

Lewis M Clement

1634/187A

Room 287A

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ILLUSTRATED CATALOGUE  
OF  
RADIO TELEGRAPH APPARATA

製品目錄

CLEMENT.

ANNAKA

ELECTRICAL INSTRUMENT CO., LTD.

株式會社 安中電機製作所

東京下澁谷

Society of Wireless Pioneers - California Historical Radio Society



**Illustrated Catalogue**  
OF  
**Radio Telegraph Apparata**

**The Annaka Denki Seisakujo, Ltd.**

**Annaka Elec. Instruments M'f'g. Co., Ltd.**

**TOKYO, JAPAN.**

## DATA for ENQUIRIES & ORDERS.

Our Clients are specially requested to furnish us with the following informations along with their Enquiries and Orders, viz:

1. Land or Ship Station.
2. Capacity in K.V.A.
3. Communication Distance by day, and by night in miles or nautical miles.
4. Local conditions of the regions to be covered in the communication range; on open sea, flat land or mountainous land.
5. Sending Wave-lengths (100—5,000 metres.)  
Receiving Wave-lengths (100—10,000 metres.)
6. Source of Electric Power for Motor-Generator; A.C. or D.C., Frequency and Phase, if A.C., and Voltage.
7. Accumulators are required or not.
8. Antenna is required or not.
9. If no special informations are given the accessories and spares we will always quote for our Standard sets.
10. The Plant to be installed by Buyers or by ourselves.

## TERMS AND CONDITIONS

Goods are forward at Customers' risk and expense.

Complaints can only be entertained if made within 4 weeks after receipt of the goods ordered.

Dimensions, Illustrations and Specifications given in this Catalogue are not binding and we reserve to ourselves the right to supply goods which may differ slightly from the particulars given, alterations and improvement being constantly made in our design.

All accounts payable in Tokyo.

## FORWORD.

The Radio Telegraph Apparata and accessories thereof, described under the following pages are manufactured with best materials and first class workmanship under the special licence of the Teishinsho (the Communication Department of the Imperial Japanese Government) and generally known as the "Teishinsho" type, and answer the following requirements:

Capacity from  $\frac{1}{10}$  K.V.A. up to 50 K.V.A.

To communicate for a distance of up to 4,000 nautical miles in the night time.

To radiate or receive practically any wave-lengths.

For bigger capacities full specifications are furnished upon application.

We take pride in informing our Clients of the fact that more than 80% of Wireless Stations in actual service on board vessels sailing under the Japanese flag are supplied by ourselves.

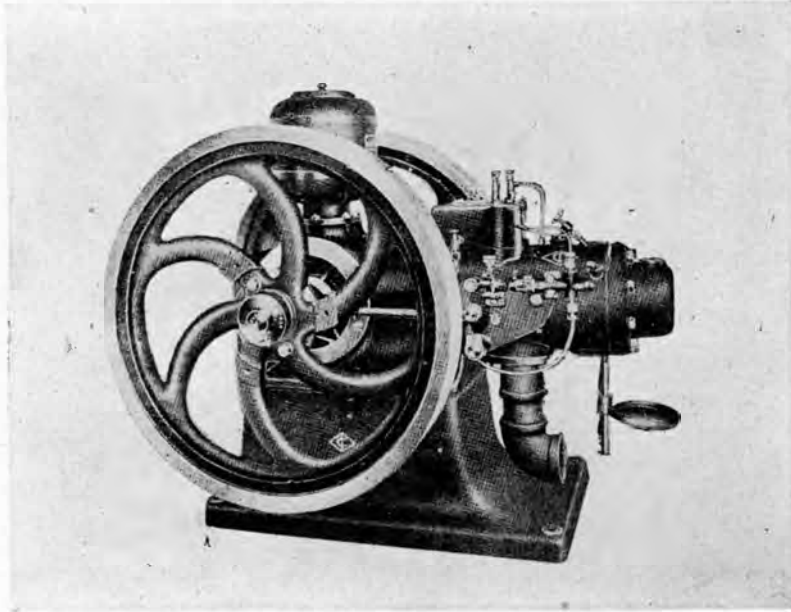
We were established in the year 1901, and have specialized in the manufacture of Radio Apparata since then.

THE ANNAKA DENKI SEISAKUJO, LTD.

March, 1920.

# 陸上局用横型單筒石油發動機

Horizontal Single Cylinder Oil Engine for Land Station Use.



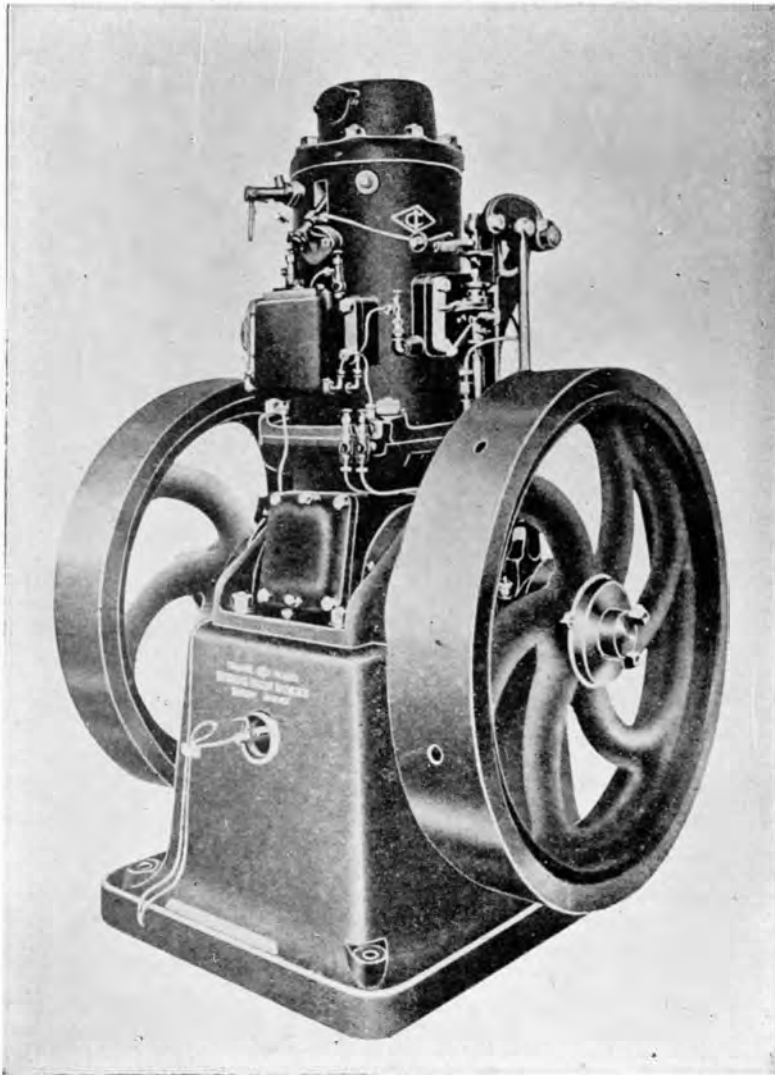
本機ハ横型「セミディーゼル」ニシテ二馬力ヨリ十五馬力迄同型トス

These Oil Engines are of Horizontal Semi-Diesel type and manufactured for capacities varying from 2, H.P. up to 15, H.P.

H.P.	Revolution per minute	Size of Pulley	Width of Belt	Diameter of Fly-Wheel	Length(approx.) of Engine	Breadth(approx.) of Engine	Height(approx.) of Engine	Net Weight (approx)
2	400	10" × 6½"	2¼"	24"	3'— 1"	2'—6½"	2'—9½"	in Kwan 105
3	400	10" × 7"	3"	26"	3'— 5"	2'—8½"	2'—11"	117
4	400	12" × 7½"	3"	30"	3'—8½"	3'— 0"	3'— 2"	152
6	380	14" × 8½"	3½"	34"	4'— 4"	3'— 4"	3'—6½"	210
8	370	14" × 8½"	3½"	36"	4'—8½"	3'—7½"	4'— 0"	326
10	360	16" × 8½"	3½"	38"	4'—10"	3'—9½"	4'— 2"	388
12	350	16" × 10"	4"	42"	5'—2¼"	4'— ½"	4'— 6"	413
15	340	18" × 11¼"	5"	44"	6'—9½"	4'—6¾"	4'— 7"	450

# 陸上局用豎型單筒石油發動機

Vertical Single Cylinder Oil Engines for Land Station Use.



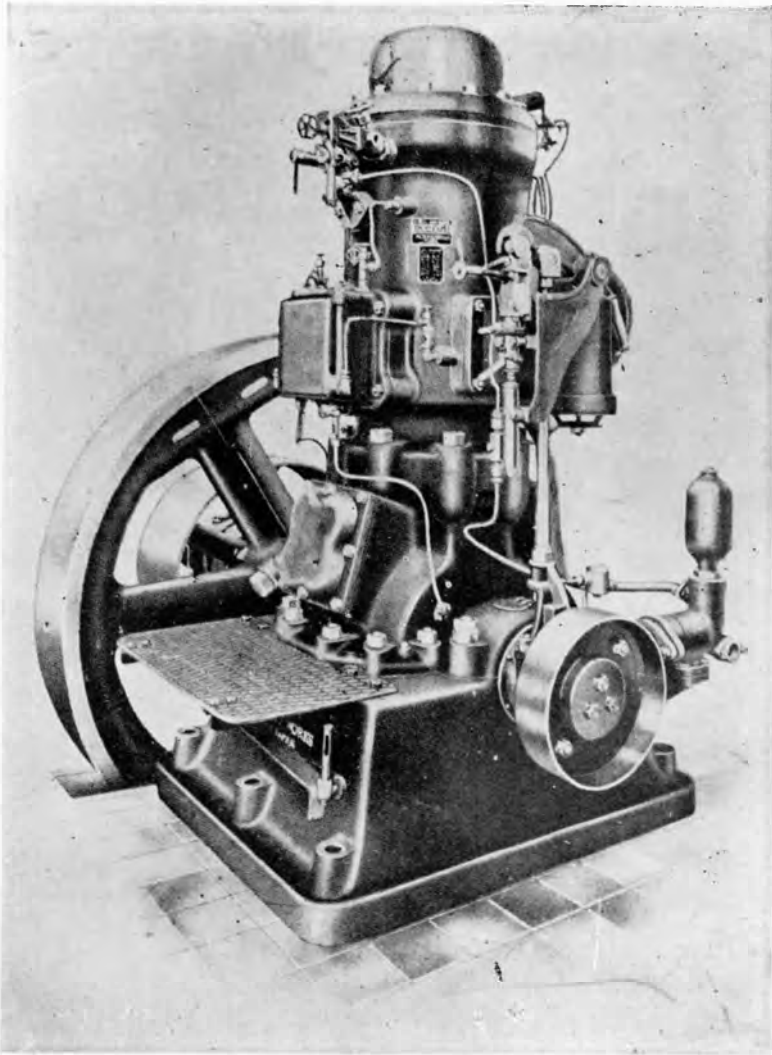
本機ハ豎型「セミディーゼル」ニシテ二十馬力ヨリ三十馬力迄同型トス

These Oil Engines are of Vertical Semi-Diesel type and are manufactured for capacities varying from 20, H.P. up to 30, H.P.

H.P.	Revolution per minute	Size of Pulley	Width of Belt	Diameter of Fly-Wheel	Length(approx.) of Engine	Breadth(approx.) of Engine	Height(approx.) of Engine	Net Weight (approx) in Tons
20	400	20"	6"	38"	54 $\frac{7}{8}$ "	40"	64 $\frac{9}{16}$ "	2.3
25	380	24"	7"	40"	55 $\frac{7}{8}$ "	40"	45 $\frac{5}{16}$ "	3.2
30	350	26"	8"	42"	62 $\frac{3}{8}$ "	42"	77 $\frac{1}{8}$ "	3.7

# 陸上局用豎型單筒石油發動機

Vertical Single Cylinder Oil Engine for Land Station Use.



本機ハ豎型「セミデーゼル」ニシテ三十五馬力ヨリ六十馬力迄同型トス

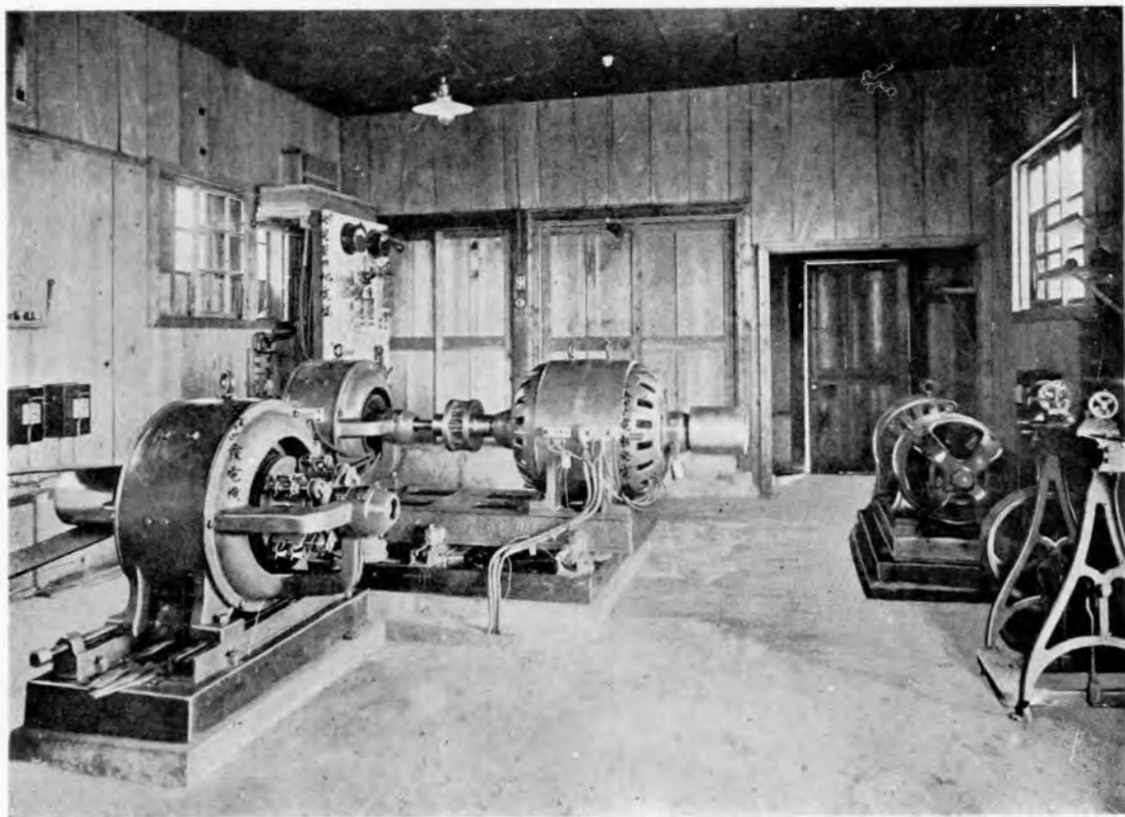
These Oil Engines are of Vertical Semi-Diesel type and manufactured for capacities varying from 35. H.P. up to 60. H.P.

H.P.	Revolution per minute	Size of Pulley	Width of Belt	Diameter of Fly-Wheel	Length (approx.) of Engine	Breadth (approx.) of Engine	Height (approx.) of Engine	Net Weight (approx.) in Tons
35	320	28"	9"	54"	73"	54"	73"	4.4
40	300	29"	9"	57"	76"	53"	75"	4.9
50	290	30"	10"	60"	79"	60"	77"	5.6
60	275	31"	10"	66"	84"	66"	83"	8.0



## 陸上無線電信局發電室ノ圖

Generator Room for Land Station.



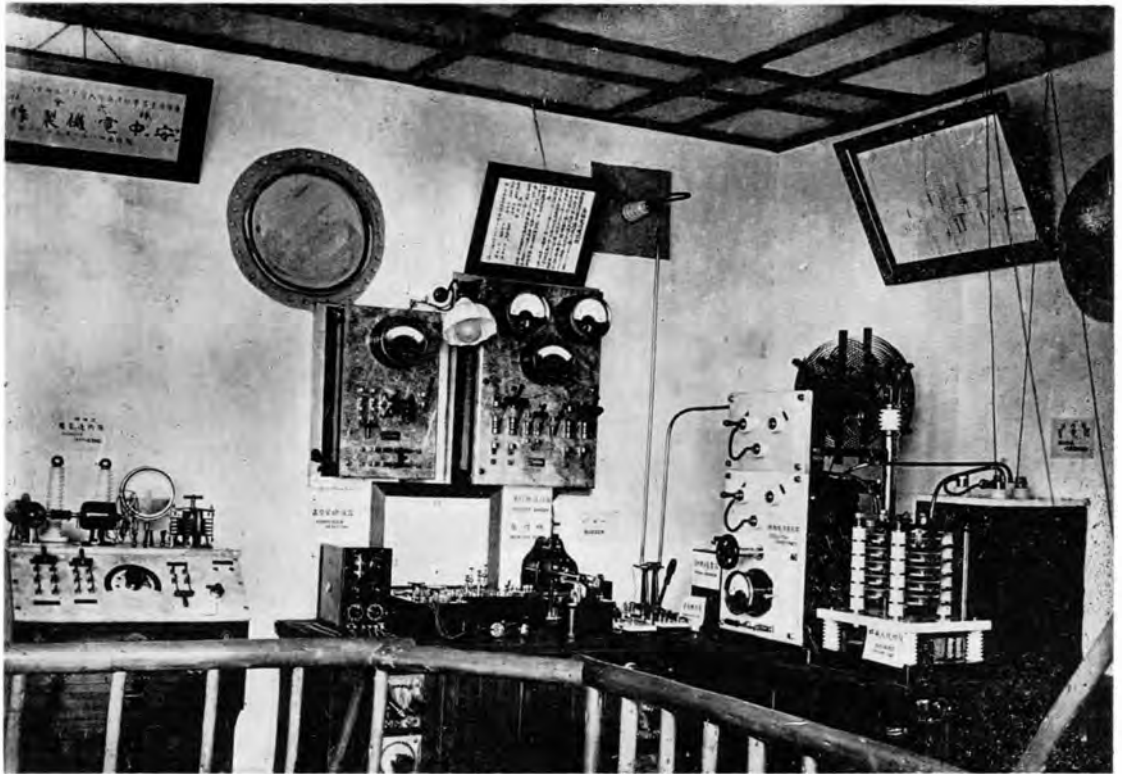
本圖ハ陸上無線電信局發電室ニシテ五十馬力石油發動機.四十「キロワット」直  
流發電機.二十五「キロヴォルトアンペア」電動發電機配電盤及豫備用トシテ  
七「キロヴォルトアンペア」電動發電機ヲ裝置ス

The above illustration shows, the generator room equipped with 50, H.P.  
Oil Engine, 40, K.W.D.C. Dynamo, 25, K.V.A. Motor-Generator, Switch Board,  
and Auxiliary Motor-Generator of 7, K.V.A.

# 電氣博覽會出品館ノ圖

(三キロヴォルトアンペア装置)

## 3. K.V.A. Apparatus at Electrical Exhibition.

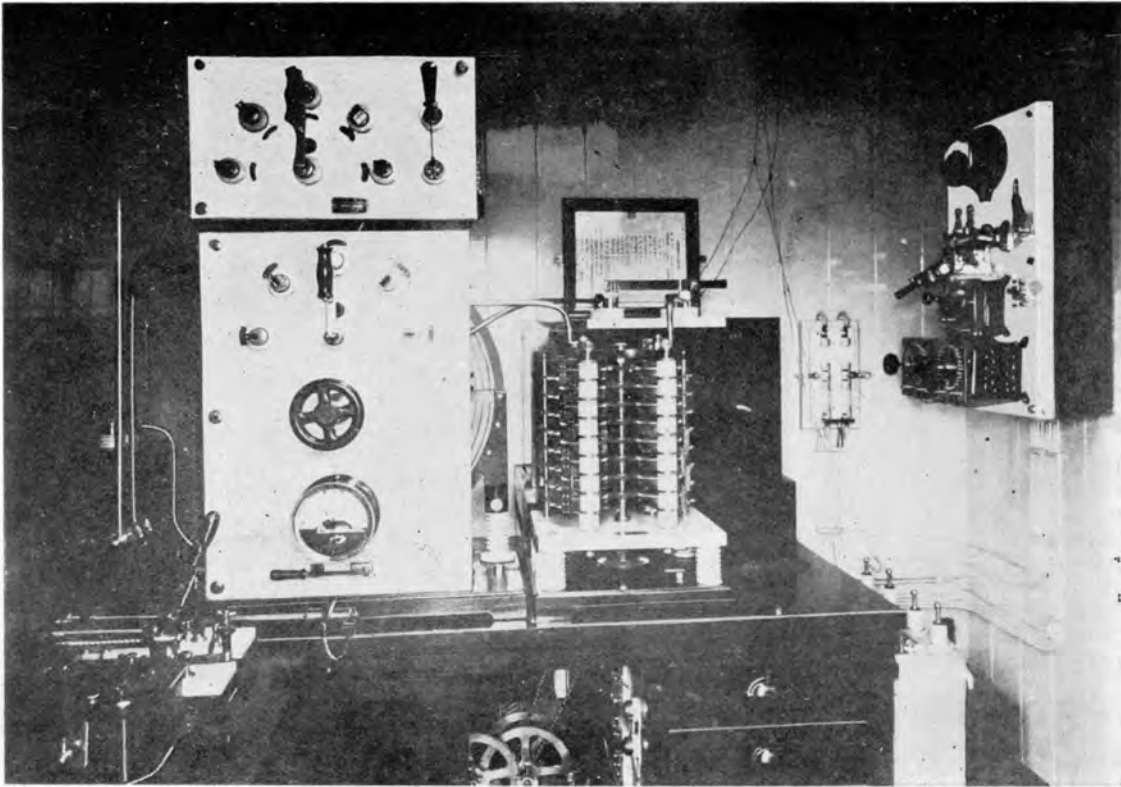


本圖ハ大正七年三月東京上野ノ忍池畔ニ開催セラレタル電氣博覽會弊社出品館ノ一部ナリ

Exhibits of Radio Telegraph Apparata of our manufacture shewn at the Electrical Exhibition held in Tokyo in 1918.

## 船舶局三「キロヴォルトアンペア」装置ノ圖

### 3, K.V.A. Radio Telegraph Set.



本圖ハ船舶無線電信局三「キロヴォルトアンペア」装置ニシテ送信部ヲ示ス

使用シ得ル電波長下ノ五種トス

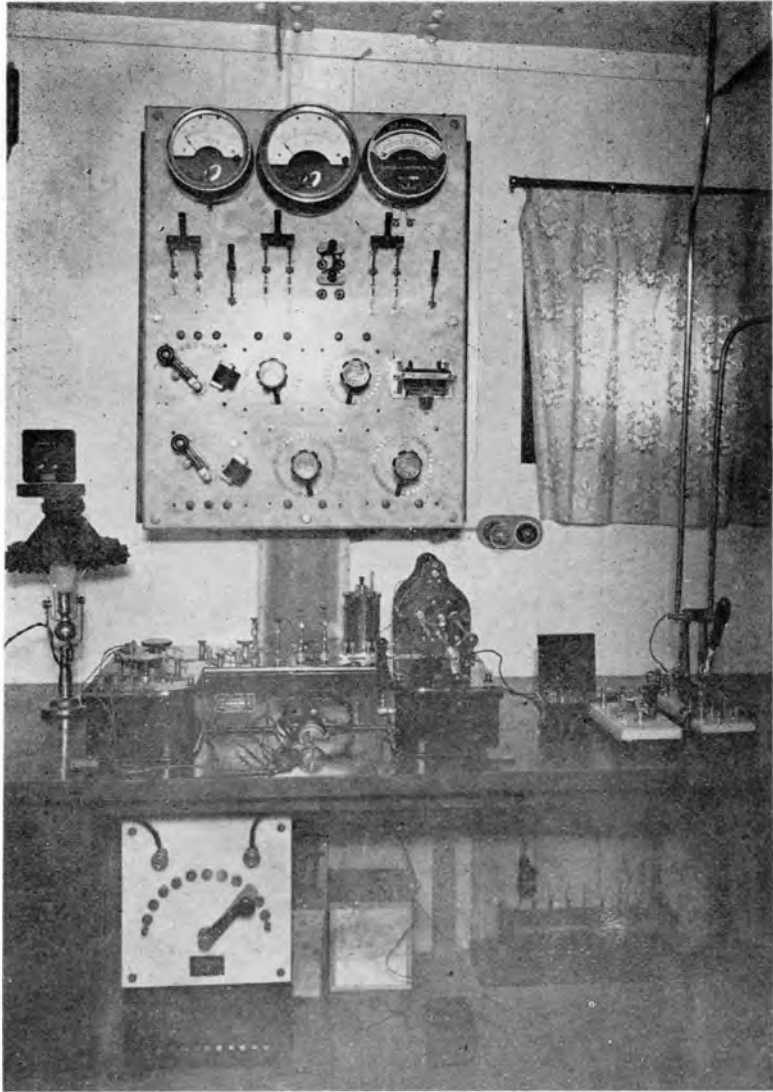
三百米突、四百五十米突、六百米突、千米突、千八百米突

通信距離 晝間四百海里、夜間千二百海里。

The above illustrates the sending set of 3 K.V.A. Radio Telegraph Apparatus for Ship Station, which is suitable for 5 different Wave-lengths of 300; 450; 600; 1,000 and 1,800 metres, and capable of covering the communication ranges on open sea of 400 nautical miles in the day time and 1,200 nautical miles in the night time.

船舶局一「キロヴォルトアンペア」装置ノ圖

1, K.V.A. Radio Telegraph Apparatus for Ship Station.



本圖ハ船舶無線電信局一「キロヴォルトアンペア」装置ニシテ  
送信部ノ一部及受信機ヲ示ス  
通信距離 晝間二百海里. 夜間八百海里

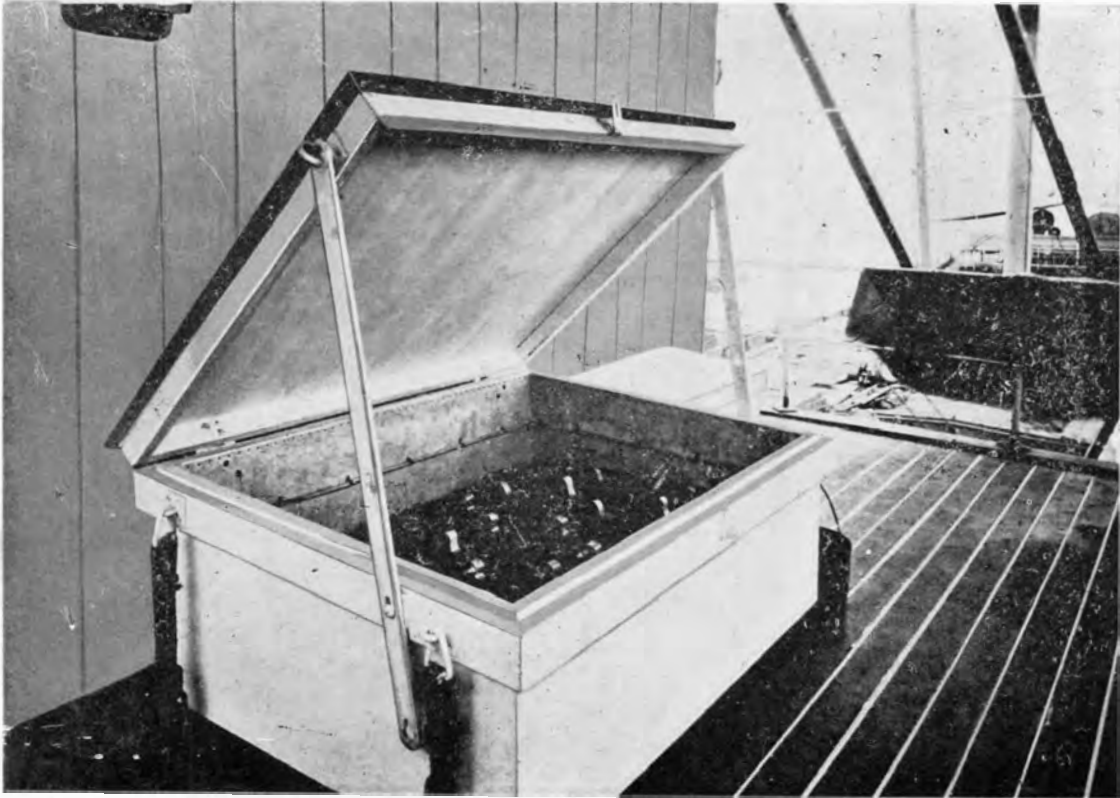
The above Illustration shows the Receiving Set and a portion of the Sending Apparatus of 1, K.V.A. for a Ship Station, Ranges of Communication, being:—

200 nautical miles in the day time on open sea.

800 " " in the night time on open sea.

# 船舶局蓄電池格納函

Accumulator Box.



本器ハ船舶局蓄電池格納用ニシテ硫酸ニテ腐蝕サル、フヲ防グ爲メ

函ノ内面ハ鉛板張ヲ施シタルモノナリ

十五個用.....型録 第一九九五〇號  
 二十五個用.....同 第一九九五一號

Accumulator Box containing 15 or 25 Cells of Emergency sets.

for 15 cells ..... Catalogue No. 19950

for 25 cells ..... No. 19951

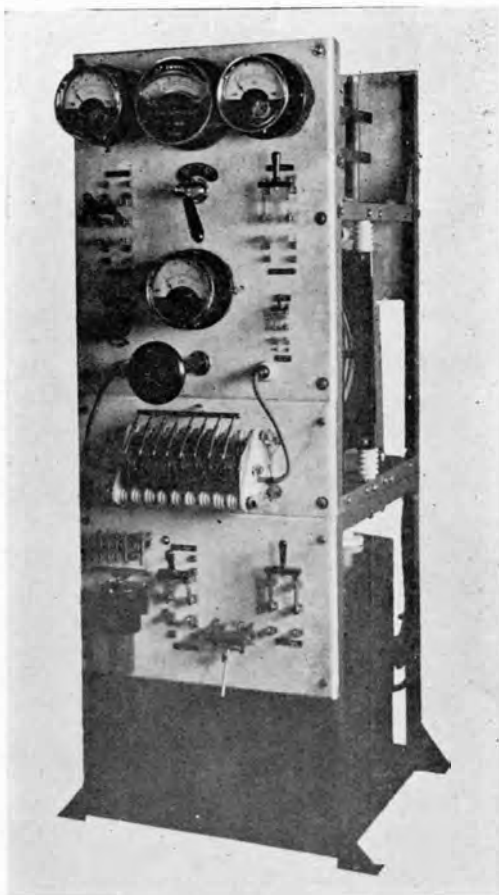
## 「パネル」型無線電信送信機

Sending Apparatus, Panel Type.

本器ハ時代ノ要求ニ應ジ遞信省式無線電信機ノ容積ヲ小ニシ且ツ取扱ヲ簡單ニシタルモノナルガ故ニ如何ナル船舶ニモ取付ケ得ルノ特點ヲ有シ容量 $\frac{1}{2}$  K. V. A. ヨリ 5 K. V. A. 迄ノモノヲ製作ス而シテ本機ノ特長ヲ擧グレバ下ノ如シ

1. 遞信省式ヲ採用シアルガ故ニ通信距離ノ大ナルハ勿論特許侵害ノ虞ナシ
2. 波長變更頗ル簡單ナリ
3. 調整簡單ナリ
4. 容積小ナリ
5. 取付簡單ナリ

型録一九〇一九號



In this are embodied all the necessary conveniences and the characteristics of the "Teishinsho" system Radio telegraph apparatus, while it is built up as compact and easy in working as possible. We may mention the following as some of the characteristic points of the type:

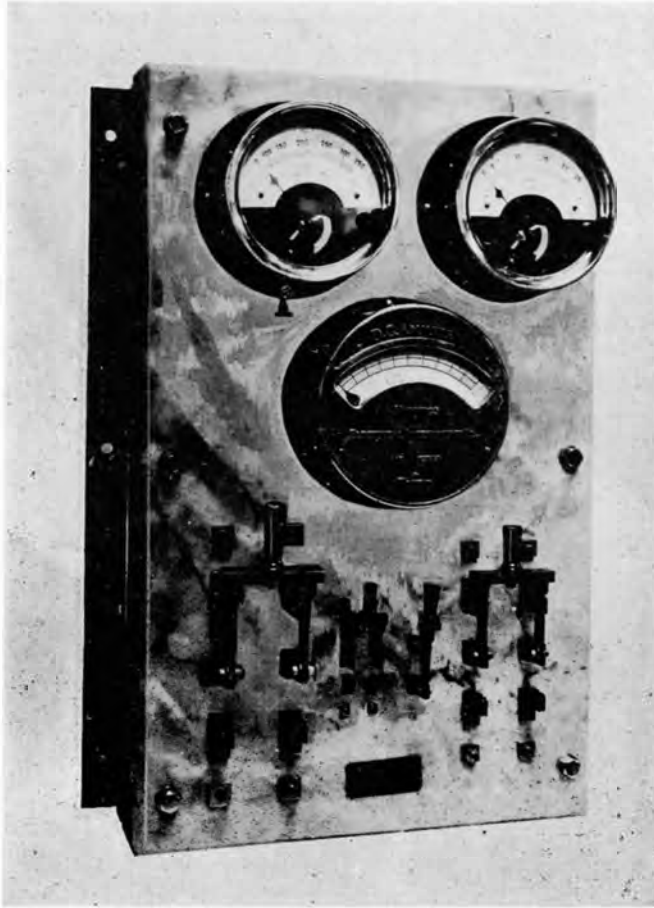
- (1) Great in Communicative Distance compared to its Volume.
- (2) Easy in changing Wavelengths.
- (3) Easy in Adjustment.
- (4) Compact in Design.
- (5) Easy in Installation.

Sending apparatus of this type can be manufactured for Capacities from  $\frac{1}{2}$  K.V.A. up to 5 K.V.A. Unless otherwise specified we will supply this type for convenience' sake.

Catalogue No. 19019

## 船舶局用配電盤

Main Switch Board for Radio Station on board a Ship.



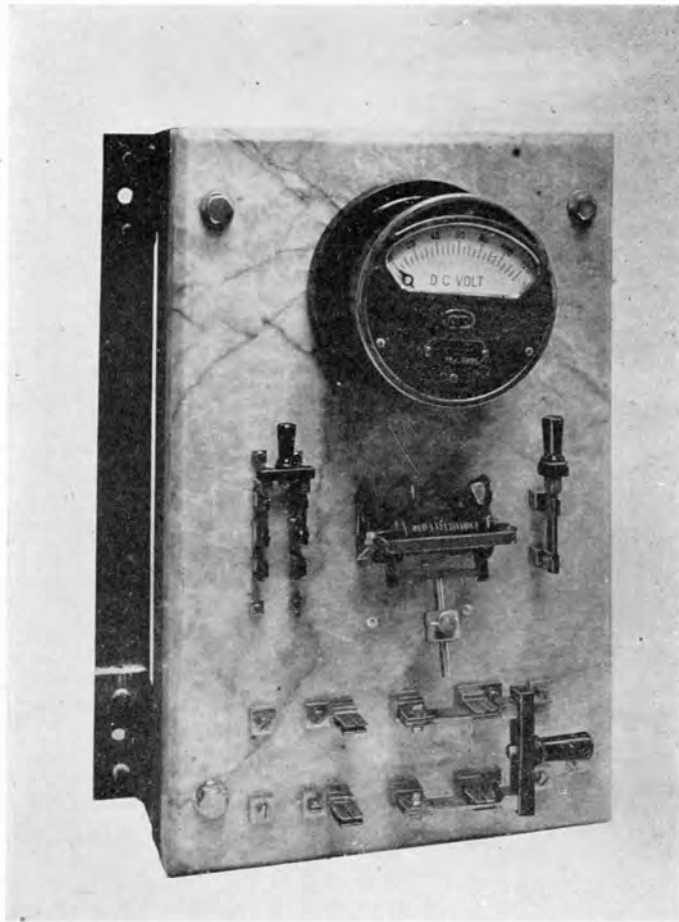
本器ハ船舶局高周波電動機運轉用ニシテ大理石盤上ニ取付  
ケラレタル交流電壓計、電信計、直流電流計及開閉器等ヨ  
リナル

型錄第一九二三五號

Consisting of A.C. Voltmeter and Ammeter, D.C. Ammeter, Knife-Switches;  
all fixed on a Marble Panel and designed for use with H.F. Motor-Generators.  
Catalogue No. 19235.

## 船舶局蓄電池充電用配電盤

Switch Board for Charging Accumulators for Radio  
Station on board a Ship.



本器ハ船舶局豫備装置ノ蓄電池充電用トシテ設計セラレタルモノニシテ大理石板上ニ取付ケラレタル最小電流遮斷器  
直流電壓計及開閉器等ヨリナル

型録第一九二三六號

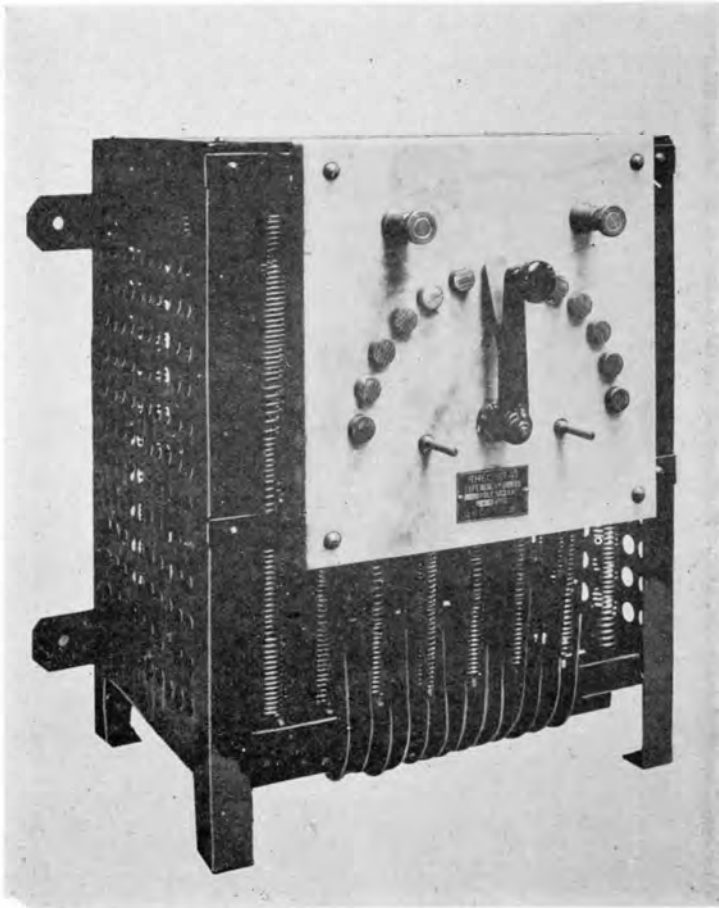
Consisting of Minimum Circuit Breaker, D.C. Voltmeter, Knife-Switches,  
all fixed on a Marble Panel.

Especially designed for charging Accumulators of the Emergency sets.  
Catalogue No. 19236.



# 蓄電池充電抵抗器

Rheostat for charging Accumulators.



本器ハ蓄電池充電電流加減用ナリ

三十「ヴォルト」用.....型録第一九九一〇號

五十「ヴォルト」用.....同 第一九九一一號

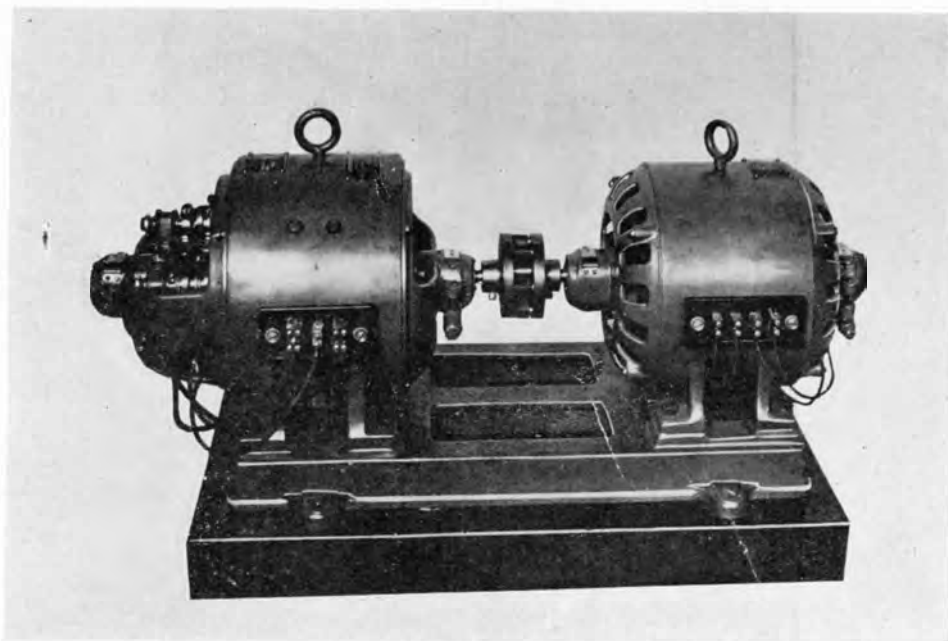
This is specially designed for regulating voltage for charging accumulators of emergency sets with a total resistance of 4-6 ohms.

For 30 volts.....Catalogue No. 19910

„ 50 „ „ „ 19911

# 高周波電動發電機

High Frequency Motor Generator.



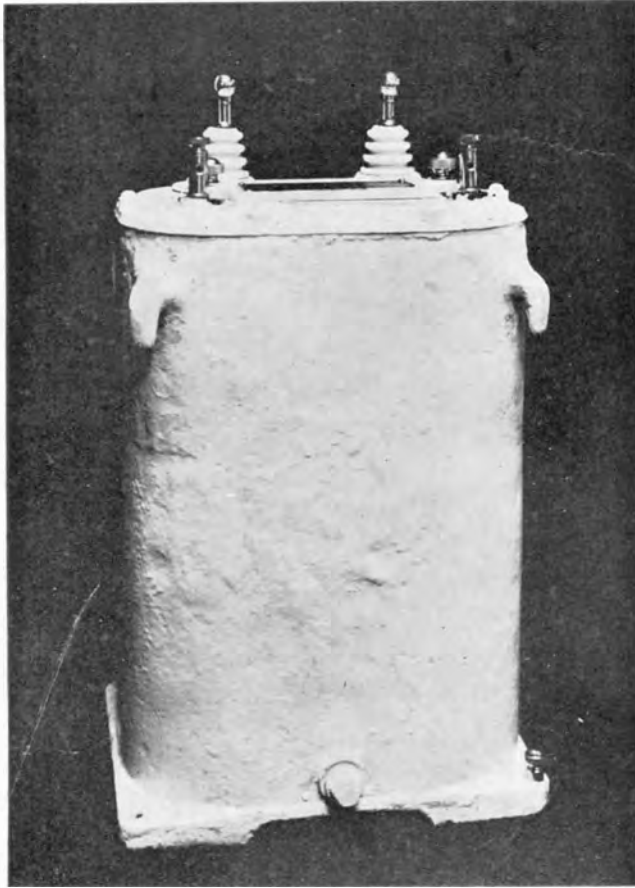
本機ハ直流電動機ト高周波交流發電機トヲ直結シタルモノニシ  
テ二百五十又ハ六百「サイクル」ノ交流ヲ發生スルモノナリ

In this the Alternating current of 250 or 600 cycles is generated by Alternator  
directly coupled to D.C. Motor:

型録番號 Catalogue No	容量 (キロワットアンペア) K.V.A.	直流電動機 D.C. Motor	周波數 Frequency
19220	0.25 K.V.A.	0.5 H.P.	250
19221	0.5 "	1.0 "	200
19222	1.0 "	1.5 "	"
19223	2.0 "	3.0 "	"
19224	3.0 "	5.0 "	600
19225	5.0 "	9.0 "	"
19226	7.0 "	12.0 "	"
19227	10.0 "	17.0 "	"
19228	15.0 "	25.0 "	"
19229	25.0 "	40.0 "	"

# 高周波變壓器

## High Frequency Transformor



本器ハ普通油冷却型ニシテ一次捲線ニ低壓電流ヲ供給シ二次捲線ニ高壓ヲ發生スルモノナリ而シテ普通下表ニ示ス容量ノモノヲ製作スルモ大ナル容量ノモノモ亦需ニ應ジ製作スベシ

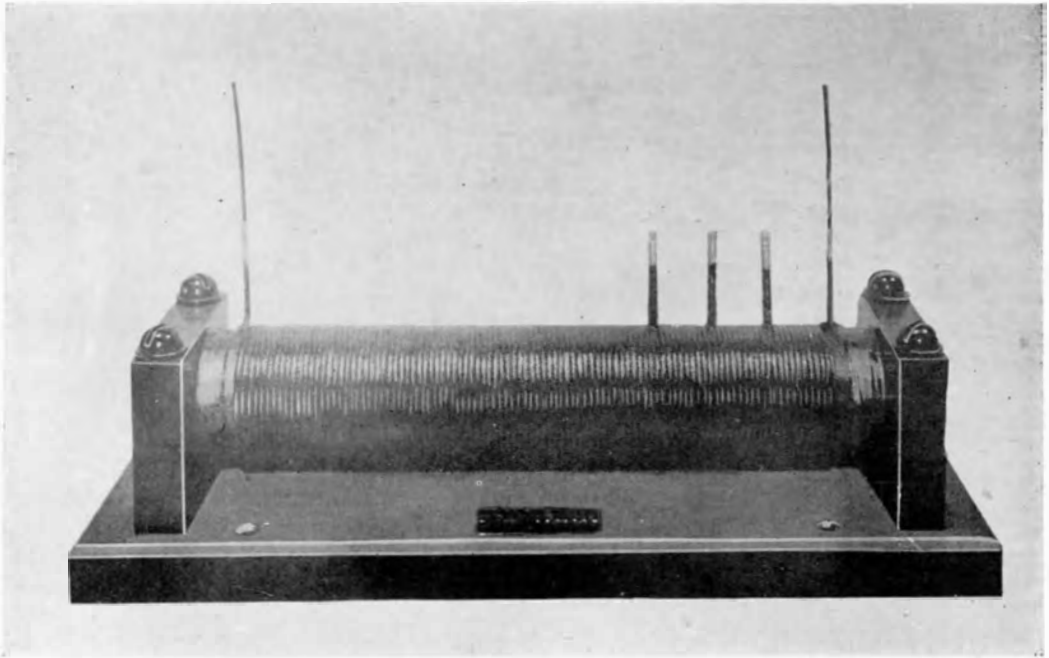
Being an Oil Cooled Transformer, Lowvoltage A.C. Current flowing through the primary coil, produces High voltage A.C. Current in the Secondary Coil; manufactured in the following capacities:—

For bigger capacities, particulars given on application.

型錄番號 Catalogue No.	容量 (キログワットアンペア) K.V.A.	一次線電壓 Primary Voltage	二次線電壓 Secondary Voltage	周波數 Frequency (Cycles)
19250	0.25	100.	2 500	2.50
19251	0.5	100.	”	5.00
19252	1.0	250.	4 000 5 000	”
19253	2.0	”	5.000 6.500	”
19254	3.0	”	” ”	6.00
19255	5.0	”	5.000 6.500 8.000	”
19256	7.0	”	” ” ”	”
19257	10.0	”	” ” ”	”
19258	15.0	”	5000. 10000. 15000.	”
19259	25.0	”	” ” ”	”

〔インピーダンスコイル〕

Impedance Coil.



本器ハ成層セル圓形鐵心ニ絶縁銅線ヲ捲回シタルモノニシテ交流機回路ノ「レゾナンス」ヲ善良ナラシムル用ニ供ス而シテ上部ノ「タップ」ハ其捲回数ヲ任意ニ加減シ得ラル

型録第一九〇五〇號

Consists of laminated iron core with a coil of Insulated Copper Wire wound around and provided with several tappings.

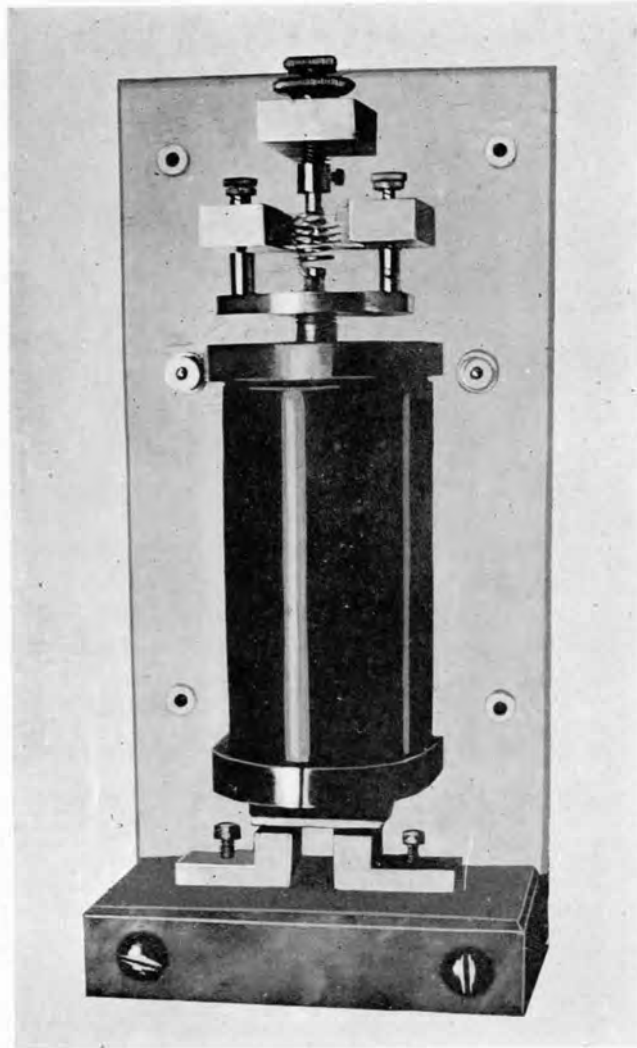
The Coil is used for adjusting Resonance effect, being connected in the Primary circuit of the transformer.

Catalogue No. 19050.

# 中 介 電 鍵

Relay Key.

普通手動用電鍵ニテ大ナル電流ヲ斷續スル時ハ接點ヲ熔解シ使用ニ堪ヘザル  
ヲ以テ小ナル電鍵ニ據リ電磁石ニ直流ヲ通ジ之レヲ働作セシメ下部ノ接點ニ  
據リ交流ヲ斷續セシム  
本器ハ七「キロヴォルトアンペア」以上ニ使用ルモノトス  
型錄第一九九一—三號



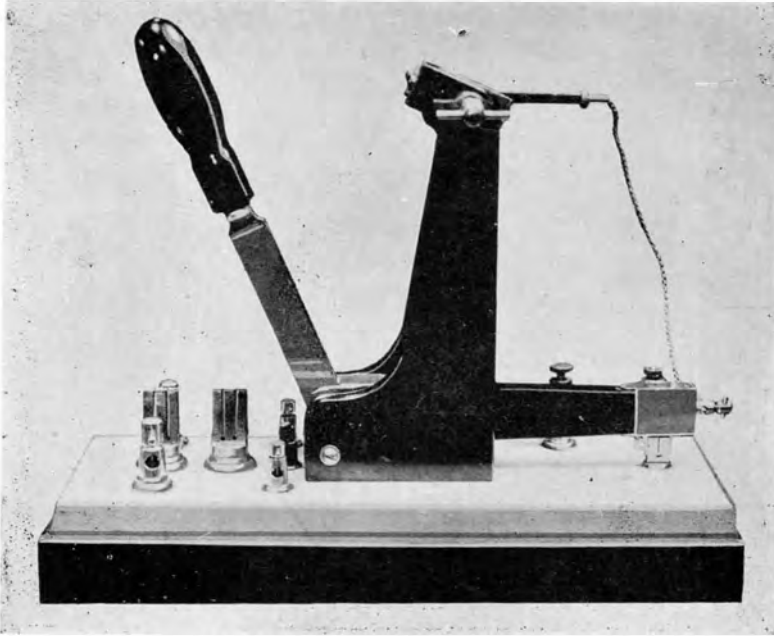
In this heavy current can be made and broken by the big silver contacts seen underneath the Electromagnet energized by weak current which can be handled by a small handkey, also the Electromagnet keeps the circuit made until the current is practically nil, thereby preventing violent sparking.

Used for apparatus with a capacity upwards of 7, K.V.A.

Catalogue No. 19113.

## 送 受 轉 換 器

Sending and Receiving Switch.



本器ハ空中線ヲ送信機  
又ハ受信機ニ切換フル  
モノナリ

型錄第一九〇四八號

This is intended for switch-  
ing over the Aerial to Sending  
or Receiving set as the case  
may be.

Catalogue No. 19048.

## 電 鍵

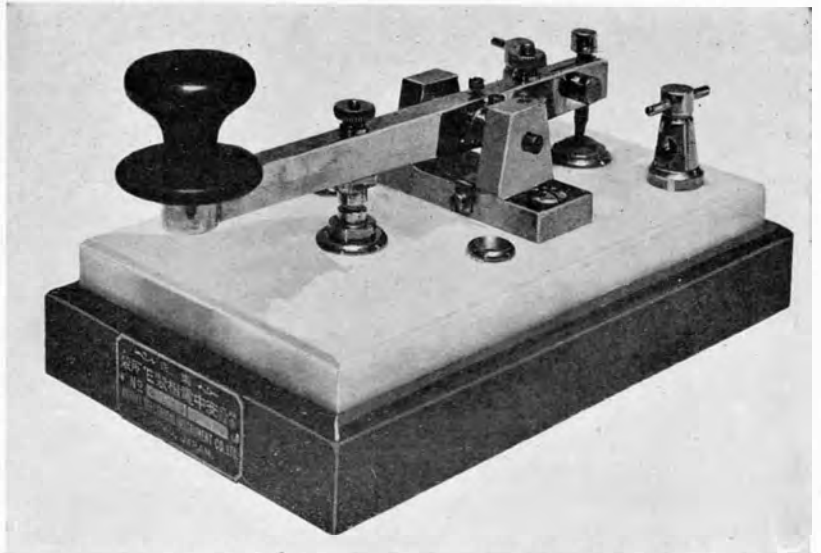
Sending Key.

本器ハ普通有線電信用單  
信電鍵ト同型ニシテ送信  
電流ノ爲メ接點ニ「アー  
ク」ヲ生ジ酸化スルヲ以  
テ之レヲ防ク爲メ接點ニ  
純銀ヲ使用シ五「キロヴ  
ォルトアンペア」迄ノ電  
力ニ使用スルモノトス  
型錄第一九一一〇號

Sending Key of Simplex type  
by means of which a current up  
to 20 Amps can be safely  
handled.

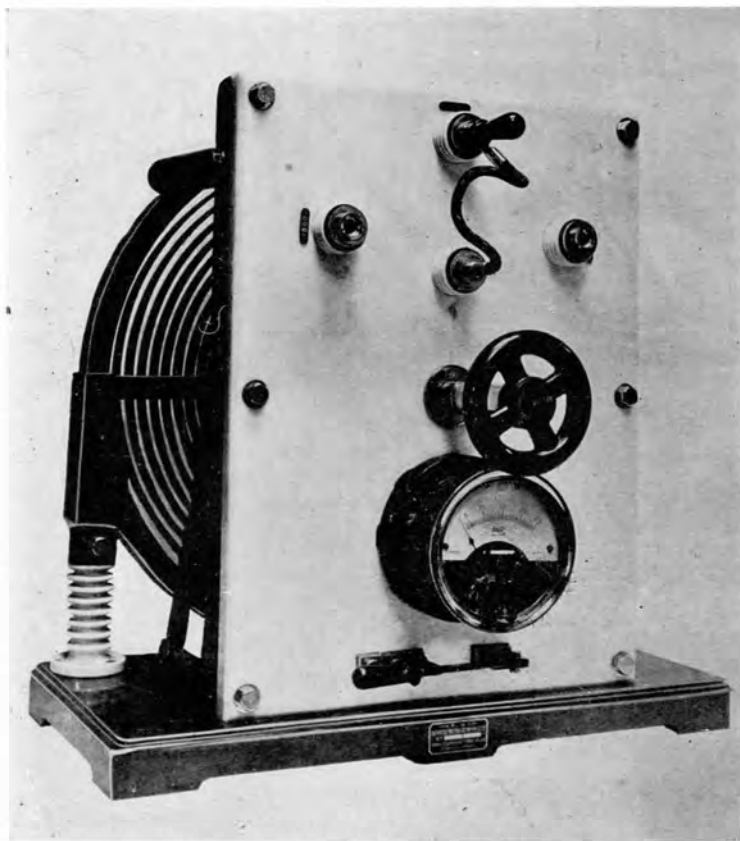
Used for direct sending in  
Radio Apparatus up to 5 K.V.A.  
capacity.

Catalogue No. 19110.



## 密結合型振動電流變壓器

Oscillation Transformer for Quenched Spark Transmitter.



本器ハ瞬滅火花間隙式ノ場合ニ使用スルモノニシテ一次捲線及二次捲線ハ同一ノ捲線ヲ共用スル所謂「オート」型ノモノニシテ大理石ノ表面ニハ三百・六百・千八百「メートル」ノ三種ノ電波長ヲ任意ニ且ツ迎速ニ變換シ得ル爲メ「ジヤツク」ヲ取付ケ又一次回路及空中線回路ノ結合度ヲ調整シ得ラル、様一次回路側ニ「スライダ」ヲ取付ケアリ

又空中線ニ流ル、電流ヲ讀ミ得ラル、様電流計ヲ取付ケアリ

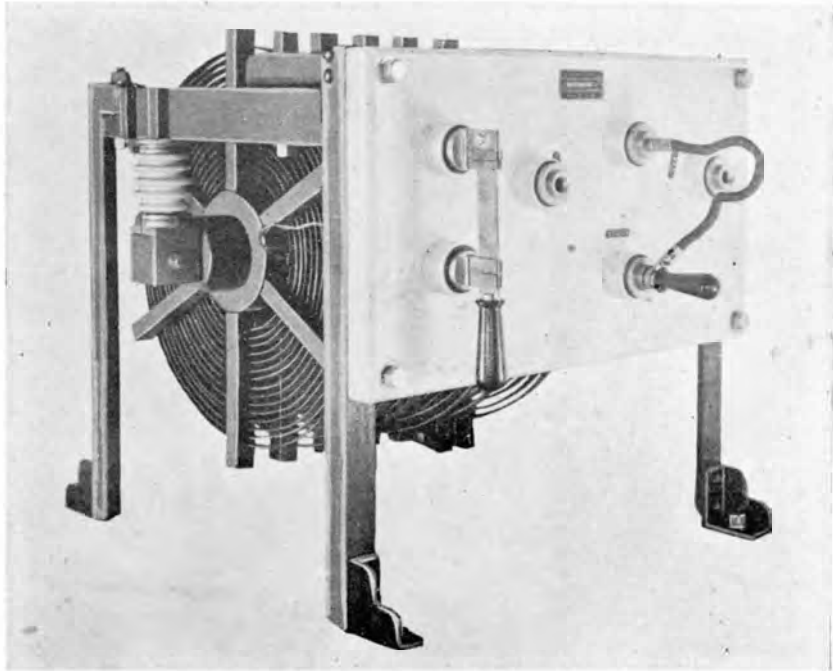
型錄第一九〇二九號

Of Auto Transformer type, consisting of Spiral Coil of Copper ribbon and a Marble Panel standing on a Wooden base. On the Marble Panel are provided Jacks and Plugs for changing Wave-lengths and a Slider for delicate adjustment of Primary and Antenna circuit coupling and an Hotwire Ammeter for reading Antenna current.

Catalogue No. 19029.

## 波長延長捲線

Sending Inductance Coil.



本器ハ送信機ノ空中線測ノ波長ヲ延長スルモノニシテ硬銅帶ヲ  
渦狀ニ捲回セル「コイル」六個ヲ直列ニ接続シ振動變成器ト同  
様ニ「プラグ」及「ジャック」ニ依リ約千八百米以下ノ三種ノ電  
波長ヲ任意ニ變換シ得ラル  
型錄第一九〇五五號

Used for adjusting the Sending Waves of Antenna Circuit; and consists of 6 Independent Coils connected in series, made of hard drawn copper ribbon spirally wound and mounted on the frame with a Marble Panel, three Jacks being attached thereto connecting suitable taps for obtaining the required Wave lengths less than about 1800 meters.

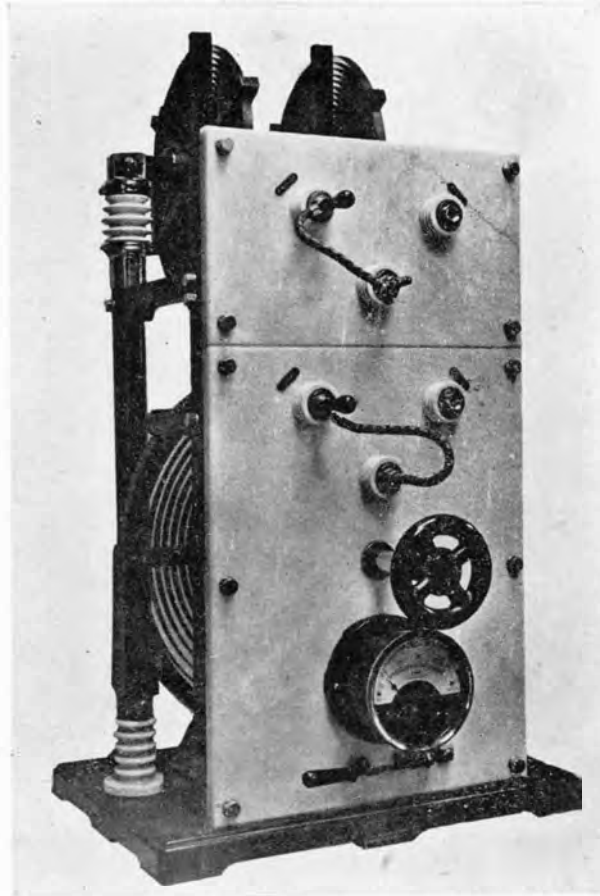
S. P. Knife Switch on the panel is for the purpose of cutting unnecessary coils off.

Catalogue No. 19055.



## 密結合型振動電流變壓器

Oscillation Transformer for Quenched Spark Transmitter.



本器ハ「クエンチド」火花間隙式ノ場合ニ使用スルモノニシテ一次捲線及二次捲線ハ同一ノ捲線ヲ共用スル所謂「オート」型ノモノニシテ大理石ノ表面ニハ三百、六百ノ二種ノ電波長ヲ任意ニ且ツ迅速ニ變換シ得ル爲メ「ジャック」ヲ取付ケ又一次回路及空中線回路ノ

結合度ヲ調整シ得ラル、様一次回路側ニ「スライダ」ヲ取付アリ而シテ上部ノ捲線ハ空中線回路ノ波長ヲ延長スル用ニ供ス下部ノ電流計ハ空中線ニ流ル、電流ヲ讀ミ得ラル本器ハ三乃至七「キロヴォルトアンペア」用ナリ

型錄一九〇二七號

Of Auto Transformer type, consisting of a Spiral Coil of Copper ribbon and a Marble Panel standing on a Wooden base, on the Marble Panel are provided Jacks and Plugs for changing Wave-lengths and a slider for delicate adjustment of Primary and Antenna Circuit Coupling and an Hotwire Ammeter for reading Antenna current, necessary Inductance Coil for Antenna circuit being attached on the top.

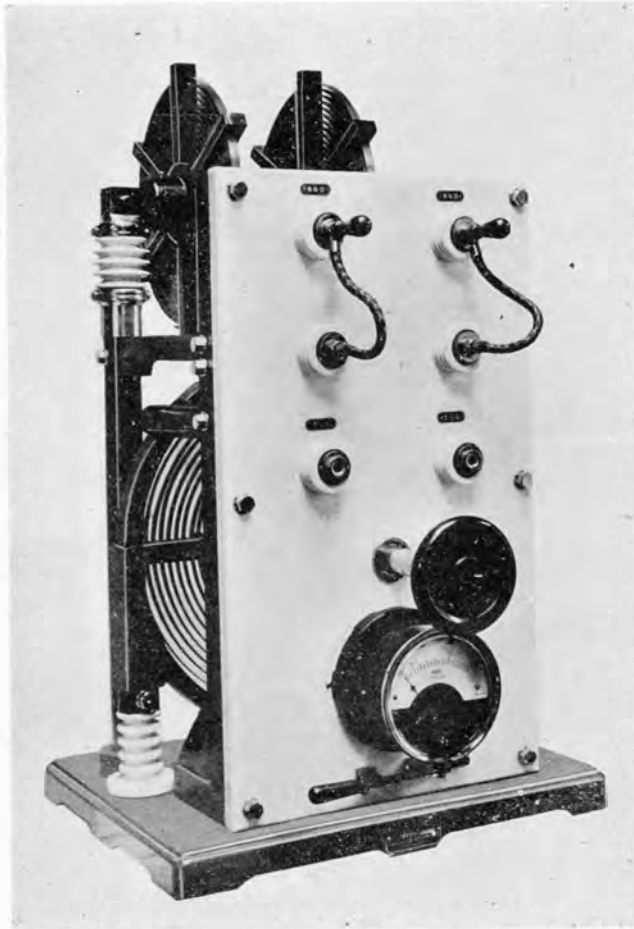
Suitable for Capacities from 3, K.V.A. up to 7, K.V.A. and for two different Wave-lengths of 300 and 600 metres.

Catalogue No. 19027.

## 路密結合型振動電流變壓器

Oscillation Transformer for Quenched Spark Transmitter.

本器ハ「クエンチド」火花間隙式ノ場合ニ使用スルモノニシテ一次捲線及二次捲線ハ同一ノ捲線ヲ共用スル所謂「オート」型ノモノニシテ大理石ノ表面ニハ三百、六百米突ノ二種ノ電波長ヲ任意ニ且ツ迅速ニ變換シ得ル爲メ「ジャック」ヲ取付ケ又一次回路及空中線回路ノ結合



度ヲ調整シ得ラル、様一次回路側ニ「スライダ」ヲ取付アリ而シテ上部ノ捲線ハ空中線回路ノ波長ヲ延長スル用ニ供ス下部ノ電流計ハ空中線ニ流ル、電流ヲ讀ミ得ラル本器ハ一乃至三「キロヴォルトアンペア」用ナリ  
型録第一九〇二六號

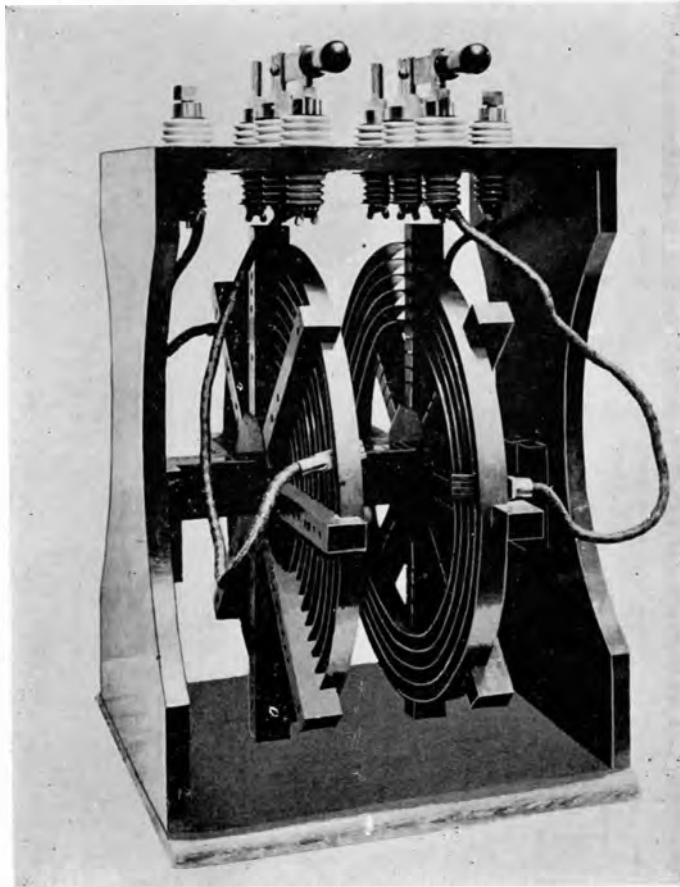
Cf auto Transformer type, consisting of a Spiral Coil of Copper ribbon and a Marble Panel standing on a Wooden base. On the Marble Panel are provided Jacks and Plugs for changing Wave-lengths and a slider for delicate adjustment of Primary and Antenna circuit coupling and an Hotwire Ammeter of reading Antenna current, necessary Inductance Coils for Antenna circuit being attached on the top.

Suitable for Capacities from 1, K.V.A. up to 3, K.V.A. and for two different Wave-lengths of 300 and 600 metres.

Catalogue No. 19025.

## 疎結合型振動電流變壓器

Loose Coupling Type Oscillation Transformer for Ordinary  
Spark Transmitter.



本器ハ普通火花間隙式ノ場合ニ使用スルモノニシテ一次捲線及  
二次捲線ヨリ成リ兩捲線ノ結合度ヲ自由ニ加減シテ二種波長ノ  
發生ヲ拒グヲ得ラル而シテ上部ノ開閉器ハ波長ヲ迅速ニ變換  
スルモノナリ 型錄第一九〇二五號

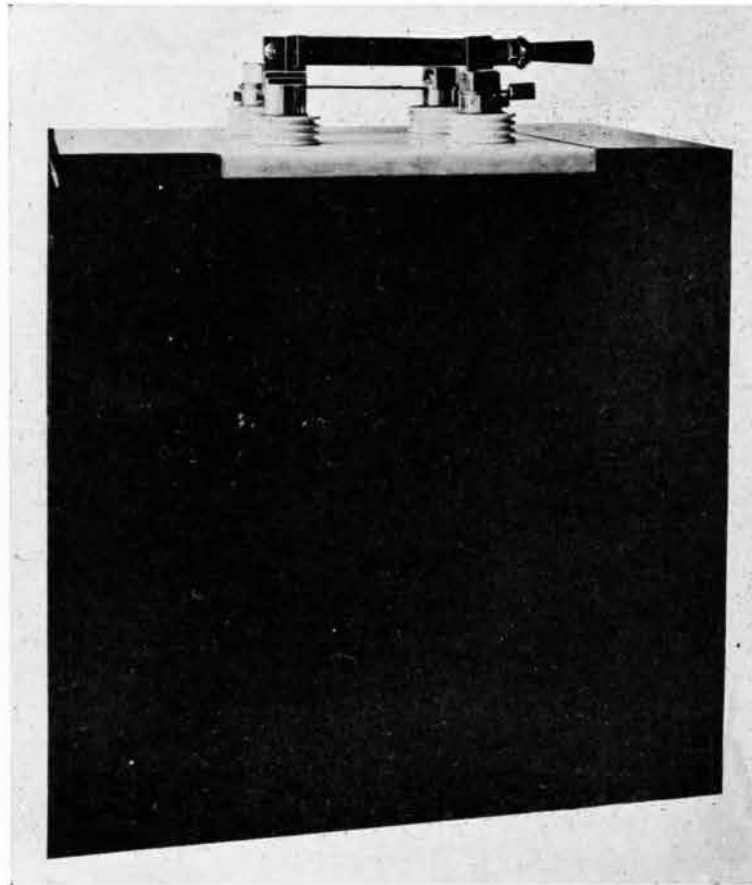
The Primary and Secondary Coils are tapped to make connection with  
Notches of Sliding Contacts for obtaining the Number of Turns to syntonize  
with the desired Wave-length, also by turning the Shuft the Coupling of both  
Primary and Secondary Coils are adjusted for delicate syntonny.

Suitable for Capacities from  $\frac{1}{2}$  K.V.A. up to 30, K.V.A.

Catalogue No. 19025.

# 送信用蓄電器

Main Condenser for Spark Discharge Circuit.



本器ハ硝子板ト「ブリキ」板トヲ組合セ之レヲ蠟ノ混和物ヲ以テ固形體トナシタルモノ四個ヲ木製函ニ收メタルモノニシテ一個ノ電氣容量約〇、〇〇六五「マイクロファラッド」ナリ而シテ本器ハ波長三百米突以下ノ場合ハ其一個ヲ使用シ波長四百

米突以上ノ場合ハ三個ヲ使用スルモノニシテ之レヲ「スイッチニ據リ増減シ得ラル」試験電壓二萬五千「ヴォルト」型録第一九〇二八號

Consisting of alternate laminations of Tin Plates and Glass Plates which are filled up with Wax compound of special preparation. Each box contains 4 blocks of about 0.0065 Mfd. each.

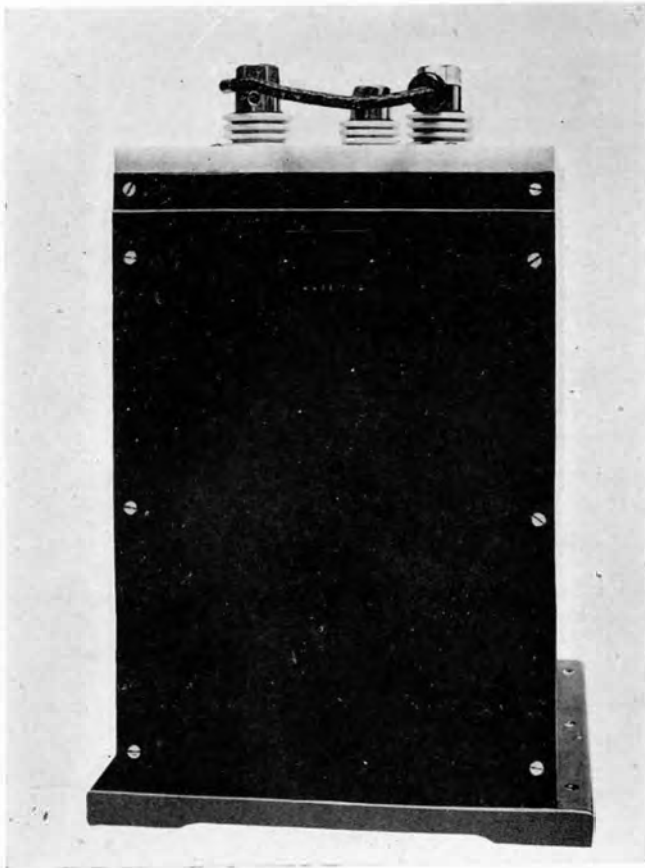
One of the blocks is used for Wave-lengths less than 300 metres while over 400 metres 3 blocks are used. The change is effected by means of a switch attached on the top.

Tested with 25,000. V.

Catalogue No. 19028.

## 送信用蓄電器

Main Condenser for Spark Discharge Circuit.



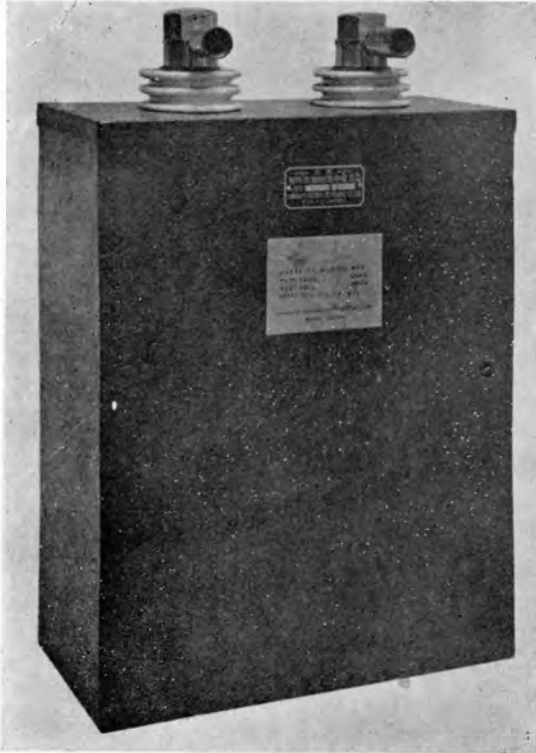
本器ハ硝子板ト「ブリキ」板トヲ組合セ之レヲ蠟ノ混和物ヲ以テ固形體トナシタルモノ三個ヲ木製函ニ收メタルモノニシテ一個ノ電氣容量約〇.〇〇六五「マイクロファラッドナリ」而シテ本器ハ波長三百米突以下ノ場合ハ其一個ヲ使用シ波長四百米突以上ノ場合ハ三個全部ヲ使用スルモノニシテ之レヲ「プラグススイッチ」ニ據リ増減シ得ラル

試験電壓二萬「ヴォルト」 型錄第一九〇四一號

Consisting of 3 individual Condensers of about 0.0065 Mfd. each, being placed in a Wooden case, one of which is used for a Wave-lengths of 300 metres, while two are used in parallel for Wave-lengths of 400 metres and over.

Condenser capacity can be changed by means of Plug attached on the case.  
Catalogue No. 19041.

波長短縮用蓄電器  
Wave-Shortening Condenser.



本圖ノ蓄電器ハ硝子板ト「ブリキ」板トヲ組合セ之レヲ蠟ノ混和物ヲ以テ固形トナシタルモノニシテ溫度ノ變化ニ關係ナク其電氣容量殆ンド一定ナリ本器使用ノ目的ハ短波長ヲ發射スル場合ニ空中線ニ直列ニ挿入スルニアリ

型錄第一九〇四〇號

The Condensers illustrated above are independent of variation in temperature and are extremely constant. These are generally connected in series with Antenna for the purpose of shortening Wave-lengths.

Catalogue No. 19040.

防禦用蓄電器  
Protecting Condenser.



本器ハ硝子板ト「ブリキ」板トヲ組合セタルモノヲ木製函ニ收メタルモノニシテ其電氣容量約〇・〇〇四「マイクロフォラッド」ナリ而シテ本器ハ送信ノ際發電機電動機、等ニ振動電流浸入シ捲線ノ燒損スルヲ防グ爲メニ其端子間ニ並列ニ挿入スルモノニシテ前面ノ遮斷器ハ本器ノ破損其他ノ故障ノ爲メ短絡ヲ生ジ強電流ノ流ル、ヲ防グモノナリ

型錄第一九〇四二號

Consists of Laminations of Glass and Tin Plates encased in a wooden box with Fusebox attached on the outside.

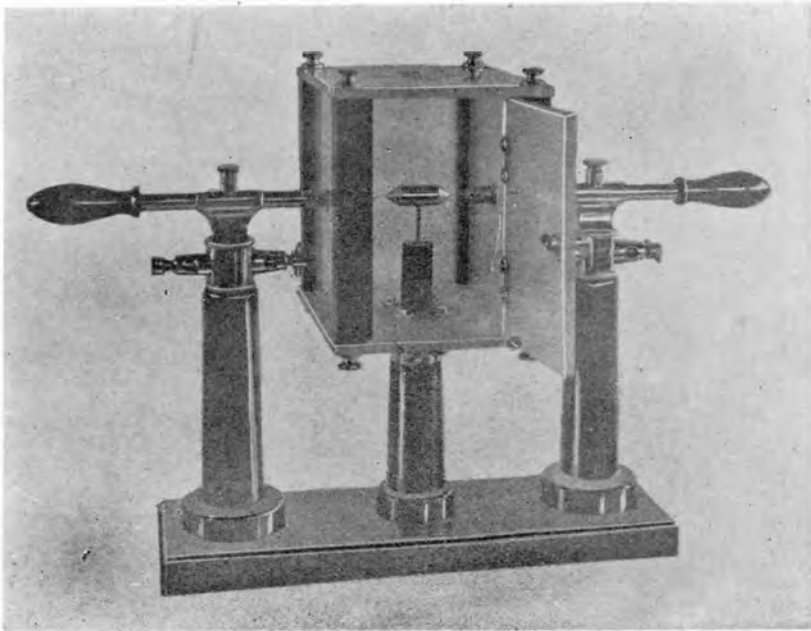
Used in parallel with Generators and Compressor Motors to protect against the serging effect of Oscillation Current.

The Capacity is 0.004 Mfd. approximately.

Catalogue No. 19042.

## 普通火花隙間

Ordinary Spark Gap.



本器ハ疎結合型送信機ニ使用セル尖端火花間隙ニシテ現今ニテハ舊式ニ屬シ殆ンド使用セラレザルモ無線電信技術ノ幼稚ナル時代ニ於テハ誘導線輪ト併用セラレ「キロヴォルトアンペア」乃至三「キロヴォルトアンペア」ノ實際局所ニ使用シ相當ノ成績ヲ收メタルモノナリ

型録第一九〇九〇號

Rather Old type but can be used for actual service with a tolerably good result on long distance as well as on short distance together with an Induction Coil.

Can be furnished for any capacities from 1, K.V.A. to 30, K.V.A.

Catalogue No. 19090.

# 空 氣 壓 搾 器

Air Compressor.



本器ハ瞬滅火花間隙冷却用ニシテ八分ノ一馬力、六十又ハ百「ヴォ  
ルト」ノ直流電動機ヲシテ上部ノ鞆ヲ働作セシムルモノナリ構造堅  
固永年ノ使用ニ堪ユ

型錄第一九一〇六號

This is for supplying cooling air to the Gaps.

Substantially built for many years' service.

Provided with  $\frac{1}{8}$  H.P. Motor D.C. 60 V. or 100 V.

Catalogue No. 19106.



## 空氣壓搾機用抵抗

Rheostat for Compressor Motor.



本器ハ空氣壓搾機用電動機ノ

速度加減用ナリ

型錄第一九二四〇號

For regulating Motor Speed of Air  
Compressor with 15 steps.

Catalogue No. 19240.

## 冷却器

Air Filtering and Alcohol Vapour Mixing Tubes.



本器ハ瞬滅火花間隙冷却用ニ使用スルモノニシテ胴體內ニハ海綿ヲ充填シ上部容器ニハ「アルコール」ヲ充タシ置キ時々「コック」ヲ開キ海綿ヲ濕潤セシメ電極へ寒冷ナル空氣ヲ吹込ムモノナリ

型錄第一九一〇〇號

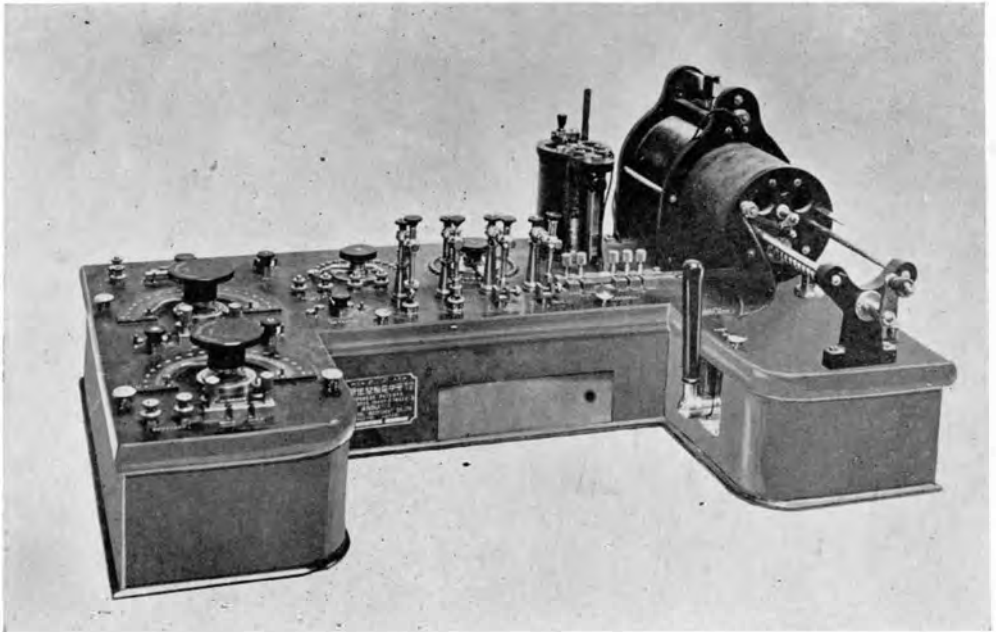
Consisting of Alcohol Container and  
Sponge Cylinder.

Alcohol in the Container drops into the Sponge in the Cylinder, through the pores of which the Air is forced through on to the Spark Gaps.

Catalogue No. 19100.

## [A]型 無線電信受信機

Receiving set Type A.



本器ハ逓信省特許品ニシテ弊社ガ特ニ其製作ヲ許可サレタルモノニシテ疎結合型及密結合型ノ振動變成器ヲ有シ兩者ノ何レカヲ任意ニ且ツ容易ニ轉換器ヲ以テ切換使用シ得ラルベク檢波器トシテハ紅亞鉛鍍及「エックス」檢波器ヲ使用セルモ尙型録第四五頁ノ真空管檢波器ヲ併用スルコトヲ得ベシ

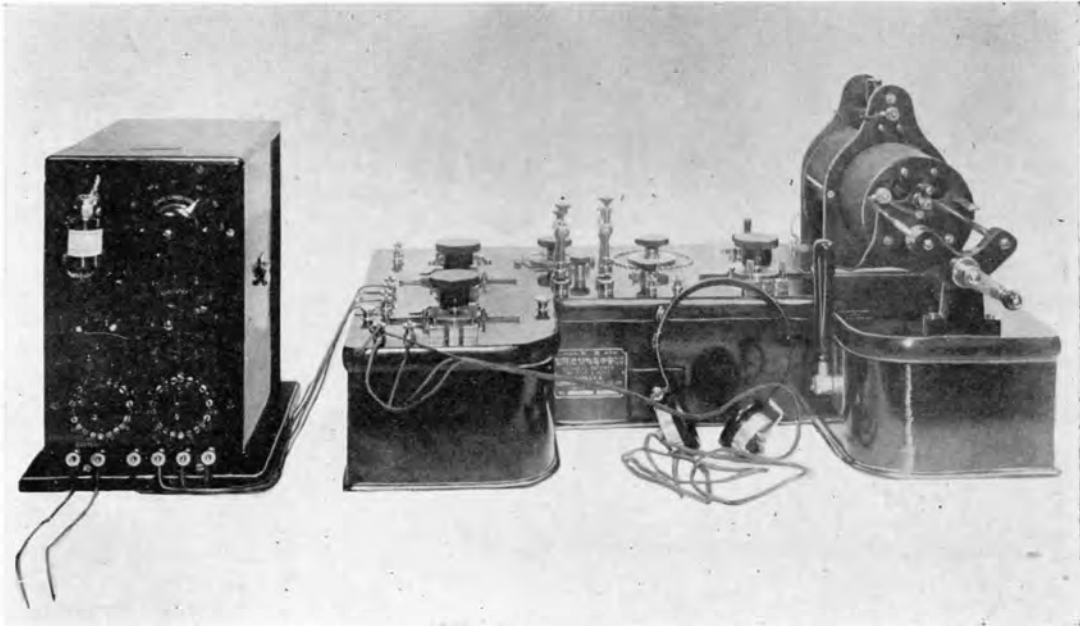
型録第一九一二三號

Generally same as the Receiving set of Catalogue No. 19122 but with two Oscillation transformation for Loose and Close Couplings. Can be used together with the Vacuum Bulb Detector of Catalogue page 45.

Catalogue No. 19123.

# 無線電信受信機

Receiving set with Vacuum Bulb Detector.



本圖ハ型録第四三頁受信機ニ型録第四五頁D型真空管檢波器ヲ  
續接シタルモノナリ

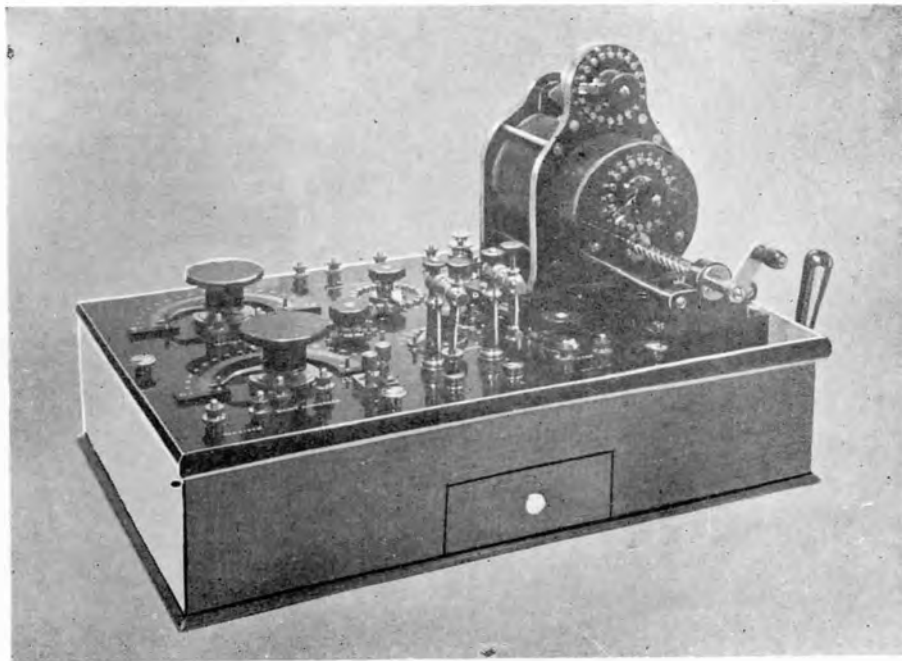
型録第一九二〇一號

The Illustration shows the Receiving set of Catalogue page 43 with Vacuum  
Bulb Detector of Catalogue page 45.

Catalogue No. 19201.

## [C]型 無線電信受信機

Receiving set Type C.



本器ハ「ペリコンサーキット」ノ接続ニ鑛石檢波器ヲ使用スル  
モノニシテ形状ヲ小ニシ且ツ取扱ヲ簡單ニセシモノナリ  
型録第一九一三四號

This is a modified type C Receiving set in which Crystal Detectors are inserted to for "Pelicon" circuit.

This is smaller in size and simpler in manipulation than ordinary type C Instrument.

Catalogue No. 19134.

# [C]型 無線電信受信機

Receiving set Type C.



上圖ハ型録第四一頁 C型受信機ニ型録第四五頁D型真空管檢波  
器ヲ接續シタルモノナリ

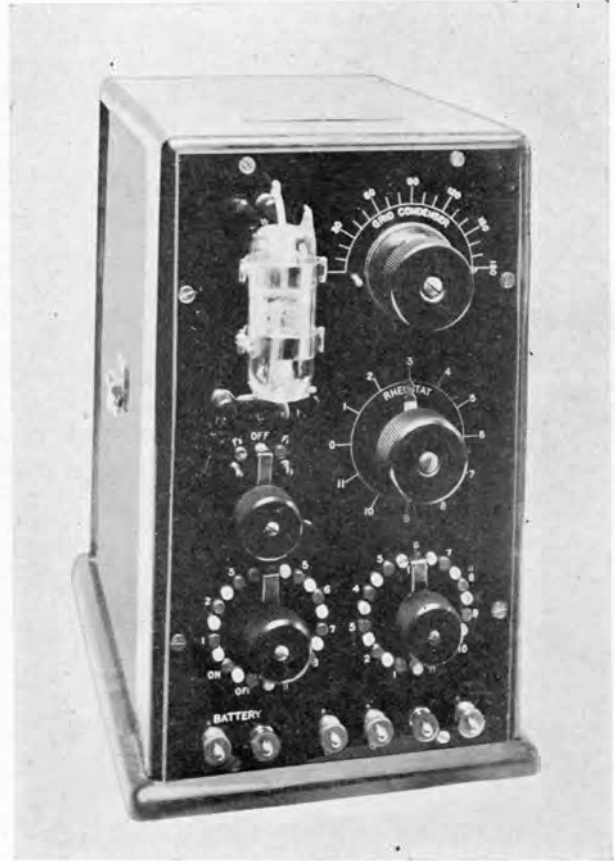
型録第一九二〇〇號

The above illustration shows our C type Receiving set, shown on page 41  
cobined with small Pattern Vacuum Bulb Detectors shewn on page 45.

Catalogue No. 19200.

# [D]型 眞空管 檢波器

Vacuum Bulb Detector Type D.



本器ハ眞空管ノ現象ヲ利用シタルモノニシテ左ノ特長ヲ有ス  
(一) 鑛石檢波器ニ比シ其感度鋭敏ニシテ二倍乃至五倍ノ通信距離ヲ  
増加ス

- (二) 船体動搖ノ爲メニ受信感度ニ變化ヲ受クルコトナシ
- (三) 空中電氣又ハ送信電波ノ爲メニ受信感度ニ變化ヲ受クルコトナシ
- (四) 鑛石檢波器ハ接觸點ノ調整ヲ要スレド本器ハ其必要ナシ
- (五) 合調作用鋭敏ナルヲ以テ混信ヲ防止スルコトヲ得

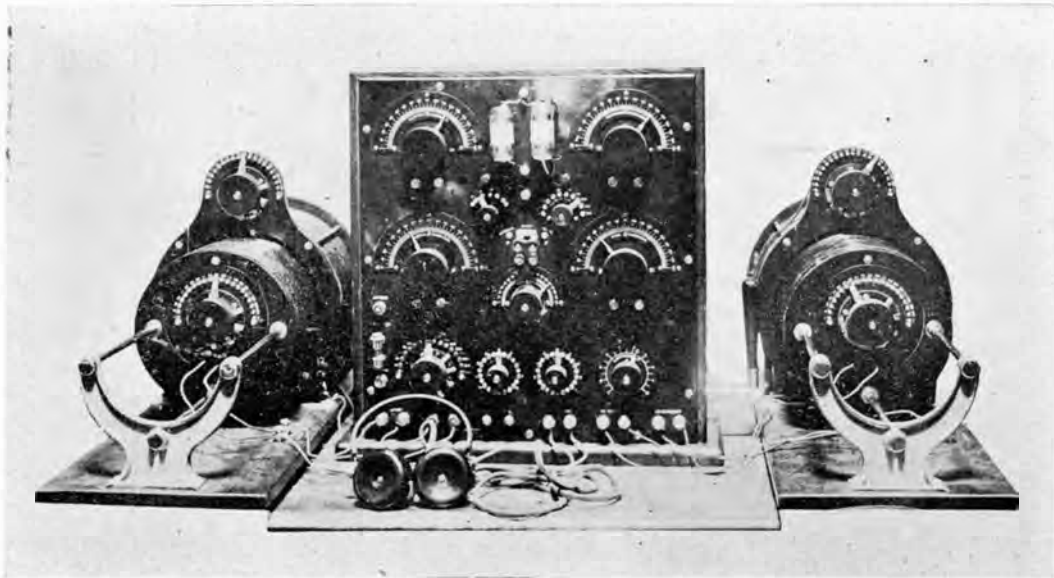
型錄第一九一三〇號

In this the Vacuum Bulb Phenomenon is utilized which has enabled us to obtain most sensitive and constant Detectors. This Detector has the following characteristics:—

- (1) Much greater in sensitiveness than Crystal Detectors and increases the range of communication about 2 to 5 times as much.
- (2) Changeability in sensibility due to rolling and vibration of ships can be avoided.
- (3) Not liable to be disturbed by static or Sending waves.
- (4) No adjustment of contact is necessary as in the case of Crystal Detectors.
- (5) Very acute in tuning.
- (6) Can be used directly with the Receiving sets Catalogue Nos. 19122, 19123, &c. Catalogue No. 19130.

# 長波長持續電波受信機

Receiving set for Long-wave Undamped Oscillation.



本機ハ六百乃至一萬米突迄ノ波長ヲ有スル「アンダンプトオツシレーション」ヲ受信スルヲ得ルモノニシテ右側ノ轉換器ニ依リ「ヒートロダイン」若クハ「アルトロオーヂオン」ノ接續トナスヲ得ルモノトス

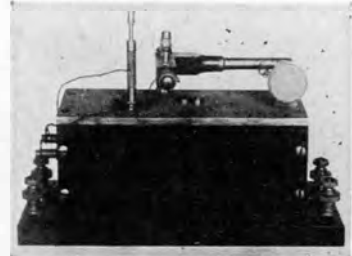
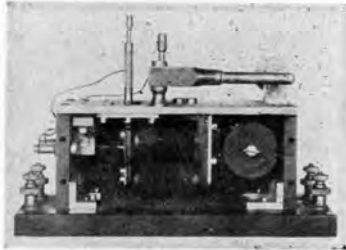
型錄第一九一三五號

This set of apparatus is suitable for receiving undamped oscillation of 600-10,000 metres wave length and designed to change over the connections to either of Hydrodyne or Ultraudion by means of a switching handle shown on the right hand side.

Catalogue No. 19135.

## 「チッカー」検波器

Tikker or Ticker.



持續電波ノ受信ニハ整流作用ヲ有スル檢波器ハ其用ヲナサズ如何トナレバ續  
持振動電流ノ整流サレタルモノハ受話器ニ直流ヲ通ジタルト等シク唯ダ其ノ  
始メト終リノミ音響ヲ發ス故ニ本器ニ依リ人ノ聽キ得ル程度ノ振動數ニ持續  
振動電流ヲ斷續セシメ受話器ニ音ヲ與フルモノナリ

型錄第一九一三六號

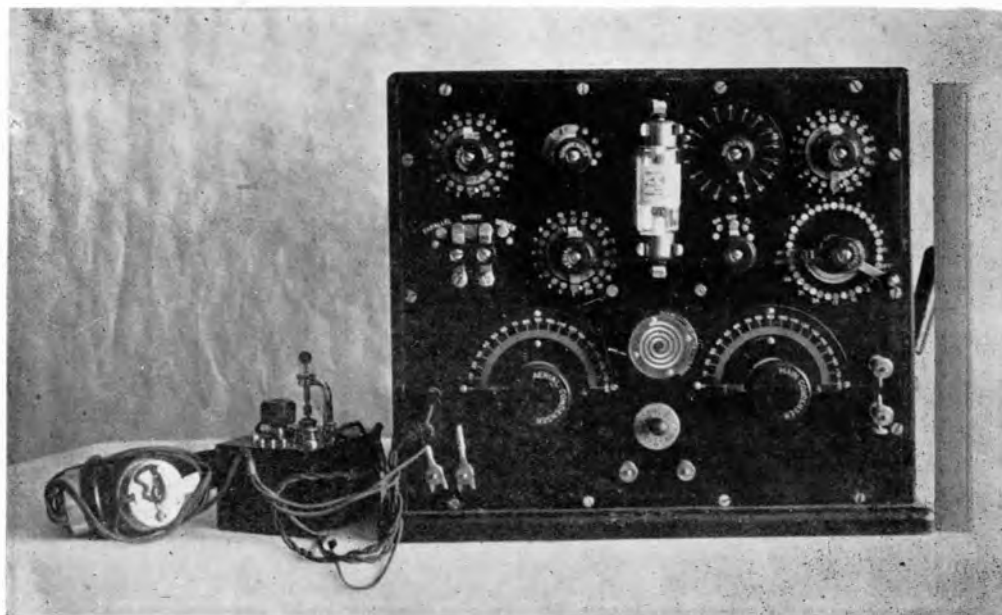
For undamped oscillation any detectors which have the rectifying action are found useless, since rectified undamped oscillation gives to the Telephone Receiver the same effect as that of Direct Current and only the start and finish of the dash are heard. Ticker must be used for interrupting undamped oscillation at a rate falling within the limits of audition and eventually giving proper sounds to Receiver.

Catalogue No. 19136.



## [E]型無線電信受信機

Radio Telegraph Receiving set Type E.



本器ハ専ラ真空管検波器ヲ使用シ得ラル、様設計シタルモノニシテ前面ノ轉換器ヲBULBニ倒ストキハ真空管検波器ヲ使用シ得ラレCRYSTALニ倒ストキハ鑛石検波器ヲ使用シ得ラル而シテ鑛石検波器ハ受信機ヨリ特ニ分離シ「コード」ヲ以テ接續シ通信技術者ガ夜間「ベット」又ハ「ソファ」ニ横臥シツ、他局ヨリノ呼出ヲ聴取シ得ラル、モノナリ

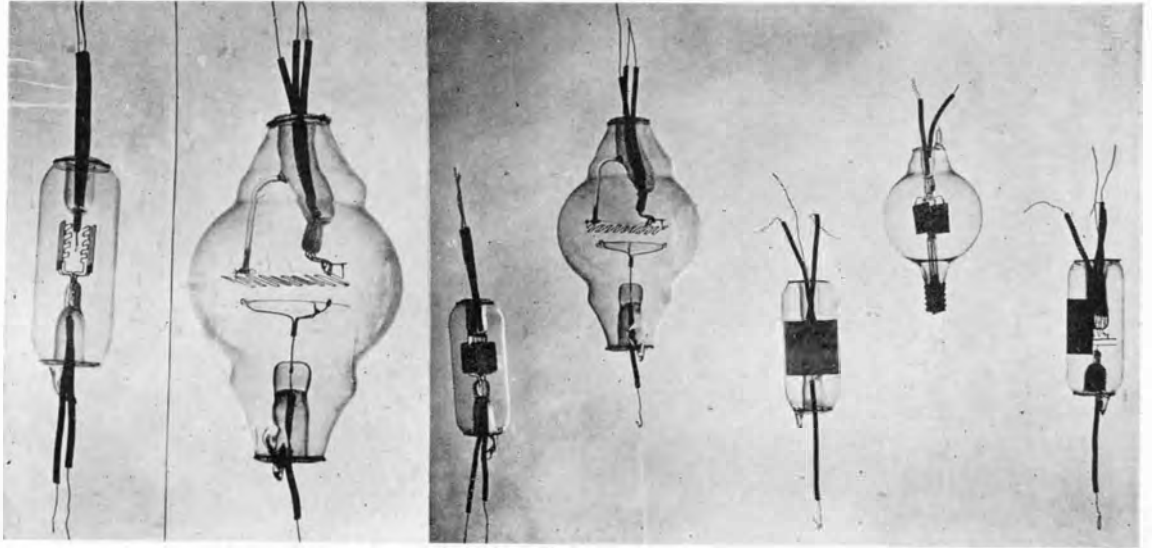
型録第一九一三七號

This is specially designed for using Vacuum Bulb Detector, and if the Switch is pushed on the side of "Bulb," Vacuum Bulb will be put into service, while if the Switch is pushed on to the side of "Crystal," Crystal Detector will be put into service. The Crystal Detector is provided separate from the instrument and connected with a suitable length of a cord to enable the operator to listen to the calling from outside stations even while he is reposing himself.

Catalogue No. 19137.

# 眞 空 管

## Vacuum Bulbs for Detectors.



本品ハ弊社ガ多年ノ研究ノ結果製作セルモノナリ

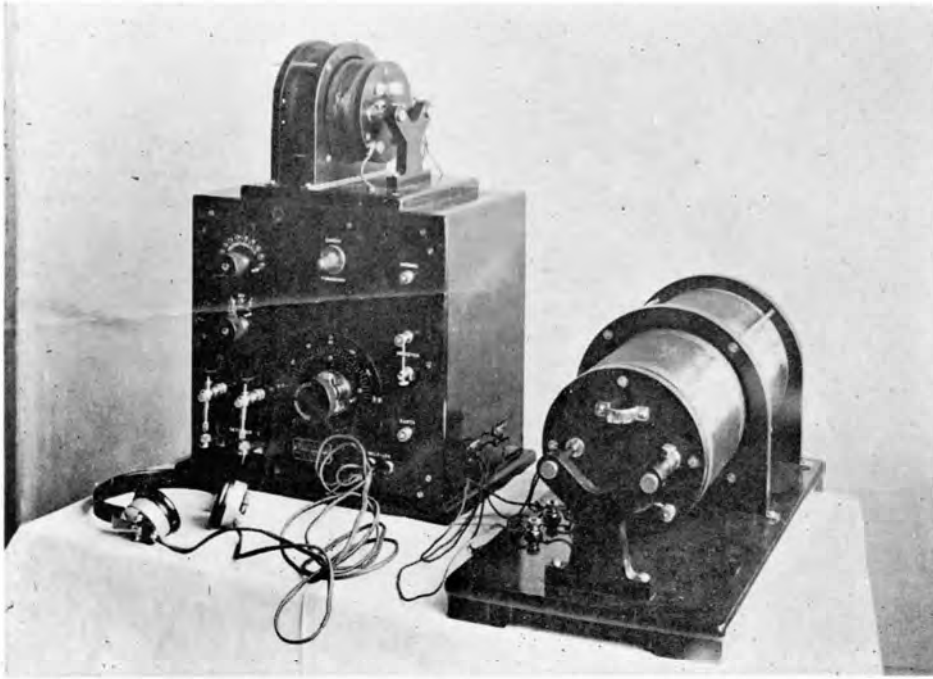
Illustration shews some of types of Vacuum Bulbs generally manufactured at our works. Unless specified otherwise we always supply Bulbs Catalogue No. 19131, Filament Voltage 4 V. and Anode Voltage 40-60 V.

We are, however, ready to supply Vacuum Bulbs of any pattern, which are sensitive and constant in working:—

Catalogue Nos.	Description
19131	A Pattern, generally supplied with Detector set.
19131-a	B Pattern, now pattern of 19131.
19132	C Pattern.
19132-a	D „ modified De Forest pattern.
19132-b	E „ „ „ „
19133	F „ for undamped oscillation generally used for Radio telephony, Filament Voltage 16 volts, Anode Voltage 500 volts or over.

## 時報用受信機

Receiving set for Time Signal.



本機ハ文部省震災豫防調査會ヨリノ御注文ニ依リ午後九時銚子  
及船橋無線電信局ヨリ發信スル中央標準時ヲ受信シ得ラル、様  
設計製作シタルモノニシテ六百米突又ハ四千米突ノ電波ヲ「ス  
キッチ」ニ據リ迅速ニ切換ヘ受信スルコトヲ得ルモノナリ

型錄第一九一三八號

This apparatus has been specially designed to the order of Educational  
Department of the Japanese Government and capable of being quickly switched  
over to either 600 or 4,000 metres Wave-lengths.

Catalogue No. 19138.

# 無線電信用受話器

Telephone Receiver.



本器ハ無線電信用トシテ製作セルモノニシテ二個ノ受話器ヲ直  
列ニ接續シ其電氣抵抗千乃至六千「オーム」ヲ有ス

型録第一九一四〇號

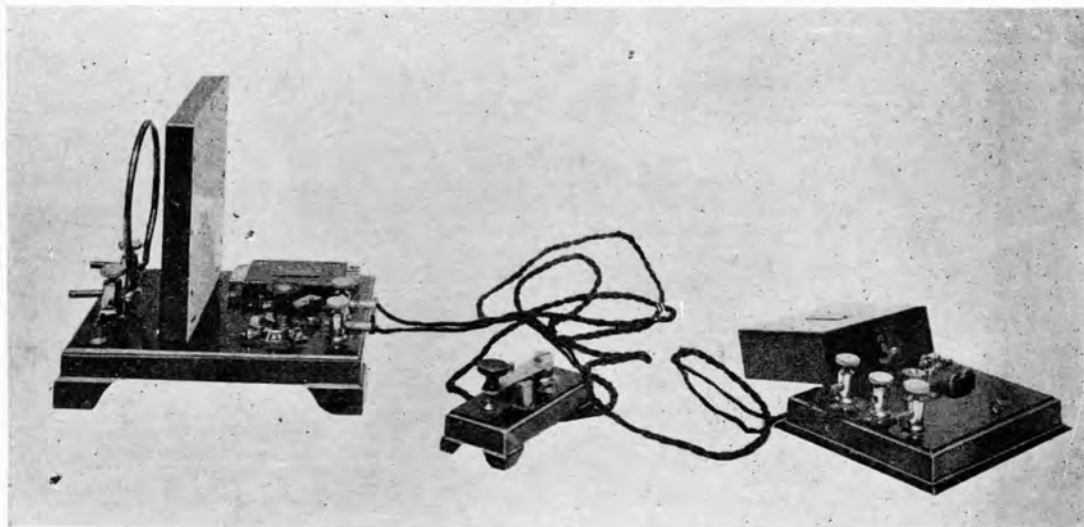
Of double ear type. Two Receivers are connected in series.

Total Resistance from 1,000-6,000 ohms.

Catalogue No. 19140.

# 受信機調整器

Buzzer.



本器ハ受信機調整用ニシテ斷續器・電鍵・振電動流發生器ヨリ成  
リ轉換器ニヨリ誘導捲線ト蓄電器トノ組合セヲ變化シ各種ノ電  
波長ヲ發生スルモノトス

電波長 300. 600. 1.800.....型錄番號 19150—C

同 300. 400. 500. 600. 1800..... „ 19150—D

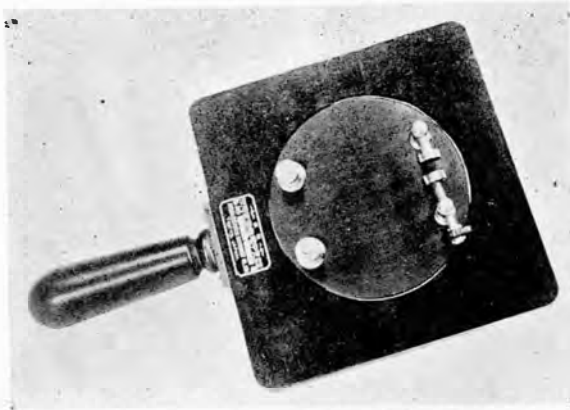
For testing the sensitiveness and the tuning of the receiving set by generat-  
ing very weak oscillation.

Suitable for generating 3 different wave-lengths of 300, 600 and 1,800 metres,  
and designed to work with D.C. 3 volts.

Catalogue No. 19150.

# 音調試験器

Tone Tester.



加減蓄電器  
Variable Condenser.

本器ハ木製盤ニ誘導捲線蓄電器及檢波器ヲ取付ケタルモノニシテ送信電波ノ音色ヲ試験スルモノナリ

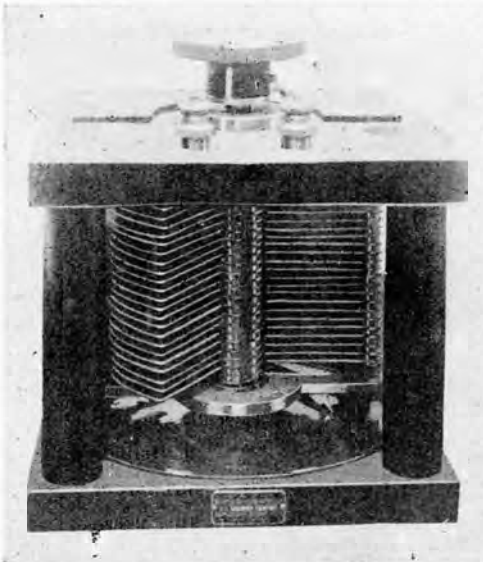
型録第一九一四八號

Consisting of Inductance Coil, Fixed Condenser, Crystal Detector and enclosed in a wooden box, provided with a handle. Intended for testing tone of a sending wave.

Catalogue No. 19148.

# 鑛石檢波器

Crystal Detector.



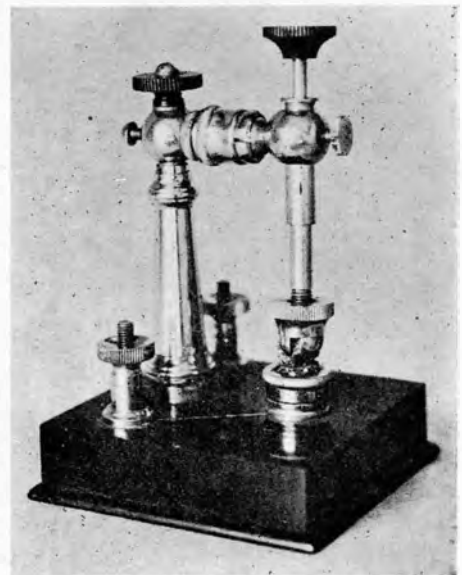
誘電体ヲ空氣又ハ油トセル金屬製半圓板蓄電器ニシテ其電氣容量ヲ任意ニ加減シ得ベシ  
「マイクロプロアッド」

型録第一九一三九號

電氣容量	0.001	''
''	0.002	''
''	0.003	''
''	0.105	''
''	0.008	''

The above illustrated is a Variable Condenser with air or oil as dielectric, with Semi-circular movable metal discs and with ebonite handle having a scale index.

Catalogue No. 19139.



本器ハ紅亞鉛鑛ト班銅鉛、紅亞鉛鑛ト黃銅鑛、炭化硅素ト磁鐵鑛ノ何レノ組合セノ檢波器ニモ使用シ得ラル、モノナリ

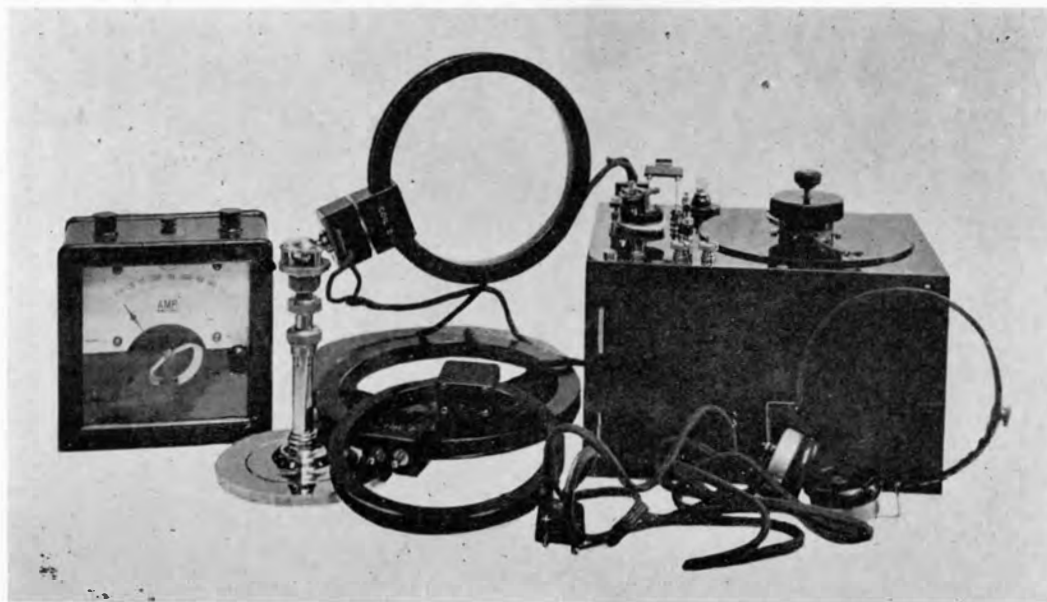
型録第一九一四一號

This Crystal Detector is used for any combination of Zincite and Bornite, Zincite and Copper Pyrite, Carborandum and Magnetite.

Catalogue No. 19141.

# 波 長 計

Wave-Meter.



本器ハ百乃至一萬「メートル」ノ電波長測定用トシテ製作シタルモノニシテ下記ノ諸品ヨリ成ル

加減蓄電器

固定蓄電器

檢波器

「セフターギャップ」

「ジャック」

本器ニハ左ノ三品ヲ附屬ス

熱線電流計

受話器線

誘導捲線

波

長 100—3 000 米突……………型録番號 19145—1

” 100—5,000 ”…………… ” 19145—2

” 100—10,000 ”…………… ” 19145—3

「バザー」

電燈球

兩極双投開閉器

「ターミナル」

## 型録第一九一四五號

Suitable for the measurement of Wave-lengths varying from 100 to 10,000 metres. Consisted of the following parts:—

- |                         |                              |
|-------------------------|------------------------------|
| One Variable Condenser. | One D.P. Doublethrow Switch. |
| One Buzzer.             | One Safety Gap.              |
| One Condenser.          | Four terminals.              |
| One Electric Lamp Bulb. | Two Jacks.                   |
| One Detector.           |                              |

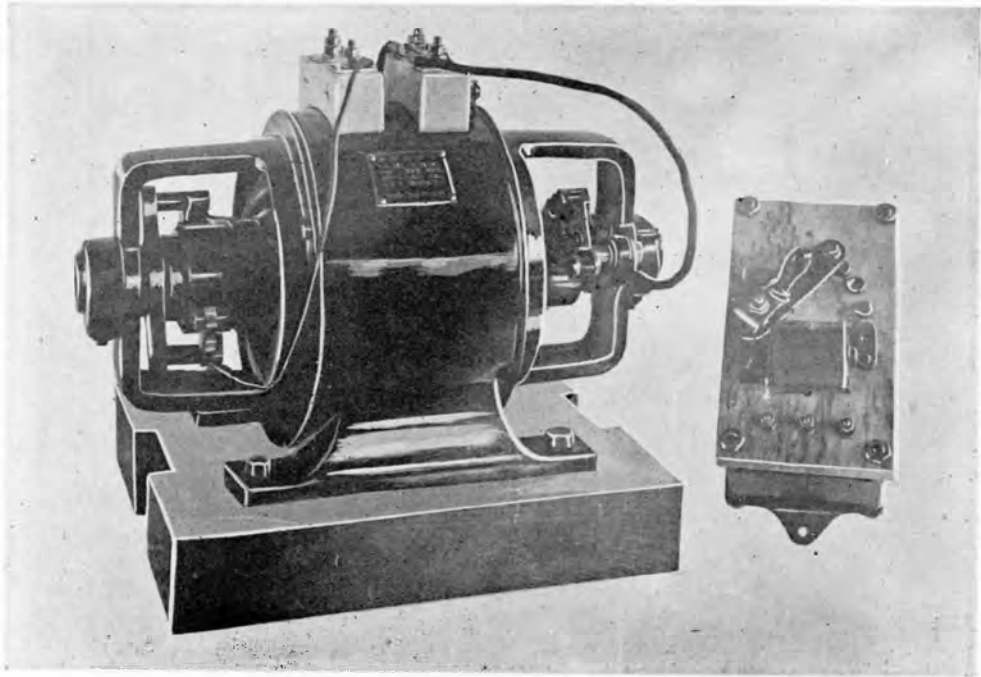
Also provided with the following accessories:—

- One Hotwire Ammeter.
- One Telephone Receiver.
- Inductance Coils.

Catalogue No. 19145.

# 直流回轉變壓器

Dynamoter



本機ハ一次線側ニ直流五十乃至百「ヴォルト」ヲ供給シ二次線側ニ直流三百乃至六百「ヴォルト」ヲ誘發スルモノニシテ專ラ真空球送信機及無線電話用ニ使用ス

型錄第一九二三〇號

Primary side: D.C. 50-100 volts.

Secondary side: D.C. 300-600 volts.

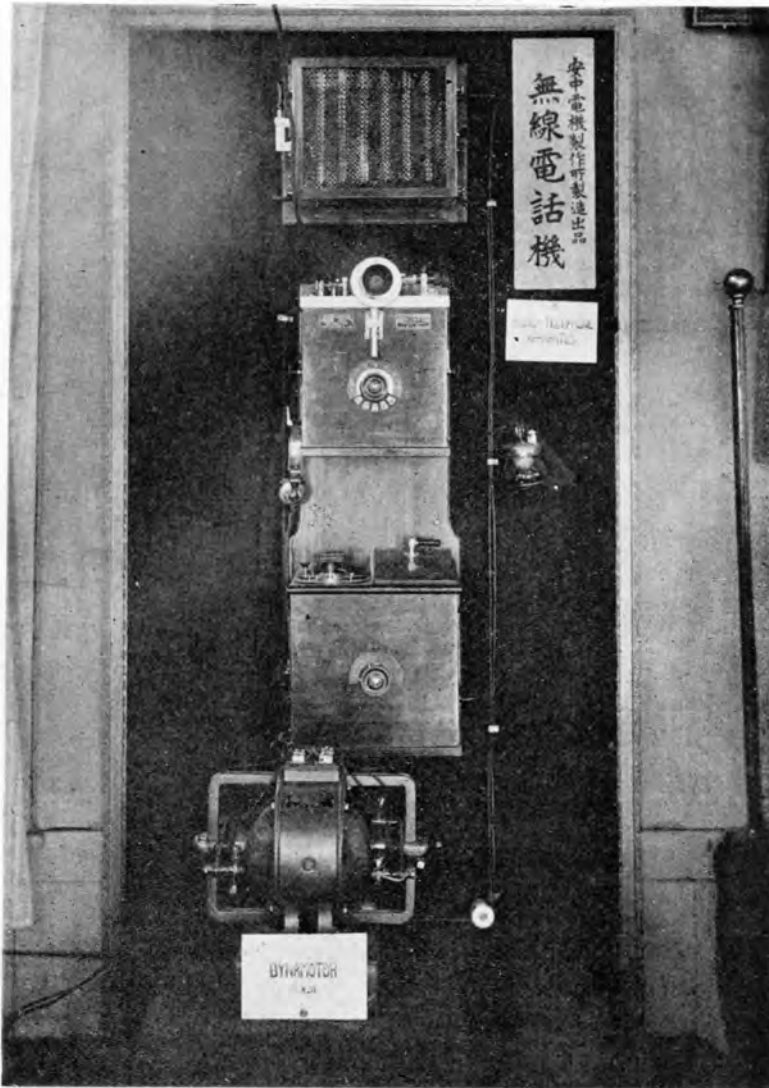
User for generating high pressure direct current for the purpose of Wireless Telephony, &c.

Catalogue No. 19230.



## T-Y-K-式無線電話機

T.Y.K. System Radio Telephone Apparatus.



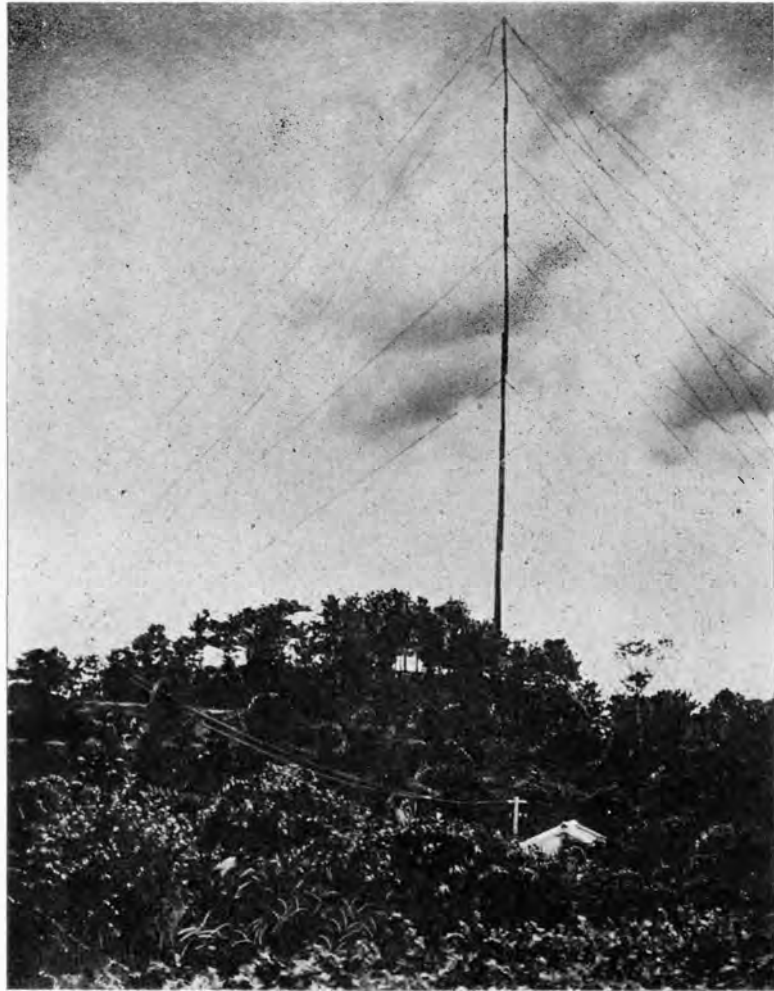
本機ハ遞信技師烏瀉右一、横山英太郎、遞信技手北村政次郎三氏ノ發明特許ニ係ルT.Y.K.式無線電話機ニシテ上部ハ送話部下部ハ受話部ナリ 型録第一九二三一號

This is the so-called "T.Y.K." system Radio Telephone Apparatus manufactured under the patent of Dr. Torikata, Mr. Yokoyama and Mr. Kitamura, with best materials and workmanship. The Apparatus consists of Transmitter and Receiving sets, the former being placed on the top of the other.

Catalogue No. 19231.

鳥羽無線電話局全景

Toba Radio Telephone Station.



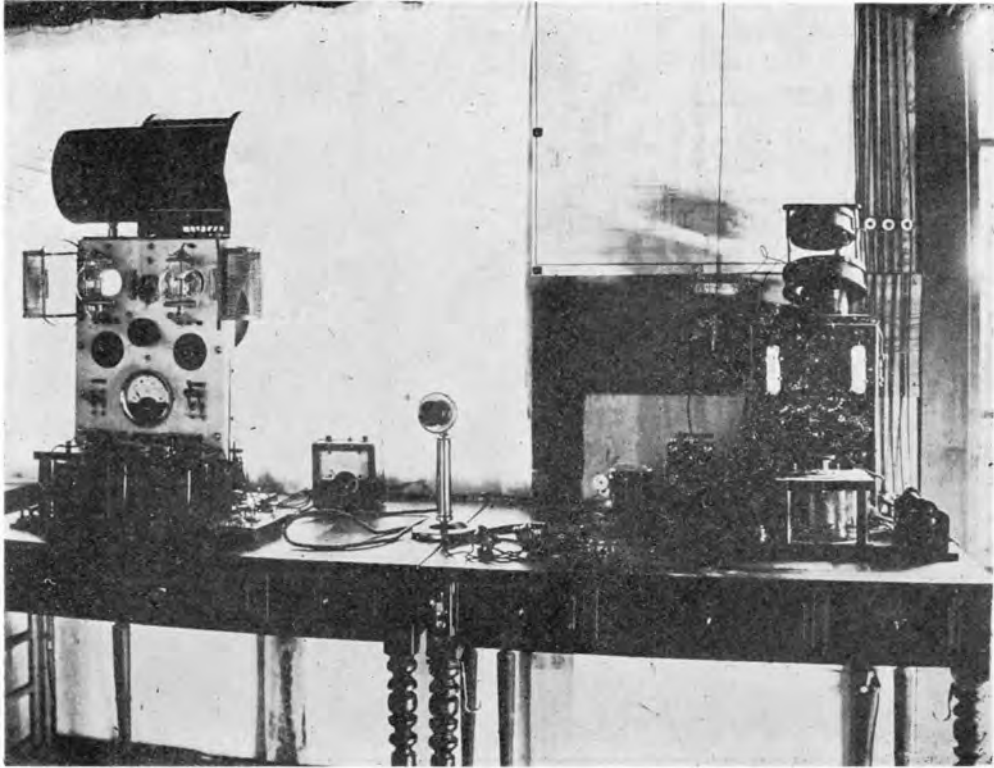
本無線電話局ハ三重縣志摩郡鳥羽町ニアリ

電柱ノ高サ木柱二百尺

The above illustrates the Radio Telephone Station at Toba, Miye prefecture. Height of Antenna Mast 200 ft.

## 佐伯式無線電話装置

Radio Telephone Apparatus.



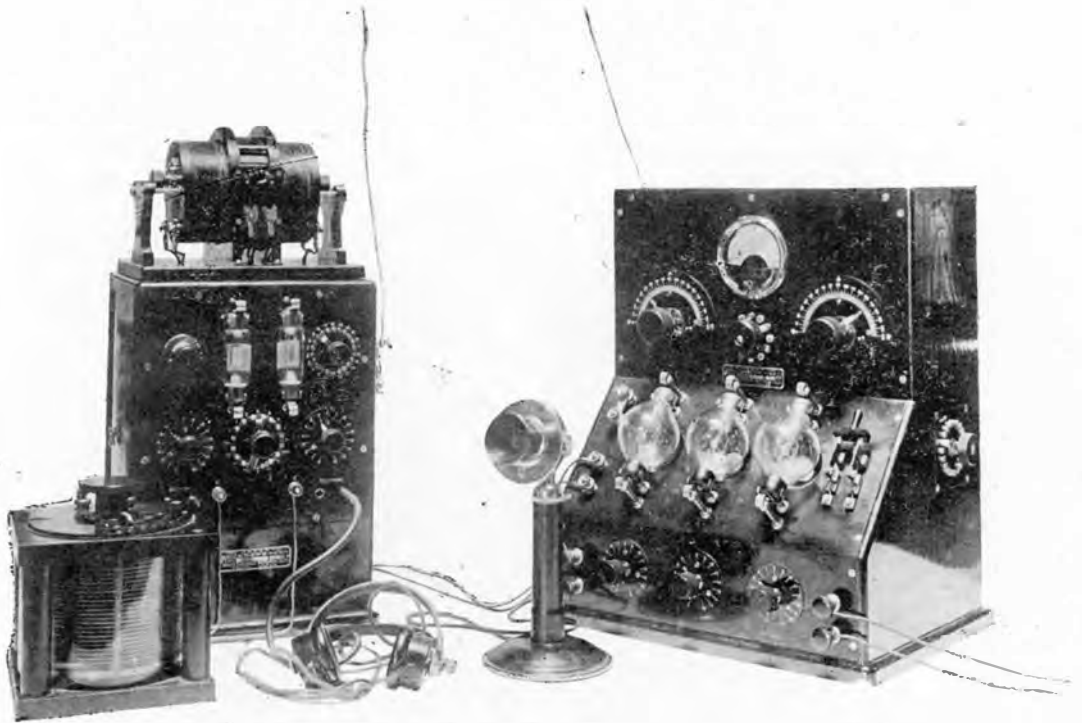
本無線電話局ハ三重縣志摩郡鳥羽町ニアリ最初T. Y. K. 式ヲ採用セシガ昨年佐伯式(型録第六一頁)ニ變更シ現今同所神島間(距離九哩)ニ通話ヲ交換シツ、アリ  
左方ハ送話部ニシテ右方ハ呼出信號及受話部ナリ

Toba Radio Telephone Station is equipped with "Sayegi" System Radio Telephone Apparatus manufactured by us and has been in actual use since last year between Toba and Kamishima (9 miles in distance) with successful results.

Left hand side is the Sending set and right hand side is calling device and Receiving set.

## [B]型 佐伯式 無線電話機

Sayegi System Wireless Telephone set Type B.



本機ハA型(型録第六一頁)ヲ簡單ニシタルモノニシテ通話距離二十海里  
ヲ有シ左方ハ受話部ニシテ右方ハ送話部ナリ

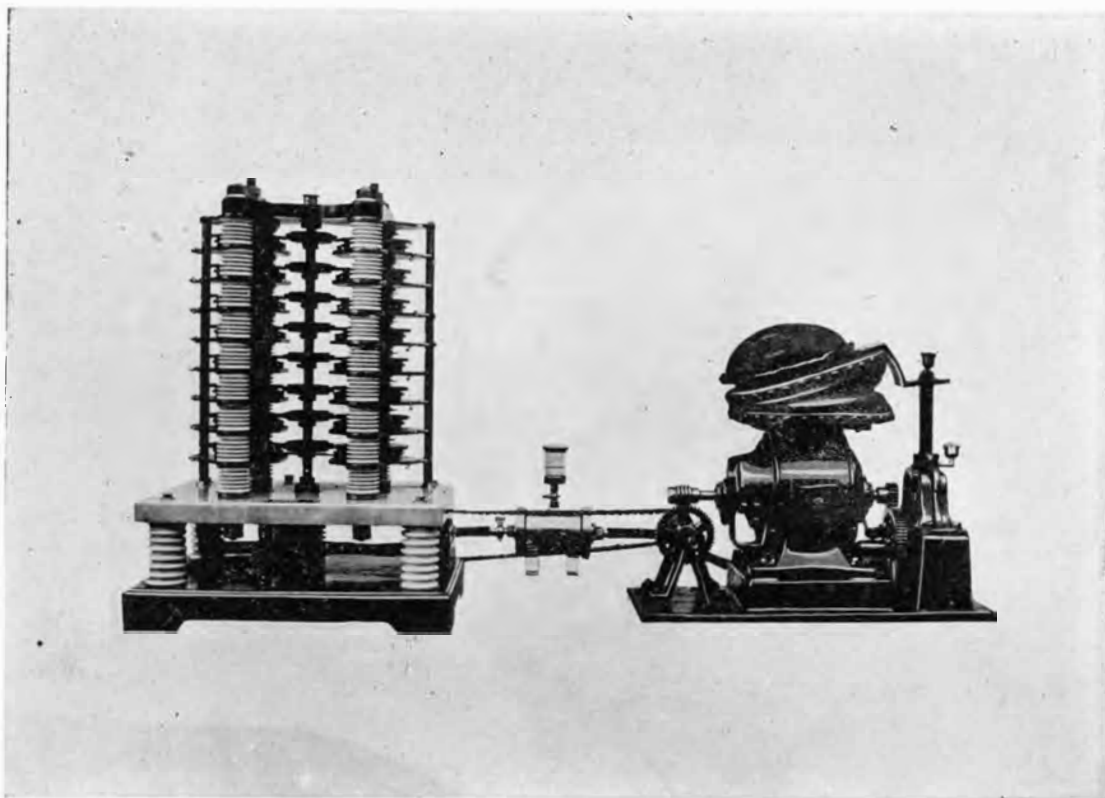
型録第一九二八一號

This is a simplified pattern of type A apparatus as is shown on page 61  
of this catalogue and suitable for a working range of 20 neautical miles on  
open sea. In the above illustration the Receiving set is shewn to the left and  
the sending set to the right.

Catalogue No. 19281.

# 瞬滅火花間隙

Quenched Spark Gap.

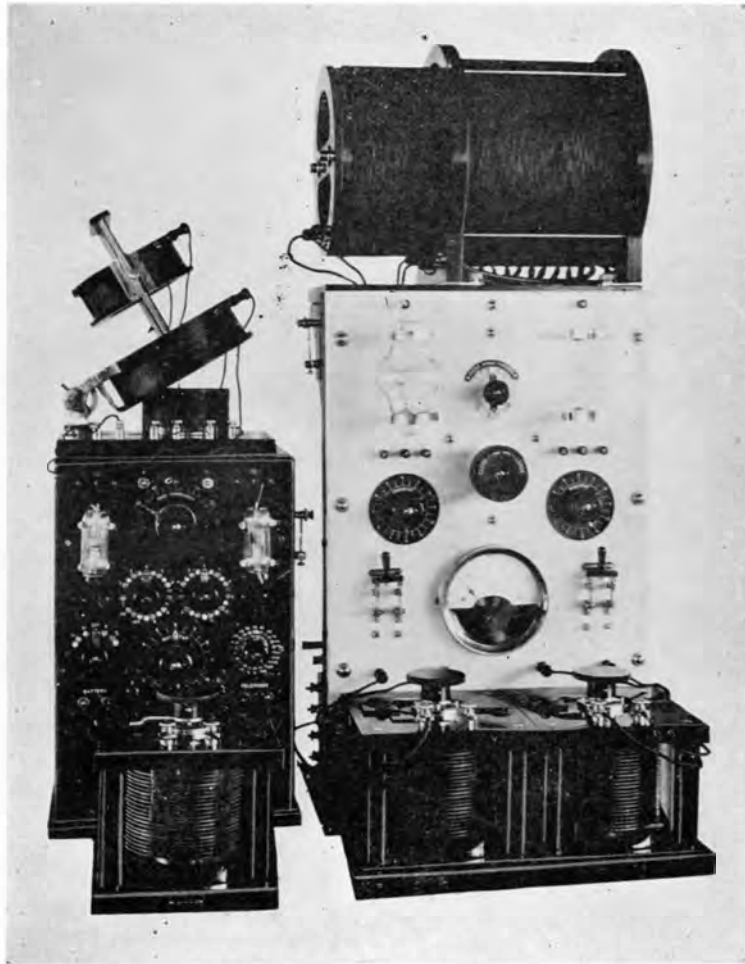


本器ハ三「キロヴォルトアンペア」瞬滅火花間隙ニシテ型録第三五頁 三六頁及三八頁ヲ組合セタルモノナリ

The above is a Quenched Spark Gap arrangement for a capacity of 3K.V.A.  
consisting of apparata catalogue Nos. 11072, 19105 and 19100.

# 佐伯式無線電話機

Sayegi System Wireless Telephone Set.



本機ハ遞信技師佐伯美津留氏ノ考案ニナレルモノニシテ通話距離五十海里ヲ有シ左方ハ受話部右方ハ送話部ナリ

型錄第一九二八〇號

Designed by Mr. Sayegi, Radio Engineer of Direction General of Post and Telegraphy, Teishinsho.

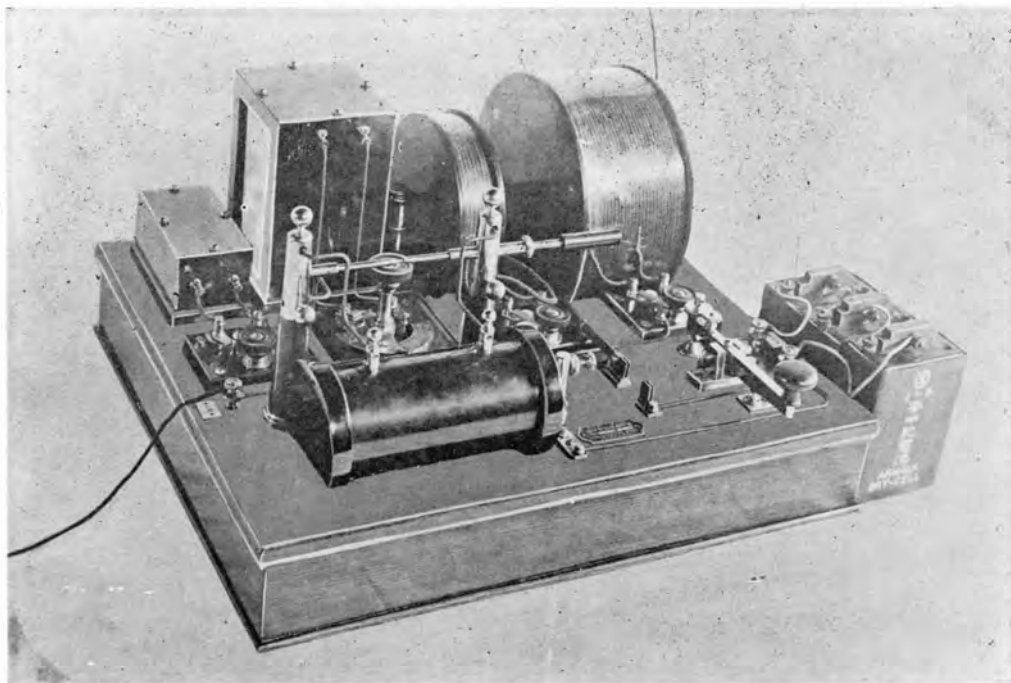
Working range is 50 nautical miles on open sea.

In the above illustration Receiving set is shown on the left hand side while the Sending set is on the right side.

Catalogue No. 19280.

## 合調作用實驗器(送信部)

Syntony Tester for Educational Purpose. (Sending Part)



本器ハ自己誘導捲線ト蓄電器トノ組合セヲ變化シテ各種ノ波長ヲ發  
生セシムルモノニシテ「シントニー」實驗用ナリ

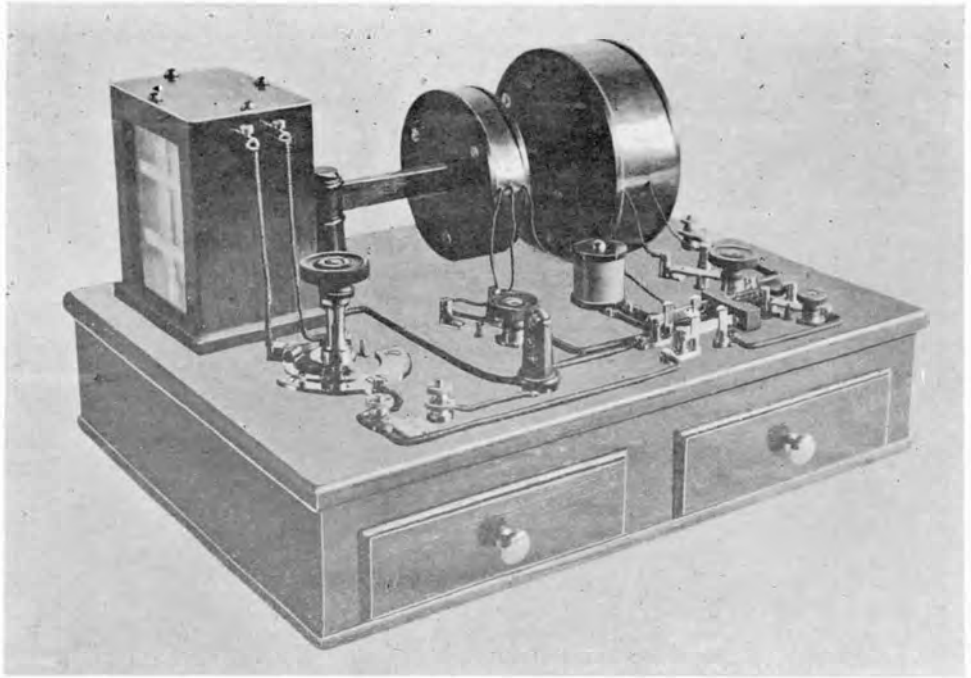
型錄第一九二九二號

This is Syntony tester, Sending set only, for Educational purpose.

Catalogue No. 19292.

合調作用實驗器(受信部)

Syntony Tester for Educational<sup>1</sup>. (Receiving Part)



本器ハ型録第六二頁ノ受信機ナリ  
型録第一九二九三號

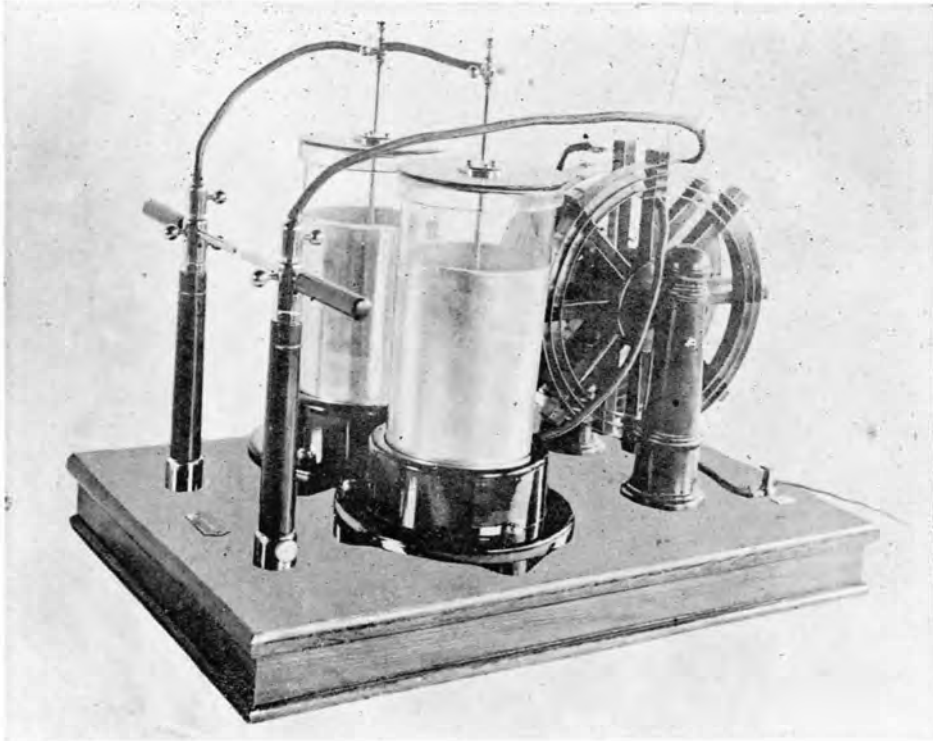
This is the Receiving part of the apparatus shown on page 62.

Catalogue No. 19293.



## 教育用無線電信機(送信機)

Radio Telegraph Sending Set for Educational Purpose.



本器ハ近距離用及教育用ニシテ電波長百乃至三百米突ヲ發射シ得ベシ

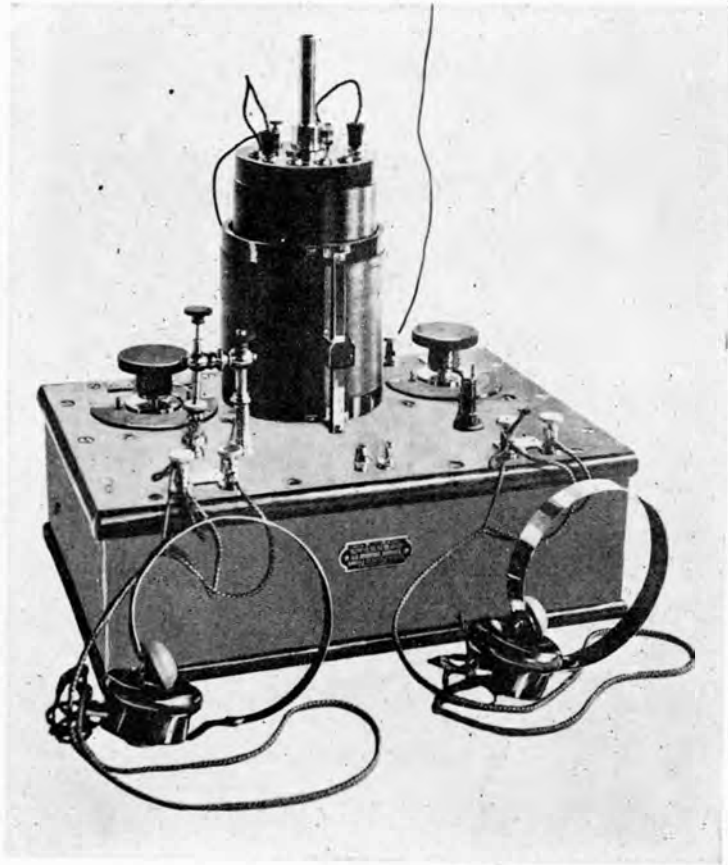
型錄第一九二九四號

This is suitable for use of short distance communication or educational purposes and capable of radiating Wave-lengths of 100 to 300 metres.

Catalogue No. 1294.

## 教育用無線電信機(受信機)

Radio Telegraph Receiving Set for Educational Purpose.



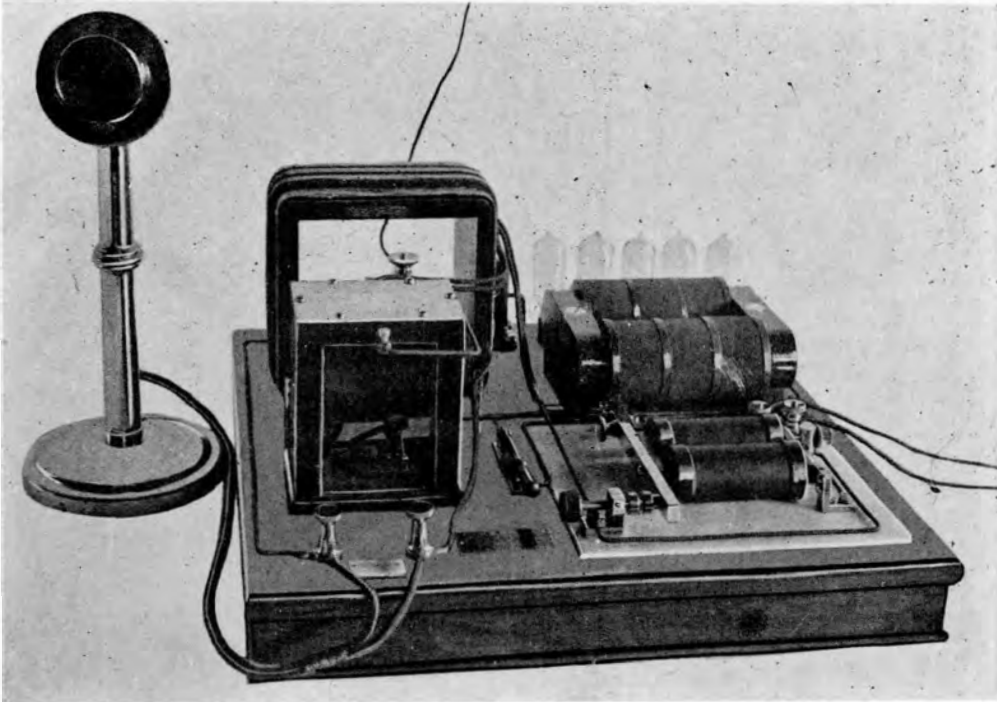
本器ハ近距離用及教育用ニシテ電波長百乃至二千米突ヲ受信シ得ベシ  
型錄第一九二九〇號

This is specially manufactured for the Educational purposes in Technical schools and suitable for receiving Wave-lengths between 100 to 2,000 metres.

Catalogue No. 19290.

## 教育用T-Y-K-式無線電話機(送話部)

T.Y.K. System Wireless Telephony Apparatus for Educational  
Purposes. (Transmitter Only)



本機ハ教育用 T. Y. K. 式無線電話機ノ送話部ニシテ電源トシテハ直  
流四百乃至五百「ヴォルト」ヲ使用ス

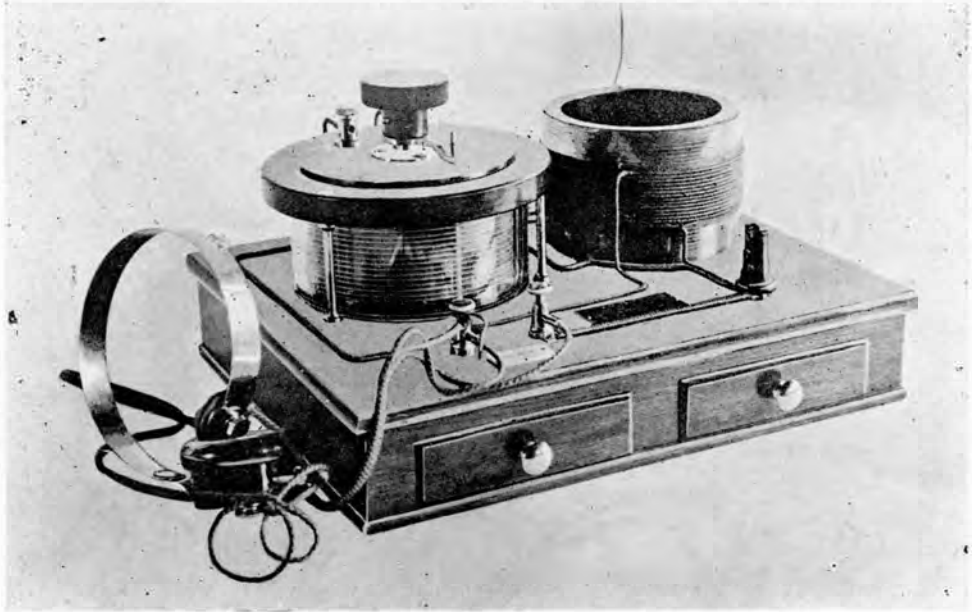
型録第一九二九五號

This is T.Y.K. System Wireless Telphony Set, transmitter only, for educa-  
tional purposes. D.C. 400 or 500 V. is used as source of electricity.

Catalogue No. 19295.

教育用T-Y-K-式無線電話機(受話部)

T.Y.K. System Radio Telephone Apparatus for Educational  
Purpose. (Receiving Set Only)

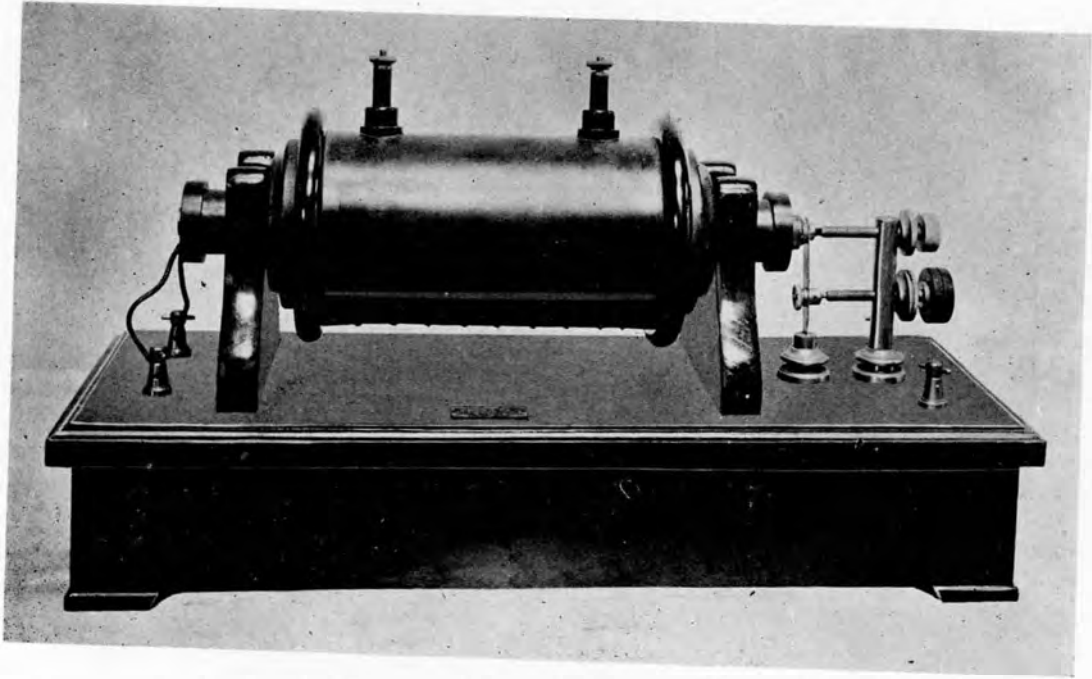


本器ハ教育用 T. Y. K. 式無線電話機ノ受話部ナリ  
型録第一九二九一號

Catalogue No. 19291.

誘 導 線 輪

Induction Coil.



本器ハ一次捲線ニ直流低壓電氣ヲ供給シ二次捲線ニ高壓ヲ誘發セシ  
ムルモノニシテ無線電信及ビX光線用ナリ

型録第一九一七〇號

Used for producing extra high tension current.

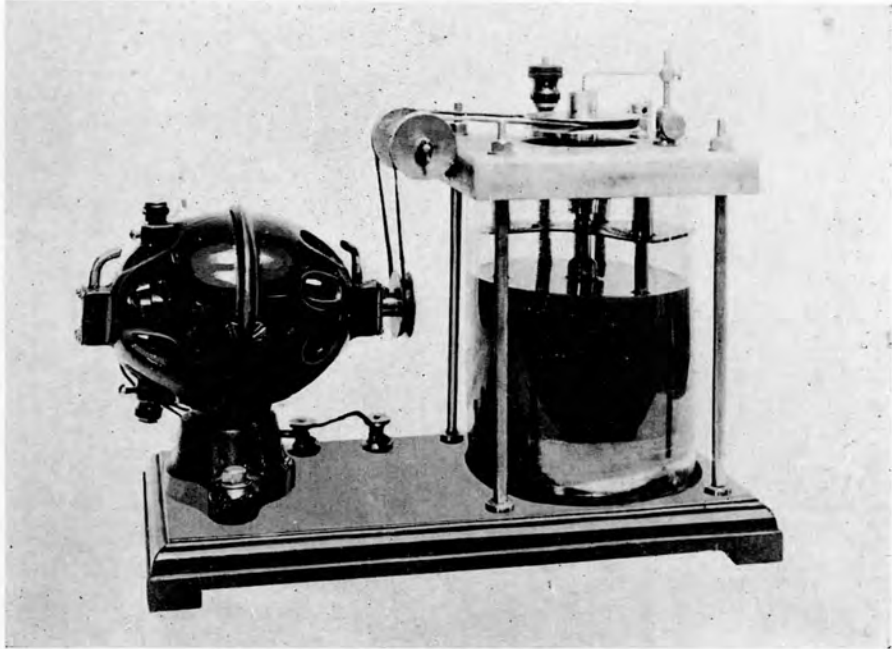
Mounted on a wooden base containing condensers.

Suitable for the purpose of Wireless telegraphy and X-ray generation.

Catalogue No. 19170.

# 水銀斷續器

Mercury Interrupter.



本器ハ誘導線輪ニ直流電源ヲ使用スル場合ニ電流ヲ斷續セシム  
ルモノニシテ使用電流四十「アンペア」以下ナリ

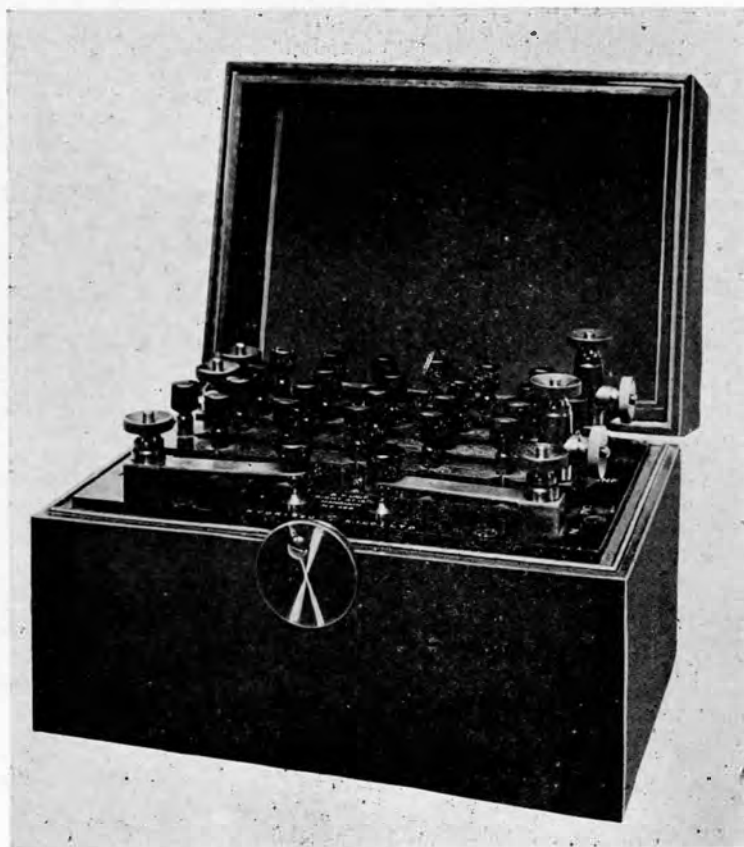
型録第一九一七一號

This is generally use together with Induction Coil, Catalogue page 68,  
for the purpose of interrupting Direct Current, when an Alternating Current  
Generator is not used.

Catalogue No. 19171.

[ホイートフトンブリッジ]

Wheatstone Bridge.



本器ハビー、オート型ト稱スルモノニシテ各種導体抵抗測定ニ  
 使用スルモノナリ  
 而シテノ器ハ10、100、1000、10000、100000、1000000ノ三組ノ「アーム」ヲ有  
 シ「オーム」ヨリ四000「オーム」迄「六個ノ「ゴイル」ヲ備ヘ  
 「ホリゾンタルカルバノメーター」ト乾電池ヲ併用セバ0.001  
 オームヨリ10000「オーム」迄ノ電氣抵抗ヲ容易ニ且ツ精  
 密ニ測定シ得ルモノナリ  
 本器ニ使用セル抵抗線ハ「マンガンシ」、「プラチノイド」、「ジ  
 ヤーマンシルバー」等アリ  
 型録第一九二六三號

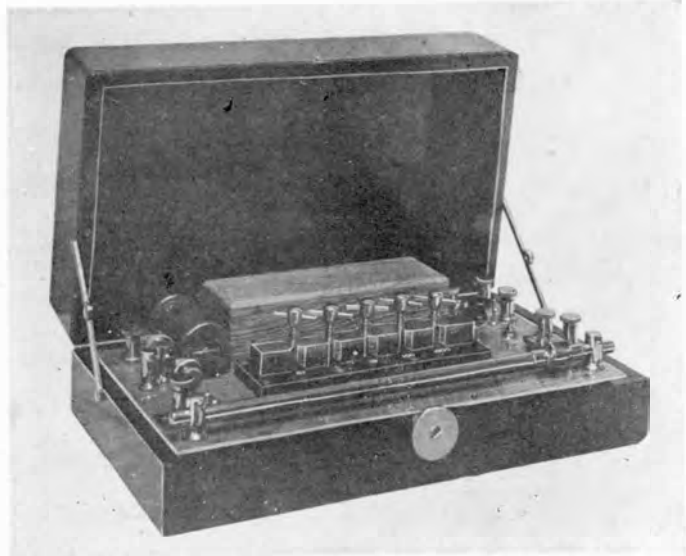
P. O. Pattern Wheatstone Bridge in wooden case with hinged lid, and Key  
 for Battery and Galvanometer.

With 16 plugs and resistances of 1 to 4,000 ohms in 3 arms of 10, 100 and  
 1,000 ohms respectively; and used for the purpose of measuring 0.01 to 1,110,000  
 ohms.

Catalogue No. 19263.

[コーラシュブリッジ]

Kohlrusch Bridge.



本器ハ「ホフートストンブリッジ」ノ原理ヲ應用シ電流計若クハ受話器ヲ用ヒ正確ニ〇、〇五「オーム」ヨリ一〇、〇〇〇「オーム」迄ノ電氣抵抗ヲ測定スルコトヲ得ルモノニシテ地板抵抗又ハ電解液ノ抵抗ヲ正確ニ測定スルコトヲ得

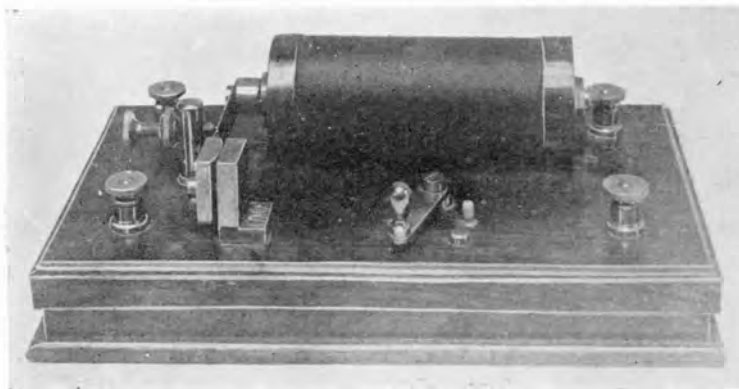
型錄第一九二六五號

In this type of Bridge, the resistance is indicated on a scale in ohms for direct reading. The Rheostat contains 5 comparative coils of 0.1; 1; 10; 100; 1,000 ohms, and suitable for resistance measurements on solid conductors between about 0.05 and 20,000 ohms with sufficient accuracy.

Catalogue No. 19265.

[ルムコルフ誘導線輪]

Ruhmkorff Induction Coil.



本器ハ地中導体抵抗、液体抵抗及蓄電器容量等ノ測定電源用トシテ使用スルモノニシテ一次線ハ直流三「ヴォルト」ニテ働作ス  
型錄第一九一七五號

This Induction Coil is worked with 3 volts Direct Current supplied to the Primary Coil, and generally used for the measurement of Earth Resistance, Liquid Resistance.

Coil placed on a Wooden base and provided with a 2-poleswitch.

Catalogue No. 19175.



## 船舶用蓄電池

Accumulators for Radio Station  
on Board a Ship.



本器ハ船舶局豫備装置用ニシテ三時間放電  
七十八「アンペア」時ノ容量ヲ有ス

型録第一九二五四號

Contained in Ebonite cases.

Strongly built to stand rolling  
and vibration of a ship.

Capacity is 78 amp-hours for 3 hours  
discharge.

Catalogue No. 19254.

## 水 銃

Water Syringe.



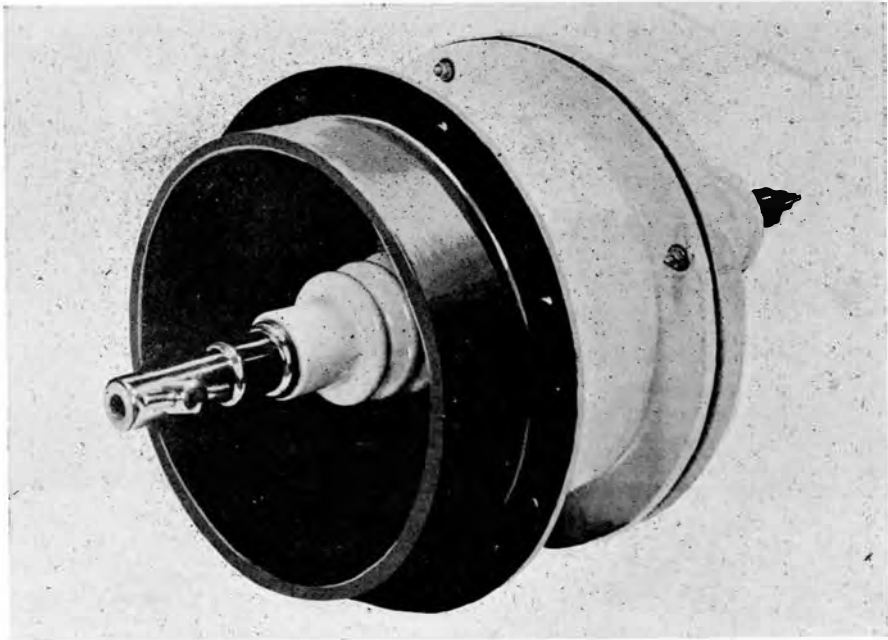
本器ハ「エボナイト」製ニシテ蓄電池溶液加減用ナリ  
型録第一九二五六號

Made of Ebonite. Has a high resistivity against the action of  
Sulphuric Acid of Accumulators. Used for taking in and out  
acid.

Catalogue No. 19256.

# 空中線引込管

Antenna Socket.



本器ハ陶器製ノモノニシテ空中線引込用ナリ

三「キロヴォルトアンペア」用以下 型録番號 19190—A

七「キロヴォルトアンペア」用以下 „ 19190—B

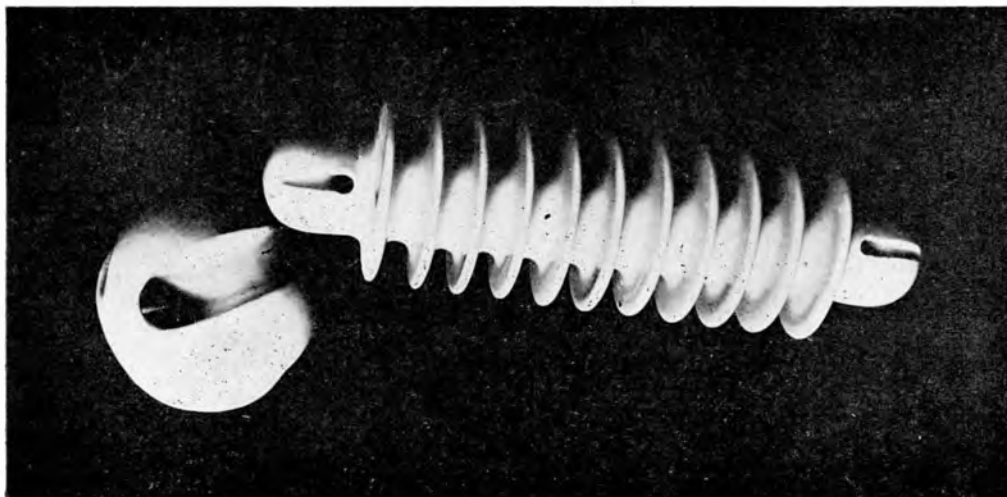
Specially designed for leading-in Antenna Wire.

Made of porcelain with metal base.

Catalogue No. 19190.

# 空中線用碍子

Corrugated Insulators and Ball Insulators for Antenna.



本品ハ何レモ陶器製ノモノニシテ皺形碍子ハ空中線絶縁用ナリ

型録番號 一九一九一號

玉碍子ハ「ステー」絶縁用ナリ

” 一九一九二號

Corrugated Insulators are specially designed for the purpose of insulating Antenna Wire.

Made of porcelain of best quality.

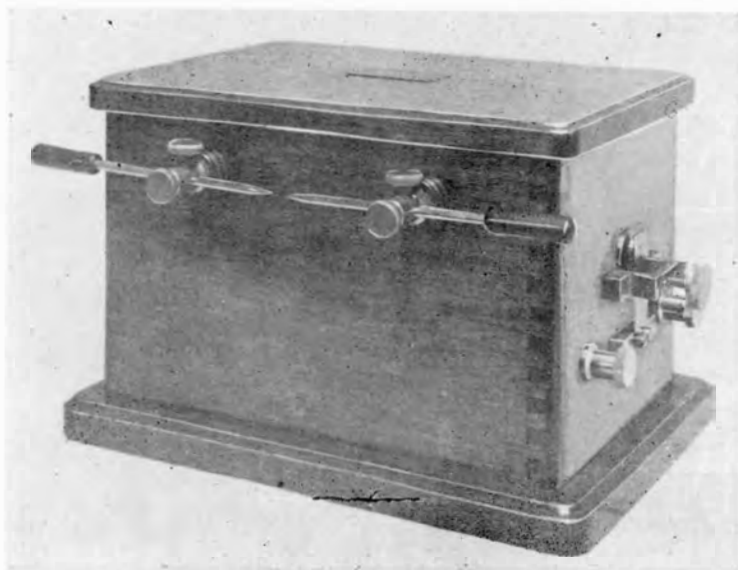
Catalogue No. 19191.

Ball Insulators are specially designed for the purpose of insulating stay wires.

Catalogue No. 19192.

發火「コイル」

Induction Coil.



本器ハ主トシテ電球ノ真空度試験ニ使用スルモノニシテ一次捲線ノ電源トシテハ交流直流何レニテモ使用シ得ラル而シテ一次捲線ニ供給スル電壓下ノ如シ「スパーク」一時ノモノ六乃至八「ヴォルト」  
 同一時半ノモノ八乃至一〇「ヴォルト」又本器ト電球抵抗器トヲ直列ニ使用スル時ハ百「ヴォルト」回路ニモ直接使用シ得ベシ  
 B.T. 一時「スパークコイル」  
 型録番號一九一七二號—A  
 B.T. 一時半同 同一九一七二號—B  
 同上用遞降變壓器（「コイル」三個迄）  
 型録番號一九一七二號—C  
 同上用電球抵抗器  
 同一九一七二號—D

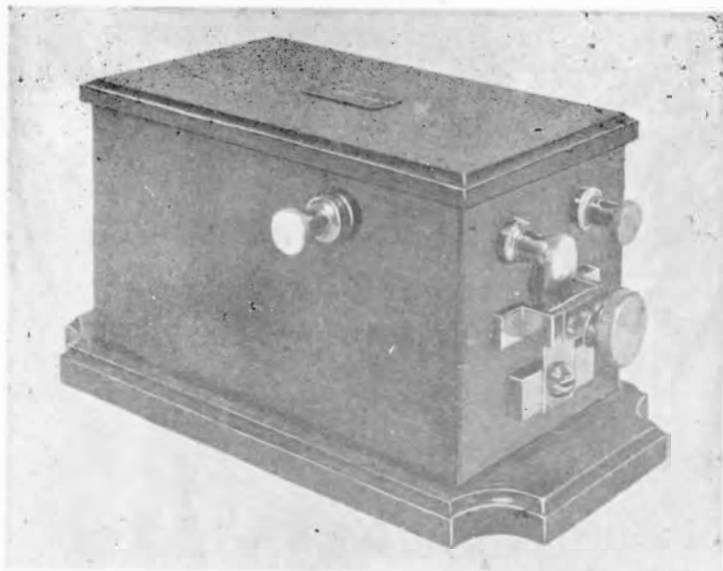
This is specially designed for the testing of vacuum in Incandescent Lamp Bulbs. Catalogue No. 19172.

發火「コイル」

Induction Coil.

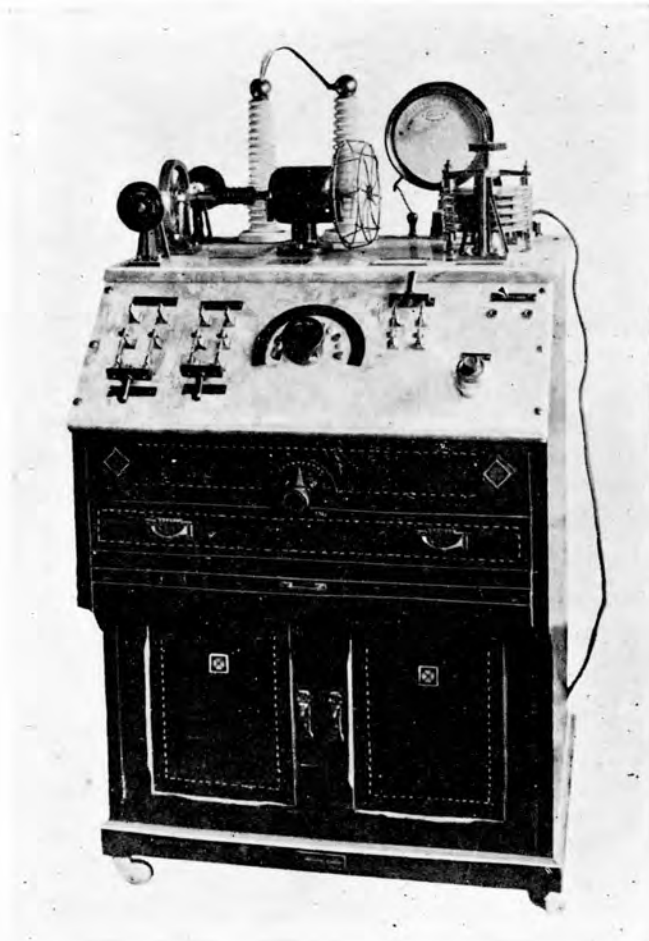
本器ハ石油發動機又ハ瓦斯倫發動機ノ發火用ナリ  
 型録第一九一七三號

This is specially designed for Motor Car Ignition. Catalogue No. 19173.



# 電氣透熱器

Diathermie.



本機ハ工學博士烏瀨右一及醫學士樫田十次郎兩氏ノ特許品ニシテ  
各種神經系統病其他ノ治療用ナリ

型錄第一九二九五號

Diathermie designed and patented by Dr. Torigata and Dr. Kashida.

Catalogue No. 19295.