

STROMBERG-CARLSON TELEPHONE MFG. CO.

ROCHESTER, N.Y. CHICAGO, ILL.
KANSAS CITY, MO. TORONTO, ONT.

BULLETIN NO. 1020

EDITION AC

Battery-Saver Attachment



Fig. 1—Normal Position; receiver on the hook



Fig. 2—Listening Position; receiver off and hook half way up

The price of the dry batteries used in local battery telephones, owing to the scarcity of the raw materials used in their manufacture, is now about 40% higher than it was prior to the beginning of the European war. Because of the increased battery expense and the necessity for conserving battery materials every owner of a Stromberg-Carlson local battery telephone should equip the instrument with our new and improved Battery-Saver attachment.

In a local battery telephone the circuits and apparatus are arranged so that current from the dry cells begins to flow through the transmitter when the receiver is lifted off the hook and the current consumption continues until the receiver is again replaced; regardless of whether the user is carrying on a conversation or simply listening.

On rural lines there are often times when the telephone is used for listening purposes only, as for example, when market and weather reports are being issued from the central exchange. Then, too, in some communities subscribers do not consider telephone messages confidential and a ring on the line brings many subscribers to the telephone to get the neighborhood news. Under all these conditions the current from the battery is being utterly wasted at the listening stations, and when the telephone company furnishes the batteries the total cost of the wastage amounts to a considerable sum in the course of a year.

The Battery-Saver is compact, does not complicate the telephone and will not get out of order.

Bull. 1020

Battery-Saver Attachment

The Battery Saver



Fig. 3—Pressing button to put telephone in talking condition

Our Battery-Saver, as the name implies, absolutely eliminates this waste by permitting subscribers to use their telephones for listening purposes to their hearts' content without connecting the dry cells to the transmitter circuit but is arranged so that by pushing a button the telephone is immediately put in transmitting condition for talking purposes.

The device consists of a latch which is made to attach to the hookswitch escutcheon plate on the left side of the instrument. Our new No. 896 telephones require only the latch, but in the case of instruments made prior to Dec. 1, 1917 it is necessary to install one of our new type hookswitches as well. Instructions for making the simple changes in the telephone are to be found on pages 3 to 6.

How it Operates

In Figure 1 we show a close-up view of a telephone, equipped with the Battery-Saver, just as it is when it is not in use. When the receiver is removed from the hook the lever springs up but is caught half-way by the bent finger of the Battery-Saver latch, as in Figure 2. In this position the circuits of the telephone are connected so that the user may hear but not talk; the transmitter is not connected to the battery and no current is consumed.

If the person using the telephone wishes to talk he presses the latch back as in Figure 3. This disengages the hookswitch lever and allows it to resume its upward movement to the full operated position as shown in Figure 4. When the lever is in this position the battery is connected to the transmitter and telephone may then be used for talking purposes.

When the receiver is replaced (hung up) after a conversation the Battery-Saver is automatically forced to its normal position Fig. 1. This action is in no way dependent upon force of gravity as in other kinds of similar apparatus.



Fig. 4—Full operated position; hook up as far as it will go

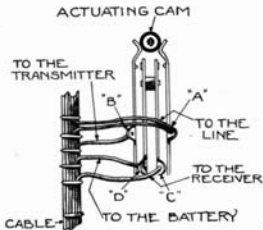


Fig. 5—No. 34-A Hookswitch Wiring—Not designed for Battery Saver

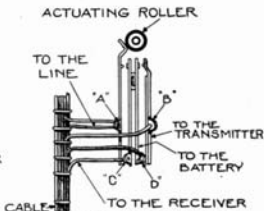


Fig. 6—No. 40-F Hookswitch Wiring—Designed for Battery Saver Attachment

The Battery Saver Latch Positively Actuated

It will be noticed when the receiver is replaced on the hook that the S-C Battery-Saver latch is positively returned to its normal position so as to be in readiness to catch the hook lever when the latter goes up the next time the telephone is used. This is accomplished by the hookswitch lever engaging a cam surface behind the projection marked Press to Talk at the point marked "m" (Figure 8) of the latch and forcing the latter to the right so that the hook-end "n" is over the slot in the hookswitch escutcheon.

Directions for Attaching Battery-Saver Hookswitch to No. 896 Type Telephones

The attaching of a Battery-Saver latch to a telephone already in use and which was not originally fitted for Battery-Saver service, requires that two changes be made, *regardless of the make or style of telephone*:

First:—To re-wire the hookswitch so that the receiver circuit is closed on the line circuit when the hookswitch lever is raised half way up, and so that the battery circuit is closed on the transmitter circuit *only when the hookswitch lever is fully raised*.

Second:—That the Battery-Saver latch be fitted to the side of the telephone so as to hold the hookswitch lever in its half-way position, when the receiver is removed, and so as to release the hook lever and allow the latter to go all the way up, when the latch is pressed by the finger.

In addition, the hookswitch must be adapted to close the contact springs successively and so as to be easy of adjustment and to hold this adjustment indefinitely.

Battery-Saver Attachment

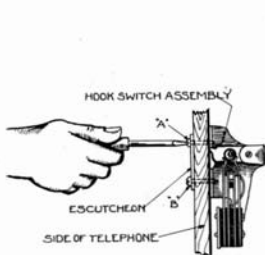


Fig. 7—Replacing of Hook Switch Assembly

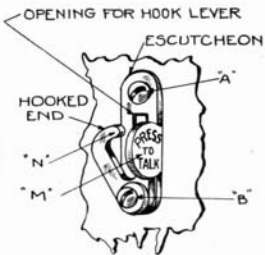


Fig. 8—Battery Saver Latch in Place

When the telephone is fitted with the hookswitch spring combination, having two outside springs, both actuated by the cam roller as shown in Figure 5, the Battery-Saver feature requires that our No. 40-F Hookswitch, having successively actuated contact springs as shown in Figure 6, be substituted.

The installation of this No. 40-F Hookswitch is a very simple operation as follows:

(a) Remove the hookswitch lever by pressing down on the contact spring actuating cam with one hand and withdrawing the lever with the other hand. Then take out the two escutcheon screws "a" and "b", Figure 7, which serve to hold the hookswitch assembly in place.

(b) Start the upper escutcheon screw "a" into the new hookswitch frame so as to hold the latter in place.

(c) Replace the lower escutcheon screw "b" with the long screw (Pc-No. 9324 Screw No. 6-32 R.H.I. enameled, seven-eighths inch long furnished with the Battery-Saver attachment), having this long screw go through the Battery-Saver latch pivot hole first as shown in Figure 8, and then tighten both the screws "a" and "b" in place so as to hold the hookswitch assembly rigidly in the telephone cabinet.

(d) Now with a hot soldering iron take the wires from the contact springs of the hookswitch just displaced and attach the same to the new hookswitch, putting the wires that connected with the right hand springs of the old hookswitch to the left hand contact springs of the new hookswitch and vice-versa as shown in Figures 5 and 6. In doing this

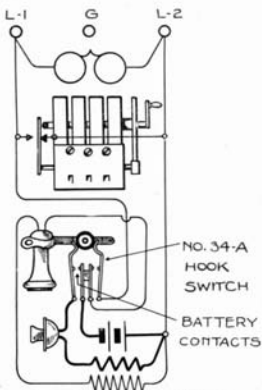


Fig. 9—Telephone Circuit Wiring of No. 34-A Hookswitch

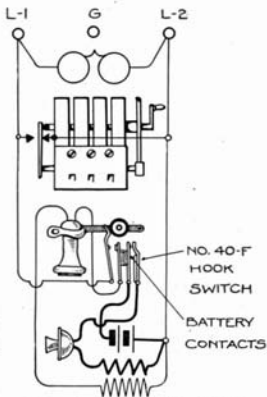


Fig. 10—Circuit as Rewired for No. 40-F Hookswitch

bring the wires up between the hookswitch frame and the side of the cabinet to the contact springs in the same way that the original hookswitch was installed.

Figure 9 shows the wiring as originally installed in the telephone and Figure 10 the new wiring provided by the change just made.

(e) Now replace the old hookswitch lever in the new hookswitch assembly and see that the contact springs are adjusted to operate as shown in Figures 11, 12 and 13, which is as follows:

- 1—*Receiver On Hook*, lever down, all contacts are opened, as shown in Figure 11.
- 2—*Receiver Off Hook*, lever held in its half-raised position by Battery-Saver latch, the two left hand contacts then are closed and the two right hand contacts open, as shown in Figure 12.

Battery-Saver Attachment

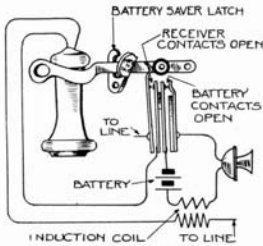


Fig. 11—Correct Spring Adjustment
Receiver on Hook

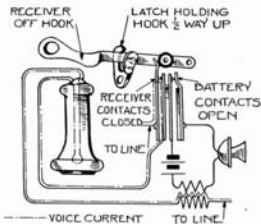


Fig. 12—Correct Spring Adjustment—
Receiver Off—Latch Holding

3—*Battery-Saver Latch Raised*, and receiver still off hook—all four contacts are closed as shown in Figure 13.

If it is found that the contacts do not close correctly as just described, when a new hookswitch is installed, then the springs can be easily adjusted by slightly bending them with a pair of long nose, thin-ended pliers or by means of a screw driver blade between the springs as shown in Figure 14. In making this screwdriver adjustment the end of the screwdriver blade should be placed between the contact springs and down close to the insulators and then the screwdriver handle turned slightly to the right or left to throw the upper end of the contact spring in the desired direction.

Battery Saver Can Be Used On Any Stromberg-Carlson Compact Type Telephone

The Battery Saver can be successfully used on any of our No. 896 Compact Type Wall Telephones. All telephones of this type are now furnished with the No. 40-B Hookswitch either with or without the Battery Saver Latch, as specified. The Battery Saver is not included in the price of the telephone but is supplied at slight additional cost. The latch can be purchased separately when required and the attachment can be made at any time by simply screwing it on in its proper place.

Our No. 896 Telephones made prior to December 1, 1917, which are equipped with No. 34 Type Hookswitches can be arranged for the Battery Saver by changing the hookswitch to the No. 40-B Type and adding the latch attachment as described in the preceding pages.

Page 7 contains a stock list of the parts which should be ordered for old and new type telephones. Be sure to specify the materials exactly as listed.

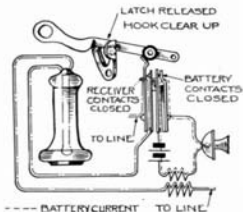


Fig. 13—Correct Spring Adjustment
Receiver Off—Latch Released

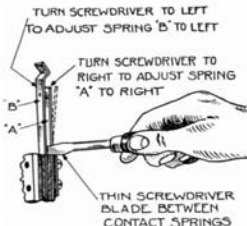


Fig. 14—Adjusting Contact Spring
with Screw Driver

What to Order

Battery Saver Attachment for No. 896 Telephones made prior to Dec. 1, 1917 and Equipped with No. 34 Type Hookswitches

The necessary materials to provide the Battery Saver feature on No. 896 Telephones which are equipped with the No. 34 Type Hookswitch (Stationary cam with main contact springs on both sides of same) are as follows:

Pc. No. 12766—Battery Saver Latch Assembly.

Pc. No. 12748—Switch Assembly (No. 40-F Hookswitch

less Hook Lever, Escutcheon and Screws).

Pc. No. 9324—Long Screw for attaching Battery Saver Latch.

Battery Saver Attachment for new Model 1918 No. 896 Telephones with No. 40-B Hookswitches

When the No. 896 Telephone is equipped with the No. 40-B Type Hookswitch (Roller cam with main contact spring on one side of cam only) the Battery Saver feature can be obtained by merely adding the *Pc. No. 12766 Battery Saver Latch*. In this case a long screw is provided at the top of the escutcheon, see "A" Fig. 7, which can be removed and put through the Battery Saver latch at "B" in Fig. 8. The short screw can then go into the top of the escutcheon as at "A" Fig. 8.

The hookswitch contact springs in this telephone are adjusted in the factory for the correct operation of the Battery Saver latch, which requires that the two left hand springs close when the hook lever is latched in its half-way up position and that the right hand spring not be in contact; also that the contacts of all three springs be closed together when the latch is released and the hook is all the way up. When the receiver is on the hook and the hookswitch lever is down, then the contacts of all three springs must be open.

To order No. 896 Telephones with Battery Saver attachment add letter "W" to regular combination of code number and letter.