

Battery Charging

—There's money in it

Brown Brothers
— Allied Companies —
THOMSON AND BROWN BROTHERS LTD
BROWN BROTHERS (IRELAND) LTD.

Wholesale only. Head Offices & Warehouses:

GREAT EASTERN STREET, LONDON, E.C.2
126, GEORGE STREET, EDINBURGH, 2.

Branches:

ABERDEEN, BELFAST, BIRMINGHAM, BRISTOL, CARDIFF, DUBLIN,
DUNDEE, GLASGOW, LEEDS, LIVERPOOL, MANCHESTER,
NEWCASTLE, SOUTHAMPTON.

BATTERY CHARGING

WHY YOU SHOULD BE EQUIPPED FOR THIS SERVICE.

The charging of accumulators for radio and other purposes is a business that has rapidly developed.

The urgent and growing need of this service : the simplicity of the undertaking : the comparative low cost of the necessary plant : and the steady, regular income to be derived, are factors which should induce every Radio Dealer and Garage Proprietor to instal the necessary plant.

In addition to the profit it brings, Battery Charging is a sure means of attracting and retaining customers who otherwise might make their purchases elsewhere.

Not occasionally, but continually throughout the year, is this service in demand.

We offer a choice of no less than 12 different makes of Charging Plant, including that for use where no electric mains are available. We have a type of plant for every individual need.

Free advice by our staff of Battery Service Experts is always available without the slightest obligation on the part of the dealer.

A Steady Income all the year round.

BATTERY CHARGING

METHODS USED.

The supply from which charging current is obtained must be by direct current or rectified alternating current (termed D.C. and rectified A.C. respectively).

The most efficient and economical method of charging from D.C. is by rotary transformer.

Charging from A.C. Mains can be carried out by means of rotary or valve rectifier, or by dry metal rectifier.

Charging from either A.C. or D.C. employs one of two methods : constant current or constant voltage (usually termed constant potential).

If no electric supply is available, charging can be undertaken by means of petrol or paraffin-electric plant.

All systems and methods are described in detail in separate leaflets—available on application.

Typical examples of various plant are given in the ensuing pages.

Do not hesitate to consult us on any point. Simple and convenient Hire Purchase Terms enable you to instal equipment without large capital outlay.

Let us Equip your Charging Station.

BATTERY CHARGING

THE PROFIT.

We have told you that battery charging is worth your while, now let us prove it in plain figures :—

A typical charger—the Davenset A.C. Garage Model—
Output 25 volts at 6 amps.
Charges 40 2-volt 20-amp. act. cells per day.
Cost of charging for 15 hours at 3d. per unit ... 9d.
Income, at 6d. per cell 20/-

These figures will vary with the cost of your supply. However, they will serve as a guide to the profits obtainable.

We maintain a staff of experts to give you unbiased opinions on any plant.

THE OUTLAY.

Hitherto the installation of charging equipment has entailed the expenditure of a comparatively large sum. Now—by means of our Hire Purchase Scheme—it is possible for every Radio Dealer & Garage Proprietor to establish and build up an ever-increasing and profitable business.

No heavy cash outlay is necessary to secure Charging Apparatus. A simple deferred payment arrangement between you and Brown Brothers, Ltd.—no third party enters into these transactions—enables equipment to be delivered without security other than the goods supplied.

Instal NOW! ————— Pay as you earn.

BATTERY CHARGING

TERMS OF HIRE PURCHASE.

After the initial deposit of 25 per cent. has been paid, the equipment is delivered. The balance is spread over an agreed period :—

Six Months, at 2½% interest, or
*Twelve Months, at 5% interest.

We quote below an extract from an actual Agreement :

“ To pay you the sum of £40 . 15 . 6 as an agreed rent for the hire of said equipment until the 9th day of September, 1931, as follows : £10 on the signing of this Agreement, and six equal monthly instalments of £5 . 2 . 6 payable on the ninth day of each subsequent month, commencing 9th March, 1931.”

Schedule of Equipment referred to in this Agreement :

One R.A. 52/49 Westinghouse R.G.C.I. Charger.	
Total Cash Value of Equipment	£40 . 0 . 0
Initial Deposit 25%	10 . 0 . 0
Balance	£30 . 0 . 0
Six months' interest at 2½%	15 . 0
Stamp Duty	6
Six equal monthly payments £5 . 2 . 7	<u>£30 . 15 . 6</u>

*A twelve months' Agreement is only accepted if value of charging equipment is not less than £40.

Hire Purchase Terms are available on all types of Charging Plant over £10 Nett Trade.

Take up this profitable Service.

CRYPTO CONSTANT POTENTIAL CHARGING EQUIPMENT

FOR A.C. OR D.C.

Manufactured by a firm of over 30 years' experience, embody the latest developments in battery charging, and represent a high-class product, thoroughly robust, and made throughout with British material and labour.

Efficiency exceptionally high, resulting in low running costs.

Each Outfit absolutely complete, ready to run immediately it is installed.

Owing to automatic taper charge, batteries of any capacity can be connected to bus bars, and disconnected at end of charge, without making any voltage or current adjustments.

One-day charging for any capacity battery, 2, 6 or 12 volt.

Non-reversibility of polarity.

No gassing or over-charging possible. Batteries float on completion of charge—therefore no waste of current.

3-Wire (8 and 16 volts) Outfits Standard for Alternating Current.

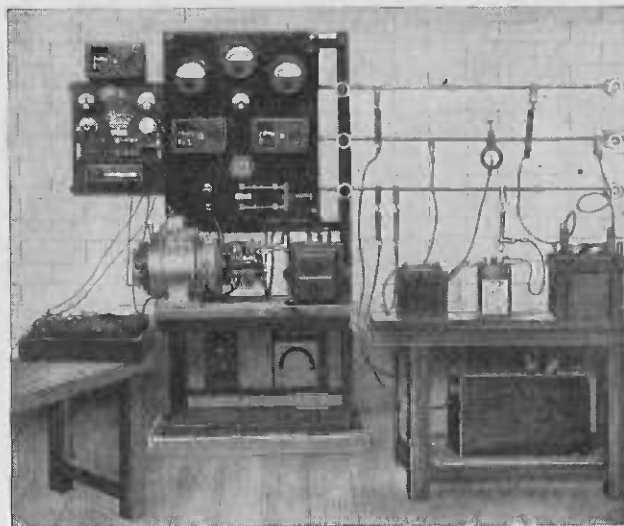
2 and 3-Wire Outfits for Direct Current as required.

A.C. Outfits supplied with attachment for charging high-tension batteries at a small extra cost.

Ask the Specialists the Plant to suit you best

CRYPTO CONSTANT POTENTIAL FOR A.C. OR D.C.

Our Hire Purchase accommodation charge for this Plant over 6 months is 18/-.



Crypto Type 1B A.C. Charger.
(Constant Potential).

Output : 3-wire. 8 and 16 volts 80 amps.

Will handle 300 2-volt cells per week of 72 hours.

Cost of charging at 3d. per unit	17/2
Income at 6d. per cell	£7.10.0

Price £47.12.0 Nett Trade

or £11.18.0 down and 6 Monthly Instalments of £6.2.0

This is a typical example of the extensive range of Crypto Chargers. Details of all types available on application.

DAVENSET VALVE RECTIFIERS

FOR A.C.

A most efficient form of charging apparatus both from the viewpoint of electrical efficiency and silent working.

Moderate first cost and low running and maintenance costs are important reasons for the popularity of this equipment.

Davenset Chargers are simple to operate, have no moving parts, and cause no interference with Radio reception.

There is no feed back if current fails, and charger commences work again immediately supply resumes.

A valve rectifier is employed, and all necessary resistances, meters, switches, etc. are mounted on one board.

Of the various Davenset models available the one described on facing page is a general purpose outfit capable of charging high and low tension accumulators separately or simultaneously, and is especially suitable for Wireless and Electrical Retail Shops and small Garages.

Our Advice is at Your Disposal

DAVENSET VALVE RECTIFIERS FOR A.C.

Our Hire Purchase accommodation charge for this Plant over 6 months is 5s.



Davenset Garage A.C. Charger.

Output : 25 volts 6 amps.

Will handle 40 2-volt* cells per day.

Cost of charging at 3d. per unit	...	...	...	9d.
Income at 6d. per cell	...	...	...	20/-

Price £10.10.0 Nett Trade

or £2.12.6 down and 6 Monthly Instalments of £1.7.0

*Calculated on average capacity 20 actual A.II.

This is a typical example of the extensive range of Davenset Chargers. Details of all types available on application.

DAVENSET VALVE RECTIFIERS

— FOR A.C. —

The Automatic Charger illustrated opposite is absolutely fool-proof.

Each instrument has multiple circuits plainly marked and definitely and automatically controlled output values in amperes.

This pre-determined rate is available from each circuit irrespective of the number of cells in charge.

Correct functioning is visually indicated by red and green indicator lamps to each circuit, which ensures that, whilst the green indicator is glowing, the cells in that circuit are receiving their correct rate of charge.

One or more of the circuits may be interconnected; thus it is possible to obtain an output of 50 volts $5\frac{1}{2}$ amps. if desired on the model illustrated.

The valve incorporated in this instrument is only called upon to supply approximately 50% of its rated output, and, as a result, a long life is assured.

Add to your Profits by charging Batteries

DAVENSET VALVE RECTIFIERS FOR A.C.

Our Hire Purchase accommodation charge for this Plant over 6 months is 9/6.



Davenset A.S.C.4. A.C. Charger.

Output : 50 volts $5\frac{1}{2}$ amps.

Will handle 80 2-volt cells per day.

Cost of charging at 3d. per unit	1/10
Income at 6d. per cell	£2.0.0

Price £24.3.0 Nett Trade

or £6.0.9 down and 6 Monthly Payments of £3.2.0

This is a typical example of the extensive range of Davenset Chargers. Details of all types available on application.

"B.B." ROTARY RECTIFIERS AND TRANSFORMERS

FOR A.C. AND D.C.

Highly efficient, and costing very little to run, these Rectifiers and Transformers are particularly suitable for the Radio Dealer or Garage handling a moderate number of batteries per day.

Of substantial and superior workmanship throughout, and designed for continuous running without constant attention.

The Rectifier is a most economical and simple means of charging batteries from alternating current. Double-wave rectification is obtained.

The Rotary Transformer reduces the supply voltage of D.C. Mains to a suitable pressure for charging, and, by reason of its high efficiency, is extremely popular.

A range of outputs from 40 to 900 watts are available on D.C. plants; whilst on A.C. 60 to 3,200 watt machines can be supplied.

The R.4 Rotary Transformer shown on facing page is very economical to run—the consumption being 400 watts per hour on full load.

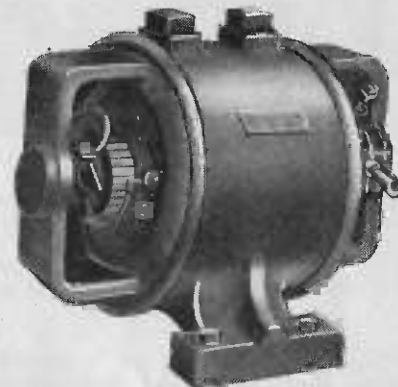
The charger consists of a single machine with a double wound armature and two commutators, and is fitted with ball-bearings to reduce noise to a minimum.

Will give Efficient Service for Years.

B.B. ROTARY RECTIFIERS AND TRANSFORMERS

FOR A.C. AND D.C.

*Our Hire Purchase accommodation charge for this Plant over
6 months is 7/8*



B.B. Rotary Transformer, Type R.4 for D.C.

Output: 50 volts at 5 amps.

Will handle 40 2-volt cells* per 16-hour day.

Cost of charging at 3d. per unit	...	...	...	1/8
Income at 6d. per cell	...	...	...	20/-

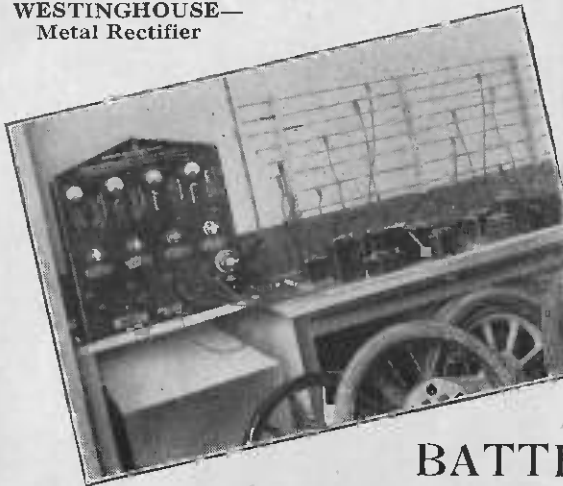
Price £18.18.0 Nett Trade

or £4.14.6 down and 6 Monthly Instalments of £2.8.6

*Calculated on average capacity 30 actual A.H.

This is a typical example of the extensive range of B.B. Chargers. Details of all types available on application.

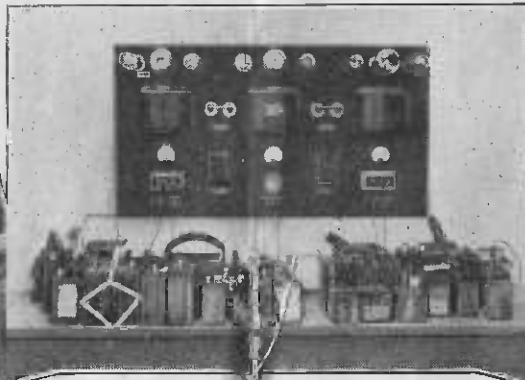
**WESTINGHOUSE—
Metal Rectifier**



**HOBART—
Constant Potential**



DAVENSET—Valve Rectifier



BATTERY CHARGING STATIONS Equipped by BROWN BROTHERS, LTD.

Below we print some expressions of opinion by the actual users of the Battery Charging Plant illustrated on this page:—

WESTINGHOUSE Metal Rectifier supplied to: Bound's Garage, Birchington Road, Kilburn, N.W.6, the proprietor of which says: "I have found the apparatus satisfactory, good business having resulted from its installation."

DAVENSET—Valve Rectifier supplied to: Mr. L. Wheatley, 89, Hertford Road, Lr. Edmonton, N.9, who says: "Our business has been built up on the 'B.B.' Plant and has necessitated the installation of equipment of greater capacity."

HOBART—Constant Potential supplied to: Barnsdale Garage and Engineering Co. Ltd., Barnsdale, W.9, who say: "Considerably increased business has passed through our hands as a result of the installation of this Plant, which has given us no trouble whatsoever."

B.B.—Rotary Rectifier supplied to: Phillips Music Stores, 413, Mare Street, Hackney, E.8. Messrs. Phillips say: "We changed a Charging Board we had had installed only a few months for a 'Crypto', and considered that it more than warranted the trouble and expense incurred. We can now charge a larger number of batteries simultaneously."



B.B.—Rotary Rectifier

All the illustrations of the Charging Plant on this page are from actual photographs, taken on the premises by kind permission of the owners.

EXPERT ADVICE.—Our Staff of technically trained experts on Battery Charging Equipment have made an intensive study of every type of Plant for the purpose on the market. The choice we offer from more than a dozen different makes assures just the right type for any particular condition.

PROFITABLE SERVICE.—Dealers having any doubts or difficulties in the matter should write us a full explanation. We will help them. There is no reason why every dealer should not take up this highly profitable and extremely easy service. The absence of electric mains in the district makes no difference, for we have a Plant designed to meet this, otherwise, difficulty.

SMALL OUTLAY.—The whole of the necessary equipment to start a profitable service can be had on a very small initial payment, for example: Plant value £20. Deposit £5, balance over 6 months at only 2½% interest, or: Plant value £40. Deposit £10.0.0, balance over 6 months at only 2½% interest or over 12 months at 5% interest.

NEWTON VALVE RECTIFIERS

FOR A.C.

Entirely new design, made up in four distinct models, each is complete and designed for wide variation, both in respect of charging rates and number of batteries which can be handled.

Unique feature is the unit type construction. All models are of similar height and depth and vary only in width. This makes it possible to build up complete Rectifier Chargers having any number of circuits by selecting the necessary Unit Rectifiers.

All models are of enclosed pattern with crystalline front, and black and nickel fittings.

Variable voltage for varying numbers of batteries is provided by special "plug-in" Selector Switches, one for each circuit. Variation in charging rates is obtained by Rheostat in each circuit.

Simplicity of control is the keynote of design and there is no interference with Radio reception.

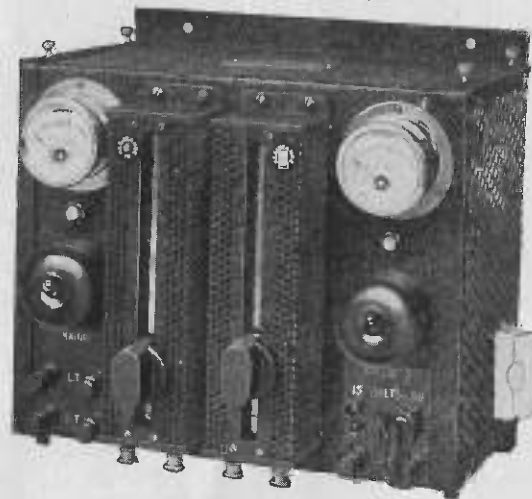
The electrical efficiency is 80% and the no load consumption only 20 watts. These rectifiers therefore are some of the most efficient on the market.

We Specialize ————— Let us help you.

NEWTON VALVE RECTIFIERS

FOR A.C.

Our Hire Purchase accommodation charge for this Plant over 6 months is 5/-



Newton N.V.6 Rectifier.

Output : 30 volts 6 amps.

*Will handle 36 2-volt cells per day of 18 hours.

Cost of charging at 3d. per unit	...	...	...	1/-
Income at 6d. per cell	...	...	...	18/-

Price £10.10.0 Nett Trade
or £2.12.6 down and 6 Monthly Payments of £1.7.0

*Calculated on batteries up to 30 amp. hours.

This is a typical example of the extensive range of Newton Chargers. Details of all types available on application.

PHILIPS VALVE RECTIFIERS

FOR A.C.

A new and particularly interesting Charger for the Radio dealer who handles mainly small cells and occasional car batteries.

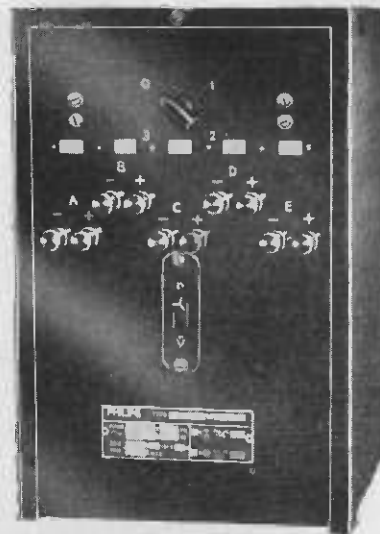
By an ingenious method of switching the following circuits are available, and the current passing in each circuit is clearly indicated by plain signals.

Employs one Philips No. 367 Valve for rectification, and five Barrater lamps for current adjustment, and consumes only 350 watts on full load.

Position of Switch.	Circuits.				
	A.	B.	C.	D.	E.
0	1 amp.	Off.	Off.	Off.	$\frac{1}{2}$ amp.
1	1 amp.	2 amf.s.	1 amp.	1 amp.	$\frac{1}{2}$ amp.
2	1 amp.	2 amps.	2 amps.	Off.	$\frac{1}{2}$ amp.
3	1 amp.	4 amps.	Off.	Off.	$\frac{1}{2}$ amp.

PHILIPS VALVE RECTIFIERS FOR A.C.

Our Hire Purchase accommodation charge for this Plant over 6 months is 4/6.



Philips Three-in-One Charger for A.C.

Output 30 v, 5½ amps. Will handle 60 2-v. cells per day

Cost of charging at 3d. per unit 1/4
Income at 6d. per cell £1.10.0

Price £10.10.0 Nett Trade

or £2.12.6 down and 6 Monthly Instalments of £1.7.0

This is a typical example of the extensive range of Philips Chargers. Details of all types available on application.

NEWTON CONSTANT POTENTIAL CHARGING EQUIPMENT

For A.C., D.C., or from PETROL-PARAFFIN ENGINE.

Being easy to instal, cheap to maintain, and most simple to operate, the Newton is very popular.

The operation of the equipment is practically automatic and does not call for a skilled attendant.

It enables batteries to be properly charged in 8 hours, thus permitting of quick service and the handling of a larger number of batteries.

Batteries are merely grouped into 6 and 12 volt units, connected to the bus-bars by suitable charging leads, all provided, and then left : in 8 hours they are properly and healthily charged.

With a Newton C.P. Charger all sizes of batteries can be simultaneously charged.

Constant Potential charges batteries safely. Each battery automatically takes its correct current according to its condition. Current wastage is avoided and overcharging obviated.

The Newton is British built and serviced throughout, and has many exclusive features. Can be run from A.C. or D.C. mains, belt-driven from shafting or engine-driven.

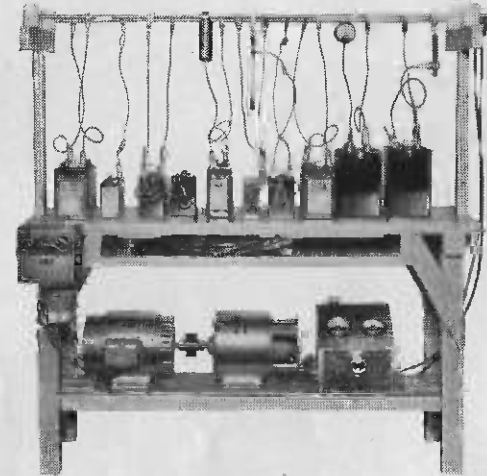
Complete protection of plant and batteries under all conditions is absolutely ensured.

Don't Wait ————— Do it NOW!

NEWTON CONSTANT POTENTIAL

For A.C., D.C., or PETROL-PARAFFIN ENGINE.

Our Hire Purchase accommodation charge for this Plant over 6 months is 15/6.



**Newton C.P. Charger, "Service" Type.
For A.C. or D.C.**

Output : 7½ volts, 50 amps. or 15 volts, 25 amps.

*Will handle 300 2-volt cells per week of 72 hours.

Cost of charging at 3d. per unit	10/9
Income at 6d. per cell	£7.10.0

**Price with Bench £39.10.0 Nett Trade
or £9.17.6 down and 6 Monthly Instalments of £5.1.4**

*Calculated on average capacity 2 volt, 30 amps.

This is a typical example of the extensive range of Newton Chargers. Details of all types available on application.

WESTINGHOUSE FOUR-CIRCUIT RECTIFIER

TYPE R.G.C.1. FOR A.C.

Made up of Metal Rectifiers, the Westinghouse employs no liquids or chemicals, no valves or commutators. It has no moving parts, and, in consequence, is silent in operation.

This equipment consists, in effect, of four separate battery chargers, built into one compact unit.

Independent control of each of the four circuits—low, medium or high—is provided.

The following independent charging rates are provided for:—

1. For H.T. Cells 0 to 0.25 amps. 0 to 150 volts.
2. For L.T. Cells 0 to 0.5 amps. 0 to 150 volts.
3. For L.T. Cells 0 to 1.0 amps. 0 to 150 volts.
4. For Car batteries 0 to 5.0 amps. 0 to 40 volts.

In operation, it is not necessary to use all the circuits simultaneously, nor is it wasteful to use the set to charge a few batteries only.

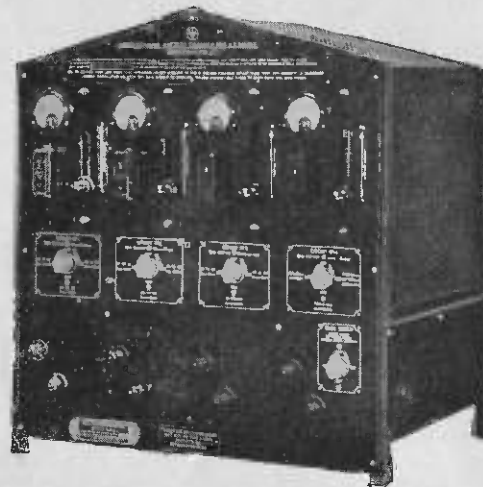
The set requires no watching or adjusting, neither does it interfere with the operation of Radio Receivers.

If for any reason the electric supply is interrupted, charging of course ceases, but the batteries cannot discharge. As soon as the supply is restored, charging automatically resumes.

*We have supplied Charging Plant to
Thousands———Why not to YOU?*

WESTINGHOUSE FOUR-CIRCUIT RECTIFIER. TYPE R.G.C.1 FOR A.C.

*Our Hire Purchase accommodation charge for this Plant
over 6 months is 15/6*



Westinghouse Type R.G.C.1 for A.C.

Output: 150 volts, .25 to .5 and 1 amp; 40 volts 5 amps.

Will handle 140 2-volt* cells per day.

Cost of charging at 3d. per unit 5/-
Income at 6d. per cell £3.10.0

Price £40.0.0 Nett Trade

or £10.0.0 down and 6 Monthly Instalments of £5.2.7

*Calculated on average capacities of 20 and 30 actual A.H.

This is a typical example of the extensive range of Westinghouse Chargers. Details of all types available on application.

WESTINGHOUSE RECTIFIERS

FOR A.C.

Has similar characteristics to the well known RGC1 Charger, but a larger and more elastic output.

Is capable of handling the following load:—

1-60 cells	...	...	...	...	at ½ amp.
1-60 cells	...	...	...	...	at 1 amp.
1-60 cells	...	...	...	...	at 3 amps.
1-18 cells	...	...	...	...	at 5 amps.

Each circuit independently controlled with low, medium and high charging positions.

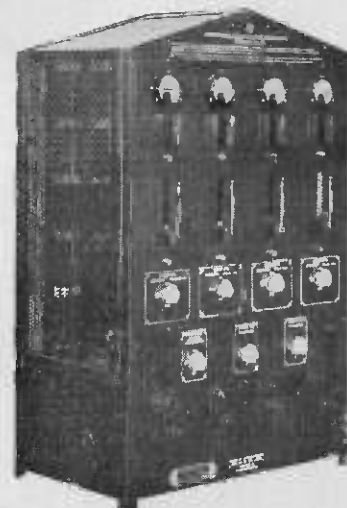
In operation, it is not necessary to use all the circuits simultaneously, nor is it wasteful to use the set to charge a few batteries only.

The set requires no watching or adjusting, neither does it interfere with the operation of Radio Receivers.

If for any reason the electric supply is interrupted, charging of course ceases, but the batteries cannot discharge. As soon as the supply is restored, charging automatically resumes.

WESTINGHOUSE RECTIFIER R.G.C.6 FOR A.C.

Our Hire Purchase accommodation charge for this Plant over 6 months is 22/-.



Westinghouse Type R.G.C.6 for A.C.

Output: 150 volts, 9½ amps.

Will handle 198-2 volt cells per day.

Cost of charging at 3d. per unit	...	...	...	7/3
Income at 6d. per cell	...	...	...	£4.19.0

Price £57.0.0 Nett Trade

or £14.5.0 down and 6 Monthly Instalments of £7.6.2

*Calculated on average capacities of 20 and 30 actual A.H.

This is a typical example of the extensive range of Westinghouse Chargers. Details of all types available on application.

CRYPTO "UNIT" VALVE RECTIFIER FOR A.C.

Buy British built equipment for better battery charging.

Ready for immediate connection to supply mains.

Independent regulators in each circuit (see note below).

Trouble free. Silent in operation. No radio interference.

Initial and Maintenance costs low.

Simple and Self contained.

High efficiency.—Full wave rectification is employed.
Three charging voltages are available.

Made specially for small and medium-sized charging stations.

Ammeters supplied in each individual circuit.

Different charging voltages (3) by plug and socket arrangement.

Excellent finish throughout.

*Circuits may be paralleled if desired so that the full amperage shown in the output column may be obtained as one circuit.

NOTE—"Unit" Rectifiers use an independent variable regulator per circuit and overcome the difficulties experienced with automatic regulator (Barrater) lamp control, where only one fixed amperage per circuit is obtainable and a minimum number of cells is required per circuit to enable charging to proceed.

CRYPTO "UNIT" VALVE RECTIFIER FOR A.C.

*Our Hire Purchase accommodation charge for this Plant
over 6 months is 5/-*



Crypto "Unit" Charger, Type VR3.

Output: 30 v., 6 amps. Will handle 36 2-v. cells per day.

Cost of charging at 3d. per unit 9d.

Income at 6d. per cell 18/-

Price £11.18.0 Nett Trade.

or £2.19.6 down and 6 Monthly Payments of £1.10.6

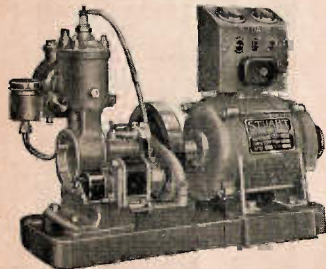
*This is a typical example of the extensive range of Crypto
Chargers. Details of all types available on application.*

*VR 4. 63 volts 10 amps
2 1/2 cells*

STUART CHARGING & LIGHTING PLANT

FOR AREAS WITHOUT ELECTRIC SUPPLY

*Our Hire Purchase accommodation charge for this Plant
over 6 months is 13/-*



Stuart Plant, Type 26. (250 Watts).

Output: 25/37 volts 10/7 amps.
Will handle 70 2-volt* cells per day.

Cost of charging (fuel and lub. oil)...	...	...	2/-
Income at 6d. per cell ... ..	...	...	35/-

Price £33.6.0 Nett Trade
or £8.6.6 down and 6 Monthly Instalments of £4.5.5

*Calculated on average capacity of 30 actual A.H.

*This is a typical example of the extensive range of
Stuart and other Makers of Plant. Details of Newton,
Stuart, Lister and Petter available on application.*

STUART CHARGING & LIGHTING PLANT

FOR USE WHERE ELECTRIC
SUPPLY IS NOT AVAILABLE.

Overcomes the problem of charging accumulators in localities where electric current is not available.

The Stuart Plant consists of an engine embodying all the latest improvements and run on petrol, benzol or gas, driving a dynamo.

An auxiliary switchboard is necessary to break down the current to a suitable rate for charging small radio batteries.

A starting switch enables the engine to be started without effort, and the very clear and simple instructions provided enable even quite unskilled persons to understand and operate the Plant without fear of damage.

The Stuart is very economical to run and is thoroughly robust and reliable. In addition to its usefulness in areas without electric supply, this Plant is specially recommended in certain districts where the cost of electricity is high.

WITH THE COMPLIMENTS OF

LISSEN
LIMITED

LISSENIUM WORKS,
WORPLE ROAD,
ISLEWORTH, MIDDX.