

TELEPHONES

STROMBERG-CARLSON
TELEPHONE MFG. CO.

ROCHESTER N.Y. - CHICAGO ILL.

NOTICE TO PURCHASERS

When ordering goods, give address in full, including county and shipping point. Care should be taken to specify our Code Numbers as well as the name of each article ordered. Transportation charges on goods returned must be prepaid.

Terms are thirty days net cash. If your financial standing is unknown to us, a statement of your financial condition and satisfactory references should accompany your orders. This will avoid delay in determining your proper credit basis.

Accounts are due and payable thirty days from date of invoice unless otherwise agreed upon, and will be subject to sight draft without notice after that time.

Cash Discounts are not allowed unless by special agreement.

Goods will be sent C. O. D. if a remittance sufficient to pay express charges both ways accompanies the order. Goods may be forwarded by freight with sight draft attached to bill of lading or by express collect. Remittances may be made by New York draft, Post Office or Express Money Order or registered letter to our general office at Rochester, N. Y.

Shipments. We endeavor to ship standard goods immediately upon receipt of order, but unless you specify by code numbers what is wanted, your order may be subject to delay. Directions as to the proper routing of orders should be given; otherwise we will use our best judgment. Make orders separate from anything else; if infor-

mation is wanted from any department whatever, write on separate sheet from order and you will get both goods and information more promptly.

Prices. We issue price lists giving the lowest quotations upon all standard goods and endeavor to have in our customers' hands an up-to-date list; yet we do not hold ourselves liable for changes in prices without notice. Prices are always f. o. b. factories, unless otherwise specified. In asking us for quotations, the quantity should always be given, as in many cases it largely influences the prices.

All agreements made contingent upon strikes, fires, accidents or causes beyond our control.

Returning Goods. Under no circumstances return goods to us without first getting our permission; otherwise we will refuse to receive them. We stand ready to correct at any time errors on our part, and expect our customers to accept liability for their own mistakes. No goods will be accepted for credit after ten days from date of delivery. Name and address of shipper should be plainly marked on all returned packages.

Liability. We employ experienced packers and we cannot be responsible for breakage after having obtained "in good order" receipt from a transportation company. All claims for breakage and damage should be made to the transportation companies handling the freight.

Goods sent by mail are sent at purchaser's risk of loss or damage.

CENTRAL ENERGY TELEPHONES

Bulletin Number 5



STROMBERG-CARLSON TELEPHONE MANUFACTURING COMPANY

GENERAL AND EASTERN SALES OFFICE: ROCHESTER, N. Y. SALES DEPARTMENT: CHICAGO, ILL.

FACTORIES: ROCHESTER, N. Y. AND CHICAGO, ILL.

Introductory

IT is with pardonable pride that we take this occasion to make mention of the wonderful success we have had in the manufacture of Central Energy Telephones. Since we are the pioneers in the independent telephone field in the manufacture of Central Energy apparatus our experience should count for something. It has been our aim since we began the manufacture of telephone apparatus to produce an article that was superior in every way to the product of other companies. Did it ever occur to you what it means to be the leaders in any line of business in which there is so much progress and competition as the telephone business? In using nothing but thoroughly high grade material and buying nothing cheap because it was cheap, we have been able to maintain the position which we now hold, that of being the largest independent manufacturer in the world of high class telephone apparatus.

We attribute this success to various things, principally to the design and construction of our apparatus, which is illustrated and described in this bulletin, and the materials we have used. We find that it pays to buy the best material because of the fact that it makes satisfied customers, and satisfied customers are good customers. In regard to the construction of our apparatus it would seem unnecessary to state that every detail receives our most careful attention, as a casual inspection of one of our instruments will show even an inexperienced person that our telephones are built and finished in a workmanlike manner.

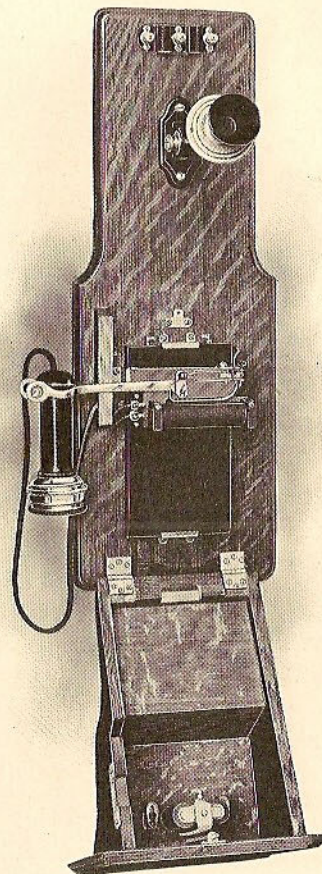
We employ inspectors in all departments whose duties are to see that all parts that go to make up a complete telephone are well and carefully made, and it is their duty to see that all parts are correct before they leave the factory or their departments. By this system of rigid inspection we have been able to turn out high class goods, and we believe the reputation we have for doing so is well earned.

As to the success of our apparatus we wish to emphasize the fact that a number of exchanges, after having adopted other makes of apparatus, have, in order to retain their subscribers, replaced their original telephones with Stromberg-Carlson instruments. We would be pleased to furnish testimonials verifying the above statement. We may further add that many operating companies who have ventured to experiment with the various makes of apparatus that did not give satisfactory results, have, in numerous instances, greatly benefited their service by installing Stromberg-Carlson telephones. Having furnished a large number of telephones for use with various makes of switchboards we are thoroughly familiar with the requirements and are prepared to furnish in any quantity telephones to operate in conjunction with any make of switchboard system.

"Central Energy" Office Telephone

Code Numbers

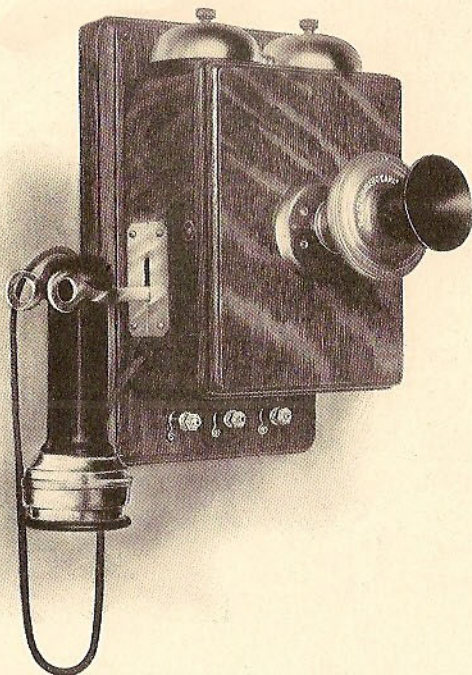
- No. 188. Golden Oak Woodwork, No. 1 Transmitter, No. 3 Receiver, No. 1 Transmitter Arm, No. 15 Hookswitch, No. 2 Condenser, No. 11 Induction Coil, No. 20 Lightning Arrester, 600 ohm No. 6-M Ringer.
- No. 189. Walnut Woodwork, No. 1 Transmitter, No. 3 Receiver, No. 1 Transmitter Arm, No. 15 Hookswitch, No. 2 Condenser, No. 11 Induction Coil, No. 20 Lightning Arrester, 600 ohm No. 6-M Ringer.
- No. 190. Golden Oak Woodwork, No. 1 Transmitter, No. 3 Receiver, No. 1 Transmitter Arm, No. 15 Hookswitch, No. 2 Condenser, No. 11 Induction Coil, No. 20 Lightning Arrester, 1000 ohm No. 6-A Ringer.
- No. 191. Walnut Woodwork, No. 1 Transmitter, No. 3 Receiver, No. 1 Transmitter Arm, No. 15 Hookswitch, No. 2 Condenser, No. 11 Induction Coil, No. 20 Lightning Arrester, 1000 ohm No. 6-A Ringer.



"Central Energy" Residence Telephone

In the accompanying illustrations is shown our standard "Central Energy" residence or office telephone. The instrument is regularly furnished in oak or walnut woodwork, but can be furnished in special woods if necessary. Orders for same, however, may in some cases be subject to delay.

This instrument is one which we believe embodies all of the important and necessary details to place it in the front rank of high class telephone apparatus. The instrument is very practically built, the apparatus being so mounted that all parts are easily accessible for adjustment, inspection or repairs. The ringer is the self-contained type and so mounted as to give sufficient space for adjusting. The bell clapper is covered with a metal shield to prevent anybody from varying the adjustment of the ringer. The hook-switch is mounted on a heavy metal support, which is fastened to the back of the cabinet just below the ringer. The induction coil is mounted vertically in the cabinet, as shown in the illustration, all the connections for same being soldered. The transmitter is mounted on a short knuckle joint arm, so constructed that it is not necessary to tighten or loosen the arm to change the adjustment. A wrench supported beneath a metal clip mounted on the inner side of the door is provided for adjusting the ringer; also for removing connections from the binding posts mounted at the lower edge of the instrument. The door is fastened by a screw on the left hand side, which screws into a brass clip, mounted on the door, the screw being threaded through an escutcheon and provided with a spring so that the screw will be forced out-

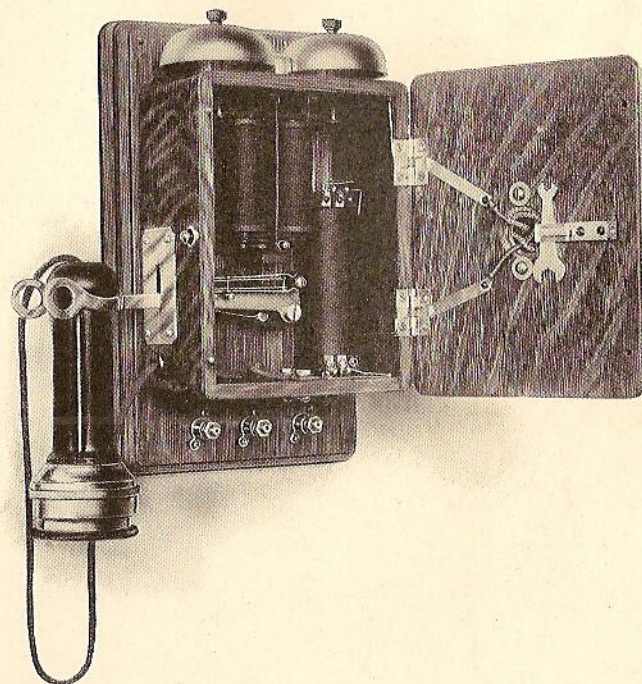


"Central Energy" Residence Telephone

ward as soon as it gives way from the clip on the door when the screw is loosened for the purpose of examining the inside of the instrument. This arrangement prevents the screw from falling out, consequently always being in place and also from being damaged when the door is closed. The receiver cord passes through a hard rubber bushing at the side of the instrument, which lessens the wear at this point. The condenser is mounted in the backboard. These instruments are regularly equipped with our No. 1 Transmitter and No. 3 Receiver. Wall space occupied by this instrument 6x7 $\frac{1}{4}$ inches.

Code Numbers

- No. 192. Golden Oak Woodwork, No. 6-M 600 ohm Ringer, No. 1 Transmitter, No. 3 Receiver, No. 8 Transmitter Arm, No. 15 Hookswitch, No. 2 Condenser, No. 11 Induction Coil.
- No. 193. Walnut Woodwork, No. 6-M 600 ohm Ringer, No. 1 Transmitter, No. 3 Receiver, No. 8 Transmitter Arm, No. 15 Hookswitch, No. 2 Condenser, No. 11 Induction Coil.
- No. 194. Golden Oak Woodwork, No. 6-A 1000 ohm Ringer, No. 1 Transmitter, No. 3 Receiver, No. 8 Transmitter Arm, No. 15 Hookswitch, No. 2 Condenser, No. 11 Induction Coil.
- No. 195. Walnut Woodwork, No. 6-A 1000 ohm Ringer, No. 1 Transmitter, No. 3 Receiver, No. 8 Transmitter Arm, No. 15 Hookswitch, No. 2 Condenser, No. 11 Induction Coil.





“Central Energy” Portable Desk Telephones

This telephone is a very neatly designed, strongly built instrument with a substantial, heavily nickel-plated, highly polished brass base and pedestal. It is equipped with long distance transmitter mounted on adjustable arm, bi-polar receiver and six-foot connecting cord with terminal block attached. The hookswitch has platinum contacts, all of which are enclosed. The induction coil is mounted in the base.

Quotations on “Central Energy” Desk Telephones alone include the desk stand with transmitter, receiver and six-foot connecting cord with terminal block attached. This is known as Portable Desk Telephone No. 336.

Quotations on Portable Desk Telephones complete include extension bell, desk stand with transmitter, receiver and a six-foot connecting cord with terminal block attached.

Code Numbers

- | | |
|----------|---|
| No. 204. | No. 336 Portable Desk Telephone, 600 ohm Ringer and No. 292 Extension Bell. |
| No. 205. | No. 336 Portable Desk Telephone, 600 ohm Ringer and No. 293 Extension Bell. |
| No. 206. | No. 336 Portable Desk Telephone, 1,000 ohm Ringer, No. 294 Extension Bell. |
| No. 207. | No. 336 Portable Desk Telephone, 1,000 ohm Ringer, No. 295 Extension Bell. |

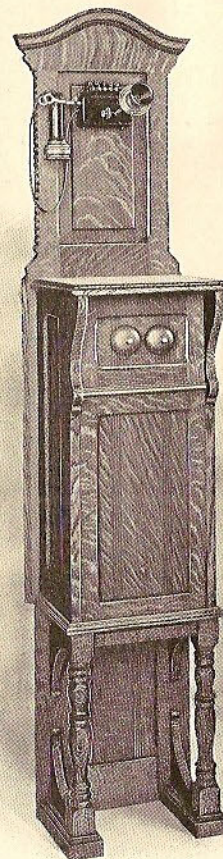
"Central Energy" Cabinet Wall Telephone

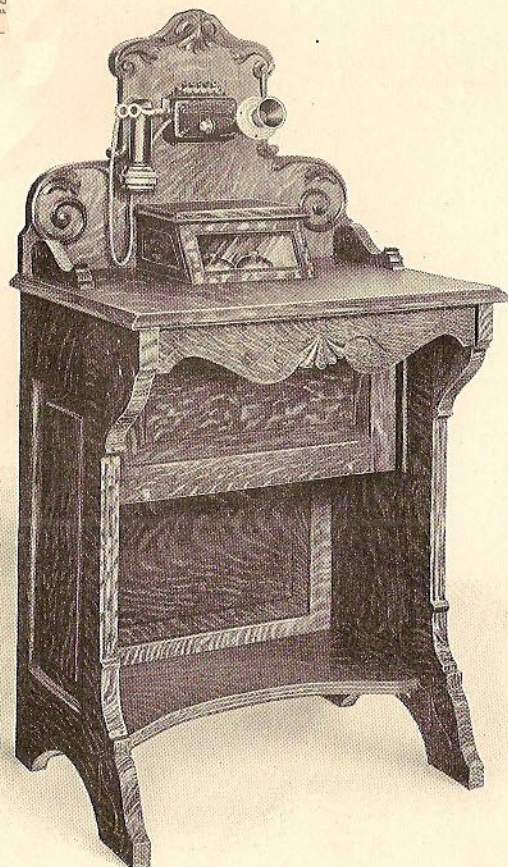
This telephone is built principally for use in telephone booths and offices in public buildings. The front and sides of the cabinet are paneled; the sides of the upper part are edged with a beaded moulding, while the top is surmounted by a handsome grooved moulding which projects forward about one inch.

The telephone is finished in quarter sawed oak with golden oak finish. The equipment of an instrument consists of lightning arrester, ringer, condenser, No. 8 triplet, which includes hookswitch, induction coil, transmitter arm, transmitter and receiver.

Code Numbers

- No. 196. Golden Oak Woodwork, 600 ohm No. 6-M Ringer, No. 8 Triplet (which includes No. 1 Transmitter, No. 3 Receiver, No. 11 Induction Coil and No. 2 Hookswitch), No. 2 Condenser.
- No. 197. Golden Oak Woodwork, 1,000 ohm No. 6-A Ringer, No. 8 Triplet and No. 2 Condenser.





"Central Energy" Cabinet Desk Telephone

This telephone is one of the handsomest pieces of cabinet work we produce and serves the double purpose of both writing desk and telephone. The cabinet is furnished in quarter sawed oak with golden oak finish, highly polished. The cabinet can be furnished, if desired, in any special finish to match the surrounding woodwork. A single instrument is equipped with our standard carbon block lightning arrester, long distance transmitter, receiver, platinum contact hook-switch, condenser and self contained ringer.

Code Numbers

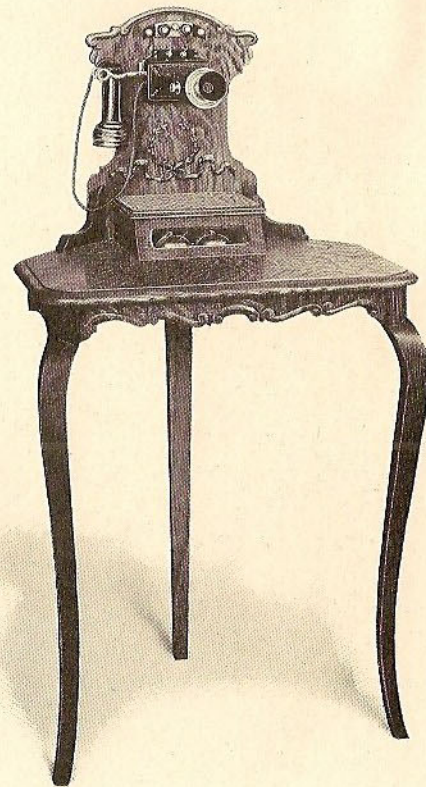
- No. 198. Golden Oak Woodwork, 600 ohm No. 6-M Ringer, No. 2 Condenser, No. 8 Triplet (which includes No. 1 Transmitter, No. 3 Receiver, No. 2 Hook-switch) and No. 11 Induction Coil.
- No. 199. Golden Oak Woodwork, 1,000 ohm No. 6-A Ringer, No. 2 Condenser, No. 8 Triplet.

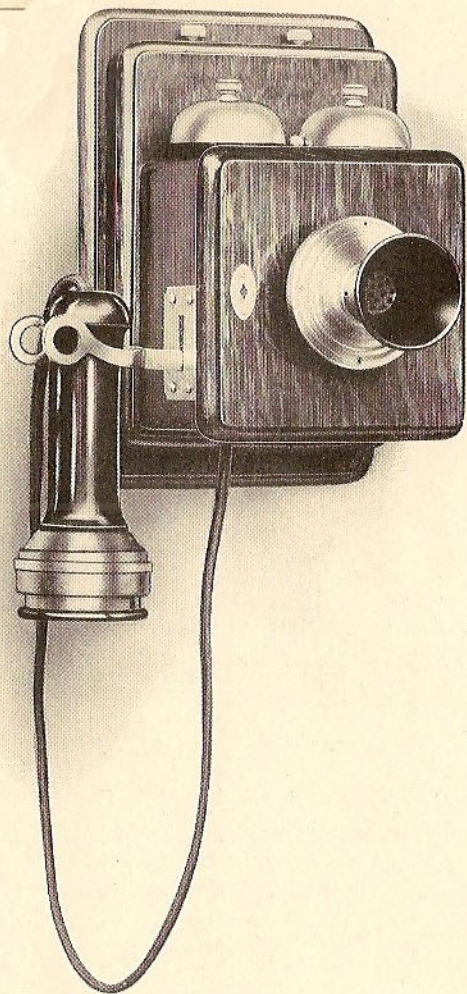
“Central Energy” Corner Desk Cabinet Telephone

This illustration shows one of our standard “Central Energy” telephones for clubs, residences, guests or writing rooms of hotels. The instrument is finished in golden oak, highly polished, presenting a very attractive appearance. It is the most ornamental piece of furniture in the way of a telephone that we manufacture. The writing shelf affords ample space for writing, while the small cabinet enclosing the ringer may be used to support a telephone directory. The instrument is equipped with our standard long distance transmitter and receiver.

Code Numbers

- No. 200. Golden Oak Woodwork, 600 ohm No. 6-M Ringer, No. 8 Triplet, (which includes No. 1 Transmitter, No. 3 Receiver, No. 2 Condenser and No. 11 Induction Coil).
- No. 201. Golden Oak Woodwork, 1000 ohm No. 6-A Ringer, No. 8 Triplet, (which includes No. 1 Transmitter, No. 3 Receiver, No. 2 Condenser and No. 11 Induction Coil).





“Central Energy” Hotel Telephone

This telephone is of a special design and is intended for either residence or office use where a small compact instrument is desirable. The apparatus is mounted in the front portion of the instrument with the exception of the condenser, which is mounted on the backboard. These instruments are regularly furnished in oak or walnut woodwork and are equipped with receiver, transmitter, platinum contact hookswitch, ringer, induction coil and condenser.

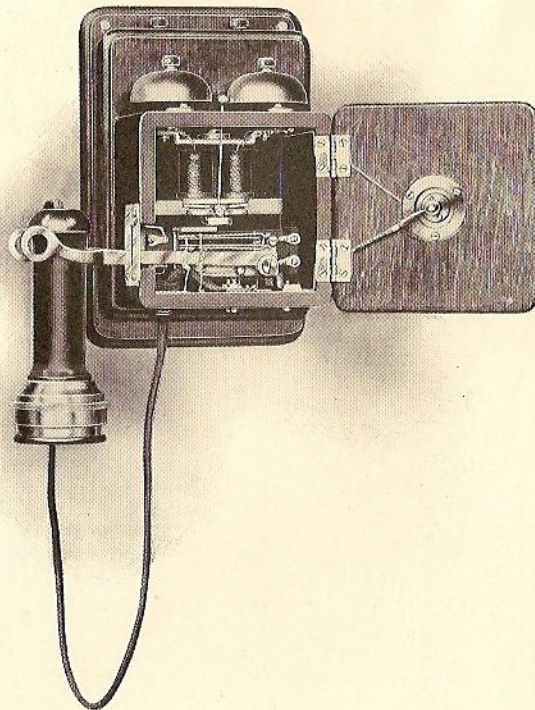
Wall space occupied by this instrument 6 x 9 inches.

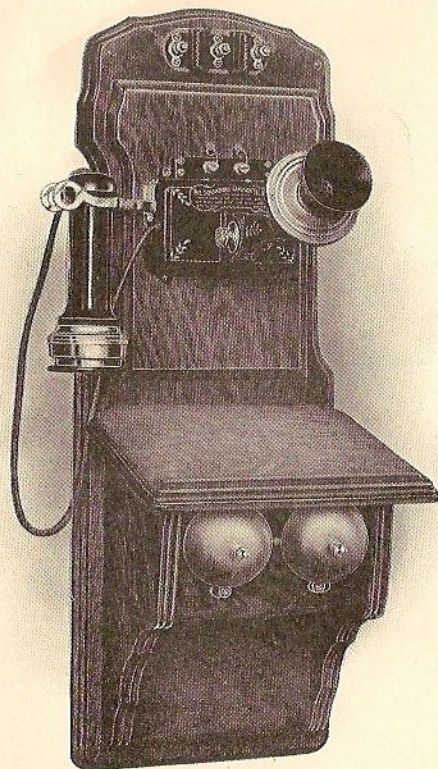
NOTE.—Orders for this Instrument may be subject to delay, since it is not carried in stock.

"Central Energy" Hotel Telephone

Code Numbers

- No. 375. Golden Oak Woodwork, 600 ohm No. 6-M Ringer, No. 1 Transmitter, No. 3 Receiver, No. 8 Transmitter Arm, No. 6 Hookswitch, No. 2 Condenser and No. 11 Induction Coil.
- No. 376. Walnut Woodwork, 600 ohm No. 6-M Ringer, No. 1 Transmitter, No. 3 Receiver, No. 8 Transmitter Arm, No. 6 Hookswitch, No. 2 Condenser and No. 11 Induction Coil.
- No. 377. Golden Oak Woodwork, 1000 ohm No. 6-A Ringer, No. 1 Transmitter, No. 3 Receiver, No. 8 Transmitter Arm, No. 6 Hookswitch, No. 2 Condenser and No. 11 Induction Coil.
- No. 378. Walnut Woodwork, 1000 ohm No. 6-A Ringer, No. 1 Transmitter, No. 3 Receiver, No. 8 Transmitter Arm, No. 6 Hookswitch, No. 2 Condenser and No. 11 Induction Coil.





“Central Energy” Office Telephone

The accompanying illustration shows one of our standard wall instruments for office or general use, which is regularly furnished in oak or walnut woodwork. The design of the instrument makes it very practical for office use or where it is necessary to do any writing in connection with the telephone, the shelf being provided for this purpose. The writing shelf may be removed by simply loosening the screw which is beneath the lower front edge of the shelf above and between the ringer gongs. The instrument is regularly equipped with our standard carbon block Lightning Arrester, 2-M. F. Condenser, 1000 ohm Ringer and No. 8 Triplet, which includes No. 2 Hookswitch, No. 11 Induction Coil, Receiver and Transmitter.

Code Numbers

- No. 184. Golden Oak Woodwork, No. 8 Triplet, (which includes Transmitter Arm, No. 2 Induction Coil, No. 2 Hookswitch, No. 1 Transmitter and No. 3 Receiver), 600 ohm No. 6-M Ringer, No. 2 Condenser.
- No. 185. Walnut Woodwork, No. 8 Triplet, 600 ohm No. 6-M Ringer, No. 2 Condenser.
- No. 186. Golden Oak Woodwork, No. 8 Triplet, 1000 ohm No. 6-A Ringer, No. 2 Condenser.
- No. 187. Walnut Woodwork, No. 8 Triplet, 1000 ohm No. 6-A Ringer, No. 2 Condenser.

For the above instrument equipped with No. 2 Combination Telephone and No. 16 Hookswitch Box.

- No. 365. Golden Oak Woodwork, No. 2 Combination Telephone, No. 16 Hookswitch Box, No. 11 Induction Coil, 600 ohm (No. 6-M) Ringer, No. 2 Condenser.
- No. 366. Walnut Woodwork, equipment same as No. 365.
- No. 367. Golden Oak Woodwork, No. 2 Combination Telephone, No. 16 Hookswitch Box, No. 11 Induction Coil, 1000 ohm (No. 6-A) Ringer, No. 2 Condenser.
- No. 368. Walnut Woodwork, equipment same as No. 367.

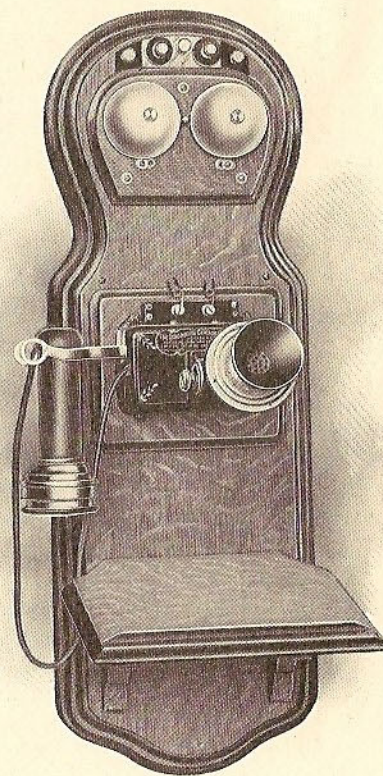
“Central Energy” Office Telephone

This instrument is designed principally for office use or where a small shelf on the telephone is desired. The instrument is regularly furnished in oak or walnut woodwork.

Code Numbers

- No. 37-A. Golden Oak Woodwork, No. 8 Triplet, (which includes Transmitter Arm, No. 11 Induction Coil, No. 2 Hookswitch, No. 1 Transmitter and No. 3 Receiver), 600 ohm No. 6-M Ringer and No. 2 Condenser.
- No. 37-B. Walnut Woodwork, No. 8 Triplet, 600 ohm No. 6-M Ringer and No. 2 Condenser.
- No. 37-C. Golden Oak Woodwork, No. 8 Triplet, 1000 ohm No. 6-A Ringer and No. 2 Condenser.
- No. 37-D. Walnut Woodwork, No. 8 Triplet, 1000 ohm No. 6-A Ringer and No. 2 Condenser.

NOTE.—Orders for this instrument may be subject to delay, since it is only furnished as an extension where the instruments are already installed.



“Central Energy” Portable Combination Telephones

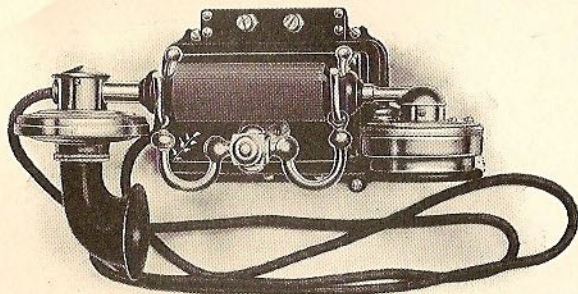


Fig. 1.

are made so substantial as to eliminate troubles to a minimum. The receiver is fastened to the handle or support of the instrument by means of a ball and socket joint. The distance from the transmitter to the receiver may be varied by moving the tube, which extends inside of the handle, in or out. The instrument is supported in a pronged hookswitch, gracefully and substantially built with all wiring parts concealed. The instrument occupies a very small space, which makes it very practical for desk use, it being possible to mount the instrument inside of a roll-top desk, where space is valuable but where it is desired to have the instrument very handy, and also so situated as to be free from meddlesome hands. The base in which the hookswitch is mounted is made of metal, neatly japanned and finished with gold striping. In Fig. 2 is shown this instrument mounted in a little different manner.

The accompanying illustration, Fig. 1, shows our standard combination telephone, which has been designed to withstand rough usage, to which an office instrument is usually subjected; consequently, is made with few parts and of such material as will stand hard knocks. The instrument has many new features, which are considered very practical and at the same time



Fig. 2.

Instrument shown in Fig. 1 is equipped with No. 16 Hookswitch Box.

Instrument shown in Fig. 2 is equipped with No. 14 Hookswitch Box.

No. 2 Combination Telephone. (This consists of transmitter, receiver handle and cord.)

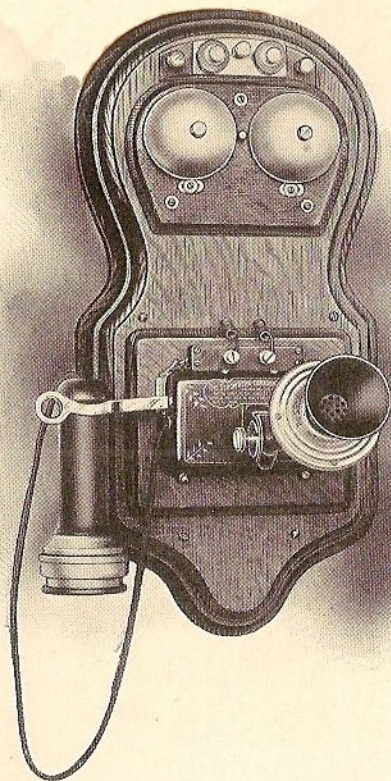
Code Numbers

- No. 360. Portable Combination Telephone Set. (This includes No. 2 Combination Telephone and No. 14 Hookswitch Box).
- No. 248. No. 2 Combination Telephone, No. 14 Hookswitch Box, (which includes Hookswitch and No. 11 Induction Coil), 600 ohm Ringer, (No. 292 Extension Bell).
- No. 249. No. 2 Combination Telephone, No. 14 Hookswitch Box, (which includes Hookswitch and No. 11 Induction Coil), 600 ohm Ringer, (No. 293 Extension Bell).
- No. 250. No. 2 Combination Telephone, No. 14 Hookswitch Box, (which includes Hookswitch and No. 11 Induction Coil), 1000 ohm Ringer, (No. 294 Extension Bell).

- No. 251. No. 2 Combination Telephone, No. 14 Hookswitch Box, (which includes Hookswitch and No. 11 Induction Coil), 1000 ohm Ringer, (No. 295 Extension Bell).

Fig. 2.

- No. 359. Portable Combination Telephone Set. (This includes No. 2 Combination Telephone and No. 16 Hookswitch Box).
- No. 252. No. 2 Combination Telephone, No. 16 Hookswitch Box, (which includes Hookswitch and No. 11 Induction Coil), 600 ohm Ringer, (No. 292 Extension Bell).
- No. 253. No. 2 Combination Telephone, No. 16 Hookswitch Box, (which includes Hookswitch and No. 11 Induction Coil), 600 ohm Ringer, (No. 294 Extension Bell).
- No. 254. No. 2 Combination Telephone, No. 16 Hookswitch Box, (which includes Hookswitch and No. 11 Induction Coil), 1000 ohm Ringer, (No. 294 Extension Bell).
- No. 255. No. 2 Combination Telephone, No. 16 Hookswitch Box, (which includes Hookswitch and No. 11 Induction Coil), 600 ohm Ringer, (No. 295 Extension Bell).



“Central Energy” Residence Telephones

This illustration represents a neatly designed, compactly built wall instrument for residences or offices where a small instrument is preferable, and where the necessity of a writing shelf is not an important detail. The instrument is regularly furnished in golden oak or walnut woodwork. The equipment consists of lightning arrester, condenser, ringer, and No. 8 Triplet, which includes hookswitch, induction coil, transmitter, transmitter arm and receiver.

Code Numbers

- No. 35-A. Golden Oak Woodwork, No. 8 Triplet, (which includes Transmitter Arm, No. 11 Induction Coil, No. 2 Hookswitch, No. 1 Transmitter and No. 3 Receiver), 600 ohm No. 6-M Ringer and No. 2 Condenser.
- No. 35-B. Walnut Woodwork, No. 8 Triplet, 600 ohm No. 6-M Ringer and No. 2 Condenser.
- No. 35-C. Golden Oak Woodwork, No. 8 Triplet, 1000 ohm No. 6-A Ringer and No. 2 Condenser.
- No. 35-D. Walnut Woodwork, No. 8 Triplet, 1000 ohm No. 6-A Ringer and No. 2 Condenser.

NOTE.—Orders for this Instrument may be subject to delay, since it is only furnished as an extension where the instruments are already installed.

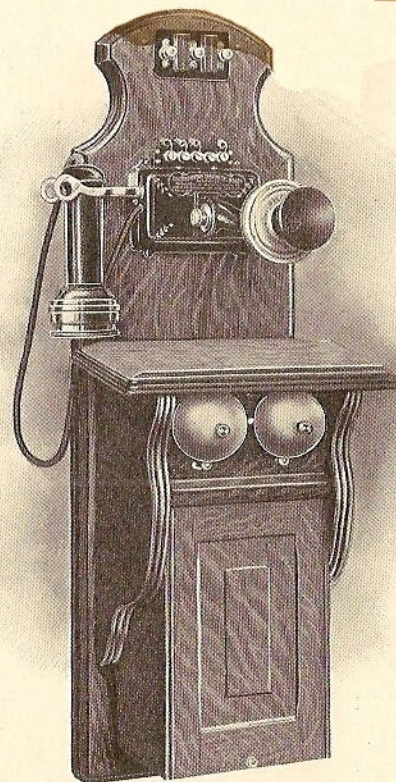
Local Battery "Central Energy" Office Telephone

This instrument is designed principally for Exchanges using local battery for talking and Central Energy calling. Sufficient space is provided below the writing shelf to contain two cells of Stromberg-Carlson battery or two cells of dry battery. This instrument is furnished in oak or walnut woodwork.

Code Numbers

- No. 202. Golden Oak Woodwork, No. 9 Triplet, (which includes No. 1 Transmitter, No. 3 Receiver, No. 11 Induction Coil and No. 1 Condenser), 600 ohm No. 6-M Ringer.
- No. 203. Walnut Woodwork, No. 9 Triplet, No. 1 Condenser and 600 ohm No. 6-M Ringer.

NOTE.—Orders for this instrument may in some instances be subject to delay, since they are only furnished as extensions on equipments already installed.

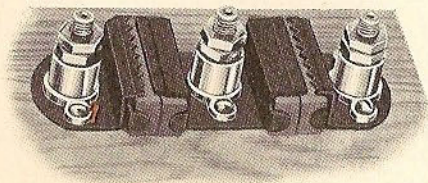


Central Energy
Telephone Parts

TELEPHONE PARTS

LIGHTNING ARRESTER.

The illustration shows style of lightning arrester used on all our telephones, a type which is very well known in the telephone field. The carbons are of such size as to offer a good discharge surface between them and are



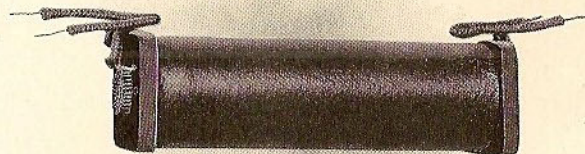
No. 20 Lightning Arrester.

inserted between stiff springs which keeps them under constant pressure. The support at one side of the carbon blocks extends over the top of the carbons sufficiently to cover the opening between them, thus preventing dust and other particles from collecting at this point. The carbons may be removed without difficulty by simply pushing them upwards from between the springs. The arrester is

equipped with our standard No. 7 machine-made binding post and each is fitted with two hexagon nuts.

INDUCTION COIL.

The No. 11 induction coil, type used in triplets on all our central energy telephones, is designed for high efficiency and is well built mechanically. The center or core consists of a bundle of soft annealed iron wires. The heads are made of maple. The windings are made of best quality



No. 11 Induction Coil.

of copper wire, insulated in our own factory. The terminals of the windings are brought out at the ends of the coil, each coil being covered with a heavy glazed pebble linen cloth to protect it from mechanical injury.

TELEPHONE PARTS

RINGER.

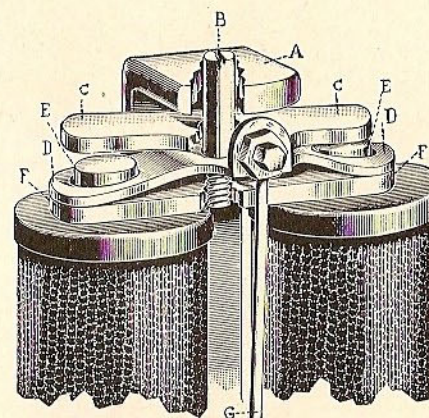
The illustrations show type of ringer used on all Stromberg-Carlson telephones. Fig. 1 shows complete end view of the ringer, while Fig. 2 shows sectional view of same. The permanent magnet (A) is made of the finest grade of magnet steel, carefully tempered. The adjusting screw (B) is made of brass large

enough to perform its work without any danger of twisting. Armature (C) and cores (E) are made of annealed soft iron. The plate (D) which supports the armature is made of spring brass of sufficient thickness to possess the proper amount of tension. The spool binding plate (F) is made of brass forced over the cores (E). The spool heads are made of red fibre board. The spools are carefully

wound with the best grade of fine copper wire, silk insulated, the outside of the windings of the spools being covered with heavy glazed pebble linen cloth. The adjustment of the ringer is effected by turning screw (B) which has a shoulder resting on plate (D) while the lower end is threaded into plate (F). Turning the screw to the right causes plate (D) to be drawn downwards, thus bringing armature (C) nearer the cores (E) and lessening the movement of the striker (G). Turning the screw to the left increases the distance between the armature (C) and cores (E), thus increasing the movement of the striker (G).

Code Numbers.

- No. 6-A. 1000 ohms.
- No. 6-F. 2500 ohms.
- No. 6-M. 600 ohms.

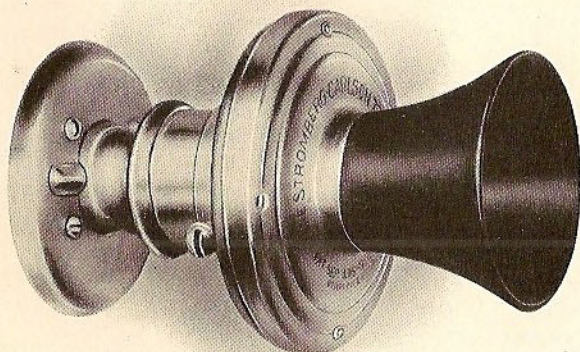


Ringer—Fig. 2.

TELEPHONE PARTS

TRANSMITTER ARMS.

In the accompanying illustration is shown our No. 8 adjustable transmitter arm, which is adapted principally for hotel and residence telephones. The arm is built of



No. 8.

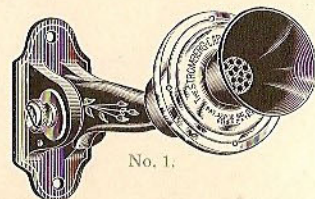
brass nickel-plated and so constructed as to be constantly under tension, thus relieving the necessity of adjusting the arm as soon as any wearing of the parts takes place. The arm is provided with concealed transmitter cords. Its length is two inches and it occupies a mounting space of two and one-half inches in diameter.

No. 9 Transmitter Arm, same as No. 8 but for mounting a solid back type transmitter.

No. 1 arm has concealed transmitter cords.

No. 10 Transmitter Arm same as No. 1 but for mounting a solid back type transmitter.

Transmitter Plug Pc. No. 2924. A brass plug used for mounting our No. 4 transmitter on arms made for our No. 1 transmitter.



No. 1.



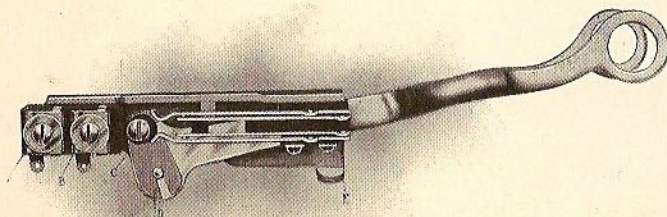
TRIPLET.

The No. 8 triplet shown in illustration is the type used on all our central energy telephones. It consists of our No. 1 transmitter mounted on adjustable arm with concealed transmitter cords, No. 3 receiver, No. 2 hookswitch and No. 11 induction coil mounted in neatly japanned iron box.

TELEPHONE PARTS

HOOKSWITCHES.

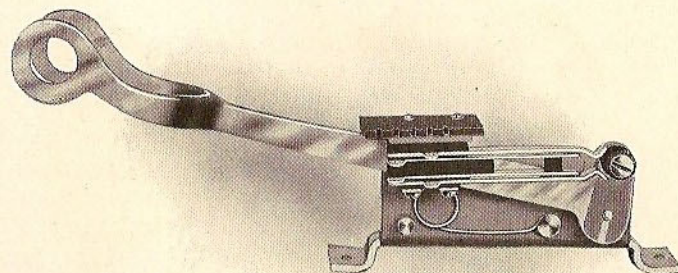
The illustration shows our standard No. 2 hookswitch, the type used in triplet sets on all our Central Energy telephones. The hook lever is made of cast brass, mounted



Hookswitch No. 2.

on a heavy brass frame and provided with German silver springs, which are insulated from each other and the frame by hard rubber strips. All contact points are pure platinum. The receiver cord terminals are attached to our patent fasteners (A and B), which are supported on a hard rubber block: The operation of the hookswitch is as follows: The movement of the hook downward causes the hard rubber insulated pin (C) to be drawn in between the springs, causing them to spread apart, thus breaking

contact, while the upward movement of the hook disengages the springs and allows them to come to a position as shown in the illustration. The stop (E) prevents the hook from moving too far downward when the receiver is restored. Its points of merit are simplicity, good mechanical construction, positiveness in action.



Hookswitch No. 6.

Type of hookswitch used in our hotel and residence telephones. The operation and construction are the same as the No. 2 with the exception of the mounting plate and hook lever.

No. 15 Hookswitch, type used in our No. 188 and 192 telephone.

TELEPHONE PARTS

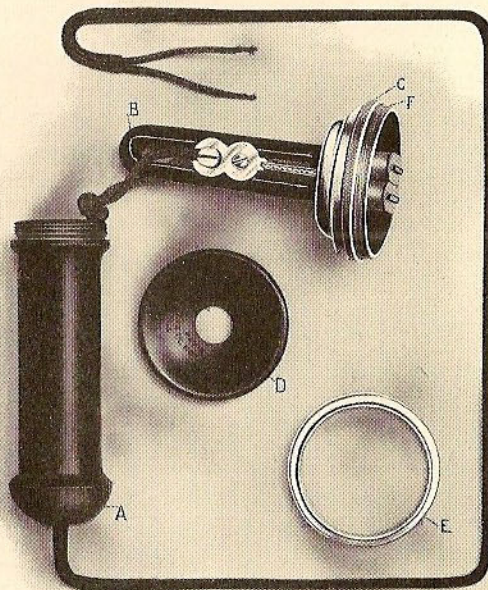
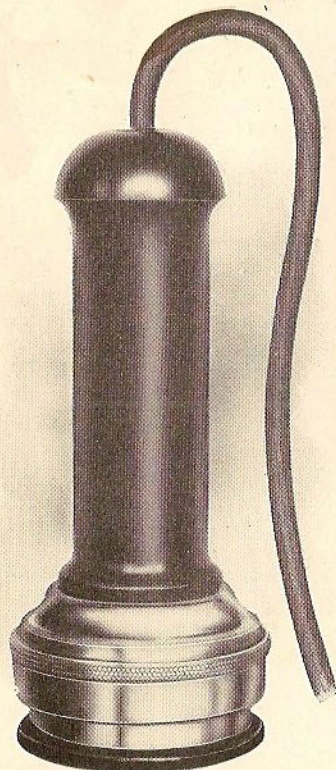
RECEIVER.

In the illustrations is shown a complete Stromberg-Carlson receiver; also its principal parts which are entirely original in design and construction. It is of the horse-shoe magnet (B) bipolar type with all parts securely fastened in a heavily nickel-plated brass cup (F). The diaphragm is firmly clamped at its edge in the adjustable cap (E) and then screwed on to cup (F) until the proper adjustment is attained, when the lock ring (C) is screwed down against this cap (E), thus assuring permanent adjustment. The cord passes through the end of the shell (A) and is held in such a manner as to remove the strain from the conductors, which are firmly attached to the fibre block between the magnets. Both the hard rubber shell (A) and the cap (D) are entirely independent of the receiver proper; hence, the permanency of the adjustment is in no way affected by variation in temperature.

Code Numbers.

No. 3. Receiver with Cord.

No. 7A. Cord for No. 3 or No. 6 Receiver.

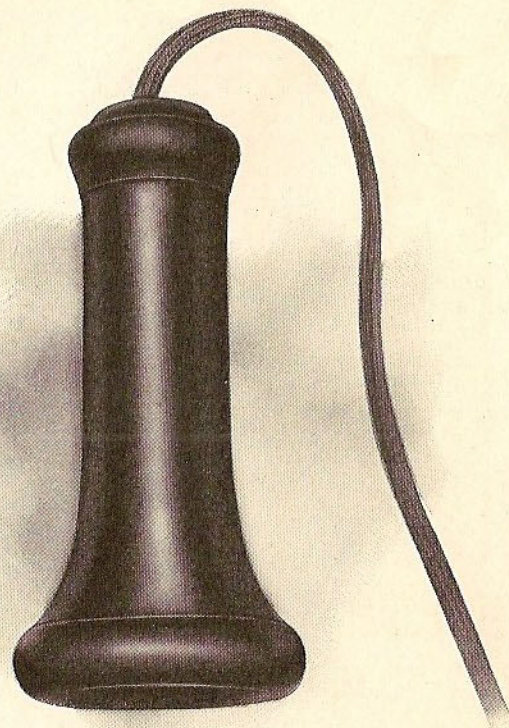


TELEPHONE PARTS

OUR No. 6B RECEIVER

In Figs. 1, 2 and 3 are shown illustrations of our new adjustable all rubber shell receiver and its parts. We have always evaded making this type of receiver, principally because we do not believe in non-adjustable receivers, and it has not been possible up to this time to build an all rubber receiver with an adjustment quite equal to that used on our No. 3 receiver. The large number of inquiries, however, which we have been receiving of late has caused us to design this new type of receiver to supply the demand of parties who wished to avail themselves of the superior qualities of our apparatus and at the same time have it present the same external appearance as that which they already have in use. The design and construction of the instrument has been worked out by experts, whose experience in this line of work has been very extensive.

The construction of the receiver is as follows: The shell, Figs. 1 and 2, is made of pure hard rubber and has a removable ear cap only. The pole pieces "A", Fig. 3, are of the horse-shoe magnet type, bent from a bar of the best quality of steel carefully tempered. The magnets "B" and "C" are wound with fine copper wire, silk insulated, and supported when in place by a cast bridge.



TELEPHONE PARTS

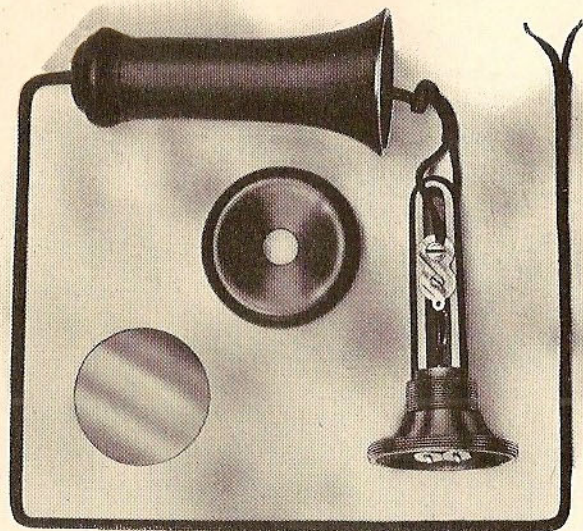


Fig. 2.

(I), which is milled so as to receive the magnets and also to fit in between the pole pieces (A). The bridge is fastened to the pole pieces when in place by a screw,

which passes through its center and is shown in the pole piece (A). The magnets, when assembled and in place, as shown in Fig. 2, are enclosed in a metal case (H),

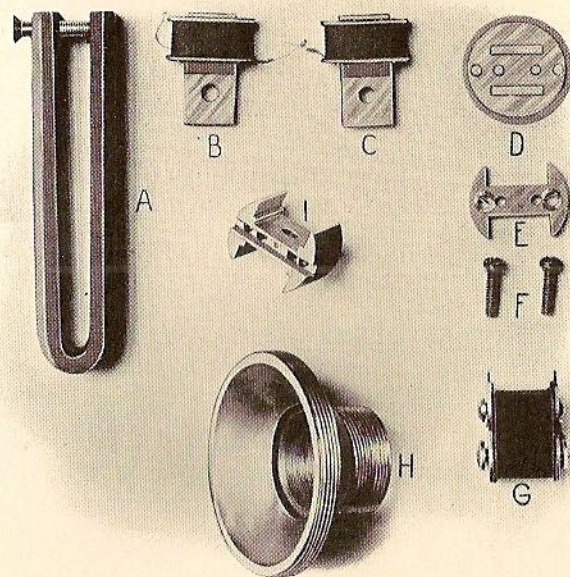


Fig. 3

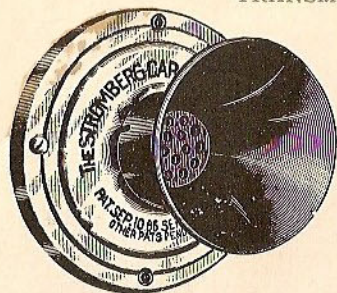
TELEPHONE PARTS

which is threaded on the inside to receive the metal bridge (I) and threaded on the outside to receive the ear cap and shell. The metal plate (D) through which the magnets (B and C) pass, is supported by a seat in the metal case (H). This construction renders the diaphragm chamber practically air tight and prevents that surging of the air in the shell of the receiver, which gives rise to that particular sound in some makes of receiver which may be compared to that heard in a hollow vessel or tube, with a small hole in one end, when placed to the ear. The finest adjustment may be had by simply turning the pole pieces which are bolted to this bridge (I). When the proper adjustment has been obtained, the screws (F), which pass through this locking plate (E), are screwed up tight, resulting in a tension between the bridge (I) and the

metal case (H). This prevents its **turning and changing** the adjustment after it has once been **obtained**. **In the** assembling of the receiver, the diaphragm is placed **on the** metal case (H), then the ear cap is screwed on **perma-**
nently. After this operation has been performed **the** instrument may be adjusted to any degree of sensitiveness by placing it to the ear with one hand and turning the pole pieces with the other, at the same time talking into a transmitter connected with same. When the proper degree of sensitiveness has been obtained the adjustment may be locked by tightening the screws (F) as mentioned before. The receiver cords are fastened to a hard rubber block (G), which is supported between the pole pieces. To replace the cord it is only necessary to simply remove the shell of the receiver as shown in Fig. 2.

TELEPHONE PARTS

TRANSMITTER.

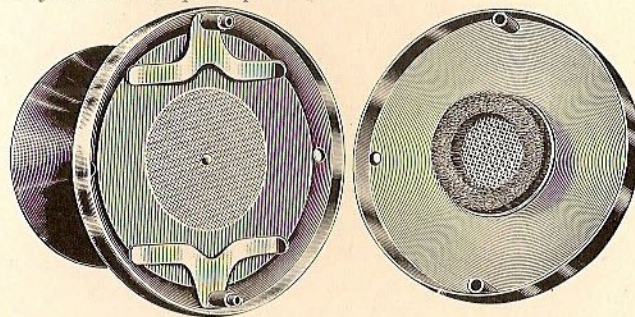


The strongest argument that can be given for the Stromberg-Carlson transmitter is the fact that the instrument has been on the market for seven years, and even though competition has been exceedingly sharp and a great deal of experimenting going on with

this class of apparatus, it has not been necessary to make any change in the design of the Stromberg-Carlson transmitter, of which there are several hundred thousand in use today. A large majority of these are in use by some of the largest independent telephone systems in the United States, namely, the Home Telephone Company, Louisville, Ky., Rochester Telephone Company, Rochester, N. Y., Twin City Telephone Company, Minneapolis and St. Paul, Minnesota; Independent Telephone Company, Seattle, Washington, and thousands of other systems of various sizes.

The transmitter is of our own design and is broadly covered by letters patent. In its construction, the instrument is extremely simple, attention having been paid to detail from the standpoint of efficiency and durability.

The success of the instrument is due to a large extent to the quality of the material used and the extreme care exercised in its manufacture. The instrument is compactly mounted in a highly polished nickel-plated outer casing with heavy metallic diaphragm and rubber cloth auxiliary diaphragm, thus making it absolutely moisture-proof. Both the front and back electrodes are of gold-plated gauze and only the best grade of hard polished granular carbon is used. It is adjustable to any degree of sensitiveness, and is, therefore, adapted for service in noisy as well as quiet places.



Code Number.

No. 1. Transmitter Head with Rubber Perforated Mouth-piece.

TELEPHONE PARTS

OUR No. 4 TRANSMITTER.

In the accompanying illustrations (Figs. 1, 2, 3 and 4) are shown views of a new transmitter which we are placing on the market to supply the demand for an instru-

same in principle as our No. 1, which we shall continue to furnish as our standard, unless otherwise specified, but differs somewhat in its construction



Fig. 1.

ment having the general appearance of those which are imitations of the Bell design. The transmitter is the

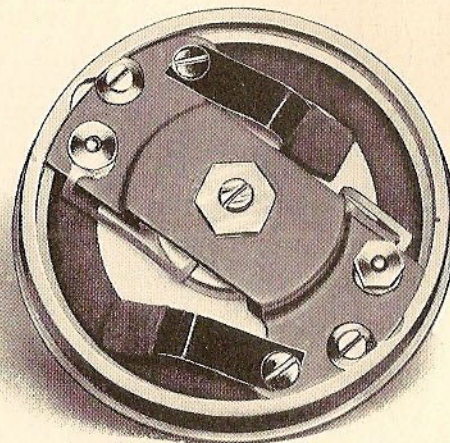


Fig. 2.

The parts are thoroughly well built after accurate tools and dies, and of such material as will produce the most satisfactory results. The parts are all supported by a heavy cast brass front piece. The bridge which supports the back electrode and dampening springs is made

TELEPHONE PARTS

of **heavy cast** brass and is supported on a shoulder which extends around the inside of the front piece (this is shown in Fig. 2), instead of being screwed to the top edge of the front piece, as is common practice. This former method of construction always ensures the back electrode being in the center of the instrument, thus preventing

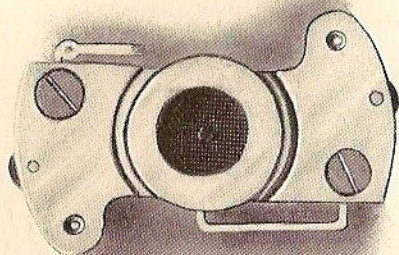


Fig. 3.

any distortion between the two electrodes, which is very often the case in instruments where the bridge is mounted on the front piece and fastened with four screws. The method of fastening the bridge (see Fig. 2) is very simple and extremely practical. A heavy steel screw with a washer (Fig. 3) passes through each end of the bridge.

This washer, when the bridge is in place, moves in a slot milled on the inside of the cast brass front. Turning the screw slightly to the left locks the bridge, while turning the screw to the left allows the bridge to be removed. The bridge is removed by simply turning it from left to right, which brings the washer on this screw into the semi-circular space milled out of the side of the front piece.

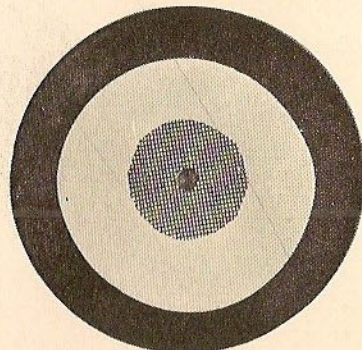
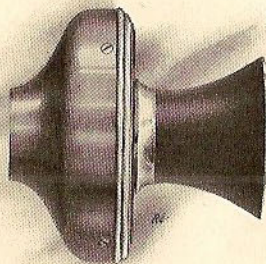


Fig. 4.

Connections with the transmitter are made by means of lock-nut binding posts, to which are connected the front and back electrodes by insulated punched metal conductors (Fig. 3), these being less liable to break than fine wire, and they also avoid the necessity of any soldered connections on the inside of the instrument.

TELEPHONE PARTS

In regard to the granular carbon used, it would seem only necessary to state that the same high grade is used as has been our practice in the past, which has enabled us to maintain the high standard which we established at the beginning. The success of our transmitters in the past has no doubt been due to the quality of carbon which



we have used as much as any one thing. The front and back electrodes are gold-plated gauze, these being the same as in our No. 1 transmitter. The front electrode is

riveted to the diaphragm, as shown in Fig. 4, while the back electrode is riveted to a metal shell or cup, the inside of which is surrounded by a felt ring, the center of which contains the carbon granules. The diaphragm (Fig. 4) is made of smooth, flat metal of the proper thickness to produce a sharp, quick movement, and is held under tension by dampening springs, as shown in Fig. 2. The adjustment of the transmitter is effected by means of a lock-nut and a screw or post to which the back electrode is fastened. The very finest adjustment may be had by loosening this nut and turning the slotted screw which passes through its center, thus changing the distance between the front and back electrodes. After the proper sensitiveness has been obtained the instrument may be locked by this lock-nut as mentioned above. It is possible with this method of adjustment to adjust the instrument for noisy places and will give the most satisfactory service when conversation is carried on very close to the mouthpiece. However, the instrument may be so adjusted that one can talk at a considerable distance from the mouthpiece.

TELEPHONE PARTS

CONDENSERS.

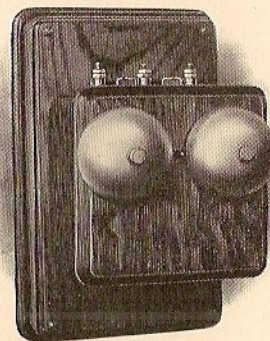
In the accompanying illustrations are shown our No. 2 and No. 4 Condensers, the types used in our "Central Energy" telephones. They are made of the finest grade of rice paper and pure tissue tin foil. Particular attention is given to the quality of the insulation. Each condenser is put up in a sealed japanned metal



case, the terminals being brought out through rubber bushings. Each condenser is warranted to come up to the rated capacity, which is marked on the end of the case.

EXTENSION BELLS.

Our Standard Extension Bells are mounted in oak or walnut woodwork, with door hinged at top.



CONDENSERS — Code Numbers

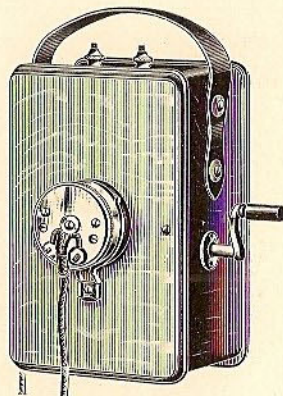
- No. 2. 2 M. F. Condenser.
- No. 4. 2½ M. F. Condenser.

EXTENSION BELLS — Code Numbers

- No. 292. Golden Oak Woodwork, 600 ohm No. 6-M Ringer, No. 2 Condenser.
- No. 293. Walnut Woodwork, 600 ohm No. 6-M Ringer, No. 2 Condenser.
- No. 294. Golden Oak Woodwork, 1000 ohm No. 6-A Ringer, No. 2 Condenser.
- No. 295. Walnut Woodwork, 1000 ohm No. 6-A Ringer, No. 2 Condenser.

TELEPHONE PARTS

LINEMAN'S EXCHANGE TEST SET.

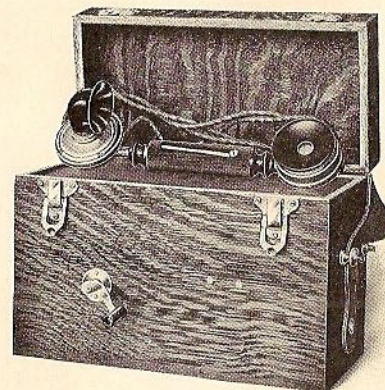


Equipped with a generator, polarized buzzer and a powerful double-pole watchcase receiver which is also used as a transmitter.

Code Numbers.

- No. 333. Golden Oak woodwork, No. 20 3-bar Series Generator.
- No. 334. Golden Oak woodwork, No. 22 3-bar Bridging Generator.
- No. 335. Golden Oak woodwork, No. 23 4-bar Bridging Generator.

PORTABLE TESTING TELEPHONE.



This instrument is a complete portable telephone and is especially intended for long distance toll line work. It consists of combination set, generator, polarized buzzer, induction coil, switch, two-pony dry batteries, detachable crank, etc., all compactly mounted in highly polished quarter-sawed oak, dovetailed case with nicked trimmings and leather carrying strap.

Code Numbers.

- No. 331. Golden Oak Woodwork, No. 3 Combination Telephone, No. 20 3-bar Series Generator, Dry Batteries and Buzzer.
- No. 332. Golden Oak Woodwork, No. 3 Combination Telephone, No. 22 3-bar Bridging Generator, Dry Batteries and Buzzer.

NOTICE

We will not guarantee to make deliveries
of the No. 4 Transmitter before January 1,
1904.

Stromberg-Carlson Telephone Mfg. Co.