

(1) Number of Pages 20(2) Date of repair 19-2-68(3) Initials of the Referencer S.B. u. 68**MADRAS RECORD OFFICE****GOVERNMENT OF MADRAS**Revenue DEPARTMENTG.O. No.
B.P. No.

1571

Press
Mis.

Dated

2 - 11 - 1875

196

Not to be folded or roughly handled

No. 45. Read the following Proceedings of the Board of Revenue, dated 29th September 1875, No. 2,721 :—

Read the following letter from J. J. L. RATTON, Esq., M.D., Special Salt Duty, to C. A. GALTON, Esq., Acting Sub-Secretary to the Board of Revenue, dated Ennore, 15th September 1875, No. 64.

I HAVE the honor to inform you that a pamphlet by Mr. H. E. Falk, recently written and circulated in Madras, and probably also in the other Presidencies and in London, containing some erroneous statements calculated to discredit the salt manufacture of this Presidency has lately been shown to me, and I would feel obliged if you would bring these remarks upon it to the notice of the Board.

2. Mr. Falk seems to have visited India as President of the Salt Chamber of Commerce, Cheshire and Worcestershire, and he writes fairly enough with the object of inducing the Supreme Government to do away with the "odious" Madras monopoly in salt manufacture in order that Cheshire may be enabled to extend its salt trade by shipments to this Presidency. I think I shall be able to show that the abolition of the monopoly would not benefit Cheshire, but for the present I will follow Mr. Falk.

3. With the above object he condemns the monopoly from the free trade stand-point, and draws attention to failings in the Madras salt system exposed in my reports. He also appeals to the Supreme Government to abolish it out of hand, as will appear from the following extracts from his pamphlet :—Page 13. "The continuation of the manufacture of Madras is, in my opinion, a mistake to which a great Government ought not to lend a name." Page 12. "Government at Home can alone solve the question, as it is one of high imperial policy, which local interests would never allow to be brought to a fair unanimous conclusion." Page 6. "We have seen with what beneficial effect Government has abolished the salt monopoly in Bengal, and Madras should be made to follow without delay." It is known that Mr. Falk's views have been laid before the Governor-General and the Secretary of State, of the former he writes, Page 12, "Lord Northbrook was so strongly impressed with the desirability for immediate action that he requested me to draw up a short memorial on the subject in Calcutta." It is therefore right that the consideration of the subject should not be prejudiced by the errors which his pamphlet contains.

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5. At page 1 of the pamphlet I read—"In theory Government imposes a condition on these dealers to retail it to the consumer with a profit of 25 per cent.; but how far this theory is carried out in practice, we see by the fact that the retail prices paid by consumers in the immediate vicinity of Madras are equal to 4 Rupees per maund." Neither in theory nor in fact does the Government impose any condition on the dealers as to the retail price of salt. Trade is unrestricted, and the price of ordinary salt is regulated solely by the law of demand and supply. Hence, as the price of salt at the Madras Cotaurs is only 2 Rupees a maund and carriage is cheap, it follows that the consumer does not pay 4 Rupees a maund in the immediate vicinity. Here at Ennore, ten miles from Madras, the price as calculated from small retail sales is less than 3 Rupees a maund.

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8. In the same paragraph, page 4, he says, on the authority of Mr. Nursinga Row, Salt Deputy Collector, "The salt pans at Ennore which make 16 mil. tons were measured to embrace with their appurtenances seven square miles, i.e., 4,480 acres; hence the make of each 1,000 tons would require 280 acres." I addressed Mr. Nursinga Row regarding the above, and learnt from him that he did not supply this information to Mr. Falk officially, but that it formed the subject of a casual conversation which he had with him at the Vullur pans at a time when he could not consult his office records, but was obliged to speak from memory or conjecture. He states also that he told Mr. Falk that the Ennore pans were seven miles in circumference, not seven square miles in area. Here are the real facts as taken from the office records. The Ennore pans, as measured by the salt officers, are 3 miles 30 $\frac{3}{4}$ furlongs in superficial area. This measurement embraces tracts of sandy soil unfit for salt culture, waste pans, boat canals, &c. The average produce of the Ennore pans is 71,167 tons per annum. The produce this year, 1875, was 141 $\frac{1}{2}$ mil. tons. Taking the average and comparing it with the total area we find that the yield is equal to 31.7 tons per acre; so that 31.7 acres would yield more than 1,000 tons. But as the area given includes waste tracts even this does not show the real produce per acre. This year at Ennore I scraped over 13 tons of salt from one acre in one month, and the scraping season lasts

from the middle of February until about the middle of June. Herein then Mr. Falk's facts and conclusions are very far from being correct.

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10. In the next paragraph he states that the salt itself contains fully "30 per cent. water, sand and other deleterious ingredients." The analysis of Doctor Macrae, M.A., Acting Chemical Examiner, prove that Madras salt contains only 11.13 per cent. of impurities, including 5.21 per cent. of water, which is not certainly a deleterious ingredient from a hygienic point of view.

11. Further on in the same paragraph he writes as follows of the organic matter contained in the brine:—"The organic matter which becomes an ingredient in the salt must also in times of cholera and other epidemics widely spread the contagion." The probabilities are strongly against the supposition herein contained that organic matters of the kind referred to pass through the various stages of salt manufacture extending over fourteen days or more intact. At an early stage of evaporation when the brine reaches the density of 9° Beaumé life ceases in it and decomposition at once ensues. All minute weak organisms are broken up and oxidised long before the period of saturation, and it is hardly conceivable that the germs of contagion, cells, bioplasts, or whatever they may be, can resist for days the powerful disintegrating forces which destroy the more robust forms of life. At all events the analyses of Madras salt made show but few traces of organic matter, which are easily accounted for by leaves blown into the salt pans and by the leaf and thatch coverings used in storing the salt.

12. Again, in the same paragraph, he speaks of "the enormous wastage which is complained of in this salt, and is said to be 25 per cent." I have been at pains to investigate this subject during the last four years, and the highest percentage of wastage that I found was 10.44 per cent. A note on this subject is given at the bottom of page 39 of my report for 1872. Officially, the wastage is known to vary from 3 to about 10 per cent., but it very seldom reaches the latter figure. In the Tanjore, Madura, and Tinnevely Districts, where clay coverings are used, the wastage is ordinarily about 3 per cent.

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ignorant and prejudiced people on the face of the Globe." Agreed. But he is not perhaps aware that the suggestion on which I lay the greatest stress, the remedy which I recommend as of the first necessity, is to get the manufacture into the hands of European commercial men, or natives of capital and education, and this is being gradually effected.

16. In connection with the above subject he makes the following remarks:—
"We have in England attempted many economical improvements, but they have always failed eventually from the fact that the material we have to deal with is most singular and capricious in all its properties, and will admit in the great practice of manufacture of no subtle manipulations." Salt in England may be most singular and capricious, it is not so here. On the contrary its movements are regulated and controlled by well known laws, and although manufacture in Cheshire has no doubt reached such a pitch of perfection that subtle manipulations would alone improve it, here on the contrary very simple practical arrangements are sadly needed, have been advocated, and are being successfully introduced.

17. Mr. Falk goes on to state that "there exists no prejudice against the use of imported salt into Madras, as I have been assured from several authoritative sources on the contrary." There is nevertheless a strong prejudice against imported salt, and especially against Cheshire salt, the reasons for which I will endeavour to explain. First, there is the natural prejudice of a conservative people against the use of any thing to which they are unaccustomed. Secondly, the natives at large unhappily labor under the impression that all pure white salt is made by refining common bazaar salt with blood, bones, &c. The only native white salt seen in the bazaars is purified in this way by an enterprising native merchant, and sold to soldiers, East Indians, &c. It is believed that human bones are used to clarify English salt. Further, a large quantity of Cheshire salt is imported into the country in cases containing hams, bacon, cheese, &c., and this salt finds its way into the bazaars and causes an intense prejudice in the native mind against all Cheshire salt; for it is impossible to tell whether a given sample exposed for sale travelled from England in contact with a Yorkshire ham or not. In proof of the foregoing I may mention a circumstance which ought to be within the knowledge of Mr. Falk. In August 1872, a cargo of 361 tons of Cheshire salt arrived at Madras consigned to a local European Firm. From the beginning of August 1872 till the end of October 1873, or for fifteen months, that Firm endeavoured to dispose of the salt but without success, and in October 1873 they shipped all of it but 449 Indian maunds (which includes large samples distributed) to Calcutta. I saw the Agents who endeavoured to dispose of this salt directly to the natives, and they assured me that it was sheer prejudice, and of the kind stated, which prevented the sale of this salt, and so strong was the prejudice that, although they reduced the price of the Cheshire salt to that of the black bazaar salt, they could only dispose of small parcels of it to Regimental contractors or other natives whose dealings were entirely with Europeans.

18. Speaking of Bombay salt, page 9, Mr. Falk says:—"It is of a much superior description to the Madras salt." An average specimen of that supplied to Malabar which I forwarded for analysis in 1873 to the Acting Chemical Examiner was found to contain 16.45 per cent. of impurities, whereas Madras salt

as I have stated contained at that time only 11.13 per cent. of impurities, and it is much purer now.

19. In paragraph 3 of Mr. Falk's letter to His Excellency the Viceroy of India, he attributes the wastage of Madras salt to "the deliquescent nature of the Epsom and Glauber's salt;" but unfortunately for this view of the case Epsom salt is contained in Madras salt only to the extent of 2.35 per cent. and is not deliquescent, and Glauber's salt is not produced at all at our salt manufactories.

20. At the end of the same paragraph he states that "the able scientific reports of Dr. Ratton employed by Government even give instances of 42 per cent." of wastage. Mr. Falk here mixes up loss of bulk and wastage, two very different things. What I pointed out was that an ordinary sample of large grained Madras salt lost 42 per cent. in bulk by being finely triturated in a mortar. It lost nothing however in weight or substances. The quantity of salt remained the same, but it packed in a smaller compass by 42 per cent. I have never known Madras salt to waste as much as 12 per cent.

21. At paragraph 9 of the same letter, Mr. Falk says that "the chemical processes involved for the elimination of the bittern salts may be quite correct in theory, but they will never stand the test of practice. Dr. Ratton's reports, &c." The contrary of all this has been proved conclusively. In the south of France, where salt is manufactured in earth-works and by solar evaporation as with us but under less favorable meteorological conditions, these same bittern salts are ~~obtained~~ ^{separated} with the greatest ease, and a salt equalling that of Cheshire in whiteness and purity is produced for 5 francs a ton.

22. I have now noticed the chief errors contained in Mr. Falk's pamphlet and in the letter to the Viceroy which forms its appendix. It remains to review briefly the prospects of an Anglo-Madras salt trade.

23. The shipment of 361 tons of English salt to Madras in August 1872 was an experimental one. The facts relating to it are as follows. The salt cost 15 Annas a maund in bulk in bond at Madras; items as under invoice price, 10 shillings and 6 pence a ton. Freight, 25 to 30 shillings a ton. Landing charges, 4 shillings a ton. Sacks and sundries, 2 shillings a ton. The charges are moderate, they are not likely to diminish in the future. The Board of Revenue agreed to treat this salt as Madras made, and the ordinary duty of Rupees 1-13-0 a maund was levied on it. To be disposed of profitably therefore it should realize Rupees 2-12-0 a maund in bond. In the result it was found unsaleable, retailed about the country at Rupees 2 a maund. This commercial fiasco is attributed solely to strong and still existing prejudice, and that may be so, but considering that Madras salt contained in 1872 only 5.91 per cent. of saline impurities, I hardly think a native bunnya would have paid 37 per cent. more for any other salt whatever. And Cheshire salt is not after all absolutely pure.

24. Since 1872-73, Madras-made salt has very distinctly improved in quality. Its importation into Calcutta has largely and progressively increased during the past three years, and its price has risen in the same period to the level of that commanded by English salt. It is likely that its manufacture will soon be still further improved and cheapened. I hope to show next year that salt equal to that of Cheshire in every respect can be made here for less than one Anna a maund. European merchants of capital are now beginning to turn their atten-

tion to this subject, and only await the result of my experiments to take action in the matter. It may now be affirmed as certain that if Government gives this movement the encouragement it deserves, Cheshire salt will not only not find a market in Madras, but will even in time be driven out of that of Calcutta.

25. In the very improbable contingency of the excise being abruptly introduced into this Presidency, Cheshire would for a time supply some of the Northern Districts with salt. The small Native manufacturers who can make salt, only because they are paid for it on delivery, irrespective of quality, and are helped with advances when in difficulties, would abandon their pans. Then, and for a time by reason of the salt famine which would ensue in districts unconnected with the rest of India by rail, Cheshire salt would find a market even at its high price. But this would not last long. There is a great deal of locked up capital in the country seeking profitable employment. Capitalists are even now in the light of recent investigations turning towards salt, and the first symptom of a famine would determine the employment of idle funds in the revival on a large and enlightened scale of the abandoned local manufactories.

26. The great bulk of Mr. Falk's remarks on Madras, other than those I have noticed, are in reality arguments in favor of improving our salt arrangements as they stand; such as building salt godowns, &c., &c. I have drawn attention to all of these matters before in my reports.

27. Should these remarks reach Mr. Falk, he will of course attribute them to public motives. He has in his hurry been most unfortunate in his facts. He has done good service in drawing attention prominently to the drawbacks of the confessedly imperfect Madras salt system. The subject is one of great interest to me, and I am not sorry to have Mr. Falk's assistance in ventilating it.

THE Board fully concur in Dr. Ratton's comments on Mr. Falk's Pamphlet, and resolve to submit his letter to Government, with the request that it may be laid before the Government of India and the Secretary of State.

(A true Copy and Extract.)

(Signed) C. A. GALTON,
Acting Sub-Secretary.

No. 46.

ORDER THEREON, 3rd November 1875, No. 1,571.

Separate Revenue, No. 6.

Salt.

COPY of these Proceedings will be communicated to the Government of India, with reference to G. O., No. 1,569, 3rd November 1875; also to the Secretary of State.

(True Extract.)

(Signed) L. A. CAMPBELL,
Under-Secretary to Government.

To the Board of Revenue.

Ed. W. J. Lewis.

No. 2,721.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 29th September 1875.

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Obdt. of 1875: SYNDHIA

REVENUE.

To

THE BOARD OF REVENUE.

Dated November, 3rd.

Recd.

Encl.

G. O., 3rd November 1875, No. 1,571.

NOVEMBER.

Nos. 45-46.

Salt manufacture of Madras Presidency.
Resolving to communicate to the Government of India and to the Secretary of State Proceedings of the Board of Revenue submitting Mr. Ratton's comments on Mr. Falk's Pamphlet on —



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19. In paragraph 3 of Mr. Falk's letter to His Excellency the Viceroy of India, he attributes the wastage of Madras salt to "the deliquescent nature of the Epsom and Glauber's salt;" but unfortunately for this view of the case Epsom salt is contained in Madras salt only to the extent of 2.35 per cent. and is not deliquescent, and Glauber's salt is not produced at all at our salt manufactories.

20. At the end of the same paragraph he states that "the able scientific reports of Dr. Ratton employed by Government even give instances of 42 per cent." of wastage. Mr. Falk here mixes up loss of bulk and wastage, two very different things. What I pointed out was that an ordinary sample of large grained Madras salt lost 42 per cent. in bulk by being finely triturated in a mortar. It lost nothing however in weight or substances. The quantity of salt remained the same, but it packed in a smaller compass by 42 per cent. I have never known Madras salt to waste as much as 12 per cent.

21. At paragraph 9 of the same letter, Mr. Falk says that "the chemical processes involved for the elimination of the bittern salts may be quite correct in theory, but they will never stand the test of practice. Dr. Ratton's reports, &c." The contrary of all this has been proved conclusively. In the south of France, where salt is manufactured in earth-works and by solar evaporation as with us but under less favorable meteorological conditions, these same bittern salts are eliminated with the greatest ease, and a salt equalling that of Cheshire in whiteness and purity is produced for 5 francs a ton.

22. I have now noticed the chief errors contained in Mr. Falk's pamphlet and in the letter to the Viceroy which forms its appendix. It remains to review briefly the prospects of an Anglo-Madras salt trade.

23. The shipment of 361 tons of English salt to Madras in August 1872 was an experimental one. The facts relating to it are as follows. The salt cost 15 Annas a maund in bulk in bond at Madras; items as under. Invoice price, 10 shillings and 6 pence a ton. Freight, 25 to 30 shillings a ton. Landing charges, 4 shillings a ton. Sacks and sundries, 2 shillings a ton. The charges are moderate, they are not likely to diminish in the future. The Board of Revenue agreed to treat this salt as Madras made, and the ordinary duty of Rupees 1-13-0 a maund was levied on it. To be disposed of profitably therefore it should realize Rupees 2-12-0 a maund in bond. In the result it was found unsaleable, retailed about the country at Rupees 2 a maund. This commercial fiasco is attributed solely to strong and still existing prejudice, and that may be so, but considering that Madras salt contained in 1872 only 5.91 per cent. of saline impurities, I hardly think a native bunnya would have paid 37 per cent. more for any other salt whatever. And Cheshire salt is not after all absolutely pure.

24. Since 1872-73, Madras-made salt has very distinctly improved in quality. Its importation into Calcutta has largely and progressively increased during the

past three years, and its price has risen in the same period to the level of that commanded by English salt. It is likely that its manufacture will soon be still further improved and cheapened. I hope to show next year that salt equal to that of Cheshire in every respect can be made here for less than one Anna a maund. European merchants of capital are now beginning to turn their attention to this subject, and only await the result of my experiments to take action in the matter. It may now be affirmed as certain that if Government gives this movement the encouragement it deserves, Cheshire salt will not only not find a market in Madras, but will even in time be driven out of that of Calcutta.

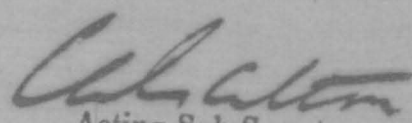
25. In the very improbable contingency of the excise being abruptly introduced into this Presidency, Cheshire would for a time supply some of the Northern Districts with salt. The small Native manufacturers who can make salt, only because they are paid for it on delivery, irrespective of quality, and are helped with advances when in difficulties, would abandon their pans. Then, and for a time by reason of the salt famine which would ensue in districts unconnected with the rest of India by rail, Cheshire salt would find a market even at its high price. But this would not last long. There is a great deal of locked up capital in the country seeking profitable employment. Capitalists are even now in the light of recent investigations turning towards salt, and the first symptom of a famine would determine the employment of idle funds in the revival on a large and enlightened scale of the abandoned local manufactories.

26. The great bulk of Mr. Falk's remarks on Madras, other than those I have noticed, are in reality arguments in favor of improving our salt arrangements as they stand; such as building salt godowns, &c., &c. I have drawn attention to all of these matters before in my reports.

27. Should these remarks reach Mr. Falk, he will of course attribute them to public motives. He has in his hurry been most unfortunate in his facts, but he has done good service in drawing attention prominently to the drawbacks of the confessedly imperfect Madras salt system. The subject is one of great interest to me, and I am not sorry to have Mr. Falk's assistance in ventilating it.

THE Board fully concur in Dr. Ratton's comments on Mr. Falk's Pamphlet, and resolve to submit his letter to Government, with the request that it may be laid before the Government of India and the Secretary of State.

(A true Copy and Extract.)


Acting Sub-Secretary.

To the Acting Secretary to Government, Revenue Department.
,, Dr. Ratton, on Special Salt duty.

Exd. W. J. Lewis.

REVENUE DEPARTMENT.

No. 3932.

157/a

From Board Revenue. 7th October 1875.

Dated

FOR ORDERS.

This is to be
sent to the
S. & S. Secy. of P.
in continuation of the
Rev. Mr. W. Falk's
letter of 17th Feb.
1875 No 256.
Salt. L. H. M. S.

The for. which
have already
been addressed
on the subject
of the Excise
System vide
letter 17th Feb.
75 No 256.
These Proceedings

Ans: 1575: 24th
1875.

Board of Revenue,
MADRAS.

PROCEEDINGS, 29TH SEPTEMBER 1875, No. 2,721

24th 7 Oct 1875

Encl.

Received

11th Oct

SEPTEMBER.

No. 2,721.

Salt manufacture—of Madras Presidency.
Dr. Ration's comments on Mr. Falk's Pamphlet
on — concurred in, and his letter submitted to
Government with request that it may be laid
before the Government of India and the Secre-
tary of State.

Ch 1671-330 Madras Secy

W. H. M. S.

1227 Oct 1875 No. 1575

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paper.

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submitted in
continuation
of that letter
but we have
not a copy
of Mr. Falks
Statement or
pamphlet
and it is
suggested that
Dr. Hutton
might be

Government with request that it may be laid
before the Government of India and the Secre-
tary of State.

Ch 1671-33 Dec 1874

W. H. O. 1874

C 27 Oct 1874

C 27 oct 75. W. I. 1875

FOR ORDERS.

Let transcriptions
of various papers

W. I. 1875

C. 1571

Copies of these Papers will
be comm^d to be kept of
Dundee, in reference to
C. C. No 1579 3/11-5.
also to be kept of State

3 November 1875

14. Let the Board of Directors be

C 27 oct 75. W. I. 1875

Government with request that it may be laid
before the Government of India and the Secre-
tary of State.

C. 1571-30 October 1875

W. I. 1875