture of silver wire—
(For silver and gold lace.)
Printed cottons—
(Similar to those of Wálanjagar.)
Brass and bronze work—
(One man, Nyana Asari, can make pierced ornamental trays and chembus, &c., of Muhammadan design.)

Arni.

Weaving—
(Male and female cloths.)

Chittoor.

Weaving—
(Cotton female cloths.)

Gudiyáttam.

Weaving—
(Fine silk female cloths, fine male cloths, and cotton female cloths.)
The cloths ordinarily made are inferior; but when called upon the weavers can produce fine silk and embroidered female cloths equal to the best productions of Kuttálam or Kuranád.

Kálahasti.

Palampores and printed cloths—
(Representing scenes from the Mahabarata and Ramayanam.)
Weaving—
(Common male cloths.)

Kulgherry or Karigeri.

A small village near Vellore where ornamental pottery is made generally with a green copper glaze. The forms are now mostly of an inferior European type.

Kunnattur.

A village near Arni where reed mats are made similar to those of Wandiwash.

Maderpak.

Weaving and cotton-printing.

Nemali.

Weaving.

Palmañér.

Making and painting toys.

† *Servur.*

A village near Arni where Jain women weave coarse mats out of "Jehchai leaves" (*Phania farinifera*). The mats sometimes have simple patterns in red and black.

Tirupati.

Ornamental metal-work—
(Brass inlaid with copper and silver.)
Carvings of Hindu deities and toys in Red Sanders wood.
Weaving—
(Common male cloths.)

In a small village, four miles from Tirupati, small bronze images of Hindu deities are made. They are inferior in execution.

Tuttyput.

A village near Ambúr railway station where fans are made of palmyra leaves, and often tastefully decorated in brilliant colors.

Trichanur and Tirutani.

Goglets and various vessels and Hindu images carved out of stone. Also made at Chinnavarikum (near Ambúr railway station).

Vellore.

Brass and bronze—
(Household utensils.)
Embroidery—

† One tailor who makes the embroidered canopies, which are used in the temple service of the Hindus and for sacred processions.

Vellore Jail.

Weaving—
Woollen and cotton carpets, reed mats, purdahs, coarse cloths, &c.

Wálanjagar.

Weaving—
(Fine and common female cloths.)
Woollen carpets—
(Only made by the Muhammadans. They are inferior in design, and aniline dyes are often used.)
Cotton carpets—
(Aniline dye is often used in these also.)
Satin—
(Worn by Muhammadans as trousers. Very good in quality, color and design.)
Printed cottons—
(Block-printed cloths and handkerchiefs of an inferior kind.)

Wandiwash.

Weaving.
Reed mats—
(The patterns are generally very good in design, but they are often spoilt by aniline dye.)
Common male and female cloths.

SALEM DISTRICT.*

Attur.

Reed mats.

Hosúr.

Bronze work—
† One man who produces very fine images of large size of the Hindu deities.

*In nearly every town in the south of this district weaving of male and female cloths is carried on to some extent.

Námakkal.

Weaving—
(Fine male cloths.)

Razipur.

Weaving—
(Fine male cloths and inferior female cloths.)
Bronze and brass work—
One workman is skilful in ornamental work.

Salem.

Weaving—
(Fine male cloths and inferior female cloths.)
† Palampores and painted cloths—
(Scenes from the Mahabarata and Ramayanam similar in style to the painted cloths of Kálahasti but different in color. The palampores are finally designed and superior to similar ones produced at Kálahasti.)

Ványambádi.

Printed cottons—
(Inferior cloths for female wear, block-printed.)
Reed mats of an inferior kind.

TANJORE DISTRICT.

Ayyampet.

Weaving—
(Cotton and silk female cloths, satin similar to that made at Wálajánagar in North Arcot. Cotton carpets, woollen mats or small carpets of very bold and characteristic designs. All the textile productions of this village are remarkable for their good dyes and designs.)

Kumbakónam.

Bronze, brass, zinc, copper and silver work—
(Household utensils and figures of Hindu deities. The former are now generally plain or with only a simple device of two parrots engraved on them. There are, however, still a few workmen skilled in ornamental work.)

Painted cloths—
Hand-painted cloths and handkerchiefs similar to those of Nagore.

Kuttálam and Kuranád.

Weaving—
Very fine silk female cloths of striking beauty. Cotton female cloths.

Mannárgudi.

Weaving—
(Inferior female cloths.)
Brass and bronze—
(Plain household utensils.)

Máyavaram.

Locksmiths—
† One skilful workman who makes superior locks, safes, &c.

Nagore.

Cotton printing and painting—
(Cloths and handkerchiefs. The inferior kind are block-printed, but the better ones are very pretty in design and generally well executed. These are all painted by hand. Red, blue and sometimes yellow are the colors used.)

Negapatam.

Cotton printing—
(A few inferior workmen who produce cloths similar to those of Nagore.)
Cutting and polishing of precious stones.

Shiyáli.

Reed mats—
(Made at two villages close to Shiyáli. The designs are very fine and the dyes excellent.)

Tanjore.

Weaving—
(Very fine silk cloths for females generally richly embroidered with silver lace. Some magnificent examples of this kind of work are to be seen in the palace. Cotton female cloths.)
Metal-work—
(Chembus, trays and other vessels of bronze or copper encrusted with silver, brass or copper finely chased. The designs generally mythological in character. Household utensils.)
Pith-work—
(Models of temples, figures, &c., made out of pith.)
Talc fans—
(Ornamented with light and graceful designs painted in fine lines either in white or colored.)
Musical Instruments.

TRICHINOPOLY DISTRICT.

Andimatum.

A village near Jayankondasholapuram where colored glass toys are made.

† *Ariyalur.*

Weaving—
Satin of remarkable beauty of color embroidered with tasteful designs generally arranged in stripes. Worn by native ladies.

Jayankondasholapuram.

Weaving—
(Common white male cloths.)
† At a village four miles from this place hand-painted cloths and handkerchiefs are produced similar to those of Kumbakónam and Nagore.

Karumbalur.

Brass and zinc work—
(Ornamental work of a unique character. Trays, chembus, &c., are cast in the two metals which form by juxtaposition different designs, somewhat barbaric in style. The work is chiefly interesting for the process. Only one family are engaged in the work.)

Lálgudi.

A wood and ivory carver named Velayuda Asari carves very skilfully small images of Hindu deities and small animals, &c. He also makes ornamental carved flower-stands of most atrocious quasi-European design, but the work is always skilful in execution.

Trichinopoly.

Gold and silver work—
(The chief goldsmiths produce work of a very debased European character.)
Weaving—
† (Silk and cotton female cloths and an inferior kind of satin embroidered with patterns in silver lace worn by Muhammadans.)
Carved pith-work—
(Models of temples and other buildings and of figures.)
Paintings on talc and ivory.

Uraiyur.

(A suburb of Trichinopoly.)

† Cotton-printing—
(Palampores often very rough, but sometimes very good in execution, design, and color.)

MADURA DISTRICT.

Arupukotai.

Weaving—
Cotton female cloths.

Dindigul.

Weaving—
(Similar to that of Madura.)
Sankalingasari brass and bronze work—
Household utensils without ornamentation. There is one locksmith, Sankalingasari, who has acquired considerable reputation for his skilful contrivances.

*Madura.***Weaving—**

Fine male cloths embroidered with silver lace, silk cotton female cloths, the latter especially remarkable for their beauty in color and taste in design. Turbans.

Palampores—

† (One man who can produce palampores similar in style to those of Salem and Kálahasti. There is no demand for his work now.)

Manufacture of silver lace, brass and bronze work—

(Household utensils without ornamentation.)

Some of the goldsmiths are very skilful workmen.

Dyeing—

Madura especially famous for its indigo and deep red dyes.

*Mána Madura.***† Painted cloths—**

One man who produces hand-painted female cloths and handkerchiefs worn by Muham-madans. Similar ones are made at Permagudi and Pamban, but this man's designs are generally bolder and more suited to the process.

*Pamban.***† Painted cloths—**

(Similar to those of Permagudi, Mána Madura and Pamban.)

*Permagudi.***Weaving—**

(White male cloths and female silk cloths of similar patterns to those of Kuttalam and Kuranad in Tanjore.)

† Painted cloths—

(Designs drawn and with a fine metal instrument very effective at first, but almost lost when the cloth is dyed.)

*Ramnad.***† Locksmith—**

One man, Najina Muhammad, who makes very ingenious contrivances in locks, safes, &c. Some wood-carvers of Ramnad are very skilful workmen.

*Sivaganga.***Brass, bronze, and iron work—**

(Three men whose time is generally employed in making inferior models in bronze of toads, lizards, snakes, &c., for which there is a considerable demand, and extravagant prices are paid. But the men are capable of much better work in laying iron with silver and in highly ornamental wrought, cast and chased arms, &c.)

† Decorating ivory with painted ornament—

One man, Suppaiyya Asari, who paints ornamental designs on ivory boxes, &c.

APPENDIX B.*Madura Red Dye.*

Madura is famous for a fine dye of a deep red color. The dye is also prepared in many other places, but Madura has acquired a reputation for finer color and greater permanence, which is attributed by the weavers to the peculiar qualities of the water of the Vaigai.

The process is as follows:—The ashes of a plant called by the natives Umiri,* which grows wild on sandy beds near the sea coast round about Ramnad, Rámésvaram and Tuticorin, are steeped

in water for ten days when the water is poured off and the white cloth is dipped in the sediment and left for three or four days. When it is taken out and washed the cloth has a yellowish grey color.

Next it is dipped in a liquid prepared out of Tinbura root (a small shrub) growing on the banks of the Vaigai.

Kaya † leaf and gingelly-oil prepared in the following manner: The root of the Tinbura is

leaves of the kaya leaf well dried and reduced to powder and gingelly-oil in these proportions: Tinbura decoction 16 parts, Kaya leaf 2 parts, and gingelly-oil 2 parts. The cloth is left in this liquid for two days when it is taken to the bed of the Vaigai and left in very shallow running water for a day, after which it is dried in the sun. It is re-dipped in the dye and again washed in this way for ten or eleven days, when the operation is complete. The whole process is very tedious, sometimes lasting over a month. During the rainy season all operations are suspended.

Painted Cloths.

The hand-painted cloths of Kumbakónam, Nagore and other places are prepared as follows:—The white cloth is first steeped in a preparation of gallnuts boiled in milk for five or six hours, and allowed to remain for two days. Then it is taken out and dried in the hot sun on the sandy bed of the river or in the prakara court of the temple. The patterns are then drawn on the cloth by a rude brush with melted wax. The cloth is steeped in the dye for a sufficient time when the wax is removed by hot water, the patterns appearing white on a blue or red ground, as the case may be. If only one color is desired, the cloth is complete, otherwise all but the portions of the pattern in which a second color is to be introduced is coated with wax. When the cloth is again dyed and the wax being removed the process is finished.

Brass and Zinc work of Kurumbalur.

The brass portion of the vessel is first modelled in wax and cast in the ordinary way by surrounding the model with a mixture of clay and sand, melting out the wax and pouring in the molten metal. This process forms a brass vessel apparently roughly pierced in simple designs, which is again surrounded by a mould and the molten zinc is run into the perforations. The vessel is completed by filing, chasing, and burnishing. Each vessel generally requires to be cast in separate portions which are afterwards soldered together. Only one family is engaged in this work.

Endorsement by W. WILSON, Esq., Director of Revenue Settlement and Agriculture, dated Madras, 13th March 1885, No. 443.

Submitted to Government in reference to G.O., No. 1044, dated 16th September 1884.

2. Mr. Havell's tour embraced the districts of North Arcot, Salem, Tanjore, Trichinopoly and Madura, and his report deal with the following arts and industries that are practised there:—

- | | | |
|---------------|---------------------|-------------------|
| (1) Weaving. | (3) Cloth-printing. | (5) Wood-carving. |
| (2) Spinning. | (4) Metal-work. | (6) Pottery. |

3. The general condition of all these industries is in Mr. Havell's opinion unsatisfactory, not one of them can be said to be flourishing, while some appear to be fast dying out.

4. Commercially the weaving industry which, considering the numbers engaged on it is by far the most important, has suffered very seriously in its main branch, viz., the manufacture of cloths of cotton, silk and mixed materials for men and women's wear from competition with the cheap machine-made fabrics of foreign looms.

5. This competition grows stronger every day and the whole industry must, Mr. Havell thinks, soon disappear so far as low caste or purely cotton goods are concerned, the only part likely to be able to hold its own being a small remnant in the shape of the finer manufactures wherein silk is used either wholly or partially.

6. Artistically speaking the decline is noticeable only, Mr. Havell says, in the women's cotton cloths which, except in the case of those manufactured in Madura, have lost their characteristic beauty from the use of European dyed thread.

7. The carpet industry has similarly declined both commercially and artistically.

In Ayyampet, of Tanjore, where ten years ago 107 families were engaged in the manufacture of woollen carpets, there are but twelve now. In Tanjore which was once famous for silk carpets of remarkable beauty, Mr. Havell could not find a single workman engaged in the industry, while in Wálajánagar, of North Arcot, the silk carpets of which also were at one time in repute, the industry is practised by only two families whose wares were noticeable, Mr. Havell says, only for the inferiority of their designs and the use of aniline dyes.

The cotton carpet industries of North Arcot, Tanjore and Trichinopoly are declining both commercially and artistically, the decline of that of Wálajánagar in North Arcot being, in Mr. Havell's opinion, due probably to the competing influence of the similar industry in the neighbouring Vellore jail which was stopped too late to enable the independent industry to recover itself.

8. The only branch of the weaving industry that has not suffered, Mr. Havell writes, from European competition is the manufacture of reed mats, the best specimens of which are produced at Shiyáli and Wandiwash.

9. The census figures may be quoted in confirmation of Mr. Havell's statements that many weavers have been forced to abandon their trade for other pursuits.

In 1871 there was a male weaving population of 540,061 against 431,773 in 1881 (*N.B.*—Women were not censused in 1871 according to their professions); this is a decline of over 20 per cent., and though part of it may doubtless be ascribed to the famine of 1876-77, that will not account for it all, nor perhaps for more than a fraction of the decrease.

10. Mr. Havell speaks of the satin fabrics of Ayyampet, Arcot and Wálajánagar as a beautiful industry that has hitherto attracted little notice. These satins are used by Muhammadans for trousers and under the familiar name of "Kincob," are by no means unknown.

Mr. Havell draws attention to a variety of satin that he found manufactured in Uraiyur of Trichinopoly, and used to make the bodices worn by native ladies. This industry which he found followed by only two men, Mr. Havell believes has never been noticed before.

11. The spinning of cotton which was at one time an industry of great importance has now dwindled to insignificance owing to the competing influence of cheap foreign machine-made thread.

Country thread is now used only in the manufacture of the coarsest cloths and cotton carpets.

12. The art and industry of printing on cotton cloth deals with two classes of goods—

- (1) Palampores used for personal adornment or as bed-covers.
- (2) Illustrations of Hindu mythology used for the decoration of cars and temples and as wall-hangings on festive occasions.

The former class of goods are either hand-painted or block-printed and are produced at Kumbakónam, Nagore, Uraiyur, Mána Madura, Permagudi, Pámban, Wálajánagar and Arcot.

The latter are hand-painted and are produced at Kálahasti, Salem and Madura. Of these, Mr. Havell writes that, "apart from their interest, the wonderful effect of the arrangement of color gives them an artistic value of a high order."

The trade in the former class of goods is chiefly an export one,—to Penang and Singapore,—but it has in the last 20 years declined, Mr. Havell thinks, quite 80 per cent., the decline being due to the supersession of these goods by cheap English prints.

Artistic degradation has followed commercial decline; the patterns now in use are very poor and altogether inferior to the old.

Mr. Havell notices the sacred palampores of Salem which he believes to be quite unknown.

13. In metal-work Mr. Havell says that the brass and bronze industries which are the most extensive have commercially declined but little, the only noticeable thing being the supersession of the old native oil lamps by cheap kerosene ones. Artistically however there has been a great retrogression, and the fine ornamental work for which Southern India was once famous has become, Mr. Havell writes, almost a lost art.

The modern tendency is more towards cheap production than excellence of design or workmanship, while the acquisition of specimens of the fine old work of previous generations is Mr. Havell says, made difficult, if not impossible, by the Hindu custom of melting down all old vessels.

The artistic worker in iron and wood has disappeared with the cessation of the need or demand for his wares owing to changed conditions and changed tastes.

The goldsmiths of all the arts has suffered least whether commercially or artistically from European competition and contact. This is due in Mr. Havell's opinion to the conservatism of the native women who have not given up their traditional

ornaments, nor exchanged them for European jewellery. This alone would not have preserved it from decadence; the fact that jewellery is not an article that lends itself to cheap reproduction by machinery is what has probably saved the Indian goldsmiths' art from invasion and, as Mr. Havell apparently thinks, inevitable deterioration by European competition.

14. Pottery of an ornamental character Mr. Havell found only at Kulgherry in North Arcot, but its forms were debased owing to the evil influence of European contact, which, in Mr. Havell's opinion, seems to have been artistically disastrous to every Indian industry that it has touched.

15. The causes of the decline—commercial and artistic—in these arts are, in Mr. Havell's opinion, the overgrowing competition of cheap European goods in the case of articles of necessity, and in the case of *articles de luxe* in some small degree to the decay and extinction of Native States and Zamindaris, but chiefly to the spread of European education and ideas among the wealthier classes.

16. Mr. Havell, alluding at the close of his report to the uselessness of the present collection at the School of Art as an index to the arts and industries of the Presidency, claims for the purchases he has made in the course of his tour the merit of being a step in the right direction to the formation of an Art Museum which would in his opinion exercise the most important influence on native art. The influence which Mr. Havell speaks of is conservative and progressive. But the influence of such a collection might not improbably have an altogether different effect in respect of some at and rate of the industries that Mr. Havell has dealt with; it might hasten their decay and extinction by giving to the European manufacturer, whose agents are everywhere, the opportunity of copying and cheaply reproducing patterns, access to which he now finds difficult owing to the increasing jealousy and reserve of the last remnants of a dying race of artists.

17. The Art Museum which Mr. Havell wishes to see established should in his opinion be formed in connection with the School of Art where there is plenty of room for it. To house it in any other building would in his opinion be to detract from its practical value as an educational agency, and would, Mr. Havell says, add much to his labor of superintendence. This is a matter which it is for Government to decide upon. Mr. Havell's opinions are not at one on the point with the views expressed by Government in their Order of 21st February 1885, No. 895, Revenue Department.

To the Secretary to Government, Revenue Department.

Order—No. 463, Revenue, dated 24th April 1885.

Miscellaneous.

Recorded. The Government observe that while Mr. Havell's researches have not resulted in the discovery of any new industries, a result which was hardly perhaps to be anticipated, they serve to establish a number of useful facts in regard to the condition and distribution of industries already known. From this point of view Mr. Havell's Appendix A, which consists of facts alone, is the most interesting part of his report. The Government are of opinion that the inquiry thus begun should be continued during next cold weather. The Director of Agriculture will submit his recommendations in due course as regards the districts to be visited by Mr. Havell during his next tour of inspection.

2. As desired by Mr. Havell, the articles collected by him will be retained in the School of Arts for teaching purposes.

(True Extract.)

W. WILSON,
Ag. Secretary to Government.

III

G.O., No. 695, Revenue, dated 11th August 1886.

Read—the following paper :—

Letter—from E. B. HAVELL, Esq., Superintendent, School of Arts, on special duty.
To—the Director of Revenue Settlement and Agriculture.
Dated—Madras, the 28th May 1886.
No.—90.

With reference to G.O., No. 3, dated 5th January 1886, I have the honour to submit my report on the arts and manufactures of the districts of Kistna, Gódvári, Vizagapatam and Ganjám. I have visited all the important places in these four districts and obtained as much information as possible regarding other places which time did not permit me to obtain by personal enquiry.

2. *Unknown Industries.*—It is necessary to make a reservation with regard to this description. I very much doubt whether it would be possible to discover in any country an industry which is new in the sense that the entire principle or process of it is altogether unknown. I include under this head one or two arts which have not been represented in the Madras collections for the present London Exhibition or in Calcutta in 1883-84, and concerning which as far as I am aware nothing has been recorded in any books of reference on the subject as to their existence in this Presidency.

3. *Lacquer Work.*—The most important is a kind of lacquer work on wood used by a workman in the service of the Zamindar of Mandasa in Ganjám. A similar method of decoration has been practised in the Punjab and formerly was largely used in Saracenic architectural decoration of interiors in various countries. In Cairo and Damascus especially there are magnificent examples of it. It is identical with old Italian "Gesso" work. The style of design has however much of the character of Madras work about it so it is not merely the discovery of a Punjabee workman in Madras. This man originally came from Kondapilly in Kistna. The only Madras work which can be compared with it is the lacquer work of Kurnool which is perhaps the finest Indian "Gesso" work now practised anywhere. I have not been able to obtain a description of the Kurnool process, but I have no doubt that it is similar to that of Mandasa. In style there is no similarity between the two, the Mandasa work being much bolder and suitable for decoration on a large scale, while Kurnool lacquer could only be employed satisfactorily on boxes, trays or articles of furniture.

4. The ornament is raised in very bold relief so that it at first sight has the appearance of wood carving. The colors are painted on a ground-work of silver foil which gives them a very brilliant effect. Some parts are gilded and small pieces of bangle glass with silver foil at the back are used in the ornamental detail. The whole process is described elsewhere. Only one man can do this work.

5. The other industries are not of much significance :—at Peddápúram in Gódvári one weaver prepares cloths of a fine silk gauze, or muslin brocaded at the ends. They are worn by Zamindars or wealthy people as a kind of ceremonial costume, but are so fine that they are not suitable for ordinary wear. Similar stuff was formerly made at Trichinopoly, but I believe the manufacture has died out there.

6. At Kondapilly one man stamps leather in ornamental patterns for books or boxes and desks. He has, however, only one stamp—an heir-loom of his family—with two designs on it. One design is very simple and the other elaborate, but more suitable for a box-lid than for a book cover.

7. At Kuppookonda in Kistna one man and his family turn very neatly in stone minute boxes for holding native ladies' eye-paint and kunkum.

8. New localities for well-known industries and details regarding them which are, I believe, more complete than any which have been hitherto given, will be found below and in the appendix to this report. The localities in which the various industries are carried on are entered in the margin against the paragraphs referring to each.

9. *Cotton Manufactures.*—Cotton-weaving may be divided into two chief classes—colored cloths and white cloths. Inferior colored cloths of European dyed twist are on special order made by weavers of white cloths, but the main divisions of the industry are represented by these two classes. In these districts there are two distinct varieties of colored cloths; the first is made at Chirala and Vetapálem and other places in the Kistna district.

Kistna.	
Addipalle.	Vetapálem.
Bhattiprolu.	Razapet.
Chirala.	

The speciality of these places is a well-woven and finely-dyed cloth worn as a dhoti by Mahomedans throughout the Northern Circars and exported largely to Hyderabad. The body of the cloth is woven with thread of the fine red dye prepared from the plant "Seruvér" (*Hedyotis umbellata*, Lam.); a plain white band runs on each side throughout the length and across the ends broad bands of blue (indigo) are woven. For European use it would be very effective as a curtain. The handkerchiefs

for Mahomedans made at the same places are of the usual check pattern and are not remarkable. At Pedana near Masulipatam there is a considerable industry in dhoties and colored cloths also sent to Hyderabad, but they are of an inferior description and mostly woven with imported dyed twist.

10. The second variety of colored cloth is made at Rájam in the Vizagapatam District. They are cloths for female wear, but are worn by males also among the hill tribes. The body of the cloth is plain, but the edges and ends are embroidered with wider and more elaborate bands than is usually the case.

Vizagapatam.	
Rájam.	
A few looms at Allipore,	Vizagapatam;
Palasa,	Ganjám.

Special patterns are introduced in the embroidery to suit the taste of the hill-people by whom they are worn as part of their war or festival costume. Imported dyed twist is generally used, indigo being the only dye of native production. The most effective variety of cloth has a plain dark-blue ground, embroidered at the edges and ends with patterns in yellow and white or with silver lace. As regards material and manufacture they are generally superior in quality, and the contrast of the richly-worked borders and ends with the plain ground is effective.

11. The manufacture of white cloths for native use may be divided into three classes—first, coarse cloths of country thread; second, cloths of various degree of fineness, none remarkably fine, all of imported twist; and, thirdly, fine muslin cloths either of country or imported thread.

Chiefly in the south-west of the Kistna District.

12. Cloths of the first class are of coarse but strong texture worn chiefly by poor agriculturists of both sexes.

The cotton is spun by the female members of a family and handed over to the weaver, who receives payment for the cloth generally in the form of grain.

The cost of production is somewhat higher than the price of a machine-made cloth, but being of stronger texture and warmer, it is preferred by the class of people for whom it is made.

It is not sold in the bazaars, but only made to order; and no European cloth is precisely similar to it.

13. Weavers of this class of cloth are scattered throughout the villages and towns of cotton-producing districts, but never in large numbers together as the demand is limited.

All over the four districts.

14. The production of the second class of cloth engages the main part of the industry.

The cloths are of various degrees of fineness; from a common description with a plain edge and a band at the end of colored thread, to superior cloths with embroidered edges and bands of silver brocade at the ends.

The lace or brocade is not generally genuine, i.e., of real silver, unless specially ordered. All the materials used in these cloths are of foreign manufacture, except that on special order country-spun thread will be used. With a slight difference as to the bands across the ends they are worn by both males and females.

15. These two classes of weavers are common to nearly all districts. The third is a special class only existing in a few places in the Presidency. The cloths are made either of a fine country-spun thread known as "silk-weaver's cotton" or of imported thread equally fine. The former is spun by a class of people living in some localities in the Gó dávari, Vizagapatam and Ganjám districts. They do not belong to the silk-weaver's caste, so
- | | |
|--------------|--------------|
| Gó dávari. | Sripuram. |
| Uppada. | Vizianagram. |
| Vizagapatam. | Ganjám. |
| Allipore. | Berhampore. |
| Anakápallo. | Boodethy. |
| Boddam. | Chicacole. |
| Pandur. | Itchápúr. |
| Penubaka. | Mandasa. |
| | Narsipettah. |

the name is probably derived from the fineness of the cotton. The thread is not generally made finer than fine imported thread, but it speaks much for its durability that people are willing to give as much as Rs. 15 for a plain cloth (for ordinary wear) woven with it when they can buy a similar cloth (also hand-woven) of machine-spun thread for about half the price. This industry is specially noteworthy as showing the direction in which the native handicraftsmen may find a field in which they have nothing to fear from European manufactures.

16. Chicacole muslin is of this description of manufacture, only that simple flowers or stripes of colored cotton are interwoven with the cloth.

17. *Miscellaneous*.—Besides these three classes, cotton cloth of various description for European use is produced, but the industry is small. At Pedana, near Masulipatam, table-cloths and cotton cloth for European wear are made at a few looms. Chicacole muslin is sometimes used for European ladies' dresses
- | | |
|--------------|--------------|
| Kistna. | Vizagapatam. |
| Pedana. | Allipore. |
| Gó dávari. | Ganjám. |
| Rajahmundry. | Chicacole. |

and at one or two places the weavers supply the small local demand for cotton cloth, bed-ticking, etc.

18. The hill-people in the tracts of Vizagapatam and Ganjám weave rough cotton cloths with colored stripes, red and blue, sometimes slightly embroidered. The best I saw were those worn in the Goomsur maliahs of Ganjám.

19. Cotton carpets are made at one or two places in these districts, but they are not different to those made in other parts of the Presidency.
- | | |
|------------|--------------|
| Kistna. | Vizagapatam. |
| Vinukonda. | Jamee. |

20. *Cotton spinning*.—I have already referred to two descriptions of country-spun thread. The first is the very coarse thread spun by the females of an agriculturist's family in every cotton-producing district. "Silk-weaver's cotton" is spun by a particular class only in the villages near Uppada in the Gó dávari district, Anakápallo and Pandur in Vizagapatam, and Chicacole in Ganjám. Formerly it is said that the demand for it was large so that it formed a separate industry in which whole families were engaged. Now only females are occupied in spinning, while the men have become weavers. Chiefly in various villages in the north-east corner of the Gó dávari district another description of fine thread is spun known as "Palkee-bearer's cotton." It is not so much in demand as "silk-weaver's cotton" and the quality is inferior.

21. *Silk-weaving*.—A special description of silk fabric made at Peddápúram has been before noticed. Fine silk-cloths and cholis are also made at Jaggayapet in Kistna and Berhampore in Ganjám. They are either plain cloths with the usual borders or they sometimes have simple flowered or checked patterns. Though generally well woven and of good color they are not specially remarkable compared with other Indian fabrics of the same class.
- | | | |
|-------------|-------------|-------------|
| Kistna. | Gó dávari. | Ganjám. |
| Jaggayapet. | Peddápúram. | Berhampore. |

22. At Jaggayapet seventeen families of the Dasiri caste weave cloths of tasar silk obtained from Hyderabad.

23. At Pandur and other places the finer cotton cloths often have silk borders embroidered or plain.

24. The color most used is the crimson produced from lac, and the cloths of Berhampore, unless specially ordered, are all of this color. Deep yellow, green, grey and several tints produced by varying the color of the warp and weft can also be obtained at Jaggayapet, seldom at Berhampore. Indigo-blue and white cloths are made to order.

25. *Woollen Carpets*.—Carpets are made only at Ellore and Masulipatam. The native demand is confined to small mats or rugs, but large carpets are made for European firms. The patterns are bold in character, of a floral type generally, on a white ground with a colored border, but sometimes the centre ground is of one color, either red or dark grey, entirely plain.
- | | |
|--------------|------------|
| Kistna. | Gó dávari. |
| Masulipatam. | Ellore. |

The dyes in use are all native and prepared by the weavers themselves.

There is no distinction between the manufacture of the two places except that the best and largest carpets are made at Ellore.

26. *Reed Mats and ornamental Basket-work*.—Plain reed mats are made at Ayyanvole in the Kistna district and in the Goomsur maliahs of Ganjám and some of the hill tracts of Vizagapatam. Ornamental patterns will be made to order at Ayyanvole.
- | | |
|--|--|
| Kistna. | |
| Ayyanvole. | |
| Hill tracts of Vizagapatam and Ganjám. | |

27. The mats and basket-work of Parlákimedi are distinct in style. The only native dye in use is black and when the patterns are worked with this, the contrast with the silver grey of the undyed reed is very pleasing. Unfortunately nearly all
- | |
|--------------|
| Ganjám. |
| Parlákimedi. |

the work is carried out with aniline dyes and it is difficult to get any patterns without them. Fancy baskets, flower-stands, cheroot cases, etc., are made all of common European shapes.

28. *Palampores*.—The printed cotton cloths of Masulipatam consist of canopies, screen cloths, prayer cloths, men's handkerchiefs, turbans, cloth for Muhammadan jackets, and women's cloths. Canopies and screens and other cloths entirely hand-painted, generally with patterns of the "tree of life" type or mythological subjects, are only made by three families on special order. Every description of cloth, except the cheaper cloths with patterns only in red outlined with black on a white ground, is partially hand-painted. This will be explained under "processes." It would be useless to attempt to describe all the different varieties, but even the commonest and cheapest cloths are generally excellent in design and the brilliancy and happy arrangement of color are especially remarkable.

29. There are three distinct classes of Palampores: first, those on a white ground entirely block-printed in red with a black outline; second, cloths printed in two or more colors (which may be red, light blue, dark blue, green, yellow, and a dark brown or black), either with a white or colored ground—these are partially hand-painted; third, cloths in two or more colors entirely hand-painted.
- | | |
|------------------------|--------------|
| 1ST AND 2ND. | 3RD. |
| Kistna. | Kistna. |
| Jaggayapet (inferior). | Masulipatam. |
| Masulipatam. | |
| Gó dávari. | Gó dávari. |
| Gollapalem. | Gollapalem. |
| Narsapur. | Pallacollu. |
| Pallacollu. | |

30. At Pallacollu most of the printers make men's turbans and handkerchiefs and women's cloths of an ordinary kind. But there is one excellent workman whose hand-painted canopies and screens are equal to any made elsewhere. The best have mythological subjects similar to those of Kálahasti in North Arcot (which are better

known), but in drawing, intelligent composition and in other respects they are much superior. He also has some patterns of the "tree of life," but these are inferior in design to the similar ones of Masulipatam. Sometimes the effect is heightened with gold leaf fastened on the cloth with a kind of size and beaten in until it is firmly fixed.

31. I regret to say that since I visited Pallacollu I have heard that this man has become incapable of work through partial loss of eyesight. A few men were working under him but were not so skilful.

32. At Gollapalem near Cocanada there are a number of Palampore printers who prepare inferior block-printed canopies and bed-covers. A few families also paint canopies, etc., by hand with mythological figure subjects, but these are inferior to similar ones made at Masulipatam and elsewhere. A few other places where Palampores are made are noticed in the appendix.

33. *Embroidery*.—Very fine embroidery work is done by one man in the service of the Zamindar of Mandasa. He embroiders silk on cloth for canopies or screens in fine bold patterns. His work is also superior in execution to any other Madras embroidery.

Ganjám.
Mandasa (in the service of the Zemindar).
Industrial School, Vizianagram.

Ganjám.
Chikati (in the service of the Zamindar),
Berhampore and elsewhere.

36. *Gold and Silver Work*.—The usual ornaments worn by females in nearly every part of the Presidency are of the same style of design as elsewhere, but they are exceptionally well made throughout the Vizagapatam district. Some parts of the district are remarkable for special work.

37. In the Narsaraopet and Vinukonda taluks of Kistna, the silver belts worn by males are noteworthy. The belt itself is made of silver wire, plaited together, over which highly ornamented bosses and flat plain bands are fastened alternately throughout the length. This pattern is not confined to any one district; but in these taluks of Kistna and in the adjacent district of Nellore, the ornament is much more elaborate and better designed than elsewhere. A gold-smith at Narsaraopet has a reputation for good work of this kind.

38. In the Vizagapatam district the silver female ornaments worn by some of the lower castes are very remarkable for tasteful design and often for fine workmanship. I found the best in the Anakápalle taluk. They are quite distinct in style from ordinary Hindu ornaments, but have some resemblance to the brass jewellery of Uriyas in Ganjám.

Kistna.
Narsaraopet. | Vinukonda.
Vizagapatam.
Anakápalle taluk.
Vizagapatam.
Bobbili. | Vizianagram and other places.
Pedapenki. |
Vizagapatam.

Vizagapatam.
Bobbili and Párvatipur taluks and other parts.
derived from various kinds of grain, paddy, dholi, etc.

Northern parts of the Ganjám district.

34. In the Industrial School at Vizianagram, a workman from Benares embroiders caps, etc., in the usual Benares style.

35. In the Ganjám district some Uriya tailors embroider a kind of appliqué work and patch-work in a quaint, though somewhat barbaric, style. The effect is spoilt by the use of inferior European materials.

39. In other places, more especially at Pedapenki, silver girdles in links (a "snake" pattern) are made most excellently.

40. Chiefly in the Párvatipur and adjacent taluks of Vizagapatam, the men wear pretty gold necklaces, the patterns

41. In Ganjám the Uriyas have many distinct patterns in gold and silver not found elsewhere

42. *Jewellers*.—There are many jewellers in various places and especially in the Vizagapatam district who make ornaments similar in design to those of the ordinary gold-smith.

All over the districts.

Kistna.

Núzvid and other places.

Góddavari.

Peddápuram.

Pithápuram and other places.

Vizagapatam.

Bobbili.

Párvatipur.

Rájam.

Vizagapatam.

Vizianagram.

Ganjám.

Belugunta and other places.

Vizagapatam.

Anakápalle.

Bobbili.

Ganjám.

Chicacole.

Mandasa.

Parlákimedi.

44. *Damascening*.—A good many goldsmiths in various places in Vizagapatam and Ganjám can damascene on iron and steel. There is now no demand for such work, and none of them have done any recently or within the last four or five years.

45. *Brass Work*.—Plain beaten work in chembus and common household vessels, for which sheet brass is used, occupies the greater number of brass-smiths. Cast work is done by the more skilful workmen who make bells for bullocks, superior chembus and drinking vessels, small images of Hindu deities, and occasionally lamps in bell-metal, besides ordinary beaten work. Images, lamps and architectural ornaments of large size are generally made by them of sheet metal.

46. Skilful brass-smiths make silver and gold vessels, such as those described under silver-smith's work.

Kistna.
Mylaveram and other places.

Vizagapatam.

Anakápalle.

Bobbili.

Kotapadu.

Párvatipur and other places.

Ganjám.

Belugunta and other places.

47. The manufacture of personal ornaments is a special class of brass work found in the Vizagapatam and Ganjám districts. The best are worn by the lower classes of Uriyas in the north of Ganjám and some of them are very excellent in design. In and near Parlákimedi some good patterns are also made.

48. Brass ornaments are also worn by the hill tribes in Vizagapatam and Ganjám, but as far as I could ascertain none of them are in the least remarkable unless from an ethnological point of view. However I did not have an opportunity of direct investigation among the more remote tribes.

49. *Iron Work*.—There are a few black-smiths in the Vizagapatam district who formerly made swords, spears and other weapons. As there is now no demand for such work they confine themselves to rough knives for bandymen, razors, writing styles and miscellaneous articles of common cutlery.

Vizagapatam.
Párvatipur taluk.

Ganjám.

Belugunta.

Parlákimedi and many villages bordering on the hill tracts.

50. Ordinary black-smiths make tyres for country carts, agricultural implements, bolts and nails, &c.

51. The people in the hill tracts make rough "tangis" or battle axes and some other implements.

52. Country iron is used in parts of the hill tracts at Núzvid in Kistna and at Párvatipur and some other places bordering on the hill country of the Vizagapatam and Ganjám districts.

53. *Ivory and Horn Work.*—At Vizagapatam the ivory workers make all kinds of fancy boxes, desks, paper-knives, combs and small articles of furniture.

These are either wholly of ivory or of sandal-wood, rose-wood or ebony inlaid or overlaid with ivory fretwork. Various patterns are etched on the ivory in black. They also make similar articles in horn, tortoise shell, and porcupine quills.

Some zamindars retain ivory carvers in their employ to make fancy boxes of inlaid work, to carve combs, images, or ornamental articles, or to make and inlay musical instruments.

Vizagapatam.
Mandasa. |
Kistna.
Núzvid.
Ganjám.
Antagudda. | Parlákimedi.
Palasa. |

In other places there is no regular demand for ivory work, but some carpenters or muchies, rarely gold-smiths, will work in ivory or horn on order.

54. Every ivory worker employs a black lacquer to heighten the effect of his inlaid work, but the country workmen, instead of simply incising the ivory in lines as in "Vizagapatam work," will cut out the ground of the pattern deeply and fill in the hollows with lacquer. When not carried to excess this process is more effective though more laborious than the simple engraving.

55. Ornamental combs of horn are worn by Uriyas in the Ganjám district. The ornament is produced by piercing the top part of the comb and by engraving patterns on it, the incisions being filled with a composition of silver and mercury. Horn boxes are also ornamented by the latter process.

56. *Wood-carving.*—Of wood-carving in these districts there is nothing to speak of. In some parts of Kistna there are a few fairly-skilled carvers who work in a mixed Mahomedan and Hindu style. In the other districts there is hardly any wood-carving to be found.

57. *Carved Fruit Shells.*—Two gold-smiths in the service of the zamindar of Mandasa carve cocoanut and bael fruit shells very finely. They are generally mounted in silver and converted into snuff boxes. Several gold-smiths in the northern parts of Ganjám professed to be able to do similar work, but only one, at Antagudda, could produce any specimen of it. I have seen it stated that these shells are carved by the hill tribes, but this is not the case.

58. *Stone-work.*—There are many stone-cutters all over the districts who, besides dressing stones for building purposes, prepare mill-stones, stone pestles and various vessels. When required stone figures are carved at Kooppookonda in Kistna, where small stone boxes are also very neatly made, Bobbili and Peddápúram in Vizagapatam, Chicacole, Mandasa and Muttoora in Ganjám. The stone-cutters at Mandasa and Muttoora can do fine architectural carving, but the demand for ornamental stone work is very limited.

59. *Toys and lacquered ware, painted work, &c.*—Wooden toys carved and painted are made at Kondapilly. They consist chiefly of small figures or groups of figures made of a very light jungle-wood (*Gyrocarpus Asiaticus*).

At Narsápur, Gódávári district, Nakkapille, Srungavarupukóta, Vizagapatam district, small boxes used as pujah vessels and miniature models of native household utensils are neatly turned in wood and carved with a plain colored

lacquer. The lacquer is also applied to the frame-work of cots chairs, etc. These boxes and toys are found in almost every house in the Gódávári and Vizagapatam districts.

60. Besides wall decoration, ordinary muchies' work is to paint and decorate palanquins or cots, fans, trays, and other articles for marriage ceremonies and to make paint and gild large wooden images and horses or dragons for Hindu cars. They also illustrate mythological subjects on wood or cloth. Many muchies make plain articles of furniture.

Kistna.
Kondavid.

61. *Paper.*—Paper of a coarse kind is made at Kondavid in Kistna by about ten families.

Kondavid.

62. *Scent.*—About twenty families at the same place extract the scented essence of jessamine.

PROCESS.

63. *Mandasa lacquer.*—A strong glue is first prepared from deer skin by soaking the skin in water for three days and afterwards boiling and straining it. This glue is ground with an equal part of white dammer and the powder is mixed with water to the consistency required.

Pieces of old chatties are then ground up into a fine powder, a process which is said to take several days. Three parts of this powder mixed with one of aloes are then added to the semi-liquid preparation of glue and dammer. The wood to be ornamented being first carefully planed and smoothed by rubbing pipe clay mixed with powdered tamarind seed and kanjee over it; this composition is repeatedly applied with a brush until the ornament produced is raised to height desired. This being accomplished a coat of white oil-paint is laid over the whole. The ground-work of the ornament is then covered with silver foil and the coloring proceeded with in the ordinary way with pigment ground in wood oil. Gilding and small pieces of bangle glass inserted as part of the ornament are used to heighten the effect. When the whole work is properly dried in the sun the ornament will stand washing and considerable rough usage.

64. *Spinning.*—The ordinary native method of spinning cotton is so well known that it is unnecessary to describe it. For "silk-weaver's cotton" there are some peculiarities in the process. By the ordinary method a rough mill or gin is used to separate the fibres or wood from the seeds, but for this thread the operation is performed with a small iron rolling-pin entirely by hand.

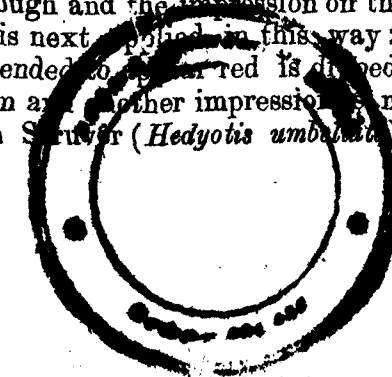
The cotton is cleaned in the ordinary way with a bow.

The "carding" or disentanglement of the fibres, is accomplished with the aid of the upper jaw of a fresh-water shark called "Wallagu." For the same operation in Europe a kind of wire brush is used.

The spinning wheel and the spinning process are the same as used for ordinary country-spun thread, except that the wheel is lighter in construction.

65. *Palampores.*—The white cloth is first prepared by steeping it in a mixture of buffalo dung. It is then spread on the ground and water is thrown over it, but it should not be thoroughly washed. A solution of powdered gall-nuts (myrabolans) is next prepared, and the cloth, when dry, is steeped in this for one or two days. When it is again dried it is ready for the printing process.

For Block-printed Palampores.—If the pattern has a black outline a mixture is prepared from iron filings, jaggery and vinegar (sour toddy). This is placed in a shallow trough with a piece of flannel or thick cloth at the bottom. The face of the block is dipped in the trough and the impression on the cloth gives the outline of the pattern. The red color is next applied in this way:—A second block cut for the details of the pattern intended to be in red is dipped in another trough in which there is a solution of alum and another impression is made. The cloth is now boiled in the dye prepared from *Sesuvium* (*Hedyotis umbellata*) and the leaves of *Memecylon*



tinctorium called "jagiaku." As the dye only adheres firmly to the alum mordant the cloth comes out with patterns in red according to the design of the second block. The white ground of the pattern is however stained with the red dye and the cloth must be well washed with chunam soap and dhoby's earth (*soudu mannu*) to remove the superfluous color.

Many of the cheaper palampores are left in this state, but if a second color is required all of the details of the pattern which are required to remain red must be covered with melted wax applied with an instrument somewhat resembling a draughtsman's inking pen with the addition of a large pouch containing the wax through which the handle of the instrument passes. When this operation is complete the cloth must be dipped in dye of the second required color. The waxed portions of the cloth, of course, are not affected by the dye. The wax is afterwards removed by boiling the cloth. For every additional color required, the waxing process must be repeated.

Hand-painted Cloths.—For hand-painted cloths the only difference is that the whole work is performed without the aid of blocks.

66. *Brass Work.*—The brass-smith's work is either hammered or cast. He has no knowledge of the method of spinning.

The composition of ordinary bell-metal is 8 or 10 parts of copper to 6 of tin.

The old wax-process described by Cellini and used by all mediæval metal-workers in their moulded vessels or figures, known to them as "cire perdue," is the only method of casting employed by native workmen.

In their ornamental work however they seldom avail themselves of the artistic capabilities of the process which old European masters developed so highly. So it is of some interest to find the tasteful patterns of the brass ornaments worn by the lower caste Uriyas in Ganjam made in this way. One curious apparatus is a hollow tube of bamboo into the end of which a movable brass perforated plate is fitted. The wax is made sufficiently soft by heat and pressed through the perforations at the end of the tube by another piece of wood exactly fitting it. The wax comes out in long threads, resembling vermicelli, which are used to form various patterns for the brass ornaments. The fineness of the thread may be regulated by altering the gauge of the brass plate at the end of the tube. Other patterns are obtained by means of brass dies similar to those used by gold-smiths, and when the wax model is complete the process is continued in the ordinary way by coating it thickly with mud, melting out the wax and pouring in the molten metal.

67. *Paper Manufacture.*—The process at Kondavid is essentially the same as in hand-made paper of European manufacture. Improved raw materials and knowledge of their properties are most necessary for the production of a better class of paper.

68. There is nothing specially noteworthy in the processes of other handicrafts.

69. *Dyes (Cotton).*—As a rule the cotton weaver buys European dyed twist in the bazaar. Only two native dyes are now used by the cotton weavers—red and blue.

The red produced from the root of the plant *Hedyotis umbellata*, called "Seruvêr," is used at Vetapalem and a few other places in the Kistna district. The wild plant produces the best dye.

The process is exceedingly tedious and the root expensive, and on this account "chiranjee" (*Morinda* bark taken from the roots of the tree) is often used to mix with *Seruvêr*. It gives an inferior color and is less permanent. The *Seruvêr* itself, when properly prepared, is a fine color and very enduring. *Seruvêr* is also the red in Masulipatam and many other palampores.

Morinda bark is used by the hill-people of the Goomsur maliahs of Ganjam for a red dye and is there called "achu."

Indigo is the common blue dye universally used in the plains, but *Wrightia tinctoria* is said to be used in the north of the Vizagapatam hill tracts for the same purpose. It is called "chittankudu."

The yellow of Masulipatam palampores is prepared from the leaf galls of *Terminalia chebula*. It is called "allikaya" or "aldikaya."

70. *Woollen Carpets.*—In the woollen carpets of Masulipatam and Ellore all the dyes are native and I did not discover any in which aniline dyes were used, but probably they may be found in some of the inferior small rugs, as is the case at Ayyampet in Tanjore.

The dyes most used are for crimson or red—stick lac and sappan wood (*Cæsalpinia sappan*); yellow, "allikaya" and turmeric; orange or reddish yellow, the flowers of the Moduga tree (*Butea frondosa*) combined with turmeric; dark and pale blue, indigo.

Other colors are produced by the combination of the above.

71. *Silk.*—In silk the most common dye is the crimson from stick lac. At Berhampore all cloths are of this color unless specially ordered. At Jaggayapet a fine golden yellow, sometimes approaching to orange, is used. It is called "vanga-pandu chaya," and seems to be identical with the dye produced from *Rottlera tinctoria*. Black or dark-blue is prepared from indigo, but seldom to be got unless ordered. Green is imported. Various other shades and tints are produced by arranging the warp and weft in different colors.

72. Generally speaking in cotton, silk and wool the reds and blues are more or less permanent, but the greens and yellows are fugitive. The pale-blue in old carpets is often only a faded green. It is necessary to bear this in mind in comparing the quiet tones of old carpets and other textiles with the extreme brilliancy of new ones.

CONDITION.

73. *General.*—Except in carpets, palampores and some descriptions of cotton goods nearly all trade is local.

74. Carpets are exported to Europe and to various parts of the Presidency. Palampores are for the most part sent to Burma, the Straits and to Persia and other places *via* Bombay.

75. The colored cloths of Chirala, Vetapalem, Pedana, and other places in Kistna are in demand among Mahomedans in the Northern Circars and in Madras, but the chief trade is with Hyderabad.

76. The common white cloths made in the Kistna and Gôdâvari districts are brought by merchants from Hyderabad besides being sold in the districts.

77. In Râjam colored cloths there is a large trade with Nagpore and the hill tracts of Vizagapatam and Ganjam. Some of the finer white cloths of Uppada are sent for sale to Madras and other places, but with these exceptions the cotton weavers only supply the demand of the surrounding districts.

78. All export trade is in the hands of Sowcars, who supply the workmen with materials and pay them at fixed rates for each cloth and carpet, etc. When the orders of the Sowcars are insufficient, the weavers will do inferior work on their account for sale in the local bazaars and country fairs.

79. The inferior class of white cloths of country-spun thread are only made to order.

80. Gold-smiths, carpenters, muchies and black-smiths only work on special order or for daily hire.

81. Brass-smiths like the weavers generally form a separate colony in certain towns and villages. A master-workman, who employs others of his class, takes the place of the Sowcar and carries on the trade with the surrounding districts.

82. Unmarried men in every trade generally work for hire under members of their own family or trade. The better class of workman, when married, hires another to assist him unless there is an adult member of his own family following the same occupation.

83. The females of a weaver's, potter's and brass-smith's family generally assist in minor operations in which special skill is not essential.

84. In palampore printing and basket-ware, females sometimes carry out the whole work. Cotton is spun and wound almost exclusively by females.

85. *Relative condition as to numerical strength.*—The information on this head given in the census returns is, I think, not altogether reliable. These returns are drawn up in two forms; one is of little value, as the classification has no direct reference to the usual subdivisions of labor recognised by natives and, if correct, many must be included in it twice or more under different heads. The other is more explicit except in one point, and that with regard to the female workers included in it.

86. According to these returns, in the Vizagapatam district there are 56,313 female weavers, outnumbering the males by nearly 2 to 1; there are 1,255 female gold-smiths, 552 female black-smiths and 587 female potters, etc.

Such statistics are misleading if not explained. The enumerators have evidently included as weavers, gold-smiths, etc., the wives and daughters of the actual worker who sometimes assist in minor operations. Thus the weaver's wife will wind the thread and assist in arranging the warp, the potter's wife beats the chatties when nearly dry with a kind of wooden mallet. This system of counting seems to leave considerable latitude to individual discretion, for even in adjacent taluks there is often an astonishing variation in the relative proportion of males and females engaged in the same work. Females, as a rule, never work independently. I have inspected many thousands of weavers at work at their looms, but never yet discovered a female worker actually engaged in weaving. I have seen a female brass-smith making ornaments for hill-people and occasionally females who undertook palampore work independently.

87. Analysing the returns for the Vizagapatam district without reference to females, I find in the plains the following approximate relative proportion of the chief handicrafts:—Brass-smiths 1, bamboo and basket-workers 1.2, black-smiths 1.5, potters 2.2, carpenters 2.6, gold-smiths 5.5 and weavers 17. Except that the gold-smiths in this district are in larger proportion than usual, these figures agree with my own general notes and with some statistics I have obtained independently. They will, I think, represent tolerably accurately the normal relative strength of each of these industries.

88. Including females the proportion stands thus:—Brass-smiths 1, black-smiths 1.5, basket and bamboo-workers 1.6, carpenters 2.7, potters 3.8, gold-smiths 5.5, weavers 43.9.

89. In the hill tracts it is said that females weave their own cloths. There the proportion is as follows:—

Including females, carpenters are lowest at 1, black-smiths next in proportion 1.6, gold-smiths 6.5, potters 17.7, brass-smiths 24.7 and weavers 95.2.

90. Compared with the others those engaged in cotton-printing, carpet-weaving, stone-cutting, bangle and toy-making, and in minor industries form a very insignificant fraction.

91. *Condition as to prosperity of trade—Cotton Weavers.*—With some few exceptions in every seat of the industry throughout these districts, there has been, according to all the evidence available, a steady and continuous decline in numbers. Perfectly trustworthy statistics are very difficult to obtain everywhere, but having heard the statements of the weavers in most of the towns and villages of nine districts and obtained as much independent testimony as possible, I think the following figures, taken from one of the towns in the Vizagapatam district, are trustworthy and typical of the average condition of the industry in white cloths, which forms the chief branch of native cloth manufacture:—

Number of families of weavers at work	110
Number of families of weavers now engaged in other work	10
Number of families who have left the place for want of work within the last four or five years	15

92. Doubtless in many places the decrease is considerably greater in proportion, but it is sometimes compensated for by an increase in other places. Beyond four or five years back, the figures given would probably be only conjectural, but the weavers nearly always date the commencement of the falling off at about 20 or 30 years ago.

93. The decline in numbers is probably for the most part in the class of inferior workmen who weave the common white cloths of imported twist selling for 2 or 3 rupees each, for they have not only to compete with English and American long

cloth, a piece of which, equal in length to a native cloth, can be purchased for less than half the price, but with machine-made cloths precisely similar to their own production as regards size, pattern and quality of cotton, and selling for about three-fourths the price. The country weaver has, however, one advantage which the hand-process gives him—his cloths are more durable and are sometimes preferred on this account to the cheaper machine-made cloths. Weavers of colored cloths only have to compete with inferior imported printed cottons, and in the finer class of white cloths there is no direct competition with the native weavers, but they suffer indirectly from the cheapness of European long-cloth and change of habits among the higher classes of natives.

94. At Chirala and Vetapalem I was informed that, besides the ordinary native cloths described above, some ten or twenty years ago there was a large trade in a description of purdah or colored hangings for export to Europe. Many families still retain the paper patterns which had been sent to them. The main part of this industry has disappeared; only one family now receives orders from a Madras firm. The native trade, both here and at Pedana and the other places where similar cloths are made, is also said to have declined considerably.

95. In very few places there has been an increase in numbers only attributable to the migration of weavers in search of work.

96. At Rajam, however, there seems to be some real increase of prosperity. The weavers have increased in numbers, they earn comparatively high wages and their cloths are in great demand in Nagpore and among the hill tracts of Vizagapatam and Ganjam. The special trade of Rajam seems to be out of the influence of the competition of foreign importations. The only class of goods which compete with native-colored cloths for females are cheap printed cottons, and among the hill tracts especially the strength and warmth of the country cloth would be likely to establish a superior demand for them.

97. *Silk-weaving.*—The number of weavers of Jaggayapet is said to fluctuate considerably. Silk-weavers from Hyderabad will settle there for a time when they can find enough work and return when there is nothing for them to do. The weavers at Berhampur are said to be steadily decreasing.

98. *Carpet-weaving.*—Only within the last four years there has been a diminution in the total number of weavers employed, but the kharkhanas or houses of looms remain the same. The falling off is attributed to a decrease of foreign orders for large carpets. The commercial depression in Europe may be the cause of this.

99. *Cotton-printing.*—This industry seems to have declined perhaps more than any other. The evidence of the workmen is supported by disinterested testimony—the extraordinary number of blocks which being no longer wanted have been thrown on one side. In my last report I referred to a similar condition in the southern districts. At Masulipatam from one house I obtained impressions from over 200 disused blocks each different in design but all of one class of pattern—very simple repeats of flowers or spots. I think the fact that there should have been a demand for variety of such minute distinction and that one family of printers could afford to provide itself with such an extensive stock is remarkable evidence of the extent of their former trade. In several places, Vizianagram and Vizagapatam for instance, workmen who now print only common borders to white cloths have a large stock of blocks which are never used or only brought out when a special order is given.

100. The Masulipatam workmen, however, are well paid compared with the weavers. Probably they adapt themselves to circumstances more easily. The weavers seem to have an almost invincible objection to any other occupation and will hold on to their looms as long as they can earn enough to provide themselves with scanty food.

101. *Paper Manufacture.*—The paper manufacture at Kondavid was said to have been much more important formerly than it is at present. I found ten families there who were provided with apparatus, but employed as coolies or agriculturists. Twenty years ago I was told there were about sixty families. Now there are only ten.

102. The relative prosperity of other industries may be estimated by comparing the earnings of workmen.

103. *Earnings of Workmen—Cotton Weavers.*—A single cooly weaver, *i.e.*, one who works under another, ordinarily receives Rs. $3\frac{1}{2}$ or Rs. 4 per month according to his skill. It does not follow that the cooly is less skilful than the employer. Most unmarried men work for hire in this way. A cooly at Rájam and at Pandur and elsewhere weaving the finest cloths of country or foreign thread gets Rs. 5 or 6 per month. A weaver's family (men, wife and child), making the coarsest white cloths of country cotton will earn collectively on the average from 2 to 3 annas per day. They do not employ a cooly. A similar family of what I have called the second class, *i.e.*, the great mass of the weaving industry engaged in making ordinary white cloths of imported twist, earns from 3 to 4 annas per day after paying the cooly. A family weaving the finest cloths of "silk-weaver's cotton" can earn from 5 to 7 annas per day besides paying for a cooly as I have mentioned above. This class of weavers is a very small fraction of the whole industry.

104. *Silk Weavers.*—A family earns on the average 4 or 5 annas per day.

105. *Carpet Weavers.*—Carpet weavers work together in large "kharkhanas" and are not assisted by the females of their families. They receive from 8 annas to 2 annas each man according to his skill.

106. *Cotton Printers.*—Cotton printers also work together like the carpet weavers and brass-smiths. At Masulipatam the man who prints the cloths receives about 8 annas per day, the waxer 6 annas, and the dyer 3 annas. In other places their earnings are less in proportion to the quality of work.

107. *Gold-smiths.*—In proportion to their skill gold-smiths earn from 4 annas to Re. 1 per day.

108. *Brass-smiths.*—The earnings of brass-smiths are as follows: those doing cast work—skilled workman from 6 to 7 annas per day, others less in proportion to their ability. Those doing plain beaten work—skilled workman 4 annas to 5 annas, others in proportion.

109. *Carpenters and black-smiths.*—Ordinary carpenters earn from 2 to 3 annas per day each man. They also receive once a year remuneration in the shape of grain for repairing agriculturists' implements. Skilled carpenters and black-smiths in large towns earn higher wages.

110. Gold-smiths are the most flourishing. A quantity of flimsy imitations in base metal of some of the commoner patterns of jewellery are now sold in the bazaars, but they are not likely to have had an appreciable influence on the native goldsmith's work. They are better paid than any other workman.

111. The cotton weavers are perhaps worse off than most others, for, though an ordinary carpenter or black-smith receives no more than an average weaver, his wife and family are at liberty to work in the fields or as coolies and thus add to their earning, whereas a weaver's family is wholly occupied in giving assistance as preparatory work for the loom.

112. *Condition as to technique, etc.—Cotton-weaving and Spinning.*—In both one cannot fail to notice the extreme simplicity of the apparatus in use. However no very practical improvement in the looms has hitherto been effected which does not take from the weavers the very advantage (in point of durability) which the simple hand-process now enables their goods to hold in the market.

The direction in which they might perhaps receive an important benefit would be by the introduction of a more effective but simple hand-machine for spinning cotton which would combine the advantages of rapid production and evenness of thread of machine manufacture with the quality of strength which country cotton now has. If by this means the cost of production of country hand-spun cotton could be materially reduced, the weaver's position would probably be immensely improved, for, whereas now he is obliged to purchase imported twist at bazaar rates, he would then be able at first hand to obtain a material the quality of which would give his cloths a most decided advantage over those made of machine-spun thread.

Many attempts have been made to improve upon the primitive "gin" used by spinners in order that they might be able to prepare raw cotton for the home market, but I believe little has been done in the other direction to enable the weavers to

supply themselves with cheaper material. At present a spinner of coarse cotton working the whole day can only produce 6 or 8 pies' worth, or if fine "silk-weaver's cotton," to the value of about one anna.

As far as the manipulative process is concerned and in his own class of goods, the native weaver is often a highly-skilled workman and little improvement is likely to be effected in this direction. The best cloths are well woven and far superior in quality to the ordinary machine-made cloths which are offered in the bazaars.

113. *Carpet-weaving.*—The fact that the best description of English carpet is still made on identical principles is an acknowledgment of the efficiency of the process borrowed originally from Persia.

The ordinary Ellore and Masulipatam carpets of small size prepared for the country bazaars are often of inferior stuff and badly made; but carpets of the superior class prepared only on special order are equal in point of finish and material, and infinitely superior artistically to the imitations of them made in the various jails of the Presidency. There may be a falling off in treatment of color and in the execution of the details of patterns compared with the *finesse* in the working of Indian carpets made 20 or 30 years ago, but the blame for this can hardly be attributed to the weavers themselves, and the mischief is not so serious but that a judicious encouragement of the weavers would soon remedy it. The best patterns in use are not inferior to those of old South Indian carpets which are held up to the disparagement of modern productions.

The outcry against the deterioration of Indian carpets, as far as Madras carpets are concerned, is in my opinion not altogether called for. Aniline dyes are very rarely used as they are at Warangal and other places in Hyderabad, and I have seen carpets from the native looms at the three seats of the industry—Ellore, Masulipatam and Ayyampet (Tanjore)—which are in no respect inferior to old specimens in the hands of connoisseurs in London or in native houses and palaces.

I cannot but think that jail manufactures which are generally altogether inferior in color and design are passed off as coming from the caste-weaver's looms. The good work to which I refer is not at all easy to obtain, and the unbusiness-like habits of ordinary native workmen doubtless react against their trade. After a personal observation of the looms I think Madras carpet manufactures have not been adequately represented in the recent collections for exhibition, still less so at Calcutta in 1883-84. Without a good typical collection of all the various industries for reference it will be almost impossible for any committee in Madras to insure that every manufacture does itself justice.

114. *Cotton-printing.*—As I have described above, there are two processes—one by which the patterns are drawn and completed entirely by hand (except that the preparatory outline is sometimes stencilled), and another in which the greater portion of the work is accomplished by means of blocks. The first naturally has the most artistic capabilities, and in some cases, such as in the Pallacollu palampores, it has led to as close an approach to fine art as native ideas and a predilection for a flat treatment of design will permit.

The other process has also some advantages from an artistic point of view, but these very advantages have from commercial exigencies led to the chief defects in modern productions, *viz.*, the blurred outline and smudginess which are characteristic of ordinary Indian cotton-printing. In the commoner cloths printed only in red on a white ground, these faults are not often noticeable and occur only from the use of worn-out or badly cut blocks or from careless printing. When a cloth is required to have two colors, generally red and blue, the dye is first applied by means of blocks in the ordinary way, the color being brought out by boiling the cloth, but in all cases the second color (blue) must be added afterwards entirely by a method which is practically handpainting. In cloths prepared for the ordinary market it is impossible for the workmen to compete with cheap imported printed cottons and at the same time attend to the niceties of execution which this hand-painting demands. In the modern European process the whole work is, of course, performed more rapidly by machinery, but tedious and primitive though it may seem compared with mechanical production, it is obvious that the native method has considerable artistic advantages, and to these advantages Masulipatam palampores owe most of their beauty.

115. *Gold-smiths*.—Gold-smiths as a rule prepare nothing beyond the personal ornaments in gold or silver worn by natives (chembus, rose-water sprinklers, and other vessels of gold or silver are generally made by brass-smiths or by workmen of the gold-smith's caste who work exclusively in such articles). The defects in their work are chiefly a neglect of general finish and a want of precision in the making of joints, hinges, or other fastenings. Such defects are by no means common to the gold-smiths as a class, and I have found many in whose work the defects were insignificant compared with much that was truly excellent. The art of working in precious metals is, expressing it briefly, to put work into them, *i.e.*, to give the maximum of thoughtful labor to the minimum amount of precious metal consistent with considerations of utility. This the native gold-smith clearly appreciates and in such correct use of gold and silver for the purpose of ornaments, in good feeling for decorative design, and in careful finish of ornamental detail the best gold-smiths might teach a lesson to the majority of their European fellow-workers of the present time. There are no important processes (except purely mechanical processes of modern introduction) which are unknown to them. Inferior gold-smiths are finnikin in their work, but this is a fault common to all unskilled designers, and occasionally the designs of otherwise skilful workmen have a tendency to the extravagant ornamentation and elaboration for its own sake which have ruined Madras and Trichinopoly gold and silver work. Usually, however, their design is purer in style and more vigorous than is commonly found in other districts. In the Vizagapatam District especially I found better work than any I have seen in any other parts of the Presidency.

116. *Jeweller's Work*.—It is impossible to draw any comparison between Indian and modern European jeweller's work. The two are quite distinct in principle. The native workman treats precious stones entirely for the artistic effect he can produce with them; the European chiefly regards them for their intrinsic value and beauty. Considered from his own point of view the native can produce excellent results; though, doubtless, it would be no loss to the effect if the stones were more carefully worked. Jewellers do not generally understand lapidary's work. They obtain the stones ready-cut for setting.

117. *Silver-smiths*.—The silver and gold work which ordinary brass-smiths do is rough and plain, but among the few of the gold-smith's caste, who for the most part confine themselves to silver-smith's work, there are workmen whose productions are exceedingly well made and finished. Work of this description is nearly always hammered throughout, moulding being very seldom employed.

In design of silver and gold work on the large scale required in this branch of the craft, the Madras workman is not generally so successful as in jewelry. He neglects the relative importance of the various parts, and in proportion to his desire to produce a *chef d'œuvre* or to please his patron, he overcrowds and elaborates the ornamentation, so that the effect of the whole is altogether inadequate with the patience and skill bestowed on the detail. The best work consequently is produced when the desire for display is subordinate to considerations of utility or when the patron cannot afford to pay for extravagant excess in ornamentation.

118. *Brass-smiths*.—The best workmen are skilful in the use of their tools, and their work is generally well finished. They are, however, with every few exceptions, ignorant of the European method of casting in sand, etc., which would be employed with great saving of labor in some portions of their work. They use the wax process already referred to for all kinds of castings. It is hardly necessary to say that they are unacquainted with the method of spinning.

The large bronze lamps for temples are often good in design. Other ornamental work is seldom attempted by an ordinary brass-smith.

119. *Ivory Carvers*.—In methods of execution there is nothing particularly noteworthy. Nearly all ivory work is well finished and executed with considerable skill. In design little can be said in praise of it. Most Vizagapatam work has nothing except the careful execution to redeem its artistic wretchedness. The general treatment borrowed from metal work is altogether unsuited to the nature of ivory, the carved ornamental details are feeble and monotonous, and the etchings mostly copies of the worst European patterns. The attempt to conceal the construction by placing ivory knobs on the head of each rivet is characteristic of the general ignorance of design displayed throughout.

Good work both in design and execution may be obtained from the ivory carvers in more remote parts of the Vizagapatam and Ganjam districts, but these men only work to special order.

The workmen employed by various Zemindars and Rajahs are generally very skilful, but in compositions on a large scale they fall into the same error as the silver-smith.

120. I append a list of all the places in the four districts in which any industry of importance is carried on, and also a few notes regarding prices.

APPENDIX.

Place.	Number of families.							Other particulars.
	Cotton weavers.	Gold-smiths.	Carpenters.	Brass-smiths.	Black-smiths.	Potters.	Muchies.	
<i>Kistna District.</i>								
Ayyanvole	..	..	..	..	..	..	..	Thirteen families engaged in making reed mats; four of them will make ornamental patterns, if ordered.
Addipallee	110	}	..	..	..	..	..	{ <i>Weavers.</i> —Coloured dhotis and handkerchiefs for Muhammadans, similar to those of Chirala and Vetapalem.
Bhattiprolu	110		..	..	..	..	..	
Chirala	..	}	..	..	..	..	..	{ <i>Weavers.</i> —Coloured dhotis for Muhammadans of a deep red colour with a white stripe on each border. Handkerchiefs with checked patterns for the same.
Vetapalem	..		..	..	..	..	..	
Casenapully	..	..	..	..	..	2	..	Two potters make rough kujas, etc., of a clay, which is superior to what is generally used.
Durgi	22	9	5	3	3	9	..	Brass-smiths make brass and copper images. Two stone-cutters carve images.
Guntur	100	..	..	..	..	..	..	<i>Weavers.</i> Coarse white cloths. Ten families tan and dye leather for book-binding, etc. A few ordinary gold-smiths, brass-smiths, and carpenters.
Idugallapalli	40	}	..	..	..	..	..	{ Ordinary native cloths; ten families at Idugallapalli, seven at Kappaladoddi and five at Mallavolu weave cloth for European wear.
Kappaladoddi	50		..	..	..	..	..	
Mallavolu	30		..	..	..	..	..	
Jaggayapet	71		31	46	7	15	23	
Kondapilly	80	30	40	5	15	25	30	<i>Weavers.</i> —Plain white cloths. Muchies, about twenty, paint and decorate bedsteads, palanquins and boxes, and make large wooden figures for Hindu cars, painted and gilded; ten houses are engaged in making toys, chiefly small figures from a very light wood (<i>Gyrocarpus Asiaticus</i>); one man stamps leather for boxes, desks, and book-binding. He has only two patterns.
Kondavid	..	..	..	..	..	..	..	Ten families making a coarse kind of paper; twenty families distil scent from jessamine.
Maacherla	49	6	1	..	2	5	..	<i>Weavers.</i> —A few families make a stout cotton cloth in narrow lengths which are sewn together to serve as screens or to make a superior kind of bag. If desired an ornamental effect is produced by dyeing the lengths alternately red or blue. The cloth is sent to Nadukudi near Dachopalle to be dyed.
Masulipatam	84	68	36	16	35	23	35	<i>Weavers.</i> —White checked cloths for females, ordinary white cloths. One hundred and forty-five families of palampore printers; three families make hand-painted screen cloths or canopies on order; eighteen families of carpet weavers.
Mylaveram	25	..	..	100	..	..	..	<i>Weavers.</i> —Common white cloths. Brass-smiths, four families making bells, ohembus, etc. (cast work), the remainder plain beaten work.
Narsaraopet	24	12	2	1	8	6	1	Coarse cloths of country thread. One gold-smith, a skilful workman, making good silver belts.

NOTE.—The numbers given are approximately correct, but are not in all cases to be taken as precise statistics. They are intended to show the relative importance of the various places with regard to each industry.

Place.	Number of families.							Other particulars.
	Cotton weavers.	Gold-smiths.	Carpenters.	Brass-smiths.	Black-smiths.	Potters.	Muchies.	
Kistna District—cont.								
Núavid	4	10	10	4	1	5	3	Two brass-smiths work fairly well in silver; three carpenters also work in ivory and make musical instruments and inlay ebony and ivory on a peculiar kind of white jungle-wood, chiefly for sandals and boxes. The black-smiths and carpenters use country iron obtained from hills near Somavaram, a village near Nuzvid.
Pedana	400	}	..	..	..	..	..	{ Weavers.—Coloured dhotis for Muhammadan's and women's cloths, common striped or checked patterns. Three families at Pedana and ten at Polavaram weave table-cloths and cotton cloth for European wear.
Polavaram	120							
Razapet	106	..	..	..	..	..	..	Weavers.—Coloured dhotis and handkerchiefs, similar to those of Chirala and Vetapálem.
Répalle	80	..	..	..	..	..	..	Weavers.—Ordinary white cloths.
Tenali	320	10	..	..	4	10	..	Weavers.—Ordinary white cloths.
Vinukonda	..	..	..	..	..	..	..	One family making cotton carpets.
Góddavari District.								
Cocanada	28	48	40	11	25	5	6	{ Weavers.—Ordinary white cloths. One skilled brass-smith making good ornamental lamps. Thirty-five houses of palampore printers making common block-printed palampores and inferior hand-painted canopies with mythological figure subjects.
Jagannadapuram	..	..	..	..	..	..	..	
Ellore	700	250	225	25	100	150	25	{ Weavers.—Fine white cloths with silver brocade and common cloths. Twenty-five houses of carpet weavers employing about one hundred weavers; thirty families of shoe-makers; ninety of bamboo and basket workers.
Senivaraupeta	..	..	..	..	..	..	..	
Gollapalem	..	..	..	..	..	..	..	* Palampore printers; ordinary block-printed canopies, etc. One or two families inferior hand-painted canopies with mythological figure subjects.
Narsápur	100	25	10	1	10	10	4	Weavers.—Fine and inferior white cloths and inferior coloured cloths. Muchies painting figures for Hindu cars and making lacquered toys, boxes, etc.; fifty houses of palampore printers, common block-printed palampores and canopies on white ground.
Pallacollu	100	4	2	3	3	4	..	Weavers.—Fine and inferior white cloths and inferior coloured cloths. Fifteen houses of palampore printers, generally coloured women's cloths, turbans and canopies, etc.; one particularly good workman painting canopies, etc., by hand, Hindu mythological subjects, "tree of life" patterns, sometimes with gold leaf to heighten the effect.
Peddápuram	260	62	44	26	12	32	3	Weavers.—Common white cloths. One silk weaver making a kind of silk gauze or muslin worn on ceremonial occasions by wealthy people; ends of the cloth brocaded; one specially skilful gold-smith doing jeweller's work; one skilled brass-smith making images and vessels in bell-metal; one hundred and fifty families of stone masons.
Pithápuram	..	..	..	..	..	..	..	A few weavers of common white cloth; one good silver-smith.
Rajahmundry	97	300	700	100	75	..	2	Weavers.—Coarse white cloths. Carpenter's boxes, bedsteads, etc., four hundred families; common wood-work for houses, three hundred families.
Tuni	300	15	..	..	..	..	..	Weavers.—About fifty families wearing fine white cloths; a few muslin cloths of "silk-weaver's cotton," the rest common white cloths.
Uppada	200	..	..	..	..	..	..	Weavers.—Mostly fine white muslin cloths with silk borders, some of "silk-weaver's cotton." There are some fifty families of weavers at and near Uppada who spin "silk weaver's cotton."

NOTE.—The numbers given are approximately correct, but are not in all cases to be taken as precise statistics. They are intended to show the relative importance of the various places with regard to each industry.
* Numbers not returned up to date.

Place.	Number of families.							Other particulars.
	Cotton weavers.	Gold-smiths.	Carpenters.	Brass-smiths.	Black-smiths.	Potters.	Muchies.	
<i>Visagapatam District.</i>								
Allipore	50	..	..	..	..	..	..	Coloured women's cloths similar to those of Rájam, coloured turbans, white cloths, both fine and inferior, bed-ticking and similar cotton cloths.
Anakápalle	110	15	15	30	15	20	..	<i>Weavers.</i> —White cloths, both fine and inferior. A few families using "silk-weaver's cotton"; one exceptionally good gold-smith can damascene on iron and steel; one tin-worker (cast vessels); brass-smiths, common beaten work.
Bobbili	175	10	..	30	..	..	..	<i>Weavers.</i> —White cloths, mostly inferior. One gold-smith can damascene on iron and steel; twenty stone-outters; two good carvers.
Boddam	25	..	..	..	..	..	..	<i>White Cloths.</i> —A few looms weaving fine cloths of "silk-weaver's cotton."
Jamnee	..	..	..	..	..	..	..	Thirty-five families weaving cotton carpets.
Nakkapilli	60	..	..	..	..	..	..	<i>Weavers.</i> —Common white cloths. One family doing lacquer work on toys, boxes, bedsteads, etc.
Kotapadu	..	..	..	150	..	..	..	Nearly all plain beaten work; one makes good ornamental lamps for temples.
Kudur near Kotapadu.	..	4	..	..	4	..	..	<i>Black-smiths.</i> —Making bandymen's knives, writing styles, razors, etc.; formerly making spears and swords; one man received an award for good work at the International London Exhibition of 1871.
Pandur	400	..	..	..	..	..	..	Fine white cloths with silver lace and embroidered borders (mixed silk and cotton); inferior cloths; fine muslin cloths of "silk-weaver's cotton" (about fifty families); about one hundred houses also spin "silk-weaver's cotton."
Párvatipur	40	22	15	75	10	25	..	<i>Weavers.</i> —Inferior white cloths. Brass-smiths, about fifty families of master workmen who employ the rest to work under them; about twenty-five families working in bell-metal; twenty-five in beaten work.
Pedapenki	..	9	..	..	..	..	..	<i>Gold-smiths.</i> —Two specially skilled workmen who make excellent girdles in gold or silver.
Penubaka	20	..	..	..	..	..	..	<i>White Cloths.</i> —A few looms weaving fine cloths of "silk-weaver's cotton."
Rájam	800	20	15	5	10	12	5	<i>Weavers.</i> —Fine coloured cloths with wide embroidered borders, sometimes with silver lace; white cloths of the same description; two silver-smiths, one an exceptionally good workman.
Sripuram	40	..	..	..	..	..	..	<i>White Cloths.</i> —A few looms weaving fine cloths of "silk-weaver's cotton."
Srungavarapukóta ..	50	..	..	..	..	..	..	<i>Weavers.</i> —Common white cloths. One family of four brothers doing plain lacquer work on toys bedsteads, etc.
Visagapatam	300	200	70	30	50	30	1	<i>Weavers.</i> —Common white cloths. About ten gold-smiths, specially skilful workmen; one brass-smith makes good lamps and vessels in bell-metal; four houses of palampore printers, one with a number of old Persian patterns, ordinary work, simple borders to cloth; nine large houses of ivory workers employing about fifty workmen.
Visianagram	100	95	48	30	26	9	8	<i>Weavers.</i> —Mostly white cloths, both fine and inferior. A few looms fine muslin cloths of "silk-weaver's cotton" with ornamental borders of mixed silk and cotton. Many weavers out of work. Gold-smiths, about twenty families, confine themselves to jeweller's work; one gold-smith exceptionally good workman; four families of cotton printers generally doing inferior work, such as borders to cloths; one has a large quantity of blocks but seldom used; about twenty-five families of shoe-makers prepare leather for book-binding, etc., coloured red, blue or yellow.
<i>Maharajah's Industrial School.</i> —Pottery, rattan work, coarse carpets (cotton and wool), silk weaving, embroidery, musical instruments, etc.								

NOTE.—The numbers given are approximately correct, but are not in all cases to be taken as precise statistics. They are intended to show the relative importance of the various places with regard to each industry.

Place.	Number of families.							Other particulars.
	Cotton weavers.	Gold-smiths.	Carpenters.	Brass-smiths.	Black-smiths.	Potters.	Muchies.	
<i>Ganjām District.</i>								
Antagudda	..	..	..	..	..	..	..	One gold-smith carving fruit shells. <i>Weavers.</i> —White cloths. A few looms fine cloths of "silk-weaver's cotton." Seventy-five houses of silk weavers, fine coloured cloths and cholis; one tailor doing inferior embroidery work.
Berhampur	355	83	42	8	48	..	1	
Boodethy	150	..	..	..	..	..	..	<i>Weavers.</i> —Fine and inferior white cloth. Fine muslin cloths of "silk-weaver's cotton" (about five families).
Belugunta	30	5	4	10	4	2	..	<i>Weavers.</i> —Coarse white cloths. Brass-smiths (five houses) make ornaments worn by Uriyas; five make bells, pandams, chembus, etc., besides ordinary beaten work; two workmen fairly skilled in silver-smith's work.
Chikati (employed by the Zemindar).	..	..	..	..	..	..	..	One good ivory-carver; one embroiderer making State umbrellas, canopies, etc., in a kind of patch-work and appliqué work.
Chicacole	100	32	..	6	..	..	..	<i>Weavers.</i> —Fine and inferior white cloths. Fine muslin cloths of "silk-weaver's cotton"; also muslin with checked and flowered patterns in coloured cotton used by Muhammadans for jackets, turbans, etc., also by European ladies for dresses (about five families); light cotton cloth for European wear (one family); two gold-smiths also carve stone and one can damascene on iron and steel. (The numbers of carpenters, black-smiths, etc., not exactly known.)
Ichápur	40	16	4	..	4	2	..	<i>Weavers</i> of white cloths, both fine and inferior. Fine muslin cloths of "silk-weaver's cotton" (about five families).
Mandasa	50	10	4	1	..	2	..	<i>Weavers</i> of white cloths, both fine and inferior. Fine muslin cloths of "silk-weaver's cotton" (two families); one gold-smith can do damascene work on iron; two stone-carvers.
Employed by Zemin-dar.	..	5	..	..	..	..	..	One gold-smith particularly excellent workman; two of them carve ivory and cocoanut and bael fruit shells very finely; one painter doing fine lacquer work; three skilful stone-carvers; one embroiderer in silk on cloth work very bold in design, and particularly good in execution.
Muttoora	..	..	..	..	..	..	..	About fifty houses of stone-cutters, twenty-five good carvers.
Narsipettah	250	..	..	..	..	..	..	<i>White Cloths.</i> —A few looms weaving fine cloths of "silk-weaver's cotton."
Palasa	40	..	..	..	..	..	..	<i>Weavers</i> of white cloths, both fine and inferior. Fine muslin cloths of "silk-weaver's cotton" (two families); three houses of ivory carvers, also making musical instruments and horn boxes and combs; ornamentation produced by incisions with a composition of silver and mercury rubbed into them.
Parlákimedi	70	22	20	1	8	20	20	<i>Weavers.</i> —Coarse white cloths. One carpenter, a skilful ivory carver, but not regularly employed; the muchies are employed in decorating the palace; a female brass-smith making ornaments for the hill-people; four families of basket workers making ornamental mats, and fancy baskets, etc., potters on order will make large jars up to four or five feet in height for storing grain.
Tarlá	70	6	2	4	2	2	..	<i>Weavers.</i> —Coarse white cloths.

NOTE.—The numbers given are approximately correct, but are not in all cases to be taken as precise statistics. They are intended to show the relative importance of the various places with regard to each industry.

Prices.—A few notes regarding the prices of various articles may be useful.

The cloths of Chirala and Vetapálem dyed with "Seruvér" sell at from Rs. 2-8-0 to Rs. 3-8-0 each, or Rs. 4 to Rs. 6 per pair according to the fineness of the colour.

Rájam coloured cloths vary greatly in price; according to the fineness of the thread or quantity of lace, from 2 to 25 rupees each.

Chicacole muslin (with colored spots or stripes) is ordinarily made of three qualities. One piece, 12 yards long and 1 yard wide, if of English thread, sells at Rs. 6, Rs. 5 and Rs. 4-8-0 according to the fineness of the thread. A similar piece woven with country thread costs Rs. 10, 9 or 8. When specially ordered cloths of extra fineness are made of country thread costing up to Rs. 25.

The thin cotton cloth for European wear made at the same place sells at from Rs. 1-12-0 to Rs. 2-4-0 per piece of 10½ yards.

Silk-weaver's thread is ordinarily spun in three degrees of fineness, about equal to Nos. 60, 80, and 100 of European twist. It is sold by weight. Five, eight, or twelve tolas sell for one rupee. Extra fine thread selling at 2 tolas per rupee will be spun to order.

Silk Cloths.—These are sold by weight. One seer for Rs. 8 to Rs. 13 according to the quality of silk. One man's or woman's cloth is 7 yards long and 1½ wide and weighs about 2 or 2½ seers.

Woollen carpets sell at from Rs. 4 to Rs. 10 per square yard according to quality and intricacy of the pattern.

Brass and Bell-metal work.—Plain hammered work of brass is sold by weight at 3½ to 5 seers for one rupee.

Ornamental hammered work of brass, such as large temple lamps, at 1½ to 2 seers for one rupee.

Bell-metal.—Chembus and other vessels cast in bell-metal 1½ seers for one rupee. (Hammered work in bell metal is rather unusual. Some of the common utensils for the Brinjaris and hill people are made in this way at Párvatipur).

Kondavid paper is sold by the workmen for Rs. 10 per 100 quires.

No. 21-C, dated 23rd June 1886.

Received and submitted in original to Government.

W. H. GLENNY,
Ag. Director.

Order—No. 695, Revenue, dated 11th August 1886.

Miscellaneous.

His Excellency the Governor in Council has perused this excellent report on Mr. Havell's tour in the northern districts with much interest. Further inquiries should be made regarding the superiority of the thread known as "silk-weavers' cotton" over the machine-spun imported thread (paragraph 15). Mr. Havell should obtain samples of the threads and of the cloths made with them and should consult Native and European experts on the subject. In submitting to Government a report on the results of his inquiries he should also forward the samples.

2. The remarks in paragraph 113 regarding the carpets manufactured in jails will be communicated to the Judicial Department. It is observed that Mr. Havell admits in his recent note on Madras carpets that no aniline dyes are used in the Madras jails.

(True Extract.)

H. E. STOKES,
Secretary to Government.

IV

G.O., No. 619, Revenue, dated 29th June 1887.

Read—the following paper :—

*Proceedings of the Board of Revenue (Settlement, Land Records and Agriculture),
No. 33, dated 26th April 1887.*

Read—the following paper :—

*Letter—*from E. B. HAVELL, Esq., Superintendent, School of Arts, on Special Duty.

*To—*the Secretary to the Commissioner in the department of Revenue Settlement, Land Records and Agriculture.

*Dated—*Madras, the 20th April 1887.

*No.—*46.

With reference to G.O., Revenue, dated 25th January 1887, No. 86, I have the honor to submit a report on the arts and manufactures carried on in the districts of Cuddapah, Kurnool, Bellary and Anantapur.

2. *Cotton-weaving—Colored cloths.*—There is a considerable industry in colored cloths for female wear carried on chiefly in the Bellary and Anantapur districts. The cloths are of an ordinary kind worn by the lower castes with common check patterns. The better sort have silk borders. Excepting the dark blue (indigo) colored cloths, they are invariably made of European colored thread. The common cotton cloths vary in price from Rs. 3 to 4 each. Mixed silk and cotton cloths or cotton cloths with silk borders from Rs. 7 to 15 each according to the quality of the silk used.

White cloths.—Fine white cloths with brocaded ends are made only at Pullampet (Cuddapah district) and the surrounding villages. They are of superior quality and well woven. European thread is always used. The industry seems to be flourishing. The price of the cloths varies greatly according to the amount of silver lace or brocade. Weavers of coarse white cloths worn by agriculturists are scattered in many villages throughout the districts. Country thread is generally used. These cloths are preferred to European long cloth by the agriculturists on account of being more durable and warmer. The demand is uncertain and the weavers very poorly paid.

Cotton carpets.—Cotton carpets are made at Cumbum and Kurnool in the Kurnool district, and at Bellary and Adóni. The Cumbum carpets are well designed and good in color, but rather coarsely woven. Country thread is used. There is only one family employed at Bellary, but good work is turned out. The designs and execution are very good as a rule, and when native dyes are used the colors are pleasing and fairly permanent. Carpets of large size are made to order. At Adóni and Kurnool over 300 families are employed. All the best woven carpets are spoilt by the glaring colors of the European thread which are generally arranged in violent contrast to obtain the maximum of "effect." The European dyes are used. 1st, because the native purchasers prefer glaring colors; and 2ndly, because they are less expensive and more easily prepared than the native dyes. The latter when carefully prepared are more permanent. European thread is used at Bellary, Adóni and Kurnool for the finer carpets. At Cumbum only country thread is used.

Cotton-spinning.—Only coarse thread is spun for the common white cloths worn by the agriculturists and for cotton carpets. Spinning, however, is not followed as a regular occupation; the females of a weaver's or agriculturist's family employ their spare time in spinning whatever is required for their own use.

3. *Silk-weaving.*—Fine silk cloths are made at the places noted in the margin.

Kurnool.	Bachigandanhalli.	The industry is in a very depressed condition. The total number of families engaged in it is very small, and the finer cloths are only made to order. The depression is attributed chiefly to the rise in the price of silk owing to disease among the silk worms in Mysore. Three varieties of cloth are made. At Kurnool one family makes fine pagidees or turbans worn by Mahomedans. They are generally plain white with the ends brocaded in simple bands.
Bellary district—	Tambrahalli.	
Adóni.	Humpasagra.	
Bellary.	Anantapur district—	
Kampli.	Dharmavaram.	

The silk weavers at Bachigandanaballi, Tambrahalli and Humpasagra make mostly colored silk cloths for cholis. The patterns are good, but the effect is generally spoilt by the use of crude imported green, purple or yellow which are quite out of harmony with the low-toned native crimson (lac) dye. The more harmonious country green and yellow dyes are rarely used except when specially ordered.

Dharmavaram in the Anantapur district and Kampli in Bellary are the chief places where fine cloths for female wear are made. At Kampli the weavers only work to order. The most effective and characteristic cloth is one with a white ground of a wide check pattern, crimson borders and brocaded ends, sometimes with figures of flowers, birds, &c. The best of this kind are made at Dharmavaram. At Kampli some handsome cloths are made of the same style with the ends prettily embroidered in various simple patterns.

Dyes.—For silk the dyes in common use are: crimson, lac or cochineal; yellow, turmeric, various shades of orange, arnotto (prepared from seeds of *Bixa Orellana*) used alone or together with turmeric; black from iron; more rarely a rich green, indigo and turmeric; when ordered a blue from indigo. Three very crude European dyes are also commonly used everywhere—a yellow, green and purple. The contrast of these with the low-toned native crimson or orange is painful. The native dyes are not only more harmonious, but more lasting. I forward small samples* of yellow and green silk for comparison.

* Four samples.

Prices.—Silk cloth for cholis is generally made in lengths sufficient for six or more. Each choli is about three-fourths of a yard in length and cost from Re. 1 to Rs. 2-8-0 according to the pattern and quality. The price of the fine silk cloths of Dharmavaram and Kampli is estimated by the value of the silk and silver brocade and by cost of labor. A superior cloth will contain about three seers of silk costing from Rs. 7 to 9 per seer. The value of the brocade depends entirely on the width. The cost of labor for the body of the cloth will be about Rs. 6 or 7 and for the brocaded ends Rs. 8 to 12 according to the pattern. A cloth with elaborately brocaded ends will take as long as six weeks in execution.

4. *Printed cottons.*—The industry is carried on at the places noted in the margin.

Jammalamadugu (Cuddapah district).	The Jammalamadugu chintzes are very inferior turbans for Mahomedans roughly printed with the simplest patterns on a black ground. The Pamidi and Chooloor cloths are mostly roughly printed handkerchiefs and turbans, but a rather effective screen cloth or purdah used in marriage ceremonies is also made. This is well printed and tastefully designed. One man at Pamidi and one at Chooloor prepare hand-printed cloths with mythological subjects similar to those made at Kálahasti and elsewhere. The handkerchiefs and turbans made at Banganapalle are rough, but on the coarse country cloths the patterns are sometimes effective.
Banganapalle and Nandyál (Kurnool district).	
Chooloor and Pamidi (Anantapur district).	

5. *Gold and silver-smith's work.*—There is nothing specially noteworthy in these districts.

6. *Brass-smiths.*—There are very few brass-smiths and none specially skilful.

7. *Black-smiths.*—Very rough work as in other districts.

8. *Wood-carving.*—There is some good wood-carving to be found in various parts of the Bellary district, though little of it is modern. The best work is noticeable for the absence of the extravagance which generally disfigures characteristic Madura carving. In design and technique it somewhat resembles northern work. A very good old example of it now in the Central Museum was procured by the Collector for the Indian and Colonial Exhibition. There are now a few good workmen at Adóni and at Kampli. In design the Adóni carving is much the best; but the Kampli men are rather better carvers.

9. *Lacquer work*.—Very fine lacquer work on trays, fans, boxes, &c., is done at Nandyál and Banganapalle in the Kurnool district by two families. It is equal, if not superior, to any other Indian lacquer. This is a very effective and comparatively inexpensive form of decoration which if brought into notice and skilfully adapted to furniture and interior decoration might become popular. The process is similar to that of the Mandasa lacquer described in my last report, except that the composition for raising up the ornament is made from a white shell found in the river beds, which is finely ground up and mixed with white dammer. The Nossam lacquer work is similar in style, but much inferior both in design and execution. Some very inferior lacquer work is done in Kurnool town.

10. The particulars given in my last report with regard to the condition, etc., of the various industries apply to these districts also. I append a detailed statement of the towns and villages showing the number of workmen and the industries carried on.

ENCLOSURE No. 1.

Place.	Number of families.						Other particulars.
	Weavers.	Gold-smiths.	Carpenters.	Brass-smiths.	Black-smiths.	Potters.	
<i>Cuddapah District.</i>							
Chitrél	20	5	2	..	2	7	One family of muchies painting palmyra leaf fans, palanquins, etc.; inferior to similar work done at Nosam and elsewhere.
Deverspully	} 44	..	..	..	..	..	A few families making ordinary grass mats.
Wattaloor		65	25	6	12	5	
Cuddapah		..	..	..	..	..	A few families making common glass bangles.
Gopagudipallu		..	..	..	..	..	
Sompallee	} 80	6	3	..	1	15	<i>Weavers.</i> —Coarse white cloths and turbans. One hundred families of cotton printers making rough turbans, etc.
Parnapallee		..	..	..	..	..	
Jammalamadugu		..	..	..	..	..	
Pullampet	} 200	..	..	..	..	..	Fine white cloths with brocaded ends.
Nagarajapet and surrounding villages.		..	..	..	..	..	
Ráyachóti		..	..	..	..	..	A few families of weavers making coarse white cloths of country or English thread.
Ghanivaid and many other places.		..	..	..	..	..	Brass-smiths making lamps, chembus, etc., of an ordinary kind.
Rameswaram	60	6	2	3	2	..	
Wonypenta	..	4	1	151	1	..	
<i>Kurnool district.</i>							
Banganapalle	..	..	..	..	..	..	One family painting trays, etc., with very good lacquer work. Seventy families of cotton printers, turbans, handkerchiefs, etc.; only 20 families regularly employed.
Cumbum	50	12	12	..	1	..	<i>Weavers.</i> —Coarse white cloths; 12 families of cotton carpet weavers.
Goorakul	..	..	..	..	..	..	A few families making common grass mats.
Kurnool	36	30	31	4	12	9	One weaver making fine silk brocaded turbans. Eleven families of muchies making lacquered images, toys, etc. One man damascening on steel and carving in wood. Two hundred and six families weaving cotton carpets.
Nandyál	204	11	7	1	6	3	<i>Weavers.</i> —Common white and colored cloths; one family doing good lacquer work as at Banganapalle. Thirty-two families of cotton printers; rough handkerchiefs, turbans, etc.
Nosam	20	3	1	..	2	..	<i>Weavers.</i> —Coarse white cloths of country thread. Two families painting trays, boxes, fans, furniture, etc., with lacquer. Four families making painted wooden images, toys, etc.
Yelagode	} ..	..	..	..	..	..	Two families of fairly good wood-carvers.
Rudraveram		..	..	..	..	..	
Chintacounts		..	..	..	..	..	Villages in the Sirvel taluk where country iron is smelted.
Bachipalle		..	..	..	..	..	
Srirangapuram	..	..	..	..	..	..	

Place.	Number of families.						Other particulars.
	Weavers.	Gold-smiths.	Carpenters.	Brass-smiths.	Black-smiths.	Potters.	
<i>Bellary District.</i>							
Adóni	700	10	28	5	15	10	<i>Weavers.</i> —One or two families making fine silk cloths to order. The remainder common colored cotton cloths with silk borders or mixed silk and cotton cloths. One hundred families of cotton carpet weavers. Two of the carpenters good wood-carvers. Eight families of muchies; 60 families of dyers.
Bachigandanahalli	200	3	2	..	..	5	<i>Weavers.</i> —One or two families fine silk oholis. Two hundred families mixed silk and cotton cloths or cotton cloths with silk borders.
Bellary	300	150	50	6	50	100	<i>Weavers.</i> —One family fine silk cloths, the rest common white or colored cotton cloths or mixed silk and cotton cloths. One family of cotton carpet weavers.
Harpanahalli	23	12	12	4	6	3	<i>Weavers.</i> —Mixed silk and cotton colored cloths and coarse white cloths.
Mirahall	100	5	2	6	2	4	<i>Weavers.</i> —Common colored cotton cloths with silk borders. Brass-smiths—Common beaten work.
Hospet	144	29	16	8	11	2	<i>Weavers.</i> —Mixed silk and cotton and common cotton colored cloths.
Humpasagra	400	7	5	..	1	..	<i>Weavers.</i> —One or two families making fine silk oholis and cloths. Three hundred and fifty families mixed silk and cotton cloths or cotton cloths with silk borders. Fifty families coarse white cloths.
Kampli	200	10	4	..	1	1	<i>Weavers.</i> —One or two families fine silk cloths. Two hundred families mixed silk and cotton or cotton colored cloths with silk borders. Two of the carpenters good carvers. One family of muchies painting, lacquering images, toys, &c.
Ráyadrug	300	10	10	..	5	11	<i>Weavers.</i> —Fifty families ordinary silk cloths and common colored cotton cloths with silk borders or mixed silk and cotton cloths. Two hundred families common white cloths.
Tambrabally	182	11	14	..	8	10	<i>Weavers.</i> —One hundred and eighty-two families as at Bachigandanahalli.
Nimbalagerry	..	..	..	..	..	..	Ten families of weavers of woollen cumblies. Fine cumblies costing up to Rs. 40 made to order.
<i>Anantapur District.</i>							
Kalyándrug	100	..	..	..	..	..	<i>Weavers.</i> —Mixed cotton and silk cloths or common colored cotton cloths with silk borders.
Chilamattur	..	..	..	..	..	..	A few families making gunny bags.
Dharmavaram	150	5	7	1	2	3	<i>Weavers.</i> —Four or five families fine silk cloths; good colors and patterns, the remainder mixed silk and cotton cloths or common colored cotton cloths with silk borders.
Gooty	74	16	2	1	5	10	<i>Weavers.</i> —Common white cloths; one family making a kind of white cloth called dup-pattu worn by Brahmans.
Gutur	..	..	..	..	..	..	A few families making glass bangles.
Somadapally	..	..	..	..	..	..	Eight families making common country paper.
Namadalla	..	..	..	..	..	..	Thirty houses of cotton printers employing two hundred workmen; black printed screen cloths, handkerchiefs, etc., one man painting mythological subjects by hand.
Pamidi	5	9	2	..	3	6	<i>Weavers.</i> —Mixed silk and cotton cloths or common colored cotton cloths with silk borders.
Kistapand	238	3	3	..	3	6	One stone mason making paper-weights, pestle and mortars, &c., out of a peculiar stone found in the neighbourhood.
Ráyaloheru	..	..	..	..	..	..	
Tadpatri	311	11	5	..	2	5	<i>Weavers.</i> —Mixed silk and cotton cloths or common colored cotton cloths with silk borders.
Yadiki	380	2	2	..	2	6	<i>Weavers.</i> —Two hundred and sixty families common colored cotton cloths with silk borders. One hundred and twenty families common white cloths. Four families mixed silk and cotton cloths.

Resolution—No. 33, dated 26th April 1887.

Submitted for the information of Government.

(True Copies and Extract.)

P. RAJARATNA MUDALIAR,
Secretary.

To the Secretary to Government, Revenue Department,
with the four samples of dyed silk.
Copy to the Superintendent, School of Arts.

Order—No. 619, Revenue, dated 29th June 1887.

Miscellaneous.

Recorded.

2. The Government observe that Mr. Havell says nothing in the body of his report regarding the damascening on steel carried on at Kurnool or the excellent blankets or cumblies made at Nimbalegherry in the Bellary district.

3. The districts which Mr. Havell has not visited are Nellore, Chingleput, South Arcot, Coimbatore, Nilgiris, Tinnevely, Malabar and Canara. The Commissioner will in due course submit proposals for a tour in some of these districts next cold season.

(True Extract.)

J. F. PRICE,
Ag. Secretary to Government.

V

Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), No. 283, dated 16th August 1887.

J. GROSE, Esq., M.A., C.S.

Read—the following papers:—

G.O., No. 619, Revenue, dated 29th June 1887.

*Letter—from E. B. HAVELL, Esq., Superintendent, School of Arts, Madras.
To—the Secretary to the Board of Revenue, in the Department of Revenue Settlement and Agriculture.
Dated—Madras, the 6th August 1887.
No.—410.*

With reference to paragraph 2 of G.O., Revenue, Nos. 619–619-A, of the 29th June last, I have the honour to report that the one man at Kurnool who is able to damascene on steel is now employed in the Collector's office in marking weights and measures. There was no specimen of his work available, and consequently I was unable to make any comment on it in the body of my report.

2. Similarly, with regard to the fine cumblies made at Nimbalegherry, they are only made to order and I could not obtain a specimen to examine.

*Letter—from E. B. HAVELL, Esq., Superintendent, School of Arts, Madras.
To—the Director of Public Instruction.
Dated—Madras, the 6th August 1887.
No.—411.*

With reference to your Official Memorandum No. 4954, of the 3rd instant, I have the honour to state that no orders have yet been passed regarding my next tour. On the first occasion I left Madras in November but afterwards towards the end of January. The first two tours lasted about three months each, but the last only two. I would suggest that it is desirable that the tours be arranged so that I may not be absent from Madras longer than a month at a time.

Endorsement by H. B. GRIGG, Esq., Director of Public Instruction, dated the 8th August 1887, No. 5135.

Forwarded to the Commissioner of Agriculture for favour of consideration when submitting proposals to Government for Mr. Havell's tour in accordance with G.O., No. 619, Revenue, dated 29th June 1887.

Resolution—No. 283, dated 16th August 1887.

Communicated to the Collectors of Cuddapah, Kurnool, Bellary and Anantapur, and to the Superintendent of the School of Arts.

2. With reference to paragraph 2 of the Government Order, Mr. Havell explains that the one man at Kurnool, who is able to damascene on steel, is now employed in the Collector's office in stamping weights and measures, so that there was no specimen of his work available for inspection, and that, as regards the fine cumblies made at Nimbalegherry, these, it is said, are only made to order, and no specimen could be got at the time of Mr. Havell's visit.

3. With reference to paragraph 3 of the order, the Board observe that in 1885 the Collectors of Nellore, South Arcot, Coimbatore, Tinnevely and South Canara reported to the Director of Revenue Settlement and Agriculture that there were no arts or industries in their districts of sufficient importance or interest to call for investigation by Mr. Havell. From the District Manuals the Board gather that some important industries were carried on in some of these districts, viz., Nellore, Chingleput, South Arcot and Coimbatore, as shown in the statement appended to these Proceedings. The Collectors concerned are requested to report, at an early date, whether the industries are still carried on. In Tinnevely, it is understood that excellent mats are made, though the Collector, in his report of 1885, omitted to mention the fact. The Collector of Malabar reported, in the same year, that the following industries in his district might, with advantage, be examined into by Mr. Havell:—

- (1) Weaving industry at Palghat and Tellicherry;
- (2) manufacture of grass mats at Palghat;
- (3) brassware of Cherpalcheri in Walavanad taluk and of Kunhimangalam in Chirakkal taluk.

4. With reference to Mr. Havell's letter of the 6th instant, he will be requested to state when and what districts he would propose to visit, and how he would arrange his tour so that he may not be away from Madras for more than a month at a time.

Arts and Industries.

District.	Taluk.	Village.	Nature of art or industry.	Remarks as to good or bad, existing or died.
1. Nellore ..	Nellore ..	Kovur ..	Weaving ..	Fine shirtings, pocket handkerchiefs and muslins suitable for ladies' dresses are made to order.
	Udayagiri ..	Yapallagunta ..	Do. ..	Exceedingly fine muslin is made.
	Kandukur ..	Kandukur ..	Do. ..	Fine tent cloth is made.
	Gudur ..	Mudumanir ..	Do. ..	Fine cloths.
	Rapur ..	Rettapalli ..	Sculpture and stonework.	The workmen are noted for their skill in sculpture and ornamental work made on towers of native pagodas.
2. Chingleput ..	Conjeeveram ..	Conjeeveram ..	Weaving ..	Cloths.
	..	Sadras ..	Do. ..	Chintzes, .. almost
	..	Satvavedu ..	Do. ..	Red handkerchiefs .. extant.
	..	..	Metal working ..	Workers in metals abound in the district, but the workmanship is rude and exhibits little artistic skill. At a grand festival at Conjeeveram a fair of this sort is held.

Arts and Industries—cont.

District.	Taluk.	Village.	Nature of art or industry.	Remarks as to good or bad, existing or died.
3. South Arcot	Cuddalore	Cuddalore	Matting	
	Chidambaram	Porto Novo	Weaving	Women's cloths of a mixture of silk and cotton.
		Chidambaram		From cocoon fibre.
	Cuddalore	Old Town Cuddalore.	Rope-making	Formerly to a very great extent, but since much decayed.
		Chinnamanaikeni-palliam.	Weaving	Fine cloths are made. Number of looms in 1882-83 was 10,878.
4. Coimbatore	Coimbatore	Coimbatore	Do.	Cotton carpets of excellent quality and colour.
	Bhavani	Bhavani	Carpet-making	Fine silk fabrics with silver and embroidery interwoven are made.
	Kollegal	Kollegal	Silk-weaving	Good gunny of sunn hemp is manufactured in some of northern villages of Erode and southern of Bhavani taluks.
			Gunny	Excellent spectacles of real pebble (quartz crystals), lingams and vigrahams of the same material are made in the neighbourhood.
	Palladam	Tiruppur	Pebbles	Good gongs are made near Palladam, but the particular mixture is a trade secret.
5. Tinnevely			Metals	
6. Nilgiris	Nil.	Nil.	Nil.	Nil.

(True Extract.)

P. RAJARATNA MUDALIAR,
Secretary.

VI

G.O., No. 949, Revenue, dated 30th September 1887.

READ—the following paper :—

Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 20th August 1887, No. 293.

J. GROSE, Esq., M.A., C.S.

Read—the following paper :—

Letter—from E. B. HAVELL, Esq., Superintendent, School of Arts.

To—the Secretary to the Commissioner of Revenue Settlement, Land Records and Agriculture.

Dated—Madras, the 16th August 1887.

No.—429.

With reference to G.O., No. 695, Revenue, dated 11th August 1886, paragraph 1, I have the honour to report that I have obtained samples of cloths made with "silk-weavers" thread from Pondur, Vizagapatam district, and Chicacole, Ganjam district, and submitted them to G. L. Chambers, Esq., and M.R.Ry. P. Theagaroya Chetty, Rao Sahib, who kindly consented to examine them. The reports of these gentlemen are enclosed :—

I. Letter from E. J. Sewell, Esq., Acting Collector of Ganjam, dated 23rd December 1886, No. 5236.

I-(a). A memorandum received with the above.

II. Letter from the Deputy Collector, Vizianagram Division, to the Collector of Vizagapatam, dated 26th March 1887, No. 160.

II-(a). A list of the samples woven at Pondur received with the above.

III. Letter from G. L. Chambers, Esq., dated 30th April 1887.

IV. Letter from M.R.Ry. P. Theagaroya Chetty Rao Sahib, dated 8th July 1887.

V. Letter from H. G. Turner, Esq., Collector of Vizagapatam, dated 26th July 1887, No. 1694.

V-(a). Letter from the Deputy Collector, Vizianagram division, dated 19th July 1887, No. 322, received with the above.

2. The samples are—

(a) Three cloths made to order at Pondur of fine silk-weavers' thread, not the finest that can be made, but the first three qualities prepared for the ordinary market.

(b) Various samples of Chicacole muslins, some made wholly of country thread, while others are reported to be made partly with English and partly with country yarns.

(c) Various samples of country yarns (silk-weavers' thread).

3. It will be observed that Mr. Chambers is of opinion that the three samples from Pondur are made from English yarn, and states that "country yarn would not be so even." I have referred the point to the Collector of Vizagapatam through whom the samples were obtained, and he states, as the result of his inquiries, that he has no doubt that the cloths were really made of the fine country thread as ordered. I would point out that the process of the preparation of the thread, which I described in my report, conduces to the evenness to which Mr. Chambers alludes. I do not think that the variety of cotton is different to that used in the ordinary coarse country cloths. By the ordinary process the fibres are separated from the seeds by the rude country gin; but in the process I described a small iron rolling pin is used to separate the fibres by hand. In the first case the object is to remove as much as possible from the seed, but in the other case only to separate the finer fibres. The bow for cleaning the cotton by this special process is fitted with a fine wire instead of the coarse leather thong ordinarily used. The spinning wheel also is specially made lighter in construction. The silk-weavers' thread, therefore, is not ordinary country spun thread, but made by a special process to secure the qualities of fineness and evenness.

4. However the qualities by which these cloths still retain some hold on the market are doubtless those to which Mr. Theagaroya Chetty alludes, viz., their durability and softness. With regard to the high prices of the samples from Pondur, they are probably due to the fact of the cloths being made to order and also to their having the borders embroidered; the charge for workmanship seems higher than usual. The Arni cloths sold in the bazaars are much inferior in quality and do not have silk embroidered borders; at the same time they are certainly comparatively cheaper than these samples.

5. Many of the samples of Chicacole muslins made of country yarn are pretty and seem particularly suitable for ladies' summer dresses. The memorandum which the Acting Collector of Ganjam kindly forwarded with the samples gives particulars as to prices, &c.

6. I regret the delay in the submission of this report; it has been due to the time taken in the preparation of the samples. I forward all samples as directed.

ENCLOSURE No. 1.

Letter—from E. J. SEWELL, Esq., Acting Collector of Ganjam.

To—the Superintendent, School of Arts.

Dated—Chatrapur, the 23rd December 1886.

No.—5236.

I have the honour to inform you of the despatch of specimens of Chicacole muslins as desired in your letter of the 24th August last, No. 848.

2. Enclosed is a memorandum containing the information available as to the kinds and cost of the muslins made.

3. The muslins have been paid for here. The price of the two pieces made of country cotton is Rs. 8 each. The pieces made of English cotton cost Rs. 5 and Rs. 4-8-0, respectively. The amount paid is therefore Rs. 25-8-0, which I request may be remitted.

ENCLOSURE No. 2.

Memorandum.

The Chicacole weavers use three kinds of thread—

- (1) Called "English."
- (2) Called first quality "country."
- (3) Called second quality "country."

The "country thread" is very carefully prepared and it makes into much more durable and finer muslin than the common "English thread" that the weavers buy in the market.

A spotted piece of muslin—one yard wide and twelve yards long—takes a man and two children more than a week to make.

The narrow and cheaper kinds of muslins take one man five or six days.

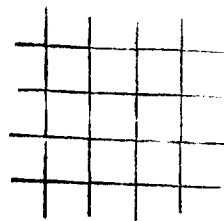
The qualities usually sold of the spotted muslins are Nos. 1 and 3, but "first quality thread" can be made if ordered. Between Rs. 6 and Rs. 7 worth of "best quality country thread" is used in making a piece of muslin, and the price is consequently so much increased that the weavers seldom get orders for this kind. Of the "second quality country thread" between Rs. 4 and Rs. 5 worth of thread is used in making a piece of spotted muslin of the usual length—12 yards long and 1 yard wide.

The "self-coloured" and "checked" muslins are made in pieces about 11 yards long and from 25 to 27 inches wide.

The weavers cannot make their muslins more than one yard wide, but the length may be increased.

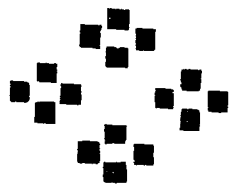
Orders for Chicacole muslins can be sent to—

Nulla Venkatasami,
Pata Chicacole,
Ganjām district.



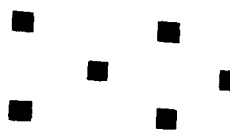
11 yards long, about 25 inches wide; also "self-colours."

Second quality country cotton. English cotton.
RS. A. P. Not made unless specially ordered.
11 12 0



12 yards long and 1 yard wide, dark blue or colours on white ...

9 8 0 7 0 0



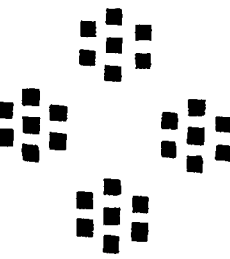
12 yards long and 1 yard wide, dark blue, red or alternate colours on white ...

7 0 0 4 8 0



White under colour on white ... { 12 yards long 1 yard wide }

8 0 0 5 0 0



12 yards long and 1 yard wide ...

10 8 0 8 0 0

It seems to be difficult to get reliable information about the price of the yarn in the bazaar. Two kinds ("English and second quality country") are herewith sent. Two small patterns of muslin said to be made of the superior or "first quality country thread" are sent.

ENCLOSURE NO. 3.

Letter—from M.R.Ry. V. JAGANNATHA ROW, Deputy Collector, Vizianagram Division.

To—the Collector of Vizagapatam.

Dated—Vizianagram, the 26th March 1887.

No.—160.

Adverting to the marginally-noted communications received from you, I have the honor

1. Your endorsement, dated 28th October 1886, No. 835, on letter from Superintendent, School of Arts, dated 13th idem, No. 966.
2. Your letter, dated 23rd November 1886, No. 2073.
3. " " 11th December " " 1284.
4. Your endorsement, dated 22nd March 1887, No. 113.

to forward herewith three sample cloths woven at Pondur of country thread known as "silk weaver's thread," as also five samples of different qualities of the same thread generally used for cloths.

2. The thread used in the cloths herewith sent is of the first three kinds, the numbers on the cloths representing the respective qualities of the thread used. Nos. 4 and 5 of the accompanying specimens of the thread have not been used in these cloths, the Superintendent having desired to be supplied only with the specimens of the first three qualities.

3. Lace or other expensive borders have been avoided as desired. In the female cloth alone, i.e., No. 3, inferior lace has been used at one end of the cloth, the workmen having insisted that it would not find a sale without some kind of lace. My instruction to the workmen was that three different kinds of borders should be used for the three cloths, but they have used only one kind of it for cloths Nos. 2 and 3, which is their favorite pattern, and have used a variety of nice borders for cloth No. 1. It will be seen that nearly each fold of the cloth has a different pattern, and I am confident that this cloth will find favor with the purchasers.

4. The enclosed memorandum gives the necessary particulars of the cloths and of the thread herewith sent. Their total marketable value comes to Rs. 39-10-5, of which Rs. 30 have already been advanced to the workmen. The balance is payable to them.

5. Owing to the recent changes in the personnel of the Deputy Tahsildar of the Chipurnapalle taluk wherein the village of Pondur is situated, there has been some delay in procuring and transmitting these cloths.

ENCLOSURE NO. 4.

DESCRIPTION of the three specimen cloths woven at Pondur in accordance with the requisition of the Superintendent, School of Arts, Madras.

No.	Quality of the thread.	Description of the cloth.	Length and width in cubits.	Detail of prices.			
				Items.	Price per tola.	No. of tolas.	Total price.
I	1st class.	A cloth with different borders consisting of two pieces, each forming an undergarment for males.	18 by 2½ ..	Silk thread for the border.	ANNAS. 4	2	RS. A. P. 0 8 0
				Cotton thread for the texture of the cloth.	2½	46½	7 12 0
				Workmanship at 8 annas a cubit.	..	..	9 0 0
				Total ..	..	..	17 4 0
II	2nd class.	A cloth with a border called Vanti uvvu Bedasaram consisting of two pieces, one forming the under and the other upper garment for males.	15 by 2½ ..	Silk thread for the border.	4	1½	0 6 0
				Cotton thread for the texture of the cloth.	2½	46	6 9 0
				Workmanship at 6 annas a cubit.	..	..	5 10 0
				Total ..	..	..	12 9 0
III	3rd class.	A cloth with a border like the one above, but forming a single piece for the use of females.	10½ by 2½ ..	Silk thread for the border.	4	1	0 4 0
				Lace	7½	2½	1 2 0
				Cotton thread for the texture of the cloth.	2	31	3 14 0
				Workmanship at 6 annas a cubit.	..	..	3 15 0
				Total ..	..	..	9 3 0
				Grand Total ..	..	..	39 0 0

DESCRIPTION of the five samples of thread herewith sent.

Number.	Price per tola.	Number of tolas sent.	Total price.	Brought over.	—	Remarks.
	RS. A. P.		RS. A. P.		RS. A. P.	
1	0 2 8	$\frac{3}{4}$	0 2 0	Brought over ..	39 0 0	
2	0 2 4	1	0 2 4			
3	0 2 0	1	0 2 0	Total cost of thread ..	0 10 5	
4	0 1 9	1	0 1 9			
5	0 1 7	$1\frac{1}{2}$	0 2 4	Grand Total ..	39 10 5	

ENCLOSURE No. 5.

Letter—from G. CHAMBERS, Esq.
To—the Superintendent, Government Central Museum.
Dated—Madras, the 30th April 1887.

I have the honor to acknowledge receipt of your letter, No. 393, of the 25th instant accompanied by a parcel of samples regarding which you desire my opinion.

Nos. 1 to 3.—Orange-bordered dhootees, made from English yarn. Country yarn would not be so even.

No. 4.—Cutting of muslin. Country thread.

No. 5.—These are five patterns of Chicacole cloth. Four of them are mixed cloths made of English yarn. One of them is a spotted muslin made from country yarn.

Nos. 6 and 7 are two pieces of country-woven muslin. The warp in No. 6 is probably country-spun, but the weft in both is English. The warp of No. 7 is probably English.

No. 8.—The warp looks English and the weft country.

No. 9 is wholly country thread.

No. 10.—Patterns of country-woven muslins. A, B, C, D, F and G are country yarn, while E is English yarn.

Yarns.—All the samples are correctly marked, only one being English thread.

The so-called silk-weavers' cotton is merely ordinary country-spun thread made from a variety of cotton (probably Northerns) which has a short but very fine fibre; but for this latter quality these fine yarns (probably 90 to 100) could not be spun from such short-stapled cotton especially by hand. The cotton has no special value.

ENCLOSURE No. 6.

Letter—from M.R.Ry. P. THEAGARAYA CHETTY.
To—the Superintendent, School of Arts.
Dated—the Tondiarpet, 8th July 1887.

With reference to the samples you have sent me for opinion, I have the honor to report that samples of cloths Nos. 1, 2 and 3 are of country-spun thread of about Nos. 130, 120 and 100 of English-spun thread.

2. I have consulted with experts on the quality of these cloths, and they all agree with me that cloths woven with country-spun thread stand wash and lasts much longer than those woven with English thread; and cloths woven by machine with English thread are not as durable as cloths made by hand-looms with English thread. It is also a curious fact that hand-made cloths are much warmer than machine-made ones.

3. As to prices quoted, I suppose they are much higher than what we pay to thread of that description in Sathivedu and Tiruvallūr taluks of Chingleput district. The thread known as "Mala nulu" spun by Pariah women, with which the famous Arni muslins are made, is not as dear as the prices quoted.

4. This thread, i.e., "Mala nulu", can be had in small quantities now, but the art is dying out as English-made goods can be got much cheaper.

5. It is only a few of the higher classes that take a fancy to such cloths, and but for their support the art would have died out long ago.

ENCLOSURE No. 7.

Letter—from H. G. TURNER, Esq., Collector of Vizagapatam.
To—the Superintendent, School of Arts.
Dated—Vizagapatam, the 26th July 1887.
No.—1694.

In reply to your letter, dated 4th May 1887, No. 245, I have the honor to forward copy of the General-duty Deputy Collector's letter, No. 322, dated the 19th instant, asserting that the specimen cloths sent to you were made of country yarn and not of English yarn. I have no doubt the cloths are really such.

ENCLOSURE No. 8.

Letter—from M.R.Ry. V. JAGANNATHA ROW, Deputy Collector, Vizianagram Division.
To—the Collector of Vizagapatam.
Dated—Vizianagram, the 19th July 1887.
No.—322.

Adverting to your endorsement, dated the 9th May last, No. 536, on a letter from the Superintendent of the Madras School of Arts, I have the honor to inform you that the specimen cloths sent to that officer from Pondur were made of country yarn and not of English yarn, as was supposed by the expert to whom they were presented for examination.

2. The thread is even owing to its fine quality, but at a single washing it will contract and present a rougher appearance.

3. Fabrics made of country yarn are distinguished from those made of English yarn by the superior weight and durability. The unevenness of the yarn is not in all cases apparent until the cloth is washed.

4. I saw the cloths while they were being woven at Pondur and they were prepared with special care. They were examined by local experts both at Pondur and at Vizianagram before being despatched, and there was not the slightest cause for suspecting the thread used. I have myself got cloths of country yarn woven both at Pondur and Thamada, buying fine country thread from $3\frac{1}{2}$ to 5 tolas per rupee. The cloths were to all appearance of a very fine texture, but on being washed they invariably contracted and presented a coarser appearance. The durability and inflexibility of the cloth (qualities conspicuous by their appearance in cloths made of English yarn) could only be tested by wash and use. Very fine thread is prepared by some women at Thamada, and it is quite as good as No. 150 of the English yarn, if not better. The qualities sent to the Superintendent of the School of Arts were not the finest, as he required only the ordinary sorts usually sold in the bazaar.

5. The endorsement under reply and the deputy tahsildar's report on the subject are herewith sent.

Resolution—No. 293, dated 20th August 1887.

Submitted to Government with reference to paragraph 1 of G.O., dated 11th August 1886, No. 695.

(True Copies and Extract.)

P. RAJARATNA MUDALIYAR,
Secretary.

To the Secretary to Government, Revenue Department,
with samples of cloth, of muslins and of thread.

Order—No. 949, Revenue, dated 30th September 1887.

Miscellaneous.

Ordered that this report be communicated to the Military Department and the Chamber of Commerce and that it be placed on the Editors' Table.

(True Extract.)

J. F. PRICE,
Ag. Secretary to Government.

VII

G.O., No. 441, Revenue, dated 20th June 1888.

Read—the following paper :—

Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture, No. 211, dated 11th May 1888.

W. WILSON, Esq., M.A., C.S.

Read—the following paper :—

Letter—from E. B. HAVELL, Esq., Superintendent, School of Arts.

To—the Commissioner of Revenue Settlement and Director of the Department of Land Records and Agriculture.

Dated—Madras, the 5th May 1888.

No.—227.

With reference to G.O., dated 24th October 1887, Mis. No. 6411, Revenue, I have the honor to submit my report on the arts and manufactures of the Malabar and Coimbatore districts.

2. *Cotton weaving.*—There is very little in this industry to call for special remark. The following may be noticed :—

Colored cloths.—At Bhaváni in the Coimbatore district about 60 families weave inferior colored cloth worn by females. In Coimbatore, 100 families weave a dark-red cloth worn generally by Muhammadans as a head handkerchief or upper cloth; it is woven with white stripes.

White cloths.—Coarse white cloths worn by ryots are woven in villages all over the districts; about 500 families in Coimbatore town weave superior white cloths with brocaded ends, but they are not to be compared with the finest manufactures of Madura and other places. Common white and colored cloths are also made at Kollegál. The weavers number about 382 families.

3. *Cotton carpets.*—Fifteen families at Bhaváni weave cotton carpets. Their productions are very glaring in color on account of the cheap bazaar dyes which are commonly used. The best native designs, too, are generally spoilt by the introduction of some common European pattern badly arranged. Bhaváni is said to have been once famous for its dyes; but the art seems to have been lost, for indigo is the only die which is prepared locally. Country thread is nearly always used for the warp, while English thread is preferred for the weft. The explanation given is that English thread is not strong enough to be used as warp. This practice is just the reverse of that which is usually adopted for cotton cloth weaving. Another point to be noticed is the custom of arranging the warp for cotton carpets perpendicularly; this entails a rather awkward arrangement for working the “healds” of the loom, but probably when the pattern is intricate it is, on the whole, the most convenient method. There can be no doubt, however, that for the commoner patterns of simple stripes, the horizontal position saves much time; it is seldom adopted, probably because the weavers’ houses are, as a rule, too small to admit of it.

4. *Silk weaving.*—In Coimbatore town a few families weave silk turbans and cloths of ordinary quality. Fifteen families at Kollegál are engaged in the same industry. Their cloths are generally of plain crimson color (either Cochineal or lac dye) with the ends simply brocaded; all the specimens which were shown to me were badly woven and not remarkable in any other respect. Common bazaar dyes seem to be now the most popular; formerly it is said the town was noted for the fineness of its lac dye. I append a memorandum on the silk culture carried on in the taluk prepared from the notes kindly supplied to me by M.R.Ry. K. Subroyer, Sarishtadar of Kollegál.

5. *Printed cottons.*—At Tirupúr and Dhárápúram in the Coimbatore district, a few families make rough palampores and other chintzes of a common description.

6. *Grass-mat weaving.*—The Pálghat mats are well known. The best are made in several villages near the town of Pálghat; but common ones are made in many places in both districts. The mats are woven with the split stalks of *Cyperus pangorei*, a sedge which grows in the locality. The female members of the family generally prepare the sedge for weaving by dexterously splitting it into about four strips and at the same time removing the pith from the inside. These strips are laid in the sun and when dry are ready for weaving unless it is desired to color them—a deep red is produced by boiling the strips in water with Sappan wood and Kasa leaves (*Memecylon edule*, Roxb.). Black is obtained by steeping strips which have been already dyed red in a mixture of wood ashes and black mud taken from the beds of tanks. Yellow from turmeric is sometimes used; but it is not permanent. The mats are woven with much care; it is said that a good mat will hold water for 24 hours; even the strings forming the warp are prepared by the weavers themselves from country hemp in preference to the cheap twine which they can obtain in the bazaars.

7. *Gold and silver work.*—The gold ornaments in the Malabar district, especially those worn by Nayar and Tier families, are very fine; in fact I have seen none finer in any part of India. The drawings, which I forward herewith, will give a better idea of them than a written description. Figures 1, 2, 3 and 4 show one type, necklets made up of a repeat of some highly conventionalized form such as a tiger’s tooth (figure 1) or cobra’s hood (figure 2) stamped from a die and finished by chasing. The central link in figure 3 is the tali or marriage token. The other type is made up of minute plates and wires and pellets of gold soldered on to a wedge-shaped foundation as shown in figures 5, 6, 7 and 8. The fringe of gold pendants, which most of the patterns have, has a peculiarly light and graceful effect which the drawings do not express. Figure 7 shows an elaborate piece of work which, it is said, occupied a workman for three months; figures 5, 6 and 8 are, however, better designs. The necklets are tied on by a silk thread connecting all the links and are generally finished at either end by a tassel as shown in figure 9. Figure 10 is an ornament worn by Moplah women. It consists of a number of chains, the links being thin plates of gold pierced or otherwise ornamented, which are arranged in rows and attached at either end to an ornamental plate of gold. It is not strictly speaking a neck ornament, as it is unusually long, falling right over the bosom like a native flower garland. Figure 9 is another Moplah pattern, a simple but effective arrangement, set with rubies and emeralds. In the Coimbatore district, the silver ornaments worn by the Vellala caste are also noteworthy. Figure 11 is the type of wristlet worn, but such a fine specimen is not often met with. It is worked in the same way as the gold ornaments (figures 5, 6, 7 and 8). Figures 12 and 13 show two kinds of armlets. The pattern of the first is probably suggested by the shape of the garlic bulb, but it is called by the fanciful name of “parrot’s beak;” the other consisting of small hollow cylinders generally strung together in a double row, sometimes plain and sometimes with ornamental ends (as in the example), may have been derived from the practice of wearing receptacles for charms to protect the person, though the intention in this case is now lost sight of.

8. *Brass-smiths.*—Kunhimangalam and Cherupalcheri are the chief places in the Malabar district for brass-smith’s work. The workmen are exceptionally skilful in casting vessels of all kinds, lamps, &c., especially large cooking vessels, often 5 or 6 feet in diameter, called “Urutes” (figure 14), which are used at great festivals. The shapes of the various vessels are interesting and characteristic. Figures 15 and 16 are two forms of water vessels in common use. Figure 17, a hand lamp, is suggestive of classic design, while the temple lamp, figure 18, might call to mind the seven-branched candlestick sculptured on the arch of Titus. Figure 19 is an ornamental stand between three and four feet high, used at the marriage ceremonies of Moplahs to hold *pán supári*. In the Coimbatore district, there are about 50 families of brass-smiths at work at Anapalayam near Tirupúr. They make bell metal gongs and trays besides the ordinary domestic utensils. The gongs seem to be made of the ordinary native composition of four parts copper to one of tin; they are very roughly hammered and badly finished. All the work turned out is of an inferior description. In Coimbatore town, there are about 45 families of ordinary workmen.

9. *Black-smiths, Carpenters and Wood carvers.*—They are the ordinary workmen found in every district. Iron is smelted in a few jungle villages in the Walawanád taluk of Malabar, and Bhaváni and Satyamangalam taluks of Coimbatore; but the industry seems to be fast dying out. In wood carving, there is nothing worth noticing in either district.

10. *Lapidaries.*—About ten families at Chettipalayam, a village near Tirupúr in the Coimbatore district, work crystals for spectacles and make crystal and glass beads and various kinds of ornaments, lingams and other sacred symbols and images. The process is exceedingly simple like all native processes, but the work turned out is neat and well finished. The crystals, &c., are ground on emery discs which are prepared as follows:—Corundum, which is said to be found in the neighbourhood, is first pounded up to any desired degree of fineness, a sufficient quantity of lac to form the disc is melted up and mixed with the powdered corundum; as the lac cools, it is flattened out to a circular shape on a stone which has been first sprinkled with a little more of the powder to give the surface of the disc the proper texture. A number of discs are prepared in this way with corundum powdered more or less finely to suit the quality of the work. They are attached by a little melted lac to the ordinary native lathe which is worked with a bow in the ordinary way except that the crystal worker turns the lathe with the right hand and works with the left and does not, like the carpenter or metal worker, employ an assistant. The discs are of course kept wet while the crystals are being ground. Smooth wooden discs are used for the final polishing processes, the crystals being worked with water and a paste made of corundum very finely ground. Crystals are procured locally and from the surrounding districts. The amethysts found at Vallam near Tanjore are sent to Chettipalayam to be polished. The workmen, however, are not particular in choice of materials; when they have no special order on hand, they will use any colored pebble or pieces of broken glass to make up into ornaments.

11. The Coimbatore District Manual states that good gunny of sunn hemp is manufactured in some of the villages situated in the north of Erode and south of Bhaváni taluks; but I could obtain no information in those localities regarding the industry. It has probably died out.

12. I append a detailed statement giving particulars of the number of workmen and the industries in which they are engaged, and also the memorandum on silk culture referred to above:—

ENCLOSURE No. 1.

Place.	Number of families.					Other particulars.
	Cotton weavers.	Goldsmiths.	Carpenters.	Blacksmiths.	Potters.	
<i>Malabar District.</i>						
Calicut	..	28	14	16	..	Four carpenters can do ordinary carving. Sixteen families of ordinary brass-smiths and four families of skilled workmen who can cast images, lamps, &c. (Basel Mission Weaving Establishment and Tile Works.)
Cannanore	116	37	13	17	..	<i>Weavers.</i> —Twenty-four families make inferior white cloths; ninety-two families inferior colored cloths; forty-three families of leather workers; four families of brass-smiths. (Basel Mission Weaving Establishment.)
Cherupalcheri	..	3	12	7	..	Three families of brass-smiths who can cast lamps, images, &c., and do ornamental work.
Kunhimangalam	30	2	..	4	12	Twenty families of skilled brass-smiths who can do all kinds of cast and beaten work.

Place.	Number of families.					Other particulars.
	Cotton weavers.	Goldsmiths.	Carpenters.	Blacksmiths.	Potters.	
<i>Malabar District—cont.</i>						
Pálghat	47	232	207	54	140	<i>Cotton weavers.</i> —Inferior white cloths. Seventeen families of grass-mat weavers. Nineteen families of ordinary brass-smiths. Villages near Palghat where grass mats are made. Odavanur and Manjalur, ten families each. Yedatarai, about six families. <i>Cotton weavers.</i> —Inferior white cloths. Four families of ordinary brass-smiths. (Basel Mission Weaving Establishment.)
Odavanur	..	..	..	..	..	
Manjalur	..	..	..	..	..	
Yedatarai	..	..	..	..	..	
Tellicherry	65	30	38	20	..	
<i>Coimbatore District.</i>						
Bhaváni	85	9	6	4	6	<i>Cotton weavers.</i> —Inferior white and colored cloths; fifteen families of cotton carpet weavers; four families of ordinary brass-smiths.
Coimbatore	600	60	95	50	60	<i>Cotton weavers.</i> —About 500 families make white-laced cloths of fairly good quality, the remaining 100 weave a closed striped cloth worn chiefly by Mahomedans. Five families of silk weavers, ordinary work. Common grass mats, fifty-five families; twenty-five carpenters can do ordinary carving; forty-five families of brass-smiths including fifteen skilled workmen; fifty families of leather workers.
Dhárápúram	24	25	15	13	24	<i>Cotton weavers.</i> —Inferior white cloths. Thirty families of leather workers; seventeen families weaving common grass mats; ten families of the dyer's caste making inferior palampores.
Kollegál	382	22	20	4	7	<i>Cotton weavers.</i> —Common white and colored cloths. Ten families of silk weavers making cloths of ordinary quality; four families of ordinary brass-smiths.
Tirupúr	60	5	5	4	4	<i>Cotton weavers.</i> —Chiefly inferior colored cloths. Five families of the dyer's caste making inferior palampores.
Villages near Tirupúr— Anapalayam	..	..	..	..	..	About fifty-four families of brass-smiths, of which thirty-six families do plain beaten work; eleven families make gongs, trays, etc., of beaten bronze; seven families cast chumbus, lamps, images, etc.
Chettipalayam	..	..	..	..	..	Ten families of lapidaries making crystal spectacles, ornaments, lingams and vighrams.

ENCLOSURE No. 2.

Silk culture in the Kollegal taluk of Coimbatore.

Mode of cultivating the mulberry plants.—In the rainy season, immediately after the fall of rain, fields containing black soil or clay are ploughed 4 or 5 times into furrows, and the soil loosened. On another fall of rain, mulberry cuttings each one foot in length are planted in small pits a yard apart in the same manner as sugarcane are planted. Within two days these cuttings begin to take root and to sprout. At this time the plantation is weeded and the soil around the plants broken up and fresh earth mixed therewith. At the end of 4 months the plants grow to perfection.

About the rearing of silk-worms.—One seer of cocoons is usually bought for one rupee. They are laid in large bamboo trays (resembling sieves) which are suspended by ropes for eight days out of the reach of rats and ants. On the ninth day the moths begin to come out of the cocoons. They are at once removed to another bamboo tray in which they are kept for one day. Next day the male moths are taken out and thrown away. Before the evening of that day female moths lay their eggs and the next day they are also removed from the trays and thrown away. The trays are then hung about the roof and covered with thin cloth to protect the eggs from flies, ants and lizards. On the seventh day after the eggs are laid, the silk-worms begin to

come out. At this stage the worms are fed with small cuttings of tender leaves of mulberry plants five times in the day and five times in the night. Thus they are fed for seven days. On the eighth day they discontinue feeding and lie down without moving. In this state they are said to be attacked with fever. On the morning of the next day they recover and are fed as before with small cuttings of mulberry leaves. In this way they are fed for four days. Then they are attacked with "fever" a second time and discontinue feeding. Next day they are again fed as usual. After the lapse of four more days they are attacked with "fever" a third time. Next day they recover as usual and are fed with full-grown mulberry leaves for four days longer, when they are attacked a fourth time. At the time of the first "fever" the worms in one tray are transferred to two trays. On the second attack the worms in two trays are removed to eight trays, for the third "fever" they are removed to sixteen trays and for the fourth to thirty-two trays. In four days after the fourth attack the worms grow large and change color from white to purple. At this stage they discontinue feeding altogether and are removed to bamboo tatties called "*chendrigan*." Three days afterwards they begin to spin cocoons. During the process the tatties are exposed to the morning sun at sunrise for about half an hour, and then hung up to the roof inside the house. In two days more the cocoons are collected in bamboo baskets; a sufficient number are laid aside for a fresh propagation and the rest are subjected to a steaming process to kill the chrysalides. The silk is unwound from the cocoons by putting them in a chatty with boiling water and a few cleaning nuts (*Ponnalangai*) and attaching the ends of two or more cocoons to a light wheel turned by hand. The cleaning nuts probably serve as a solvent for the natural gum secreted by the silk-worm for building the walls of his cocoon together. There does not appear to be any specific disease prevalent in the taluk among the silk-worms. They are said to be affected in abnormal seasons of heat or rain, but not to such an extent as to produce a marked loss in the quantity of silk. The following table shows the average price of raw silk per maund during the last ten years:—

Year.	Average price.		
	RS.	A.	P.
The price of one maund of raw silk in the year July 1879 to June 1880	130	0	0
The price of one maund of raw silk in the year July 1880 to June 1881	140	0	0
The price of one maund of raw silk in the year July 1881 to June 1882	125	0	0
The price of one maund of raw silk in the year July 1882 to June 1883	120	0	0
The price of one maund of raw silk in the year July 1883 to June 1884	100	0	0
The price of one maund of raw silk in the year July 1884 to June 1885	90	0	0
The price of one maund of raw silk in the year July 1885 to June 1886	110	0	0
The price of one maund of raw silk in the year July 1886 to June 1887	140	0	0
The price of one maund of raw silk in the year July 1887 to February 1888	130	0	0

The price is said to fluctuate according to the increase or decrease in the importations of China or other silk.

List of the villages in which silk-worms are reared.

	Number of ryots rearing silk-worms.						
1. Allalby	...	...	...	...	...	...	100
2. Kunthore	...	...	...	...	...	...	40
3. Chilukanadi	...	...	...	...	...	...	10
4. Thagarapuram	...	...	...	...	...	...	30
5. Hosamalinghi	...	...	...	...	...	...	30
6. Therampalli	...	...	...	...	...	...	15
7. Uttampalli	...	...	...	...	...	...	10
8. Kunakalli	...	...	...	...	...	...	30
9. Meelur	...	...	...	...	...	...	10
10. Mudigundam	...	...	...	...	...	...	20
11. Kongaralli	...	...	...	...	...	...	100
12. Kannur	...	...	...	...	...	...	40
13. Mangalam	...	...	...	...	...	...	50
14. Thondiathuvadi	...	...	...	...	...	...	20
15. Chikkindunadi	...	...	...	...	...	...	5
16. Polliem	...	...	...	...	...	...	30
17. Kariyanapuram	...	...	...	...	...	...	5

List of the villages in which silk-worms are reared—cont.

	Number of ryots rearing silk-worms.						
18. Kemmellipuram	...	...	...	...	...	...	5
19. Kodipuram	...	...	...	...	...	...	5
20. Chennalinganhalli	...	...	...	...	...	...	5
21. Ikkadalli	...	...	...	...	...	...	10
22. Mathipuram	...	...	...	...	...	...	5
23. Hanur	...	...	...	...	...	...	20
24. Basthipuram	...	...	...	...	...	...	5
25. Hondarbalu	...	...	...	...	...	...	10
26. Jakkalli	...	...	...	...	...	...	5
27. Thimmarajapuram	...	...	...	...	...	...	10
28. Manduvanalli	...	...	...	...	...	...	20
29. Aruvanapuram	...	...	...	...	...	...	10
Total	...	...	...	...	...	...	655

Resolution—No. 211, dated 11th May 1888.

Submitted for the information of Government.

2. From the drawings submitted by Mr. Havell, it will be seen that some of the Malabar and Coimbatore jewellery is very beautiful in design and in workmanship. It is suggested that when a sufficient number of specimens of this and other work have been collected and figured, they should be lithographed and published in the form of an album.

(True Copies and Extract.)

P. RAJARATNA MUDALIAR,
Secretary.

Order—No. 441, Revenue, dated 20th June 1888.

Miscellaneous.

His Excellency the Governor in Council has read Mr. Havell's report with interest.

2. The Government are of opinion that the drawings of native jewellery, etc., might with advantage be forwarded, with an explanatory article which Mr. Havell will no doubt be able to draw up, for publication in the *Indian Art Journal*. The album referred to by the Board would then be unnecessary.

3. Proposals for Mr. Havell's next tour should be submitted at an early date. The Government hope that with another tour he will be able to complete the survey of the Presidency, and that he will then be in a position to compile an account of the industries and arts of Madras.

(True Extract.)

J. F. PRICE,
Secretary to Government.

VIII

Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), No. 366, dated 31st July 1888.

W. WILSON, Esq., M.A., C.S.

Read—G.O., No. 441, Revenue, dated 20th June 1888.

Resolution—No. 366, dated 31st July 1888.

Communicated to Mr. Havell and to the Collectors of Coimbatore and Malabar.

2. Mr. Havell is requested to prepare an explanatory article for publication in the *Indian Art Journal* with the drawings submitted by him.

3. With reference to paragraph 3 of the Government Order, it is observed that the districts which Mr. Havell has not yet visited are Nellore, Chingleput, South Arcot, Nilgiris, Tinnevely and South Canara. Fine cloths are made in Nellore and Chingleput, and also nice earthenware articles in the latter district. In South Arcot the matting, weaving and rope-making industries are still carried on. Mr. Havell is requested to report when and what districts he proposes to visit next, so that the survey of the Presidency may, if possible, be completed at an early date.

(True Copy and Extract.)

P. RAJARATNA MUDALIAR,
Secretary.

IX

G.O., No. 669, Revenue, dated 19th September 1888.

Read—the following paper :—

Proceedings of the Board of Revenue (R.S., L.R. and Agri), Mis. No. 2509, dated 10th September 1888.

W. WILSON, Esq., M.A., C.S.

Read—the following paper :—

*Letter—from the Superintendent, School of Arts, Madras.
Dated—the 3rd September 1888.
No.—521.*

With reference to the Proceedings of the Board of Revenue, No. 366, of the 31st July last, I have the honour to suggest that, in my next tour, I should visit Tinnevely. The best grass mats in the Presidency are made in the district, and there are probably other industries worth investigation.

2. With regard to the preparation of a complete account of the art manufactures of the Presidency, I would suggest that, as my duties in the Educational Department demand very much attention, it would be most convenient that the subject should be dealt with in a series of articles to be published, first, in the *Indian Art Journal* and, afterwards, in book form. If this suggestion is approved, I could, instead of treating the Coimbatore and Malabar districts separately, commence now an account of the gold and silver jewellery of the whole Presidency. With regard to other industries, I would suggest that I should be allowed to revisit some of the places in each district, more especially the five districts * of my first tour, as it is impossible, in a hurried tour of a fortnight or less in each district, to investigate fully all the industries.

* Madura.	North Arcot.
Tanjore.	Salem.
Trichinopoly.	

3. With regard to my next tour, I have the honour to state that July or August next would be the most convenient time. The school-work, particularly the arrangements which are now being made for commencing carpet-weaving in the Industrial department, will require my personal attention for some time. In January, as I have had neither leave nor vacation of any kind for five years, and my health has lately been very indifferent, I propose to renew the application for three months' privilege leave, which I made last March, presuming that my engagement is renewed. I shall be able, between this time and January, to supervise the preparation of illustrations and to commence the account of the gold and silver jewellery of the Presidency as proposed above.

Resolution—Mis. No. 2509, dated 10th September 1888.

Submitted for the orders of Government, with reference to G.O., No. 441, dated 20th June last.

2. In the circumstances, the Board recommend that Mr. Havell's proposals be accepted.

(A true Copy and Extract.)

P. RAJARATNA MUDALIAR,
Secretary.

Order—No. 669, Revenue, dated 19th September 1888.

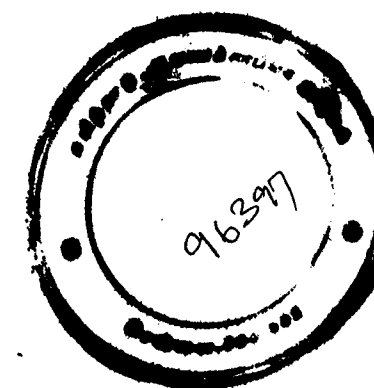
Miscellaneous.

The course proposed by Mr. Havell is approved. * Arrangements should be made for securing the right to reprint the articles which he intends publishing in the *Indian Art Journal* and for obtaining a sufficient number of copies of the illustrations.

(True Extract.)

C. A. GALTON,
Ag. Secretary to Government.

* These orders were, however, subsequently cancelled and Mr. Havell made no further tours in the Presidency (G.O., No. 803, Revenue, dated 19th November 1888). He was instructed in the orders last quoted to prepare a consolidated report on the results of the inquiries already made by him, but this does not appear to have been submitted at all.



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