

1
dt: 4.3.29. Address - G. M. Ismailjee & Sons.
Urgent 52 McLeod Rd.
Lahore.

To.

Prof: Roerich.
Hall Estate - Nagar.

Dear Sir.

I forwarded you on the 2nd instant an estimate for the Electrification of your bungalow vide our conversation at Mauda on the 28th ultimo. I originally proposed the Uno-Electric lighting Set or similar plant - i.e. Engine + Generator combined. I find however this plant is not available from Stock in India - but the Deles lighting sets with Batteries are - the cost of these sets are very high & would not in my opinion justify the expense as compared to the advantages of Electric lighting. If however expense be of no consideration then I would be prepared to instal a Deles lighting Set at an additional cost of 1700/- i.e. the estimate would be increased from 3420/- to 5120/- Lump Sum.

I would however point out certain advantages & disadvantages of the Delco. 1. In the hands of unskilled workmen or attendant the overhauling of this plant is liable to lead to damage to the generator. This means the employment of a highly paid man who also understands Batteries. which is an expensive item. This results in considerably higher running costs.

The plant as proposed & estimated for by the vide mine of the 2nd instant. is cheaper - does not require a highly paid attendant. Engine & Generator being separate the latter is not liable to any damage. & the engine is easily attended to monthly. There are no batteries hence less liability to total closing down in case of damage due to neglect or damp or being allowed to run down. Kindly let me have your reply early. In the event of your deciding on the Delco the terms would require to be revised from 50% to 75% on order & 25% on handing over.

to enable me to meet Cost of Engins.
freight etc. or your cheque may
be made payable to the suppliers
direct. who will forward through
me the Plant direct, the Electrical
material I shall arrange for personally
and bring up with me together
with the workmen.

I shall personally do the Erection
of the plant and supervise the work
The wiring of the house will not
take more than ten days and you
will be put to practically no
inconvenience - i.e. so far as this is
avoidable.

Yours faithfully
M. Lindsey.

C/o Post Master - 4
Bajaura P.O.
Kangra Dist.

Dear Sir,

With reference to our conversation at Mandi Dak Bungalow on the 27th ultimo regarding the Electrification of your Bungalow.

Attached are particulars of Type of Engine and Generator - fittings etc. I propose to install ~~and~~ total lumpsum cost of instal~~l~~ation - I am prepared to gurantee

(1) the completion of and to hand over in running condition within a period of 8 weeks from date of your placing order-

(2) The quality of workmanship to be up to Standard.

(3) To execute free of cost any repairs & replacements due to faulty workmanship up to a period of three months from date of handing over of instal~~l~~ation.

Terms - 50 % on placing of order.
25 % on installation of Engine & generator
25 % on completion and handing over.

Estimated cost of all material labour freight etc. lump sum is Rs 3420/- (Rupees three thousand four hundred and twenty only.

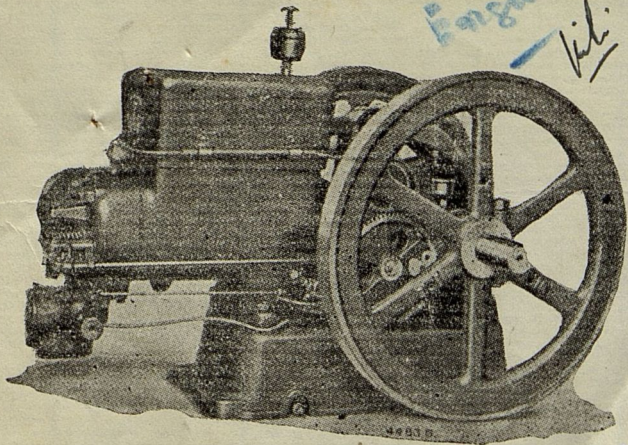
Awaiting the favour of your early reply.

Yours faithfully,

W. Lindsay

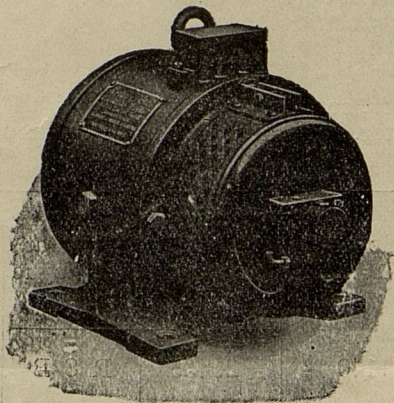
To
Professor Rociel -----
Hall Estate
Nagar P.O.
Kangra Dist.

W. Lindsay



"M.V." Type "G" Motors and Generators

(Direct-Current)

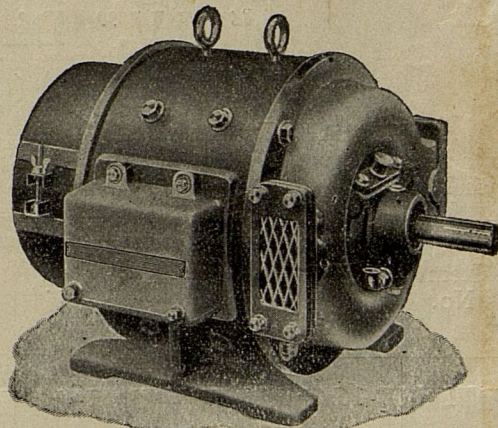


Enclosed Ventiladed Type
(Small Size.)

Motors—Shunt
Wound 110, 220
and 440 volts.

Generators—
Compound Wound
115 and 230 volts.

Enclosed
Ventiladed Type.



Enclosed Ventiladed Type.
(Large Size)

General.—These machines have been designed to meet the various requirements of industrial work in India, and are substantially built, efficient and thoroughly up to date in every respect ; the commutator and brush gear are easily accessible, and the various parts are made to gauge and are interchangeable.

Damp-proof.—All windings are thoroughly impregnated at our Works with a special insulating varnish which enables them to withstand the ravages of the extremes of heat and dampness of the Indian climate.

Each motor is stocked complete with slide rails and standard pulley, also Type "SD" starter. A few variable speed motors primarily intended for use with house service pumps are also complete as above and with a Type "R" speed rheostat.

Table No. 1

"M.V." Direct-Current Motors

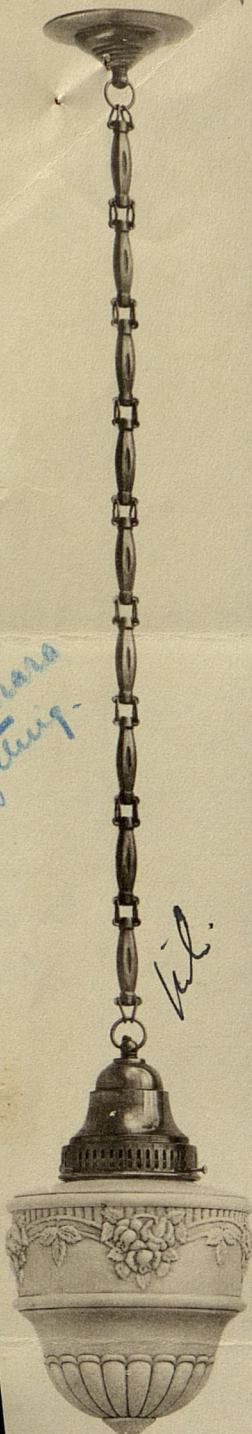
(Calcutta Stock)

"M.V." "G" Type Shunt Wound, Enclosed Ventilated Motors, complete with pulley (of the sizes given below), slide rails and Type "SDB" Protected Type Starter, Normal Service rating, fitted with No-Voltage and Overload releases.

Item No.	Motor Item No.	G. Frame No.	H.P.	Volts.	Pulley.	Speed R.P.M.	"SD" Starter. Catalogue No.	Shunt Rheostat. Catalogue No.
1	16	G 1611	2	110	5" x 3"	1140	23435	R 8 B
2	1	G 1306	.45	220	3" x 2"	1500	23445	
3	5	G 1407	1	"	5" x 2½"	1600	23446	"
4	8	G 1507	1	"	do.	1200	23446	"
5	10 P	G 1507	1½	"	do.	1700/1960	23447	"
6	15 P	G 1557	2½	"	do.	2200	23448	"
7	19 P	G 1611	2¾	"	do.	1560/1900	23448	"
8	20 P	G 1611	3	"	do.	2300	23448	"
9	21 P	G 1611	3	"	do.	1960/2100	23448	"
		G 1611	1¾	"	do.	950	23447	"

*Barara
Jewelry*

W.L.



S 36.—
Glasglocke altelfenbein

Specifications-

Engine - Fair-banks-morse - 3. 4 H.P. 475 R.P.M. runs on cheapest quality kerosene Oil - Consumption of a 5 H.P. Engine on full load for 13 hours is 4 Gallons Kerosene - A 3 H.P. would consume approximately on full load 1 gallons of Kerosene (cheapest quality) at -/12/- a gallon per night; if taken on an average throughout the year owing to variation of number of lighting hours winter and summer.

Generator - Metropolitan Vickers 1.85 KW D.C. Shunt Interpolar.

Points - 22 Lights and 6 Plug Points.

Switch Board- Marble pannel - complete with Generator Switch, Fuses, Ammeter and Volt meter.

Installation - Casing & Capping $1\frac{1}{2}$ " 3/22 V.I.R. Wire, 600 Megham Grade C.M.A. -

Fittings - Polished Brass Tumbler Switches - 18 Enamel shades, 4 Carrara one light fittings for Dining and Sitting rooms -
2 Flexible Table Stands complete with Glass shell reflector shades.
4 Fixed Table Stands with opal shades.
One Extra ordinary Brass Standing lamp with silk shade with 20 ft. Flexible wire and connection.

Distribution Board. Teak wood with glass in front - Lock and Key, 4 Circuits with Iron Clad switch and fuses combined.

Alh

9
NAGGAR
Kulu
Punjab

March 8 1929

M. Lindsey, Esq.
c/o M. Ismailjee & Sons,
52 McLeod Road.
Lahore.

Dear Sir,

I am receipt of your two letters of nil date and of March 4th, for which I thank you.

As it seems possible that we can get sufficient water on the estate, I would like to ask you to give me also a complete estimate for a hydro-electric plant, stating also what amount of water and what height of fall would be necessary and we will see whether such can be arranged

Awaiting your early reply, with particulars and leaflet of the American Union-Electric hydro-plant you mentioned.

Yours very truly,

C/o M. Ismailjee & Sons,
52, Meleod Road,
Lahore.

Dated 18th March, 1929.

To
Professor N. Roerich,
Hall Estate,
Nagaar.

Dear Sir,

I am in receipt of your letter dated 8th instant. Regarding of quantity of water required; this should be sufficient to drive a small mill of the local type, these take about 3 to 4 H.P. whereas we require from two to three H.P.

Least Head required "(Verticle height) should be from 10 to 12 feet and depends on volume available, the greater the head the better; for the final drive of Turbine, this head may be assisted by the building of a storage~~age~~ or Pressure Tank; it is from here the head is measured; the flow into this tank should be sufficient to keep the tank filled once the Turbine is started. The outlet under pressure being 3 inch bore, the flow into the tank should be by a drain carrying near enough an 8" bore of water. The size of storage Tank will depend on the bore available and head of water (measured vertically) from Tank to Turbine.

One of your servant's quarters could be used as a generator house.

- (a) What bore of water could you arrange to bring to the Tank?
- (b) What distance measured vertically could the Tank be built above the generating house?

Please fill in the rough sketch enclosed and I will then be able to decide if it can be arranged.

If you can get the required water power all the better, as this will do away with running costs and wages of an attendant and be considerably cheaper in the long run.

Whatever plant it is decided to install I would like to make an immediate start, I am in a position to send up the men and material to do the wiring at once and would complete this work in ten days, while the whole installation would be completed and running in 8 weeks, probably earlier, i.e. whether you decide on Water Power or the plants I have already estimated for.

I regret that the Uno-Electric hydro-plant is not available in this country.

Lump Sum estimate for Water Power Plant is
Rs. 3,610/-/- (Rupees three thousand six hundred and ten only)

Should you decide on Water Power Plant the terms would be as in the case of Fairbanks Morse Plant; that is, 50% on order; 25% on completion of installation; balance on completion and handing over.

Your cheque should be made payable to Messrs. M. Ismailjee & Sons Lahore, who will supply the necessary material.

An early reply will oblige, as I shall be returning to Kulu at an early date, and it will be necessary for me to inspect all material personally to avoid inferior material being supplied.

Yours faithfully,

Milindsey

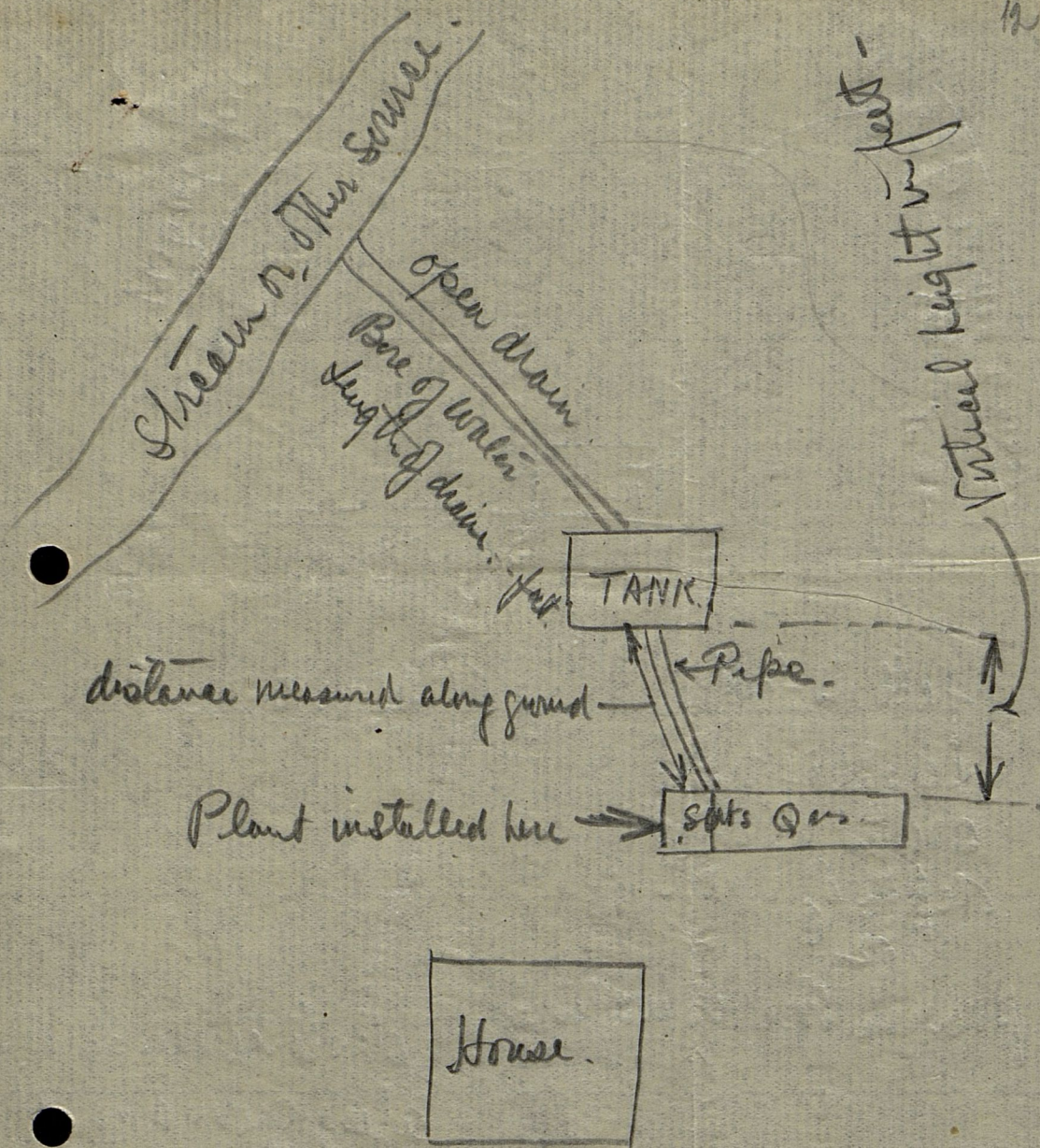
SPECIFICATION WATER POWER PLANT.

Turbine. 2 to 4 H.P. complete with driving pulley and belt and 50 feet G.I. Piping.
Generator. Metropolitan Vickers 1.85 KW D.C. Shunt, Interpolar.
Switch Board. Marble pannel - complete with Generator switch, Fuses, Ammeter and Volt meter.
Points. 22 Light and 6 Plug Points.
Installation. Casing and Caping 1.1/2" 3/22 V.I.R. Wire 600 Meghm Grade C.M.A.
Fittings. Polish Brass Tumbler Switches - 18 Enamel shades 4 Carrara one light fittings with for Dinning and Sitting rooms.
 2 - Flexible Table Stands complete with Glass shell reflector shades.
 4 - Fixed Table Stands with opal shades.
 1 - Extra ordinary Brass Standing lamp with silk shade with 20 feet Flexible wire and connections.
Distribution Board. Teak wood with glass front Lock and key 4 Circuits with iron Clad switch and fuses combined.
 LUMP SUM - Rs. 3,610/-/-

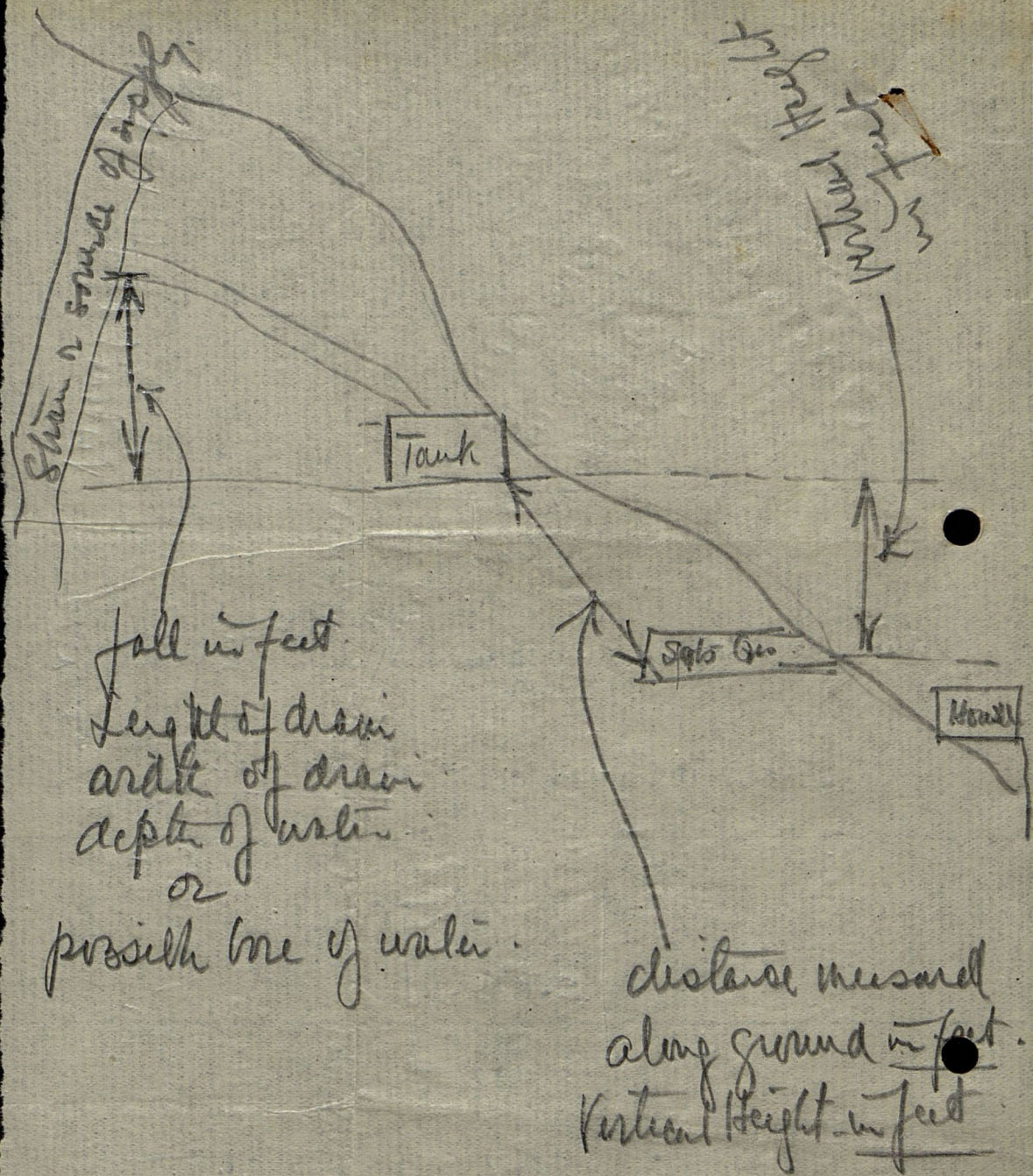
N.B. Cost of bringing water to Turbine Storage tank; Generator house (if one built) are not included in this estimate. These however I can estimate for you on hearing further from you.

NL/TF.

Mil.



Plan required with above positions
 + particulars (see over) etc.



NAGGAR
Kulu
Punjab

March 21 1929

M.Lindsey Esq.
Lahore.

Dear Sir,

We are in receipt of your letter of March 18th for which we thank ^{you}. We are glad to hear that you are soon coming up Kulu way and Professor Roerich requests you to kindly visit us in Naggar, so that you can yourself inspect the possibilities, as we would of course much prefer the hydro-electric plant.

Awaiting your early reply as to the date of your visit and hoping you will visit us soon,

Yours faithfully

Secretary to Prof.N.Roerich.

14
K. C. VARMA & SONS,
LAHORE (India).

(Persian Translation Form)

A ADDRESS C/o K.C.Varma & Sons.
1 Beadon Road.
Lahore.
Dt 28/3/29.

Pro f N. Ro erich.
Na ggar

Dear Sir.

I am in receipt of your letter dated 21st instant and now to you a wait my a rival~~l~~ regarding the decision as to whether water power would be possible.

Am I to understand that in the event of water power not being possible you would in that case be prepared to instal an Engine for the necessary drive; i.e., you are definite as to having electric lights installed?

I ask this as irrespective of what the driving power, this, in no way effects the installation in the house; the wiring of which could be taken in hand at once; this would save time and enable me to complete; this, the greater part of the work, pending arrival of the Plant, i.e., Engine or Turbine. while also I could bring the men and material up with me.

Should the above meet with your approval I would request you to forward your cheque, making it payable to Messrs K.C.Varma & Sons: the Cheque should be Crossed; and not as previously stated in favour of

Ismailjee & Sons; I find that this firm would be more suitable as they specialise in this particular work and moreover I am negotiating with them in regard to a large contract I hope to secure for another

Electric Installation in an adjoining district, hence I am anxious to complete yours as early as I possibly can.

Thanking you for an early reply

N. Hindson
Yours Faithfully.

15
NAGGAR
Kulu
Punjab

Apr. 3 1929

M. Lindsey, Esq.
Lahore,

Dear Sir,

In reply to your letter of the 28th ult. Prof. Roerich instructs me to inform you that he wants to consider only the erection of a HYDRO-electric plant and welcomes to discuss with you the possibilities of this, after you have acquainted yourself with the situation on the spot, here.

But perhaps, in order not to loose time afterwards, you can make some provisional arrangements with your suppliers in Lahore, so that fittings etc. may be sent up to you here, on your letting them know about it, in order that you may not have to go to Lahore again to select the material. We want to add that we do not like the Carrara light fittings but would prefer glass shade hanging lamps in all rooms.

Awaiting your news as to the expected day of your visit to Naggar,

Yours very truly

Secretary.

A.

Class }
Prefix }

Code

POSTS



TELEGRAPHS.

Inland Telegram.

No.

Space for Postage Stamps.

The stamps must be affixed by the Sender, and must not overlap. Any Stamp for which there is not room here should be affixed at the back of this Form.

Stamps cut, torn or defaced are not accepted.

Office of Origin, Date and Service Instructions.

Words.

H. M.

Sent at

Charge.

Rs. A.

To

By

Nothing to be written by the Sender above this line.

If this telegram is to be classed EXPRESS, write the Class here.

If this telegram is on State business the word STATE should be written in this space.

When a reply is to be prepaid, write the words "Reply Paid" and the amount in the space below. These words are not charged for.

TO

Name

Address

Telegraph Office

Lindsey

care Karmkutya
Lahore

NOTICE.

PLEASE
GIVE A
FULL
ADDRESS.

Going away now must postpone everything until return

FROM

Roerich

NOT TO BE
TELEGRAPHED.

Signature

and

Address of Sender

Roerich Naggar 27/4/1929

ADDITIONAL SPACE FOR STAMPS.

The *ACCURACY* of telegrams is not guaranteed the Sender and Receiver must accept *ALL RISKS* arising from non-delivery, errors or delays. *Complaints* respecting telegrams and claims for refund involving complaints against the service should be addressed to the *Director-General of Posts and Telegraphs, Traffic Branch, Calcutta*. Claims for refund respecting telegrams which do not involve complaints against the service should be addressed to the *Deputy Accountant-General, Telegraph Check Office, Calcutta*. Claims for refund or complaints respecting telegrams should be made within two months from the date of the telegram. The receipt granted for the telegram should be enclosed with the reference. In addresses consisting of a name prefixed to a Registered or Abbreviated address, or when a telegram is addressed to one person at the house of another whose name is also given, the words "Care of" or the symbol "C/o" should be inserted after the name of the Addressee. There is always risk of a telegram not being delivered if a full and definite address is not given in the first instance.

MGIPAh.—31-5-26.

C.

X

KH

POSTS



TELEGRAPHS.

17

2

NOTICE.

This form must accompany any inquiry made respecting this Telegram.

Charges to pay Rs. Office Stamp.

Rs.

28 APR. 29

Handed in at (Office of Origin).

mande

Date.

27

Hour.

10

Minute.

40

Service Instructions.

LF West

Words.

12

TC

Recd. here at

11

H. 10

M.

Rochich Hall estate naggar

arriving yours this evening

Lindsay

N.B.—The name of the Sender, if telegraphed, is written after the text.

C.

O.

PB

POSTS



TELEGRAPHS.

2

NOTICE.

This form must accompany any inquiry made respecting this Telegram.

Charges to pay.

Office Stamp.

Rs.

As.



Handed in at (Office of Origin).

Date.

Hour.

Minute.

Service Instructions.

Words.

Lahore X

26 15 10

38

TC

Reply Paid

Recd. here at

H.

M.

15 50

V Roenchi Naggar

Can Come immediately
 with supplies & other subject
 you can firm tender amount
 and items dated eighteenth
 march as per supplies. One
 hundred & fifty cases travelling
 on the Punjab work not
 entered by Lindsey care Karam



E. O. No. *619*

Office of the
Chief Engineer, Punjab,
P. W. D., Hydro-Electric Branch.

Dated ~~Lahore~~ ^{Lahore} the April 27, 192 ^{9.}

Dear Mr. Banon,

Thanks for yours of April the 12th.

I am referring your letter to Mr. Jefferis, who is now Superintending Engineer in charge of the Construction Circle at Jogindarnagar. There may be somebody in his Circle, who is going up to Kulu and could give you just the type of information you want. I will ask him to reply to you direct.

Many thanks for your good wishes. I have just got back from England after 3 months' rushed visit home and am feeling ever so much fitter and ready for work.

Yours sincerely,

P. S. Dally

Hugh S. Banon, Esquire,
Manali, Kulu.
Kangra Dist.

OFFICE OF THE
SUPERINTENDING ENGINEER,
'C'(CONSTRUCTION) CIRCLE,
P.W.D., HYDRO ELECTRIC BRANCH.
E.O. No. 249 Dated Jogindarnagar, the 13th. May, 1929.

Dear *M^r Banon.*

Reference your letter dated 12th. April to Col. Battye and his reply thereto, regarding your proposal to instal a small Hydro Electric dynamo at Naggar. I have ascertained that Mr. S.J.Bruford, Executive Engineer Mechanical Division here would be willing to go into the question for you. Mr. Bruford intends to apply for ten days leave about the middle of next month.

I am asking him to let you know direct the actual dates he will be up in Kulu.

Yours sincerely,

H.S.Banon, Esquire,
Manali-Kulu,
Kangra District.

C. S. Saffair
13/5/29

Saturday 18/8/29 -

My dear Mr Shiberoff

I am sorry I have been
unavoidably detained today - hope
to have the pleasure of seeing you
~~tomorrow~~ ^{tomorrow}. I send you Aunt Bodding's
letter also Mr Jeffries reponse -
I hope this finds you all very
fit. With kindest regards -

P.S.

Please excuse pencil Yours sincerely

Hugh L. Danson

Permanent Address

Joginder Nagar.
Mandi State.
Punjab India

21
Temporary Address

Manali
Kulu
Punjab

From Mr N. Booldington Royal Engineer

To Prof. Rorick Nagar
Kulu.

Sir,

I have the honour to report
as attached. with regard to the
proposed Hydro Electric Plant
which you propose to instal
at Nagar.

My visit being carried out
at your request through Mr
Banon of Manali and as
directed by Lt. Col. B C Battye RE
C E P W D. (Electricity) Punjab.

If my recommendation to 3
is approved I have the honour
to state that I could arrange
for the survey to be carried out
under my supervision by a
nominee of myself provided
I receive instructions before
20th inst

I have the honour to be
Sir

Yours most obedient Servant

Manali 16-5-29

N Booldington RE

22

Report on proposed Hydro Electric project at Naggar.

General.

The proposal as outlined is to obtain power from the Chakki Khad to serve for Electrical purposes the needs of Prof. Rorick's Estate at Naggar.

Power Required

The proposal includes the following

(a) Lighting main Bungalow. 2 K.W.

(b) Heating do do.

This will not exclude the use of wood fires in the main rooms during the winter but will allow for cooking fans and temporary heating.

(c) Lighting and Heating Subsidiary bungalow. 5 K.W.

(d) Light 5 No Naggar's House. 2 K.W.

(e) Lighting Orchard. 3 K.W.

17
Deduct 30% Load factor 5

Total power required 12 K.W.

It will be noted that practically all the above load is for night use a medium sized circular saw could be run in the daytime with the current then not in use.

It is also noted that it is desired to install as large a plant as the water and drop available will allow for future extensions.

Power.
Available

This is an extremely difficult matter to decide as no plans or spot levels were available and owing to the shortness of my visit and lack of instruments no accurate measurements could be made.

From my observations however it would appear that provided sanction to the use of the water could be obtained at least 15 K.W. of power are available and on accurate details being forthcoming it is quite probable that no less than 25 K.W. may be obtained

Details
Required.

Should it be decided to install the plant the following will require to be constructed but no details as to their cost can be given until such time as a survey is made

(a) Small Head works, flume, regulator overflow & spillway

- ② Pipe line and supports
- ③ Power House including valves and Tail race discharge
- ④ Plant: consisting roughly of Pelton wheel.
generator
Switch board complete.
- ⑤ Over head mains to the Bungalows. estate.
- ⑥ Distribution services etc inside the Bungalows.

Preliminary
Requirements

- (a) A survey of the area with spot levels long sections and cross sections
- (b) Before the matter is proceeded with full details as to the availability of water and land should be ascertained.

J. Boulding J. H. H. H.
16/3/29

Recommendation

25

- (1) I consider that a minimum of 15 KW and maximum of 30 KW are available at the site shown on the Chakki Khad.
- (2) I recommend that a letter be addressed to the SDO Civil Engineer asking for permission for up to 5 cuses of water to be taken from the Chakki nalla below the intake of the Kul which runs above the old Fishery Hatchery the water to be returned to the nalla or to the Kul just below the old Fishery Hatchery also that permission be given to construct a Kul (pucca) along waste land below the upper Kul mentioned above.
- (3) A survey be made of the area at once so that accurate details of the power available may be determined.

The cost of this will be about 50/- + plus expenses of obtaining survey or 8 ins. funds about 50/- - 75/- - well 100/- - 125/-

16/5/29

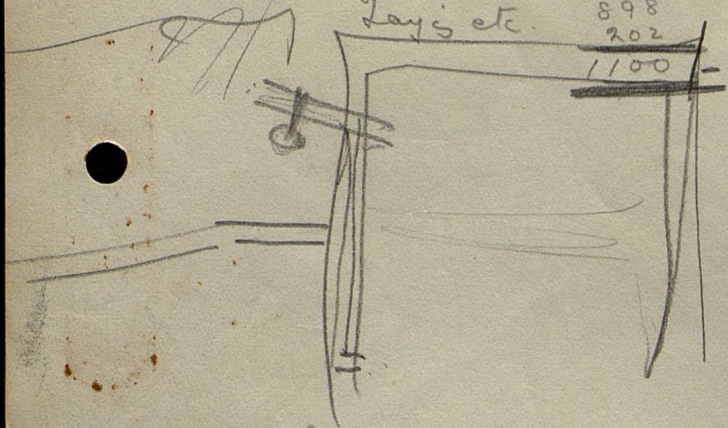
N Boddingham R.R.

Suggest ordering

1" Pipe	1600 ft.	400/-
1" bends 90°	42	4/-
300-400 gal tank	1	6/-
G.I. iron		120/-

Complete with ball
cock at inlet &
2 outlets.

3/4" pipe	300 ft.	60/-
bends	12	8/-
elbows	12	6/-
3/4" cocks	12	22/-
backnuts	12	4/-
spare sockets	12	4/-
T's	12	6/-
3/4" waste w. taps	1	20/-
2 Pipe wrench	20/-	40/-
freight		698
Lay's etc.		200
		898
		202
		1100/-



H of 36 g		61.00
1 st Read	7.59 H of 2nd	61.07.59
2 nd Read	11.73 H of staff	60.95.86
3 rd	1.29 H of int	94.57
4	11.8 14 H of staff	106.38 82.76
5	1.0 H of int	82.66
6	10.00 — staff	72.66
7	.54 int	73.20
8	11.82	61.38
9	.61	61.99
10	11.78	50.21
	.67	50.88
	12.00	38.88
	.9	39.97
	10.5	29.47
	12.3	41.77
	.69	41.08
	7.95	49.03
	1.12	47.21

$$\text{Total fall} = 5.2 \text{ ft.}$$

$$\text{Length of pipe} = 15 \%$$

$$\text{drop} = 3.5 \text{ ft. } \%$$

But top of tank in hours will be 37

$$\text{i.e. drop is } 2\frac{1}{2} \text{ ft. } \%$$

$$V = C \sqrt{m}$$

$$= 110 \sqrt{.5 \cdot .0036 \cdot .0018}$$

$$\frac{18}{1000}$$

$$110 \quad 4.2$$

$$\underline{4.5}$$

Lahore

H. Col. Battye, R.E.

H. Col. H. C. Battye, R.E.

House
Lahore

Dear Col Battye:

I wish to thank you so kindly
Mr Roddington to come and look into the
Hydro Electric scheme which we propose to
install. He has given us all the
information and drawings etc which are
required.

I understand from him that
owing to certain regulations he is unable
to accept any recognition for his
services and on his suggestion I
request that you will accept the enclosed
as a donation to welfare work for coolies
which I understand is being carried
on in Jyandhar Nagar as a token
of my appreciation of you allowing him
to come & of his services.

29
NAGGAR, Kulu, Punjab

July 6th 1929

Lt.Col.B.C.Battye,R.E.
Kapurtala House.
Lahore.

Dear Col. Battye,

I wish to thank you for so kindly allowing Mr. Boddington to come and look into the Hydro-Electric scheme which we propose to install. He has given us all the information and drawings etc., which we require.

I understand from him that owing to certain regulations he is unable to accept any recognition for his services and on his suggestion I request that you will accept the enclosed as a donation to welfare work for coolies, which I understand is being carried on in Joginder Nagar, as a token of our appreciation of your allowing him to come and of his services.

Yours very truly

Enclosure:

Check No: A121306 for Rs: 100/-
on the Imperial Bank, Simla.

REGISTERED.

From

No: 22/A

Lt. N. Boddington, R.E.,
Assistant Executive Engineer,
P.W.D., Hydro Electric Branch,
Jogindernagar,
(Mandi State). Punjab.

To

Professor .. Roerick,

*Naggar.*Dated Jogindernagar, the 13th July, 1929.

....

Sir,

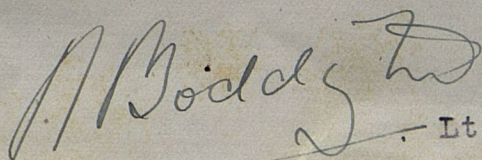
I have the honour to forward herewith a complete report and drawings for the installation, which I was requested through Col. B.C. Battye, R.E., to inspect and give advice on.

I hope I have completed the work satisfactorily.

I have the honour to be,

Sir,

Your most obedient servant,



Lt. R.E.

REPORT ON PROPOSED HYDRO ELECTRIC SCHEME AT
PROFESSOR ROERICK'S ESTATE AT NAGAR KULU.

.....

1. GENERAL.

(a) Power Available.-

As will be seen from the attached survey, the head available is 60', and the river has, on the date of my visit on July the 6th, ^{considerably more} not less than 5 cusecs, which, in view of the fact that the water will be returned to the kuhl next below the headworks, there would appear to be no difficulty in arranging with the local civil S.D.O. and zemindars for up to 5 cusecs to be taken. This will leave sufficient water available for any requirements in the short distance approx: of 1000 feet between the point that the water is taken out and where it is returned to the river or kuhl. Assuming therefore that 5 cusecs are taken, the power available is 18 K.W. allowing an average efficiency of .68 .

(b) Plan Attached.

The plan is on a small scale, but is sufficiently accurate to indicate a general idea of the work and also the cost and approximate length of the flume, the position of the power house and headworks.

(c) Levels.

Levels have been accurately taken and are marked on the plan. An imaginary level of 5500 above sea level, having been taken on a peg on the level of the lower Hatchery area, where the power house will stand.

(d) Course of the Flume.

The flume has been taken at a grade of approx: .36 % and as far as possible across waste land, except in one place where in order to avoid a very difficult cutting it is taken round ~~xxxx~~ an edge of the corn-field, which will a long part of this place be supported on trestles approx: 6' from the ground. In many other places

32

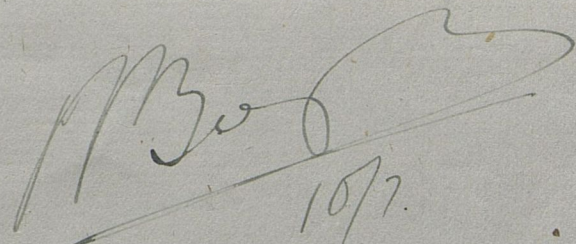
the flume will also have to be supported on trestles owing to the precipitous nature of the ground and the necessity for avoiding sharp bends and also in order to keep the grade of the flume constant.

(e) Upkeep.

After the plant is put in, it should be possible to obtain the services of an electrician who would also have some knowledge of mechanical and civil work to be responsible for the total upkeep of the whole plant, flume and external and internal wiring. His pay would probably be in the nature of Rs.50/- per month.

(f) Total Cost.

Probable cost of this work will be Rs.17600/- .
An allowance of Rs.5000/- has been made for plant. As the material is to be purchased by Professor Roerick in America, I am unable to give very accurate details as to cost. *The above cost does not include supervision for which add approx 10-15 per cent.*



Lt. R.E.
Assistant Executive Engineer.

DETAILED DRAWINGS ETC. AND PROBABLE COST.

.....

1. HEADWORKS.

A small dam should be built across the nullah about 25' long at the top and 13' at the base having a clear section of about 20 Sft. or, 400 Cft in all, the top being at a level of 5562.5 to force the required water into the flume, which should also be provided with a hand operated gate and gauge, so that the flume supply could be regulated and measured.

Cost..... Rs. 500/-

2. FLUME.

A wooden flume supported where required by trestles and at other points by earth or boulderefilling. This wooden flume is most suitable for the following reasons:-

- (a) Friction small and therefore allows a large flow of water.
- (b) Wood is available and cheap in the locality.
- (c) Easy repair.
- (d) Labour in the locality more accustomed to use timber than iron.

Two designs are attached for the flume.

"A" I consider better, but it may be decided that "B" is more suitable for the labour available. A should be more water-tight.

The length of this flume will be approximately 5000 ft. Cost.....

3,000/-

3. FOREBAY.

A small reservoir will be necessary at the top of the pipeline to give a constant, even pipe supply and also to allow the regulating of the overflow and trapping wheel. This

should consist of a tank approximately 10' square and 4' deep, either in concrete or masonry, with grille and overflow bed. There is sufficient room for this tank if a small amount of excavation is carried out, and besides, the top of the pipeline is sound, being solid rock. Cost..... 600/-

4. OVERFLOW TUNNEL.

Surplus was of this will be taken down from the forebay and allowed to fall over by a nullah into the kuhl below. Clear of the power house and tailrace..... 400/-

5. PIPELINE.

This will be approximately 120' long including bins, depending on the exact ^{posi} condition of the power house and reservoir. The line will require supports and an anchor at the power house. The size of the pipe will be specified by the machine contractors, probably about 6". Cost including erection and supports. 1500/-

6. POWER HOUSE.

A suitable size power house should be 30 x 20, which will allow of a quarter 10 x 10 for the man in charge of the installation and also a store room 10 x 10 for spare parts for tools etc., the actual room for the machinery being 20 x 20, the whole to be constructed say pucca, i.e. masonry up to 3', wood weather boarding up to eaves level, and corrugated iron roof with a wooden ceiling. 1800/-

7. MACHINERY.

As Professor Roerick is purchasing this in America, the type of machinery etc. will be

entirely a matter for the manufacturers, but I suggest that the following is a brief description of the plant required:-

- i. Two 20 Volt direct coupled Turbo generating set, complete with switch-board, automatic governor, etc., suitable for 5 cusecs of water falling through a drop of 80'.

Probable cost including foundations and erection..... 5000/-

8. OVERHEAD LINE.

Approximate length of the overhead line is 2000 feet. Two conductors of No.2 S.W.G. copper will be suitable, i.e. approx: 1200 lbs of copper. Cost erected including insulators, lightening arrestors, etc..... 2400/-

9. INSTALLATION IN HOUSES.

This is a necessity very brief, as it is not entirely known to what use the current will be put. I suggest however that each bungalow will require 15 to 25 light points, 5 fan or heater points, two power points for cookers etc. The cost of this power house including the cost of fans, heaters, etc., but not including the cost of the power plant for cookers etc. which are to be installed..... 2400/-

TOTAL COST..... 17600


Lt. R.E.

Registered

COPY

36

Nr:22/A

From:

Lt.N.Boddington,R.E.
Assistant Executive Engineer,
P.W.D. Hydro Electric Branch.
Jogindernagar (Mandi State)Punjab.

To

Professor .. Roerick,
Naggar

Dated Jogindernagar, the 13th July 1929

Sir,

I have the honour to forward herewith a complete report and drawings for the installation, which I was requested through Col.B.C.Battye, R.E., to inspect and give advice on.

I hope I have completed the work satisfactorily.

I have the honour to be,

Sir,

Your most obedient servant

(signed : N.Boddington)

Lt.R.E.

37

REPORT ON PROPOSED HYDRO-ELECTRIC SCHEME AT PROFESSOR
ROERICK'S ESTATE AT NAGAR, KULU.
.....

1. GENERAL

(a) Power Available.

As will be seen from the attached survey, the head available is 60', and the river has, on the date of my visit on July the 6th considerably more than 5 cusecs, which in view of the fact that the water will be returned to the kuhl next below the headworks, there would appear to be no difficulty in arranging with the local civil S.D.O. and zemindars for up to 5 cusecs to be taken. This will leave sufficient water available for any requirements in the short distance approx: of 1000 feet between the point that the water is taken out and where it is returned to the river or kuhl. Assuming therefore that 5 cusecs are taken, the power available is 18 KW allowing an average efficiency of .68 .

(b) Plan Attached

The plan is on a small scale, but is sufficiently accurate to indicate a general idea of the work and also the cost and approximate length of the flume, the position of the power house and headworks.

(c) Levels.

Levels have been accurately taken and are marked on the plan. An imaginary level of 5500 above sea level having been taken on a peg on the level of the lower Hatchery area, where the power house will stand.

(d) Course of the Flume.

The flume has been taken at a grade of approx: .36% and as far as possible across waste land, except in one place, where in order to avoid a very difficult cutting, it is taken round the edge of the corn-field, which will a long part of this place be supported on trestles approx: 6' from the ground. In many other places the flume will also have to be supported on trestles owing to the precipitous nature of the ground and the necessity for avoiding sharp bends and also in order to keep the grade of the flume constant.

(e) Upkeep

After the plant is put in, it should be possible to obtain the services of an electrician who would also have some knowledge of mechanical and civil work to be responsible for the total upkeep of the whole plant, flume and external and internal wiring. His pay would probably be in the nature of Rs:50/- per month.

(f) Total Cost.

Probable cost of this work will be Rs:17600/-. An allowance of Rs:5000/- has been made for plant. As the material is to be purchased by Professor Roerick in America, I am unable to give very accurate details as to cost. The above cost does not include supervision for which add approx:10-15 per cent.

(signed N.Boddington) 10/7
Lt.R.E.
Assistant Executive Engineer.

DETAILED DRAWINGS ETC, AND PROBABLE COST.

Rs/-

1. HEADWORKS. A small dam should be built across the nullah about 25' long at the top and 13' at the base having a clear section of about 20 Sft or 400 Cft in all, the top being at a level of 5562.5 to force the required water into the flume, which should also be provided with a hand operated gate and gauge, so that the flume supply could be regulated and measured. Cost.....500/-
2. FLUME. A wooden flume supported where required by trestles and at other points by earth or boulder filling. This wooden flume is most suitable for the following reasons:
 - a/ friction small & therefore allows a large flow of water.
 - b/ wood is available and cheap in the locality.
 - c/ easy repair.
 - d/ Labour in the locality more accustomed to use timber than iron.

Two designs are attached for the flume. "A" I consider better, but it may be decided that "B" is more suitable for the labour available. "A" should be more watertight.
The length of this flume will be approximately 1000 ft. Cost.....3,000/-
3. FOREBAY. A small reservoir will be necessary at the top of the pipeline to give a constant, even pipe supply and also to allow the regulating of the overflow and trapping wheel. This should consist of a tank approx: 10' square and 4' deep, either in concrete or masonry, with grille and overflow bed. There is sufficient room for this tank if a small amount of excavation is carried out, and besides the top of the pipeline is sound being solid rock. Cost.....600/-

4. OVERFLOW TUNNEL. Surplus water of this will be taken down from the forebay and allowed to fall over by a nullah into the kuhl below. Clear of the power house and tailrace.....400/-
5. PIPELINE. This will be approximately 120' long, including bins, depending on the exact position of the power house and reservoir. The line will require supports and an anchor at the power house. The size of the pipe will be specified by the machine contractors, probably about 6". Cost including erection and supports.....1500/-
6. POWER HOUSE. A suitable size power house should be 30x20' which will allow of a quarter 10x10 for the man in charge of the installation and also a store room 10x10 for spare parts for tools, etc., the actual room for the machinery being 20x20, the whole to be constructed say pucca, i.e. masonry up to 3', wood weather boarding up to eaves level, and corrugated iron roof with wooden ceiling. Cost...1800/-
7. MACHINERY. As Professor Roerich is purchasing this in America, the type of machinery etc will be entirely a matter for the manufacturers, but I suggest that the following is a brief description of the plant required:
 - i. One 220 Volt direct coupled Turbo generating set, complete with switchboard, automatic governor, etc., suitable for 5 cusecs of water falling through a drop of 60'.
 Probable cost incl. foundations and erection.....5000/-
8. OVERHEAD LINE. Approximate length of the overhead line is 2000 feet. Two conductors of No.2 S.W.G. copper will be suitable, i.e. approx. 1200 lbs of copper. Cost erected including insulators, lightning arrestors, etc.....2400/-
9. INSTALLATION IN HOUSES. This is a necessity very brief as it is not entirely known to what use the current will be put. I suggest however that each bungalow will require 15 to 25 light points, 5 fan or heater points, two power points for cookers, etc. The cost of this power house including the cost of fans, heaters, etc. but not including the cost of the power plant for cookers, etc. which are to be installed.2400/-

TOTAL COST.....17,600/-

(Signed: N. Boddington)
Lt. R. E.

Naggar,
Kulu
Punjab

July 18 1929

Dear Capt. Boddington,

Many thanks for the report and drawings of the HE Scheme, just received. Before I send it on to NY however, I wanted to ask you whether there isn't a slight misprint in the I.L. of the "Proposed Power House", as this is indicated on the drawing at I.L. 5550.00, but I believe it should be I.L. 5500.00, as otherwise the drop would be but 8.7 feet.

If you authorise me to correct this I will do so, and then send it on to NY.

Hope everything is fine and nice with you - here unfortunately the thick foggy monsoon has started, and we have a hot dampness which is by no means nice.

With all my very best wishes, also to Mrs Boddington,

Yours sincerely

41
No: 28 /A.

Joginder Naggar(Kangra),

Dated 24th July 1929.

From

N.Boddington, Esq: Lt: R.E., A.E.E.,
Sub-Divisional Officer,
P/H Sub-Division.

To

V.Shibayeff, Esq:
Naggar,
KULU.

Dear Mr. Shibayeff,

I regret not having replied before.

Height of Power House
should read 5500.

I regret the error. Please amend.

Yours sincerely,

Page 24/7
Lt: R.E.,
Joginder Naggar.
(K A N G R A)

NAGGAR
Kulu
Punjab

July 25 1929

Dear Capt. Boddington,

I wrote you on the 18th, asking about a misprint on the drawing, where the power house is marked at I.L.5550.0 instead of I.L.5500.0, the being, I believe, correct.

On copying the estimate, I now find that there are two more questions which I want to clear up, before I can send on the estimate and plan to N.Y.

Item Nr.2 of the estimate states that the length of the flume will be approximately 5000 feet, whereas on the map, and also in the report under "General (a)" the length is only estimated at 1000 feet, and this is also what I remember you always spoke of. Shall I correct this?

Item Nr.7 states "Two 20 Volt" (is this 220 V.?) and then "suitable for 5 susecs of water falling through a drop of 80'". But the drop is 60', or is here an extra 20' allowed in case the drop might be increased?

Please excuse me troubling you again with questions, but you will understand that the datae which I have to

-2-

send on to America have to be accurate
and clear to avoid wrong material being
sent.

Hope you are feeling fine. With best
regards to Mrs Boddington and yourself
Yours sincerely

No. 33.
Joginder Naggar.

Dated 31-7-1929.

From

N. Boddington, Lt: R.E., A.E.E.,
Sub-Divisional Officer,
P/H Sub-Division.

To

Mr. V. Shibayeff,
Naggar,
Kulu.

Dear Mr. Shibayeff,

I am extremely sorry that the errors
referred to by you, should have been overlooked
by me.

In both cases your surmise is correct.

Item 2 for 5,000 read 1,000

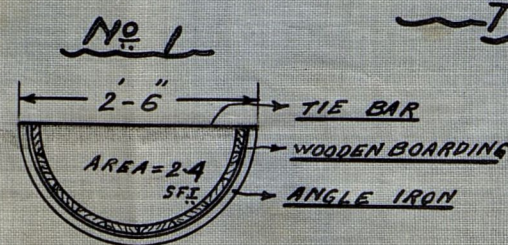
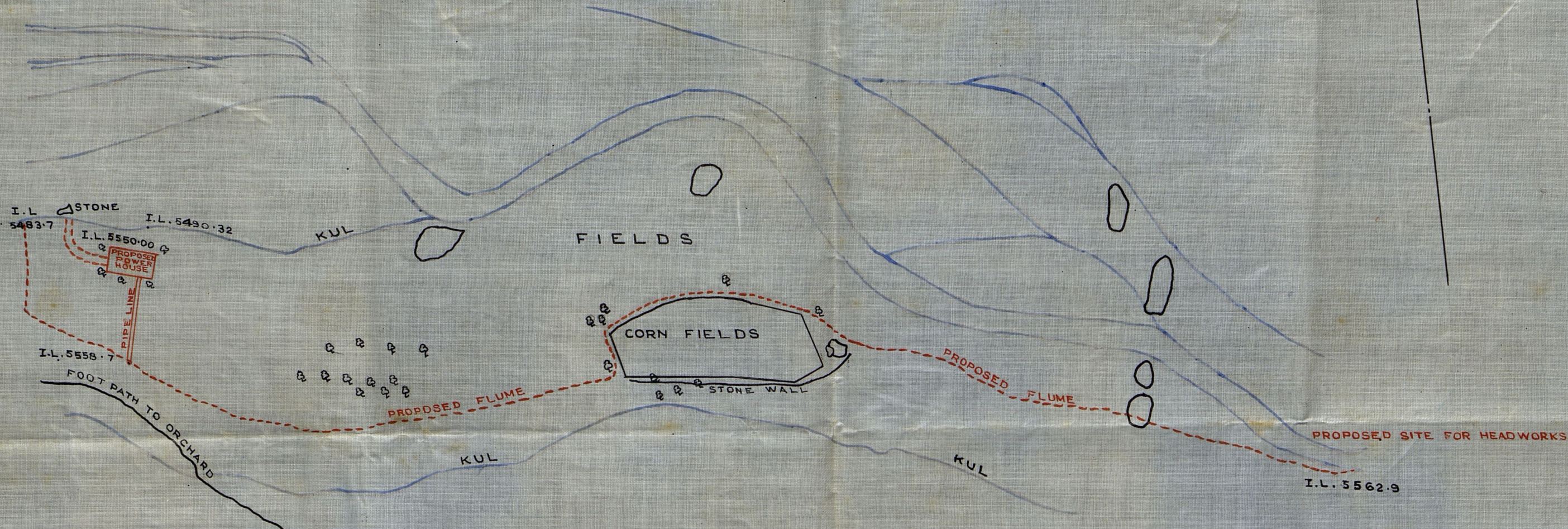
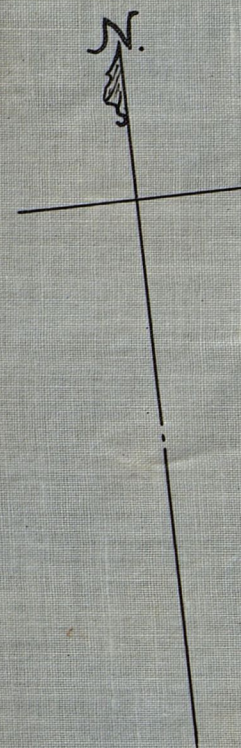
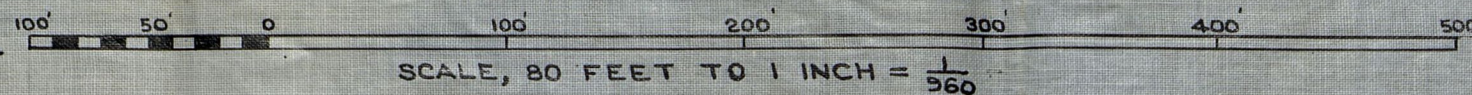
Item 7 for i. Two 20 read One 220.

Yours sincerely,

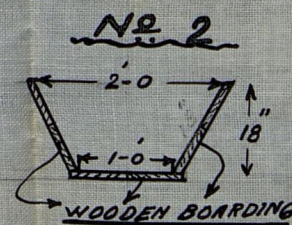
N. Boddington
31/7



NAGGAR H. E. SCHEME (PLAN)



TYPES FOR FLUME No. 1 & 2

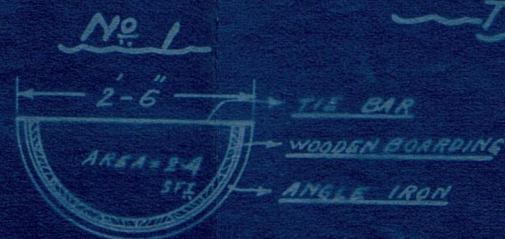


W. Boddington
11/7/29.

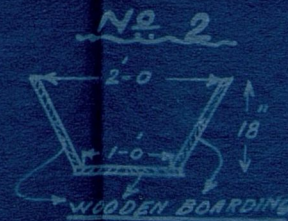
LIEUTENANT R. E.

NAGGAR H. E. SCHEME (PLAN)

100' 50' 0 100' 200' 300' 400' 500'
SCALE, 80 FEET TO 1 INCH = $\frac{1}{560}$



TYPES FOR FLUME
No. 1 & 2



N. Boddington
11/7/29.

LIEUTENANT R. E.

- ✓ 273. Crossley Bros. From Private Sec. re proposed installation and reply to same. 9. September 1931.
- ✓ 274. Mr. Shibayev asks me to enquire about electric installation and gives particulars of requirements. 22.1.32.
- ✓ 275. To Boving & Co. re electric installation 26.1.32. copy to Secretary.
- ✓ 282. Dr. Georges re water rights on Chhaki river. 29.1.32.
- 284. To Sec. to Govt. (Electricity) re water rights. 4.2.32.
- ✓ 285. To Volkart Bros. re electric plant. 4.2.32. copy to Director.
- ✓ 286. Commercial Manager, Punjab, P.W.D. Hydro Electric Branch No.161 d/ 26.1.32. forwards address of Volkart Bros.
- ✓ 296. Mr. Shibayev sends sketch and particulars of requirements for electric scheme. 16.2.32.
- ✓ 297. To Boving & Co. giving further particulars of our requirements. 20.2.32. Copy to Secretary.
- ✓ 299. Volkart Bros. E.34048. 17.2.32. re Generating set. Copy to Director.
- ✓ 301. Volkart Bros. E.2045/Electrical 22.2.32. copy with enclosures to Dr. Georges.
- 302. Mr. Shibayev suggests two turbines of 40KW better than one of 80KW. 22.2.32.
- 306. Mr. Shibayev asks for detailed estimates for electric plant. 25.2.32.
- 309. To Mr. Shibayev re estimate of power required. 2.3.32.
- 314 Callender's Cable & Construction Co. return copies of letters and plan 7.3.32.
- ✓ 315. Copy of sketch of situation of Hall Estate.
- 318. Mr. Shibayev re power required for Laboratory etc. 14.3.32.
- ✓ 325. Secretary U.H.R.I. to Boving & Co. re 80KW. plant. 19.3.32.
- ✓ 341. Asking Callender's Cable co. if information re Hydro-Electric Machinery has been received. 15.4.32. copy to Director.
- ✓ 364. To Callender's Cable Co. asking them to expedite reply. 22.4.32.
- 422. Asks S.D.O. Kulu where I can obtain Map of Chaki Nullah. 22.7.32.
- ✓ 425. S.D.O. Kulu replies to my 422. re map of Chaki Nullah. 24.7.32.
- ✓ 430. Asks Boving & Co. if Manager will visit Naggar in Oct. 29.8.32. Copy to Director.
- ✓ 433. Reminder to Boving & Co. re my No.430-L. 21.9.32.
- ✓ 434. Boving & Co. 7/27 d/ 28.9.32. reply to my 430-L stating letter is being forwarded to Mr. Webb who will reply direct. copy sent to Sec.
- ✓ 436. Mr. Shibayev states Volkart Bros wish to give quotation for electric plant on receipt of certain particulars. 17.10.32.
- ✓ 442. Mr. EN. Webb. No.7/27 ENW. d/1.11.32. states he hopes to be free to visit Kulu after 16th Nov. Copy to Sec. on 6.11.32.

11000

2100

Small Cane

12000

2200

Area 6000. 7620.

1300

2300

Spring 6060 7560

1400

2400

End 5420 6980

1500 - 5430

2500

1600

2600

1700

1800

1900

2000 - 5440

5400 5390 }
7060 }

6960 - 5380

796 B.F. Chen

7020 5430

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NAGGAR
Kulu
Punjab

A ug 21 1929

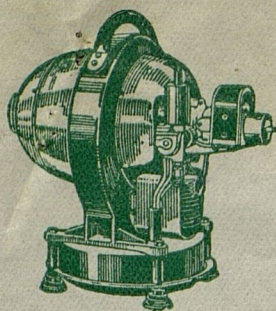
Messrs Stewart, Raeburn & Co.
Lewis Street.
Rangoon.

Dear Sirs,

With reference to your advert in the Rangoon Times, concerning the "Homelite" Portable Electric Light and Power plant, I should be very glad to have complete details and illustrated catalogue about, as well as particulars as to the price of the set.

In case there is a representative for Punjab (or Northern India), I shall be obliged if you could kindly give me his address.

Thanking you in anticipation
Yours very truly



"HOMELITE"
THE PORTABLE ELECTRIC LIGHT
AND POWER PLANT.

STEWART, RAEBURN & CO.,

ELECTRICAL & GENERAL ENGINEERS
AND
CONTRACTORS.

CODE: BENTLEY'S.
TELEGRAPHIC ADDRESS:
"LIGHTING," RANGOON.

TELEPHONE 546.

PARTNERS:

G. O. STEWART,
H. W. HOWATT,
E. J. TAYLOR.

POST BOX No. 234.
57, LEWIS STREET.

RANGOON, 30th August 1929

Mr. V. Shibayeff,
C/o Hall Estate Orchards,
Naggar, Kulu,
PUNJAB

Dear Sir,

Replying to your letter of 21st August, we
enclose herewith illustrated list giving full particulars of
the HOMELITE Portable Electric Light and Power Plant.

We are Agents for this Plant throughout India.

The price is Rs. 525/-/- packed free and delivered
F.O.B. Rangoon.

We are in a position to give immediate delivery
from stock and have every confidence in recommending this Plant
as the most efficient (really portable) small Electric Lighting
Set.

We shall be pleased to execute your orders.

Yours faithfully,

Stewart Raeburn

HWH/KS

STEWART, RAEBURN & CO.
ELECTRICAL ENGINEERS
AND
CONTRACTORS.

Post Box No. 234.

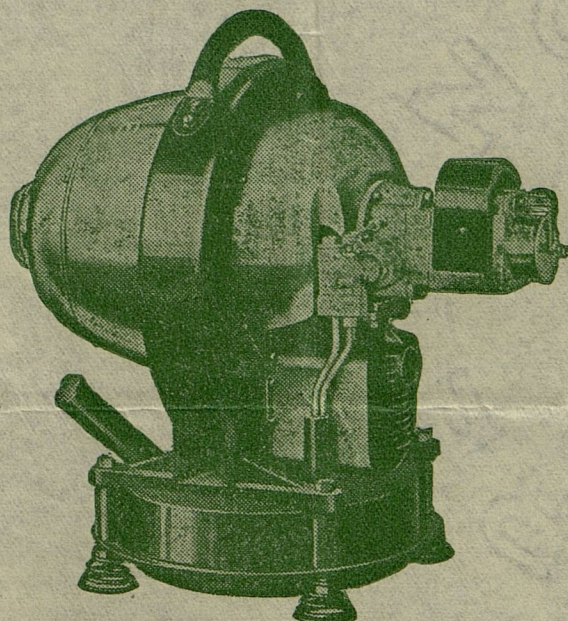
71, LEWIS STREET,
RANGOON.

CODE USED:
BENTLEY'S
TELEGRAPHIC ADDRESS:
"LIGHTING," RANGOON.
TELEPHONE 546.

PARTNERS.
G. O. STEWART,
H. W. HOWATT,
E. J. TAYLOR.

WE ARE SOLE AGENTS IN BURMA FOR
HOMELITE PORTABLE ELECTRIC
LIGHT & POWER PLANT

ELECTRICITY ANYWHERE.



The HOMELITE is now being used to supply
Light & Power to the following:—

HOMES
PAGODAS
PWES
CAMPS
CHURCHES
FESTIVALS
LAUNCHES
WORKSHOPS

PICTURE HOUSES
MOTOR CAR BATTERIES
PORTABLE DRILLS
NIGHT FISHING
SEARCH LIGHTS
THEATRES
GARAGES
Etc., Etc.,

EQUALLY SUITABLE FOR TEMPORARY
AS WELL AS PERMANENT LIGHTING,

And the Price is Low

A SAFE, RELIABLE & EFFICIENT
GENERATING SET

DIMENSIONS 22" x 15" x 22"

WEIGHT 100 LBS.

TEN IMPORTANT POINTS.

1. THE **HOMELITE** IS A COMPACTLY BUILT SELF-CONTAINED UNIT.
2. GUARANTEED CAPACITY 600 WATTS AT 110 VOLTS.
3. THE ENGINE IS A SINGLE CYLINDER TWO CYCLE TYPE, MAGNETO IGNITION, AIR COOLED WITH FLEXIBLE EXHAUST PIPE.
4. FUEL TANK CAPACITY—ONE GALLON SUFFICIENT FOR 6 HOURS RUNNING ON FULL LOAD.
5. THE GENERATOR IS MOUNTED ON BALL BEARINGS & IS OF HIGHLY EFFICIENT CONSTRUCTION.
6. DOES NOT REQUIRE ANY FOUNDATION OR FOUNDATION BOLTS.
7. THE PLANT RESTS ON FOUR SPRINGS WHICH ABSORB VIBRATION.
8. NO SWITCH BOARD REQUIRED.
9. NO SKILLED ATTENTION NEEDED.
10. THE EASIEST OF ALL ENGINES TO START, NO CRANKING—MERELY PULL A CORD.

NAGGAR
Kulu
Punjab

Sep 2 1929

Messrs Patel & Son,
Y.M.C.A. Building
The Mall
Lahore.

Dear Sirs,

I have been recommended your firm by Mr. H.L. Phailbus, Asst. Comm. of this district, who told me that you are the Agent for the Punjab for a "HOMELITE" electric portable generating set, which is very simple, light, cheap and easy to handle, and can give light for a small bungalow, etc.

I am very much interested in particulars about this, also as regards cost of upkeep, voltage, etc. etc. and request you to kindly send me a detailed catalogue with price list. Also please let me know whether I can obtain fittings, switches, wiring and unsulation-tubes from you, as well as table lamps and small opal hanging shades, and please send, if possible a catalogue of these.

I wonder what the portable lighting set is run on, whether it will run long (how many hours non-stop in succession) and whether it is not very noisy.

Thanking you in anticipation of most detailed particulars,

Yours very truly

Is the electric lighting set not dangerous, and is there any guarantee with it?

Telegraphic Address :
"Patelsons," Lahore

Educational Pictures Corporation

50

Managing Director :
Dr. K. B. Patel.

(A DIVISION OF PATEL & SONS)

Technical Director :
D. K. Patel.

Graduate in Motion Pictures N. Y. Institute
of Photography New York U. S. A.

Codes : BENTLEY'S
A. B. C. 5th & 6th EDITIONS

PRODUCERS, DISTRIBUTORS
AND
DEALERS OF



And Film Slides on all Educational
Subjects, Health, Hygiene and
Child Welfare.

Safety Portable Cinema Projectors

Epidiascopes and Film-Slides
Projectors

Portable Electric Light and
Power Plant

Educational and Anatomical
Models, Charts and Pictures

Steam and Electrical
Educational Novelties
for Children

Suppliers of all kinds of Articles
for the promotion of " Education
by Visualization "

SOLE AGENTS OF

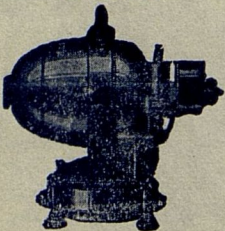
Safety Projector Co.,
Inc., U. S. A.

Zenith Portable Cinema
Projectors

De Vry Standard Automatic
Cinema Film Camera

EPIDIASCOPE

Homelite Corporation
U. S. A.



HOMELITE

THE PORTABLE ELECTRIC LIGHT
AND POWER PLANT

Bruno Knittel, Germany
Portable and Travelling Cinema

Educational Films and Film-Slides
Rented and Sold

Our Illustrated Catalogue will
be gladly supplied on
simply asking for it.

Ref. No 252 C/3046

The Mall,

LAHORE, September 6th 29 19
(INDIA)

To,
V. Shibayeff Esquire,
Naggar.
Kulu.
Punjab.

Dear Sir,

We acknowledge receipt of your valued enquiry re.
Homelite Electric Generating Plant, and take the pleasure
in enclosing under separate cover our illustrative leaf-
lets on the same. You will very kindly find that the
Homelite generators are the lightest portable plants of
extremely sound constructions, and are numerous in use
with very high reputation.

The Homelite Plant can work on Petrol and Kerosine
oil alike, and one gallon of fuel will last for full five
hours. The plant can continuously run till it has fuel in
it, if the fuel supply is kept regular it can run at a
stretch for any length of time. The plant is self lubri-
cating, and the lubricating oil is mixed with the fuel
oil. The plant weighs hardly 100 lbs, and is very handy
and compact. Besides giving you light for the Banglow
it can serve you so many other purposes, as would be read
by you from the enclosed leaflets.

For the economy sake we would request you to go in
for the plant with batteries, that will facilitate the
working, and absolutely minimise the working cost, besides
being more convenient. For with this arrangement you will
get the light from the circuit as you get the light from
the street current, without working the engine at the
time. This way you can use only one light if required or
more and the consumption will be relative.

The plant is not very noisy, for it is to be kept
off the Banglow, and the mufflers can be used to deaden
the noise even if it is desired to keep the same in the
room.

The plant is absolutely safe, and can be entrusted
for the working of the same to ordinary house bearers. It
does not require any attention, and is most reliable plant. We

ONE PICTURE IS WORTH TEN THOUSAND WORDS.

require

hold out a guarantee of superior workmanship for the period of one year.

The foreign testimonials are also being sent for the favour of your perusals. We have got excellent reference in India also, where ever the plant has been supplied. For your information sake we may add the name of Rev. Paul A. Miller, American Mission, Lyallpur who purchased a plant about two years ago for lightening his bungalow, and is using the same with kerosene oil to his perfect satisfaction.

The price of the plant is Rs 700/- ex Lahore, without batteries, the price of the batteries can be quoted on request. The Homelite plant is of 110 Voltage and the fittings are universal. We can make local purchase for you fitting of the wiring etc at the lowest cost possible.

If you donot mind to possess a heavier plant, then we can offer you a plant of 32 Volt 850 watts at Rs 700/- Ex. Lahore.

Awaiting the favour of your esteemed orders.

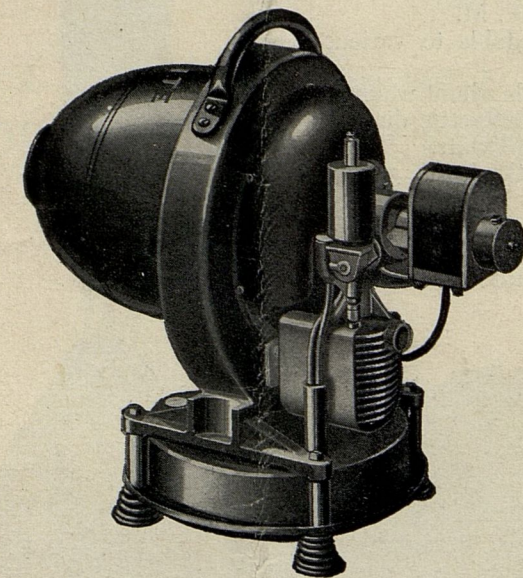
We remain, Dear Sir,

Yours faithfully,

For EDUCATIONAL PICTURES CORPORATION

KCB.

TECHNICAL DIRECTOR.



HOMELITE

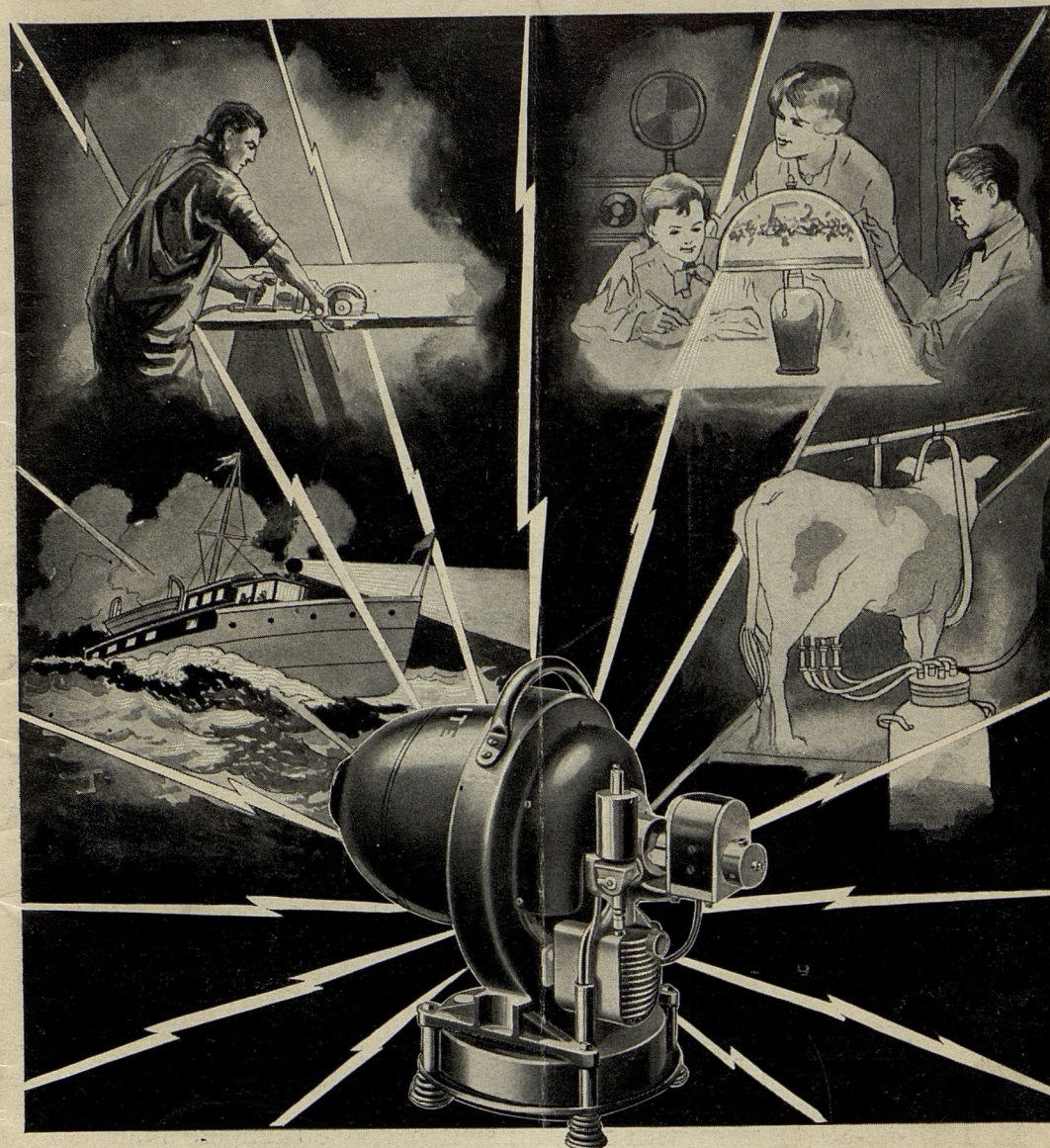
*Portable Electric Light
and Power Plant*

32 or 110 Volts

600 Watts Direct Current

HOMELITE CORPORATION
PORT CHESTER NEW YORK

*Distributors,
PATEL & SONS
Lahore & Karachi.*



HOMELITE

Electric Light and Power Anywhere You Want It.



DO IT WITH ELECTRICITY

FOR THOUSANDS OF YEARS it has been accepted as inevitable that "men must work and women must weep," but the last quarter century has brought a startling liberation from these chains. Electricity is the willing slave that has lifted the harder burdens from the shoulders of men and has ended much of the drudgery which women suffered.

Electricity's benefits and comforts can hardly be listed—they are innumerable. It is undoubtedly the greatest blessing that mankind has ever received.

But the untold advantages of electricity have hitherto been restricted by certain limits of supply sources and transmission. Often electricity has not been available where most needed.

HOMELITE has changed all that. It has given brilliant light and sturdy power to the most remote farms, to tropical jungles and deserts, to Arctic wastes, and to workers everywhere.

You can use electric tools, appliances and apparatus, enjoy the comfort and convenience of electric light, and know the infinite relief of "doing it with electricity" at trifling cost—ANYWHERE that you want it.

WHAT IS HOMELITE?

HOMELITE is a self-contained electric generating unit—which means an engine and a dynamo combined in one case. The engine operates on gasoline, kerosene or other fuel and turns the dynamo which makes electric current.

The engine part is of unique design and construction—the most efficient, dependable and economical ever known. It is simplicity itself—only six moving parts. Hundreds of plants have been in operation for years without a repair or replacement part. No HOMELITE has ever worn out.

The dynamo or generating part is also wonderfully efficient, furnishing an output of 600 watts or more. The Bosch magneto and control devices are marvels of ingenuity and sturdy reliability—proved by years of practical use.

HOMELITE is made in types for use with or without batteries and to furnish electricity at 32 or 110 volts, depending upon the purpose for which it is to be employed.

HOMELITE needs no foundation—just set it down wherever you want to use it, and it will run as usual. Being air-cooled there is no trouble with water or freezing.

HOMELITE is really portable, weighs only 110 pounds, can be carried short distances by hand or longer distances in any light car, buggy or canoe.

So simple that any one can operate it, so dependable that it is used where failure would mean disaster, so economical that it runs five hours on a gallon of gasoline, and so efficient that it is used literally all over the world, HOMELITE stands supreme in its field.



HOMELITE ..in the Home

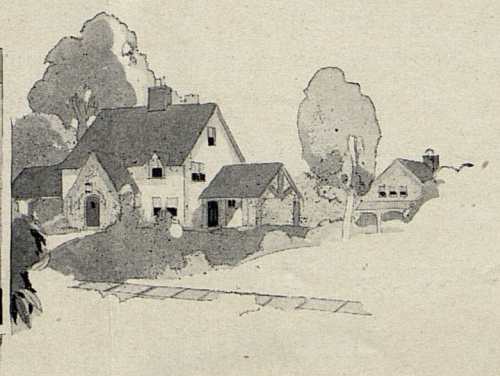
ENDING drudgery forever, and making the home more cheerful, pleasant and attractive, HOMELITE has been a priceless boon to thousands of women.

This tireless helper provides running water, runs the vacuum cleaner, sewing machine, washing machine, electric iron and many other appliances which eliminate back-breaking toil.

Moreover, it permits enjoyment of the comforts and conveniences which make the city woman's lot seem so enviable—the electric toaster, grill and percolator—the big electric fan for hot days in the kitchen.

But probably the greatest blessing is electric light—ample and reliable—instantly available—safe and clean. No more fussing with smelly lamps and lanterns.

Making the home more attractive keeps the young folks on the farm—not the least of the benefits that HOMELITE brings.



HOMELITE ..on the Farm

ELECTRICITY is undoubtedly the greatest saver of labor, time, and trouble that the farmer has ever known.

A HOMELITE plant is easily equivalent to an additional hired man at a mere fraction of the cost—to say nothing of the difficulty of getting good help. HOMELITE is always on the job, day and night.

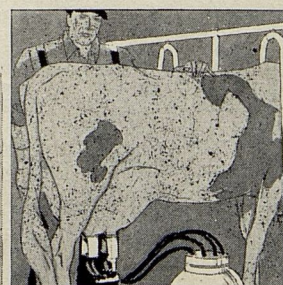
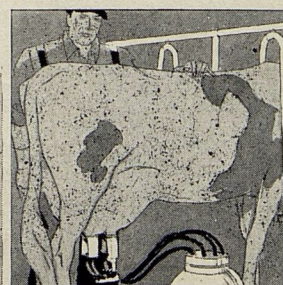
As a source of electric power, it will operate cream separator, churn, milker, water supply and shop tools such as grinders, lathes and many others—any electric machinery up to $\frac{1}{2}$ horse power.

Being portable, it may be carried to the orchard for spraying, to back pastures for sheep shearing and so on.

Best of all, it supplies floods of safe, brilliant electric light—permanently in house, barn and yard, temporarily wherever needed in emergencies.

TEMPORARY USES

Sick horse or cow in back pasture at night. Shearing sheep down by the brook. Lights in the maple sugar "bush" and shed. Light saw in the winter "wood-lot" scene.



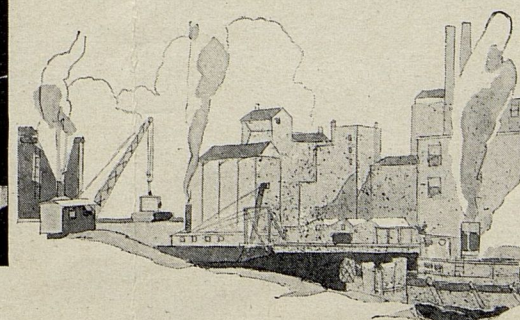
HOMELITE ..in Industry

IN THESE days of labor problems and ever increasing costs, HOMELITE has found widespread employment in industry. Wherever electric light and power are needed, HOMELITE stands ready.

The big railroads have HOMELITE plants on their wrecking cars for emergency use. Their construction gangs use them for night work. The telegraph and telephone companies supply them to their construction men. Road builders use them. Even the "emergency" wagons of the big electric light companies in large cities carry HOMELITES.

Builders find HOMELITE a great labor and time saver, as it permits the use of electric drills, saws, surfacers, paint and stucco sprayers, and other apparatus at points where electric power is not otherwise available—also for light on night jobs. Being portable by hand and requiring no batteries, it is ideal for such jobs.

New uses for HOMELITE in the industrial field are continually being discovered.



HOMELITE ..on the Water

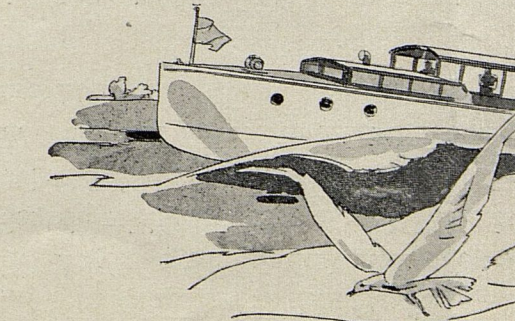
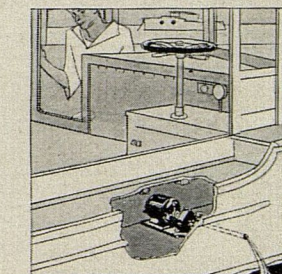
FOR MARINE use, an electric generating plant must have special qualifications. The standard HOMELITE plant meets these requirements superlatively.

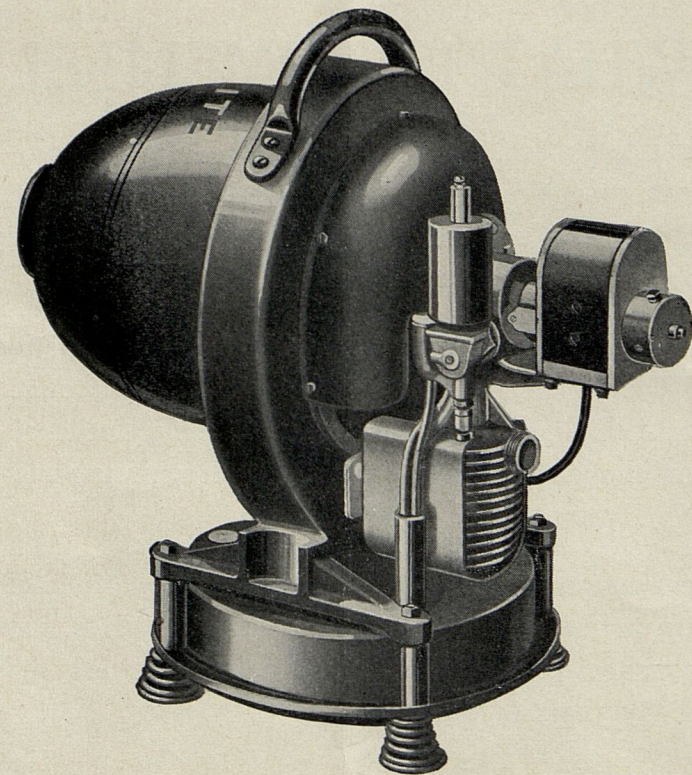
It is absolutely dependable, as evidenced by its ever increasing installation on commercial fishing boats where it must function perfectly amid the trying conditions of North Atlantic winter storms.

It is by far the most compact and efficient plant of its capacity, occupying no more space than a bushel basket and requiring no foundation.

It has proved absolutely safe in years of operation, is economical and simple.

For cabin, side and running lights, for operating electrical appliances, refrigeration, electric windlass, sail hoist, bilge pump, charging radio or engine, starting batteries, for powerful searchlight and many other purposes, HOMELITE is ideal. It is standard equipment on many modern boats and matchless for all craft up to 70 feet.





TYPE D
32 or 110 Volts

Starts with the pull of a cord

Completely self-contained. Used anywhere that portable light and power are desired. It will light 24-25 watt lights continuously or operate household appliances or machinery up to and including $\frac{1}{2}$ horse power. It is equipped with a water and dust-proof housing and Bosch high-tension magneto.

GENERATOR SPECIFICATIONS

Engine: Single cylinder, air-cooled.
Ball bearing throughout.
High tension Bosch magneto.
1700 R. P. M.

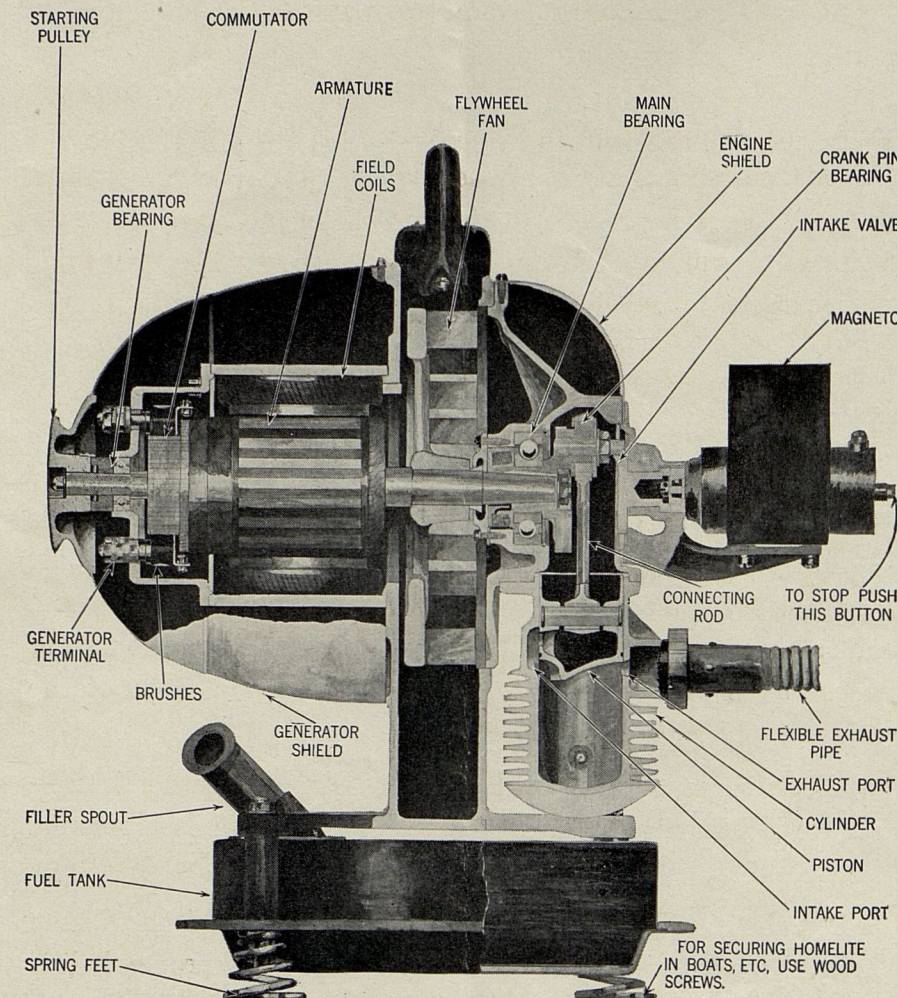
Carburetor: Adjustable to various types of fuel.

Voltages: 32 or 100 volts.

Generator: Six pole, shunt-wound.
Output, 600 watts, direct current.

Control: Automatic electric governor.

Length: 21 inches.
Height: 21 inches.
Width: 14 inches.
Weight: 110 pounds.



A Look at the Inside of HOMELITE

Note the extreme simplicity and small number of moving parts—no cam-shafts, no poppet valves, no belts or gears. Lubrication oil is mixed with the fuel—you can't forget to oil some important part. Being air-cooled, no water troubles, no danger of freezing. No foundation needed—set it anywhere.

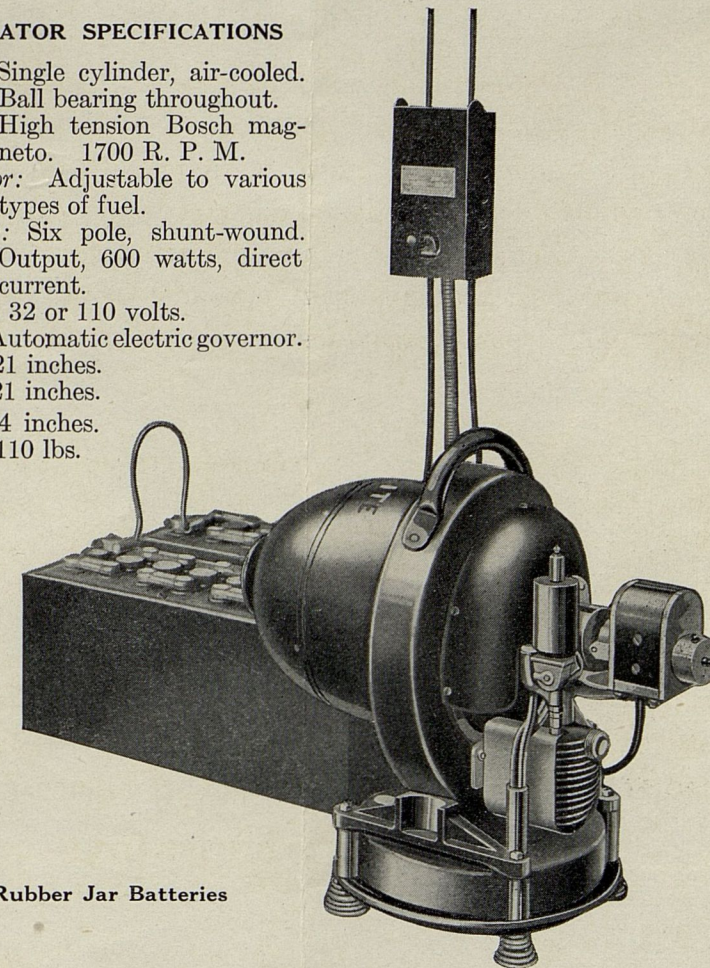
GENERATOR SPECIFICATIONS

Engine: Single cylinder, air-cooled.
Ball bearing throughout.
High tension Bosch magneto.
1700 R. P. M.

Carburetor: Adjustable to various types of fuel.

Generator: Six pole, shunt-wound.
Output, 600 watts, direct current.

Voltages: 32 or 110 volts.
Control: Automatic electric governor.
Length: 21 inches.
Height: 21 inches.
Width: 14 inches.
Weight: 110 lbs.



Rubber Jar Batteries

TYPES DSR-32-80, DSR-32-116 and DSR-32-168

Push a button to start or stop—or stops when fuel tank is empty

DSR-32-80, 32 volt, with starting switch and 80 ampere hour, RUBBER JAR batteries, 3100 watt hours capacity. It will light 35-25 watt lights or operate machinery up to $\frac{1}{2}$ horse power.

DSR-32-116, 32 volt, with starting switch and 116 ampere hour, RUBBER JAR batteries, 4300 watt hours capacity. It will light 45-25 watt lights or operate machinery up to $\frac{1}{2}$ horse power.

DSR-32-168, 32 volt, with starting switch and 168 ampere hour, RUBBER JAR batteries, 6000 watt hours capacity. It will light 55-25 watt lights or operate machinery up to $\frac{3}{4}$ horse power.

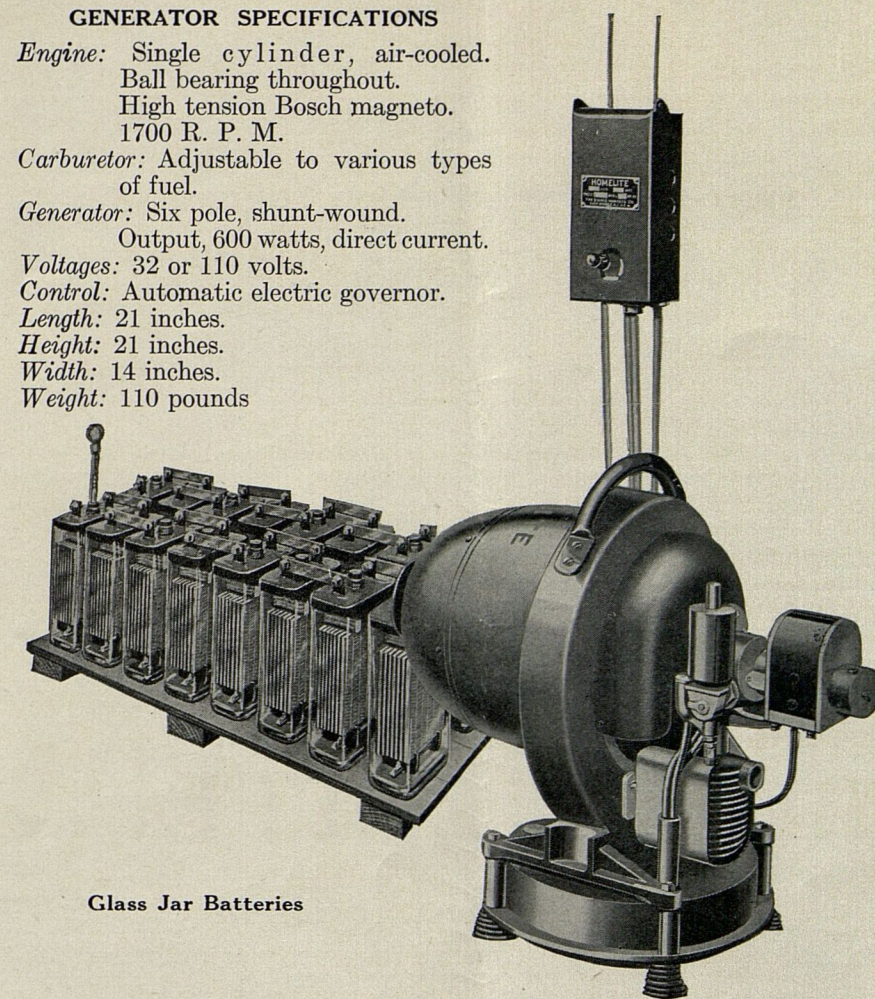
GENERATOR SPECIFICATIONS

Engine: Single cylinder, air-cooled.
Ball bearing throughout.
High tension Bosch magneto.
1700 R. P. M.

Carburetor: Adjustable to various types of fuel.

Generator: Six pole, shunt-wound.
Output, 600 watts, direct current.

Voltages: 32 or 110 volts.
Control: Automatic electric governor.
Length: 21 inches.
Height: 21 inches.
Width: 14 inches.
Weight: 110 pounds



Glass Jar Batteries

TYPES DSG-32-80, DSG-32-116, and DSG-32-200

Push a button to start or stop—or stops when fuel tank is empty

DSG-32-80, 32 volt, with starting switch and 80 ampere hour, 16-cell GLASS JAR batteries, 3100 watt hours capacity. It will light 35-25 watt lights or operate machinery up to $\frac{1}{2}$ horse power.

DSG-32-116, 32 volt, with starting switch and 116 ampere hour, 16-cell GLASS JAR batteries, 4300 watt hours capacity. It will light 45-25 watt lights or operate machinery up to $\frac{1}{2}$ horse power.

DSG-32-200, 32 volt, with starting switch and 200 ampere hour, 16-cell GLASS JAR batteries, 7000 watt hours capacity. It will light 65-25 watt lights or operate machinery up to $\frac{3}{4}$ horse power.

General Instructions

HOMELITE Operates With or Without Battery

FOR ALL PERMANENT installations, such as for house lighting and power, we strongly advise the use of storage batteries in connection with HOMELITE. It is true that storage batteries require some attention and leave much to be desired in efficiency, but their advantages far outweigh their faults. To start up your generating plant every time you want a light is highly extravagant, wasteful and foolish. The output of HOMELITE is 600 watts. The ordinary electric light bulb consumes about 40 watts. When you start up your plant in the night to run one light for a few minutes, you are wasting the other 560 watts. It is like hitching up fifteen horses to a buggy that one horse can handle easily just to go across the road!

A storage battery is a reservoir of electric power. HOMELITE fills it full—*charges* it—in a few hours. How often you need to charge your battery depends on how much you take out. If you use three or four 40 watt lamps for four or five hours an evening, you would only need to charge the battery about twice a week. And when you want a light quickly in the middle of the night, it is there instantly without waiting for the plant to get started—which might take several minutes in cold weather.

When you are using a number of appliances or electric machinery, the battery will need charging oftener. Or you can start the HOMELITE when using a heavy current and let any excess current go into charging instead of being wasted.

It is equally wasteful and extravagant to operate a plant of larger capacity than is needed. When a 600 watt HOMELITE will keep your batteries charged, a 1500 watt plant would be

foolish. It is like pumping into a reservoir—it is better to use a small pump and operate it more often than to invest in a giant pump which is not needed.

Anyone who has experience with automobile or radio batteries knows the advantages of batteries. Full directions for charging and care are furnished.

The unique advantage of HOMELITE is that it can also be used without batteries. Simply disconnect it from the battery and take it wherever it is needed to operate machinery, tools or emergency lights.

Fuel

HOMELITE will operate with gasoline or the cheaper kerosene and furnace oil. When using the heavier fuels, it is necessary to start on gasoline—much as one “primes” an automobile engine when starting in cold weather. Simply inject a little gasoline from a hand oil can into the air choke on the carburetor. After the engine is warm, it will run on the lower cost fuels.

Lubrication

All engine parts are lubricated by oil mixed with the fuel. Full directions are furnished. About once a month, a few drops of oil should be put in the oil hole in the starting pulley. As the entire main shaft runs on ball bearings, friction is reduced to a minimum and there is no trouble with lubrication if fuel directions are followed.

There are no valves to grind and carbon is easily removed if it should become necessary.

Starting

When connected with battery, as in a permanent installation, push choke all the way in and press starting button on switch box.

When operating without battery, push in the choke, wrap starting rope around pulley and give the rope a straight quick pull.

In either case, if the HOMELITE does not start at once, repeat the operation after injecting a few drops of gasoline into the choke body. Pull out the choke as soon as the engine warms up—same as an automobile.

Adjusting Carburetor

The carburetor requires adjustment to suit the type of fuel used and local conditions of heat, cold, moisture, etc. This takes but a minute, turning a small knob after the engine has warmed up to normal running temperature.

Stopping

To stop the HOMELITE, press “stop button” at front of magneto until the engine stops.

Operating HOMELITE is simplicity itself. Full detailed directions in simple language, with diagrams, are furnished with each plant. It is far simpler than any automobile. And if there should be any trouble, you don't have to “send for a repair man”—just pick up HOMELITE, put it in your car and take it to any garage. No special “service man” needed. Any auto mechanic will understand HOMELITE in a few minutes.

Wiring Installation

Any one who understands the use of ordinary tools can do electric wiring successfully. There is no mystery about it, but it is advisable to learn the general principles before starting. You can get advice and instructions where you buy your wire and fittings.

Exposed wiring, as in barn, outbuildings and yard, is very simple to install. Concealed wiring (between floors and ceiling and inside walls), as in a house, requires considerably more skill, but any good mechanic can do it.

For the average farm or country home installation, the 32 volt model HOMELITE simplifies wiring and avoids complications with fire insurance regulations. Where HOMELITE is to be used mainly without batteries for operating tools, etc., the 110 volt model is usually preferable. In 32 volt wiring make sure that your wire is of ample size. A little extra cost at the start will mean a constant saving in current loss later.

Make a diagram of the premises you wish to wire, showing points where you want lights and outlets for attaching appliances. Take it to any electrical supply dealer and he will advise you what materials you need.

~~~~~

**HOMELITE CORPORATION**  
PORT CHESTER NEW YORK



NAGGAR  
Kulu  
Punjab

Nov 8 1929

The AEG India Electric  
Phoenix Buildings  
Sprott Rd  
Ballard Estate  
Bombay.

Dear Sirs,

With reference to Thacker's Directory, stating that you deal in electrical novelties, I request you to send me your catalogue. I continuously require all sorts of things for electrical repairs, etc. Do you stock:

|                          |                          |
|--------------------------|--------------------------|
| House telephones         | small magneto generators |
| geissler tubes           | " dinamos (6V, 5A)       |
| medical coils            | " screws and nuts        |
| bevel and worm gears     | " spiral steel springs   |
| brass terminals          | " screwdrivers           |
| etc? and at what prices? |                          |

If I am addressing you wrongly in this matter, I shall be much obliged if you would kindly recommend me some stores that could supply the above.

Thanking you in anticipation of your early reply,

Yours very truly



NAGGAR  
Kulu  
Punjab

Nov 8 1929

The Universal Electric Stores  
63 Ezra Street  
Calcutta

Dear Sirs,

Please send me a catalogue of your stock. I continuously require all sorts of things for electrical repairs, etc. Do you  
Stock:

|                         |                          |
|-------------------------|--------------------------|
| house telephones        | small magneto generators |
| geissler tubes          | " dynamos (6V, 5A)       |
| medical coils           | " screws and nuts        |
| miniature lamp fittings | " screwdrivers           |
| bevel & worm gears      | " spiral steel springs   |
| brass terminals         | etc ?                    |
| and at what prices?     |                          |

If I am addressing you wrongly in the matter I shall be much obliged if you would kindly recommend me some stores that could supply the above.

Thanking you in anticipation of your early reply

Yours very truly



NAGGAR  
Kulu  
Punjab

Nov 8 1929

The Economic Electric Trading Co,  
Chakla St  
Cawnpore.

Dear Sirs,

Please send me a catalogue of your stock. I continuously require all sort of things for bell repair, etc, etc. Do you stock: house telephone, small magneto generators, toy dinamos (6 v. 5 amp. required), medical coils, geissler tubes, and small fittings like electric door bell contacts, miniature lamp fittings, small screws and nuts, bevel gears, worm gears, brass terminals, very small screwdrivers? And at what price?

If I am addressing you wrongly, I shall be much obliged if you would kindly recommend me some stores that could supply the above.

Thanking you in anticipation of your early reply

Yours very truly,



NAGGAR  
Kulu  
Punjab  
Br. India

Nov 11 1929

The Economic Electric Ltd.  
10 Fitzroy Square  
LONDON, W.1.

Dear Sirs,

A friend of mine showed me a copy of your old catalogue, and as this catalogue contained just the very things I am constantly in need of, I should be obliged if you would kindly send me your up to-date catalogue (for which I would agree to pay if necessary and if you will let me know the price). Please send it as soon as possible as mail takes a long time from here.

Kindly also let me know whether you have a branch in India, and if so, its address.

Thanking you in anticipation of your early reply

Yours very truly

Registered



WAGGAR  
Kulu  
Punjab

Nov 12 1929

Messrs The V.P. STORES  
Postbox 8939  
CALCUTTA

LONDON, E.C. 4.  
10 ADELPHI GARDENS  
THE POSTOFFICE BUILDING LTD.

AL. 14915  
PUNJAB, INDIA. Please send me  
a mail order form & price list  
WAGGAR

Registered

Thanking you in anticipation



CODES USED:  
A.B.C. 5TH & 6TH ED.  
PRIVATE.

# GIACOMO JUCKER

## ENGINEERS

MUBARAK MANZIL, APOLLO STREET,

BOMBAY.

16/XI/1929

TELEGRAMS:—"JUCKERGI."

TELEPHONE:—23384.

P. O. Box: 11.

In your reply please quote.

M/ ELEC. DEPT.

Mr. A.H. Lee,  
Bundrole Orchards,  
Bandrole P.&T.O.  
Kulu (Punjab)

Dear Sir,

We have to thank you for your valued enquiry dated 11th instant.

Re: Pelton Turbine lighting sets. We can indent pelton wheel lighting sets from Home and we have already some of these working in South India. Enclosed please find an illustrated pamphlet of our Baby Turbines.

To quote for a suitable set we must know the pressure of water available and the head. *and quantity in gallons per second.*

On receipt of the above information we shall be pleased to send our estimate.

In the meanwhile thanking you in anticipation,

Yours truly,

Per pro. Giacomo Jucker

Enc: Pamphlet.

MANAGER.



NAGGAR  
Kulu  
Punjab

Nov 19 1929

Messrs S.L.Varma Electric Co.  
Anarkali, Lahore.

Dear Sirs,

In the middle of October you sent me two dozen Everready 950 cells, which I received quite to my satisfaction.

You also then sent me a small leaflet about Everready torches and cells, which unfortunately contained no prices, and which by the way, I regret to say, I have lost. As I require one or two torches as a Christmas present, I request you to kindly send a another leaflet with PRICES.

I particularly want 2 and 3 cell torches, but I understand they are made in wide and narrow range (with large and small glass) and I am interested in the first kind. I would also prefer all-nickel (not black handle). But please send your pricelist for ALL EVERREADY TORCHES, which you stock, as I may perhaps choose something different.

Thanking you in anticipation of your early reply,

Yours very truly

p.S. I take it from your last account that the cells 950 cost 5 Annas each?



# H. L. ROCHAT & Co.,

MECHANICAL & ELECTRICAL  
ENGINEERS,  
MACHINERY IMPORTERS.

TELEGRAMS: "ROCHAT" BOMBAY.  
CODES: A.B.C. 5TH & 6TH.  
TELEPHONE NO. 20018

AND AT  
135, CANNING STREET,  
CALCUTTA.

NAVSARI BUILDING.

HORNBY ROAD, AND BASTION ROAD,  
BOMBAY, 26th November 1929.

IN YOUR REPLY  
PLEASE REFER TO

L. B. No. 55/99.

## Sole Agents for:-

MIDLAND ELECT. MFG. CO., LTD.  
BIRMINGHAM.  
SWITCHGEAR.

MAWDSLEY'S LIMITED.,  
DURSLEY,  
D. C. MOTORS & GENERATORS.

GEORGE ELLISON.,  
BIRMINGHAM.  
ELECTRIC CONTROL GEAR.

CENTURY ELECTRIC CO.,  
ST. LOUIS.  
SINGLE PHASE A. C. MOTORS.

HARLAND ENGINEERING CO., LD.  
ALLOA & LONDON.  
ELECTL. PLANT TURBINE PUMPS.

F. A. PULLEN & CO.,  
LONDON.  
CENTRIFUGAL PUMPS.

EVERETT EDBCUMBE & CO., LTD.  
LONDON,  
ELECTRICAL INSTRUMENTS.

EDWIN COTTERILL & CO., LTD.  
BIRMINGHAM.  
SAFES, STEEL DOORS, LOCKS.

NORMAND ELECTRICAL CO., LTD.  
LONDON.  
SMALL D. C. & A. C. MOTORS.

UNIVERSAL MOTOR CO.  
GENERATING, PUMPING & MARINE  
ENGINE SETS.

DAVID BROWN & SONS  
(HUDD) LTD.  
HUDDERSFIELD.  
MACHINE CUT GEARING.

PATENT LEATHER &  
STEEL LINK BELTING CO.,  
LONDON.

SCOTT & HODGSON LTD.  
MANCHESTER.  
STEAM TURBINES.

A. H. Lee, Esq.,  
Bundrole Orchards,  
Bandrole P.O.,  
Kulu, Punjab.

Dear Sir,

We beg to acknowledge with thanks receipt of your enquiry of the 11th inst., for an electric lighting outfit to be operated by water power. We can certainly quote you for this and shall be very pleased to do so, but there is no such thing as a standardized complete hydro-electric equipment. It is practically impossible to standardize anything of the kind on account of the enormous variation in the hydraulic conditions. We can, however, quite easily combine a suitable water motor with a suitable dynamo and other equipment if we have necessary information regarding your conditions and requirements.

WATER POWER. The first essential is to know the height of the fall available for developing power. You will understand that the water has to be collected at the upper level and carried in any convenient manner to a point where it can enter a closed pipe. The water motor is fixed at the lower end of the pipe just above the lower outlet. The operating head or height of fall is the difference in level between the point where the water enters the pipe and the level of the outlet. If you can give us this information, we shall be able to get some idea of the type of water motor required.

In some cases where the fall is very low, there is no actual pipe, this being replaced by a masonry pit. Nevertheless, even in that case, the head available for developing power is the same, i.e., the difference in level between the inlet to the closed pit and the outlet.

To



62  
26/11/29.

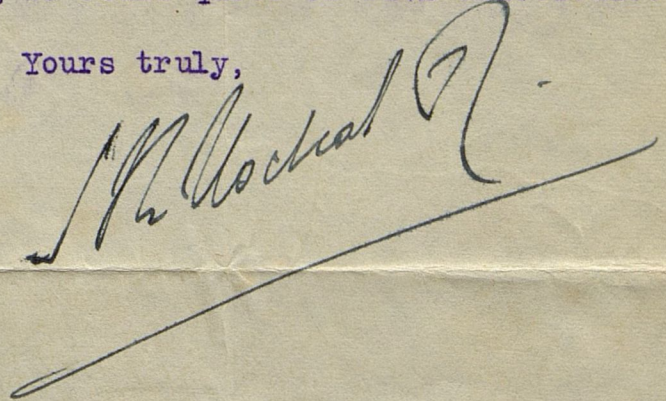
To determine the size of the motor that can be operated, we should require to have some odea of the quantity of water. If you can express this in specified quantity per minute, we can make the calculation accurately. Possibly, this may be difficult. Can you express it by indicating the size of pipe that would carry the stream of water available?

ELECTRICAL EQUIPMENT. Can you give us any indication of your requirements such as the number of lights, fans, if any, and whether you want to use small or large electric heating apparatus.

We quite appreciate that it may be difficult for you to give us all this information explicitly, but we must also ask you to realise that we have not the faintest idea what sort of an installation you have in mind. If you can give us even approximate indications on the above lines, it would at least enable us to put forward a tentative offer which would probably enable you to crystallise your requirements into something we could quote on with exactitude.

Yours truly,

HLR/MSD  
(2)

A handwritten signature in dark ink, appearing to read "M. Chochal", is written over a long, thin horizontal line that spans across the right side of the page.



NAGGAR  
Kulu  
Punjab

Nov 30 1929

Messrs S.L.Varma Electric Co  
Anarkali,  
Lahore.

Dear Sirs,

Thanks for your leaflet about AMERICAN  
EVERREADY TORCHES and their prices.

Please send by VPPOST (well packed in  
WOODEN BOX, as mail is very roughly handled by  
postal runners up hill here)

2 Three Cell Flashlights EVERREADY No:2637, NICKEL  
case, with large glass as illustrated, com-  
plete with cells Rs:6/- each, both Rs:12/-

1 doz. No:950 EVERREADY Unit cells, FRESH, Rs:3/- p.doz.

2 Everready batteries 703, for pocket lamps, about 8 As each.

2 small bulbs for latter, for ordinary pocket lamp fitting,  
but the bulbs should be with milk-glass reflector at  
back.

Please pack everything VERY CAREFULLY.

Thanking you in anticipation of your early delivery

Yours very truly



64

Our cheap rates defy competition in this trade. We guarantee our work. Estimates & quotations free.

Ref. No. ....

# S. L. Varma Electric Co.

Electrical Engineers & Contractors.

Estd. 1910

Direct Importers &  
Large Stockists of  
Electric Fans, Wiring &  
Fitting Accessories.  
Torches & Batteries  
of all makes.

Anarkali St.

LAHORE

10-12-1929

D Sir,

We are in receipt of your Regd. Parcel. We sent the Torches already tested in all respects. It is the mistake of Postal authorities in handling the parcels badly that they broke in the transit.

However we replaced 2 Bunkies & have sent you by Post Parcel. Please acknowledge receipt solely.

Regarding your tools we have mentioned in a separate letter which might have reached you by this time. We again give you address of the firm who can supply those:—

Standard Watch Co

Anarkali Lahore.

You can order them or ask their prices & price lists. Thanking you in anticipation

  
S. L. Varma Electric Co.



# American **EVEREADY** Flashlights



No. 705

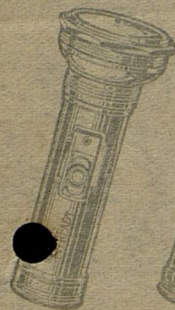


No. 950

*S. L. Varma Electric Co.  
Anarkali, LAHORE.*



No. 705



2634



2631



2633



2632



2671

FOCUSING  
LIGHTS  
200-Foot  
300-Foot  
500-Foot  
Range



2644



2674

*Lahore 14/10/29.*

*I am,  
your letter & order of 11th inst to hand.  
Doppe & Seymour Co has been handed over to us for  
Compliance as we are their sole distributors for  
Panjab. We therefore sent to day to your address  
the following & hope to serve you again in the near  
future.*

*2 dozen cells 950.  
Postage*

*7-8-0*

*1-1-0*

*Rs 8-9-0*

*Thanking you for your this small order &  
awaiting further esteemed commands.*

*S. L. Varma Electric Co.  
Anarkali, LAHORE.*

*2x16  
112  
120  
110  
124  
5*

**EVEREADY FOCUSING FLASHLIGHTS**—the greatest development  
in flashlight design—are focused by a simple turn of the end cap



Telephone No. 25301.  
Telegrams:—"SOLENOID".

Codes:-A, B, C. 6th. Ed.  
& Bentley's,

# THE TRINITY ELECTRIC SYNDICATE.

## ELECTRICAL ENGINEERS & CONTRACTORS.

PRINCESS STREET,

Bombay 17th December 1929



**N. R. KHAMBATI, B. A.**  
A. M. I. E. E.  
Chartered Electrical  
Engineer.

Consulting Engineer and  
Industrial Adviser.

**B. DAS Esq.,**

M.L.A.  
B.E.B.SC. (Glasgow) A.M.I.C.E., A.M.I.E.E.

**AGENTS**  
**RANSOMES SIMS AND**  
**JEFFERIES LTD.**  
(ELECTRIC MOTORS & DYNAMOS)  
**ERICSSON**  
**TELEPHONES LTD.**  
(RADIO SETS)

### STOCKISTS OF

Ericssons  
Telephones and  
Accessories.

Cables and Accessories

Vacuum and Gas filled

Lamps.

Electrical Porcelain  
ware of all kinds.

Insulating Materials  
Ceiling and table fans.

Conduit Pipes and  
Accessories

Ironclad gear.

Switchboard-instruments.

Energy meters

Fittings & fixtures

Ref:— 2226/29.

V. Shibayeff,  
Naggar,  
Kulun,  
Punjab.

Dear Sirs,

We beg to thank you for your letter dated

5th December 1929.

Regarding dynamos we have not got such a  
small dynamo 6 volt 1 ampere. If, however, you will  
write to us your specific requirements we shall be  
glad to quote to you.

As regards house telephones we beg to  
enclose herewith a leaflet of Ericsson's 'Converser  
Set' which we can supply you at Rs. 25/- per set.

We have got lamps <sup>with</sup> miniature cap and fittings  
for the same, but have not got electric novelties and  
toys.

On hearing from you we shall do the  
needful

Yours faithfully.

For THE TRINITY ELECTRIC SYNDICATE.

*N. R. Khambati*



NAGGAR  
Kulu  
Punjab

Dec 21 1929

Messrs S.L.VARMA Electric Co.  
Anakali St.  
Lahore:

Dear Sirs,

Re to your letter of the 10th.  
inst. the two replaced bulbs have been re-  
ceived in good condition.

Please send by VPPOST, Very well  
PACKED IN WOODEN BOX

2 doz. refills No: 950 AMERICAN EVERREADY  
must be guaranteed FRESH STOCK!

1 doz. spare bulbs W.2 Volt for our  
FIVE UNIT flashlight lgches.

Please take good care in packed the glass  
bulbs well that they are not smashed by  
the battery cells or in post.

Thanking you in anticipation of your  
earliest possible delivery,

Yours very truly,



62  
NAGGAR  
Kulu  
Punjab

Dec 28 1929

The Karachi Electric Stores  
Karachi.  
22 Bunder Road.

Dear Sirs,

I thank you for your latest pricelist.  
Please send WELL PACKED IN WOODEN BOX (as mail is  
very roughly handled by postal runners up hill here)

1 Genuine American EVERREADY Flashlight No:2644, nickel  
for three cells, Rs:6/-

1 doz. 950 Unit cells MUST BE PERFECTLY FRESH Rs:2/4

2 RED color & 2 green color ELECTRIC BULBS for the  
SUNLIGHT Tri-COLOR No:4302 Flashlight.

1 coil bell wire 1/20 SWG Holland make 1/14

100 insulating nails 1/-

1 miniature table lamp stand, brass, with or  
without shade, to cost not over 1/4

Please take greatest care in packing carefully, that  
the heavy cells, etc. dont injure and brake the bulbs, etc

Thanking you in anticipation of your early de-  
livery,

Yoursvery truly,



NAGGAR  
Zulu  
Punjab

Dec 28 1929

The EVER READY (INDIA) Co.  
Garstin Place  
Hare Street  
Calcutta.

Dear Sirs,

I am in possession of a pocket fountain pen electric torch and need refill dry cells for same No: 1915.

Please let me know your prices for same (if the price does not exceed Rs:2/8 per dozen please send one doz. of FRESH cells per V.P.POST to above address, well packed as mail is very roughly handled up hill here).

Please also send me your complete catalogue as there are others friends here interested in this pocket lamp. Please also quote price for 1 opal (half milk glass) electric bulbs to fit this lamp, which should be I believe 2.5 Volt.

Thanking you in anticipation of your early reply, yours very truly





J. L. Varma Electric Co.

Anarkali, LAHORE.

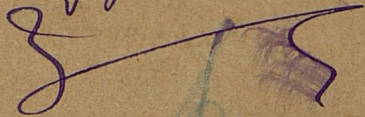
3/1/30

Dear Sir,

Your D. & to hand. We charged you correctly for all items.

The German for Bulbs can be had at cheaper rate than this but the Westinghouse Bulbs are of the best quality & the prices are standard so we cannot reduce the price & are helpless to refund you any amount.

Thanking you.



J. L. Varma Electric Co.

Anarkali, LAHORE,



POST

INDIA



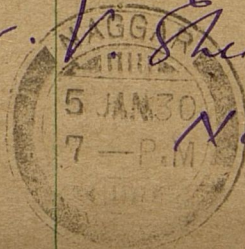
CARD



WRITING SPACE

ADDRESS ONLY

To,  
Mr. V. Shihareff



Nagar  
Kulu

Punjab.

G. L. Sharma Electric Co.  
Anarkali, LAHORE.





TRADE

MARK

'Phone MUSEUM 1055.

Branch : TWICKENHAM.

ECONOMIC ELECTRIC LIMITED,

10, FITZROY SQUARE,

LONDON, W.1.

W. 17715

*Date as Postmark.*

Dear Sir,

We thank you for your enquiry, and are forwarding our latest Catalogue under separate cover as requested. We are not represented in India, but can usually despatch goods by return of mail. Postage at the usual rates prevailing between this Country and India.

Yours faithfully,

ECONOMIC ELECTRIC LIMITED





● POST CARD.

— 0 —

THE ADDRESS TO BE WRITTEN ON THIS SIDE.



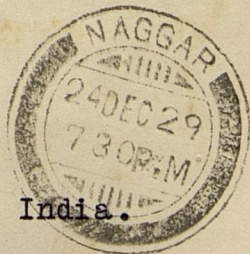
V. Shibayeff, Esq.,

Naggar,

Kulu,

Punjab,

Br. India.





Bill No. 7.

KARACHI,

3rd January 1930.

Your Order 28/12/29

V. Shibayeff

NAGGAR Kulu

Punjab

Dr. to

**P AND R**  
PETO & RADFORD  
**ACCUMULATORS**

The beginning and the end in

**POWER**

**THE KARACHI ELECTRIC STORES,**

82, BUNDER ROAD,

KARACHI.



**"STERLING"**  
ELECTRIC LAMPS  
BRIGHTER LIGHT  
LONGER LIFE.

TERMS V.P.P.

|                                           |      |      |    |    |   |
|-------------------------------------------|------|------|----|----|---|
| 1 EVEREADY Flashlight No. 26 1/4          | 6/-  | Each | 6  | 0  | 0 |
| 12 EVEREADY Unit cells No. 950            | 2/4  | Doz. | 2  | 4  | 0 |
| 2 Red and Green American Flashlight bulbs | 6/-  | "    | 1  | 0  | 0 |
| 100 Yards Bell wire 1/20 S.W.G.           | 1/14 | 100Y | 1  | 14 | 0 |
| 1000 Insulated Staples                    | 1/-  | 100  | 1  | 0  | 0 |
| Postage & Packing                         |      |      | 1  | 12 | 0 |
|                                           |      |      | 13 | 14 | 0 |

RUPEES THIRTEEN & ANNAS FOURTEEN ONLY.

6/-

1.2/-

1/-

8.2/-

5.-

1

6

14.2.-

8.2

6.-

1.-

V.P.

1/2.-

2.-



NAGGAR  
Kulu  
Punjab

Jan 14 1930

Messrs  
The Trinity Electric Syndicate  
Princess Street  
Bombay.

Dear Sirs,

I ordered a telephone set, etc. from you as per copy of my letter of Dec 28th enclosed herewith and although much over a fortnight has passed already, I regret not having heard from you since.

I consequently ~~wrote~~ <sup>wired</sup> you this morning asking when my order of the 28th was executed and hope to have the telephones soon. As it may however have happened that my letter went astray, I am sending you a copy of it herewith. I should also be glad to receive the miniature lamp fittings, if not in form of standing lamp, then perhaps in form of wall bracket fitting. The lamp should take ordinary 2.5 V pocket lamp bulbs.

Awaiting to hear from you

Yours very truly,

P.S. I trust the telephones have been tested for being in good working order. If satisfactory I intend to order more.

Copy of previous letter enclosed.



24  
NAGGAR  
Kulu  
Punjab

Jan 11 1930

Messrs The Karachi Electric Stores,  
Karachi.

Dear Sirs,

We are in receipt of your parcel as per your bill No:7, all safely to hand. Please send as soon as possible by V.P.POST, again WELL PACKED in WOODEN BOX as mail is very roughly handled by postal runner up hill here:

|                                                                      |        |
|----------------------------------------------------------------------|--------|
| 100 Insul. staples $\frac{3}{8}$ "                                   | 3/8/-  |
| 1 Coil Bell wire 1/20 S.W.G. Holland make                            | 1/-/-  |
| 4 German make Bell pushes, No:1 1, Wooden batten type                | 1/14/- |
| 2 lbs Salamoniac for Leclanche cell                                  | -/8/-  |
| 1 Porous Leclanche Pot (complete with mixture and carbon, & terminal | -12/-  |
| 1 Zinc rod for same Leclanche cell                                   | -/12/- |
| 1 doz German No:1 way A Connectors (page 13 of                       | -/4/-  |
| 1 doz. German 2 way "B" Connectors (your catalg                      | -/6/-  |
|                                                                      | -/5/-  |

Please pack carefully. Thanking you in anticipation of your early delivery

Yours very truly,

PLEASE PACK VOLT-AMMETER CAREFULLY AND PLEASE CHECK BEFORE DESPATCH

P.S. Have you American Everready Fountain-Pen-Torch-Light Batteries in stock? And at what price?



Telephone No. 25301.  
Telegrams:-"SOLENOID".

Codes:-A. B. C. 6th. Ed.  
& Bentley's.

# THE TRINITY ELECTRIC SYNDICATE.

## ELECTRICAL ENGINEERS & CONTRACTORS.

PRINCESS STREET,

Bombay, 15th January 1930.



MEMBER

PROPRIETORS.  
N. R. KHAMBATI, B. A.

A. M. I. E. E.  
Chartered Electrical  
Engineer.

Consulting Engineer and  
Industrial Adviser.

B. DAS Esq.,  
M. L. A.

B. E. B. SC. (Glasgow) A. M. I. C. E., A. M. I. E. E.

AGENTS  
RANSOMES SIMS AND  
JEFFERIES LTD.  
(ELECTRIC MOTORS & DYNAMOS  
ERICSSON  
TELEPHONES LTD.  
(RADIO SETS)

### STOCKISTS OF

Ericssons  
Telephones and  
Accessories.

Cables and Accessories  
Vaccum and Gas filled  
Lamps.

Electrical Procelain  
ware of all kinds.

Insulating Materials

Ceiling and table fans.

Conduit Pipes and  
Accessories

Ironclad gear.

Switchboard-instruments.

Energy meters

Fittings & fixtures.

+++++

Ref:- 49/30.

V. Shibayeff Esq.,  
Naggar,  
Kulu,  
Punjab.

Dear Sirs,

We are in due receipt of your letter dated 28th Dec. 1929. and thank you for the order containing in it.

Regarding The Telephone Converser, we regret, we are unfortunately, out of stock of these. But our next consignment carrying these Telephone sets are expected here on 22nd Instant. We had arranged to send these to you they received. As we were expecting the definite instruction regarding the arrival of the next consignment, and as we did not like to write to you with-out being sure of the arrival of these sets, we did not write to you up-till now, In the meanwhile we have received the telegraph from you which is and replied as follows:-

YOUR TELEGHARAM SENDING ONLY TELEPHONE SET BEFORE 23rd.

Thus we conform that we shall be sending you the Telephone set only before the 23rd. inst. We have nothing to offer you against the Table lamp, you have referred to in your letter.

Hoping to excuse for the delay,

Yours faithfully,  
For The Trinity Electric Syndicate,

*N. R. Khambati*  
Manager.



BILL No. 46.

KARACHI, 16th January 1930.

Your Order 11/1/30.

Mr. V. Shibayeff.

NAGGAR.

Kulu, Punjab.

Dr. to

**P AND R**

PETO & RADFORD

**ACCUMULATORS**

*The beginning and the end in*

**POWER**

**THE KARACHI ELECTRIC STORES,**

82, BUNDER ROAD,

KARACHI.



**"STERLING"**  
**ELECTRIC LAMPS**  
BRIGHTER LIGHT  
LONGER LIFE.

TERMS V.P. Parcel.

|                           |                                                |     |      |    |    |   |
|---------------------------|------------------------------------------------|-----|------|----|----|---|
| 1                         | only BEEDE volt & Amp Metter 0-10 v and 0-35 A | 3/8 | Each | 3  | 8  | 0 |
| 100                       | " Insulated Staples 1/4"                       | 1/- | 100  | 1  | 0  | 0 |
| 1                         | Coil Bell wire                                 |     |      | 1  | 14 | 0 |
| 3                         | only Bell Pushes                               |     |      | 0  | 8  | 0 |
| 2                         | Lbs Salmoniac                                  |     |      | 0  | 12 | 0 |
| 1                         | only Porus Pot for Leclanche Cell              |     |      | 1  | 0  | 0 |
| 1                         | only Zinc Rod for Leclanche Cell               |     |      | 0  | 14 | 0 |
| 6                         | only A connectors                              |     |      | 0  | 3  | 0 |
| 6                         | only B "                                       |     |      | 0  | 5  | 0 |
| Cost of Postage & Packing |                                                |     |      | 1  | 14 | 0 |
|                           |                                                |     |      | 11 | 4  | 0 |

RUPEES ELEVEN & ANNAS FOUR ONLY.

E. & O. E.

THE KARACHI ELECTRIC STORES  
*[Signature]*

Note:--

We regret we have not available EVEREADY fountain-pen Flashlight Batteries, just now.



# The Ever-Ready (India) Company

77

Manufacturers of  
the well-known  
"EVER-READY"  
Electric Specialities.

Proprietors, The Ever-Ready Company (Great Britain) Limited; (Incorporated in England).

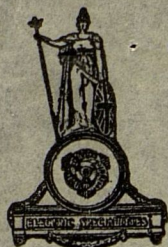
## THE "EVER-READY" WORKS

Telegrams :—"BERIC"

Calcutta.

Telephone :—Cal. 3507

P. O. Box 2170



Sold to

M r. V. Shibayeff,  
Naggar,  
Kulu  
Punjab



GARSTIN PLACE, HARE STREET,  
CALCUTTA.

Order No. P.C. 8/1/30 Date 16/1/30 Per V.P. Inv. No. 9707

2 No. 1915 batteries

@ -/8/-

1 0 0

Packing & Postage

- 5 0

Rs . 1 5 0

1

THE EVER READY (INDIA) CO.

Checked by .....

We are not responsible for damage or breakage after these goods leave our control.



FACTORY:-  
"RAJA COIR WORKS."

# THE GENERAL SUPPLIES AGENCY,

MANUFACTURERS OF COIR MATS, MATTINGS, & WOOLEN DRUGGETS.

(Sole Proprietor:- M. L. Janardana Pillay.)

TELE-GRAMS. "AGENCY."  
PHONE. NO. 88

Awarded Medal of merit at the Exhibition opened in the Senate House, Madras, in 1919 by H. E. Lady Chelmsford.  
Awarded Gold Medal at the Exhibition held by Travancore Government as a preliminary to the  
WEMBLEY Exhibition  
Awarded special Medal of merit at the WEMBLEY EXHIBITION 1924.

CODES USED:-  
A. B. C. 5TH & 6TH EDITION  
BENTLEY'S & PRIVATE.

ALLEPPEY, 18th January 1930

The Manager,  
Hall Estate, Naggar, Kulu,  
(Punjab)

Dear Sir,

Ref. your letter No. DB.790. of  
8th Dec. 1929.

With reference to the above, we had sent you our samples  
of coir mats and mattings on 19th Dec. 1929.

Now it is nearly a month since we sent samples and so  
far, we have received no orders at all.

If the quality of our samples and their prices do not  
appeal to you, please let us know and we shall be glad to send  
you a fresh patterns of samples and their prices, so that you  
may be enabled to place a small trial order in the beginning.

Thanking you in anticipation,

Yours faithfully,

For and on behalf of

THE GENERAL SUPPLIES AGENCY

M. L. Janardana Pillay,  
Proprietor.

2 pieces -  
known as  
grey x reddish



ON GOVERNMENT LISTS

FACTORY:-  
"RAJA COIR WORKS"

MANUFACTURED BY

## EVER READY (INDIA) COMPANY

EVER READY CO. (GREAT BRITAIN) LTD. (INCORPORATED IN ENGLAND.)

Awarded Medals  
At the  
Exposition

CODES USED:-

A. B. C. 5TH & 6TH EDITION  
BENTLEY'S & PRIVATE.

CODE: BENTLEY'S.

TELEGRAMS: "BERIC," CALCUTTA.

TELEPHONE: CALCUTTA 3507.

P. O. Box: 2170.

GARSTIN PLACE,  
HARE STREET,  
CALCUTTA.

January 1930

The Manager  
Hall E.

Dear Sir,

With reference to  
of coir mats andNow it is  
far, we have received

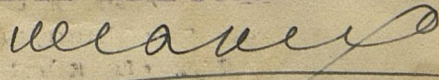
If the quality of samples and their prices do not  
appeal to you, please let us know and we shall be glad to send  
you a fresh patterns of samples and their prices, so that you  
may be enabled to place a small trial order in the beginning.

Thanking you in anticipation,

Yours faithfully,

For and on behalf of

THE GENERAL SUPPLIES AGENCY

  
M. L. Janardana Pillay,  
Proprietor.

2 pieces =

Kumasee

for reddish



80  
NAGGAR  
Kulu  
Punjab

Feb 2 1930

The Trinity Electric Syndicate  
Princess Street  
Bombay.

Dear Sirs,

With reference to my previous correspondence and exchange of wires, concerning one set of ERISCON conversers, about which you told me that they will be despatched by and not later than the 23 of Jan. I much regret that neither received them yet, nor heard any more you as to when I can expect them. Please let me know definitely when I can expect them or please obtain them from other dealers since you have contracted to supply them and I cannot wait any longer.

Awaiting your reply by return  
Yours very truly



NAGGAR  
Kulu  
Punjab

Messrs The Karachi  
Electric Stores.  
Karachi

Feb 2 1930

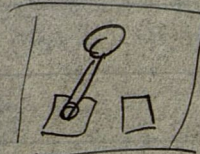
Dear Sirs,

Please send by VVPOST ~~as soon~~  
as possible:

1 doz. brass terminals like these:  
if if unavailable with wood-  
screw, they may with belt end  
and nut. (any size, but small  
size for bell wire preferable)



1 doz. Bell switches  
(one, or even two-  
way).



If you have none of the above in stock  
we shall be obliged if you would try and  
get them locally, as we know of no other  
suppliers and enquiries are very compli-  
cated from here.

Thanking you in anticipation of  
your early delivery

Yours very truly

(any size, but small  
size for bell wire preferable)



82  
NAGGAR  
Kulu  
Punjab

Feb. 7 1930

Messrs Trinity Electric Syndicate  
Princess Street  
BOMBAY.

Dear Sirs,

I am glad to state that the  
converser set is to hand and has given  
full satisfaction.

Please let me know by return:

- a) whether these sets are now in stock and  
and can be immediately any time?
- b) Whether you have also sets for ringing  
BOTH WAYS, and at what price?
- c) What wire you recommend for out door  
wiring, can you supply it, and at what  
price by 100 yards? Also insulating  
porcelain hooks with screws for outdoor  
wiring?
- d) Have you spare round pushes with two  
pin plug holes (like the push-plug on  
the left side of the sketch.) and what  
do they cost.
- e) what range will these conversers cover?  
will they work on 1500 feet?

Thanking you in anticipation of your early  
reply

Yours very truly,



REGISTERED OFFICES,  
GATEWAY BUILDING,  
APOLLO BUNDER, BOMBAY.  
  
WORKS & SHOW ROOMS,  
ENDEAVOUR BUILDING,  
PAREL, BOMBAY.  
  
BRANCH OFFICE,  
9 EGERTON RD, LAHORE.

# TURNER, HOARE & CO LTD

Engineers.

## BOMBAY.

Address for Telegrams  
"ENDEAVOUR, BOMBAY."

IN YOUR REPLY PLEASE REFER TO LDJ/EF / 492

28th April 19 31

Messrs. Hall Estate,  
Naggar, Kulu (Punjab).

Dear Sirs,

### Petter Generating Plants.

We beg to acknowledge with many thanks the receipt of your enquiry dated the 22nd instant and have pleasure in quoting you as under for 110-volt Generating Plants of 4.5 K.W., 7 K.W. and 10 K.W. These Engines are really built to operate on crude oil but can be readily run on kerosene if required, ~~and~~ cost is of no importance. In your case, if you install one of these Plants we think it would pay you to buy a fairly large supply of crude oil as the cost of running the engine on kerosene would be rather high.

We are giving you the approximate freight to Jogindarnaggar and weight of each set below. We are sorry that we cannot give you any definite information regarding the number of cases which would comprise one set.

We offer :-

(1) ONE - 4.5 K.W. Petter Direct-Coupled Generating Set, comprising:-

- 1 - 8 bhp Petter "S" type Vertical Single Cylinder Two Stroke Cold Starting Crude Oil Engine with automatic ignition and complete with all the usual spares, tools and accessories including single disc type flywheel and rigid coupling but without water cooling, direct coupled on a combination baseplate to :-
- 1 - 4.5 K.W. 110 volts compound wound protected type D.C. Generator by Messrs. Verity Ltd. and complete with field rheostat.

Price the set f.o.r. Bombay ... Rs2,740/-.

(2) One - 7 K.W. Petter Direct-Coupled Generating Set, comprising:-

- 1 - 12 bhp Petter "S" type Engine as above, direct coupled on a combination baseplate to :-
- 1 - 7 K.W. 110 volts compound wound protected type D.C. Generator by The British Thomson-Houston Co.

WE INSURE all goods likely to be broken in Transit at PUNJABERS Expense, Unless otherwise instructed.



L Ltd., equipped with ball and roller bearings and complete with field rheostat.

Price the set f.o.r. Bombay Rs3,817/-.

(3) One - 10 K.W. Petter Direct-Coupled Generating Set, comprising:-

1 - 18 bhp Petter "S" type Engine as before but including Self-Starter complete of the hand operated type, direct coupled on a combination baseplate to :-

1 - 10 K.W. 110 volts D.C. Generator as included in item (2).

Price f.o.r. Bombay, the set, Rs5,267/-.

All the above prices are subject to a discount of 10% to your goodselves.

The approximate weight and freight of each Set would be as under :-

4.5 K.W. Set

Weight approximate 38 mounds  
Freight to Jogindarnagar Rs118/-.

7 K.W. Set

Weight approximate 70 mounds  
Freight to Jogindarnagar Rs215/-.

10 K.W. Set

Weight approximate 130 mounds  
Freight to Jogindarnagar Rs400/-.

Consumption of crude oil per bhp per hour as under :-

|              | <u>Full Load</u> | <u>3/4 Load</u> | <u>1/2 Load</u> |
|--------------|------------------|-----------------|-----------------|
| 8 bhp Engine | .7 lbs.          | .798 lbs.       | 1.01 lbs.       |
| 12 " "       | .568 lbs.        | .634 lbs.       | .68 lbs.        |
| 18 " "       | .568 lbs.        | .65 lbs.        | .71 lbs.        |

The above figures are subject to the usual tolerances of 5% either way.

Delivery - 4.5 K.W. Set from stock, subject to prior sale.  
Balance in about 14 weeks from receipt of order

Terms of Payment - These are one third of value with order and balance against delivery of railway receipt per V.P.P. or through a recognised Bank.

Placing ourselves at your service for any further information you may require,

We are, dear Sirs,  
Yours faithfully,  
pro Turner, Hoang & Co. Ltd.,  
*Mue*

enc. "S" type Engine Catg.



# Westinghouse Electric International Company

5, Bank Street, Fort,  
Bombay,  
1st May, 1931.

HEAD OFFICE:

150, BROADWAY,  
NEW YORK.

LONDON OFFICE:

NORFOLK STREET,  
STRAND. W. C. 2.

SUBJECT: WESTINGHOUSE ELEC. PLANTS.

W/P.

The Secretary,  
Hall Estate,  
Naggar Kulu ( Punjab)

Dear Sir,

We thank you very much for your letter dated  
April 22, 1931 regarding the above subject.

We are enclosing herewith our Catalogue No. 204 A  
describing Westinghouse Electric Service Plants. Also we  
are enclosing herewith export price list for Westinghouse  
Electric Plants. You will please note that the price listed  
is dollar price and if you will get the current rate of  
exchange you will get the approximate rupee price for these  
plants.

We regret that we do not manufacture 7-KW Automatic  
Plant, but if you desire we shall quote you a price on  
Engine Generators capable of generating 7-KW, 110 Volts.

We also regret that we do not keep a stock of  
these plants in Bombay, but will get you from our works in  
East Pittsburgh.

Hope this will be of interest to you and if any  
additional information is required please do not hesitate  
to get in touch with us.

Very truly yours,  
PER WESTINGHOUSE ELEC. INTERNATIONAL COMPANY

*H.R. Prowse*  
W R.M. PROWSE.

ALL QUOTATIONS ARE BINDING FOR SIXTY DAYS ONLY.

MADE IN U.S.A.  
LUNA BOND



86  
May 26th, 1931.

Mr. James C. Bennett  
Westinghouse Electric & Manufacturing Co.  
150 Broadway, New York City

Dear Mr. Bennett:

Following our conversation of May 24th, I take great pleasure in giving you a few more details regarding the great necessity of establishing a hydro-electric plant at the Himalayan Research Institute of the Roerich Museum in Kulu, Western Himalayas.

As we have already mentioned to you, the Himalayan Research Institute has carried on extensive research during the past year in the fields of botany and zoology, as well as in medicinal herbs. Representative collections of plants and seeds have been sent to the U. S. Bureau of Foreign Seed and Plant Introduction, Washington, D.C., the Michigan University Clinic, the National Museum of Natural History, Paris, and the New York Botanical Garden. Dr. E. D. Merrill, Director-in-Chief of the New York Botanical Garden, has written us that he found among the collection sent there, specimens of great economic and scientific value. We enclose copy of a Roerich Museum Bulletin containing an article which Dr. Merrill wrote in this regard, and which appeared in several New York and Boston newspapers.

The presentation of the collection of Himalayan plants and seeds to the Museum of Natural History in Paris was made the occasion of a formal ceremony, with speeches by the Marquis d'Andigne, former president of the Paris Municipal Board, M. Mangin, President of the Museum, and Mme. de Vaux-Phalipau as well as Dr. George Chklaver of the French Society of Roerich Museum. The ceremony was heralded as a memorable step in the cultural cooperation of American and French institutions, and descriptions appeared in fifteen French newspapers.

The first sets of extracts from medicinal herbs have been forwarded for further experimentation to Dr. Felix Lukin, Riga and Professor V. A. Pertzoff, of Harvard University. It is the aim of the Medical Department of the Institute to carry on research in the medicinal plants of the Himalayan region, with comparative analysis of the native pharmacopoeia. Cancer research will form one of the vital tasks of this Department, not only from the widely humanitarian aspect, but also due to the significant factor that there is no cancer in the Kulu Valley, where the Institute has its base.

A very generous donation from the friend of the Institute has made it possible to start the erection of a bio-chemical laboratory for the intensive development of this work. I need not point out to you the importance of a hydro-electric plant in this connection, which we feel is of paramount necessity.



-2-

Our mutual goal of serving humanity in the fields of science and culture, encourages us to approach you, with the hope that the Westinghouse Electric Company may be interested to help us install such a plant at the headquarters of the Institute, as their gift toward the furtherance of the task to which the Institute so disinterestedly devotes all its efforts.

Moreover, we wish to bring to your attention the fact that the Institute is the furthest outpost of science today, being the only scientific institute with such a wide scope of research work in all fields of science in the Himalayas. As such, the Institute enjoys the interest of the whole scientific and cultural world. We feel that the donation of the necessary equipment for a hydro-electric plant would draw the attention of all these circles to the Westinghouse Electric Company.

Among the honorary Advisors of the Institute are such outstanding scientists as Dr. Albert Einstein, Professor Robert A. Millikan, and other internationally known scientists. The accompanying leaflet will give you detailed information in regard to the scope and program of the Institute.

We thank you for your kind consideration of this matter, and hope to hear from you in regard to it.

Very sincerely yours,

Vice-President



22

C O P Y

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY

150 BROADWAY, NEW YORK

Office of  
JAMES C. BENNETT  
Vice President

July 9, 1931.

Mrs. Sina Lichtmann, Vice Pres.,  
Roerich Museum,  
310 Riverside Drive,  
New York City.

My dear Mrs. Lichtmann:

URUSVATI HIMALAYAN RESEARCH INSTITUTE

Referring to your letter dated May 26th and my acknowledgment of June 3rd, I have just been able to obtain a final decision of the subject matter of your letter.

In reviewing the proposition made to you sometime ago for a hydro-electric plant for the Research Institute, the officers of our International Company pointed out that in the price quoted you of \$3600. f.a.s. New York, there were included products not of our manufacture aggregating \$2859., approximately 70% of the total contract price. These we would have to buy from other manufacturers to go along with our own products and on the basis of making a sale for cash we would be justified, but the officers did not feel that we could properly approach the other manufacturers for a donation of their products. In addition to this feature and while fully appreciating the value and character of the work carried on by the Research Institute, the officers feel that they cannot in all fairness in these times of business depression and with losses from our operations, justify a recommendation to donate any part of the electric plant. I feel that you will readily understand this view.

I naturally regret that I am not able to send you more favorable advices.

With personal regards,

Yours very truly,

(Signed) James C. Bennett,

Vice-President.



July 10, 1931

Mr. James C. Bennett, Vice-President,  
Westinghouse Electric & Manufacturing Co.,  
150 Broadway,  
New York City.

My dear Mr. Bennett:-

I have received your letter of July 9th in regard to my last letter of May 26th, and while I regret that the officers of the Westinghouse Electric Company could not in these times of business depression recommend a donation of part of an electric plant to the Urusvati Himalayan Research Institute in Kulu, I take this occasion to express my deepest appreciation to you for all your interest which you have taken in the development of the wide scientific program of the Himalayan Research Institute in Kulu. Your whole-hearted interest and cooperation which you have shown to us for many years has proven to us all that we have in you a close friend and sympathizer of all our cultural undertakings.

The Himalayan Research Institute with its all embracing program of scientific research in all fields of science, and especially with its present Cancer campaign, which is now being inaugurated - a campaign which has in its inception the battle with this greatest ill of humanity - has in the last few months made astounding progress in medicinal research. Several laboratories for biological, medical as well as other research work will be built this Fall, so that we feel justified in putting all our forces and energy into this task of ours.

I shall communicate the contents of the letter received from you to the President-Founder of the Himalayan Research Institute, Professor Nicholas de Roerich, as I know how appreciative he is of all efforts which you have made in behalf of our Institutions in the past.

With personal regards,

Most Sincerely,

Vice-President.



TELEGRAMS:—"MIMAR" LAHORE.  
TELEPHONE NO. 2225

90  
CODES:—  
BENTLEYS & PRIVATE.

## Michael Martin & Co.,

Ref. 33 / 1

The Mall,

(P. O. BOX 125)

Lahore.

14th July 1931.

Proffessor M. Roerich,  
Hall Estate ,  
Naggar,  
Kulu.

Dear Sir , As we understand that you have acquired the Hall Estate, and contemplate installing a hydro electric plant, we beg to offer our services in this respect. If you would be so good as to furnish us with rough general particulars we would be in a better position to examine the matter and would send our representative over to make a personal investigation.

In case you are interested in small temporary sets which could be installed immediately, we beg to enclose a few leaflets re DELCO sets.

Waiting the favour of an early reply which will have our best attention at all times,

Yours faithfully,  
for Michael Martin & Co,

*G. Carmody.*

( Travelling Representative )

*Dalhousie.*



NAGGAR, Jan 22, 1932

Re CONSTRUCTION

Col. A. E. Mahon, D.S.O.  
Nedou's Hotel  
LAHORE.

Dear Colonel Mahon,

Since we have now received the land where the hydro-electric plant can be erected, we would like to get into touch with as many firms as possible and request you in this connection to kindly try to find the following:

- a) what hydro-electric plants have been established in India, about 60 Kilowatt power and upwards;
- b) with regard to those working satisfactorily, by whom were the turbines and dynamos supplied, (names and addresses of the suppliers);
- c) names and addresses of engineers who erected these plants and who may be recommended. An ordinary electrical engineer, who may be excellent for lighting installations, electric motor, generators, etc. but who has no practical experience in calculation of water leading, volume, drop, etc. would be of little use in our case.

Besides this perhaps you could look up in KELLY's International Trade Directory (Section hydro-electric machinery) names of manufacturers and their addresses. We believe that in Delhi and probably also Lahore Kelly's Directory can be found in a Public Library or large firm. In this connection we think, Switzerland may have some suitable manufacturers, it being a hilly country uses electric power from waterfalls extensively, and I remember having seen Swiss machinery of this kind at a technical exhibition, though I then took little notice of their name, etc. Perhaps German firms also supply the Swiss requirements and these addresses would also be desirable.

On the other hand if you could find a hydro-electric specialist,



it would be very desirable if you could kindly let us know on what terms he could make the inspection of the available volume and drop of water, to calculate the maximum power procurable. If such a man is engaged by any of the firms installing hydro-electric plants, it could probably be arranged that such estimate is made free by the firm, in whose interest it will be to get the contract. In this case two requirements would be essential: that the firm can supply suitable machinery and that they have a man with practical knowledge of calculating available water supply.

For your guidance we may further add that the Laboratory's requirements are at least 80 Kilowatt, 110 Volt, A.C. (alternating current), 60 cycles. In your negotiations you will probably find that the British standards are 50 cycles, but the Biochemical apparatus supplied, require the American standards 60 cycles. However for the manufacturer this makes no difference, except that it may not be available from stock in India. As regards the voltage 110 V is approximate, the apparatus working on 105 - 115 V.

As regards the water supply, Capt. Boddington had calculated that if only a part of water from the Chaki River is taken and carried in a flume about 1000 feet and then dropped about 60 ft, we could get 20 Kw (which was at that time considered sufficient for lighting, fans, refrigerator, etc.) Such power could be obtained from 5 cusecs (5 cubic feet of water in one second), but since this amount may no doubt be increased and the drop probably also heightened, there is no doubt that much more power than 20 Kw can be obtained, but whether it will be 50 or 80 or 100 remains for an engineer to calculate.

We may further add that we have been given address for hydro-electric installation suppliers (Messrs Giacomo Jucker, Mubarak Manzil, Apollo Str, Bombay, Agents for the Austrian PELTON turbines) by Mr. Allan Lee, who recommended this firm, and we are writing to them to-day and will let you know of the reply.

So far we had written - in August - to Messrs Crossley Bros, Ltd, (138 Meadow Street, Bombay), the English Electric Co (Mercantile Chamber, Graham Rd, Ballard Estate, Bombay) and the A.E.G. India Electric Co, Ltd (Phoenix Building, Sprott Rd, Ballard Estate, Bombay), of which however only the first have replied, as per copy enclosed for your information. A copy of our letter (which was the same to all three firms) is also enclosed.

Previously we had obtained from Messrs Turner, Hoare and Co, Ltd. (Gateway Building, Apollo Bunder, Bombay) estimates for the PETTER OIL ENGINE generating plants, but these were only up to 10 K.W., running on oil (not with water-supplied turbines).

We have given you all the information available by us and hope it will suffice to get into touch with some firms for a definite solution of the problem of our electric requirements.

Our Institute would like to purchase a copy of WHO's WHO (of the world) and if the latest issue is available in Lahore or Delhi, please ask a bookseller to send it to us by V.P. POST (well packed). We understand it costs about two pounds. I have your London address of them, but no doubt it is also available in the larger bookstores here and no need to wait 2 months for it. We shall be greatly obliged if you could help us to trace a copy here, at your convenience, when going to Delhi.



Reference No. 341-L.

Manali  
Kulu  
15th April 1932

Messrs Callender's Cable & Construction Co., Ltd.  
Masson Narsingdas Building  
The Mall  
Lahore

Dear Sirs,

With reference to your letter No. 5/23/8563 dated 7th March 1932. I shall be glad to know if you have succeeded in obtaining any information re Hydro-Electric Machinery suitable for the Hall Estate.

Yours faithfully

 Colonel  
(A.E. Mahon)

Copy to the Director

URUSVATI  
*Himalayan Research Institute,*  
Naggar,  
Kulu.



CALLENDER'S CABLE & CONSTRUCTION CO LTD

Masson Narsingdas Building  
The Mall  
P.O. 199

LAHORE. 18th April 1932.

5/28/9184 .

Colonel A.E.Mahon, D.S.O.  
Urusvati Himalayan Research Institute  
MANALI, Kulu

Dear Sir,

We have to acknowledge receipt of your letter  
No.341-4 of the 15th inst. and to advise you that we have  
not yet received the necessary information re Hydro-Electric  
Machinery for the Hall Estate

We have recently heard from the manufacturers that they are  
investigating the matter and we hope to have their final reply  
shortly when we shall advise you immediately.

Yours faithfully,  
Callendar Cable & Construction Co,Ltd  
Signed AA.Windle  
Resident Engineer.



URUSHATI  
Himalayan Institute,  
Naggar,  
Kulu.

Copy

94

Reference No.364-L

Manali  
Kulu  
22nd April 1933

Messrs. Callender's Cable & Construction Co., Ltd.  
Masson Warsingdal Building  
The Mall  
Lahore

Dear Sirs,

I am in receipt of your letter No. 5/28/9184 of the 18th inst.  
on the subject of Hydro Electric Machinery for the Hall Estate.

I shall be obliged if you will urge the manufacturers to  
expedite their reply as the matter is urgent.

Yours faithfully

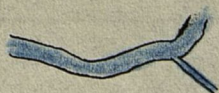
*A. B. Mahon*

Colonel

(A. B. Mahon)



SITUATION OF HALL ESTATE, NAGGAR, Kulu, Punjab.



RIVER



Motor road



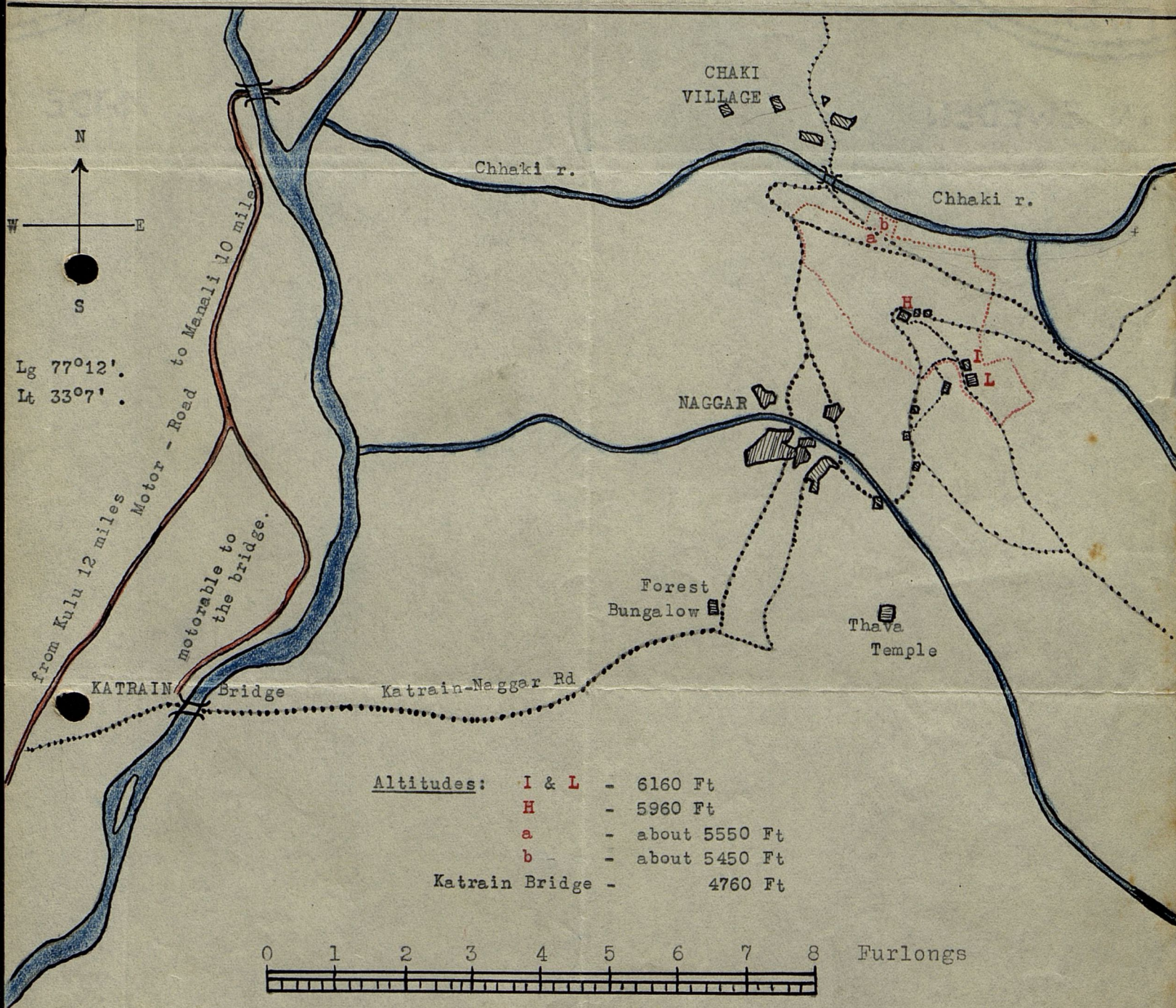
mule road

a-b Proposed fall (probably about 100')

a - tank; b - turbine.

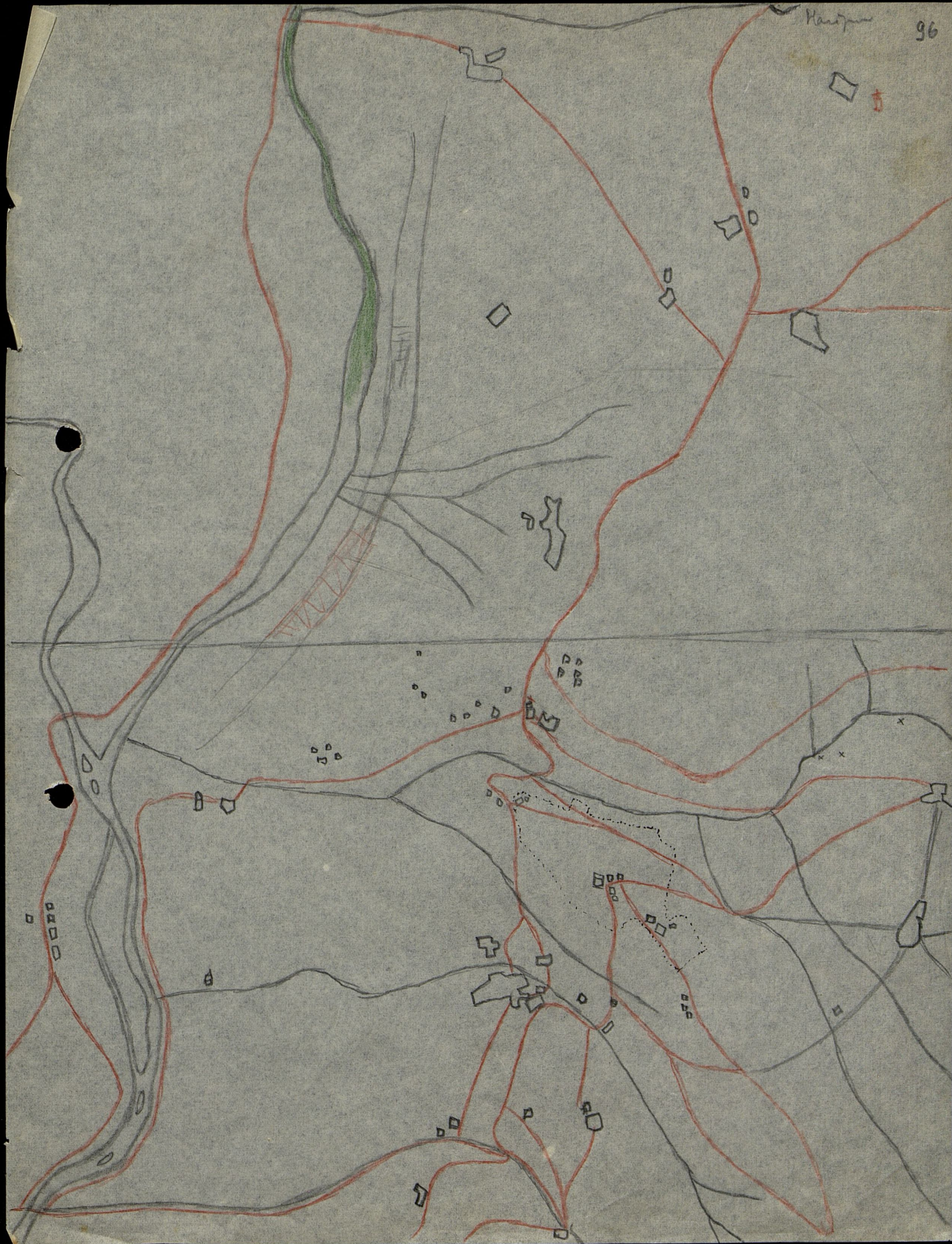
H, I, L - buildings. (see list):

boundary of HALL Estate



Lg 77°12'.  
Lt 33°7'.







شجرہ کشتوار جادو نوڈر از چکانی مال والی سند بنجر موسومہ خودری تھی۔ بجلی کو لکھنی تھر تحصیل کو ضلع کانپور

یہ فوٹو پر پورے لکھنؤ کے مالک کے ہوتے ہیں

بیمینہ سند بمقام فی مال

Plan

لکھنؤ کے مالک کے ہوتے ہیں

الکھنؤ کے مالک کے ہوتے ہیں

$$1928 = \frac{19 + 9193}{2}$$

$$\frac{1928}{1404} = \frac{9193}{2}$$

امدادیت نوڈر حسب ذیل ہے

۱۔ رقبہ مطلوبہ ملکیت سرکار دہلی کے ہوتے ہیں

۲۔ اگر رقبہ کی نسبت سے کوئی دفعہ لکھنؤ کے مالک کے ہوتے ہیں

۳۔ سب سے پہلے آراغی ملکیت کو دیکھ کر جو کوئی دفعہ لکھنؤ کے مالک کے ہوتے ہیں

۴۔ سب سے پہلے آراغی ملکیت کے متعلقہ ملکیت کے ہوتے ہیں

۵۔ سب سے پہلے آراغی ملکیت کے متعلقہ ملکیت کے ہوتے ہیں



۶۔ کتبہ سال قبل بنی۔ یہ عورت سال ہو کر مر گئی۔ یہ تعقل زبان سکھیں صاحب پیغمبر صاحب سہو سہو ہے۔

۷۔ از ارض نو توڑ سرگرمی از گھر تاحصہ شدے بجانب مشرق لجاہدہ لقا ہوا کہ ایک سال "واقفہ" ہے۔

۸۔ جگل نگر جہڑہ نمبر حدودہ اثر واقعہ ہے۔

۹۔ گاؤں شرین و ندر ب لجاہدہ لقا ہوا نصف میل بجانب جنوب واقعہ ہو گاؤں نڈا کی زبانوں تقیقا بہ قول کی ہے۔

۱۰۔ از ارض مطہرہ لقا ہوا (جودہ) وقت واقفہ ہو گاؤں لقا ہوئے۔

● زمین عمارت و کھیتی باڑی کے لیے ہے۔ لہذا کہہ جہاں سکے جہاں ہے۔ لہذا کہہ جہاں سکے جہاں ہے۔ لہذا کہہ جہاں سکے جہاں ہے۔

● راستہ شریع عام وغیرہ کام نہیں ہے۔ البتہ جہاں کام ہوگا ہے۔ لہذا کہہ جہاں سکے جہاں ہے۔ لہذا کہہ جہاں سکے جہاں ہے۔

۱۲۔ بوقت میں پیش ہونے والوں نے گاؤں شرین و ندر ب لقا ہوئے۔ انہوں نے اپنا حق و سبب بیان کیا۔ کہ کوئل کے بیج سے اور کھیتی باڑی کے مویشیان کی مکھل سے۔ لہذا کہہ لقا ہوا ہے یہاں سے یہاں سے لقا ہوا ہے۔ لہذا کہہ لقا ہوا ہے۔

نوٹ: یہ صفحہ میں کوئی مکمل نہیں ہے۔ نہایت بڑی حد تک مکمل ہے۔

۱۳۔ سال کو کوئل نو توڑ نہیں ملے۔

۱۴۔ سال مال اسٹاک کا مالک ہے۔

● ۱۵۔ نو توڑ بڑے کوئل و عظمیٰ مطلوب ہے۔ جگا رقبہ بزرگ بھائی لقا ہوا ہے۔ رقبہ بزرگ بھائی لقا ہوا ہے۔ رقبہ بزرگ بھائی لقا ہوا ہے۔

اس کے اس رقبہ پر جو کہ بزرگ ہے کوئل جسے پانچ سال کی عمر ہے + اور نو توڑ بڑا کوئل پر بڑا ہے + پانچ سال کی عمر ہے۔

۱۶۔ نو توڑ بڑا منگولیاں پانچ سال کی عمر میں لقا ہوا ہے۔ رقبہ بزرگ بھائی لقا ہوا ہے۔ رقبہ بزرگ بھائی لقا ہوا ہے۔

ادب تکلیف سے مکمل شدہ۔ تحریر ۱۸ اپریل ۱۹۳۳ء

سینور مسٹر نیوٹن سنگھ



سیدان مهتمه ازان کافور شین سحالی و خوش سحر

ہمارے سب کتب ہیں بیان ہے۔ کوئلے، پیپر اور اوسم جہان ہمارے مویشی کی گل ہے۔ گندہ گندہ انفاق ہمارے  
۱۔ ہمارے مویشی ہیں کوئلے کو خرچ کا نقصان ہو ۲۔ ٹوہم وہہ وہہ نہیں بیوگے۔ گندہ ہمارے اس نوؤد کیلچ میں  
کوئلے عند نہیں ہے۔

شعرو ولد در شیر لک  
نزدیک ولد در برعو  
او جمعی ولد در برعو  
پدری لک در برعو  
در برعو ولد در برعو

المعروف والجهل المسمى بمائة متبوعه جزء اخر استوفى له كتابي  
بسم الله الرحمن الرحيم

سید محمد علی دینوری  
مکتوبه فی سبیل  
الامور الدینیة  
چون نام حدیث و کتب  
کتابخانه کوی علی و کوی

[illegible]

صفت و در بگو چو دل نه شو نیست نه پند و اندک کیم نیست همه کجی بوزه کجی همه لایمی چو کیم نیست







Veegam trade operation

100

② 1/2 mile range Single base 230 volt horizontal or verticle mounting Rs. 425/-

1 " " " " Rs. 710/-

2 " " only horizontal double motor type Rs. 850/-

1 " " 440 volt Verticle mounting Rs. 1600/-

2 " " " " " Rs. 1850/-

3 " " " " " Rs. 1950/-

5 " " " " " Rs. 2550/-

① Sending booklet.