

RADIORAMA

INTERESSANTES FÜR FUNK- UND A/V-LIEBHABER

Nr. 59

Spielzeug...



Not so good. Too hard to balance.

THE TROPADYNE

INTERMEDIATE FREQUENCY AMPLIFICATION WITH TUNED TROPAFORMERS

THE sensitivity, selectivity, and volume obtained in all types of super-heterodynes (and the Tropadyne is no exception) depends entirely upon the intermediate frequency transformer. If the intermediate transformer is poorly designed, it is useless to heterodyse the signals to a longer wavelength, as they could just as well be amplified on the shorter wavelength by using the conventional tuned radio-frequency transformer.

The failing of most super-heterodynes is due to improperly matched intermediate transformers and loosely coupled air-core transformers having a low input to output efficiency. The TROPAFORMER was designed to overcome all these difficulties. In the first place it combines transformer and condenser. The condenser is shunted across the secondary winding of the transformer, and by its use the transformer may be tuned to any definite wavelength between 3,000 and 9,500 metres. Therefore, one important advantage of using TROPAFORMERS is the ability to tune each stage to the same wavelength, and thus insure maximum amplification and selectivity.

By the use of a small amount of special extra thin silicon steel for the core, the efficiency of the transformer is considerably increased and, due to the fact that each stage is tuned, the selectivity, which was sacrificed by using iron for the core, is entirely compensated for. Only after extensive research work has the correct amount of iron and coil spacing been determined for amplification without distortion. Transformers that are too sharply tuned distort by the eliminating side bands in the intermediate frequency carrier wave.

The amplification is less on the higher wavelengths than on the lower. The explanation of this is due to the fact that the ratio of inductance to capacity is decreased and, consequently, the step-up ratio of the transformer is reduced. Although the maximum amplification is at the zero dial setting, it is not good practice to operate the transformers under the zero-degree setting of the dial, as the stability of the circuit is decreased, and it has a tendency to oscillate. This explains why the best operating position is between 50 and 80 on the dial.



When four TROPAFORMERS are operated in cascade in a super-heterodyne circuit the method of adjusting them is simple. First, each dial should be set at about 50 or 60. A station is then tuned in. The dials are then adjusted, one at a time, and left in the position that gives the greatest volume. It will be necessary to make slight adjustments of the potentiometer that stabilises the circuit, as when all TROPAFORMERS are in tune the circuit oscillates more easily than when they are out of tune. Final adjustments are made on the TROPAFORMERS after a very weak station is tuned in. Once adjusted they need not be touched again. NOTE THAT THE FOUR TROPAFORMERS USED IN A SUPER-HETERODYNE ARE ALL ALIKE. NO SPECIAL INPUT TRANSFORMER IS REQUIRED.

All TROPAFORMERS receive a careful individual test of frequency characteristics and voltage amplification.

The TROPADYNE KIT, containing four TROPAFORMERS, with Shunt Condensers, one Oscillator Coupler, complete with wiring diagram in three colours, drilling template and book giving complete instructions.

List Price £8 5 0
" TROPAFORMERS 35/- each.
" Oscillator Couplers 18/6 each.



London, Regent Street, einst und später...



Hamleys in London – der Welt erster und grösster Spielzeugladen: Im Jahr 1760 eröffnete der aus Bodmin in Cornwall stammende William Hamley im Londoner Stadtteil High Holborn einen Spielzeugladen mit Namen «Noah's Ark» (Arche Noah).

Das Geschäft blieb in den Händen der Familie und war, als 1837 die Enkelsöhne des Gründers die Leitung übernahmen, bereits richtig berühmt – mit königlicher und auch sonst nobler Kundschaft.

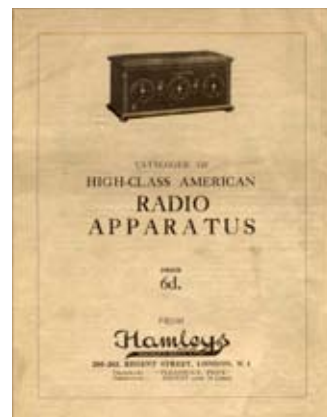
Eine Filiale an der Regent Street, einer der berühmtesten Strassen im Herzen der Stadt entstand 1881; sie befand sich zuerst in Nr. 200, wurde später erweitert (Nr. 200 - 202) und besteht seit 1981 aus den nebeneinanderliegenden Gebäuden 188 - 196, als weltgrösster Spielwarenladen mit einer Verkaufsfläche von total 5 000 m². Jede der sieben Etagen ist einer anderen Spielzeugkategorie gewidmet; der Parterrebereich gehört traditionsgemäss den Stofftieren, von den Teddybären bis zu fast lebensgrossen Giraffen...



Moritz Rauhaardackel von Steiff (Amazon)

Höhepunkt ist die seit etlichen Jahren stattfindende Hamley «Christmas Toy Parade», ein grosser, bunter Umzug, von Tausenden – nicht nur Kindern – gern besucht.

Hamleys ist heute fast überall in vielen Ländern vertreten und seiner Branche stets treu geblieben, doch es gab offenbar in den 1920er-Jahren einmal einen Abstecker in das damals aufkommende, vielleicht auch als Spielzeug betrachtete «Radiowesen», doch niemand spricht mehr davon, keiner weiss etwas, aber ein noch erhalten gebliebener Katalog scheint zu beweisen, dass dem so war.



Er enthält auf dreissig Seiten nur erstklassige Bauteile und Apparate ausschliesslich amerikanischer Herkunft, wobei offenbar R.A. Rothermel, ein Londoner «Elektronik-Spezialist» beteiligt war und ein informatives Vorwort verfasste:

INTRODUCTION

IN presenting this new list of Radio Apparatus, we should like to express our appreciation and thanks for the large number of letters and testimonials we have received from Traders and discriminating English Amateurs.

It is very gratifying to know that our efforts to supply components of the highest quality are appreciated, and to feel that we have been the means of making it possible for British experimenters to obtain components which will enable them to construct up-to-date receivers.

Due to early broadcasting, coupled with remarkable manufacturing resources and wonderfully equipped research laboratories, it has become an acknowledged fact that the design and construction of American Radio Apparatus is far in advance of that of any other country in the world.

...Mit dieser neuen Liste möchten wir uns bedanken für die vielen von Händlern und anspruchsvollen Englischen Amateuren eingegangenen Briefe und Berichte. Es ist sehr erfreulich zu wissen, dass unsere Bemühungen, Bauteile bester Qualität zu liefern, geschätzt werden und zu sehen, dass wir damit Britischen Experimentatoren ermöglicht haben, Empfänger nach neustem Stand der Technik zu bauen.

Es ist eine bekannte Tatsache, dass – dank frühzeitigem Start des Radiowesens, geeigneten Produktionsmitteln und hervorragend ausgestatteten Laboratorien – Amerikanische Produkte den Erzeugnissen aus anderen Ländern weit voraus sind. Britische Hersteller haben dies zwar realisiert, doch kann es bis zum Erreichen einer ebenbürtigen Qualität noch Jahre dauern, unter Berücksichtigung der bedeutenden Anforderungen an ein kommerziell fabriziertes Produkt.

Die saubere Anpassung von Transformatoren zum Beispiel ist dermassen anspruchsvoll, dass selbst in Amerika nur wenige Fabrikanten gute Arbeit zu leisten im Stand sind. Die folgenden Seiten lassen erkennen, dass wir Erzeugnisse prominenter Marken anbieten können – Namen wie Bremer Tully, Silver-Marshall, Allen Bradley, Haynes Griffin, Connecticut, Phenix, etc. brauchen keine Erklärungen.

Auch ist zu sehen, dass die von uns gehandelten Komponenten in folgenden, bestbekanntesten Empfangsgeräten Verwendung finden:

*The Haynes Griffin Simplified and De Luxe Super Heterodyne.
The New Cockaday Super Heterodyne.
The Bremer Tully «Nameless» Receiver.
The Silver-Marshall Laboratory and Autodyne Receivers.
The Best 45,000 Cycle Popular Mechanics' Super Heterodyne.
The Ultradyne.
The Tropadyne.
The Ricodyne.
The Silver-Marshall Four-Tube Knockout.
The Roberts Knockout, etc.*

Wir werden, dem jeweiligen technischen Fortschritt entsprechend, unser Lager dauernd mit neuen Errungenschaften unserer Lieferanten ergänzen. Abschliessend freuen wir uns, Sie beim Bau eines dieser Apparate beraten zu dürfen und Ihnen die dazu passenden Röhren zu empfehlen.

R.A. Rothermel, Ltd.

*The Best 45,000 Cycle Popular Mechanics' Super Heterodyne.
The Ultradyne.
The Tropadyne.
The Ricodyne.
The Silver-Marshall Four-Tube Knockout.
The Roberts Knockout, etc.*

We shall be continually adding stocks of new components as further advances are made in design by various manufacturers whose products we handle.

In conclusion, we shall be pleased to give advice as to the construction of any of the circuits mentioned above, and to recommend suitable Valves.

R. A. ROTHERMEL, LTD.

THE "NOAHS ARK"

HAMLEYS
231, 230, 229 HIGH HOLBORN

Announcing
2ND ANNUAL
MODEL AEROPLANE
Competition

HAMLEY BROTHERS LTD.

To Model Aeroplane enthusiasts this is the best Competition yet—especially if you are keen on the constructional side of the Hobby. There are two sections: Senior (over 16 years) and Junior (under 16 years). The first prize in each section is a magnificent Trophy, and other prizes total over 30 Guineas in Vouchers. The Competition is delightful in its simplicity—because all you have to do is to construct a Model Aeroplane that will fly. The chief condition of the entry is that the Kits W.1, and a good selection is given for each section. —B.O.P. Readers should write at once to Hamleys for a folder giving full particulars—and to know how an entry form may be obtained.

A SPECIAL ARTICLE ON THIS COMPETITION APPEARS ON PAGE 7

TABLE CAMP STOOLS

TEAL LUNCH CASE

Everything for Picnics COMPLETE IN ONE CASE

HERE, at last, is the complete Picnic Outfit—one strong case, size only 20 x 16 x 6 ins., which holds every requisite for al fresco meals. In addition to a fully fitted lunch and tea case for four persons—with stainless cutlery and decorative china—which can be used separately if desired, the outer case contains a folding table, four camp-stools, table-cloth and serviettes. A marvel of compactness at the remarkably low price of 84/-

Our Illustrated Picnic List (G.H.) will be sent post free on request.

Mail Order Dept. (G.H.)
200-202 REGENT ST.
LONDON, W.1

Hamleys
HAMLEY BROS. LTD.

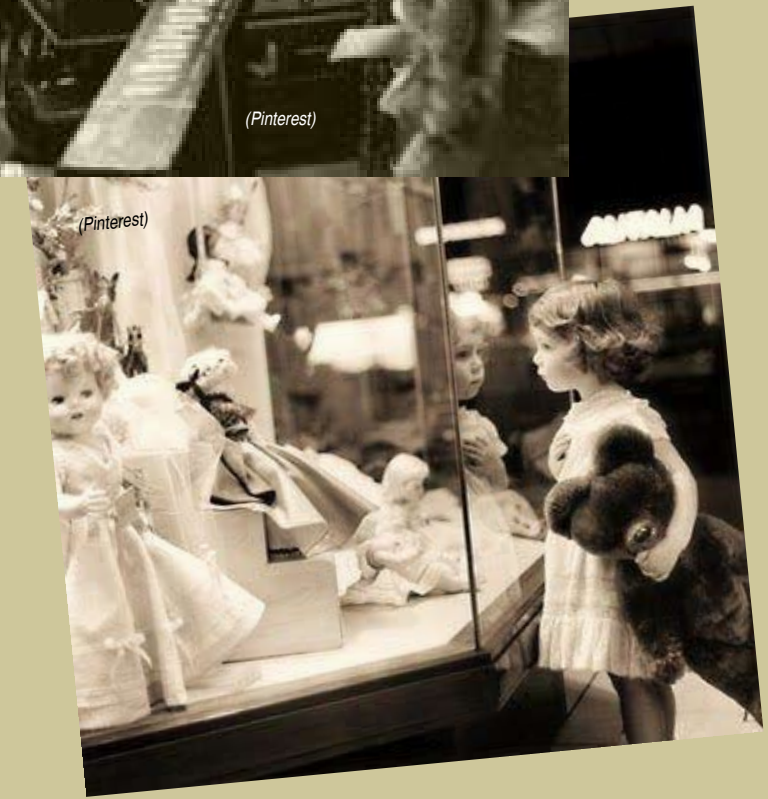
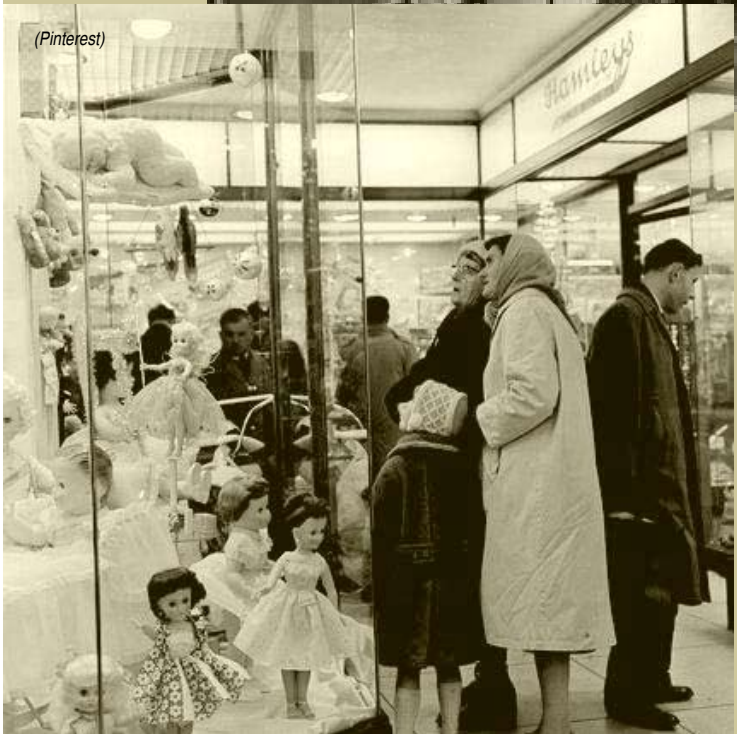
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LONDON and CROYDON

The **FINEST TOYSHOP** in the **WORLD**

SEE THE WONDERFUL SELECTION OF **Tri-ang Toys**

The House of **Hamleys**
HAMLEY BROTHERS LTD.

The Parade, Festival Gardens,
BATTERSEA PARK
AND
200-202, REGENT ST., LONDON, W.1





(GettyImages)



London, Regent Street: Christmas Toy Parade
(New West End)

PROOF—A FEW OF OUR MANY TESTIMONIALS

W. H. WALL,
115, Clive Road,
Canton, Cardiff.
May 29th, 1925.

DEAR SIR,—
I am in receipt of yours of the 23rd inst., also the "Royal" transformer, for which I thank you.
You will doubtless be pleased to learn that the transformer arrived just in time to be substituted for one of another make with distinctly improved results, and I consider that the trust I which you have dealt with my complaint has not been misplaced. I have hitherto had in your components has not been misplaced. I shall lose no opportunity in making this fact known to the many enthusiasts with whom I am acquainted.
Yours faithfully,
W. H. WALL.

Highgate,
N. 6.
April 26th, 1925.

GENTLEMEN,—
You will doubtless be interested to hear of the results obtained on the six-valve Tropadyne which I assembled and tested out on Saturday last. Except for the transformers and oscillator coupler, all components were standard, and B. T. H. B5 valves were used throughout.
The following stations were logged in under one hour, using a standard Rodline loop: London (without L.F.), loud speaker; Birmingham (with L.F.), loud speaker; Manchester (with L.F.), loud speaker; Bournemouth (with L.F.), loud speaker; Newcastle, loud speaker; Glasgow, loud speaker; Aberdeen, loud speaker; London, loud speaker; Hamburg, loud speaker. English Petiti Parisien, loud speaker. Many of these were received at enormous strength and amateurs. Many of these were received at enormous strength and amateurs. Many of these were received at enormous strength and amateurs.
This was one evening's work. I am hoping to log many more stations yet. Interference from London simply was not there. The station could be lost on a vernier movement of the oscillator condenser. Truly a set for the most discriminating amateur or experimenter!

W. LOVEDAY,
37, Navarino Road, E. 8.
June 25th, 1925.

GENTLEMEN,—

H. COLLIER & SONS,
Motor Cycle Manufacturers,
44-45, Plumstead Road, S.E.
June 25th, 1925.

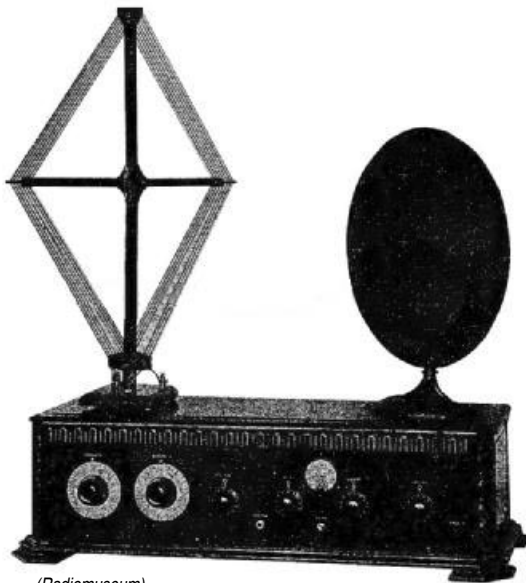
DEAR SIR,—
I am pleased to advise you that the Ultradyne receiver built up from the kit I recently obtained from you has fully come up to the maker's claims. I have now tried out eight different Heterodyne sets, some from English parts and others from America, the Ultradyne being easily best. Even during the present summer weather I have not the slightest difficulty in receiving I.F.C. relay stations at loud speaker strength, using one stage of I.F. only. London, Bournemouth, and Birmingham are received at good speaker strength without L.F. Recurrence of nearby stations is also particularly free on this set. In fact, on only one H.B.C. station is a recurrence of a L.O. troublesome, the station being Aberdeen. This feature alone eliminates one of the very few disadvantages of the Super Heterodyne upon crowded wave bands, and will no doubt be appreciated by intending constructors who have had previous experience of this type of receiver. Selectivity is extremely good, notwithstanding the simplicity of tuning. I have on several occasions received fairly clearly two continental stations, whose wavelengths were sufficiently close to cause slight heterodyning, and each without the slightest trace of the other. I can also quite easily receive Edinburgh, 343 metres, without the slightest interference from Nottingham, 343 metres, or vice versa. The fore-mentioned efficient outdoor aerial gives about 25 per cent. greater volume, but without the exceptional freedom from noise and interference so noticeable with the frame, and which makes distant reception really worth listening to.
Yours truly,
P. C. R. COLLIER.

Auf der dritten Umschlagseite des Katalogs durften ein paar Dankeschreiben von zufriedenen Bastlern nicht fehlen. Hier ist, was Jos. Alexandre von Brixton mitteilte:

Sehr geehrter ...

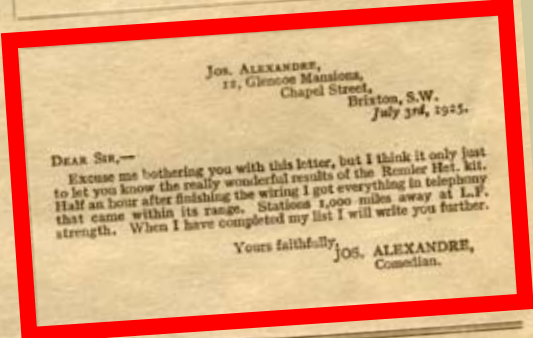
Entschuldigen Sie bitte, wenn ich Sie mit diesem Brief störe, aber ich muss Ihnen unbedingt von den wunderbaren Resultaten mit dem Remler Heterodyne-Bausatzradio berichten! Schon eine halbe Stunde nach dem Fertigstellen der Verdrahtung konnte ich auf dem ganzen Wellenbereich alles empfangen – 1000 Meilen entfernte Stationen in Lautsprecherstärke. Wenn ich meine Empfangsliste fertig habe, werde ich Ihnen wieder schreiben.

Hochachtungsvoll
Jos. Alexandre,
Komiker



(Radiomuseum)

Es könnte so ein Apparat gewesen sein, der den Komiker Alexandre in Begeisterung versetzt hat (Remler* Neunröhrensuper, Jahrgang 1925).



Remler:
Die «Remler Company» wurde 1918 von dem für Röhren bekannten Elmer Cunningham gegründet, wobei «Remler» nichts anderes ist als sein rückwärts gelesener Vorname mit einem vorangesetzten «R» (für Radio).
Ab 1922 befand sich die Firma im Alleinbesitz der beiden Mitbegründer und bekam den Namen »Gray und Danielson Mfg Co.».
Das Herstellprogramm umfasste ein breites Angebot an Bauteilen.

Set of parts not used.

SUPER HETERODYNE KITS, TRANSFORMERS, COUPLERS, Etc

*For the Haynes Simplified Super Heterodyne, Haynes Model 'A' Super De Luxe,
The New Cockaday Super.*

HAYNES GRIFFIN TRANSFORMERS.



HAYNES Griffin Intermediate Wave Transformers are individually tested and the exact peak of resonant frequency is carefully ascertained. They are then matched in sets of four which display the same characteristics. It is apparent that such careful matching must give consistently better amplification than ordinary unmatched instruments. A minimum of L.F. amplification is assured by the low impedance windings used. Ease in tuning is assured from the fact that H.F. transformers are tuned to a comparatively low wavelength, thus eliminating the repetition of stations at different points on the oscillator dial. Amplification at this low wavelength also eliminates a great deal of noise and static.

Used in an intermediate amplifier the amplification peak of Haynes Griffin Transformers using bright valves will be about at 150 kilocycles or 2,000 metres.

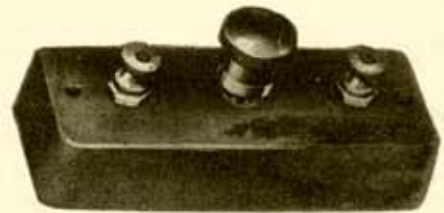
Haynes Griffin Intermediate Wave Transformers are specially suitable for use in Super Heterodyne Receivers. They are sold only in matched sets of four, consisting of one in-put and three inter-stage transformers.

Set of four List Price £5 5 0.

HAYNES OSCILLATOR COUPLER.

THE Haynes Griffin Special Oscillator Coupler is designed for use in Super Heterodyne and other experimental oscillator circuits. Used with a .0005 condenser in shunt oscillations may be produced over a wavelength range of from 180 to 500 metres. As used in the H.G. simplified and Super-de-luxe super heterodyne receivers.

List Price 18/- each.

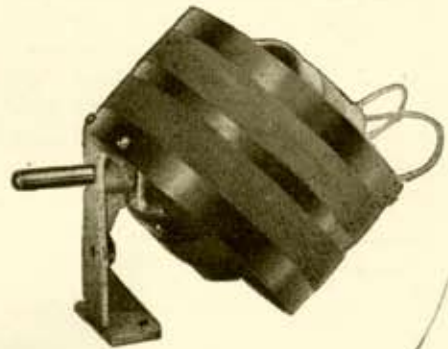


HAYNES SPECIAL IN-PUT CONDENSER.

THE Haynes Griffin Variable In-put Condenser is distinctly a speciality product, and was especially designed for use in shunt with the primary of the in-put high frequency transformer in super-heterodyne receivers. Its high capacity range of .0003 to .0008 mfd. ensures perfect results.

List Price 8/6 each.

*Amplex Variable Grid Densers
can be supplied in other
capacities.*



THE MICRODYNE KIT.

THIS kit contains all necessary parts for building the seven-valve Microdyne super-heterodyne receiver.

Drilled and engraved panel, rheostats, dials, valve holders, together with a complete set of Microdyne intermediate air-core transformers, and everything required for assembling one of the most favoured super-heterodyne sets known. Apex gold plated vernier controls are furnished with this kit.

Kit complete List Price £25 10 0.

Plus Western Electric Co.'s licence, 30s.

REMLER APPARATUS

For Best's "Popular Mechanics" 45,000 cycle Super Heterodyne.

INTERMEDIATE FREQUENCY AND TUNED STAGE TRANSFORMER



Type 610.



Type 600.

THE Remler Type 600 Intermediate Transformer is designed to provide one or more stages of amplification at long wavelengths or low frequencies, and will produce satisfactory amplification when used at any frequency between 30 and 90 kilocycles. In super-heterodyne circuits radio engineers agree the best results are obtainable when the amplification is employed at a frequency of approximately 45,000 cycles. This transformer is ideal for such use, as maximum and uniform amplification is obtained between 40,000 and 50,000 cycles. Balanced winding eliminates electrostatic capacity and insures maximum stability in operation, making it possible to properly bias the grid to the intermediate frequency amplifier tubes, thus securing maximum amplification per stage.

The Remler Type 610 Tuned Stage Transformer has been designed to give maximum selectivity consistent with good musical reproduction. A .00025 mfd. fixed-mica condenser should be connected across the secondary of this transformer, or, if desired, a variable condenser may be used. If any interference from long-wave stations is experienced, a change in the condenser capacity will eliminate this trouble.

It is unnecessary to sell Remler transformers in matched sets, because they will be found absolutely interchangeable in all respects. The coils are checked before being incorporated in the transformer, and the individual transformers are very carefully tested after they are completely assembled. The precautions taken in this respect have been worth while, as is evidenced by the number of complimentary letters we have received regarding the quality and uniformity of these products.

Both Type 600 and 610 transformers have their windings mounted on small bakelite castings, and are enclosed in compact and beautifully finished bakelite cases. All terminals are brought out at the top and marked to designate their proper connection to the associated parts of the amplifier.

Type 600. Intermediate Transformers	...	...	...	...	...	...	...	...	List Price, 35/- each.
Type 610. Tuned Stage Transformers	...	...	...	...	...	...	...	...	List Price, 35/- ..

THE REMLER OSCILLATOR COUPLER. Balanced Winding Coupling Unit.

We used this coupler instead of the Haynes Griffin one in the simplified Super.



REMLER Type 620 Coupling Unit is made especially for use in a super-heterodyne circuit. The balanced winding permits the use of an oscillator circuit which furnishes a uniform output over the entire broadcast wavelength range.

List Price, 18/6 each.

Best American audio transformer in England.

THE KARAS HARMONIK L.F. TRANSFORMER



As used in the New Cockaday Super-Heterodyne Receiver.

THIS remarkable new laboratory-made transformer gives a high degree of amplification with great volume over a wide range of frequencies, and provides unusually clear, natural reproduction. Turn ratio 4 to 1. Specified by Laurence M. Cockaday for use in his new super-heterodyne.

List Price, 37/6 each.

THE R.A.R. L.F. TRANSFORMER

THE "R.A.R." Transformer is an exceptionally fine piece of workmanship and gives wonderful amplification. The terminals are well spaced and the size is very convenient where space is a consideration.



This Transformer will meet the demand of those who require a good article at a low price. Ratio 3 to 1.

No. 4500 List Price, 14/6 each.

THE DURATRAN H.F. TRANSFORMER

As used in the Cockaday Super-Heterodyne Receiver.

THE Duratran Radio Frequency Transformer is designed for a wavelength band of 225 to 550 metres, and has an amplification factor of over 20. The transformer is mounted in a hard rubber case. Liberal spacing of the terminals, to prevent surface leakage and reduce capacity between the connecting wires, is an outstanding feature.

The terminals are plainly marked and on the back of the transformer case is shown a conventional circuit diagram.

No special form of circuit is necessary. Will amplify satisfactorily in any form of radio frequency circuit.



List Price, 21/- each.

THE BURNS LOUD SPEAKER

THE No. 205 Speaker is an instrument of extreme sensitiveness, yet is capable of great volume and harmony. The quality of reproduction is of remarkable clearness and instantly attracts attention. The voice with all its fine shadings and the various musical instruments with their wide range of pitch are reproduced with exquisite trueness.

The volume of tone surpasses that of many higher-priced speakers and, in addition, the Burns Speaker is surprisingly free from distorted or false tones and raspy sounds. This clarity of tone has won for it unanimous praise and enthusiastic users. There is no absorption of tone or loss of volume with the free unobstructed curve of this horn. The shape of the bell has been designed to give best acoustic results, as also has been the selection of the materials, the aluminium sound column and pyralin bell being practically non-vibrating. The horn is well balanced on a wide base on which it freely swivels, thus directing the sound where wanted.

Burns speakers are equipped with the well known Burns unit. This has a convenient adjuster for regulating tone, and if desired can be supplied separately with adaptors for attachment to the tone arm of any gramophone. A small base holds the unit at right height to fit on the tone arm.

No. 205B. Speaker with highly polished black pyralin bell.

List Price, £5 10 0 each.

No. 205D. De Luxe Model with semi-transparent pyralin bell.

List Price, £5 17 6 each.

No. 100. Unit for gramophone attachment.

List Price, £2 5 0 each.

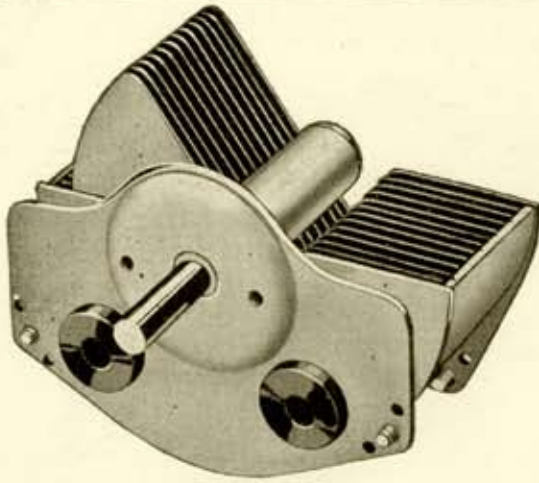


No. 100 Unit.



No. 205 B.

LOW-LOSS VARIABLE CONDENSERS



Bradleydenser

BRADLEYDENSERS.

THE Bradleydenser is a low-loss, efficient variable condenser of distinctly new design. The use of one bearing eliminates losses by reducing the amount of dielectric in the condenser, and makes possible a very low minimum capacity.

The Bradleydenser is made of brass, and is provided with a detachable dust cap over the stationary plates. The mounting plates and rotor are grounded, thus eliminating hand capacity effects. It is mounted on the panel with two screws, and no template is required for drilling. The Bradleydenser is made in four sizes without vernier plates.

·00025	...	...	...	...	...	List Price, 24/6 each.
·00035	...	...	...	...	...	List Price, 25/6 each.
·0005	...	...	...	...	...	List Price, 26/6 each.
·001	...	...	...	...	...	List Price, 31/6 each.

BREMER-TULLY LIFETIME CONDENSERS (Square Law Type).

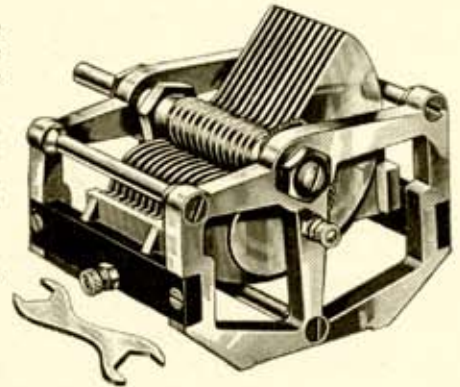
DESIGNED and built to secure the utmost in all the essential factors of a perfect condenser.

Not only extremely low-loss, but also high ratio—straight line wavelength throughout range, "Lifetime" adjustable bearings, positive pig-tail connections, lubricated friction and bearings, no springs, single hole three-point or combination mounting.

B-T condenser plates are of pure aluminium, die-cast in place by a special process under extremely high pressure, which eliminates all possibility of loose plates or high resistance because of poor contacts. A solid bar of metal extends centrally through the rotor plates, and radial fins extend to the upper surface.

This condenser has met with the highest approval of the best experts. It is beautiful in finish and workmanship—rugged, but not heavy, and is built to last a lifetime.

L-7—125 M.M.F.	·000125	...	...	...	List Price, 22/6 each.
L-11—250 M.M.F.	·00025	...	...	...	List Price, 24/- each.
L-23—500 M.M.F.	·0005	...	...	...	List Price, 26/6 each.
L-35—750 M.M.F.	·00075	...	...	...	List Price, 34/- each.



HAMMARLUND MODEL "C" CONDENSERS.

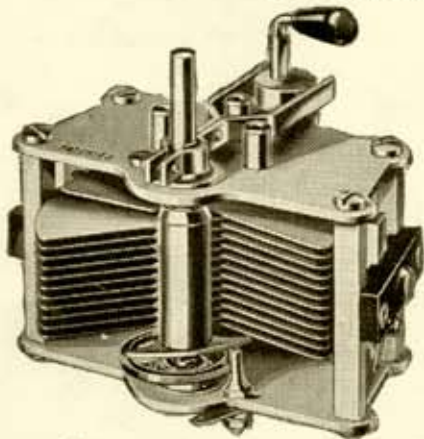
AFTER twelve months' experimental work the Hammarlund Model "C" Condenser was perfected. Hard brass rotor and stator plates of high conductivity are placed in slotted brass posts and soldered, thus securing perfect electrical contact. A clock-spring pig-tail is provided. Stator plates are so shaped that capacity increases very slowly over the low wave range of the condenser.

PATENTED VERNIER CONTROL.

Though some means of extra fine tuning is recognised as essential, arrangements offered up to the present have not met the exacting requirements of perfect verniers. Losses have been increased by additions of insulation. Loose plates have caused "microphonics," generally confused with "battery noises" and "static." Fixed dials have prevented balanced panel layouts. Duplication of settings, or "logging," has been difficult.

The vernier control used on Hammarlund Condensers is an exclusive patented feature which tunes to a hairsbreadth by moving the entire set of rotor plates by minute degrees, it being possible to split each degree on the condenser scale into fifty or more parts, each giving its distinct variation in capacity. Settings can be logged and duplicated at any time because every adjustment of the vernier is indicated on the dial.

The control, which has no backlash and is non-microphonic, operates by means of a small handle located at the edge of the dial. As it can be adjusted to take any dial up to 4 inches in diameter, any desired type or size of dial may be used, maintaining both the beauty of the set and the knife edge tuning qualities required to eliminate interference.



·00025 plain	...	...	...	...	List Price, 24/- each.	·00025 vernier	...	...	...	...	List Price, 28/6 each.
·0003	..	..	..	..	" 24/3 "	·0003	..	..	..	..	" 29/6 "
·00017	..	..	..	..	" 24/6 "	·00017	..	..	..	..	" 30/- "
·0005	..	..	..	..	" 26/6 "	·0005	..	..	..	..	" 31/3 "
·001	..	..	..	..	" 31/3 "	·001	..	..	..	..	" 46/6 "

Prices of Midget, Dual and Triple Condensers on request.

16
Very best condensers made

LOOPS, ETC.

Very good loop.



Type T.S.B. 12.

THE BODINE LOOP

Specially designed for Super-Heterodyne Receivers.

More Beautiful in appearance.

More effective in Design.

THE Bodine Loop graces the most attractive home surroundings. Its design is unusually artistic and its English mahogany finish and silk-covered wire make it strikingly handsome in appearance.

The Bodine is very responsive to directional setting, giving great selectivity, and allowing you to easily tune out undesired local stations. In order to secure full advantage of this feature it is fitted with a calibrated satin-silver dial marked off in degrees. You can log the setting of the loop for any particular station and return to that station without trouble at any time.

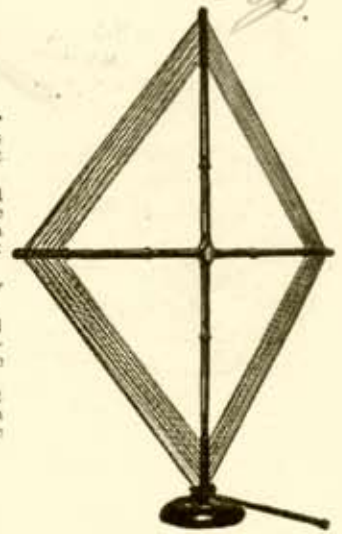
The loop is also fitted with an insulated handle that allows you to turn it conveniently without disturbing its magnetic field by body capacity.

It is designed for the lowest possible absorption losses throughout; impulses from distant stations are delivered to your set with undiminished strength. Every part is carefully insulated and the stranded wire is double-wrapped in silk. Connections from the loop to the radio set are made directly from the insulated ends of the loop coil, eliminating losses in the base of the loop.

The results obtained from any radio set operating on a loop depend entirely upon the amount of energy that the loop collects and delivers to the set. The Bodine Loop—with its new basket-weave winding and low-loss design—will bring in many distant stations that you could not hope to get with a less efficient loop. Its use is an assurance of satisfaction.

Type B. 12. Standard Loop **List Price, 45/- each.**

Type T.S.B. 12. With 5-point tap switch which enables the whole or any part of the loop to be used **List Price, 52/6 each.**

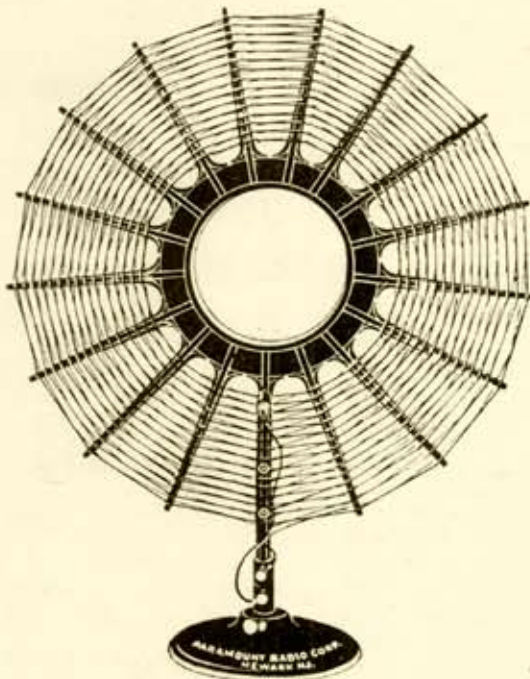
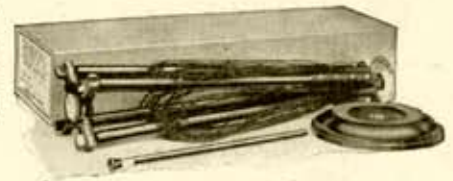


Type T.S.B. 12.

Collapsible and Portable

All models of the Bodine Loop are 2 feet square when erected, yet fold in an instant to fit into a box only $3\frac{1}{2} \times 6 \times 18$ in. in size. You can conveniently take this loop with you anywhere.

Sliding sleeves cover the joints at the centre and hold the loop rigidly extended. The wires are always taut; phosphor bronze strands interwoven with the stranded copper wire prevent stretching and loss of efficiency. Model B12. Standard



← THE PARAMOUNT LOOP

THE Paramount Loop is of different construction and design from any other loop made, and embodies many sound principles. It is composed of all Bakelite, insuring dielectric supports for the wire, thus eliminating possible leakage of energy. A great feature is the winding, and accounts for remarkable D.X. results. It is spider web wound, with windings spaced to give maximum signal strength. The diameter of the Paramount Loop is only 15 inches, yet it is wound with 56 feet of wire.

Provided for tappings by means of neat plugs. The Paramount is made in black or brown bakelite with green or brown silk wire.

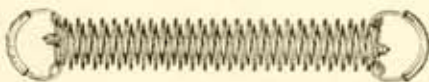
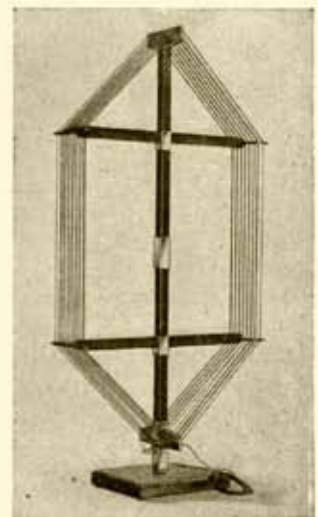
List Price, 62/6 each.

→ THE MATHIESON BOX TYPE LOOP

THE New Type Mathieson is the aristocrat of loops, and has been specially designed for use with the various models of super-heterodyne receivers detailed in this list.

It is wound with green braided silk-covered wire which is less liable to become frayed. Provision is made for centre tap and, if desired, the loop can be adjusted for use with a loop-jack plug, and thus mounted directly on top of the cabinet. The Mathieson is collapsible and takes up very small space when folded.

List Price, 62/6 each.



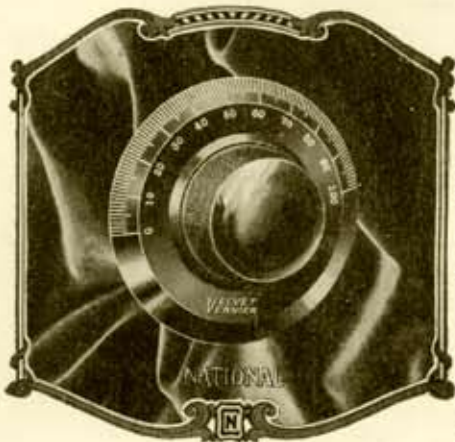
THE KEY TO THE AIR CAGE AERIAL

THIS Antenna is a double helix designed to give highly directional characteristics with maximum collecting area. This indoor cage cuts out static, reduces interference and gives many times more volume. Ideal for outdoor use, and in places where an outdoor aerial cannot be employed with portable sets ... **List Price, 9/6 each.**

Best used with Amber Super

ADDITIONAL ITEMS

NATIONAL VELVET VERNIER DIALS



TO control sharp tuning it is necessary that the motion of the manually-operated knob be imparted at reduced speed to the apparatus in a perfectly smooth movement, absolutely free from grating, noise and back-lash, and when the hand is removed from the knob, the apparatus must remain in a fixed position, otherwise the circuit constants are changed and poor tuning results. The National Velvet Vernier Dial has overcome every disadvantage common to the vernier type. This has been accomplished by the development of an entirely new form of gearless transmission. It is made entirely of bronze or brass, nickel-plated, and has a life far in excess of that of the set in which it is used. Its motion is smooth and regular throughout its range. *No back-lash exists—none can develop.*

The knob is of black bakelite and of ample size to fit the hand. The dial is also of black bakelite highly polished, and with perfectly uniform graduations.

The mechanism is mounted rigidly on the panel and serves as a third bearing for the apparatus it drives. The parts run true and uniform, and the graceful lines form a combination that is exceptionally pleasing.

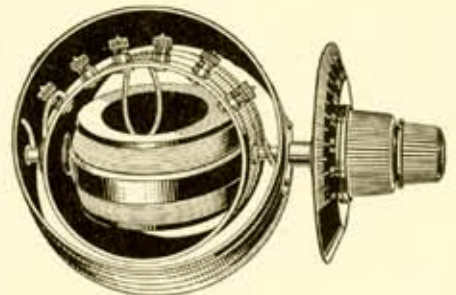
4-inch Velvet Bakelite Dial List Price, 14/6 each.

FOOTE COAST-COILS

THE COAST-COIL is a low-loss coil wound with the correct size of wire on high-grade tubing, thus assuring the lowest losses. It avoids the spider-web construction in which the spokes completely surrounded by wires have large losses. It eliminates the use of large wire, necessary to make a coil self-supporting, which construction increases the eddy current losses. The Coast-Coil is so constructed that the field is concentrated, thereby decreasing the losses ordinarily occurring in apparatus near the coil.

A coil built with a fixed primary will not operate satisfactorily on all aeriels. The length of your aerial—its height—the materials used—its construction—and the surroundings—have much to do with the results you get. The Coast-Coil with its inside rotor (variable primary) adjusts your set to your aerial.

List Price, 35/- each.



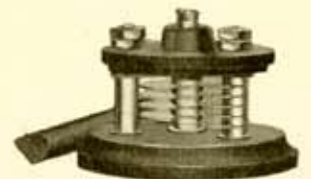
CHELTON NEUTRODYNE CONDENSER

Maximum Capacity 0.000015 M.F.D. Minimum Capacity 0.000005 M.F.D.

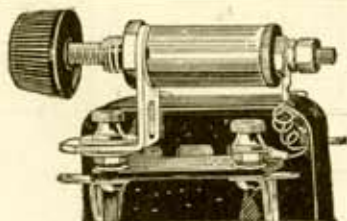
THIS condenser has been especially developed for neutralising valve capacities. Note the following points :

1. Base mounting for locating in any part of the set.
2. Capacity can be changed to suit any change of valves.
3. The insulated key enables one to make an adjustment that will not be changed by the curious tinker.

List Price, 9/3 each.



THE ELECTRAD AUDIOHM AND VARIOHM



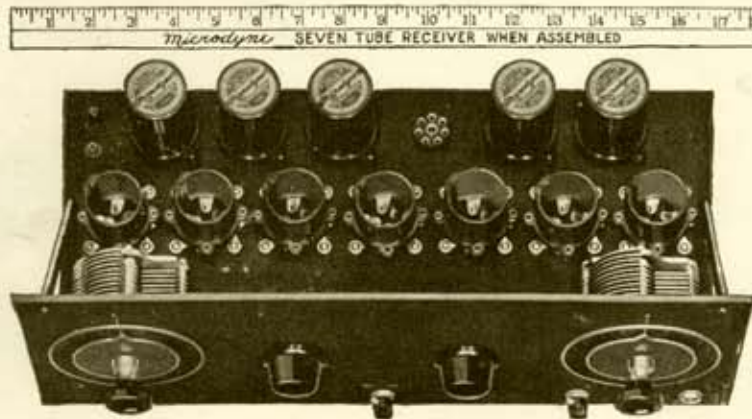
THE Electrad Audiohm is a variable resistance ranging from 10,000 to 120,000 ohms. It is especially designed to mount across the secondary of L.F. transformers and for resistance-coupled amplifiers.

List Price, 6/9 each.

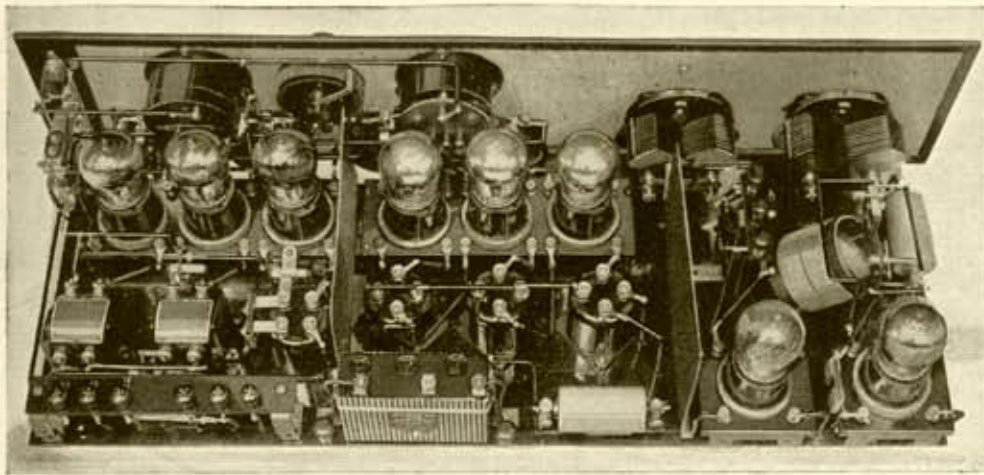
The Variohm is a grid leak having a complete range from one-fourth to 30 megohms in one unit. It is non-microphonic, moisture proof, and is designed for base or panel mounting.

List Price, 6/9 each.

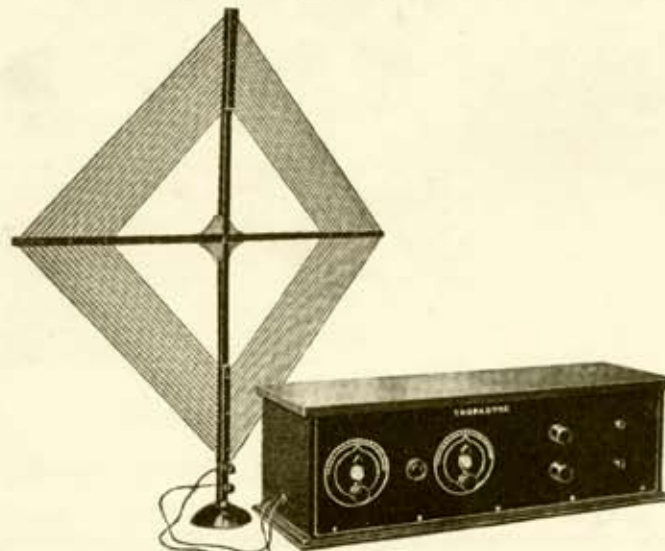
INTERESTING RECEIVERS



The Microdyne Super Het.

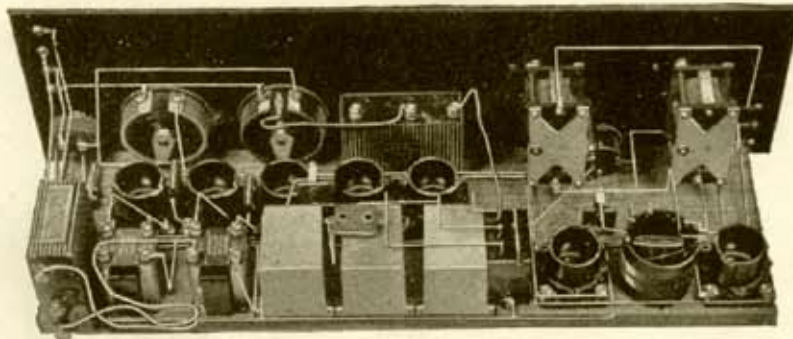


The Best 45,000 Cycle Popular Mechanics' Super Heterodyne.

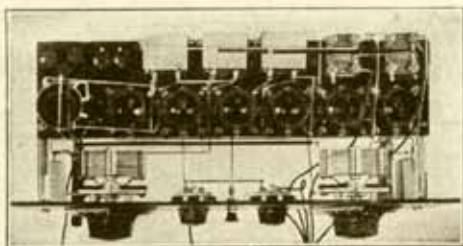


The Tropadyne.

INTERESTING RECEIVERS



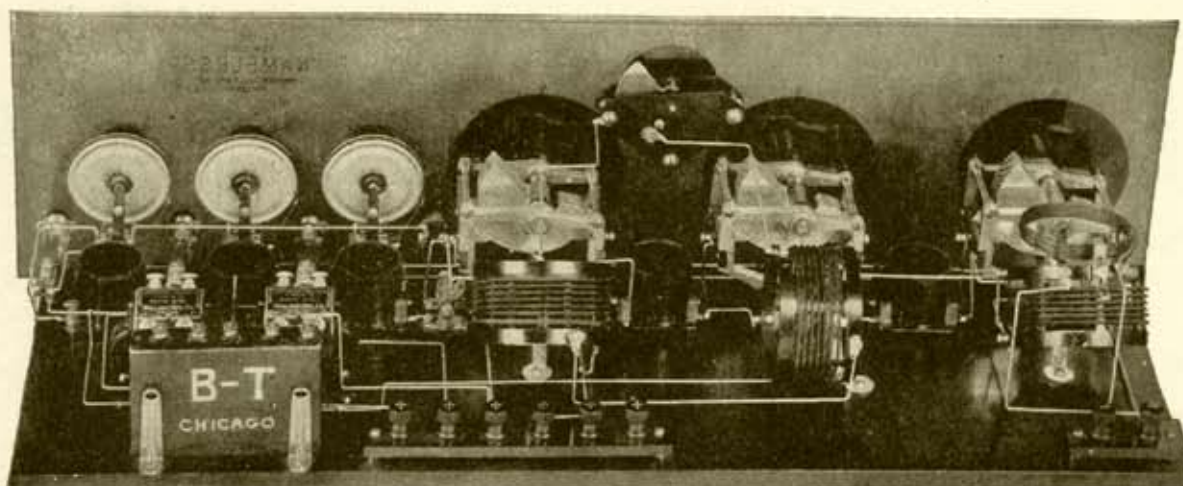
The Silver-Marshall Laboratory Super Het.



*very
good
portable*



The New Silver-Marshall Super Autodyne.



The Bremer Tully "Nameless."



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verbunden mit der Gesellschaft der Freunde der Geschichte des Funkwesens,
dem Radiomuseum.org und I-N-T-R-A

