

38022

1936

C0533/464  
KENYA

38022

Sisal IndustryDecorticating Machinery

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29.  
Agriculture  
Social Industry  
C.D.F.

1 Hydraulic Engineering Co. - 24.4.36.  
Requests extension of the loan.

Mr. Flood,

Capt. Mangnall came in to see me on April 2nd and he then reported that the new model of his sisal decorticating machine was apparently giving satisfactory results in Kenya as he had been asked to replace the two earlier machines supplied (one in Kenya and one in Uganda) with new models.

He said that he would require financial assistance from the Colonial Development Fund in order to do this, and I asked him to write in on the matter.

(1)

The attached letter, dated April 4th, came in during my absence on leave. In this, Capt. Mangnall asks for further financial assistance on the lines set out in the concluding sentence of para. 7 of the memorandum attached to C.D.A.C. 1705.

(5) 19.4.36

It might be assumed, I should think, that if the owners of the estates where the earlier machines were installed have asked for them to be replaced by new models, they are satisfied with the performance of the new model, but before going to the C.D.A.C. it might be advisable to telegraph to Kenya asking for a report on the new model erected at Taveta. The question as to whether the machine is successful or not has to be decided by the S. of S., and I assume that the C.D.A.C. may wish to have this decision given before they consider further financial assistance and for the conversion of the first grant on to a loan basis with the added £5,000 on loan now applied for.

*J. A. Stokdale*  
15th April, 1936.

This is a matter concerning the provision in that in 1933 the C.D.F. advanced £1200 to finance the construction of Capt. Mangnall's machine. There were

machines shipped to Kenya. They proved unsatisfactory.

It was then proposed to produce a new model to replace them & the C.D.C. advanced £3,000 for one machine. The conditions of the advance were very briefly that if the machine was not a success in 18 months the advance was to be a free grant. If it was successful then the advance was to be a loan repayable as to principal & interest by equal annual instalments beginning after two years.

The 18 months runs from the first payment which was made on 15 June 1935 (see last instalment of No. 36 on 38022/35) so the thing has up to 15 Dec next to prove itself a success or not. The last instalment of the grant was to be paid when the machine began work. This was reported in Jan. of this year & payment was made in Feb. (74976 on 38022/35).

When the application was submitted to the C.D.A.C. it was said that if the new model was an unqualified success Capt. Mangnell thought he could get the money to replace the other two defective ones on the strength of orders, but if not he might have to apply for a loan of a further £5,000. This he has now done. He does not say what terms he contemplates but I suppose it would be like the last - say £1000 per machine at once £1000 on shipment & £600 on news that they were working. Loan to be free of interest for 2 years.

We must obviously be able to say whether the first one is a commercial success or not before we can go to the C.D.A.C. and the only way to get the info required is from Kenya. A year ago Kenya was not very helpful as they said they had no one who could give a sound opinion. (No. 7 on 38022/35) Since then there is the new machine and it works for 3 months & much more doing its special generally. If the other two estates want the new thing it is probably all right but we can't say. They might ask for new machines on the ground that they will get them for nothing and that they are a better article than the one that doesn't work. I don't think it likely but they might.

See agreement at No. 37 in 38022/35.

So I think the only thing to do is to consult Kenya and per draft herewith and perhaps Mr. Stockdale would reply saying that we should like an official application addressed to the U.S. ops giving the fullest info possible as to what the firms have said.

J.E.O. Hand  
17.4.36.

Draft: I am find up a draft of an ops letter to Capt Mangnell.

Stockdale  
18/4

Sir C. Bottomley

Sir J. Campbell is doing it, likely to be away for some time. Action seems obvious but you should see the drafts. I gather that Capt. Mangnell's firm is now too stable at the moment.

Stockdale

The C.D.A.C. may well say that from a commercial point of view there should be no need of further help.

2 Tel to Gov. Kenya No 100

3 To Capt. Mangnell (cc) 28 APR 36

Pro Mangnell

Capt. Mangnell  
Ref. No. 3 official application will be passed on the 25.3.36.

DESTROYED UNDER STATUTE

Prof. A. J. Permitt  
571736  
at once

A.D. Bowen (H)

We can only wait for a reply from Kenya  
 to (2) before we can consider whether this  
 application should go to the C.D.A.C. The  
 meeting this month is on May 27<sup>th</sup> & all  
 memoranda have to be ready by May 12<sup>th</sup>

Capt. Mangall, ----- 4th May 1936.  
 Ref. No. 3; submits memorandum as requested regarding  
 extension of loan for sisal decorticating machinery.

6. ----- 7th May 1936.  
 Request that further three sample parcels of sisal  
 leaves may be prepared by air mail.

*This report which  
 was sent to E.H.  
 Dept. reports that  
 the sisal is different from  
 the one in the bank  
 - see notes opposite.*

7. ~~Hydraulic Engineering Co. No. 177~~ ----- 14 MAY 1936

DESTROYED UNDER STATUTE Hydraulic Engineering Co. ----- 14.5.36

8. To Hamilton, ----- 14.5.36

9. Governor tel. No. 119. ----- 22nd May 1936.  
 Ref. No. 2; report being forwarded by air mail of the  
 14th May.

10. Mangnall, ----- 13th May 1936.  
 Transmits copies of letter and cable received asking  
 for indication of progress in the matter, and requests  
 some idea of the position within the next 2 or 3 days.

Mr. Stankhill

You left the originals with me. Their  
 serial NO. 10. We are late for the C.D.A.C. this  
 month & that means the end of June. That won't be  
 in time. We might get urgency pleaded however.

*XL* T. Gov. Kenya, Tel. No. 120 cons. 15/5/36

13. To Mangnall, ----- 11<sup>th</sup> May, ----- 18.5.36.  
 (745 sent to 11<sup>th</sup> return)

14. Hamilton, ----- 15th May, 1936.  
 Acknowledges No. 9 with thanks.

15. Governor tel. No. 127. ----- 16th May, 1936.  
 No. 12 and recommends submission of the application to  
 the C.D.A.C. provided that the resulting grant is used  
 primarily to improve model on lines agreed between the  
 Hydraulic Engineering Co. and the Manager of Taveta.

*N: 6, 7, 9 & 14*

transferred to

3807/1/36

Kenya

17. ----- memo. No. 1981. ----- 20th May, 1936

letter attached

18. The Hydraulic Engineering Co. cons. 21 May 36  
 (5aird)

*Transfer Nos. 6, 7, 9  
 and 14 to a  
 separate sub file.*

19. Governor No. 242. ----- 14th May, 1936.  
 Ref. No. 2; transmits copy of report on the new machines  
 in operation on the Taveta Estate; supports application for  
 further assistance to Capt. Mangnall on the condition  
 set out in No. 15.

20. Hydraulic Engineering Co. ----- 25th May, 1936.  
 No. 18 and details modifications that will be made in  
 the new machines.

*Copies of Nos 19 & 20 have been supplied  
 to the Dept. C.D.A.C. for the meeting tomorrow  
 The report on the working of the  
 improved machines at Taveta*



Indicates that there is room for considerable improvement, but that the machine is capable of becoming a commercial success provided the improvements agreed upon are introduced.

J. J. Proctor  
26/5/36

See C. Botterby

J. J. Proctor  
26/5

The Cttee had this all for them & Capt. Mangnall attended. He says the machine is really better than the report would show because the tests are not conclusive & actual performance is better (e.g. it has done 4.5 trucks in 10 hours) Mr. Stockdale agrees rather.

Capt. Mangnall will send him by a memo of advice. The report (I gave him a copy). He thinks we should have to get advice on  
a) The machine  
b) Capt. Mangnall's fees

minutes of meeting, 26/5/36

It certainly looks as if the trouble had been in the machine. The report seems approved to get things going.

26/5/36

- 1. To Mangnall tel. ----- 25.5.36
  - 2. Mangnall tel. ----- 25th May 1936
- No. 21 ansd; will attend C.O. as requested.

DESTROYED UNDER STATUTE

SEE ROYAL WARRANT

118

23. G.D.A.C. 1988. ----- 5th June, 1936.  
Prepared to recommend further loan of £1,000 towards the completion of the first machine, subject to such arrangements being made by the Co. with Mr. Bibby and Mr. Mehta as would prevent any action by them jeopardising the successful development of the machine.

Mr. Stockdale

This is really further than I expected the Committee to go. The fault was that Capt. Mangnall was persuaded into building three machines. If he had only made one and regarded it as an experiment there would be no trouble.

As a result of no having made three and pursued a certain out-turn he was faced with proceedings and in any case could not get paid. He got a further grant to finance alterations in one machine if the other two owners would not press him. The one is now working and the two owners say "we want machines at once". Capt. Mangnall asks for £6000 for the purpose of

- a) Putting in further improvements in the machine that is working
- b) Remodelling the other two, to include all improvements

The Committee naturally say they won't touch anything till the two unimproved machines, until they know whether the new model will do all that is claimed.

They would consider putting up £1000 to cover the new improvements required in No. 1 but they lay down prior conditions

- a) An independent technical review of the machine with an opinion as to whether it should be supported
- b) Information as to the status of the Hydraulic Engineering Co.
- γ) Assurance that Bibby & Mehta (Kishida) won't spoil things by taking action

- a) We must I think get "from the Gov. There must be lots of people who could advise
- β) We can get from the C.A.
- γ) Must wait for α & β.

Kenya has been used for several years. It is not their money & it is Major Briggs' machine, but if it does work it is tried to reduce costs & improve outputs. They ought to have taken more interest in it and sent people to make full tests & reports not the very short sketchy trials recorded in the enclosure to the dispatch. (Mr Marshall gave us much more illuminating figures). I think we should say so.

? Ask Kenya for full reports by an engineer and an agricultural officer. Ask C.A. for a report on the Co.

Copy of our deep 9 letter to go to C.D.A.C.  
9. copy of C.D.A.C. letter to be included in the deep.

4-2-5-1936  
8-6-36

I agree with action as proposed and should suggest that Capt Mangrill be informed of the decision of the Committee to recommend assistance towards the improvement of the machine as it was provided that they are satisfied with the proposal from a technical standpoint is sound and likely to make the machine able

successfully to compete with other makes of local machines. We should also be informed that further information being sought from Kenya & that arrangements for the completion of this information could only be contemplated if arrangements could be made by the Company with Messrs Peabody & Madley is proposed. Any action by them jeopardizing the successful development of the machine as question

This assumes that the Company is in a financial position to improve the

further issue of £1000, but I feel that Mr Marshall should be given some information going some in view of the financial action for the machine & that it would be justified in taking the risk.

J. Spindale  
9/6

Sir C. Bottomley

You should see? Action as proposed

13-6-36  
106

W.C.S. 10.6.36 at 10.30

24. Hydraulic Engineering Co - 11 June, 1936.  
Transmits memorandum on report received from Gov in No 19 on machine, & necessary photographs.

Photo Room  
R 297

25. Mangrill - 5/0 - 11 June, 1936  
The copy of memo on 24, requests action be taken as soon as possible.

26. Waters - 5/4 - 2 June, 1936  
Des of costs regarding comparison between the Mangrill & Combs decorticators

Return 23

Mr Spindale

You should see this: a copy of the memo must clearly go to Kenya, and one should be to the C.D.A.C.

The figures in the memo of No 26 do not quite agree. Capt Mangrill says he gets 73.87% more fibre and the figures in the last para of Mr Peabody & Madley's report give 86 tons as against 77 tons out of 100 tons of leaves. This can be regarded as 7% better

NOT REVIEWED

or, if you say Mangnall gets 86 against 77 that is equivalent to  $\frac{1}{11}$  better or 9%.

Perhaps the Kenya report does not bear out Capt Mangnall's full claims.

The last page says that if he has to stick with only one of the three machines then the other two will descend upon him and the whole enterprise will stop. As he also says the alterations will enable him to collect the market why can't they go ahead without relying on bond funds?

I have added an enclosure (part 9) including a copy of the memo by Capt Mangnall in the despatch to Kenya. But I think you should see first in case you want to make any comment.

S. S. G. Hunt  
13.6.

I agree with action proposed.

J. A. Stoddard  
1936

- 27 to Hydraulic Engineer (20, 25) - 16 JUN 1936
- 28 to S. G. (info. 23) copy - 16 JUN 1936

By air mail 24/6/36  
24 to Kenya, 4224 (w/ as 17, 20, 23 & 4) incl to 24

19 answered

18 JUN 1936  
C.D.  
A 22 JUN  
A 26

29 JUN 1936

U. to 6000 ft. view of 1/6 & 1/6  
The photo. taken at present of 200' - this is now being filed in the...  
Trans. 49.14 to a separate sub file.  
R80-24  
227 8.13.18

31. 6A

Submits information regarding the standing and financial position of the Hydraulic Engineering Co.

This should satisfy the C.C.C.  
? Wait for Kenya's reply to No 29.  
C. A. Foxworth  
8/7/36

Mr Stoddard  
Sir J. Campbell

Capt Mangnall called - on his way to Lords and bewailed his fate. He says that if the manager of the estate had only said "it's a good machine and with a few alterations will deliver the goods", all would be well.

He tells me Kenya have departed a Railway engineer to see the machine but some one has broken the main driving chain and a bit can't be done till new links arrive from Renolds. (Why they don't have several spare links I don't know)

If S1 is correct he should not be in the trouble he says he is. He is inclined to be bitter about the C.D. A.C. and I told him he had no real case for assistance at all & that the office had rather established things in advancing the original grant. He will write about it.  
J. E. W. Hunt  
10.7.

Personally I consider the proposal of the C.C.C. a very fair one & I would like to see it go through. The Crown Agents report is more favourable than I had expected.

J. A. Stoddard  
1936

19/7/36

S. S. G. Hunt  
14.7

Harrold

20 July 1966

Ref. W. 273: consider for reasons set out that the decision of the C.D.A.C. should be reconsidered, & that assistance should be granted to extent of replacing machines.

This is all very unfortunate.

He does not say anything about trying to induce Mr. Bittly & Mr. Pickett not to press their demands for new machinery.

In fact the gist of the letter is that money to provide for the purchase of these two machines is necessary to keep the Company going. Can it be that they have been building these machines with money borrowed from the bank on the expectation of getting a loan from the C.D.A.C.?

I have discussed with Mr. Caine, who does not think that the C.D.A.C. will be likely to award them the amount of £100,000 and not due to meet Bill Soff's

as the H. will be circulated to the C.D.A.C. and the particular company going. In fact in view of the

financial position of the Co., as revealed by this letter, even the £100,000 of the further £1000 for the Tarata machine might require further cover.

It has however occurred to me that if in fact the Co. will be required to produce some special machinery in connection with the

arrangement of the W.O. & the proposed to be submitted at the

I submit you for cover of the letter for Mr. Bittly & Mr. Pickett

The C.D.B. is generally very reluctant to help. He argued up with concerns in a way financial position & the only additional fact which can now be put before them is that this company is in danger of collapse unless they suffer it! As hinted in the past, there is no reason why some better

financial case in which we  
take up the recommendations of  
the machine with a written C.D.F.  
help.

I think Mr. Pashin's draft  
has all the essential points  
fairly

I agree. The Comm's decision was I think quite  
sound; it was certainly arrived at after a full  
discussion; and I do not think there is any  
chance whatever of its being revised.  
I concur in the draft.  
The 23-7-36.

Mr. Pashin,  
This concerns a machine  
from which we are very glad  
to hear of an improvement in  
total output, and I would like  
you to see the accompanying draft  
before it goes.

The history is shown in the third  
minute on this file. The  
C.D.F.

C.D.F. have provided £4,200  
and have offered another £1000  
on certain conditions. Captain  
Meynell, whose company have  
put a lot of money into the affair,  
says that it is the Committee's  
offer is not sufficient to keep  
them going till they get other  
orders, which he confidently expects  
out of the armament programme.

His machines have been  
damaged by ill luck and we  
could not say how far the loss  
has been due to defects which could have  
been provided against.  
Mr. J. Campbell, confident  
that the loss would not be  
more than £1000 and that it would  
be paid by the Government, they should  
signify any objection?  
The draft is very good?

W.C.S. 24.7.36

I will remain as before  
sorry to see the details but  
is no objection.

W.C.S. 24.7.36  
R. W. Mangall (22 Bank)  
- - 1 AUG 1936



31. Mangnall.-----8/0-----5.8.36.  
Ref. No. 33; hopes to obtain the assistance of Sir  
W. Load, President of the Tanganyika Sisal Growers  
Assocn, now in England; requests short interview on  
the 11th. August; to discuss points raised in 33.

36 I am replied again with  
W.L.S.  
MR Mangnall 8/0 Del C-5-36 36  
The Stockdale & I saw him yesterday.

There is no letter from T.S. to us  
regarding about the letters regarding  
for the broken chain have been arranged  
by a demand for a new engine, that is  
not his concern at all. He is fond  
with legal actions all round, & that  
first president his Co. from borrowing money  
on 2 subscriptions. He has a letter of some  
arrangement, but will not know  
for some weeks.

He attended with Frank C.S. to be as  
arranged & would like to be  
C.S. He will be found with the plan to  
be known in the past but he had  
regard to the same business  
which is not to be done and that  
to know that the company is doing  
what for the particular country  
is not to be done.

Recd 27/8/36  
C.S.  
28.8.36

Mr. Grose-Smith.

Recirculated in accordance with Sir C. Bottomley's  
minute of the 12.8.36. opposite.

Room 297.  
27.8.36.

Mr. Grose  
Sir C. Bottomley

I have now seen 32 & 34. It appears

that there is no prospect of a report from Kenya.

Mr. C.D. A.C. made their grant of assistance conditional

- on (1) more information as to the machine
- (2) information as to the company's general standing
- (3) Satisfactory arrangements with Messrs. Bailey  
& Naraji Kaledas.

(3) is available in the C.A. letter (31)  
as to (2) There is no hope of anything from Kenya owing to  
the breakdown. There is the report in (32) that it does  
not, get very far and the covering letter is unappreciated  
(3) seems unlikely in view of what Capt. Mangnall has said

I think we can only  
I send the C.D. A.C. a letter saying we understand  
a report is not to be expected in view of a breakdown  
(this was prepared then in favour of the machine) but  
sending a copy of (32) and give the substance of the  
C.A. letter (31) and say we understand the  
all regarding with the other two.

That is all we can say, but  
as I have indicated at A  
Capt. Mangnall's attention the statement  
of T. Bottomley to obstruction or hostility on  
the part of Messrs. Grose. Also, the C.A.



letter give a different impression  
from Capt. Macgill's own  
reputation of being an old  
reputable business going to  
pieces.

Of course ~~nothing~~ could be  
done ~~without~~ ~~arrangement~~, but  
possibilities on our side, & there  
will be an opportunity of  
explaining the position orally,  
but if an Honorable Sir  
Campbell is about to venture to  
the Office I should like him to  
see the Draft.

*Clad 28/8/36*  
*alone*

I am afraid the "all" was meant  
I am afraid the "all" was meant

*Campbell*  
*8/4/36*

To C.D.A.S. (44697/322)

11 SEP 1936

38. Crown Agents.----- minutes.----- 29.10.36  
Points out that under the agreement it will soon be nec-  
essary to decide whether the machine has proved success-  
ful, and enquires whether enquiry on this point has yet  
been made.

*See end of*  
*170 57 on 72*  
*1935 p 4*

*(The first instalment  
of the 5000 hours was  
made paid in February  
last.)*

(37)

(32)

... the first instalment ...  
... the 5000 hours ...  
... the first instalment ...  
... the 5000 hours ...

... the first instalment ...  
... the 5000 hours ...  
... the first instalment ...  
... the 5000 hours ...

*Campbell*

M: Stouardale.

I have spoken to Mr. Stouardale, who proposes, subject to your concurrence, that a note shd. be prepared for circulation at the next meeting of the C.D.A.C. inviting attention to Para 2 of the agreement; <sup>Something to the effect</sup> saying that, while the machines have produced interesting results which may yet be of value in the development of machinery capable of an economical output of high quality fibre, it cannot be said that the machines have achieved the purpose for which they were designed; & inviting the Committee to recommend that the advance shd. be regarded as a first grant.

If you agree, perhaps you will suggest what shd. be said as to the actual achievements of the machines.

[The latest date for the submission of proposals for consideration at the next meeting of the Committee is on 11 Nov.]

J. J. Paskin  
4/11

Mr. Paskin,

I agree with the action proposed.  
The position in regard to the Mangnell fibre

fibre decorticator is briefly as follows :-

In the new model it was contemplated that some of the defects of the earlier model would be rectified. These earlier models showed that a fibre of high quality was being prepared, that the percentage outturn of fibre was higher than in the machines in use in East Africa, but that the rate of daily output was low. Certain mechanical modifications were seen to be desirable and the replacement of the driving ropes necessary

In the new model, the driving ropes were replaced by chains and modifications of the feed table were made. The shape of the entrances to the scutching drums was also modified. The results of these changes, as far as is known at present, indicate that the anticipated speeding up of production has not been achieved to the extent contemplated, and that the change in the form of the scutching drums has brought about certain difficulties in the steady feed of the leaves through the drums. A fibre of high quality is prepared by the machine, and the percentage recovery of fibre from the leaves is good. The daily output is, however, still below requirement and the difficulties of feeding into the drums are unlikely to be <sup>overcome</sup> unless there is a reversion to the earlier form of drum which provides a rounded face at the intake.

The above language is probably foolish from an engineering point of view, but it is the best I can do.

- The position may be summarised :-
1. The output per working day is still too low to be economical.
  2. There is clogging at the intake of each drum.
  3. This clogging <sup>involves delays and</sup> may result in the breaking of the driving

driving

driving chains of the machinery. (This has, I believe, actually happened).

F. H. Sheddale  
9.11.36.

I submit for comment, a 4th. memo to the C.D.A.C. all the facts are of course well known to the Centre, but the case has been on numerous other occasions of such an unusual character. Has it been thought it desirable to send a memo to the holders of your history of this project. The actual submission enclosed pages 13-18.

I regret that it has not been found possible to prepare the minutes for submission before now. I have however spoken to Mr. Smith who says that it will be in time if it reaches him as an approved draft by Friday evening.

J. J. Parker  
12/x1.

I have stamped the memo, which is clear, I assume, no time pressure but I should like Sir J. Campbell to see before the meeting.

114 Kind  
13.11

39. 60 memos

H.A.C.D.A.C. 2088 - 16 Nov. 36.

in: stands  
supply  
11/11/36

11/11/36  
11/11/36  
11/11/36  
11/11/36

11/11/36  
C. Brown

No reply received to (29)

? Wait another month

C. Brown  
20/11/36

20/11/36  
R. 297

40. MINUTE (BY MR. STEWARD) OF THE C.D.A.C. (2090) 1.12.36

Agrees to authorising the advance of £3,000 to be treated as a free grant and also recommends that the original loan of £2,000 should be converted into a free grant. A similar letter is being sent to Treasury.

Draft to Treasury  
C. Brown  
7/12/36

1/2 & 1/3  
1/3

of plates. etc.  
16.12.36  
1/37

2098  
✓ copies of 23 sent to also March.

44. GOV'S DEPUTY (WARR) 586. . . . . 36.  
States that the deprecicator is not in working  
order and that apparently as the manufacturers  
are unable to obtain further finance from the  
CDF, they have dropped all interest in the machine.

We shall have to write to Kenya  
when we get Treasury approval  
of the Memoirs in No 44.  
The opportunity might be taken  
to tell the former, ~~of~~ Confidentially  
of the remarks made by  
Capt Murray at the interview  
with Mr Stockdale on the  
1st December.

Mr Stockdale  
to see

C.A. Rowan  
17.12.36

Mr Stockdale  
2/12

J.P. Parker  
19/12

Mr Stockdale  
to see

MS. Treasury (S 30209/2226/2) — 30.12.36  
Small conversion of advances indicated, which  
was originally displaced in loans into fees granted

? Now upon the C.A.  
Kenya, part  
Hydraulic Eng. Co.  
As in draft here with  
part  
I have added a Confidential  
draft in regard to No 44.

C.A. Rowan  
4/1/37

Mr Duncan

Will you please consider whether anything  
should be added to the file to C.A. & re  
as to the cancellation of agreements of  
1932 (v. No. 28 or 18016/32) & 1935 (No 37)  
or 38022/35)

J.P. Parker  
5/1.

Mr Parker

I think that the drafts will do as they are  
But see my slight amendments.

21/1/37  
Mr Duncan

Mr Hydraulic Eng. Coy

26 JAN 1937

47 To Kenya - 80 - (49 a/c to 40) (as above) —

48 To Kenya - Conf (3) —

49 To C.A. — 7, 44, 47 —

Copies of 47 required  
for C.A. — (Comp)  
either taken  
or 1937 file

56027/36

C. O.

Mr. *Erasmus* 4/15/37  
Mr. *Parkin* 25/1  
Mr.

Sir C. Parkinson.  
Sir G. Tomlinson.  
Sir C. Bottomley  
Sir J. Shuckburgh.  
Permt. U.S. of S.  
Parly. U.S. of S.  
Secretary of State.

2. January 1937

*Erasmus*

DRAFT.

*Clear Agent*

(38)

I am etc. to refer to your  
Communication of the 28<sup>th</sup> of October  
Reference O/Kanya Po, and to  
inform you that he has  
reached a decision with regard  
to the achievement of the  
Sisal decorticating machine  
manufactured by the Hydraulic  
Engineering Co. Ltd, and that  
upon that decision, the  
Lord Commissioners of the  
Treasury have sanctioned the  
conversion of the advance of  
£500 made to the Company  
in 1935 into a free grant.  
Their Lordships have also  
agreed that the advance of  
£700 made to the Company

*to the Comptroller in Charge  
of the Patent Office  
to be referred to the  
Patent Office  
to be referred to the  
Patent Office*

FURTHER ACTION.

48

in 1935 should be treated similarly. In the latter Commission, reference invited to from letter of the 23<sup>rd</sup> of June 1952, (28 on 18016/22.)  
Reference of Kenya Co.

The presence of Kenya and the Company have been enforced accordingly. Copies of the relevant correspondence are enclosed for your information.

*Sam Eli*

(Signed) J. E. W. FLOOD

Mr. Grossmith 4/1/37  
Mr. Parkin 25/1/37.  
Mr.  
Sir C. Parkinson.  
Sir G. Tomlinson.  
Sir C. Bottomley.  
Sir J. Shuckburgh.  
Permt. U.S. of S.  
Parly. U.S. of S.  
Secretary of State.

Downing Street,  
27 January, 1937.

Sir, *Stc*

I have etc. to refer to my

*(see diff.)*

despatch No. 80 <sup>today</sup> of even date regarding

**DRAFT.**

the Mangnall Decorticator and to inform you that Captain Mangnall stated at an

KENYA.

CONFIDENTIAL. (3)

O.A.C.

interview at the Colonial Office on the 14<sup>th</sup> December that he had made arrangements

with the agent of Mr. Mowji Kalidau in Uganda and with Mr. Bibby in Kenya, to refund £2,000 in respect of the two

visual decorticators, signed orders, which were supplied to them, on the

understanding that payments should be made at six-monthly intervals spread over five years. It was understood

that Captain Mangnall had offered the same terms to Major Grogan but that these had not been accepted.

**FURTHER ACTION.**



which was submitted to the Colonial Development Advisory Committee at a meeting on the 25th of November. The Committee noted with regret that the machine had not proved successful, and in the circumstances, agreed that there was no alternative to authorising the conversion of the loan of £5,000 advanced to the Hydraulic Engineering Company in 1935, into a free grant. They also recommended that the sum of £2,700 advanced to the Company in 1934 (should be treated similarly).

The sanction of the Lord Commissioners of the Treasury for the treatment of the two advances as free grants had now been obtained and the Company and the Crown Agents for the Colonies are being informed accordingly.

I have, etc.  
W. DRMSBY GORE.

3024/56

C.O.

- Mr. *Russell* 4/137
- Mr. *Parkin* 571
- Mr. *Duncan* 21/1/37
- Mr. *Parrin* 2/1/18
- Sir C. Parrinson.

- Sir G. Tomlinson.
- Sir C. Bottomley.
- Sir J. Shuckburgh.
- Permt. U.S. of S.
- Parly. U.S. of S.
- Secretary of State.

1937  
file  
46

26 Jan., 1937

DRAFT.

The Managing Director  
Hydraulic Engineering  
Co. Ltd.

With reference to the Agreement dated the 20<sup>th</sup> of June 1935 between the Hydraulic Engineering Company Ltd. and the Crown Agents for the Colonies on behalf of the Govt of Kenya, I am etc to inform you that he has reached a decision in regard to the achievement of the great desalinating machine mentioned in the Agreement and that with the concurrence of the Lord Commissioners of the Treasury, it has been ~~agreed~~ <sup>agreed</sup> that the advance of £5,000 made to the Hydraulic Engineering Co. Ltd. in 1935

FURTHER ACTION.

Mr. G. Tomlinson  
 Mr. C. Bottomley  
 Mr. J. Shuckburgh  
 Mr. G. C. Bottomley  
 Mr. J. Shuckburgh  
 Mr. G. C. Bottomley  
 Mr. J. Shuckburgh

will be regarded as  
~~should be considered as~~  
a free grant

2. It has also been agreed  
that the advance of £700

made to the Company in  
1932 ~~should be repaid as~~  
a free grant.

Government of Kenya and the  
The Crown

Agents are being informed  
accordingly.

James

(Signed) J. E. W. FLOOD

will be regarded as  
~~should be considered as~~  
a free grant

2. ~~It has also been agreed~~  
that the advance of £700

made to the Company in  
1932 ~~should be regarded as~~  
a free grant. <sup>Government of Burma and the</sup>  
~~Ministry.~~ The Crown

Agents are being informed  
accordingly.

Yours  
Sincerely

(Signed) J. E. W. FLOOD

4519

Any reply to this letter should be addressed to—

THE SECRETARY,

TREASURY,

WHITEHALL, LONDON, S.W.1.

and the following number quoted :

S.34609/0226/2.

TREASURY CHAMBERS.

30 December, 1936.



RECEIVED  
31 DEC 1936  
O.O. REGY

Sir,

COPY SENT TO ACCOUNTS DEPARTMENT.

43.

I have laid before the Lords Commissioners of His Majesty's Treasury Mr. Flood's letter of the 14th instant, 38022/36, signifying Mr. Ormsby Gore's concurrence in the recommendations of the Colonial Development Advisory Committee, conveyed in the Secretary's letter of the 1st instant, that certain advances that have been made from the Colonial Development Fund to the Government of Kenya for the construction, installation and working in Kenya of a new type of sisal decorticator, should now be treated as free grants.

In reply I am to request you to inform Mr. Secretary Ormsby Gore that, in the circumstances explained, My Lords sanction the conversion of the following advances, which were originally authorised as loans, into free grants viz:-

(a)

The Under Secretary of State,  
Colonial Office:

KENYA.

No. 586



GOVERNMENT HOUSE  
NAIROBI.  
KENYA

NOVEMBER, 1936.

Sir,

29  
I have the honour to acknowledge the receipt of your despatch No. 424 of the 18th June, requesting that further reports on the working of the Mangnall decorticator at the Taveta Estate and on the prospects of its commercial success, if certain alterations were carried out, might be furnished by an Engineer and an Agricultural Officer competent to form opinions on these points.

(47)  
2. On the receipt of your despatch, arrangements were made for inspection of the machine by the Chief Mechanical Engineer of the Kenya & Uganda Railway and by an Agricultural Officer. The machine, however, was out of action and could not be run until certain spares were received from England. Since it was essential, for the purpose of supplying the information desired by the Colonial Development Advisory Committee, to observe the decorticator in action, the arrival of these spares was awaited.

3. It now appears, from information given by the Manager of the Taveta Estates, that nothing has been done to the decorticator since its final breakdown early this year. He adds: "Apparently as the manufacturers are unable to obtain further finance from the Colonial Development Fund, they have dropped

THE RIGHT HONOURABLE  
W. ORMSBY GORE, P.C., M.P.,  
SECRETARY OF STATE FOR THE COLONIES,  
DOWNING STREET,

LONDON. S.W. 1

- 1 - all .....

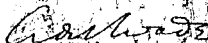
all interest in decorticating machinery and do not intend making any replacements of broken parts, etc." This machine is the only "improved" Mangnall decorticator in the country.

4. In the circumstances, it will be appreciated that it is not possible to furnish the reports desired. In view of the statements quoted in paragraph 3 above, it might be advisable that Capt. Mangnall should not be furnished with a copy of this despatch.

I have the honour to be,

Sir,

Your most obedient,  
humble servant,



G. V. F. N. O. R. S.,  
DEPUTY



C. O.

Mr. Grosse Smith, 7/112/36

Mr. *Adkins* 2/11

Mr.

Sir C. Parkinson.

Sir G. Tomlinson.

Sir C. Bottomley.

Sir J. Shuckburgh.

Permt. U.S. of S.

Parly. U.S. of S.

Secretary of State.

Downing Street,

4 December, 1936.

Sir,

I am etc. to refer to the letter from Colonial Development Advisory Committee of the 1st December (C.D.A.C.2090) regarding the advances made to the Hydraulic Engineering Company Limited in connection with the construction of a new type of sisal decorticator and to request that the Lords Commissioners of the Treasury may be moved to sanction the conversion of the loan of £700 made to the Company in 1932 into a free grant in accordance with the Committee's recommendation.

It will be observed that the Committee also agreed that the subsequent advance of £3,000 to the Company should be treated as a free grant.

**DRAFT.**

THE SECRETARY,  
TREASURY

COPY SENT TO ACCOUNTS DEPARTMENT

FURTHER ACTION.

11

grant. In this connection I am to invite  
reference to the 6th and 18th-paragraphs of  
the Memorandum submitted to the S.D.M.C. and  
to ask that Their Lordships may be moved to  
approve the treatment of this advance as a  
free grant *also*.

I am, etc.

(Signed) J. E. W. Flood.

Are the photographs used  
to with you?

Mr. Caine,

Mr. Flood, has seen

S. Caine  
1.12

Captain Mangnall was in London to-day and he came in to see me in order to let me know that he had made arrangements with the agent of Nanji Kalidas in Uganda, and with Mr. Bibby in Kenya, to refund £2,500 in respect of the two sisal decorticators (first model) which were supplied to them - payments to be made at six monthly intervals spread over 5 years. He had offered the same terms to Major Grogan but these had not been accepted, and there is still talk of litigation in respect of the machine (second model) supplied for use on Taveta Estate. As far as the C.D.A.C. advance is concerned, Captain Mangnall said that he regretted that he would have to ask for this to be written off. I gathered that the Chester Hydraulic Company was in the process of reconstruction but that it would weather the storm. All expenditure on the development of the Mangnall sisal decorticator would be written off, but it was proposed to contemplate certain further changes in the machine and then offer a still further model to the sisal industry. Captain Mangnall seems to be confident that he would be able to sell further machines of this third model and that <sup>they</sup> would work satisfactorily. (This I thought was either excessive optimism or delusion). Capt. Mangnall asked if the photographs which he supplied for the meeting of the C.D.A.C. could be returned to him, and I promised to have this matter considered.

F. A. Shilldale

1.12.36

Are the photographs returned  
to with you?

Mr. Caine,

Mr. Flood, has seen

J. Caine  
1.12

Captain Mangnall was in London to-day and he came in to see me in order to let me know that he had made arrangements with the agent of Nanji Kalidas in Uganda, and with Mr. Bibby in Kenya, to refund £2,500 in respect of the two sisal decorticators (first model) which were supplied to them - payments to be made at six monthly intervals spread over 5 years. He had offered the same terms to Major Grogan but these had not been accepted, and there is still talk of litigation in respect of the machine (second model) supplied for use on Taveta Estate. As far as the C.D.A.C. advance is concerned, Captain Mangnall said that he regretted that he would have to ask for this to be written off. I gathered that the Ohester Hydraulic Company was in the process of reconstruction but that it would weather the storm. All expenditure on the development of the Mangnall sisal decorticator would be written off, but I was proposed to contemplate certain further changes in the machine and then offer a still further model to the sisal industry. Captain Mangnall seems to be confident that he would be able to sell further machines of this third model and that <sup>they</sup> would work satisfactorily. (This I thought was either excessive optimism or delusion). Capt. Mangnall asked if the photographs which he supplied for the meeting of the C.D.A.C. could be returned to him, and I promised to have this matter considered.

J. A. Shilldale

1.12.36

Communications on this subject  
should be addressed to

THE SECRETARY.

Telephone: WHITEHALL 9191.

24  
4  
COLONIAL DEVELOPMENT ADVISORY COMMITTEE,

COLONIAL OFFICE,

DOWNING STREET,

S.W.1.



REC

1st December, 1936.

C.D.A.C. 2090.

Sir,

I am directed by the Colonial Development Advisory Committee to request you to inform Mr. Secretary Ormsby Gore that, at their 93rd meeting on the 25th November, they had before them a memorandum by the Colonial Office (C.D.A.C. 2088) setting out the position with regard to the construction, installation and working in Kenya of a new type of sisal decorticator towards which grants of assistance from the Colonial Development Fund have been made, as shown in the papers mentioned in the margin.

2. The Committee note with regret that the machine has not proved successful, and in the circumstances agree that there is no alternative to authorising the advance of £3,000 made in accordance with the recommendation of the Committee at their 76th meeting on the 27th February, 1935, to be treated as a free grant.

They

THE UNDER SECRETARY OF STATE,

COLONIAL OFFICE,

C.D.A.C.

1959

1961

1705

1725

1981

1988

2036

(110)

COLONIAL DEVELOPMENT ADVISORY COMMITTEE.

Kenya.

Sisal Decorticating Machinery.

C.D.A.C.  
950  
961  
1705  
1781  
1967  
1988  
2008

With reference to the papers noted in the margin, I circulate for consideration a Colonial Office Memorandum setting out the position in regard to the construction, installation and working in Kenya of a new type of sisal decorticator.

It will be observed that, subject to any observations which the Committee may have to offer, the Secretary of State feels that there is no alternative to his deciding that, for the purposes of the Agreement between the Hydraulic Engineering Company and the Crown Agents for the Colonies, the machine has not proved successful, and to his requesting the Treasury to authorise the advance of £3,000 to be treated as a free grant.

The Committee are also invited to concur in a proposal that the original loan of £700 should also be regarded as a free grant.

S. CAINE

Secretary to the Committee.

COLONIAL OFFICE.

16th November, 1936.

Copy sent to Kenya (47) 49



SISAL DECORTICATING MACHINERY.

The Mangnall Decorticator.

1. At their 46th Meeting, on the 2nd of March, 1932 the Committee recommended a free grant of £500 and a loan of £700 for 5 years free of interest, to finance the construction of a new type of sisal decorticator by the Hydraulic Engineering Company Limited.

2. The recommendation was approved and as a result of the experimental machine constructed, orders were subsequently placed by sisal producers in Kenya for three commercial machines. These machines were duly delivered and installed but owing to certain mechanical defects they failed to give satisfaction and in 1935 the Company was threatened with litigation by the purchasers of the machines which had proved faulty.

3. The Company was confident that the defects were remediable but it was unable to find the finance necessary to enable the defective machines to be replaced by new models from which the defects had been eliminated. The cost of replacing the three machines was estimated at £7,000 and the Company applied for a loan of this amount. The matter was discussed with Captain Mangnall who ultimately expressed the view that, if a single new model were constructed and proved to be an unqualified success, the Company would find it possible to finance the two further machines required for replacement on the strength of orders received from new purchasers.

4. At their 76th Meeting on the 27th of February, 1935 the Committee recommended a free grant of £2,000, for the purpose of constructing one new machine on the following conditions:-

The loan to be free of interest for two years, bearing interest at four per cent., thereafter, and repayable by equated annuities spread over the third to the eighth years (or earlier at the company's option). If the new machine is not successful, the loan to be converted into a free grant of capital. The loan to be granted on condition that the owners of the defective machines will agree to stay their claims against Captain Mangnall's company, until such time as the new machine has been made and tested in East Africa.

5. The Company was able to obtain the consent of two of the owners concerned (Major Grogan and Mr. Bibby); but, owing to his absence in India the consent of the third owner (Mr. Nanji Kaledas Mehta), could not be obtained, and with the concurrence of Sir Basil Blackett it was agreed that the stipulation as regards the third owner should be waived.

6. In due course, the conditions governing the advance were embodied in an Agreement between the Hydraulic Engineering Company and the Crown Agents for the Colonies dated the 20th of June, 1935, which provided, inter alia, that

"If within a period of eighteen calendar months after the date of payment of the first instalment of the advance the machine has not proved to be successful in achievement of the purpose for which it is designed, the advance will be regarded, not as a loan, but as a free grant. The question whether the machine is successful or not for the purposes of this condition shall be decided by His Majesty's Principal Secretary of State for the Colonies, whose decision shall be final."

An improved machine was ordered to be made in September, 1935, and was put into complete production at

the Taveta Estate. The cost of constructing, transporting and installing this machine and maintaining it in working order was reported by the Company to have been considerably in excess of the £3,000 advanced to them. Moreover, when the machine was put into operation it immediately became obvious that certain improvements were still required. Nevertheless the Taveta machine produced quite promising results and from time to time it was inspected by representatives of Mr. Bibby and Mr. Mehta.

8. In May 1936, the Company reported that it was threatened with legal proceedings by Mr. Mehta unless shipment by the middle of August of a new de-bottlenecked, in place of the defective machine supplied to him, could be guaranteed. The Company was not in a position to comply with this demand and submitted an application for the grant of a further loan of £64,000, of which £1,000 was for the purpose of incorporating in the Taveta machine the improvements which experience had shown to be necessary and £5,000 was the estimated cost of replacing the other two machines with new machines in which the necessary modifications of the "Taveta" machine would be incorporated.

9. This application was considered by the Committee at their 29th meeting on the 27th of May. As in the light of reports received from the Governor of Kenya, it appeared that the new model in operation at Taveta could not yet be regarded as a proved commercial success. The Committee saw no justification for any expenditure on the replacement of the two other machines until the practical possibilities of the Taveta model had been fully

demonstrated.

demonstrated. They intimated, however, that they would be prepared to recommend a grant of a further £1,000 towards the final improvement of the Taveta machine: provided

(a) that satisfactory reports were furnished as to the prospects of the success of the machine from the technical and commercial points of view, including its prospects of being able successfully to compete with similar machines of German or other manufacture;

(b) that the Committee could be assured that the standing of the Company was such that it was worthy of further support; and

(c) that arrangements were made by the Company with Mr. Bibby and Mr. Mehta to prevent any action by them jeopardising the successful development of the machine.

10. This recommendation was communicated to the Company, and also to the Governor of Kenya who had suggested to arrange for further reports on the working of the machine, and on the prospects of its commercial success if the proposed alterations were carried out, to be furnished as soon as possible by an engineer and an agricultural officer competent to form opinions on these points. The Governor was also furnished with a copy of a memorandum prepared by the Company in which the previous reports received from the Governor of Kenya were analysed and in which the view was expressed that sufficient evidence as to the prospects of the success of the machine (if altered as was proposed) was already available to justify their being assisted to proceed immediately with

the

the building of the two further machines.

11. A further appeal by the Company dated the 20th of July, together with information as to the financial standing of the Company has been communicated to the Committee in Colonial Office letter of the 11th of September, (C.D.A.C. 2038).

12. No further report as to the working of the machine has yet been received from the Governor owing, it is understood, to the machine having been put out of action by the breaking of the driving chain.

13. The period of 18 months referred to in the Clause of the Agreement quoted in paragraph 6 above will expire on the 21st of December. It will accordingly shortly be necessary, for the purposes of that Clause, for a decision to be taken on the question whether "the machine has proved to be successful in the achievement of the purpose for which it is designed."

14. As to this, it can be said that there is evidence that the machine is capable of producing a fibre of high quality and that the percentage recovery of fibre from the leaves is good. On the other hand the daily output so far attained has been too low to be economical. It has been claimed by the Company that, in this respect, the unsatisfactory results are partly attributable to the fact that the oil engine installed by the Taveta estate was unreliable and exceedingly variable in its output, and that if an engine were installed which can be relied upon to give even output continuously, the decorticator would have no difficulty in dealing with the extra quantity of leaves

to

to produce greater output of fibre per day than can be produced by Corona machines.

15. On the other hand they are also partly attributable to clogging at the intake of the drums, caused by faults in the feeding mechanism, which however the Company claim to be remediable by a comparatively simple modification of the design.

16. The author of the Report which was furnished by the Governor in his despatch of the 14th of May (which was before the Committee at their meeting on the 27th of May) stated that he was not competent to express an opinion on the question whether the modifications which it was proposed to make in the machine were likely to produce the anticipated results; whether the machine, when so improved, would be capable of the contemplated output, and whether it would be likely to stand the greater strain to which it would be subjected when working to full capacity. Owing to the breakdown referred to in paragraph 12 above, there has been no opportunity of obtaining a report by an officer competent to form an opinion on these points. However there seems reason to think that the clogging at the intake of the drums, may be largely responsible for the breaking of the driving chain.

17. The Company is not able, without financial assistance, to undertake the necessary alterations to the machine; the Committee is not prepared to recommend a grant for this purpose until it has received further reports which, in present circumstances, are not obtainable;

and

and it is not possible to say finally that the machine has been proved to be successful for the purpose for which it has been designed until these improvements have been carried out and until the improved machine has been fully tested under normal working conditions with an efficient engine of adequate power.

18. There is therefore a complete deadlock and, subject to any observations which the Committee may have to offer, the Secretary of State feels that there is no alternative to his deciding that, for the purposes of the Clause quoted in paragraph 6 above, the machine has not been proved successful for the purpose for which it has been designed, and to his requesting the Treasury to authorise the advance of £3,000 to be treated as a free grant. In these circumstances the Secretary of State considers that the Company (and the Government of Kenya) should also be relieved of the liability to repay the loan of £700 referred to in paragraph 1 above and, subject to the concurrence of the Committee, he proposes to recommend to the Treasury that this sum should also now be regarded as a free grant.

COLONIAL OFFICE,

16th November, 1936

*Draft*  
M: Passin 12/21/36.  
M: Spence 12/11  
M: Flood 13 at one

39

SISAL DECORTICATING MACHINERY.

The Mangnall Decorticator.

10 on 18016/32.

1. At their 46th Meeting, on the 2nd of March, 1932, the Committee recommended a free grant of £500 and a loan of £700 for 5 years free of interest, to finance the construction of a new type of sisal decorticator by the Hydraulic Engineering Company Limited.

No. 5 on 38022/35.

2. The recommendation was approved and as a result of the experimental machine constructed, orders were subsequently placed by sisal producers in Kenya for three commercial machines. These machines were duly delivered and installed but owing to certain mechanical defects they failed to give satisfaction and in 1935 the Company was threatened with litigation by the purchasers of the machines which had proved faulty.

3. The Company was confident that the defects were remediable but it was unable to find the finance necessary to enable the defective machines to be replaced by new models from which the defects had been eliminated. The cost of replacing the three machines was estimated at £7000 and the Company applied for a loan of this amount. The matter was discussed with Captain Mangnall who ultimately expressed the view that, if a single new model were constructed and proved to be an unqualified success, the Company would find it possible to finance the two further machines required for replacement on the strength of orders received from new purchasers.

No. 8 on 38022/35.

4. At their 76th Meeting on the 27th of February, 1935, the Committee recommended a free grant of £3000, for the purpose of constructing one new machine on the following conditions:-



The loan to be free of interest for two years, bearing interest at four per cent., thereafter, and repayable by equated annuities spread over the third to the eighth years (or earlier at the company's option). If the new machine is not successful, the loan to be converted into a free grant of capital. The loan to be granted on condition that the owners of the defective machines will agree to stay their claims against Captain Mangrall's company, until such time as the new machine has been made and tested in East Africa.

5. The Company was able to obtain the consent of two of the owners concerned (Major Grogan and Mr. Bibby); but owing to his absence in India the consent of the third owner (Mr. Nanji Kaledas Mehta) could not be obtained, and with the concurrence of Sir Basil Blackett it was agreed that the stipulation as regards the third owner should be waived.

6. In due course, the conditions governing the advance were embodied in an Agreement between the Hydraulic Engineering Company and the Crown Agents for the Colonies dated the 20th of June, 1935, which provided, *inter alia*, that

"If within a period of eighteen calendar months after the date of payment of the first instalment of the advance the machine has not proved to be successful in achievement of the purpose for which it is designed, the advance will be regarded, not as a loan, but as a free grant. The question whether the machine is successful or not for the purposes of this condition shall be decided by His Majesty's Principal Secretary of State for the Colonies, whose decision shall be final."

7. An improved machine was shipped to Kenya in September, 1935, and was put into commercial production at the Taveta Estate. The cost of constructing, transporting and installing this machine and maintaining it in working order was reported by the Company to

(See encl. to  
No. 37  
38022/35)

have been considerably in excess of the £3,000 advanced to them. Moreover, when the machine was put into operation it immediately became obvious that certain improvements ~~and simplifications were required.~~ <sup>was still</sup>

Nevertheless the Taveta machine produced quite promising results and from time to time it was inspected by representatives of Mr. Bibby and Mr. Mehta.

8. In May 1936, the Company reported that it was threatened with legal proceedings by Mr. Mehta unless shipment by the middle of August of a new decorticator, in place of the defective machine supplied to him, could be guaranteed. The Company was not in a position to comply with this demand and submitted an application for the grant of a further loan of £5,000, of which £1,000 was for the purpose of incorporating in the Taveta machine the improvements which experience had shown to be necessary, and £5,000 was the estimated cost of replacing the other two machines with new machines in which the <sup>necessary modifications of the</sup> "Taveta" ~~improvements~~ would be incorporated.

(23) 9. This application was considered by the Committee at their 89th meeting on the 27th of May. In the light of reports received from the Governor of Kenya, it appeared that the new model in operation at Taveta could not yet be regarded as a proved commercial success, the Committee saw no justification for any expenditure on the replacement of the two other machines until the practical possibilities of the Taveta model had been fully demonstrated. They intimated, however, that they would be prepared to recommend a grant of a further £1,000 towards the final improvement of the Taveta machine: provided

(a) that satisfactory reports were furnished as to the prospects of the success of the machine from the technical and commercial points of view, including its prospects of being able successfully to compete with similar machines of German or other manufacture;

(b) that the Committee could be assured that the standing of the Company was such that it was worthy of further support; and

(c) that arrangements were made by the Company with Mr. Bibby and Mr. Mahta to prevent any action by them jeopardising the successful development of the machine.

(27) (d) This recommendation was communicated to the  
(29) Company, and also to the Governor of Kenya who was requested to arrange for further reports on the working of the machine, and on the prospects of its commercial success if the proposed alterations were carried out, to be furnished as soon as possible by an Engineer and an agricultural officer competent to form opinions  
(34) on these points. The Governor was also furnished with a copy of a memorandum prepared by the Company in which  
(39) the previous reports received from the Governor of Kenya were analysed, and in which the view was expressed that sufficient evidence as to the prospects of the success of the machine (if altered as was proposed) was already available to justify their being assisted to proceed immediately with the building of the two further machines.

(32) // A further appeal by the Company dated the 20th of July, together with information as to the financial

standing

(37)

standing of the Company has been communicated to the Committee in Colonial Office letter No. 38022/36 of the 11th of September, (CAAC 2038).

12. No further report as to the working of the machine has yet been received from the Governor owing, it is understood, to the machine having been put out of action by the breaking of the driving chain.

13. The period of 18 months referred to in the Clause of the Agreement quoted in paragraph 6 above will expire on the 21st of December. It will accordingly shortly be necessary, for the purposes of that Clause, for a decision to be taken on the question whether "the machine has proved to be successful in the achievement of the purpose for which it is designed,"

(34)

14. As to this, it can be said that there is evidence that the machine is capable of producing a fibre of high quality and that the percentage recovery of fibre from the leaves is good. On the other hand the daily output so far attained has been too low to be economical. It has been claimed by the Company that, in this respect, the unsatisfactory results are partly attributable to the fact that the oil engine installed by the Taveta estate was unreliable and exceedingly variable in its output, and that if an engine were installed which can be relied upon to give even output continuously, the decorticator would have no difficulty in dealing with the extra quantity of leaves to produce greater output of fibre per day than can be produced by Corona machines.

15. On the other hand they are also partly attributable to clogging at the intake of the drums, caused by faults in the feeding mechanism, which however the

Company

Company claim to be remediable by a comparatively simple modification of the design.

(19)

16. The author of the Report which was furnished by the Governor in his despatch of the 14th of May (which was before the Committee at their meeting on the 27th of May) stated that he was not competent to express an opinion on the question whether the modifications which it was proposed to make in the machine were likely to produce the anticipated results; whether the machine, when so improved, would be capable of the contemplated output, and whether it would be likely to stand the greater strain to which it would be subjected when working to full capacity. Owing to the breakdown referred to in paragraph 12 above, there has been no opportunity of obtaining a report by an officer competent to form an opinion on these points. Moreover there

(18 this is a fair deduction seems reason to think that the clogging at the end of intake of the drums, <sup>may be</sup> largely responsible for the Mr. Stockdale's minute of 9/11 breaking of the driving chain.

17. The Company is not able, without financial assistance, to undertake the necessary alterations to the machine; the Committee is not prepared to recommend a grant for this purpose until it has received further reports which, in present circumstances, are not obtainable; and it is not possible to say finally that the machine has been proved to be successful for the purpose for which it has been designed until these improvements have been carried out and until the improved machine has been fully tested under normal working conditions with an efficient engine of adequate power.

*This is what I understood to be the case.*  
*J. S.*  
*1911*

18. There is therefore a complete deadlock and, subject to any observations which the Committee may have to offer

offer

offer, the Secretary of State feels that there is no alternative to his deciding that, for the purposes of the Clause quoted in paragraph 3 above, the machine has not been proved successful for the purpose for which it has been designed, and to his requesting the Treasury to authorise the advance of £3,000 to be treated as a free grant. In these circumstances the Secretary of State considers that the company (and the Government of Kenya) should also be relieved of the liability to repay the loan of £700 referred to in paragraph 1 above and, subject to the concurrence of the Committee, he proposes to recommend to the Treasury that this sum should also now be regarded as a free grant.

38  
HD

O/Kenya 80.

East African Department,  
Colonial Office.

RECEIVED  
29 OCT 1936  
REGD

28)  
31)

With reference to Colonial Office confidential letter No. 3802/36 of the 10th June and confidential reply of the 2nd July regarding the loan of £5,000 made from the Colonial Development Fund to the Government of Kenya and re-lent to the Hydraulic Engineering Co. Ltd. for the development of an improved type of machine for the desiccation of sisal, you recall that under clause 2 of our agreement with the Company dated the 20th June 1935 copies of which accompanied our official letter of the 10th June 1935, it will shortly be necessary to arrive at a decision as to whether, within a period of 18 months after the date of payment of the first instalment (20th June 1935), the machine has proved successful. We shall be glad to know whether any work is being made with a view to a decision hereon communicated in due course.

37-1-35

*J. C. ...*  
Hon. Department  
Crown Agents Office  
29th October 1936

Mr. Grossmith. 29/8  
Mr. Patten 29 5/16  
Mr. Flood 29:8

Sir G. Robinson  
Sir J. Campbell  
Sir G. Tomlinson

Sir C. Bottomley.  
Sir J. Shuckburgh.  
Perm. U.S. of S.  
Parly. U.S. of S.  
Secretary of State.

3/9/56  
Mr. Flood 3-9 of

August, 1936.

11 SEP 1936

Sir,

I am etc.

DRAFT.

THE SECRETARY  
GENERAL DEVELOPMENT ADVISORY  
COMMITTEE

To Hydraulic Engineering Co. (27)  
From Captain Mangnall (34)

FURTHER ACTION

23  
letter of the 5th of June (reference  
C.D.A.C.1988) regarding the  
application for further assistance  
in connexion with the improvement  
of Captain Mangnall's sisal  
decorticator, and to request you  
to inform the C.D.A.C. that the  
recommendations which they were prepared  
to recommend further assistance were  
duly communicated to the Hydraulic  
Engineering Company Limited. A  
copy of the letter sent to the  
Company is enclosed herewith,  
together with a copy of Captain  
Mangnall's reply.



Mr. [unclear]  
 Mr. [unclear]  
 Mr. [unclear]  
 Sir C. Parkinson  
 Sir G. Tomlinson  
 Sir C. Bottomley  
 Sir J. Shackburgh  
 Perm. U.S. of S.  
 Parly U.S. of S.  
 Secretary of State.

**DRAFT.**

registered by the Company and outstanding  
 are understood to amount to approximately  
 £25,000. The Company are reputed  
 owners of large works and foundry in  
 Chester, employ about 100 hands, and are  
 held in good repute. The financial  
 position of the Company is believed  
 to be favourable, and they are considered  
 reliable for their ordinary engagements.  
 The Company have, not infrequently,  
 supplied to the Crown Agents "Rail creep  
 adjusters" for various Colonial  
 Government Railways, and <sup>in the case of</sup> ~~for the~~  
<sup>recall</sup> ~~during which~~ they have supplied  
 certain machinery in connexion with the  
 establishment of a factory for a Sisal  
 Softening Plant for Kenya, a loan for  
 which has been made from the C.D.F.  
 to the Ker's Government for re-loan to

**FURTHER ACTION**

Mr. McCrae,  
 4. It will be recalled that the  
 Committee's recommendation was subject  
 to such arrangements being made by the  
 Hydraulic

Hydraulic Engineering Company with Mr. Bibby  
and Mr. Mehta as would prevent any action by  
them jeopardising the successful development  
of the machine in operation at Taveta. As  
regards this point, it is understood from  
Captain Mangnall that the Company is still  
negotiating with Mr. Bibby and Mr. Mehta.

I am, etc.

(Signed) J. E. W. FLOOD

C. O.

Mr. P... 22/7  
Mr. C...  
Mr. S... 23/7  
Mrs. J. C...  
Sir C. Parkinson

Sir G. Tomlinson.

\* Sir C. Bottomley, 24/7

Sir J. Shuckburgh.

Permt. U.S. of S. 24/7

Early U.S. of S.

Secretary of State.

**DRAFT. MANGNALL.**

CAPT. E. A. MAGNALL.  
P.R.

FURTHER ACTION

29022/36 Kenya  
(S.C. Butler)  
1353  
-1 AUG 1956  
P...  
20/7/56  
G...  
A... 24  
Dear Capt. Mangnall

In Flood's absence on leave  
I am answering  
I have opened your letter of the  
20th of July in which you have  
explained the serious consequences  
to your Company of the recommendation  
of the C.D.A.C. on your application  
for a further loan of £5,000. I do  
understand your letter to mean that a  
loan of £1,000 for the purpose of  
effecting the necessary improvements in  
the Taveta machine would not be  
sufficient to keep your Company going,  
and that the provision of money to  
start on the building of two new  
machines for the Masindi and Ziwa  
Estates is the only means of tidying  
your Company over until you can  
secure other orders (possibly in  
connection with the armament programme).

I am asked to say that the authorities here are very doubtful whether any useful purpose would be served by referring your application to the Committee again at this stage. The Committee went into the whole matter most carefully at their last meeting and they quite definitely came to the conclusion that they would not be justified in recommending a loan of such a substantial amount as £5,000 for the building of new machines until the necessary alterations have been made in the parent machine and the practical possibilities of that machine have been fully demonstrated. We understand this to mean that they would want evidence of its actual performance under working conditions with a reliable prime mover of adequate power.

Mr. Gray's report is very encouraging and valuable as evidence which may assist the Committee in coming to the conclusion that they would be justified in recommending a loan of £1,000 for the improvement of the parent machine. It is however thought unlikely that the Committee would consider either it or your deductions from the Kenya report as a satisfactory substitute for

C. O.

- Mr.
- Mr.
- Mr.
- Sir C. Parkinson.
- Sir G. Tomkinson.
- Sir G. Boscawen.
- Sir J. Shuckburgh.
- Perm. U.S. of S.
- Parly. U.S. of S.
- Secretary of State.

DRAFT

for the practical tests under full working conditions which they have stipulated as a prerequisite of further assistance for the building of two new machines.

Apart from this the only new factor which could be brought before the Committee at this stage is your statement as to the financial position of your Company. As to this, while the Committee would, no doubt, feel the greatest sympathy with the Company in its troubles, especially in view of the large sums which the Company has devoted to the development of this machinery, it is doubtful whether the Committee would feel ~~it~~ justified in recommending a loan which they did not regard as justified on other grounds, mainly with the object of

FURTHER ACTION

tiding

...tiding one particular British company over

its financial difficulties. As regards the point that, if the withholding of this loan involved the disappearance of your Company,

the result might be to deprive this country of the opportunity to enter the market for this type of machinery, it would probably be held that, so far as the C.D.A.C. is concerned, the money already advanced would not <sup>have been</sup> wasted since the plans of the machinery could no doubt be sold to ~~it~~ <sup>and developed</sup> by some other company.

I am afraid that this may seem a rather *hard* point of view to take. But I must ask you to believe that it is not due to any want of sympathy with your Company in what, I trust, are purely temporary difficulties. It merely represents an attempt to envisage the view that the Committee would feel obliged to take of its functions as laid down (and limited) by the law.

From this point of view it has occurred to us, from what you have said as to the possibility of your obtaining orders in connection with the armament programme, that the possibility of your

Company

C. O.

Mr.

Mr.

Mr.

Sir G. Parkinson

Sir G. Tomlinson

Sir C. Bottomley

Sir J. Shuckburgh

Perm. U.S. of S.

Peru. U.S. of S.

Secretary of State.

**DRAFT**

**FURTHER ACTION:**

Company having to close down might conceivably be of more direct concern to the W.O. or the Admiralty, ~~and~~ and that, if faced by this possibility, one or other of those Departments might perhaps be prepared to expedite the placing of orders in order to keep you going.

As your letter was marked "personal" we have not felt justified in mentioning the matter to anyone in either of those Departments (indeed without further information we do not know which would be likely to be concerned). But it has occurred to us that it might perhaps be worth your while to get into touch with someone there and explain your difficulties.

As regards the first stage of the programme envisaged by the C.D.A.C., viz., the provision of £1,000 for the improvement of the machinery at Taveta, we will

willingly

willingly do anything in our power to expedite  
a decision. But I understand from a note made by  
Flood after your call here on the 10th of July,  
that the further reports which have been called  
for from Kenya are likely to be delayed owing  
to the main driving chain having been broken.

*Yours very truly*

(Signed) W. C. BOTTOMLEY.

ALL COMMUNICATIONS TO BE ADDRESSED TO THE COMPANY

372  
46

TELEPHONE  
CHESTER, 1421  
Private Branch Exchange

CONTRACTORS TO  
THE ADMIRALTY, WAR OFFICE,  
INDIA OFFICE,  
CROWN AGENTS FOR THE COLONIES,  
AND FOREIGN GOVERNMENTS

TELEGRAMS  
HYDRAULIC, CHESTER  
CODES  
ABC 6th EDITION  
SENTINELS

# The Hydraulic Engineering Company Ltd

LONDON OFFICE  
TRAFALGAR HOUSE, WATERLOO PLACE,  
PALL MALL, S W 1  
TELEPHONE WHITE HALL 9334  
TELEGRAMS HYDROCHEST WICCY, LONDON



chester 20th July 1936.

REFERENCES YOURS  
OURS ARR/

Personal.

Dear Mr. Flood,

## Sisal Machinery Development in East Africa.

The Committee's decision given in your letter of June 16th. unless reconsidered will almost certainly terminate our efforts at the very end of this long development programme.

To explain why we cannot carry on without immediate help I am afraid it will be necessary to state something of our private affairs.

For many years we have been trying to counteract the effects of a reducing demand for our past products caused mainly by the inroads of electricity into the hydraulic machinery market.

Naturally we have successfully developed many new types of machinery but in themselves they have been insufficient to fill the gap, and for some years our main concentration has been in the development of improved machinery for East African sisal, as there is an expanding market and no British manufacturer left in the field.

copy to D. A. E. (37)



Again, although one of the oldest firms on the Admiralty and War Office lists, we are not yet benefitting from the armaments programme, as being considered as specialists whose whole output would be required in time of war, we are not considered for ordinary work such as shell making etc. Consequently we still suffer from bad trade and sadly depleted finance, but there are now very strong indications not only of returning ordinary trade but of developments on the specialist side of the armament programme in which we shall be called upon to participate.

We have therefore reached a point in our history where the Colonial development we have undertaken at such length is likely to be the means of closing us down just at the time when we are rounding the corner to a recovered trade condition, simply because it is impossible for us to meet the requirements from East Africa without assistance from the Development Fund.

I find that Messrs. Bird & Co's Director in East Africa, Mr. John Gray, visits Taveta, and as he is about the best impartial judge that could be found, I have asked for a copy of a memorandum which he drew up in connection with the machine, and now attach this. You will see that this report insists on the advantages of the machine and is in contrast to the report from the Taveta Estate, which concentrates on the relatively minor defects and fails to emphasise the main achievements.

The main facts are these:-

1. According to figures worked out from the Kenya Government report, the machine will produce 13.8% more fibre from the leaf.
2. The fibre produced is of a higher quality,

3. Per ton of fibre produced it takes only 70% of the power.
4. The call for higher output can be met by the estate arranging for more power to be available.
5. When the machine was put into operation it was immediately obvious to us as the designers that certain improvements and simplifications were required which will naturally be provided for in later machines, and we should have dealt with these at Taveta without being asked had we been in a position to do so. The items concerned are straightforward mechanical details and do not involve any modification of the process.
6. Messrs. Bird & Co. on wide experience, as per attached memo. confirm the preceding points.
7. The Governor of Kenya recommends that the requisite loan be granted.
8. The Masindi estate after several inspections at Taveta are continually pressing us for delivery of a similar machine with the few mechanical corrections as already arranged.
9. The Ziwa Estate is likewise pressing for delivery of a machine.
10. We ourselves after ten years development work in East Africa, ten lengthy visits to East Africa by our representatives, and an expenditure of £ 30,000 plus our liability for the loan now requested, are entirely confident in the full commercial performance of the new machines with their proved advantages over the



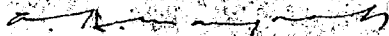
20th. July 1936.

foreign machine and that they will bring this expanding market into British hands.

(This concerns far more than our own machinery, as it affects engine-builders, pump makers and other British suppliers).

11. If the preceding ten points fail to convince the Committee that this is a case worthy of assistance to the full extent of immediately replacing the machines at Masindi and Ziwa, our work so far as we can see automatically comes to an end and the results will be lost unless perhaps at a later date they may be enjoyed by the foreign firm at present controlling this British market.

Yours very truly,



J. E. W. Flood Esq.,  
Colonial Office,  
Downing Street,  
London, S.W.1.

The copy is given below, of a memorandum prepared by Mr. John Gray, resident director of Messrs. Bird & Co. (Africa) Ltd. after his stay at the Taveta Estate in January 1936.

Messrs. Bird & Co. is the largest sisal undertaking in East Africa and Mr. Gray with his long experience in control of that organisation and his familiarity with the working and requirements of all sisal machines is in an eminent position to express a practical opinion.

MEMORANDUM ON THE MANGHALL DECORTICATOR.

1. I inspected the machine at Taveta in January this year. It was running regularly, being driven by a light high speed oil engine of a nominal 80 horse power.
2. The decortication was definitely very good, the fibre emerging from the machine straight, clean and free from undecorticated strips. The wastage was low. It was not possible to obtain a true view of the possible output capacity of the machine, owing to the low power and unsuitable type of prime mover being used. The whole performance of the machine, both as regards output capabilities and efficiency of decortication was completely obscured by the unsuitable prime mover. Taking this most important factor into consideration, I considered that the decorticator gave a convincing performance. I doubt very much whether a Corona decorticator could put up an equal performance if it was being driven by an engine of the same power and type. My opinion is that there is every indication that (subject to certain minor mechanical alterations referred to below) with prime movers of equal power and type, the output from the Manghalla decorticator would not only be equal to that of the Corona but most probably be higher with an appreciably lower waste percentage.
3. In the main features of design, I consider that the machine has practically reached finality. Certain of the minor features, such as the feeding arrangements, require alteration and adjustment, but this should not be either a difficult or an expensive matter. The change-over system is a particularly simple and effective device and is a great improvement on any of the existing systems.

BIRD & CO. (AFRICA), Ltd.

J. V. GRAY.

Director.



31

ALL COMMUNICATIONS  
TO BE ADDRESSED TO THE  
CROWN AGENTS FOR THE COLONIES  
THE FOLLOWING REFERENCE AND THE  
DATE OF THIS LETTER BEING QUOTED

C/Kenya 80

4, MILLBANK,

LONDON, S.W.1.

TELEGRAMS CROWN LONDON  
TELEPHONE VICTORIA 1736

CONFIDENTIAL

Sir,

28

In reply to your letter No. 30/36 of the 16th June, I have the honour to state that we are informed that the Hydraulic Engineering Company was registered on the 29th April 1874 with a nominal capital of £100,000 in 10,000 Ordinary Shares of £2 and 2000 Preference Shares of £50 each and all shares have been taken up, 20,000 being taken for cash and 20,000 for other considerations, mortgages and charges registered by the Company and outstanding are understood to amount to approximately £25,000.

2. The Company are reputed owners of large works and foundry in Chester, employ about 100 hands and are held in good repute. The financial position of the Company is believed to be favourable, and they are considered reliable for their ordinary engagements.

3. The Company have, not infrequently, supplied to order "Rail creep adjusters" for various Colonial Government Railways, and you are, of course, aware that they have supplied certain machinery in connection with the establishment of a factory for a Legal Softening Plant for Kenya, a loan for which has been made by the Colonial Development Fund to the Kenya Government for re-loan to Mr. McCowan (Colonial Office reference 38150/36).

I have the honour to be,

Sir

Your obedient Servant,

*Wm. G. ...*

The Under Secretary of State.

for Crown Agents

COLONIAL OFFICE.

C.O.

Answer

Mr. Grossmith. 11/6  
Mr. Parkin 12/6 f.

- Mr.
- Sir C. Parkinson
- Sir G. Tomlinson
- Sir C. Hollomley
- Sir J. Southey
- Private Sec. of S.
- Party U.S. of S.
- Secretary of State

Downing Street,

8 June 1936

Sir,

I have etc. to acknowledge

3 Directs

KENYA.

NO. 424

GOVERNOR.

(1936) the receipt of your despatch No. 242 of the 14th of May transmitting, in connection with Captain Mangnall's application for further assistance from the Colonial Development Fund, a report on the working of the Mangnall Decorticator now in use at the Taveta Estate.

2. Your despatch and the accompanying report was submitted to

CDAC. 198  
 (1936) forwarded to  
 11/6/36 (2)  
 C.D.C. (1936)  
 (1936) forwarded to  
 11/6/36 (2)  
 C.D.C. (1936)  
 (1936) forwarded to  
 11/6/36 (2)  
 C.D.C. (1936)

FURTHER ACTION

enc

C. O.

Mr.

Mr.

Mr.

Sir O. Cockburn

Sir G. Tomlinson

Sir G. Bottomley

Sir J. Shuckburgh

Permit. U.S. of S.

Early. U.S. of S.

(Secretary of State.

*Answer 2 lines  
hand for  
overleaf*

DRAFT

FURTHER ACTION

Committee would be justified in supporting it.

*At* I feel that it is most desirable that as full reports as possible should be obtained of the working of the rays machine and I shall be obliged to you if you

will arrange for reports to be made by an Engineer and an Agricultural Officer. The Crown Agents for the

Colonies are being asked to make enquiries with a view to furnishing the Committee with information in

regard to the standing of the Hydraulic Engineering Co. Ltd.

(Signed) W. ORMSBY GORE. I have, etc.

28

C. O.

Answered 31

Mr. Grossmith. 4/6  
Mr. Paskin 12/6.  
Mr.

Downing Street,

Sir C. Parkinson.  
Sir G. Tomlinson.  
Sir C. Bottomley.  
Sir J. Shuckburgh.  
Permt. U.S. of S.  
Parly. U.S. of S.  
Secretary of State.

Confidential 16 June, 1936.

Gentlemen,

I am etc. to refer to you

letter of the 4th of July last

(reference O/Kenya 80) regarding the

loan of £3,000 from the Colonial

Development Fund to the Hydraulic

Engineering Company, Limited, and to  
transmit to you a copy of a letter from  
the Colonial Development Advisory Council  
informing you that, in connection with  
the above loan,

further application for assistance  
which has been received from the Government  
of the Colonial Development Advisory Council  
it will be observed that the  
Committee has asked to be advised as to

the standing of the Company and  
to advise them - considering that  
the Company is in want of financial  
support.

**DRAFT**

37  
1936  
file

THE CROWN AGENTS  
FOR THE COLONIES.

C.D.A.C. 76 (No. 23)

FURTHER ACTION

2

I am accordingly to ~~ask you to~~ *request that you will, with and engage*  
*as may be possible & furnish re*  
*unpublished*  
Furnish this Department with such

information as can be obtained in regard  
*standing* *for annual*  
to the ~~status~~ and present position of the  
Company.

Team, etc.

(Signed) J. E. W. FLOOD

C.O.

Mr. Grossmith. *116*  
Mr. *Lusk* *116* *116*  
Mr.

*Sir G. Parkinson*  
*Sir G. Tomlinson*  
*Sir C. Bellamy*  
*Sir J. Shackburgh*  
Permit, U.S. of S.  
Permit, U.S. of S.  
Secretary of State

Downing Street,  
16 June, 1936.

C.D.  
R 12 JUN  
D

DRAFT

THE MANAGING DIRECTOR,  
THE HYDRAULIC ENGINEERING  
CO. LTD.

FURTHER ACTION

I am etc. to refer to  
your letter of the 20th inst.  
reference AM regarding your  
application for a loan of £5,000  
from the Colonial Development Fund  
and to inform you that the Colonial  
Development Advisory Committee would  
be prepared to recommend a further  
loan of £1,000 towards the  
improvement of the machine now in  
use at ~~have~~ provided they are  
satisfied

SIR

(20)

116

116



C. O.

satisfied from a technical standpoint that

the proposal is sound and likely to make

the machine able successfully to compete

with other makes of steel decorticating

machines. The Committee see no justification

for any advance from the C.D.S. in connection

with the <sup>replacement of the</sup> ~~two~~ <sup>single</sup> machines for the Dims and Masinde

factories until the practical possibilities of

the machine now in use have been fully

demonstrated. The Govt. of Kenya is being

asked to furnish full reports by an engineer

and an agricultural officer in these respects.

The assistance for the completion

of the Taveta machine could only be

contemplated, however, if arrangements could

be

Mr.

Mr.

Mr.

Sir C. Parkinson.

Sir C. Tomlinson.

Sir C. Balfour.

Sir J. Spink.

Sir H. S. ...

...

Secretary of State

*John Company*  
be made by you with Mr. Bibby and

Mr. Nanta to prevent any action by

them jeopardising the successful

development of the machine in

question.

DRAFT

I am also to ask the need of your  
letter of the 11<sup>th</sup> of June & to thank you  
for the news of the prototype method  
these

(Signed) J. E. W. FLOOD

FURTHER ACTION.

DEPARTMENT OF AGRICULTURE,  
P.O. BOX NO. 338,  
NAIROBI,  
KENYA COLONY.

2nd June, 1936.

No. C/SISA/6/165

AIR MAIL

F.A. Stockdale, Esq., C.M.G., C.B.E.,  
2, Richmond Terrace,  
LONDON, S.W.1.

Dear Stockdale,

MANGNALL DECORTICATOR.

Following on the despatch sent by this Government to the Secretary of State, the attached copy of a letter and report, dealing with a comparison between the Mangnall and Corona decorticators, will interest you.

I believe you are aware of the Hollmer decorticator. As I mentioned in a letter on this leave and suggested that you might get details of it from Mr. Hamilton of Mitchell Cotts & Company, Ltd. in London. The promoters of this machine expect it to be in the final experimental stage in about three to six months' time. If this machine is successful, it will undoubtedly be a competitor to the Mangnall decorticator.

Another process is under trial by Rutherford and Mann - ordinary decortication by Corona or Rabey, with recovery of flume waste by a centrifugal process which includes thorough washing.

Yours sincerely,

*J. W. A. ...*

REF. NO. SISAL.1/104.

20th May, 1936.

Major Layzell,  
Taveta Estate,  
Taveta.A Comparison of Decortication by the Mangnall II  
and the Corona II B. Decorticators.

Dear Sir,

I have carried out some further separations on the waste flume materials collected there on May 15th, 1936, and I believe that the data will be of interest to you and others connected with these decortication trials.

2. Besides the quantity of fibre produced per unit and the quality of this fibre, it is important to know about the relative "efficiency of abstraction" of the two decorticators. The results are based on short runs and it is recognised that the weighing of the different lots of fibre and waste materials at Taveta was not very accurate. Further work on the separation of the waste materials has been accurate and I think that the data submitted herewith gives a fairly reliable guide as to what has happened to the total initial fibre content of the leaf.

3. I would regard such a record of the fibre as highly important as it gives an idea of the percentage of fibre lost during the different stages of decortication by both types of machines. The quoting of percentages to four decimal places is not valid, but these figures, which were obtained by the use of logarithms, are retained for subsequent calculations. For convenience all weights are given as percentages of the leaf.

4. The dry weight of Mangnall II waste was .75% as against 1.39% for the Corona II B. but the mechanical separation of the materials reduces these values for fibre only to .61% and .81% for the Mangnall II and Corona II B. respectively, as the Corona II-B. waste contained very much more leaf tissue. You will note that most of the Mangnall II "decorticated fibre" loss occurs during the decortication of the butt section. The loss here is about equal to the Corona II B. loss: viz. .48% loss by Mangnall II and .50% loss by the Corona II B. The Mangnall tip section is relatively low: viz. .13% as against .31% for the Corona tip section. There is need to reduce the heavy loss of decorticated fibre during the butt section decortication by the Mangnall II. It appears that there is a great deal of snatching of already decorticated fibre during the second grip while the butt end is being decorticated.

5. You will note that I have also separated out the partially decorticated fibre or bunched fibre held by a strip of undecorticated leaf, vide Table II. The Mangnall II throws out very little bunched fibre (though whole leaves drop out) as compared with the Corona II B. The amount of fibre only contained is found to be .05% for the Mangnall (mainly butt section) and .15% for the Corona, the latter being made up of about equal losses from both sections.

6. By adding this bunched fibre to the decorticated fibre that is lost we get values of .66% total fibre lost by the Mangnall II and .96% by the Corona II B.

7. The last Table gives the relative amounts of abstracted and waste fibre by the two methods of decortication. The Mangnall II abstracts about 84% of the total fibre as against about 77% for the Corona II B., or in other words, the same quantity of similar leaf would yield 84 tons of fibre by the Mangnall II abstraction and 77 tons by the Corona II B. abstraction. The relative amounts of fibre wasted would be 28 tons and 25 tons respectively. These values might not hold for leaves of a different size, age and total fibre content.

Yours faithfully,

Sd. G. H. Gethin Jones.

SOIL CHEMIST.

Copied to Deputy Director (P. I.)  
Through Senior Agricultural Chemist.

This communication to Major Layzell, together with the accompanying tables of fibre extracted, gives a good idea of the relative "efficiency of abstraction" of the two types of decorticators. This factor, coupled with the outturn of fibre per shift will give the "efficiency of decortication". The figures show the proportion of fibre that is lost during the various stages of sisal decortication and indicate where further technical improvements have to be carried out. I would suggest that these determinations be adopted as standard tests for the valuation of the "efficiency of abstraction" of various types of sisal decortication.

Sd. G. H. Gethin Jones  
Soil Chemist.

Forwarded.

Sd. W. A. Hookley,  
Bandon Agric. Chemist.

*Meggs*

Mechanical Separation of Waste Fibre and ~~leaves~~

recovered from Waste Flumes.

A Comparison of Decortication by the Mangnall II and Corona II B  
Decorticators.

The weights of dried material recovered from the tip section and butt section waste flumes are expressed as percentage of leaf weight. The average values for both trucks are as follows:

Mangnall II.			Corona II B.		
Tip Section.	Butt Section.	Total.	Tip Section.	Butt Section.	Total.
.1728	.5754	$\frac{7480}{7479}$	.5682	.8210	1.3892

These total waste flume values give a very unreliable guide as to the amount of fibre lost during decortication as the proportion of fibre, loose material, leaf tissue and bunched fibre vary greatly. The much higher values for the Corona is partly made up of bits of leaf tissue. They amount to about a third of the total weight as compared to about a tenth only in the case of the Mangnall waste.

A sample of these waste flume materials, separated by hand into (i) loose fibre, (ii) loose dust, (iii) leaf tissue and bunched fibre. The following percentage values were obtained:

Table I.

	Mangnall II.			Corona II B.		
	Tip.	Butt.	Total.	Tip.	Butt.	Total.
Loose fibre	.1268	.4805	.6073	.8110	.5000	.8110
Loose dust.	.0278	.0525	.0603	.0692	.0646	.1338
Leaf tissue & bunched fibre.	.0180	.0624	.0804	.1880	.2564	.4444
	.1728	.5754	.7480	.5682	.8210	1.3892

Thus the loss of loose fibre by Mangnall decortication is .6073 and by Corona decortication .8110, the greater loss by the Corona being 2037%. There remains further amounts of partly decorticated fibre contained in the leaf tissue and bunched fibre separation. These portions were loosened by beating in a mortar and then washed so as to separate the fibre from the remaining materials. The results were as follows:

Table II.

	Mangnall II.			Corona II B.		
	Tip.	Butt.	Total.	Tip.	Butt.	Total.
Fibre only	.0114	.0597	.0611	.0681	.0717	.1398
Other mat.	.0066	.0227	.0293	.1249	.1847	.3096
Leaf tissue	.0180	.0624	.0804	.1880	.2564	.4444

The total fibre wasted by the two methods of decortication is the summation of the loose fibre (see Table I) and the fibre abstracted from the undecorticated leaf tissue.

Table II.

	Method I			Method II		
	lb.	wt.	gr.	lb.	wt.	gr.
Loss of fibre	1.10	1.035	1.71	1.11	1.044	1.71
Fibre abstracted	1.14	1.077	1.811	1.351	1.277	2.148
Total	2.24	2.112	3.521	2.461	2.321	3.858

The total fibre lost by method I decortication is 2.24 lb. and by Method II decortication, 2.461 lb. The fibre lost by the Method II being .227 lb.

We can now arrive at a summary of what has happened to the total leaf fibre by the two methods of decortication.

	Method I		Method II	
	Calc. on leaf wt.	Total fibre.	Calc. on leaf wt.	Total fibre.
Washed line fibre:	80.95	80.54	75.08	75.08
Crushed raw	15.45	5.8	17.40	4.20
Total abstracted fibre	96.40	86.34	92.48	79.28
Total waste fibre	2.84	16.16	3.58	22.85
Total fibre content of leaf:	99.24	102.50	96.06	102.13

The difference in the total is mainly due to the error of weighing and the slightly different water content of the different samples. The third and fourth decimal places have no significance but are retained for later calculation purposes.

SAIGHTON HOUSE,  
NEAR CHESTER.

11. 6. 36

Dear Mr. [unclear]

I have only  
to-day posted to the Under  
Secretary, the memorandum  
& photostats requested by  
the Committee. (Copies of memorandum  
enclosed.)

The photostats  
has held me up, but  
his work is effective &  
shows lots of beautiful  
white film pouring out  
of the machine.

They are from film's Cabinet  
with a small piece  
camera.

Tavista have made things  
difficult by suggesting  
in effect to send them  
down road, but they will  
not be able to get at  
us very much longer  
Bobby anyway with loss  
as a very fair deal  
in confidence. I believe single  
bullet will make some  
I saw them the paper  
of additional extraction procedure

They are back. Gullett went down  
their meeting and small in every  
actions of Tavista's address  
pleasing the arrangements of help  
out-park from one machine before  
all other shows in front  
can subvert  
Anglo. Kuster in y camera a Bullet  
shown with least Oppen in London

Blues bank change about a  
Smithy as per the  
The Sinclair  
at the in any road



They are from films, taken  
with a small Leica  
camera.

Frogs have made things  
difficult by jumping  
in front of the lens  
and then will  
not be able to get at  
us very much longer.

Betty anyway will pose  
as a very fair deal.  
The confidence of the  
other will not be  
if you then the figure  
of additional extraction probably

They are back. Another view of  
them showing a small amount  
of the frog's side of  
bleeding the environment of light  
and part from the medicine cup  
all over the nose and forehead  
an indication of a serious  
Anglo-African or a serious  
stem with heart open in the  
throat. The frog always stays  
quietly in front of  
the camera.  
a few more

CO. 538 / 464

SEARCHED	INDEXED
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APR 19 1964	
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ALL COMMUNICATIONS TO BE ADDRESSED TO THE COMPANY

TELEPHONE  
CHESTER, 1421.  
Private Branch Exchange

CONTRACTORS TO  
THE ADMIRALTY, WAR OFFICE,  
INDIA OFFICE,  
CROWN AGENTS FOR THE COLONIES,  
AND FOREIGN GOVERNMENTS

TELEGRAMS  
"HYDRAULIC CHESTER"

CODES  
A.B.C. 6th EDITION  
BENTLEY'S

502 4 24

# The Hydraulic Engineering Company Ltd



LONDON OFFICE  
TRAFALGAR HOUSE, WATERLOO PLACE,

WALLS MAIL ROOM  
GOVERNMENT WHITE HALL, LONDON  
TELEGRAMS: HYDRAULIC ENGINEERS



*Chester* 11th June 1936.

RECEIVED  
12 JUN 1936  
C.O. REGY

REFERENCES

ARU/A

The Under Secretary of State for the Colonies,  
Colonial Office,  
London, S.W.1.

Sir,

As directed by Mr. Stockdale following the last meeting of the Colonial Development Advisory Committee, we beg to enclose our memorandum in connection with the Report from Kenya together with the necessary photographs.

The delay has been occasioned by the photographer being absent for the Whitsuntide holidays and the time taken to prepare the photographs since his return.

We have the honour to be, Sir,  
Your Obedient Servants,  
THE HYDRAULIC ENGINEERING COMPANY LIMITED

Managing Director

*Just (27)  
copy sent to Kenya (27)*

## CONFIDENTIAL

## MEMORANDUM

to THE UNDER SECRETARY OF STATE FOR THE COLONIES  
 from THE HYDRAULIC ENGINEERING COMPANY LTD.  
 in connection with the Report No. 242 from Kenya  
 dated 14th. May 1936.

The Report states that the machine at Taveta is not commercially successful, because it will not produce 4 tons of fibre per 10 hours. For reasons which are stated later in this memorandum, we ourselves consider it is in the best interests of an estate to work on a production figure somewhat less than 4 tons per shift per machine, but we recognise that certain estates, until they can be persuaded otherwise, will demand this output from a single machine.

While the report states that the Mangnall machine with its vent engine is capable of only 32 trucks per 10 hours against 50 by the Corona, the log kept by our Engineer (copy attached) on certain days running, shows that on several of these days when the engine was running correctly, 40 trucks were put through the Mangnall in 10 hours.

Since the Test figures in the Report show the Mangnall to be capable of extracting 13.0% more fibre from the leaf than the Corona, it is only necessary for the Mangnall to decorticate 43 trucks to equal the output of 50 trucks on the Corona. This shows that very little more power is required than at present. The oil engine installed by the Taveta estate to drive the Mangnall is of the small high speed type and has proved unreliable and exceedingly variable in its power output. Provided an engine is installed which can be relied upon to give even output continuously, the decorticator will have no difficulty in dealing with the extra number of trucks to increase the fibre output.

The majority of estates do not produce as much as 4 tons per shift, and a shift is often as long as 11 or 11½ hours.

The finest sisal undertaking in the world (The Anglo-Dutch Company of Java) has a battery of 15 Corona decorticators, of which only 10 are in commission at any one time.

Shifts are run day and night and the yearly output is 10,000 tons.

Allowing 300 working days in the year, the output is 33.3 tons per day for ten decorticators. This equals 3.33 tons per decorticator for 24 hours, or only 1.66 tons per single shift.

The Java Company must therefore consider that a very small output from a single machine constitutes a "commercial output".

This Company is of course exceptional in the care it takes to produce a fine fibre.

After decortication the Java fibre is again machine washed.

The Mangnall fibre is equally clean without this extra washing process.

At the Ziwa estate in Kenya where we have to instal a Mangnall decorticator, their existing decorticator produces approximately 5 tons in two shifts of 11 hours each.

i.e. 2½ tons per shift. There are many other estates which work on the same basis of output.

The demand in certain quarters for high output from a single machine was created when the price of sisal was very low and estates often impoverished.

Obviously the ideal can only be to produce the best quality at the lowest possible cost taking into account all capital expenditure and not of necessity to obtain high output from a single unit.

67

The last words on page 5 of the Report and their completion at the beginning of page 6 indicate a somewhat faulty conception of economic production in that they overlook the all important item of increased percentage of extraction of fibre and its effect on profits as shown by the following figures.

Analysis of Test Figures taken from Appendix 'A' of Report.

Total of two tests.

	Mangnall.	Corona.
Dry brushed fibre	156.625 lbs.	144.25 lbs.
" " tow (removed in brushing)	6.5	8.5
Waste fibre recovered from drums Mangnall 35.75    Corona 65.25 (Making a generous allowance of 25% for dried megas particles adhering to fibre)	26.8	1.46
Total weight of fibre available in leaf	189.925	201.75
Mangnall extraction	163.125 189.925	86.2 per cent
Corona extraction	152.25 201.75	75.7 per cent.

This gives an extraction by the Mangnall of 13.87 per cent greater than the Corona.

In a factory producing on a basis of 4 tons per day and allowing 300 working days per year, i.e. 1200 tons per year, the additional yield of the Mangnall machine would be 16 tons, which at £. 22 per ton, factory value would give increased revenue of £ 352.

The Report also states, that when the machine reverts to using curved surface drums instead of straight surfaces the percentage will be higher still.

In order to examine the figures, assume the Mangnall decorticator to produce only 2 tons per shift and two machines to be necessary to equal the 4 tons per shift of one Corona.

Obviously overhead charges, management costs etc. are only concerned with the total output of the factory, and if two machines are employed, would be affected only by an increased depreciation charge for the additional machine. There would be also the direct cost of additional native labour operating the second machine. Supervision would not be increased.

The Report figures show that per ton of fibre produced the Horse Power required is in the case of the Mangnall only 70% that of the Corona. Therefore running two Mangnall machines each producing 2 tons, instead of one Corona producing 4 tons, the total power would be only 70% of the single Corona. Similarly with less waste to convey away in the drain the amount of water requirement is correspondingly lower.

The analysis given earlier in this Memorandum shows that the extraction of fibre by the Mangnall is 15.87% in excess of the Corona. On a 4 tons per day production this gives an extra revenue of £ 5,652 per annum.

Taking the installed cost of one extra Mangnall machine at £2300 selling price, plus £ 300 freight, Plus £ 100 erection, i.e. £ 2700, or say £ 3000 and depreciate over 10 years, i.e. £ 300 per year, plus, say, £ 250 per year additional native labour costs, we arrive at an extra yearly expense of £ 550, and against it we have an added yearly income of £ 5652 plus the advantages of superior fibre which requires less brushing and produces less tow.

It will thus be seen that an efficient machine producing far less than 4 tons per 10 hours can be a very sound financial proposition.

In connection with the three estates, Taveta, Masindi and Ziwa, we had in the case of Taveta to guarantee 4 tons of fibre per shift when decorticating leaf not less than 4 ft. long. A shift in East Africa is a task of a certain number of trucks and often takes 11 or even more hours to complete.

The Masindi guarantee was similar to Taveta except that a shift was stated to be 12 hours.

Ziwa did not demand any form of guarantee.

From our point of view as machine builders and carrying the responsibility for repayment of the loan already made and the additional amount for which we now ask, we consider that final information is at our disposal and with new machines installed at Masindi and Ziwa and we agree to Taveta's request to be given curved drums, a new feed table to allow slightly faster feeding of leaves together with one or two minor details, we shall be able to enter the market immediately, and to meet the foreign competition effectively with a British made and more potent machine.

Any half-measure such as first making the alterations asked for at Taveta would involve us immediately in litigation with the other two estates and our many years of effort would be entirely wasted.

The Masindi estate insists on shipment being made from our works in August, and the machine for Ziwa must leave a week or two later.

The time factor is now of primary importance. Since sisal is active and prosperous, new estates are coming into production and all of them will be forced to buy German machinery if further delay is forced upon us.

The attached photographs show the machine from its erection in our works to its producing stage in Kenya.

At the time of photographing, the fibre seen passing through the machine is travelling at 140 feet per minute or about 50 per cent faster than is possible on the Corona. This allows leaves to be treated when more openly spaced and so receive more effective and lighter treatment.

Measurements taken by Hydraulic Engineering Company's Engineer on certain days running of the Mangnall decorticator during his stay at Taveta.

It should be noted that variations in the figure shown in the last paragraph under the heading 'Trucks per hour' are accounted for by the irregular running of the oil engine affecting the rate of feeding leaves and also by the natural variation in leaf condition; some leaves as short as 18" produce weight for weight considerably less fibre than leaves, say, 4 ft. long and are more difficult to feed.

The figure of 3.5 trucks per hour shown at the bottom of this last paragraph is the average taken over all the measurements and represents 35 trucks per 10 hours.

Date	Trucks dealt with	Time running.		Trucks per hour.
		hrs.	min.	
Jan. 7	27	8	4	3.28
" 8	29	7	33	3.86
" 9	24	7	49	3.0
" 10	32	9	2	3.5
" 13	23	6	25	3.68
" 22	41	10	54	3.76
" 25	45	10	36	4.29
" 27	45	11	24	3.94
Feb. 4	36	8	53	4.05
" 5	30	7	30	4.0
" 6	45	11	2	4.07
" 8	19	5	10	3.6
" 13	35	8	23	4.1
" 14	38	8	53	4.27
" 15	40	10	3	3.98
" 19	40	10	43	3.73
" 20	31	8	37	3.65
" 29	32	10	26	3.06
Mar. 18	16	4	55	3.25
" 21	36	11	54	3.02
" 23	34	10	53	3.12
" 24	35	10	7	3.46
" 25	33	10	2	3.3
" 26	32	9	12	3.47
" 27	12	3	5	3.2
" 30	35	10	0	3.5
" 31	33	10	28	3.15
Apr. 1	30	10	39	2.81
" 2	28	10	27	2.77
" 3	32	10	32	3.04
" 4	30	9	42	3.08
" 8	34	11	8	3.05
	Trucks	hrs.	min.	Average trucks per hour.
	1067½	305	46	3.5



Communications on this subject  
should be addressed to—

THE SECRETARY

Telephone : WHITEHALL 9191



COLONIAL DEVELOPMENT ADVISORY COMMITTEE

COLONIAL OFFICE

DOWNING STREET

S.W.1

5th June, 1936.

C.D.A.C. 1988.

Sir,

I am directed by the Colonial Development Advisory Committee to request you to inform Mr. Secretary Ormsby-Gore that, at their 89th meeting on the 27th May, they had before them an application, submitted on behalf of the Government of Kenya, for a further loan from the Colonial Development Fund, for the construction and installation of two new sisal decorticating machines to replace the defective machines now in use. (C.D.A.C. 1981). The Committee also had before them a despatch from the Governor of Kenya, and had the advantage of receiving evidence at the meeting in regard to this application from Captain A.R. Mangnall of the Hydraulic Engineering Company, Ltd., and Mr. F.A. Stockdale, C.M.G., Agricultural Adviser to the Secretary of State.

As a result of the assistance provided from the Fund in 1932 three experimental machines were constructed and installed in Kenya. These proved to be unsatisfactory, and, with the help of further

THE UNDER SECRETARY OF STATE,  
COLONIAL OFFICE.

assistance

*6th June 1936 (28)*  
*Kenya (29)*

113

assistance from the Fund, one of the defective machines was replaced by a new model, which, it was hoped, would overcome the difficulties experienced with the earlier machines. The Committee are now asked to recommend a further loan to cover (a) the cost of the replacement of the two other machines and (b) further improvements to the machine now in use. It appears, from the report now received from the Governor of Kenya, that the new model now in operation cannot yet be regarded as a proved commercial success, and, in these circumstances, the Committee see no justification for any expenditure on the replacement of the two other machines until the practical possibilities of this model have been fully demonstrated. The Committee would be prepared to recommend assistance towards the improvement of the machine now in use, but before doing so they would like to be furnished with an independent review of the proposal from a technical standpoint, showing the chances of its success, whether it should be able successfully to compete with similar machines of German or other manufacture, and generally such information as would disclose whether the Committee would be justified in supporting it, and at the same time they would like to be advised as to the standing of the firm concerned.

as to whether it is worthy of further support. Assuming these reports were satisfactory the Committee would be prepared to recommend a further loan of £1,000 towards the final completion of the first machine, subject to such arrangements being made by the Company with Mr. Bibby and Mr. Mehta, as would prevent any action by them jeopardising the successful development of the machine in question.

3. A similar letter is being sent to the Treasury.

Yours, Sir,

Your obedient servant,

*S. Cane*  
Secretary to the Committee

as to whether it is worthy of further support. Assuming these reports were satisfactory the Committee would be prepared to recommend a further loan of £1,000 towards the final completion of the first machine, subject to such arrangements being made by the Company with Mr. Bibby and Mr. Mehta, as would prevent any action by them jeopardising the successful development of the machine in question.

3. A similar letter is being sent to the Treasury.

I am, Sir,

Your obedient servant,

*S. Caine*

Secretary to the Committee.

PUBLIC COMMUNICATIONS BOARD TELEGRAMS OFFICE 15, MARK LANE LONDON, E.C. 3	C.O. 533 / 461	RECEIVED TELEGRAMS OFFICE 15, MARK LANE LONDON, E.C. 3
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74 20

TELEPHONE  
CHESTER, 1421.  
Private Branch Exchange

RE: [Handwritten]

CONTRACTORS TO  
THE ADMIRALTY, WAR OFFICE,  
INDIA OFFICE,  
CROWN AGENTS FOR THE COLONIES,  
AND FOREIGN GOVERNMENTS

TELEGRAMS  
"HYDRAULIC CHESTER"

CODES  
A.B.C. 6th EDITION  
BENTLEYS

# The Hydraulic Engineering Company Ltd.



LONDON OFFICE  
TRAFALGAR HOUSE, WATERLOO PLACE  
FALL HALL, S.W.1  
TELEPHONE WHITE HALL 9364  
TELEGRAMS - HYDROCHEST, PICCADY, LONDON.



*Chester* 25th May 1936.

38022/36...

REFERENCES: YOURS [Handwritten] ARMY [Handwritten]

The Under Secretary of State,  
Colonial Office,  
London, S.W.1.

We beg to acknowledge receipt of your letter of the 21st. inst.

The new machines which it is proposed to supply to the Zima and Masinde estates will naturally incorporate such improvements as are made clear by the operation of the first machine at Taveta.

These will in no way affect the process and will be confined to points which will simplify construction, operation and maintenance. Also the grip on the fibre will be still further improved and drums will be made with greater curvature to improve leaf entry.

In the interest of all concerned it will be advisable to incorporate some of these points in the existing machine at Taveta.

*Handwritten notes:*  
18  
[Illegible scribbles and notes]

Chester 25th May

75 193

The Under Secretary of State,  
Colonial Office,  
London, S.W.1.

Our reason for asking for £ 6,000 instead of £ 5,000 is in order to be in a position to make the desired adjustments at Taveta and to meet accounts outstanding for labour engaged in Kenya and other working expenses which we had anticipated would be provided by the estate, when estimating the amount for the original loan.

We are, Sir,

Your obedient servants,  
THE HYDRAULIC ENGINEERING COMPANY LIMITED.

  
Managing Director.

AIR MAIL

KENYA

No. 242



76  
GOVERNMENT HOUSE  
NAIROBI  
KENYA

REC'D

MAY, 1936.

Sir,

with reference to your telegram No. 100 of the 24th April, 1936, relating to the application by Captain Mangnall for a further loan of £5,000 from the Colonial Development Fund in connexion with his decorticating machine, I have the honour to transmit for your information a copy of the report by Mr. Gethin Jones, Soil Chemist, on the new model now in operation on Laveta Estate. Mr. Jones, amongst his other duties, has been engaged on sisal fibre research on the industrial side during the last year.

2. You will observe that the manager is not entirely satisfied with the present machine but considers that it will prove commercially successful if certain alterations which have been agreed upon by the manufacturer and the manager are carried out.

3. The Director of Agriculture is of the opinion that, in view of the success already achieved, further assistance to Captain Mangnall would be justified, on the understanding, however, that the money would be used in the first instance on improving the model on the lines suggested. In this connexion I desire to draw attention to the observations on page 5 of the report regarding the uncertainty whether the present strength of the machine is capable of standing up to the greater strain to which it will be subjected by the proposed additional horse power.

THE RIGHT HONOURABLE  
J. H. THOMAS, F.C., M.P.,  
SECRETARY OF STATE FOR INDIA AND NORTHERN  
DOWNING STREET,  
LONDON, S. W. 1.

4. I agree in the Director of Agriculture's view and I therefore recommend submission of Captain Mangnall's application to the Colonial Development Advisory Committee.

5. As regards Captain Mangnall's statement that offers to purchase the new model had been received from two estates, I am informed that the offer by the Ziwa estate in Kenya was made on the understanding that the improvements suggested by the manager of Taveta Estate would be included in the machine. The other estate concerned is in Uganda and I am unaware of the circumstances of the offer.

I have the honour to be,

Sir,

Your most obedient, humble servant,

BRIGADIER-GENERAL  
G O V E R N O R



## REPORT ON THE SECOND MANGNALL DECORTICATOR.

This report on the working of Mangnall No. II Decorticator must necessarily be a partial report only, as the writer does not feel qualified to express his own opinion on certain engineering and highly technical factors which enter into the valuation of the efficiency and economy of this machine as a sisal decorticator. However, through the courtesy of the manager of Taveta Estates, the writer was given every facility of studying the correspondence dealing mainly with engineering matters and trial runs between Capt. Mangnall and Taveta Estates; and also the Estate files dealing with percentage extraction, output of fibre per day and coatings.

The writer was at Taveta Estates from May 2nd to May 7th, when certain extraction tests were carried out. Throughout these running tests the performance of the Second Mangnall Decorticator was compared with the performance of a Corona No. 2 Decorticator using equal weights of similar leaf. The results of the parallel tests in terms of the out-turn of the machine, percentage fibre extracted, percentage of waste tow, water used and power unit employed are given in Appendix A.

### Note on the First and Second Mangnall Decorticators.

The first Mangnall Decorticator was found to have some good points and some failings when put to the test of commercial decortication. As compared with the Corona Decorticator, it had the advantage of individual leaf feed, special squeezing rolls and four drums instead of two, thus making for a steady feed of partially crushed leaves which are decorticated from both sides. This treatment was more gentle and thorough and gave a higher absorption of fibre with a correspondingly smaller proportion of waste. The fibre produced was also of a higher quality as shown by the very high proportion of No. 1 Grade fibre produced. The failings of the First Mangnall Decorticator were as follows:-

- 1) There was a decided weakness in the leaf conveyor system

due to the failure of the wire rope conveyor system the original method of adjusting the tension in these wire ropes, (ii) there was a general lack of care in the structural portions causing frequent malfunctions, (iii) the machine was not able to decorticate sufficient leaf to produce the warranted output of 10 tons of fibre per shift.

It was considered that the merits of the first Decorticator were sufficient to warrant the expenditure incurred on the construction of the second (Mansfield No. II). This second machine was to embody the good features and delete the failings of the first machine. The second decorticator was installed at several points under the supervision of George Mansfield and his assistant in December 1955.

The main alterations as compared to the Mansfield No. I are the following:-

- (i) The wire rope conveyors have been replaced by an exceptionally strong stainless steel chain.
- (ii) The four drums have been increased in size and are now flat drums instead of the original curved drums. The latter alteration is now considered to be a disadvantage.
- (iii) The grip on the fibre has been improved by contact with rubber in place of the metal ribs.
- (iv) The synchronised semi-automatic feed table has been replaced by a slotted conveyor system which still allows the leaf to be fed simply to the machine.
- (v) The crushers have been altered in design and position.
- (vi) Actual decortication is done by very hard, business steel blades working against stainless steel brackets. Major Bayliss is of the opinion that softer phosphor bronze blades would be more suitable.

Since the installation of the new machine various minor alterations and adjustments have been carried out under the supervision of a resident engineer.

Manufacturers. The carrying out of these alterations meant that the decorticator did not commence to work full shifts until quite recently.

The main reasons for the slow rate of decortication have proved to be mechanical in nature. The strengthening of the structure in various working parts and the substitution of the stainless steel conveyor rollers for the cast iron, the use of a heavy drive gives no mechanical trouble with the result of a comparatively low out-turn. Here, but it is not known how it would withstand a more rapid out-turn. The need for a greater out-turn per shift is of paramount importance. As the slower decortication, though the percentage of abstraction is slightly higher, the cost of producing one ton of fibre is very much increased owing to the uniformity of such constant charges as the cost of pumping water, the working of the power engine, overhead constant labour costs, daily salaries and certain overheads.

The speed of decortication of the Lannull, No. II and Corona II decorticators respectively is illustrated in the record of comparative tests carried out with both decorticators at Favea Estates on July 4th 1936.

It will be noticed that the rate of decortication by the Lannull No. II is only about half that of the Corona. The factors tend to lessen this difference. In the first place, the heavy loading of the Corona for a three to four minute run is likely to be heavier than when the same load has to keep up the feeding for a ten hour shift. Secondly, the conveyor system in the Corona is based on the use of numerous ropes. It is normal to run the decorticator until a rope snaps, when there is the necessary stoppage while a new conveyor rope is inserted. In continuous feeding,

the estate manager considers that the comparative advantages

of the machines are of the order of 32 trucks per shift by the Mangnall II and 50 trucks per shift by the Corona II respectively. Again the estate manager believes that the Mangnall II Decorticator could turn out more fibre per day, if it could be given a greater horse power for more rapid working. At present the Mangnall II is driven by a 80 H.P. engine while the Corona II is driven by a 156 H.P. engine. The daily turn-out of fibre per shift from the Mangnall II is estimated to be 2.8 tons as against 4 tons from the Corona II.

Major Layzell maintains that since the institution of the flat drum in the Mangnall No. II instead of the curved drum of the Mangnall No. I, there has been a falling off in the percentage of fibre extracted with the result that more fibre goes to waste down the flumes. It is difficult to assess this factor <sup>as the</sup> fibre content of the sisal leaves decorticated vary with the seasons. It is reported that a steady 4% abstraction has fallen to something of the order of 5.5%, but this latter figure is still slightly higher than abstraction of similar leaf by the Corona II. Major Layzell maintains that the re-installation of curved drums and the use of less hard phosphor-bronze blades instead of the very hard stainless steel ones now in use would result in a higher percentage of abstraction and in a better quality fibre. The estate records tend to confirm the falling off in percentage abstraction after the introduction of the flat drum. It is reported that various makers of sisal decortivating machinery have tried flat drums and found them less suitable than the curved ones.

A survey of the performance of the Mangnall No. II Decorticator leads the writer to report that at present it cannot be considered a commercial success, but rather that it must be regarded to be in its later experimental stages. The writer believes that a sisal grower with a large quantity of leaf ready to decorticate would prefer to purchase a

Corona Decorticator of a known capacity of fibre production per day, rather than the purchase of a Mangnall Decorticator of known limited capacity at the present speed of decortication and of an unknown performance when working under a greater load with additional horse power. It is highly probable that the further alterations considered necessary by Capt. Mangnall and the manager of Taveta Estates, will result in a greater capacity for decortication, a higher percentage of abstraction and possibly the production of a still higher grade fibre, but at present these features have not been proved. The decorticator has been found to be mechanically sound under the present rather low comparative load, but it is not known how the machine can withstand the proposed greater strain and what replacements may be necessary under the new working conditions. Again it is not known whether the machine will be capable of producing the guaranteed output of four tons of dry fibre per standard shift.

The Hydraulic Engineering Co., Ltd., who are the manufacturers of the Mangnall Decorticator and the manager of Taveta Estates (Major Layzell) have agreed upon the further alterations and additions which are considered necessary to enable the Mangnall Decorticator to produce a higher abstraction of a high quality fibre and more especially a greater daily out-turn of fibre.

The writer is not in a position to speculate as to whether the decorticator will attain its objective after these alterations have been carried out. Major Layzell is of the opinion that such will be the case, vide his private communication which is enclosed as Appendix B to this report. A note by the Chief Engineer of Taveta Estates is enclosed as Appendix C.

- 8 -

The writer would summarise this report by stating that at present the angnall No.11 Decorticator cannot be considered commercially successful, but that it is sufficiently so to justify the carrying out of further alterations and additions which have been agreed upon by the manufacturers and Caveta states where decortication on a commercial scale has been carried out.

*[Handwritten signature]*

Comparative Commercial Tests of the Mangnall II. and Corona IIB  
Cisal Decorticators.

	Mangnall II.		Corona IIB.	
	Truck 1.	Truck 2.	Truck 1.	Truck 2.
Number of leaves	2500	2500	2500	2500
Length of leaf	l.s. 2315	1465	2315	2465
Average weight of leaf	.926	.986	.926	.986
Time taken to decorticate	secs. 522*	100	110	285
Capacity for leaf	15965	1503	5986	3772
(i) lbs. per hour continuous running)				
(ii) equiv. in 2 1/2 ton trucks per hour	28.52	14.60	7.14	4.64
(iii) leaves per minute	288	350	714	380
Weight of dry unbrushed fibre	lbs. 32%	85%	78%	80%
Abstraction of unbrushed fibre	\$ 5.547	\$ 4.479	\$ 5.881	\$ 2.276
	\$ 5.545	both trucks	\$ 5.329	both trucks
Weight of dry brushed fibre	lbs. 77%	79%	71%	72%
Abstraction of brushed fibre	\$ 8.554	\$ 6.205	\$ 5.099	\$ 2.641
	\$ 8.280	both trucks	\$ 5.02	both trucks
Weight of dry brushed tow	lbs. 2	4 1/2	3	5 1/2
Dust & further moisture loss	" 2 1/2	2 1/2	5 1/2	2 1/2
Fibre & Megns recovered from waste & limes				
Loss in cotton	4	4	12 1/2	10 1/2
	12 1/2	14 1/2	20	10 1/2
Total recovery	17	18 1/2	32 1/2	32 1/2
Water used	gla. p. m. 240	throughout.		
Power unit	80 HP 4 VAR	80 HP 4 VAR	156 HP 10 H.P.C.E.	156 HP 10 H.P.C.E.

\* It was considered that the time taken for this test with truck 1 was somewhat longer than normal as the power unit did not give its normal HP so soon after starting. The time taken for truck 2 was considered to be about normal.

APPENDIX B.

Second Mangnall Decorticator.

The replacement of the first Mangnall Machine which was erected and run on this Estate from August 1934 to July 1935 was necessitated by the fact that the design of the machine was mechanically and structually unsound, also the machine failed completely to produce the guaranteed output of 4 tons of dry fibre per shift. The good points of the machine which warranted the expenditure incurred on the construction of a Second machine were:-

- (a) The high quality of the line fibre produced, (90% No.1 Grade in some months.)
- (b) The high percentage of abstraction obtained with its accompanying reduction in flume waste.
- (c) The machine is of British manufacture.

The construction of the second machine was carried out with the intention of embodying in its construction all the good features of the first machine.

The second machine was erected and commenced its trial runs on Dec. 16th. The running and control of the machine was under the supervision of one of the manufacturer's own staff of Engineers who only returned to England on April 10th., During this period the running of the machine has been spasmodic and much time has been spent in carrying out improvements, alterations and additions. It cannot be said at the present time that the machine is a commercial success as it stands. The quality of the fibre produced does not equal that obtained from the first machine, the percentage of abstraction also is not as good with an accompanying increase in flume waste. With regard to output I consider that more horse power is required for this machine than the first and if this is available the output would then reach 4 tons per shift always provided that it is proved by continuous running that the mechanical construction of the machine will make economical production possible without undue expenditure on



replacements.

The second machine has been considerably strengthened in construction, the wire conveyor ropes have been replaced by a stainless steel conveyor chain of adequate strength, the original feed table which was semi automatic has been modified. The snatch in of fibre into the butt drum section has been overcome by the introduction of a rubber tyre on the second conveyor wheel. All the improvements carried out on the second machine are on the whole satisfactory but there is still considerable room for further improvements.

The main alterations which I consider the manufacturers should carry out, are as follows:-

- (a) A return to the original curved drums fitted with phosphor bronze blades instead of the present flat drums and stainless steel blades.
- (b) A further modification of the feed table which can be simpler in design and still allow of single leaf feed.
- (c) A further improvement in the turn over device.
- (d) The elimination when possible of all small chains or their replacement by acid proofed chains particularly on the turn over device.

I consider that if these alterations are incorporated and additional H.P. is available say up to 100 H.P. that the machine may then attain its objective viz:-

- (a) A high quality of fibre.
- (b) A high percentage of abstraction with a corresponding reduction in waste.
- (c) A normal output.

Taking into consideration the improvements already effected I consider further expenditure is warranted to enable the improvements mentioned above to be incorporated in the machine.

The following tests were carried out by Mr. Gethin Jones of the Kenya Agriculture Department and myself, on May 4th. These go to prove that further improvements are still necessary if the Mangall decorticator is to compete as a commercial proposition with the Corona, and other makes.

Sgd.- S.C. Layzell.

Result of duplicate comparative tests carried out with the Second Mangnall Decorticator and Corona 2B. Decorticator on 4th May 1938 at Taveta Estate, under the supervision of Gethin Jones Esq., Agricultural Dept., Kenya, and Major S.C. Layzell, Manager, Taveta Estate.

	<u>Mangnall</u>		<u>Corona 2 B.</u>	
	<u>Truck 1.</u>	<u>Truck 2.</u>	<u>Truck 1</u>	<u>Truck 2.</u>
Wgt. of leaf.	2315	1456	2315	2465
No. of leaves.	2500	2500	2500	2500
Time taken to decorticate.	8.42 Mn.	7.35 Mn.	3.30 Mn.	3.55 Mn.
Leaf lbs. per hour (continuous running)	15965	19505	39386	37762
2½ ton Trucks per 10 hours (cont. running)	28.52	34.8	70.8	65.6
Leaves per minute	288	330	714	689
P.H. Value	4.5	4.4	4.3	4.2
Wgt. of dry fibre produced.	82½ lb.	85½ lb.	78½ lb.	80½ lb.
Percentage fibre to leaf abstracted.	3.74	3.70	3.53	3.28
Wgt. of Brushed Fibre.	77½ lb.	79 lb.	71½ lb.	72½ lb.
Wgt. of Brushed Tow	2 lb.	4½ lb.	3 lb.	5½ lb.
Dust & Moisture loss	2½ lb.	2½ lb.	5½ lb.	2½ lb.
Wgt. of flume waste recovered.				
Tip Section 4"	17 lb.	14½	18½	22½
Butt " 12"				32½
Water used	240 gls. p.m.		throughout.	
Power Unit	80 HP 4 VAR	80 HP 4 VAR	116 HP 10 HRCE	156 HP 10 HRCE

APPENDIX C.

Taveta Estates,  
Taveta, 8th May 1936.

TO WHOM IT MAY CONCERN.

The new type of Mangnall Decorticator, differing completely in construction to the original model, still retains the original principal of leaf stripping, and during our fourteen days practically continuous run 448 trucks of leaf were decorticated, an average of 32 per 10 hour shift, power unit being one 80 H.P. Ruston Hornsby Class V.A.R. engine.

Stoppages on the machine were fairly frequent, muddy leaves on the feed table, constantly choking the chains and sprockets with sand, several halts were called to free the crushing rolls, which jammed when a heavy feed was passed. The feed chain, of Reynolds design one inch pitch, has been thrown off many times at correct tension, finally breaking and being replaced. Also the Reynolds chain over the turn over wheel, severely eaten by the acid flew in pieces and had to be replaced.

The lower rubber tension wheel, seems to wear out in a very short time, and slip of the stainless steel conveyor chain is apparent at this point - a replacement has been necessary.

The machine decorticates well on long leaf but immediately rejects down the flume any leaf on the short side.

(Sgd.) T. S. Allen Turner  
CHIEF ENGINEER  
TAVETA ESTATES

N.B.

Grease consumption of Mangnall per day 18 lbs.  
Gear Compound Paraffin consumption cleaning feed table chains 2 pints per day.

21st May, 1936.

*Ans 20*

38022/36.

Gentlemen,

I am directed by Mr. Secretary Thomas to acknowledge the receipt of your letter of the 4th of May forwarding a memorandum relating to the sisal decorticating machinery in Kenya, and to inform you that the application for further assistance from the Colonial Development Fund is about to be considered by the Colonial Development Advisory Committee.

In the memorandum which you forwarded you state in the last paragraph but one that you wish to equip the Taveta machine with the improvements which, in the ordinary course of development, will be incorporated in the other two machines and from this it would appear that you wish to make certain further modifications in the new model machine now in operation at Taveta. In order to assist the Committee in considering the application I am to request that you will furnish such information

information as may be possible in regard to these  
modifications so that the whole position may be clear  
to the Committee at the time of examination.

I am,

Gentlemen,

Your obedient servant,

W. S. G. 19

See

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C.D.A.C.1981.

COLONIAL DEVELOPMENT ADVISORY COMMITTEE.

Kenya.

Sisal decorticating machinery

With reference to C.D.A.C.950,961,1705 and 1726,  
I circulate, for the consideration of the Committee,  
a Colonial Office memorandum submitting, on behalf of  
the Government of Kenya, an application for a further  
loan from the Fund to enable two new sisal decorticating  
machines to be supplied in place of defective machines  
now in use.

The usual financial summary is prefixed.

S. CAINE.

Secretary to the Committee.

27/2/1966 (27)

COLONIAL OFFICE

20th May 1966

92

FINANCIAL SUMMARY.

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1. Dependency. Kenya.
2. Description of scheme. Construction and installation of two further models of sisal decorticating machinery to replace defective machines now in use.
3. Date of commencement. As soon as approved.
4. Period of scheme. About three months.
5. Total cost. £6,000
6. Allocation of cost. Nearly all expenditure will be in the United Kingdom.
7. Assistance desired. Loan of £6,000.
8. Suggested terms of loan. Free of interest for 2 years, thereafter at 4 per cent., repayable by equated annuities spread over the third to the eighth years.
9. Probable yearly amounts required. 1936/37. £6,000.

93

COLONIAL OFFICE MEMORANDUM.

In 1933 the Committee recommended advances of £1,200 to finance the construction of a new type of sisal decorticator by an English company, of which the Managing Director is Captain Mangnall. With the aid of this assistance, the company (Hydraulic Engineering Company Limited) constructed three machines for supply to the following sisal producers in Kenya:-

Major Grogan, Taveta Estate.

Mr. Bibby, Ziwa Estate.

Mr. Nanji Kaledas Mehta, Maainde Estate.

In a memorandum, dated the 16th of February, 1935, (C.D.A.C.1705) the Committee were informed that the new machines had failed to give satisfaction, and that it had become necessary for the Company to apply for further assistance to enable it to meet its obligations to the three purchasers of the machines. The Secretary of State suggested to the Committee that the cost of one machine, (estimated at £3,000) should be advanced from the Colonial Development Fund.

As a result of the Committee's recommendation, a loan of £3,000 from the Colonial Development Fund was made to the Government of Kenya, to be passed on to the Hydraulic Engineering Company Limited, on the following conditions:-

The



94

The loan to be free of interest for two years, bearing interest at four per cent., thereafter, and repayable by equated annuities spread over the third to the eighth years (or earlier at the company's option). If the new machine is not successful, the loan would be converted into a free grant of capital. The loan is granted on condition that the owners of the defective machines will agree to stay their claims against Captain Mangnall's company, until such time as the new machine has been made and tested in East Africa.

The Company was able to obtain the consent of Major Grogan and Mr. Bibby, but the consent of Mr. Nanji Kaledas Mehta, owing to his absence in India, could not be obtained, and with the concurrence of Sir Basil Blackett it was agreed that the stipulation as regards the third owner (Mr. Mehta) should be waived.

An improved machine was shipped to Kenya in September, 1936, and has been in commercial production at the Taveta Estate ever since, where it has been inspected from time to time by the representatives of Mr. Bibby and Mr. Mehta.

The Company is now threatened with legal proceedings by Mr. Nanji Kaledas Mehta unless shipment by the middle of August of a new decorticator, in place of the defective machine supplied to him, can be guaranteed. A copy of a letter from the Company is annexed, in which application for a loan of £6,000 is made to enable it to supply new machines to Mr. Bibby and Mr. Mehta, incorporating the improvements which have been found necessary as a result of the operation of the machine at Taveta since September last. It is also proposed to alter the Taveta machine to include these improvements.

The

The Governor of Kenya has been consulted in the matter and he recommends the application in a telegram dated the 16th of May, provided that the grant, if made, is used primarily to improve the model on the lines agreed upon between the Company and the Manager of the Taveta Estate. A report on the working of the Taveta machine was despatched by the Governor of Kenya to the Secretary of State by the Air Mail of the 15th of May. It is anticipated, therefore, that a copy of the report will be available for the Committee's inspection at its next meeting. Meanwhile, the Secretary of State desires to support the application for a loan of £6,000 on the same terms as the earlier loan.

RECEIVED  
 10th May, 1936.

CONFIDENTIAL.

MEMORANDUM.

4th May, 1936.

to THE UNDER SECRETARY OF STATE  
FOR THE COLONIES

From THE HYDRAULIC ENGINEERING COMPANY,  
LIMITED.  
of Chester and London.

The Colonial Development Advisory Committee's Memorandum No. C.D.A.C. 1705 of 18th February, 1935, detailed the position with regard to the Sisal Decorticator developments in East Africa.

Briefly, the position was that we had accepted orders for three machines at what proved to be too early a stage in the development. The three Estates concerned were:-

Taveta Estate (Major Grogan).  
Ziba Estate (Mr. Bibby).  
Masinde Estate (Mr. Nangi Kaldas Mehta).

These machines which could not be tried out in England were found to require alteration and adjustment in excess of that which could be carried out in the remote position of the Estates. In spite of this, the Taveta machine actually did produce about 1000 tons of first class fibre and proved the machine to be capable of a very high percentage of extraction.

The Estates claimed new machines and to assist the Company a Grant was made from the Colonial Development Fund of £3,000 to replace one machine (Taveta), provided

the

provided the other two (Ziwa and Masinde) would take no action against the Company until such time as the one machine at Taveta was installed and tried out.

The Taveta machine has been running since January and has been inspected at different times by Representatives of the Ziwa and Masinde Estates.

We now have individual requests from Ziwa and Masinde for replacement of their own machines. On March 12th, 1936, the Ziwa Estate wrote asking what would be the earliest date at which we could ship the new replace machine.

We replied that we could ship in twelve weeks after we had been able to obtain Government sanction to an increase of the loan already provided for Taveta. On April 1st, 1936, the Masinde Estate cabled instructing us to supply a new machine and insisted on its shipment early in July otherwise they threatened to instal German machinery. They also specified certain modifications.

We cabled a reply stating that everything was ready to go ahead with manufacture and that we were taking up the question with Government to ask for an increase of the loan to enable the replace machine to be supplied. We also stated that the modifications suggested had been provided for.

We reported the position to Mr. Stoddale and on his direction we beg to submit this Memorandum.

The

The figure estimated for replacement of the Ziwa and Masinde machines and as mentioned in paragraph 7 of C.D.A.C.1705 was £5,000. This amount would be approximately sufficient as we have greatly reduced the manufacturing costs of the machine. A considerable amount of this estimate is absorbed by ocean freight, charges in East Africa, removal of the old and erection of the new machines in these inaccessible places.

The loan in connection with Taveta was £3,000, but our costs considerably exceeded this. In addition to manufacturing, dismantling and erection costs, we have had two representatives in the country one for over two months and the other for six months.

In view of the fact that our costs were in excess of the loan figure and also that we should like to equip the Taveta machine with the improvements, which in the ordinary course of development will be incorporated in the Ziwa and Masinde machines, we now ask that a loan of £6,000 instead of £5,000 be granted, and on the same terms as were arranged for the Taveta machine.

Finally, we are glad to say that this long and costly overseas development is now definitely at an end. From now onwards we shall be able to supply to the local industry machines unsurpassed in performance and reliability and further assistance from the Committee will be unnecessary and will not be asked.

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Draft

MEMORANDUM

Mr. Parnell 19/5  
Mr. Flood 19.5  
J. 19 above

In 1933 the Committee recommended advances of £1,200 to finance the construction of a new type of sisal decorticator by an English company, of which the Managing Director is Captain Mangnall. With the aid of this assistance, the company (Hydraulic Engineering Company Limited) constructed three machines for supply to the following sisal producers in Kenya:-

- Major Grogan, Taveta Estate.
- Mr. Bibby, Ziwa Estate.
- Mr. Nanji Kaledas Mehta, Masinde Estate.

In a memorandum, dated the 16th of February 1955, (G.D. A.G.1705) the Committee were informed that the new machines had failed to give satisfaction and that it had become necessary for the Company to apply for further assistance to enable it to meet its obligations to the three purchasers of the machines. The Secretary of State suggested to the Committee that the cost of one machine, (estimated at £3,000) should be advanced from the Colonial Development Fund.

As a result of the Committee's recommendation a loan of £3,000 from the Colonial Development Fund was made to the Government of Kenya, to be passed on to the Hydraulic Engineering Company Limited on the following conditions:-

The loan to be free of interest for two years, bearing interest at four per cent. thereafter, and repayable by equated annuities spread over the third to the eighth years (or earlier at the company's option). If the new machine is not successful, the loan to be converted into a free grant of capital. The loan is granted on condition that the owners of the defective machines will agree to stay from claims against Captain Mangnall's

company

Memorandum 4 22/4 1955  
Examine G. No. 5

See No 4/380-2/35

company, until such time as the new machine has been made and tested in East Africa.

102 No 29  
38024/35

The Company was able to obtain the consent of Major Grogan and Mr. Bibby, but the consent of Mr. Nangi Kaledas Mehta, owing to his absence in India, could not be obtained, and with the concurrence of Sir Basil Blackett it was agreed that the stipulation as regards the third owner (Mr. Mehta) should be waived.

A <sup>improved</sup> ~~perfect~~ machine was shipped to Kenya in September 1935, and has been in commercial production at the Taveta Estate ever since, where it has been inspected from time to time by the representatives of ~~Major Grogan and Mr. Bibby and Mr. Mehta~~.

The Company is now threatened with legal proceedings by Mr. Nangi Kaledas Mehta unless shipment of a new decorticator, in place of the defective machine supplied to him, <sup>by the middle of August</sup> ~~by the middle of August~~ can be guaranteed. A copy of a letter from the Company is annexed in which application for a loan of £8,000 is made to enable the company to supply new machines to Mr. Bibby and Mr. Mehta, incorporating the improvements which have been found necessary as a result of the operation of the machine at Taveta since September last. It is also proposed to alter the Taveta machine to include these improvements.

*[Handwritten signature]*

The Governor of Kenya has been consulted in the matter and he <sup>is prepared to support</sup> ~~is prepared to support~~ the application provided that the grant, if made, is used primarily to improve ~~the~~ <sup>another</sup> the model on the lines agreed upon between the Company and the Manager of the Taveta Estate. A report on the working of the Taveta machine was despatched by the Governor of Kenya to the Secretary of State by the Air Mail of the 15th of May. It is anticipated, therefore, that a

copy of the report will be available for the Committee's inspection at its next meeting. Meanwhile, the Secretary of State desires to support the application for a loan of £6,000 on the same terms as the earlier loan.



15  
COPY FOR REGISTRATION

Telegram from the Governor of Kenya to Secretary of State  
for the Colonies.

Dated 15th May 1936. Received at 12.43 pm 16th May 1936.

No. 127 Your telegram No. 120 Recommendation submission of  
HARRISON's application to Colonial Development Advisory  
Committee provided the resulting grant is used primarily to  
improve road on the line agreed upon between Hydraulic  
Engineering Company and Manager of Taveta. (2)

Air mail despatch and report on machine left  
fifteenth.

me  
173

C. O.

Mr. Flood. 14.5

Mr. Stockdale 14/15

Mr. Flood 15 *fs*

Sir C. Parkinson.

Sir G. Tomlinson.

Sir C. Bottomley.

Sir J. Shuckburgh.

Permt. U.S. of S.

Parly. U.S. of S.

Secretary of State.

For Mr Stockdale's sig.

DOWNING STREET.

18 May, 1956.

16.  
Dear Mangnall,

Your letter of the 13th has just reached me at the same time as a telegram from Kenya stating that they are forwarding the necessary official report on the working of your new machine by air mail leaving <sup>-day</sup> tomorrow and due here at the end of next week. Until that report has been received and considered it is not possible to say anything. We don't know whether the Government of Kenya will be prepared to recommend the submission of an application to the Colonial Development Advisory Committee or not, and it is therefore quite impossible for me to make any statement.

**DRAFT.**

CAPTAIN R. A. MANGNALL.


 FURTHER ACTION

It is a great pity that Nanji

Kelidas

58022

103  
178

C.O.

Mr. Flood 14/5  
Mr. Stockdale 14/5  
Mr. Flood 15/5

For Mr. Stockdale's use

DOWNING STREET.

18 May, 1956.

- Sir C. Parkinson.
- Sir G. Tomlinson.
- Sir C. Bottomley.
- Sir J. Shuckburgh.
- Permt. U.S. of K.
- Party U.S. of S.
- Secretary of State.

16.

Dear Mangnall,

Your letter of the 13th has just reached me at the same time as a telegram from Kenya stating that they are forwarding the necessary official report on the working of your new machine by air mail leaving <sup>day</sup> tomorrow and due here at the end of next week. Until that report has been received and considered it is not possible to say anything. We don't know whether the Government of Kenya will be prepared to recommend the submission of an application to the Colonial Development Advisory Committee or not, and it is therefore quite impossible for me to make any statement.

It is a great pity that Nanji

Kelidas

**DRAFT.**

CAPTAIN R. A. MANGNALL.

FURTHER ACTION

C.O. 533 464

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②

Kelidas is trying to rush you, but  
I don't see how the C.O. can  
help. I return your originals  
of the cable & letter but have kept  
copies for reference here.

Yours sincerely  
S

(Signed) F. A. [unclear] DALE

TELEPHONE  
CHESTER 1421.  
Private Branch Exchange

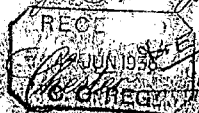
CONTRACTORS TO  
THE ADMIRALTY, WAR OFFICE,  
INDIA OFFICE,  
CROWN AGENTS FOR THE COLONIES,  
AND FOREIGN GOVERNMENTS.

TELEGRAMS  
"HYDRAULIC, CHESTER"

CODES  
18, C. 87 EDITION.  
GENTLEYS.

# The Hydraulic Engineering Company Ltd

LONDON OFFICE:  
TRAPALGAR HOUSE, WATERLOO PLACE,  
PALL MALL, S.W.  
TELEPHONE: 4711 TRAPALGAR  
TELEGRAMS: HYDROCHEM, PIS, C, LONDON



TELEPHONE: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_

13. 5. 36

Dear Sir,

The enclosed letter from  
Major Underhill's people arrived  
two days ago. The cable today  
from our agents in India & Burma  
They demand an answer  
from me by cable within the  
next two or three days.

I have no time to write. The  
best I can do for you is to  
advise how things are progressing  
I am, Sir, very  
truly yours,  
C. C. HEGY

ALL COMMUNICATIONS TO BE ADDRESSED TO THE COMPANY

104

TELEPHONE  
CHESTER A421.  
Private Branch Exchanges

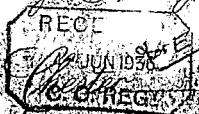
CONTRACTORS TO  
THE ADMIRALTY, WAR OFFICE,  
INDIA OFFICE,  
CROWN AGENTS FOR THE COLONIES,  
AND FOREIGN GOVERNMENTS.

TELEGRAMS  
"HYDRAULIC, CHESTER"

CODES  
A.B.C. 8th EDITION.  
BENTLEY'S.

# The Hydraulic Engineering Company Ltd.

LONDON OFFICE  
TRAPALGAT HOUSE  
WATERLOO PLACE  
LONDON, W.C.2.



13. 5. 36

Dear Sir,

The enclosed letter from  
Messrs. [unclear] [unclear] [unclear] [unclear]  
two days ago in the letter today  
you are advised [unclear] [unclear] [unclear]  
They demand an assurance  
from me by cable within the  
next two or three days  
I am a [unclear] [unclear] [unclear] [unclear]  
but could give you no [unclear] [unclear]  
idea how things are [unclear] [unclear]  
I am [unclear] [unclear] [unclear] [unclear]

C.O. 523  
100  
RECORDED  
INDEXED

COPY.

THE HYDRAULIC ENGINEERING COMPANY LTD.,

CHESTER.

103  
13.5.36.

Dear Stockdale,

The enclosed letter from Nanji Kelidas Menta's people, arrived two days ago and the cable today from our agents Gaily and Roberts.

They demand an assurance from me by cable within the next two or three days.

I am so sorry to trouble you but could you give me any idea how things are progressing.

Yours sincerely,

(Sgd.) R.A. Mangnall

Nairobi

106

Copy cable from Gaily and Roberts to the Hydraulic  
Engineering Company Limited;

.....

Following telegram received from Nanji Kampala  
unless definite shipment of decorticator middle August  
guaranteed within one week taking action cannot  
wait longer stop please reply position.

Gaily.



By Air Mail.

THE HOIMA COTTON CO. LTD.,

Jinja,  
(Uganda).

3rd. May, 1936.

Messrs. Hydraulic Engineering, Co., Ltd.,  
Chester, England.

Dear Sirs,

Re. Mangnall Decorticator.

With reference to the cables and correspondence exchanged between us, we are still awaiting definite news.

It is being mentioned in yours that you are still waiting for a loan from Colonial Development Fund.

With a view to clarifying our position, we may mention that we wish to know as to what is our position, regardless of this loan question. We are sure you will appreciate that the crop cannot wait as long as the loan question is settled or otherwise, which means that we must have a definite undertaking from you regardless of this question as to whether the machine will or will not be shipped by July. On receipt of your reply, we have or have not to approach Corona people for a

Machine

machine to deal with our crop.

With a disappointing experience in the past, we are willing to extend the time of shipment to end of July as against first week stipulated in our cable from Nairobi, but please do see this time that nothing absolutely is wrong in making the new machine as was claimed by you.

Foundation and other drawings must be sent by Air Mail in advance of shipment, to enable us to keep everything ready before the machine arrives, so as to load as little time as possible.

We shall very much appreciate if you would let us have a detailed reply by air mail here as soon as possible.

Kindly note that all correspondence in this connection is hereafter to be addressed to us at Jinja instead of at Uganda as hithertofore.

Awaiting news,

Yours faithfully,

For and on behalf of

The Hoima Cotton Co., Ltd.

(Sgd.)

General Manager.

ALL COMMUNICATIONS TO BE ADDRESSED TO THE COMPANY

5 109

TELEPHONE  
WHITEHALL 9384

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BENTLEYS.

# The Hydraulic Engineering Company Ltd.

Trafalgar House, Waterloo Place,  
Pall Mall.



HEAD OFFICE & WORKS:  
CHESTER

TELEPHONE, CHESTER (M.C.C.)  
TELEGRAMS, HYDRAULIC, CHESTER

RECEIVED  
6 MAY 1936  
C.O. REGY

London S.W.1 4th May 1936.

REFERENCE: YOURS  
DURS

The Under Secretary of State for the Colonies  
Colonial Office  
London, (S.W.)

RECEIVED  
6 MAY 1936  
C.O. REGY

Sir,

As directed by Mr. Stookdale, I have the honour to submit on behalf of my Company, the attached memorandum for your consideration. It relates to the Diesel Desuperheater development in East Africa with which you are familiar.

I have the honour to be

Sir, your obedient servant

*[Signature]*

Managing Director.

CONFIDENTIAL

MEMORANDUM

to THE UNDER SECRETARY OF STATE FOR THE COLONIES  
from THE HYDRAULIC ENGINEERING COMPANY LTD.  
of Chester and London.

The Colonial Development Advisory Committee's Memorandum No. C.D.A. 705 of 18th February 1935 detailed the position with regard to the Sisal Decorticator developments in East Africa.

Briefly, the position was that we had accepted orders for three machines at what proved to be too early a stage in the development. The three Estates concerned were:-

- Taveta Estate (Major Grogan).
- Ziwa Estate (Mr. Bibby).
- Masinde Estate (Mr. Nangi Kaledas Mehta).

These machines which could not be tried out in England were found to require alteration and adjustment in excess of that which could be carried out in the remote positions of the Estates. In spite of this, the Taveta machine actually did produce about 1000-tons of first class fibre and proved the machine to be capable of a very high percentage of extraction.

The Estates claimed new machines and to assist the Company a Grant was made from the Colonial Development Fund of £3000 to replace one machine (Taveta), provided the other two (Ziwa and Masinde) would take no action against the Company until such time as the one machine at Taveta was installed and tried out.

The Taveta machine has been running since January and has been inspected at different times by Representatives of the Ziwa and Masinde Estates.

We now have individual requests from Ziwa and Masinde for replacement of their own machines. On March 12th 1936 the Ziwa Estate wrote asking what would be the earliest date at which we could ship the new replace machine.

We replied that we could ship in twelve weeks after we had been able to obtain Government sanction to an increase of the loan already provided for Taveta.

On April 1st 1936 the Masinde Estate cabled instructing us to supply a new machine and insisted on its shipment early in July, otherwise they threatened to instal German machinery. They also specified certain modifications.

We cabled a reply stating that everything was ready to go ahead with manufacture and that we were taking up the question with Government to ask for an increase of the loan to enable the replace machines to be supplied. We also stated that the modifications suggested had been provided for.

We reported the position to Mr. Stockdale and on his direction we beg to submit this Memorandum.

The figure estimated for replacement of the Ziwa and Masinde machines and as mentioned in paragraph 7 of C.D.A.C.1705 was £5000. This amount would be approximately sufficient as we have greatly reduced the manufacturing costs of the machine. A considerable amount of this estimate is absorbed by ocean freight, railage in East Africa, removal of the old and erection of the new machines in these inaccessible places.

The loan in connection with Taveta was £3000, but our costs considerably exceeded this. In addition to manufacturing, dismantling and erection costs, we have had two Representatives in the country, one for over two months and the other for six months.

In view of the fact that our costs were in excess of the loan figure and also that we should like to equip the Taveta machine with the improvements, which in the ordinary course of development will be incorporated in the Ziwa and Masinde machines, we now ask that a loan of £8,000 instead of £6,000 be granted, and on the same terms as were arranged for the Taveta machine.

Finally, we are glad to say that this long and costly overseas development is now definitely at an end. From now onwards we shall be able to supply to the sisal industry machines unsurpassed in performance and reliability and further assistance from the Committee will be unnecessary and will not be asked.

C. O.

Mr. Stockdale 18/4/36

Mr. Flood 25-4

Mr.

~~Sir C. Parkinson~~

~~Sir G. Tomkinson~~

X Sir C. Bottomley 24/4

Sir J. Shuckburgh

Permt U.S. of S.

Parly. U.S. of S.

Secretary of State.

308

3

Qto. for Mr. Stockdale's sig.

C.D.  
R 25 APR  
D 28

2, Richmond Terrace,  
Whitehall, S.W.1.

28 April, 1936.

act

Dear Capt. Mangnall,

With reference to your

letter of April 4th, I have to in-  
form you that a telegram will be  
despatched to Kenya to ask for a re-  
port on the working of the new model  
of your machine, as the Colonial  
Development Advisory Committee will  
require to be in possession of such  
a report before they can give con-  
sideration to any further applica-  
tion for financial assistance.

The request for an exten-

sion of the loan referred to in  
your letter now under reply should  
be submitted officially addressed  
to the Under Secretary of State, and  
in this application the fullest

information.

DRAFT.

CAPTAIN A. R. MANGNALL.

FURTHER ACTION.



Information should be given as to the substance of the requests which have been made by the owners of the two estates who are now asking for the replacement of the machines originally supplied to them.

I am,

Yours sincerely,

C. O.

38022/36 Kenya.

2 115  
C. O.  
R 25 APR  
B 25 - 16

Mr. Flood 7/4

Mr. Stoddard 18/4

Mr. J. Campbell away

Sir C. Parkinson Mr Flood ✓

Sir G. Tomlinson

X Sir C. Bottomley 24.4 2000 ✓

Sir J. Shuckburgh

Permt. U.S. of S.

Permt. U.S. of S.

Secretary of State

(17/5 on 38022/35)

DRAFT.  
L. 20/5  
6/5  
C. O.  
Nairobi

7/4 18/4

from Nairobi 17/4 18/4

So old. sent 5.0 from 24/4/36 20/5

Mr. Flood now states that the two estates where his first machine installed are satisfied with the model and price for supply of new machine. He has applied for further [17/5 5000] for Colonial Development Fund to finance construction of two machines of new type. It is now further recommended to the need of new machine and state whether it can be considered commercially successful or sufficiently so to justify further financial assistance? If so please also state whether you recommend submission of application to Development Fund.

FURTHER ACTION

TELEPHONE:  
CHESTER, 1421.  
Private Branch Exchange

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AND FOREIGN GOVERNMENTS.

TELEGRAMS  
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B.C. 215 EDITION  
BENTLEY'S

# The Hydraulic Engineering Company Ltd.



Chester 4th April 1936

RECEIVED  
MAY 1936  
C.O. REC'D

REFERENCES: 20059  
ARM

F. A. Stockdale Esq. C.M.O., C.B.E.  
2, Richmond Terrace,  
London, E.C. 4

Dear Sir,

SPECIAL DECONTICATOR  
Loan From Colonial Development Fund  
Colonial Office Memorandum G. Dea. C. 1705  
of 16th February 1935.

The owners of the two estates who agreed to await the result of the first machine installed at Taveta have now inspected it in production and have notified us that with a few minor modifications they wish to be equipped with similar machines and are pressing us for early delivery.

As it will take some time before a sufficient volume of orders can reach us and enable the financing of these replace machines, we beg to ask for an extension of the loan as mentioned in the Colonial Office Memorandum to meet this situation.

Yours faithfully,  
THE HYDRAULIC ENGINEERING COMPANY LIMITED

Managing Director.