

Edl (1915) Department.

Ms SERIES.

G.O. No. 1186 Edl

DATED 2-11-15

[Despatch Abstract.]

Pencil-making Experiment. Requesting
the director of Industries to submit
documents showing the authority he
has from the owner of the pencil making
machinery to use it for his
experiments and to transfer it to
Madras and directing that he
should not embark on new
experiments without the sanction
of Govt.

C.F.—29



Subject

PENCIL MANUFACTURE Submitting remarks on the--

ENCLOSURES

No.

.....

Spare copies

No. *E 11*

Station _____, Dated the 25th September, 1915

From (Name) K. T. B. Tressler, Esq.,
(Designation) Director of Industries.

To The Secretary to the Government of Madras,
EDUCATIONAL Department.

Sir,

In reply to G.O. 3286 Educational I have the
honour to state that I have already submitted two reports
to Government regarding the pencil factory. Vide No. **83 of 26 Feb**
I may perhaps also be permitted to invite reference to the **and 27th**
1915
Mysore Economic Journal regarding the different branches
into which the organisation of industry is divided. In
order to establish an industry experience and data must be
obtained in all the branches mentioned. This briefly is
what I have been doing up to date.

2. When I began my pencil experiments nearly a year ago I employed Mr. Luber as "expert for the purpose

purpose of teaching us how to handle the machines. The mechanical side of the work Mr. Lubber was eminently competent to deal with, and with his assistance I obtained what I may call the "mechanical" data of production, and practical experience of machinery. Further than this Mr. Lubber was unable to help me.

3 To obtain the technical data, I therefore had to get someone else and have now a subordinate at the Indian Institute of Science where he has for the last 6 months been making experiments on the composition of Black lead for pencils. In connection with the work I have also been making trials in Madras on the refining of crude graphite. These experiments are intended to give me what I call the "technical" data of production and practical information regarding the scientific side of the work.

4 The commercial data required fall into 3 classes namely:-

Supply of raw material,
Cost of manufacture,
Value of the finished article.

As regards the first point, I have been up to the Godavari to arrange for my supplies of graphite. I have also for the last 6 months been in communication with the forest officers to ascertain how and at what price I can obtain timber. As the possibility of higher grade pencils had also to be considered I have ordered one or two sample lots of cedar wood from British East Africa. As regards Indian supplies, the information I have received must be regarded merely as a first approximation. The ^{only} way in which to determine whether supplies will actually be available in sufficient quantities, and at a sufficiently low price is to order a few hundred cubic ft. and find out how the process of supply works on a practical scale. The importance of this precaution will be perhaps understood when it is explained that a Calcutta pencil factory that at one time seemed fairly prosperous ultimately failed on account

on account of difficulties of local supply. 3

5 Having ascertained what the cost of timber is and how it can be supplied, the next point to determine is what the "slats" will cost me. I buy timber in logs by the cubic ft. These logs are sawn in the factory into "slats". There is bound to be a certain amount of wastage due to saw cuts but over and above this a certain proportion of the timber will be useless owing to the presence of knots and shakes etc. etc., Again the timber will yield a certain proportion of firsts and seconds and as the market value of the two is different and waste clearly has to be written off it becomes necessary in order to arrive at the true cost of slats, to find out what the average loss is. A correct average can only be struck by dealing with a good deal of timber. I have now ordered a few hundred cubic ft of the different varieties that I require and ^{am} about to start my experiments on this point.

6 Having ascertained the average cost of slats it becomes necessary to find out what the probable labour charges will be. When labour is first employed it is unskilled and it is only after 2 or 3 months practical working and careful study that one can ascertain what staff is required to deal with a certain output. This question of labour and organisation is a somewhat difficult one and requires special attention. When last in Mysore I discussed the matter with Mr. Chatterton and he agreed that to obtain proper production data it would be necessary to move the plant from Cocanada to Madras. There were various other highly technical reasons connected with freights, areas of production, cost of supervision, market etc., which confirmed us in favour of the change. The machinery has accordingly been removed

-4-
to Madras from Cocanada and a shed built to accommodate it near the Leather Trade School. The shed is the one which will ultimately be required for the foundry section of the new Madras Trade School. It is not supposed that this section can be organised within less than a year by which time the present experiment will have served its purpose and the shed can then be put to the use for which it is really intended.

7. The success or otherwise of an industry obviously depends to a large extent on the price commanded by the goods manufactured and the only way to find out what they will realise is actually to make them and try and sell them. This is what it is now proposed to do.

8. From the D.O. under reply it seems to me that there exists some misapprehension regarding the nature of the work I am now doing in the Pencil Industry. I have no intention of working commercially; indeed with the plant I have at my disposal it would be impossible to do so. The purpose of my work is and always has been to ascertain correctly the data of production, but to do this it is imperative to work on what may be called a semi-commercial scale. It is a comparatively easy thing to make a few gross of pencils and to make them well, but it is a very different thing to turn out pencils in any quantity up to sample. Moreover the character of work on a small scale is so far removed from commercial production that any data of cost thus obtained are absolutely valueless for practical purposes. The attempt to establish industries on insufficient data has been the most prolific source of failure and if we are to show the people how to organise any industry the first thing we have got to do is to work our data on a sufficiently large scale to make them

** This has not yet been
sanctioned. It is being
under consideration.*

reasonably accurate.

9. The position is therefore as follows:

4
I have learned to use my machinery, I have produced a graphite which I think will do, I have made arrangements with the Forest Department for the supply of timber which I think will suit and I understand from enquiries that the market would be prepared to take up my pencils. This is as far as preliminary experiments can carry me. But I do not know exactly what the wood is going to cost me delivered ^{ed} I do not know when waste is taken into account what the slats are going to cost me: I do not know what labour I shall require: I do not know definitely whether I can go on producing a standard quality of graphite and I do not know what the market can offer me for my pencils. There is only one way of finding out, that is to make pencils in certain quantities.

10. How far remote my proposition is from a commercial undertaking will be evident from the fact that I estimate my probable outturn at possibly 150 gross pencils a week, which is just half as much as a commercial factory must produce in a day in order to cover cost. But from the data I can obtain from my proposed experiments I can with reasonable accuracy calculate what ~~the~~ costs would be ^{at} a larger scale of plant. There is still of course a possibility that manufacture on a larger scale may introduce extra difficulties and expenses not met with on the scale of ~~all~~ production I ^{am} contemplate but the probability is a fairly remote one. I reckon that I ought to be able to calculate the cost of production on a large scale from the data I get within five or ten percent. If I confined myself to the preliminary experiments so far made I would not consider my deductions accurate within 50 percent: ^{as} a margin so large to make the data useless for ^{practical} purposes.

11. I understand that the proposition before me is to find out if pencils can be made satisfactorily with Indian material and labour and am handling it accordingly by the method of

approximations. Only, instead of stopping at the second approximation-- as is usually done--and getting results that have a possible margin of error of 50 to 60 per cent I am going on to the third approximation when my margin falls to 5 to 10 percent.

I have the honor to be,

Sir,

Your most obedient servant,

Wm. H. ...
Director of Industries.

NOTE FILE.

500-128
24/9/15

Spall

bynd
24/9/15
Notes in CB
22.5

My dear Pinner

I am desirous to ask you to report ^{and officially} fully ^{a few} the ~~current~~ approval of Govt the action you are taking in the matter of establishing a pencil factory in India.

I am further to ask you not to embark on any further experiments with new industries - as opposed to enquiries into their details - without first obtaining Govt approval of your ^{proposed} action.

Yrs

21.5.15

CN-3338. From the D. S. M. E. II, dated the 20th Sept. 1915.

Please see the reports on the pencil-making experiment undertaken by the Director of Industries recorded in G.O. M. 807 Sd., dated the 17th March 1915, and M. 825 Sd., dated the 22nd May 1915. In his present letter, the Director explains the further action taken by him since the submission of the former reports. In the first place, the ~~present~~ pencil-making machinery, which was at Bocanada while Mr. Duber was in charge of it, has been removed to Kadavur & Mr. Drescher has also constructed a shed ~~there~~ to accommodate it near the leather School at Washermanpet. It is submitted that the Govt. were not till now informed of this fact, nor was their prior approval sought for the transfer of the machine from Bocanada. In his first report Mr. Drescher stated that there was an ample supply of graphite in Godavari. It does not appear that in other parts of this Presidency graphite was

* This belongs to a private but has been obtained by Mr. Drescher on loan.

para 6, page 304 of G.O.

para 12, page 307 of G.O. 307 17-3-15

useful for pencils can be obtained, ^{at least} ~~at least~~ ^{real} ~~real~~ ^{made} ~~made~~.
By transferring the machinery to Madras, the industry has been moved ~~to~~ away from the seats of the raw materials required, namely, wood and graphite.

2. Mr. Trecker, however, explains that, in order to conduct various experiments to ascertain the data of production, he transferred the machinery ~~from~~ to Madras & that this step was taken by him in consultation with Mr. Chatterton. He states that his experiment will be far from a commercial undertaking in that he estimates his "probable" output at possibly 150 gross pencils a week which is just half as much as a commercial factory must produce in a day in order to cover cost. It is for consideration whether the ~~see~~ experimental manufacture of pencils on the ~~large~~ ^{unusually} scale may be allowed. Mr. Trecker considers that without this it is not possible to obtain any reliable data upon which ^{manufacture}

para 6, page 3 of cf.

para 10, page 5 of cf.

manufacture on a commercial scale can be undertaken.

3. Attention is in this connection solicited to a note written by Sir Frederick Nicholson in December last in which he expressed considerable doubts as to whether the graphite ^(+ the wood) available in the Presidency would be useful for the manufacture of any good pencils.

SN. CA
1.10.15 3.10.15

Mr. Tressler has described the order of the processes of establishing an industry in his letter in S.O. No. 307 Educational, dated 17th March 1915, fairly accurately, namely.

- (1) supply of raw material.
- (2) treatment of raw material.
- (3) mechanical processes.
- (4) profitable manufacture.
- (5) disposal of the manufactured article.

In the case of the pencil-making experiment, however, he has disregarded his own order. He has not yet satisfied himself that suitable wood is available in sufficient quantities. His supervisor at Bangalore is still studying the treatment of graphite. He has learnt how to use his borrowed machinery at a cost of Rs. 5,800 and now he proposes to ascertain

page 10 to 12
of p. 11. 26 min (4)
25.1.15

para 3, page 2 of (F)

para 3, page 2 of cf.

page 1 of p. 11. 54.6-54.8
22.5.15

9
technical data of production by making an experiment on a considerable scale with imported wood after transporting his borrowed machinery from the locality where, if anywhere, wood and graphite are available, to Madras, and setting it up in a spot which he has built as part of the Trades school, for the establishment of which sanction has not yet been given.

Experiments conducted in this fashion are bound to end in waste of money. It is useless to begin ⁵ ~~too~~ refine the graphite before you know that suitable wood is available. It is worse than useless to begin to make pencils with imported materials before you know that there are local ones to be had. The removal of the machinery to Madras is justified by "highly technical reasons connected with freight, area, of production, cost of supervision, market, etc.," which I am afraid exist only in Mr. Tressler's imagination. The erection of a shed as part of the Trades school is not justified at all.

The outstanding feature of the experiment,

10

as with those in glass and paper, seems to be that Mr. Tressler has found some machinery lying idle and set himself to learn how to use it without first sufficiently examining the question whether there is raw material to use it on or the reasons why its owners have abandoned its use. He also prefers to discover how to use the machinery by himself to learning from any one who knows. It is perhaps too late to check further progress with the particular experiment, but the reports on it seem to indicate that it is desirable to prohibit Mr. Tressler from embarking on any more * without first taking the sanction of Government.

Meanwhile he may be asked to submit for the information of Government documents showing the authority he has from the owner of the pencil-making machinery to use it for his experiments and to transfer it to Madras, and a limit, say Rs.10,000, may be placed on the total expenditure to be incurred on this experiment, including Mr. Luber's salary and the cost of transporting the machinery from Cocanada to Madras and back

and of setting it up at both places.

8
5.10.15

H. E. the Governor and circ.

P.
5.10.15.

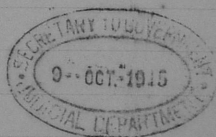
Seen. I think Mr. Luber has departed some time ago.

AYL
6.10.15

Para. 2. should be omitted, if the experienced
I have for long thought that Mr.
Trusler was not the man for this
job and further experience of him
confirms me in that opinion. I
agree that his activities shd. be curbed
as proposed.

It is
7.10.15

8/10/15



Bruno up
6.10.15

Mr. Luber left the Dept
on 11.10.15. Please
see para 1 of Mr. Trusler's
letter of 18.3.15 on page 12
Hqs. No 341
24.3.15 (17)

SK.
Draft
CA
9/10

A draft order is submitted for approval.

SK
9.10.15.
CA
10/10/15

Submitted to H.E. the General
for perusal & the remarks of
H.M. Financial and approval of
the draft

8

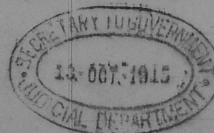
11.10.15

Para. 2. should be omitted, if the experiment
has sanctioned by Government. Was it not?
and unless the Director has already expended
in against the spirit of para. 3., I would also
omit that paragraph.

The order should I think suggest that before the
penicillin making machinery was removed from Canada
to transfer the D.P.D. should have taken orders on
the point: but perhaps this may be more fittingly
said upon receipt of the further information was
requested.

P

12.10.15.



Submitted that the pencil experiment was begun by Mr. Treveler without the previous sanction of Government. He had engaged Mr. Duber & had obtained the loan of the machinery at Vancouver when the matter was officially came to the notice of the Govt. He was thereupon asked to report on the matter. On receipt of this report it was found that Mr. Treveler's action in engaging the services of Mr. Duber ~~was~~ without the sanction of Govt was irregular and that ~~Govt~~ the approval of the Govt of India was required for the employment of Mr. Duber. ~~that Govt was the reason advanced~~

The Govt thereupon formally ~~occasionally~~ approved Mr. Treveler's action & the sanction of the Govt of India was also obtained.

2. It is submitted that in regard to glass making also the sanction of Govt was not sought for by Mr. Treveler. In April last, when he wrote to Govt suggesting the acquisition of the premises of the Madras Glass Works he stated that he had arranged

rough one of his
notes on India
contained a statement
that he intended to
experiment with
pencil manufacture.
- pag 39 of 3271 Rev. (1)

note on
page 45 of 3271 Rev. (1)
1.2.15

for No 9821 (1)
1.2.15
for 234 (A)
1.3.15

Please see letter
at (B)

for the loan of the premises & plan
 & had ^(been) carried on the experiment.
 CA 22-10-15. 3 It is for consideration whether
 the first thirteen lines of the draft ma-
 ission as a memo. in the first instance
 in view of H.E.'s note overleaf. In para
 2 of G.O. No. 98. Ed; & 1.2.15, the irreg-
 -larity of engaging the Expert without
 prior sanction had already been
 pointed out. & in D.O. No. 3286-1. Ed
 & 21.9.15, Mr. Tressler has already
 been asked to desist from embarking
 on new experiments without prior
 approval. The only new point
 which has yet to be communi-
 cated to the Director is the limit
 of expenditure to be incurred on
 pencil experiments. This ^(point) may ^{also} prob-
 ably be retained.

CA
 25.10.15

The d.o. which produced the report now under con-
 sideration was issued under His Excellency the Governor's
 orders because Mr. Tressler had embarked on this experiment
 without the sanction of Government and had afforded Govern-
 ment very little information as to the progress of the
 same. He has acted in a similar manner in respect of his

C.M. 1398 (B)

As per report of
Punjab in 1915, 1916

12.11.98 (N)
11.2.15

(Separate file)

(B)

(Separate file)

glass and pulp-making experiments. In the latter case it was the prospect of litigation alone that made him report.

In the case both of pencils and glass he improperly committed Government to expenditure. In the former he began by making on his own authority an appointment which required the sanction of the Government of India. Now he has brought ~~forward~~ ^{forward} machinery to Madras and erected, to house it, a part of the proposed Trades School, the erection of which His Excellency the Governor has disapproved. In the case of glass he has undertaken to purchase the factory if his experiments are a success and meanwhile is using the premises without the authority of the owner for other departmental purposes.

In the case of the oil ~~S~~ pressing experiment he has advanced a large sum of money for purchase of machinery contrary to all account rules.

The fact that he has a very elastic budget seems to have led him to regard himself as being at liberty to spend as he pleases. He ought certainly to have known that he should not have employed Mr. Lüber, have

12.

68

16

advanced money for oil expellers or have promised to buy the glass factory if he succeeded. As he has failed so signally in these instances it seems necessary to curb him and I doubt if in an office like his a d.o. will suffice or remain on record.

Government have so far expressed no opinion on the pencil-making experiment.

22.10.15

H. E. the Governor.

Box No. 8

27.10.15

Draft offered is amended.

P.
29.10.15



C. No. 3338 From the D. S., No. E 11, dated 25. 9. 1915

No. 1186 EdL, dated 2nd November 1915

Mr.

This shd. be omitted:
it is late to say it now

P.
—
29.10.

2. The fact ~~are~~ not satisfied
that this experiment was
missed ^{entirely} ~~entirely~~ upon or
that ^{the} preliminary inquiries
as to the feasibility of a
profitable industry were
adequately made. The ^{fact} ~~fact~~

With reference to his letter N° E 11, dated the 25th September 1915, the Director of Education is requested to submit for the information of Govt documents showing the authority he has from the owner of the pencil-making machinery to use it for his experiments and to transfer it to Hadda. ~~The Govt~~ direct that the total expenditure

on the ~~penal~~ ¹⁸ experiment, including Mr. Lister's pay and the cost of transporting the ^{machinery} ~~machinery~~ from Boca Vista to Tabasco and of setting it up at both places, should ^{in whole} ~~not exceed~~ \$10,000.

18
9.10.15.

11.10.15

3. The Director will further be requested to embark on no new experiments in manufacture without first taking the sanction of Gen.

11.10.15

The D. I.
" A. G.

Noted in
CS.
5/14/15

When given for copying—
 When copied—
 When examined—
 When signed—

191

READ AGAIN G.O. No.
 191

DATED

CURRENT No.

ENCLOSURES TO G. No.

ORDER OF GOVERNMENT

A A A A A A A

LETTER OF GOVERNMENT.

STATEMENT WITH EDITO.

PAPERS NOT FILLED UP, BEING MEANT FOR DISPATCH
 IN ORIGINAL.

S.E.—

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