

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	2930	Press
	329.530	Mis.
Dated	28 - 11 - 1865	

Not to be folded or roughly handled

*Proceedings of the Madras Government. Revenue Department,
28th November 1865.*

No. 529. Read the following Proceedings of the Board of Revenue, dated 3rd November 1865, No. 7,078A.

Read the following papers:—

From the Superintendent of the Government Central Museum, to the Acting Sub-Secretary to the Board of Revenue, dated Madras, 27th May 1865, No. 106.

1. I have the honor to submit the following report upon the twelve samples of cotton received* with your letter, No. 2,621, of the 19th instant.

* On the 22nd instant.

2. Having been informed that the Saw Gin is supposed to injure the staple, *by shortening the fibre*, my inquiries were particularly directed to this point. The method of examination I pursued is stated below.

3. From each sample of cotton I prepared four tufts, taking the cotton for each tuft from a different part of the sample. To each tuft, as soon as it was tied up, I attached a ticket. In this way all chance of mistake was avoided when comparing the several tufts. The New Orleans cotton I have distinguished by the letter A., the Egyptian by B., and the Oopum by C.; the numbers on the tickets are those on the parcels from which the cotton was taken. I have forwarded these forty-eight tufts, that in case the Members of the Board should like to compare their lengths, they may have the opportunity of doing so. It will be necessary to smooth each tuft carefully between the thumb and finger previous to comparing them.

4. The tufts having been prepared, I selected from each number of the New Orleans cotton the longest tufts. On comparing them I found there was scarcely any difference in the length of the tufts: the shortest tufts of each gave a similar result.

5. The Egyptian cotton (B.) treated in the same way gave a different result. The tufts of each parcel were so nearly of the same length that, with one exception, I could not distinguish them as long and short. But when the different parcels were compared together, three of those marked IV. B. were found a little longer than those of the other samples. The exception, referred to above, was in this sample, which had one tuft shorter than the other three, but about the same length as all the tufts of the other three parcels.

6. In the Oopum cotton (C.) the longest tuft of No. II. was longer than those of I., III., and IV., which were as nearly as possible of the same length. There was scarcely any difference in the length of the shortest tufts of this cotton.

7. It appears from the foregoing that while there is, except in the Egyptian cotton (B.), a (sometimes considerable) difference in the length of the tufts from the *same sample*, there is no perceptible difference in the length of the *same cotton* cleaned with *different Gins*. If, therefore, the fibre is shortened by the Saw Gin, which I see no reason to believe, it is evidently equally shortened by the roller Gins, which are not supposed to have that defect.

8. I examined a little of each sample with the microscope, using a power of 210 diameters, or about 44,000 superficial. In No. I., New Orleans, I found one very fine fibre, ~~and~~ of an inch in diameter, nearly broken across, and a similar

fibre in the same condition was found in No. IV. I do not consider that either was fractured by the Gin, though it may have been. I only mention it to shew that if the fibres had been injured by the Saw Gin, it must have been seen, and the only conclusion that I can come to, is, that neither of the cottons upon which I am now reporting have been injured by the saw.

9. Assuming then, as it appears to me there is reason to do, that the Saw Gin does not injure the fibre, the next question is—

Which Gin will do the most work? This is easily answered in favour of the Emery Patent Gin. I may readily assume that with its thirteen saws, and two men, it turned out twice as much cotton as the Dharwar Gin with eighteen saws and five men, i. e., it did twice the work with two-fifths of the power, or it did five times as much work. I believe it did a great deal more, but its comparative working power can only be fairly tested by working both machines for the same time with their ordinary power and weighing the out-turn of cleaned cotton. I learn that four men is the proper number to work the Dharwar Gin, but there were five when I saw it worked; the fifth man must have been in the way.

10. The Dharwar Gin should, apparently, turn the cotton out in a cleaner condition, but there is not, in the samples I have examined, such a notable difference in that respect as to give it a very strong claim to preference on that account.

11. The amount of work performed by the Macarthy, and the Wanklyn Cottage Gins, was so small in comparison with the other two, that it is unnecessary to say anything further about them, unless to observe that neither of them turn the cotton out so clean as the Dharwar and Emery Saw Gins.

12. I have only to add that I have given all the care I could to this inquiry, which has occupied all my time for four days. The difference in working power of the Saw Gin and the Churka, and its modifications, is so great that any time and labour is well bestowed that shall disabuse the mind of the belief that the saw is injurious to cotton grown in India. This is the fourth time that I have examined cotton with reference to that point, and the result has always been to find the staple uninjured. But there cannot be the slightest doubt that if the fibres were torn, the microscope would show it.

From the Honorary Secretary to the Madras Cotton Cleaning Company, (Limited,) to the Acting Sub-Secretary to the Board of Revenue, dated Madras, 7th June 1865.

1. The samples of cotton referred to in your communication of the 19th ultimo, have been examined by the Directors of my Company, and the following are the opinions arrived at with regard to the points mentioned in your paragraph 3:—

1st.—The fibres of the samples cleaned by the Emery Gin appears to be the best, generally.

2nd. Those cleaned by the Macarthy and Wanklyn come next.

3rd.—Those by the Dharwar Gin last.

2. As far as can be judged the Macarthy and the Wanklyn appear to be the Gins best adapted to clean the common country cotton. I have, however, to state that the samples sent, besides being much too small to allow of satisfactory examination, appear all to be of mixed descriptions. The Oopum has some Egyptian mixed with it, the New Orleans seems to contain nearly quarter part of

Egyptian, and the Egyptian about the same proportion of New Orleans. It is thus impossible to form a very accurate judgment upon either of the points sought to be elucidated.

From the Vice-Chairman, Chamber of Commerce, to the Acting Sub-Secretary to the Board of Revenue, dated Madras, 8th June 1865.

1. I have the honor to acknowledge receipt of your letter, under date the 19th ultimo, No. 2,621, accompanied by twelve samples of cotton, namely four of New Orleans, four of Egyptian, and four of Oopum, which had been cleaned by the Dharwar 18 Saw, the Emery Patent Saw, the Macarthy, and the Wanklyn Cottage Gins. With the view of testing the applicability of these Gins to the above cottons, the Chamber have carefully examined the samples submitted by the Board for their opinion, and have desired me now to place the results of that examination before you.

2. As regards the New Orleans and Egyptian cotton samples, those cleaned by the Macarthy Gin are decidedly the best. The staple in each case is comparatively uninjured, and the only objection that is raised to the samples is that they are both discolored and seedy. This drawback can hardly be directly attributable to the Gin used, but it seems probable that inferior Ruppas have been supplied in this case, since the samples cleaned by the other machines are not discolored to the same extent.

3. The Wanklyn Cottage Gin appears to have injured the new Orleans and Egyptian cottons, and the staple is irregular in each case. The Emery Patent Saw seems still more unsuited to these cottons, and the Dharwar 18 Saw ruins the staple completely; this result being more marked in the Egyptian than in the other cotton.

4. The four Oopum samples were then carefully compared, and preference was unanimously given to that cleaned by the Wanklyn Cottage Gin. The two samples cleaned respectively by the Emery, and Macarthy Gins, are almost equally irregular, and deteriorated, and the Chamber are decidedly of opinion that these Gins are not adapted for the treatment of indigenous cotton. The staple of the sample cleaned by the Dharwar 18 Saw Gin is cut, but the cotton is thought superior to that cleaned by the Emery and Macarthy machines. The sample cleaned by the Wanklyn Cottage Gin, though far superior in length of staple to the others, is also not regular, and although, of the four Gins above-named, the Wanklyn is decidedly the best adapted for Oopum cotton, the Chamber are not prepared to state that this Gin can be confidently recommended for the treatment of short-stapled cotton.

1. Resolved that the foregoing papers be submitted for the information of Government.

2. They contain the opinions of the Superintendent of the Government Central Museum, the Madras Cotton Cleaning Company, and the Madras Chamber of Commerce, upon several of the Gins which have been sent out from England for trial in this country.

Government Order, 15th March 1865, No. 560.
Do. 9th May do. „ 957.

3. Under the Orders of Government marginally noted, an experimental trial took place at the Agri-Horticultural Society's Gardens on the 11th May last.

4. The four Gins named in the margin were fairly tested on this occasion. The Churka Gin (Platt and Richardson), of which a specimen was

in the shed, (vide Board's Proceedings, dated 5th May 1865, No. 2,279,) choked after a very brief period and, from its complicated character, is never likely to be of any practical use.

5. The other Gins were tested with *Egyptian, New Orleans, and common country cotton (Oopum)*. A sample of each kind of cotton from each Gin was afterwards selected for comparison, and the opinion of the authorities, whose letters are printed above, was sought (1) as to the condition of the fibre in each case compared with the same kind of cotton cleaned by the other Gins, and (2) as to which of the four Gins is best adapted for the treatment of cotton grown in India.

6. The Government will observe how different are the views expressed. Captain Mitchell, the Superintendent of the Government Museum, who seems to have devoted much time and trouble to the investigation, is clearly of opinion that the cotton is *not* injured by the *Saw* Gins; and that the fibre is just as much shortened by the roller Gins as by the

* Dharwar and Emery.

Saw. In point of cleanliness he gives the palm to the Saw over the roller Gins, and of the two former kind considers the Emery the most effective. The very small out-turn of the Macarthy and Wanklyn (Cottage) roller Gins puts these out of all comparison.

7. The Cotton Cleaning Company, on the other hand, consider the Macarthy and Wanklyn roller Gins as best adapted to clean common country cotton. They allow that the fibre of the samples cleaned by the Emery appears to be the best, while that cleaned by the Dharwar 18 Saw Gins is the produce of the Cottage Gins, was so small in comparison with the produce of the two roller Gins.

8. The Chamber of Commerce again hold that the Wanklyn "is the best adapted for Oopum cotton," though they are not prepared to state that the Gin can be confidently recommended for the treatment of short staple. The Emery and Macarthy Gins are *not*, in their opinion, adapted for the treatment of indigeous cotton. The Dharwar cuts the staple.

9. In regard to the samples of foreign cotton, the Macarthy appears to have succeeded best; the Wanklyn stands next; and the two Saw Gins are condemned as entirely unsuitable.

10. The following summary of the correspondence which has taken place regarding the several Gins mentioned in paragraph 2 of the Board's Proceedings dated 5th May last, No. 2,279, contains a brief history of the efforts which have been made to introduce them into the chief cotton growing Districts, and with what effect:—

DHARWAR 18 SAW GINS.

The *eighteen Cotton Saw Gin*, referred to in the correspondence marginally noted, was received from the Cotton

Government Order, 10th June 1863, No. 1,007.
Do. 15th July " " 1,291.
Board's Proceedings, 22nd Aug. " " 5,255.
Government Order, 8th Sept. " " 1,652.
Board's Proceedings, 11th " " " 5,739.

Government Order, 9th Dec. 1863, No. 2,240.
Board's Proceedings, 6th Jan. 1864, " " 46.
Do. 2nd Feb. " " " 712.

Factory at Dharwar, and sent for experimental trial to the Horticultural Societies' Gardens, where it still remains. In the sequence of Dr. Hunter's favorable report upon it, three more Gins of the same kind were asked for on account of the Collectors of Nellore, Tinnevely,

Bellary. The Gin for Bellary was sent direct from the factory; the two for Tinnevely and Nellore were forwarded by the Board to those Districts.

Board's Procs.,	22nd April 1864, No. 2,435.
Govt. Order,	7th May " " 791.
Board's Procs.,	10th " " " 2,825.
Do.	20th " " " 3,114.
Govt. Order.,	27th " " " 912.
Board's Procs.,	31st " " " 3,301.
Do.	16th July " " 4,446.

The Collector of Tinnevely having reported unfavorably of the working of the Gin sent to him, Government desired that it should be offered for trial to the Collector of Coimbatore. The Gin was returned from Tinnevely, but as the Collector of Coimbatore said it was useless to try it in his District, it was

not sent there. It was then proposed to send it to Bellary after certain necessary repairs had been executed, but it has since been found that to put it in working order would cost more than a new machine.

Board's Procs.,	14th May 1864, No. 2,966.
Do.	20th " " " 3,113.

The report from the Collector of Nellore was not altogether favorable to the working of the Gin, and he was requested to ascertain whether the Collector of Cuddapah required it, and if so, to send it on to him. The Gin was accordingly forwarded to Cuddapah in July last, and placed in charge of the Deputy Collector Royappa Puntulu, at Jammalamadugu. The machine, however, proved to be out of order, and the Ryots stated their unwillingness to try it, as they were content with the common Churka. The Collector was, in the first instance, requested to send for the Gin to Cuddapah, and after having it repaired, to give the Ryots a further opportunity of examining its merits. It subsequently appeared that no one at Cuddapah was competent to make the requisite repairs, and the Gin was then returned to the Presidency.

To Nellore,	16th March 1865, No. 285.
Board's Procs.,	20th May " " 2,675.
Do.	11th July " " 3,901.
Do.	8th August " " 4,715.

ever, proved to be out of order, and the Ryots stated their unwillingness to try it, as they were content with the common Churka. The Collector was, in the first instance, requested to send for the Gin to Cuddapah, and after having it repaired, to give the Ryots a further opportunity of examining its merits. It subsequently appeared that no one at Cuddapah was competent to make the requisite repairs, and the Gin was then returned to the Presidency.

Board's Proceedings, 22nd January 1864, No. 427.

Board's Procs.,	31st May 1865, No. 2,839.
Govt. Order,	9th June " " 1,251.

The Collector of Bellary wanted to sell the Gin sent to that District, but was told to allow the use of it to cotton growers, so that those who were not well acquainted with a machine of the kind might see it at work. It was placed in the Cutcherry at Hoovinhadgally, but no cotton growers made use of it, or even came to inspect it. It was then exhibited at work during the settlement of the Talook by the Head Assistant, and at the suggestion of this Officer, who considered that it was useless to let it remain unprofitably in a building where it was liable to deteriorate from rust, the Board recommended and the Government sanctioned its sale by auction.

WANKLYN GINS.

Govt. Order, 6th July 1863, No. 1,204.
Board's Procs., 17th " " 4,399,
Do. 10th November " " 7,137,
Do. 4th December " " 7,636.
Govt. Order, 21st " " 2,343.
Board's Procs., 6th January 1864, " 49.
Official Memorandum to Dr. Hunter, 16th
March 1865, No. 283.

Govt. Order, 17th February 1864, No. 287.
Board's Procs., 11th June " " 3,604.

One of these Gins was received from Messrs. Line & Co., and sent for trial to the Collector of Coimbatore, who wrote unfavorably of its working. On its return from Coimbatore it was sent to the Agri-Horticultural Society for further trial and report. This report has not been received.

Subsequently two more of the Wanklyn Gins were sent direct to the Collector of Coimbatore by Messrs. Line & Co. The working of these also proved unsatisfactory, and this circumstance was reported to Government. The Collector has since returned them to the Board's Office.

CHURKA AND MACARTHY GINS.

Eight *Churka* and two *Macarthy* Gins were received by the "Robert Barbour" in the middle of 1864. One of each sort was sent to the Agri-Horticultural Society for trial and report. They were found to work very imperfectly, and Mr. Doderet was sent to adjust them. Dr. Hunter subsequently reported that the adjustment of one of them was not quite satisfactory, and they were again put in order. Dr. Hunter then reported on both Gins, the *Macarthy*

From the Inspector General of Ordnance and
Magazines, 22nd April 1864, No. 10,080.
Board's Procs., 14th May 1864, No. 2,963.
Govt. Order, 4th June 1864, No. 955.
From Superintendent, Gardens, 20th June 1864.
To " " 21st June 1864,

25th July 1864, No. 495.
Official Memorandum, 26th July 1864, No. 637.
From Dr. Hunter, 12th August 1864, No. 566.
Board's Proceedings, 17th Augt. 1864, No. 5,281.

The *Churka* was too complex and defective, and did not work satisfactorily. The Board proposed to ask Mr. Doderet's opinion on the former, and to sell the *Churka* Gins, keeping one as a specimen. Both these suggestions were approved.

Mr. Doderet was anxious to try his hand on both Gins, and accordingly made an attempt. He could, however, make nothing of the *Churka* Gin. The Board subsequently obtained from the Honorary Secretary to the Agri-Horticultural Society the following description of the *Churka* (reported upon under the impression that it was the *Macarthy*). It appeared that the Gin had been again repeatedly tried, but that it did not work satisfactorily. The principles on which it is constructed were apparently faulty in the following points:—

- 1st.—The cylinder for catching the cotton is too small, and clogs after a few revolutions.
- 2nd.—There are too many small wheels in the machine, and they cause much friction and loss of power, besides entangling the cotton, and drawing in the seeds.

3rd.—The wooden rollers get worn away at the ends, and the leather covering of the largest starts at the points of junction.

In consideration of these defects, the machine, Dr. Hunter is of opinion, can never be made to work satisfactorily.

This report was laid* before Government, when it was discovered† that the foregoing description did not apply to the Board's Proceedings went in.

Macarthy, as had been supposed, when the Board's Proceedings went in. In the meantime the Gins were offered to the Madras Cotton Cleaning Company (28th February 1865, No. 1,200). The Secretary of that body inspected one of the Platt Gins, but found it too small and complicated for the purposes of his Company. The Macarthy Gin he did not see.

COTTAGE SAW-GIN, (JAMESON,) ASHTON-ON-LYNE PATTERN.

The Inspector General of Ordnance and Magazines having brought to notice that there were nineteen of these Gins in

Govt. Order, 23rd February 1864, No. 321.
Board's Procs., 25th February 1864, No. 1,231.

Board's Procs. 29th June 1864, No. 4,020.

Board's Procs., 17th August 1864, No. 5,282.

† 6th August 1864, No. 5,038.
Finnevelly, Madura, Kistna, Nellore, Salem,
and Trichinopoly.

§ 20th August 1864, No. 1,508.

report in due course on the working of these Gins. The Gin which had been under trial at the Gardens was forwarded to Coimbatore, making altogether seven sent out.

Board's Proceedings, 29th September 1864,
No. 6,378.
Government Order, 21th Oct. 1864, No. 1,957.
Board's Proceedings, 23rd June 1865,
No. 3,497.

Board's Proceedings, 9th Oct. 1865, No. 6,374.

The result of the working of the Gin sent to Coimbatore was unfavorable. The Gin has since been returned to Madras. The Collector of Madura reports that the out-turn of clean cotton, obtained by the ordinary process used by the Ryots, is greater than by this Gin, which moreover does not clear the wool from the seeds perfectly. The Ryots do not refer the machine to their own *Churkas*.

From Nellore, 21st June 1865, No. 138.

In Nellore, the working of the Gin was not considered satisfactory, the Natives being of opinion, that though

*Proceedings of the Madras Government, Revenue Department,
28th November 1865.*

the cotton was well cleaned, the fibre was so much injured that it would be difficult to make strong thread from it.

Board's Proceedings, 11th July 1865, No. 3,925. The Gin could not be got to work satisfactorily in Tinnevely. It was found to tear the already too short staple to pieces.

From Trichinopoly, 5th July 1865, No. 132.

In Trichinopoly, little interest was shewn. After some difficulty, a few cotton merchants attended to see the Gin at work, and they considered that it ruined the staple; though in other respects it seemed to work well.

No reports have been received from Kistna or Salem.

The following statement shews the number of Gins which have from time to time been distributed, their names, and the localities where they at present are. The Board recommend that a specimen of each should be left at the Agri-Horticultural Gardens, and the rest sold after the requisite repairs have been made to those which need it:—

Names.	Number received.	Present distribution.
Dharwar 18 Saw	4	1 Agri-Horticultural Gardens. 2 Revenue Board office (out of repair). 1 Sold by auction in Bellary.
Wanklyn	3	1 Agri-Horticultural Gardens. 2 Revenue Board office. 1 Revenue Board office.
Cottage Saw (Jameson)	7	1 Tinnevely. 1 Madura. 1 Kistna. 1 Salem. 1 Nellore. 1 Trichinopoly.
Churka Gin (Platt and Brothers)	8	1 Agri-Horticultural Gardens. 7 Revenue Board office.
Macarthy (Platt and Richardson)	2	1 Agri-Horticultural Gardens. 1 Revenue Board office.
Emery...	2	1 Agri-Horticultural Gardens. 1 Revenue Board office.

No. 530.

ORDER THEREON, 28th November 1865, No. 2,930.

Miscellaneous.

1. Ordered that the above report be forwarded to the Secretary of State for India, and that copy be furnished to the Bombay Government, for the information of Dr. Forbes.

2. The Government desire that a further and more complete trial be made of the Saw Gins, to determine if possible beyond doubt their effect on the fibre.

3. The rest may be disposed of as proposed by the Board, an estimate of value and cost of repair being made before any expenditure on them is incurred.

(Signed) W. HUDLESTON,
Acting Secretary to Government.

Agri-Horticultural Gardens, and the rest sold after the
ed it:—

Number received.	Present distribution.
1	Agri-Horticultural Gardens.
2	Revenue Board office (out of repair)
1	Sold by auction in Bellary.
1	Agri-Horticultural Gardens.
2	Revenue Board office.
1	Revenue Board office.
1	Tinnevely.
1	Madura.
1	Kistna.
1	Salem.
1	Nellore.
1	Trichinopoly.
1	Agri-Horticultural Gardens.
7	Revenue Board office.
1	Agri-Horticultural Gardens.
1	Revenue Board office.
1	Agri-Horticultural Gardens.
1	Revenue Board office.

and Extract.)

Acting Secretary.

Government R. D. with reference to Government

the Chairman, Chamber of Commerce.

Copy to Captain J. Mitchell, Superintendent of the Government Central Museum.

to the Honorary Secretary to the Madras Cotton Cleaning Company.

to A. Wedderburn, Esq., Collector of Tinnevely.

to V. H. Levinge, Esq., Collector of Madura.

to T. A. N. Chase, Esq., Acting Collector of the Kistna District.

to the Honorable D. Arbuthnot, Collector of Salem.

to P. Grant, Esq., Collector of Coimbatore.

to J. W. B. Dykes, Esq., Collector of Nellore.

to A. R. McDonell, Esq., Collector of Trichinopoly.

to A. Hathaway, Esq., Collector of Bellary.

to H. G. Smith, Esq., Collector of Cuddapah.

to Dr. A. Hunter, Honorary Secretary, Agri-Horticultural Society.

Exd. J. Wright.

[Handwritten signature]

By 17th Dec/65. No 71 Price =

No. 2297

Dated 3rd November 1865.

Despatched 17-8-

Received of

E. 1. *Estimador* *field*

No. 7,078A.

Submitting, for information, opinions of the Superintendent of the Government Museum, the Madras Cotton Cleaning Company, and the Madras Chamber of Commerce, on some of the Cotton Gins sent out from England for trial.

I have more confidence in
 your ability to report who seems to
 have some real business advice to
 offer. I think it would be a good
 idea to have a small committee
 of people to report to the
 Board. I am sure you will
 be able to do this. I am
 sure you will be able to do
 this. I am sure you will be
 able to do this. I am sure
 you will be able to do this.

25-2930-

[illegible]

Little Dorrit

28th Jan 1965

Ordnung

70529-530.

222 Knopf-228