Nos 2693 w. 3.11.84.
3685 w. 17.12.83.

No. 2568 Wdf Nov 31 1885.

Recorded.

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Govt. of {1885} Madras.

EDUCATIONAL.

Issued

Recd. 29/10/85. Encl.

G.O., 7th October 1885, No. 617.

No. 2568 Wdf Nov 31/10/85

OCTOBER.

School of Arts.

Reviewing the annual report on the — for the year 1884-85.

CA to Govt 4/11

Educ 5/11.

With order

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

READ—the following papers :—

From H. B. GRIGG, Esq., M.A., Director of Public Instruction, to the Chief Secretary to Government, dated Madras, 11th September 1885, No. 6023.

I have the honor to submit the report on the progress of the School of Arts for the official year 1884-85, together with my review thereof.

ENCLOSURE.

PROCEEDINGS of the Director of Public Instruction, dated 26th August 1885, No. 5730.

Read—the following letter from the Superintendent, School of Arts, Madras, to the Director of Public Instruction, dated 24th June 1885, No. 118 :—

I have the honor to submit the annual report of the progress and position of the school for the year 1884-85.

2. *Artistic Branch.*—The number of students on the rolls at the end of the year was 162, an increase of fifteen on the number of last year. The average attendance was 119, showing an increase of twenty-three over that of the two previous years.

Scholarships.—Nine students obtained scholarships from Rs. 2-8-0 to Rs. 6 per month. Three of the apprentices holding scholarships obtained employment in preparing stained glass windows at the Government Brickfields. One was appointed draughtsman at the Central Museum. Two free students obtained appointments as draughtsmen in the Archæological Survey, and one as designer for textile fabrics in a local firm.

Examinations.—Three examinations were held, two in freehand drawing, for which five certificates were awarded, and one in Geometry. In the latter subject none reached the required standard. The progress made by the students has been satisfactory, and a marked improvement has taken place in the work of the apprentices. I am also glad to note with regard to the latter that they show an increased interest in their work and some signs of a spirit of emulation. I have found it impossible, from want of efficient assistance, to devote as much time as I should wish to the reorganization of the classes. In fact, the classes are now so large and the other calls on my time are so many, that it is hardly probable that a very satisfactory state of efficiency will be arrived at until after the appointment of the drawing master sanctioned in G.O., No. 485, dated 19th August 1884.

New Examples.—Some of the apprentices under my direction have prepared an entirely new set of examples for the first stage of the course of instruction, and many good examples of oriental design have been made available for the study of the more advanced students.

The classes have been much inconvenienced from want of suitable accommodation ; but this difficulty has since been removed by the extension and alterations of the buildings.

Wood carving, Metal work and Wood engraving.—Small classes have been arranged for practical instruction in wood carving and metal work and are now progressing satisfactorily. The wood engraving class has made considerable advance and some very creditable work has been turned out. Through the kindness of Colonel H. P. Hawkes I was enabled to procure a new supply of box-wood from the north of India which has been found to answer every purpose. This is the first time that Indian box-wood has been used in the school for engraving purposes, and probably the first time that it has been introduced into this Presidency.

Stained Glass Windows.—In the stained glass window department some of the students have received instruction in the entire process of execution as well as in design, with a view of qualifying them for independent work when they have completed their course as apprentices. Hitherto the more practical part has been left to the trained maistries and workmen employed by the school.

Reorganization of the course of instruction.—In the scheme which I have submitted for the reorganization of the course of the instruction, I have endeavoured to recognize the necessity that the work of the students should tend towards a means of livelihood for them in future. But I have mainly based my proposals upon a principle which I regard as of even greater importance that the school should avoid a condition into which similar institutions so easily drift, that of being State-aided establishments for the encouragement of portrait-painting and an inferior class of picture-painting. If pictorial art needs encouragement from the State at all, the aid given should at least stimulate a higher development. It would, moreover, be a calamity to art and to the country that the goldsmiths, workers in stone, wood, or ivory and other handicraftsmen, should be taught to look upon their several occupations with contempt, or to entertain the idea that such occupations do not afford scope for the very highest artistic genius. A sound and true development of art can only proceed by teaching the handicraftsmen of the country to look to their own occupations for exercise of their skill or genius; and by convincing them that canvas brushes and pigments are not absolutely essential for the expression of their higher aspirations. I confess it is hard to persuade them of this when they find that the public are willing to pay large sums for canvas covered without the smallest exercise of intellect, and that the thought or genius of the worker in gold or silver, wood, stone, or clay is generally estimated by scales or foot-rule.

Work executed.—The principal work executed during the year has been as follows:—

In Terracotta.—Ornamental panels for windows, and balustrades for the Post and Telegraph Offices; ornamental balustrading for the Bank of Madras buildings at Cocanada.

Stained Glass Windows.—Post and Telegraph Offices, Madras; Muir College, Allahabad; the Kirk, Madras; Arcot Church.

Wood Carving.—Large carved frame for one of the Amarávati marbles at the Central Museum.

3. *Manufacturing Department.*—This branch of the school has been fully engaged in supplying the demands of the Commissariat, Medical and Stationery departments and in the manufacture of porous cells and miscellaneous articles of pottery.

Experiments.—Experiments have been continued on a small scale with a view of obtaining a sound porcelain body, and of increasing the number of colors now available for pottery decoration. The inconvenience arising from the alterations and repairs of the buildings has, however, prevented anything like a systematic series of investigations on a sufficiently extensive scale. Consequently no very practical results have hitherto been obtained, but the knowledge acquired of the qualities of different materials will be of great value in future experiments. I have succeeded, however, in procuring kaolin from the hills round Salem, which seems to be of very superior quality, and has the great advantage of being entirely free from iron. Experiments with this are now being proceeded with. In the re-arrangement of the different departments, I have provided suitable accommodation for the carrying on of experiments in a satisfactory manner.

New Kiln.—The old disused glass furnace has been converted into a pottery kiln at a trifling cost. The outturn from it has proved satisfactory and in consumption of fuel it is more economical than the other kilns.

Store Room and Inventory of Stock.—The new store room has been fitted up and a new inventory of stock has been commenced.

4. *Accounts.*—The expenditure for the past year has been as follows:—

	RS.	A.	P.	RS.	A.	P.
Disbursements	19,769	14	3			
Liabilities	1,541	15	4			
Superintendent, teachers' establishment, and scholarships	6,950	1	6			
				28,261	15	1
Receipts on sales	10,813	15	6			
Fees from pupils	541	0	0			
Amount at credit with the Accountant-General	1,349	12	6			
Amount received from Government	14,708	11	2			
Outstandings	4,884	12	11			
Stock and stock materials	6,000	0	0			
Cash in Bank	5,317	2	7			
				43,615	6	8
At Credit				15,353	7	7

The large decrease in the amount of receipts on sales requires some comment. For several years past the school has undertaken a large amount of work which more properly belonged to

the Public Works workshops. This included roofing and carpentry work, wrought-iron railings, and other miscellaneous work for the Lying-in Hospital, Parlákimedi Palace, Baroda Palace, and other buildings then being erected. All this work was executed by contract by maistries and workmen specially engaged for the purpose. The school charged commission for the use of the workshops and for the superintendence required; and thus the item of "Receipts on sales" was raised to a large sum. But it does not appear that the work formed any part of an educational system, although the funds raised by means of it were useful and necessary for other branches of the school. The whole of this work was completed the year before I took charge, and no orders of the kind have been received since. I do not think it by any means desirable or expedient that any more of this kind of work should be undertaken; for it would necessitate an extension of the buildings and take up a great deal of my time which might, I think, be more profitably employed in other ways. As far as pottery and the more legitimate work of the school is concerned, I can testify that during the past year the amount turned out has been very considerable, and as much as could be fairly expected. In fact, there has been great difficulty in completing the large number of orders in hand with reasonable despatch; and at no time has there been any decrease of work owing to want of orders.

The fees from pupils show an increase of nearly 100 per cent. over the amount received last year (Rs. 237) and the disbursements have fallen by more than one-half.

The sum of Rs. 610-0-4 was expended from the school funds on improvements to the school buildings, on examples and on furniture, &c., required by the increase in numbers and by the reorganization of the work of the students.

5. *Museum.*—The glass cases have been rearranged and most of the specimens have been properly labelled. A catalogue has also been commenced.

The number of visitors during the year was 45,291.

6. *Picture Gallery.*—I have some difficulty in dealing with the collection of paintings in the picture gallery in a satisfactory way. Even if I were of opinion that an exhibition of this kind would be understood or appreciated by the students, or that it would tend to raise the character of their work, I would recommend many reproductions of great works obtained by various processes of photography and photo-lithography and by other means as being of far higher artistic value, and, consequently, more suitable for teaching true principles of art than a congeries of inferior copies and hopelessly bad originals.

But it appears to me that an average student taught not only to discover, but to understand the beauties of line, form, color and arrangement, in a well-designed vase or carpet or panel of well-carved ornament, would have a better insight into true principles of art than he would acquire if placed at once before the finer subtleties of the works of great European masters. Painting and sculpture are, or should be, the means of expression of the poetry of art, but the would-be poet too often descends into mere empty rhyme or jingle; and it would, I think, be as foolish to put a collection of great European masterpieces of painting and sculpture before students such as those who attend an Indian School of Art, as to give Dante's "Inferno" for a class book in an ordinary middle-class school.

It would nevertheless be worse than folly to set up, as standards of national art, paintings and sculptures of a lower order simply because they might be more readily appreciated. If the time has arrived that the art education or "taste" of the Indian public at large or of the upper classes is so fully developed that a good collection of really great works would be otherwise than a sealed book to them, the best place for such a collection would be in a public gallery connected with the University. To the students of this school, I am sure, it would be only misleading. The only satisfactory recommendation I can make with regard to the collection at the school is that it should be disposed of in whatever way the Government may think advisable.

On the other hand, I think that the usefulness of the collection of "artware" which has now been commenced would be greatly increased by further additions. Indeed, the value of such a collection largely depends on its affording the students a varied and extensive range of subject.

7. *Library.*—The library is in fair condition. The catalogue has been properly arranged, and the books will shortly be renumbered and rearranged in accordance with it.

By transferring two almirahs which were of little use in the pottery sections, I have given the increased accommodation for the books which has been needed for some time past.

8. In concluding this report, I would beg to call attention to the work in stained glass now being carried on in the Government Brickfields. Though possibly it is desirable that extensive work in very simple geometric patterns (without any attempt at what is commonly called "artistic effect") which is required for Government buildings should be executed by the staff at the brickfields, I venture to think that it is detrimental to the school that private orders should be undertaken, and I also presume to think that the Government and the public will be better served in work of a more ambitious character if it is executed at the school; for, the students and workmen employed here have far more opportunities and better supervision than those working at the Government Brickfields who, with the exception of one or two old students of the school, have had no artistic training whatever.

The Artistic branch appears to be progressing satisfactorily both as regards numbers and efficiency. The average attendance, though still poor, has improved in relation to attendance in the proportion of three to four. A pleasing and novel feature in the year's history is that the institution is beginning to fulfil its chief object—the supply of skilled labor for various art industries, some students having obtained suitable employment. The engagement of one as a designer of textile fabrics in a local firm is specially gratifying, for it is in relation to improved design that the school is calculated to benefit especially the industries of the country. From the three examinations held it appears that the instruction in freehand drawing was more successful than that in Geometry, five obtaining certificates against one. The failure in the latter subject is probably due to the low general educational standard of most of the students. It is not understood how one certificate in Geometry came to be issued if none of the students reached the required standard. The Superintendent is requested to explain. The Director is glad to hear that marked improvement has taken place in the work of the apprentices and that the progress made by the students was satisfactory. It is gratifying also to find that the apprentices show "an increased interest in their work and some signs of a spirit of emulation."

2. The Director appreciates the difficulties under which Mr. Havell has labored in regard to instruction, but trusts that his hands will soon be strengthened by the appointment of an assistant by the Secretary of State. The difficulty in regard to accommodation has been removed by the extension and alteration of the building.

3. The Director has read with great interest the paragraph of the report regarding the instruction given and progress made in wood-carving and engraving and metal work. A carved frame was made for one of the Amarávati marbles in the Central Museum. The Superintendent will doubtless give special attention to this department. The Director takes the opportunity of thanking Colonel Hawkes for having procured a supply of box-wood, hitherto apparently not used in this Presidency, from Northern India, for engraving purposes.

4. The instruction in the manufacture of stained glass windows seems to have been judiciously conducted, the students having been instructed in the process of execution as well as of design.

5. The Director agrees with the remarks made by Mr. Havell in the paragraph of his report on the subject of the reorganization of the course of instruction. The reorganization of the courses of the school will be dealt with in connection with the scheme of technical education sanctioned by Government in their Order, No. 377, dated the 3rd June 1885. In order to accentuate the special ends for which the school has been established, change in its name, indicating its industrial character, seems desirable. The point will be referred for the orders of Government.

6. The institution seems to have been very active in its manufacturing branch, turning out a quantity of high-class work. Experiments too have been made in various directions as regards pottery, and valuable information has been collected. The discovery of superior kaolin, uncontaminated by iron, near Salem, will, it is hoped, prove an important one.

7. It is noted that a new inventory of stock has been commenced. The result should be reported in due course, as well as the valuation of the articles. An examination must invariably be held at the close of each year.

8. The expenditure amounted to Rs. 28,261-15-1 and the receipts to Rs. 43,615-5-8. The falling off in the amount of receipts on sales is satisfactorily explained, and in the general remarks made by the Superintendent, the Director concurs. It is satisfactory to note that the fees increased by 100 per cent. The net cost of the institution to Government appears to have been slightly more than in the preceding year, but the form in which the accounts are rendered seems capable of improvement. The Accountant-General will be addressed on the matter. It is observed that the outstandings are nearly six hundred rupees greater than in 1883-84. Explanation will be submitted. The liabilities are, however, less by seven hundred rupees.

9. The Superintendent should submit definite and special recommendations with reference to his paragraph 6, giving at the same time a list of the pictures and full information as to how they came to be placed in the museum.

10. The museum and library seem to be carefully attended to.

11. The question referred to in the final paragraph of the report will be considered.

(A true Copy and Extract.)

(Signed) H. B. GRIGG,
Director of Public Instruction.

To the Superintendent, School of Arts, Madras.
" Principals of First-grade Colleges and Civil Engineering College.
" Inspectors of Schools.
" Inspectress of Girls' Schools.
" Principal, School of Agriculture.
" " Government Normal School, Madras.

From E. B. HAVELL, Esq., Superintendent, School of Arts, to the Director of Public Instruction, dated Madras, 14th September 1885, No. 297.

With reference to paragrah 1 of your Proceedings, No. 5730, dated 26th August 1885, I have the honor to explain, with regard to the statement in my report of the examinations held during the year, that "one in Geometry" refers to an examination and not to a certificate.

2. With reference to paragraph 8 of the same, the apparent increase in the outstandings was due to the circumstance that a large order amounting to Rs. 1,207-6-0 was not completed until the beginning of March. The amount was adjusted on the 1st April, thus reducing the outstandings to an amount less by over Rs. 600 than the same item of the previous year.

No. 6166.

Endorsement on the above.

Submitted to Government, in continuation of letter, No. 6023, dated 11th September 1885.

(Signed) H. B. GRIGG,
Director of Public Instruction.

Madras,
15*th September* 1885.

Order—dated 7th October 1885, No. 617, Educational.

The report of the Superintendent of the School of Arts shows a satisfactory increase in the numbers attending the school, in its revenue from fees, and in its general efficiency.

2. The Government entirely share the spirit in which the reorganization of the course of instruction is being carried out. It is, as Mr. Havell says, of vital importance that handicraftsmen should be taught to look on their occupations with pride, and that the genius of the worker in metals, clay, wood and stone should be estimated at its proper value.

3. The decrease in the receipts from sales is explained to be due to the concentration of the outturn of the school on such work as properly falls within the sphere of its duties to the exclusion of undertakings which more properly appertain to the Department of Public Works.

	Rs.
1883-84	32,929
1884-85	10,813

4. The form in which the accounts are rendered is, as observed by the Director, capable of improvement. Actual receipts, capital account, and receipts from Government, should be separately shewn, with details in the latter case, the amount of the outstandings should be kept down, and every year care should be taken to show to what extent the institution is becoming self-supporting.

5. On various points raised by Mr. Havell, it is observed that the Director intends to submit proposals.

(True Extract.)

for *Chief Secretary.*

To the Director of Public Instruction.
" President, Committee of Management, School of Arts.
" Accountant-General.
" Public Works department.

Exd A. Raitt.

Govt. of {1885} Madras.

EDUCATIONAL.

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The Artistic branch appears to be progressing satisfactorily both as regards numbers and efficiency. The average attendance, though still poor, has improved in relation to attendance in the proportion of three to four. A pleasing and novel feature in the year's history is that the institution is beginning to fulfil its chief object—the supply of skilled labor for various art industries, some students having obtained suitable employment. The engagement of one as a designer of textile fabrics in a local firm is specially gratifying, for it is in relation to improved design that the school is calculated to benefit especially the industries of the country. From the three examinations held it appears that the instruction in freehand drawing was more successful than that in Geometry, five obtaining certificates against one. The failure in the latter subject is probably due to the low general educational standard of most of the students. It is not understood how one certificate in Geometry came to be issued if none of the students reached the required standard. The Superintendent is requested to explain. The Director is glad to hear that marked improvement has taken place in the work of the apprentices and that the progress made by the students was satisfactory. It is gratifying also to find that the apprentices show "an increased interest in their work and some signs of a spirit of emulation."

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(Signed) H. B. GRIGG,
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To the Director of Public Instruction.
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Govt. of {1885} Madras.

EDUCATIONAL.

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The classes have been much inconvenienced from want of suitable accommodation ; but this difficulty has since been removed by the extension and alterations of the buildings.

Wood carving, Metal work and Wood engraving.—Small classes have been arranged for practical instruction in wood carving and metal work and are now progressing satisfactorily. The wood engraving class has made considerable advance and some very creditable work has been turned out. Through the kindness of Colonel H. P. Hawkes I was enabled to procure a new supply of box-wood from the north of India which has been found to answer every purpose. This is the first time that Indian box-wood has been used in the school for engraving purposes, and probably the first time that it has been introduced into this Presidency.

Stained Glass Windows.—In the stained glass window department some of the students have received instruction in the entire process of execution as well as in design, with a view of qualifying them for independent work when they have completed their course as apprentices. Hitherto the more practical part has been left to the trained maistries and workmen employed by the school.

Reorganization of the course of instruction.—In the scheme which I have submitted for the reorganization of the course of the instruction, I have endeavoured to recognize the necessity that the work of the students should tend towards a means of livelihood for them in future. But I have mainly based my proposals upon a principle which I regard as of even greater importance that the school should avoid a condition into which similar institutions so easily drift, that of being State-aided establishments for the encouragement of portrait-painting and an inferior class of picture-painting. If pictorial art needs encouragement from the State at all, the aid given should at least stimulate a higher development. It would, moreover, be a calamity to art and to the country that the goldsmiths, workers in stone, wood, or ivory and other handicraftsmen, should be taught to look upon their several occupations with contempt, or to entertain the idea that such occupations do not afford scope for the very highest artistic genius. A sound and true development of art can only proceed by teaching the handicraftsmen of the country to look to their own occupations for exercise of their skill or genius; and by convincing them that canvas brushes and pigments are not absolutely essential for the expression of their higher aspirations. I confess it is hard to persuade them of this when they find that the public are willing to pay large sums for canvas covered without the smallest exercise of intellect, and that the thought or genius of the worker in gold or silver, wood, stone, or clay is generally estimated by scales or foot-rule.

Work executed.—The principal work executed during the year has been as follows:—

In Terracotta.—Ornamental panels for windows, and balustrades for the Post and Telegraph Offices; ornamental balustrading for the Bank of Madras buildings at Cocanada.

Stained Glass Windows.—Post and Telegraph Offices, Madras; Muir College, Allahabad; the Kirk, Madras; Arcot Church.

Wood Carving.—Large carved frame for one of the Amarávati marbles at the Central Museum.

3. *Manufacturing Department.*—This branch of the school has been fully engaged in supplying the demands of the Commissariat, Medical and Stationery departments and in the manufacture of porous cells and miscellaneous articles of pottery.

Experiments.—Experiments have been continued on a small scale with a view of obtaining a sound porcelain body, and of increasing the number of colors now available for pottery decoration. The inconvenience arising from the alterations and repairs of the buildings has, however, prevented anything like a systematic series of investigations on a sufficiently extensive scale. Consequently no very practical results have hitherto been obtained, but the knowledge acquired of the qualities of different materials will be of great value in future experiments. I have succeeded, however, in procuring kaolin from the hills round Salem, which seems to be of very superior quality, and has the great advantage of being entirely free from iron. Experiments with this are now being proceeded with. In the re-arrangement of the different departments, I have provided suitable accommodation for the carrying on of experiments in a satisfactory manner.

New Kiln.—The old disused glass furnace has been converted into a pottery kiln at a trifling cost. The outturn from it has proved satisfactory and in consumption of fuel it is more economical than the other kilns.

Store Room and Inventory of Stock.—The new store room has been fitted up and a new inventory of stock has been commenced.

4. *Accounts.*—The expenditure for the past year has been as follows:—

	Rs.	A.	P.	Rs.	A.	P.
Disbursements	19,769	14	3			
Liabilities	1,541	15	4			
Superintendent, teachers' establishment, and scholarships	6,950	1	6			
				28,261	15	1
Receipts on sales	10,813	15	6			
Fees from pupils	541	0	0			
Amount at credit with the Accountant-General	1,349	12	6			
Amount received from Government	14,708	11	2			
Outstandings	4,884	12	11			
Stock and stock materials	6,000	0	0			
Cash in Bank	5,317	2	7			
				43,615	6	8
At Credit				15,353	7	7

The large decrease in the amount of receipts on sales requires some comment. For several years past the school has undertaken a large amount of work which more properly belonged to the Public Works workshops. This included roofing and carpentry work, wrought-iron railings, and other miscellaneous work for the Lying-in Hospital, Parlákimedi Palace, Baroda Palace, and other buildings then being erected. All this work was executed by contract by maistries and workmen specially engaged for the purpose. The school charged commission for the use of the workshops and for the superintendence required; and thus the item of "Receipts on sales" was raised to a large sum. But it does not appear that the work formed any part of an educational system, although the funds raised by means of it were useful and necessary for other branches of the school. The whole of this work was completed the year before I took charge, and no orders of the kind have been received since. I do not think it by any means desirable or expedient that any more of this kind of work should be undertaken; for it would necessitate an extension of the buildings and take up a great deal of my time which might, I think, be more profitably employed in other ways. As far as pottery and the more legitimate work of the school is concerned, I can testify that during the past year the amount turned out has been very considerable, and as much as could be fairly expected. In fact, there has been great difficulty in completing the large number of orders in hand with reasonable despatch; and at no time has there been any decrease of work owing to want of orders.

The fees from pupils show an increase of nearly 100 per cent. over the amount received last year (Rs. 237) and the disbursements have fallen by more than one-half.

The sum of Rs. 610-0-4 was expended from the school funds on improvements to the school buildings, on examples and on furniture, &c., required by the increase in numbers and by the reorganization of the work of the students.

5. *Museum.*—The glass cases have been rearranged and most of the specimens have been properly labelled. A catalogue has also been commenced.

The number of visitors during the year was 45,291.

6. *Picture Gallery.*—I have some difficulty in dealing with the collection of paintings in the picture gallery in a satisfactory way. Even if I were of opinion that an exhibition of this kind would be understood or appreciated by the students, or that it would tend to raise the character of their work, I would recommend many reproductions of great works obtained by various processes of photography and photo-lithography and by other means as being of far higher artistic value, and, consequently, more suitable for teaching true principles of art than a congeries of inferior copies and hopelessly bad originals.

But it appears to me that an average student taught not only to discover, but to understand the beauties of line, form, color and arrangement, in a well-designed vase or carpet or panel of well-carved ornament, would have a better insight into true principles of art than he would acquire if placed at once before the finer subtleties of the works of great European masters. Painting and sculpture are, or should be, the means of expression of the poetry of art, but the would-be poet too often descends into mere empty rhyme or jingle; and it would, I think, be as foolish to put a collection of great European masterpieces of painting and sculpture before students such as those who attend an Indian School of Art, as to give Dante's "Inferno" for a class book in an ordinary middle-class school.

It would nevertheless be worse than folly to set up, as standards of national art, paintings and sculptures of a lower order simply because they might be more readily appreciated. If the time has arrived that the art education or "taste" of the Indian public at large or of the upper classes is so fully developed that a good collection of really great works would be otherwise than a sealed book to them, the best place for such a collection would be in a public gallery connected with the University. To the students of this school, I am sure, it would be only misleading. The only satisfactory recommendation I can make with regard to the collection at the school is that it should be disposed of in whatever way the Government may think advisable.

On the other hand, I think that the usefulness of the collection of "artware" which has now been commenced would be greatly increased by further additions. Indeed, the value of such a collection largely depends on its affording the students a varied and extensive range of subject.

7. *Library.*—The library is in fair condition. The catalogue has been properly arranged, and the books will shortly be renumbered and rearranged in accordance with it.

By transferring two almirahs which were of little use in the pottery sections, I have given the increased accommodation for the books which has been needed for some time past.

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Wood Carving.—Large carved frame for one of the Amarávati marbles at the Central Museum.

3. *Manufacturing Department.*—This branch of the school has been fully engaged in supplying the demands of the Commissariat, Medical and Stationery departments and in the manufacture of porous cells and miscellaneous articles of pottery.

Experiments.—Experiments have been continued on a small scale with a view of obtaining a sound porcelain body, and of increasing the number of colors now available for pottery decoration. The inconvenience arising from the alterations and repairs of the buildings has, however, prevented anything like a systematic series of investigations on a sufficiently extensive scale. Consequently no very practical results have hitherto been obtained, but the knowledge acquired of the qualities of different materials will be of great value in future experiments. I have succeeded, however, in procuring kaolin from the hills round Salem, which seems to be of very superior quality, and has the great advantage of being entirely free from iron. Experiments with this are now being proceeded with. In the re-arrangement of the different departments, I have provided suitable accommodation for the carrying on of experiments in a satisfactory manner.

New Kiln.—The old disused glass furnace has been converted into a pottery kiln at a trifling cost. The outturn from it has proved satisfactory and in consumption of fuel it is more economical than the other kilns.

Store Room and Inventory of Stock.—The new store room has been fitted up and a new inventory of stock has been commenced.

4. *Accounts.*—The expenditure for the past year has been as follows:—

	Rs.	A.	P.	Rs.	A.	P.
Disbursements	19,769	14	3			
Liabilities	1,541	15	4			
Superintendent, teachers' establishment, and scholarships	6,950	1	6			
				28,261	15	1
Receipts on sales	10,813	15	6			
Fees from pupils	541	0	0			
Amount at credit with the Accountant-General	1,349	12	6			
Amount received from Government	14,708	11	2			
Outstandings	4,884	12	11			
Stock and stock materials	6,000	0	0			
Cash in Bank	5,317	2	7			
				43,615	6	8
At Credit				15,353	7	7

The large decrease in the amount of receipts on sales requires some comment. For several years past the school has undertaken a large amount of work which more properly belonged to the Public Works workshops. This included roofing and carpentry work, wrought-iron railings, and other miscellaneous work for the Lying-in Hospital, Parlákimedi Palace, Baroda Palace, and other buildings then being erected. All this work was executed by contract by maistries and workmen specially engaged for the purpose. The school charged commission for the use of the workshops and for the superintendence required; and thus the item of "Receipts on sales" was raised to a large sum. But it does not appear that the work formed any part of an educational system, although the funds raised by means of it were useful and necessary for other branches of the school. The whole of this work was completed the year before I took charge, and no orders of the kind have been received since. I do not think it by any means desirable or expedient that any more of this kind of work should be undertaken; for it would necessitate an extension of the buildings and take up a great deal of my time which might, I think, be more profitably employed in other ways. As far as pottery and the more legitimate work of the school is concerned, I can testify that during the past year the amount turned out has been very considerable, and as much as could be fairly expected. In fact, there has been great difficulty in completing the large number of orders in hand with reasonable despatch; and at no time has there been any decrease of work owing to want of orders.

The fees from pupils show an increase of nearly 100 per cent. over the amount received last year (Rs. 237) and the disbursements have fallen by more than one-half.

The sum of Rs. 610-0-4 was expended from the school funds on improvements to the school buildings, on examples and on furniture, &c., required by the increase in numbers and by the reorganization of the work of the students.

5. *Museum.*—The glass cases have been rearranged and most of the specimens have been properly labelled. A catalogue has also been commenced.

The number of visitors during the year was 45,291.

6. *Picture Gallery.*—I have some difficulty in dealing with the collection of paintings in the picture gallery in a satisfactory way. Even if I were of opinion that an exhibition of this kind would be understood or appreciated by the students, or that it would tend to raise the character of their work, I would recommend many reproductions of great works obtained by various processes of photography and photo-lithography and by other means as being of far higher artistic value, and, consequently, more suitable for teaching true principles of art than a congeries of inferior copies and hopelessly bad originals.

But it appears to me that an average student taught not only to discover, but to understand the beauties of line, form, color and arrangement, in a well-designed vase or carpet or panel of well-carved ornament, would have a better insight into true principles of art than he would acquire if placed at once before the finer subtleties of the works of great European masters. Painting and sculpture are, or should be, the means of expression of the poetry of art, but the would-be poet too often descends into mere empty rhyme or jingle; and it would, I think, be as foolish to put a collection of great European masterpieces of painting and sculpture before students such as those who attend an Indian School of Art, as to give Dante's "Inferno" for a class book in an ordinary middle-class school.

It would nevertheless be worse than folly to set up, as standards of national art, paintings and sculptures of a lower order simply because they might be more readily appreciated. If the time has arrived that the art education or "taste" of the Indian public at large or of the upper classes is so fully developed that a good collection of really great works would be otherwise than a sealed book to them, the best place for such a collection would be in a public gallery connected with the University. To the students of this school, I am sure, it would be only misleading. The only satisfactory recommendation I can make with regard to the collection at the school is that it should be disposed of in whatever way the Government may think advisable.

On the other hand, I think that the usefulness of the collection of "artware" which has now been commenced would be greatly increased by further additions. Indeed, the value of such a collection largely depends on its affording the students a varied and extensive range of subject.

7. *Library.*—The library is in fair condition. The catalogue has been properly arranged, and the books will shortly be renumbered and rearranged in accordance with it.

By transferring two almirahs which were of little use in the pottery sections, I have given the increased accommodation for the books which has been needed for some time past.

8. In concluding this report, I would beg to call attention to the work in stained glass now being carried on in the Government Brickfields. Though possibly it is desirable that extensive work in very simple geometric patterns (without any attempt at what is commonly called "artistic effect") which is required for Government buildings should be executed by the staff at the brickfields, I venture to think that it is detrimental to the school that private orders should be undertaken, and I also presume to think that the Government and the public will be better served in work of a more ambitious character if it is executed at the school; for, the students and workmen employed here have far more opportunities and better supervision than those working at the Government Brickfields who, with the exception of one or two old students of the school, have had no artistic training whatever.

THE Artistic branch appears to be progressing satisfactorily both as regards numbers and efficiency. The average attendance, though still poor, has improved in relation to attendance in the proportion of three to four. A pleasing and novel feature in the year's history is that the institution is beginning to fulfil its chief object—the supply of skilled labor for various art industries, some students having obtained suitable employment. The engagement of one as a designer of textile fabrics in a local firm is specially gratifying, for it is in relation to improved design that the school is calculated to benefit especially the industries of the country. From the three examinations held it appears that the instruction in freehand drawing was more successful than that in Geometry, five obtaining certificates against one. The failure in the latter subject is probably due to the low general educational standard of most of the students. It is not understood how one certificate in Geometry came to be issued if none of the students reached the required standard. The Superintendent is requested to explain. The Director is glad to hear that marked improvement has taken place in the work of the apprentices and that the progress made by the students was satisfactory. It is gratifying also to find that the apprentices show "an increased interest in their work and some signs of a spirit of emulation."

2. The Director appreciates the difficulties under which Mr. Havell has labored in regard to instruction, but trusts that his hands will soon be strengthened by the appointment of an assistant by the Secretary of State. The difficulty in regard to accommodation has been removed by the extension and alteration of the building.

3. The Director has read with great interest the paragraph of the report regarding the instruction given and progress made in wood-carving and engraving and metal work. A carved frame was made for one of the Amarávati marbles in the Central Museum. The Superintendent will doubtless give special attention to this department. The Director takes the opportunity of thanking Colonel Hawkes for having procured a supply of box-wood, hitherto apparently not used in this Presidency, from Northern India, for engraving purposes.

4. The instruction in the manufacture of stained glass windows seems to have been judiciously conducted, the students having been instructed in the process of execution as well as of design.

5. The Director agrees with the remarks made by Mr. Havell in the paragraph of his report on the subject of the reorganization of the course of instruction. The reorganization of the courses of the school will be dealt with in connection with the scheme of technical education sanctioned by Government in their Order, No. 377, dated the 3rd June 1885. In order to accentuate the special ends for which the school has been established, change in its name, indicating its industrial character, seems desirable. The point will be referred for the orders of Government.

6. The institution seems to have been very active in its manufacturing branch, turning out a quantity of high-class work. Experiments too have been made in various directions as regards pottery, and valuable information has been collected. The discovery of superior kaolin, uncontaminated by iron, near Salem, will, it is hoped, prove an important one.

7. It is noted that a new inventory of stock has been commenced. The result should be reported in due course, as well as the valuation of the articles. An examination must invariably be held at the close of each year.

8. The expenditure amounted to Rs. 28,261-15-1 and the receipts to Rs. 43,615-5-8. The falling off in the amount of receipts on sales is satisfactorily explained, and in the general remarks made by the Superintendent, the Director concurs. It is satisfactory to note that the fees increased by 100 per cent. The net cost of the institution to Government appears to have been slightly more than in the preceding year, but the form in which the accounts are rendered seems capable of improvement. The Accountant-General will be addressed on the matter. It is observed that the outstandings are nearly six hundred rupees greater than in 1883-84. Explanation will be submitted. The liabilities are, however, less by seven hundred rupees.

9. The Superintendent should submit definite and special recommendations with reference to his paragraph 6, giving at the same time a list of the pictures and full information as to how they came to be placed in the museum.

10. The museum and library seem to be carefully attended to.

11. The question referred to in the final paragraph of the report will be considered.

(A true Copy and Extract.)

(Signed) H. B. GRIGG,
Director of Public Instruction.

To the Superintendent, School of Arts, Madras.
" Principals of First-grade Colleges and Civil Engineering College.
" Inspectors of Schools.
" Inspectress of Girls' Schools.
" Principal, School of Agriculture.
" " Government Normal School, Madras.

From E. B. HAVELL, Esq., Superintendent, School of Arts, to the Director of Public Instruction, dated Madras, 14th September 1885, No. 297.

With reference to paragrah 1 of your Proceedings, No. 5730, dated 26th August 1885, I have the honor to explain, with regard to the statement in my report of the examinations held during the year, that "one in Geometry" refers to an examination and not to a certificate.

2. With reference to paragraph 8 of the same, the apparent increase in the outstandings was due to the circumstance that a large order amounting to Rs. 1,207-6-0 was not completed until the beginning of March. The amount was adjusted on the 1st April, thus reducing the outstandings to an amount less by over Rs. 600 than the same item of the previous year.

No. 6166.

Endorsement on the above.

Submitted to Government, in continuation of letter, No. 6023, dated 11th September 1885.

MADRAS,
15*th September* 1885.

(Signed) H. B. GRIGG,
Director of Public Instruction.

ORDER—dated 7th October 1885, No. 617, Educational.

The report of the Superintendent of the School of Arts shows a satisfactory increase in the numbers attending the school, in its revenue from fees, and in its general efficiency.

2. The Government entirely share the spirit in which the reorganization of the course of instruction is being carried out. It is, as Mr. Havell says, of vital importance that handicraftsmen should be taught to look on their occupations with pride, and that the genius of the worker in metals, clay, wood and stone should be estimated at its proper value.

3. The decrease in the receipts from sales is explained to be due to the concentration of the outturn of the school on such work as properly falls within the sphere of its duties to the exclusion of undertakings which more properly appertain to the Department of Public Works.

	RS.
1883-84	32,929
1884-85	10,813

4. The form in which the accounts are rendered is, as observed by the Director, capable of improvement. Actual receipts, capital account, and receipts from Government, should be separately shewn, with details in the latter case, the amount of the outstandings should be kept down, and every year care should be taken to show to what extent the institution is becoming self-supporting.

5. On various points raised by Mr. Havell, it is observed that the Director intends to submit proposals.

(True Extract.)

W. WILSON,
for *Chief Secretary.*

To the Director of Public Instruction.
" President, Committee of Management, School of Arts.
" Accountant-General.
" Public Works department.

Exd A. Raitt.

Govt. of {1885} Madras.

EDUCATIONAL.

Issued

Recd. *Encl.*

G.O., 7th October 1885, No. 617.

OCTOBER.

School of Arts.

Reviewing the annual report on the — for the year 1884-85.

1438C. 31.8.83.
1800W. 12.8.83.
1659W. 15.7.83.
1617W. 13.7.83.
1478W. 24.6.83.
742 R. 9.4.83.
138-SW. 13.6.83.

No. 2569 W&L Nov. 3. 1885

B

Recorded

Recorded

1.11.83

[6]

Govt. of {188 } Madras.

To

The Public Works Depart

No. 2569 W&L Nov. 3. 1885

Rec'd 29/10/85.

Proceedings, dated 27 October 1885.
No. 2883 Revs

Subject.

Recording letter from the Dr. Magistrate Chingleput regarding the help rendered to the Madras Harbour works Contractor.

Mr Goodrich Understand

2.11.85

2c 5/11. Rec'd/11

With order

Govt. of {1885} Madras.

EDUCATIONAL.

Issued

Recd. *Encl.*

G.O., 7th October 1885, No. 617.

OCTOBER.

School of Arts.

Reviewing the annual report on the — for the year 1884-85.

Judicial Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

from the District Magistrate, Chingleput, No. 326, dated 7th October 1885.

I have the honor to reply to GO No: 2594, Mis: dated 25th Ultimo, regarding the help rendered to the Madras Harbour Works Contractor.

2 Mr. Thorowgood's 8th para on which I am called on to report states (1) that Mr. Morowgood had endeavoured to obtain a police guard for the Contractor; I find no evidence of this. (2) that the Contractor has obtained one for himself. A guard would have been supplied immediately on his application had he applied sooner. (3) that a slight extension of magisterial power has been given to the Sarishtadar of the District. All that I have done has been to provide that Complaints by the Contractor of fraudulent breach of Contract should be disposed of by the 3d class Magistrate, Taluq Sarishtadar of Saidapet, (who is

The evidence will be found in Proc Jud Dept No 1522 dt 29 June 1885, & 1979 dt 25.7.85. No further action however appears necessary. Cy

Nos 2144W. 14.9.85.
1433C. 31.8.83.
1800W. 12.8.83.
1659W. 15.7.83.
1617W. 13.7.83.
1478W. 24.6.83.
742 D. 9.4.83.
1385W. 13.6.83.

No. 2569 W&S Nov. 3. 85
B

Recorded.
Recorded

Dec.

1.11.85

[6]

Rec 4/90

Govt. of {188 } Madras.

To The Public Works Dept.

No. 2569 W&S Nov. 3rd 1885

Rec 29/10/85.

Proceedings, dated 27 October 1885
No. 2883 Bus

Subject.

Recording letter from the Dr. Magistrate Chingleput regarding the help rendered to the Madras Harbour works Contractor.

W&S

The Hon'ble Mr. Goodrich Inderstand

Cir.

2.11.85

2c 5/11. Rec 4/11

With order

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1885} Madras.

PUBLIC WORKS.

Dated September, 14th.

Read. *Encl.*

G.O., 14th Sept. 1885, No. 2144 W.

SEPTEMBER.

Madras Harbour

Progress report of — for August 1885, recorded.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following letter from F. N. THOROWGOOD, Esq., M. Inst. C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 3rd September 1885, No. 28 W.:—

I have the honor to submit the following report of the progress on these works during the past month of August.

2. *North pier rubble base.*—During several days in August the ground swell stopped all work in the sea, and the trains of rubble stone for the base of the north pier had to be cancelled. Throughout the whole of the month the work of tipping rubble was much retarded by the broken and confused seas, caused by the blocks in the damaged piers, in close proximity to which the tipping boats have to work. This, however, is a contingency that has always been foreseen in carrying out the reconstruction. On the whole, more work has been done at the new rubble base during August than in July, a total of 7,217 tons of stone having been deposited, making a grand total of 67,937 tons deposited in the north pier since the work of reconstruction commenced.

3. *Recovering old blocks.*—The task of recovering or attempting to recover the old concrete blocks in the fallen walls is one that necessitates a smooth sea; and, although all the gearing is in readiness for the work, hitherto I have been unable to get any satisfactory result. An attempt was made at the north pier on the 31st, but after lying over the spot for some time the diving boats had to be removed, as occasionally a breaking wave rendered the position highly dangerous.

4. The apparatus prepared for this work consists of two very excellent new cargo boats purchased by me at Karikal, each capable of sustaining 20 tons. These are fastened together by four large teakwood beams which lie athwart the boats' gunwales and are secured by heavy iron straps and bolts passing down the outside of the sides to the keel. The boats have a space of 6 feet clear between them, and over this space is fixed a powerful crab winch with treble purchase gear and treble purchase blocks attached to the chain from the crab. The gear for laying hold of a block below water consists of a pair of wrought iron claws weighing 33 cwts., having a grip of 12′ 6″ wide; these are so arranged that they can be made to descend wide open over a block, and having reached the block, a diver frees four small catches, when on heaving up with the winch the block is caught hold of and carried up by the claws. All this works admirably in experiment, but the actual test of raising a block out of the ruins, I have not yet been able to apply.

5. *South pier rubble base.*—Work of tipping rubble at the south pier has been suspended during August, as the length of work set out for the purpose is much encumbered by old blocks from the damaged wall. These have to be blasted to pieces by divers before rubble can be thrown in, and diving work at this particular spot has been most seriously interrupted by the swell which has persistently rushed through the gap in the damaged work, sweeping divers off their legs. For the last few days the swell has abated and divers have been able to work.

6. *Block-making.*—The important work of making blocks went on satisfactorily throughout August up to the 29th, when it had to be stopped for want of room on the block-making platform. The second platform is being prepared as rapidly as possible, and when this is built block-making can be renewed. Of this second platform a length of 332 feet out of a total of 1,140 feet has been completed.

The number of blocks made during August has been 203, making the total of new blocks for the restored works now 688, representing a weight of about 20,000 tons of concrete.

7. *Pallávaram quarries.*—The quarries at Pallávaram have not yet been taxed very severely, and as yet not more than four trains daily have been received. During August, 11,859 tons of stone were sent down to Madras, of which 4,642 tons were used for block-making. The railway lines at the quarry have been extended and considerable blasting operations carried on.

8. The Mussulman contractor Kázim Alí Nakavy Sáhib has succeeded in obtaining for himself what I endeavoured to obtain for him, viz., two police constables to be on duty about the quarry, and a slight extension of magisterial power to the sarishtadar of the district. This is a great help in working the quarry, and tends materially to maintaining punctuality in loading the trains, by making the coolies more afraid to run away, as is their custom after having received an advance of pay.

9. *Titan crane for north pier.*—On the 7th August the S.S. *Harrogate* arrived with the first titan crane. It was originally hoped that this machine would have been ready in March last; but numerous causes have joined to delay its completion, and now it will not be possible to do much work with it before the storm season of the north-east monsoon.

10. This massive machine arrived in 325 different pieces and packages, and weighs 105 tons. The work of erection was commenced on 17th August, and cannot be wholly completed much under two months from that date. Owing to delay in shipping the second crane for depositing the wave-breaker blocks, I have had to build this titan with its overhanging girders pointing to the north, in which position it will advance, and begin work by depositing blocks on the foreshore of the existing north pier. The titan cranes for this work of reconstruction are capable of a greater number of movements than those now lying at the bottom of the sea, which were used for the first work.

11. *Stores received on the works.*—During August, in addition to the *Harrogate* with the titan above mentioned, there arrived the S.S. *Sutlej*, *Nuddea*, *Goorkha*, and *Goa;* these brought 960 tons of Portland cement, 8 sets of points and crossings which are much needed, and 708 sâl-wood sleepers from Gopálpur, besides other stores of various kinds. I was surprised to find a charge made of Rs. 2-8-0 a ton as import duty by the Madras Municipality for the sâl-wood sleepers. These sleepers do not leave the harbour limits and never are brought into the area of jurisdiction of the municipality; so after taking the opinion of the Government Solicitor on the subject of this charge, I am at present withholding payment pending a settlement of the question.

12. I am pleased to report that Mr. A. L. Pogson arrived here 20th August and assumed charge of the post of Assistant Superintendent on the 21st August.

Order—dated 14th September 1885, No. 2144 W., Public Works.

Recorded.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.
" Examiner, Public Works Accounts.
" Marine Department.
" Judicial Department for information, with advertence to paragraph 8.
" Financial (Municipal) Department for information, with advertence to paragraph 11, and with copy of note by the Honorable Member.

Exd. J. Henricus.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1885} Madras.

PUBLIC WORKS.

Dated September, 14*th*.

Recd. *Encl.*

G.O., 14th Sept. 1885, No. 2144 W.

SEPTEMBER.

Madras Harbour

Progress report of — for August 1885, recorded.

G.O. B 1860 Way 12-8-85
" A 1659 Way 15-7-85
B A
" 1617 Way 13-7-85
" 1478 Way 24-6-85
No. 742 Cay 9-4-85
G.O. A 1385 Way 13-6-85

G.O. No. 1433 Cay 31-8-85

Judicial Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

Proceedings of the Public Works Department, No. 1659 A dated 15th July 1885.

Order:- 25th July 1885, No. 1929 (Revised).

It will be pointed out to Mr. Thorneycroft that there are two Sub magistrates located at Saidapet, and that even if the Tahsildar Sub magistrate is sometimes absent on tour, the Shirastadar Sub magistrate is always present to take and try complaints. It is therefore quite unnecessary to increase the magisterial agency. Nor is Government prepared to alter its former decision regarding the deputation of a Special Police force to the quarries. The existing arrangements are sufficient to enforce the existing laws

(True extract)

Chief Secretary

To The Public works department

2nd S.D.

G.O. A 1659 W dy 15-7-85-
G.O. B/A 1617 W dy 13-7-85-
" 1478 W dy 24-6-85-
" 16/A 1420 Ca 9-4-85-
G.O. A 1385 W dy 13-6-85-

No 1860 W dy 12th August 85

B

Cond to the
Harbour to the
S. H. H. works.
H. Works.

CE.
4-8-85

AS.
6-8-85

S. H. H. W.

Dr Ser
12/8/85

Rd 14/8

Dy Sd 21/8
22/8/85 R. 12-8-85 SS

[6]

Rec'd 854

Govt. of {188 } Madras.

To

Ste W Dept

(7)

Rec 4/8/85.

Proceedings, dated 25 7/ 188 5.
No. 1528 Mun /

Subject.

No. 1860 W dy 12th August 85

Pointing out that there are 2 Sub Magts attached to Ry Cooly who desert from Pallavaram quarries & that it is therefore necessary to increase the Magisterial agency -

Wtto. order

OF 188 .

2

1885.

Madras Harbour Works, Aug 13. 1885.

OFFICE NOTE.

To Dr W.

With reference to the G. O. herewith. I think the following might be made known to Col. Shanstewart and also to Mr. Foster Webster - I learned today, after receiving this order, that the Contractor at Pallavaram has been writing to & petitioning the Collector of Chingleput on the very subject not sanctioned in this order - viz: alteration of magisterial agency, & appointment of two constables - and he has got what he (& I) wanted! Two constables will be told off for duty at the quarry, and the Sheristadar's powers are arranged so that he shall always hear the contractor's prosecutions - whether the Tahsildar is absent

Q.6.2ns ~~1386~~ W. 13.6.85 — Q.6.1654 W.
2ns 7426 Q. 4.8.85 — 15.7.85
B.2ns 1478 W. 24.6.85 — A. 2ns 1860 W. 12.8.85
" 1617 W. 13.7.85

or not — Formerly he could not take such cases if the Tahsildar were present —

Here then the Mussulman Contractor has got for himself what I failed to obtain for him — and in contradiction apparently of this order.

I think you will agree with me that it would be well that this should be known & the Secretariat although nothing need be done in the matter, I imagine

F.W.
Supt. Allow

13.10.85

To W. for information & communication to Judicial Dept. if considered necessary.

CU.
15/8

I do not think further action is necessary. The Contractor seems to have got what he wished though not in the way he wished.

Ov 24.8.85
B. 26-8-85 24.8.85

Rec'd 7167
Rec'd 14/8/85.
Sec'l

No. 1433 Cal 31-8-85

Office Copy

No. 1433 D. C.

Draft

Government of Madras.

PUBLIC WORKS DEPARTMENT.

Chepâk, 13th August 1885

OFFICE NOTE.

From D.W.

To Supt. M. H. Works.

Your Office Note of 13 Aug: 85.

The Chief Engineer is of opinion that further action is unnecessary, the desired ~~Upon~~ ~~direct~~ ~~towards~~ ~~compound~~ having been ~~have got what~~ obtained, though in a roundabout ~~You wished through~~ way apparently ~~in a different way.~~

I return yr. copy of G.O. 1860. W. & 12th August 1885.

D.W. 26.8

1 enclo

G.O. B 1860 Way 12-8-85
" A 1659 Way 15-7-85
B A
" 1617 Way 13-7-85
" 1478 Way 24-6-85
No. 742 Cay 9-4-85
G.O. A 1385 Way 13-6-85

No. 1433 Cay 31-8-85

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1885} Madras.

PUBLIC WORKS.

Dated July, 15th.

Recd. *Encl.*

G.O., 15th July 1885, No. 1659 W. A

JULY.

Madras Harbour Works

Orders on progress report of — for June 1885.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following letter from F. N. THOROWGOOD, Esq., M. INST., C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 3rd July 1885, No. 19 W. :—

I have the honor to submit the following report of the progress on these works during the month of June.

2. *North pier works—Rubble base.*—The sea has been very troublesome during the greater part of the month, and has interfered most seriously with diving operations, with deposit of rubble, and with surveying work in setting out the new lines for working. The foreshore (to be covered hereafter with 30-ton blocks) was reported complete last month, and the only addition to it during June has been about 140 tons of rubble excavated by the divers from the harbour side of the pier and merely thrown to the sea side to be out of the way.

3. The preparation of the new rubble foundation has been proceeded with as well as circumstances would permit, and 774 tons of rubble from Pallávaram were accurately deposited. This amount together with broken pieces of blocks blasted by dynamite make a total of 1,460 tons of good material now in position for the commencement of the new work, and as the old rubble base has been properly levelled by divers, there is already provision for nearly 200 feet of foundation for the new superstructure.

4. *No advance in recovering old blocks.*—I am sorry to report that I have been unable to experiment yet on the recovery of old blocks by means of a floating crane, partly on account of almost incessant swell and partly on account of sickness on the staff.

5. *Setting out new work.*—The setting out of the line for the new work has hitherto given much trouble owing to the broken water caused by the proximity of the old and fallen walls. The system that I am adopting is more laborious than that usually used in deep sea works, where buoys are generally anchored to mark certain spots. In this particular work I propose to mark the curve with specially framed iron beacons, the positions of which will be accurately determined with theodolite and measuring line, and which will be fixed in their places by divers. I hope to have the first of these beacons fixed in three days' time, and if this arrangement proves successful, a more rapid deposit of rubble and clearing away of old blocks may be reckoned upon.

6. *South pier works—Rubble base.*—At the south pier the state of the sea interfered much with marine operations, but to a less extent than at the north. During June 7,153 tons of rubble were tipped in the new base, making a total of 13,046 deposited altogether. As mentioned with respect to the north pier, when the beacons marking the new centre line are accurately fixed (a feat demanding a quiet sea) work will make more rapid progress.

7. *Pallávaram quarries.*—On many days trains from the quarries had to be cancelled owing to roughness of sea and consequent inability to dispose of stone. As

it is impossible to foretell beforehand the state of weather and sea for the following day, it often became necessary to cancel trains by telegraph at very short notice, which, no doubt, must be awkward for the traffic department of the South Indian Railway. That Company has been so obliging as to allow the harbour works staff at Madras and Pallávaram the free use of their telegraph wires for this purpose, and has otherwise been most accommodating.

8. From the 15th June, excepting when stopped by bad weather, four trains ran daily from Pallávaram bringing down 12,187 tons of stone. Of this quantity 4,402 tons were clean granite chips for making concrete and the remainder was for rubble base.

9. With reference to the working of the Pallávaram quarries, I cannot help, with all deference, expressing my regret that I have failed to show (G.O., No. 1478 W., of 24th June 1885) the want of some change in the magisterial arrangements with regard to run-away coolies. I feel sure that I have not pointed out the existing evil sufficiently clearly, and I beg to be permitted to address Government once more on the subject, as at present the coolies desert to an extent that is most hurtful to progress, and in spite of the utmost efforts of the contractor to summon them before a magistrate, and chiefly because the Sarishtadár of Saidapett is not always available, being on tour.

10. *Concrete block-making.*—The block-making machinery has been working well up to the 25th of June, when, through a slight misunderstanding with the Madras Cement Works, it had to be stopped for four days; the misunderstanding being that, without giving the Cement Works sufficient warning, I had ordered rather more cement than they could supply. There is, however, plenty of English cement in store, and block-making was, after four days, resumed with this material, my reason for not using it at once being that, as it all came direct from the factory to Madras *viâ* canal, it was likely to require four or five weeks' exposure to mature it.

11. During June 176 concrete blocks for the new work were turned out, making now a total of 259. Of these blocks 166 are for the "wave-breakers," and 93 are for the superstructure of the two piers.

12. *Tools and plant, &c.*—Two new moulds for making concrete blocks have been completed, and a covered wagon made for conveying blasting materials to the ends of the piers. Several repairs were executed upon the locomotive engines and cranes, and all machinery was kept in good order. The railway lines have been kept in as good order as the worn-out state of the rails will allow. A new boat-shed for the harbour works boats has been completed, and a small new store-shed for ropes, pulley-blocks, &c., has been taken in hand.

13. *Stores received on works.*—Some much-needed stores have been received during June, of which the following are the most important:—a boiler for a steam crane, which will enable me to move some of the old concrete blocks and re-build another block platform; a large consignment of 50-lb. and 75-lb. rails and fishplates, which are most seriously needed, the present lines being very unsafe; besides these, turpentine, boat oars, emery cloth, iron chain, &c., have arrived.

14. *Staff of office and on works.*—The death of Mr. Beardmore, on the 2nd June, already reported and commented on, with regret, in G.O., No. 1385, of 13th June, need only be noted here as a marked event during the month. On 7th June Mr. Beardmore's principal clerk (whose illness I drew attention to in paragraph 18 of my last report), Mr. E. A. D'Vaz, died of heat apoplexy. As he had charge of all Mr. Beardmore's papers in the office, referring to cement testing, boundaries of properties, drainage works, &c., his death was not only most distressing but added greatly to the difficulties of carrying on office work. Mr. Underdown, foreman diver, reported sick in paragraph 2 of my last report, is quite recovered; but most unfortunately, Mr. G. Gunther, foreman engineer, and Mr. J. Lowe, supervisor of block-making, have both been completely disabled, by injuries received on the works, since 13th June. They are now able to walk, and are on a fair road to complete recovery; but it is needless to say how disconcerting all these disasters have been just when all possible energy is needed. I beg to be allowed to record that but for the great energy of Mr. G. Lowe, head foreman, and for the able and willing assistance of

Mr. Dumphy, our lately appointed Sub-Engineer, the deficiency on the staff would have been sadly felt.

15. In conclusion I have to state that I trust the arrival of Mr. A. L. Pogson is now not far distant; for, without wishing to magnify my labors in the least, I would, with much deference, draw attention to the fact that from 26th April I have had no assistant whatever, and I begin to find I cannot do justice to the two-fold duties, especially at this time of year.

Order—dated 15th July 1885, No. 1659 W./A, Public Works.

Taking into consideration the difficulties which have been encountered, arising from the state of the weather and from sickness among the staff, the Right Honorable the Governor in Council considers the progress made on the Madras harbour works during June to be satisfactory.

2. The Government are well aware of the large amount of work that has unavoidably fallen on the Superintendent during the past two months. The sanction of the Government of India to the appointment of Mr. A. L. Pogson as Assistant Superintendent is daily expected.

3. Paragraph 9 of Mr. Thorowgood's letter will be communicated to the Judicial Department for consideration, with advertence to G.O., dated 9th June 1885, No. 1522.

4. Paragraph 7 will be communicated to the Consulting Engineer for Railways.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.
" Consulting Engineer for Railways.
" Examiner, Public Works Accounts.
" Judicial Department.
" Marine "

Exd. E. Fernandez.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1885} Madras.

PUBLIC WORKS.

Dated July, 15th.

Recd. *Encl.*

G.O., 15th July 1885, No. 1659 W. / A

JULY.

Madras Harbour Works

Orders on progress report of — for June 1885.

[6]

Govt. of {188 } Madras.

To

The W Dept

Proceedings, dated
No. 1695 Wks

188 5.

Subject.

Re progress report of Madras Harbour Works for May 1885

Recorded with reference to G.O. No. 1478 W dated 24th June/85

Cu.
7.7.85

Recording Proceedings of Govt, passing orders on the progress report of Madras Harbour Works for May 1885

With order

Judicial Department

Proceedings of the Madras Government

Read the following

13TH JUNE 1885, No. 1385 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following letter from F. N. THOROWGOOD, Esq., M. INST., C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated 6th June 1885, No. 13 W.:—

I have the honor to submit the following report of the progress on these works during the past month of May, and I must preface it with the remark that it would have been submitted earlier if I had not been most seriously pressed with work owing to sickness on the staff.

2. *North pier works.*—Divers have been working at levelling the rubble base to receive the new blocks for restored work, and at blowing up concrete blocks in the line of the new foundations. There have now been twenty-one blocks blown up by dynamite, of which number twelve were destroyed in May; these represent the equivalent to depositing 567 tons of rubble base in the new line of foundation. Latterly this work has been retarded owing to the illness of Mr. C. Underdown, foreman diver, who is under medical treatment, which prevents him from diving, but permits of his superintending the diving staff who are not so experienced. The medical officer at the general hospital thinks that a little rest is all that is required in his case, and this is what I am endeavouring to give him. The month of May is always a trying one for those who have much out-of-door work to do.

3. *Foreshore north pier.*—During May 2,282 tons of stone were deposited in the foreshore of the north pier. This work is now completed and ready to receive the wave-braker blocks so soon as the machines for depositing them are erected. These machines are, I believe, on their way out, and may shortly be expected in Madras. I have not yet been able to experiment upon recovering old blocks from the line of new work, but I have obtained two excellent boats at last, from Karical, which will be fitted out for the purpose.

4. *Railway line on north pier.*—The railway line on the north pier has been extended 393 feet for the purpose of loading the boats for depositing rubble in the new foundations, but the persistent swell from the south-east has prevented work from being carried on under this head.

5. The superstructure of the north pier has been repaired where necessary so as to be fit to receive the rails for carrying the Titan and other cranes.

6. *South pier works, rubble base.*—At the south pier the railway lines were extended with old rails for a length of 611 feet for the purpose of tipping rubble in the new line of foundations, and from the 13th to the end of the month 5,893 tons of stone were deposited.

7. *Contract for tipping rubble base.*—All the work of depositing rubble from boats since 1st May has been carried on under the new contract, referred to in my report for March (G.O., No. 989 W., of 27th April 1885, paragraph 12 of my letter therewith),

at lower rates than ever before obtained. It is satisfactory to be able to report that the work has, up to this date, been satisfactorily performed in every way.

8. *Concrete block-making.*—For the future section of work eighty-eight of the concrete blocks now on stock have been altered to suit the new design, of these thirty-five were altered in May. The alteration consists in dressing them down and plastering them with granite chips in strong cement so as to bring them exactly to the tapering form required for fitting into the curve of the new work.

9. *Block-making by machinery.*—On the 18th the machinery for block-making was started, and has been working ever since. As might be expected, on the first day the stone-crushing machines, concrete mixers, and stationary engine were occasionally pulled up by hot bearings. Since the first day all has gone well. The blocks for the abutment of the new work are complicated in shape, and required more time and trouble expended on them than will be the case with other blocks hereafter. Since the 18th there have been eighty-three blocks made by machinery for the new design, some made from Madras cement and some from the English cement imported in 1882.

10. *Block frames.*—The carpenters have been hard at work making the moulds or frames for the new blocks. These frames are of themselves very heavy pieces of work, and have to be fitted together with the most perfect accuracy. There are now seven new ones built, of which three were completed in May.

11. *Railway lines in block-yard.*—The railway lines for carrying the boxes of liquid concrete were extended 217 feet, thus commanding the full length of the block ground.

12. *New contract for block-making.*—The making of the concrete blocks has been carried on since 18th May under the new contract, and at a lower rate than formerly (*vide* Government order before quoted) and all is going on satisfactorily.

13. *Pallávaram quarries.*—The quarries at Pallávaram have been working fairly well, but the want of increased railway sidings is felt. Since the 13th May three trains have been running daily, and from 8th June four trains will be worked. A total quantity of 8,741 tons of stone has been received from the quarry during the month of May.

14. While on the subject of the Pallávaram work I would venture to ask if orders may soon be passed on my letter, No. 1 W., of 2nd April 1885, asking for the assistance of some magisterial power in keeping the coolies to their work.

15. *Miscellaneous.*—In order to be able to extend the railway lines on the two piers it became necessary to remove some of the rails which were laid down in 1880-81 for forming protecting revetment to the north of the harbour. These rails have not been needed since the coast to the north became Government property, and if additional works should at a future date be desirable, necessitating again the use of a line of rails, the old rails can be replaced, as I am informed the new railway material is shipped by this time.

16. The influx of cement from England necessitated using the large cement store which was built in 1877 outside the boundary of these works and adjacent to the old town wall behind the municipal pumping station for drainage. The municipal pumping station has cut off all available access to this shed, but in November 1883, on my representing this fact to the Vice-President, I was informed that a road would be made before February 1884. As this road is not yet made, I had to cut through the town wall and so form a new entrance to the shed. This was done with the consent of the municipality and at the cost of the harbour works.

17. *Stores and plant received.*—During May the Steamers *Cormorant*, *Sirsa*, *Tasmania*, and *Avocet* arrived with stores for the works. A total of 5,587 casks of cement was received, of which 994 were brought by the *Sirsa* transhipped from the *India* at Colombo. These casks were all slightly damaged. The other stores consisted of white paint, black paint, red lead, hides, claws for lifting blocks, diving dresses, boat oars, &c., and are all much needed.

18. *Illness of Mr. Beardmore.*—Although I have already had to report the sad death, on 2nd June, of Mr. N. St. B. Beardmore, Assistant Superintendent of these works,

yet as this report is only up to 31st May I can only draw attention to the fact that during May he was not able to be out on the works, although until near the end of the month he was able to render every assistance in consultation on details connected with the work. Unfortunately one of the office clerks, who was specially under Mr. Beardmore, was suddenly taken seriously ill also, and these events have necessarily thrown my work rather into arrears.

ORDER—dated 13th June 1885, No. 1385 W., Public Works.

Recorded.

2. Paragraph 14 will be communicated to the Judicial Department, with the request that early orders may issue on this department No. 742 C., dated 9th April 1885.

3. The Government have received with regret the report of the death of Mr. N. St. B. Beardmore, who, since October 1875, rendered excellent service as Assistant Superintendent of the Harbour Works.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.
" Examiner, Public Works Accounts.
" Judicial Department.
" Marine "

Order thereon 26th June 1885-No. 1695-Mis

Recorded, with reference to G.O. dated 9th June 1885-No. 1522 Mis

/ True Extract /

H A Wright
Ag Asstt Secretary

Exd. E. Fernandez.
Spare Copies

To The Public Works Dept

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1885} Madras.

PUBLIC WORKS.

Dated June, 13th.

Recd. *Encl.*

G.O., 13th June 1885, No. 1385 W.

JUNE.

Madras Harbour Works

Orders on progress report of — for May 1885.

Rec'd 5764 (10)

[6]

Govt. of {188 } Madras.

To

The Mr Dept

Rec'd 4/7/85.

Proceedings, dated 26/6/ 1885.
No. 1695 Mar

Subject.

Re Mr 1617 Way 13-7-85

Recorded, with reference to G.O. No. 1478 W dy 24th June/85

Cd.
7.7.85

Recordg Proceedgs of Govt, passing orders on the progress report of Madras Harbour Works for May 1885

Witto order

Cd.
8.7.85

Ans. 357.

Rec'd 5778 (11)

[6]

Govt. of {188 } Madras.

To

The Mr Dept

Rec'd 8/6/85.

Proceedings, dated 9 June 1885
No. 1522 Mar

Subject.

Re No 1478 Way 24-6-85

Stating that the appointment of a special Magistrate in the interest of harbour works at Palavaram is unnecessary

Witto order

No 1478 Way 24th June/85

6

Comm to the Supt. Harbour Works with reference to his No. 1W dy 2nd April/85, and para 2 of G.O. No. 1385W dated 13th June 1885.

Cd.
18.6.85

W.
19.6.85

Note. The G.O. referred to is now in the press. The following paragraph from the Supt's progress report in connection with this matter is made and in the order Judl. Dept is asked to issue orders early on the subject.

I am Hervorken
&
25/6

Ans. 84/6.
18.6.85

Rec'd 7426. dy. 4.85

Judicial Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

from the Public Works Department, No 742 C, dated 9th April 1885. transferring letter from the Superintendent, Madras Harbour Works, requesting that a Magistrate may be appointed in the interest of the Harbour Works at Palavaram.

Report from the Collector of Chingleput, No 81, dated 7th May 1885.

Order 9th June 1885. No 1522 (Mis)

The appointment of a Special Magistrate is unnecessary. as the Sarishtadar Magistrate of Saidapet is always present at that station, and is empowered to dispose of cases under Act XIII of 1859. The processes issued by his Court can be executed in the usual manner by the Police of Pallavaram, and until this procedure has been proved to be defective the Government are not prepared to sanction the entertainment of a special Police guard for this purpose.

/ True Extract /

Justin Chichester

Under Secy to Govt

To

The Public Works Dept /

18

P. W. DEPART.

Current No. 3135

From

Hon Supt Madras Harbour Works.

ENCLOS.—

No. 1 W.
Dated 2nd April 85
Received 4 — " — "

SUBJECT.

Asks that a magistrate may be appointed in the interest of the Harbour works at Pallaveram.

DISPOSAL.

No. 742 C Dated 9th April 1885

Transferred to the Judicial Department for early Consideration

Sd C. Bowen Major R.E.
Under Secy to Govt P.W.D.

To

The Judicial Dept /

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1885} Madras.

PUBLIC WORKS.

Dated June, 13th.

Recd. Encl.

G.O., 13th June 1885, No. 1385 W.

JUNE.

Madras Harbour Works

Orders on progress report of — for May 1885.

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PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
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Order—dated 13th June 1885, No. 1385 W., Public Works.

Recorded.

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(True Extract.)

Major, R.E.,
Under Secy. to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.
" Examiner, Public Works Accounts.
" Judicial Department.
" Marine "

Exd. E. Fernandez.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1885} Madras.

PUBLIC WORKS.

Dated June, 13th.

Recd. *Encl.*

G.O., 13th June 1885, No. 1385 W.

JUNE.

Madras Harbour Works

Orders on progress report of — for May 1885.