No. 373-W and No. 387-W Transmitters

and

Associated Equipment

Western Electric Company.

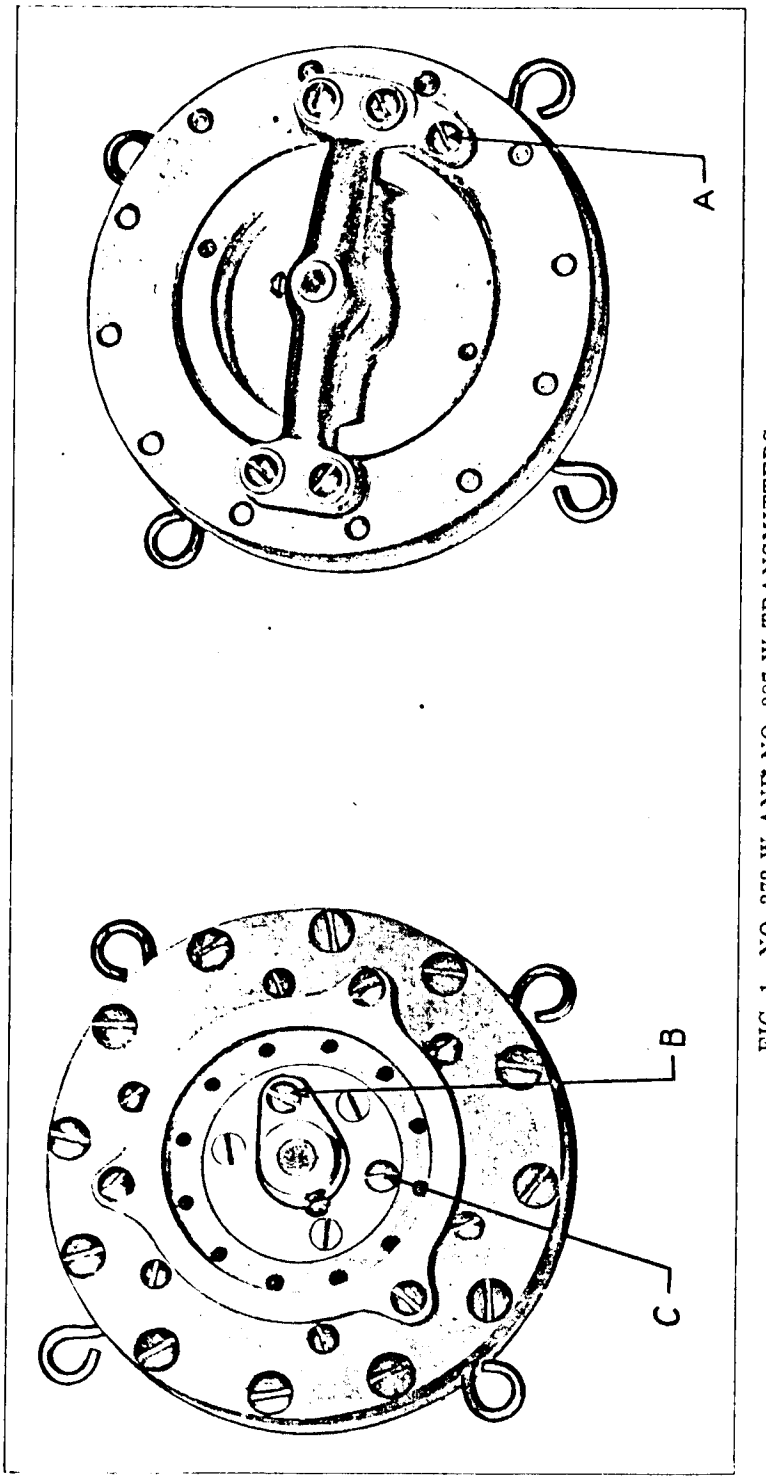

FIG. 1—NO. 373-W AND NO. 387-W TRANSMITTERS

NO. 373-W AND NO. 387-W TRANSMITTERS AND ASSOCIATED EQUIPMENT

NO. 373-W AND NO. 387-W TRANSMITTERS

These transmitters are intended for use in a Western Electric public address system, speech input equipment or other similar equipment. They are microphones in which sound vibrations create corresponding fluctuations in an electric current.

The two transmitters are identical except for minor differences in their internal constructions. They are of the push-pull type, consisting of two heavy metal rings supporting a thin stretched metallic diaphragm which acts on two carbon buttons, mounted one on each side of the diaphragm. One side of each of these buttons is connected through the diaphragm to the metal rings, and thus to the terminal marked "C" on Fig. 1. The other sides of the buttons are connected to the terminals marked "A" and "B," respectively. The transmitter current is supplied through the common terminal "C," flows through each button separately, and leaves through the outside terminals "A" and "B." The terminals "A" and "B" are the output terminals of the transmitter.

The resistance of each button is about 100 ohms and as the two are effectively in series for the voice currents the output impedance of the transmitter is approximately 200 ohms.

The transmitter should be mounted in a Western Electric No. 1-A, No. 1-B or No. 2-A Transmitter Mounting. It should always be properly mounted in a vertical position before current is allowed to pass through it. The side of the transmitter with the bridge is the front and should always face the source of sound.

The operating current in each side of the transmitter circuit should not exceed 35 milliamperes. In a No. 373-W Transmitter the difference between the values of the currents in the two sides of the circuit should not exceed 10 milliamperes and in a No. 387-W Transmitter this difference should not exceed 5 milliamperes. The normal operating current for these transmitters is 30 milli-

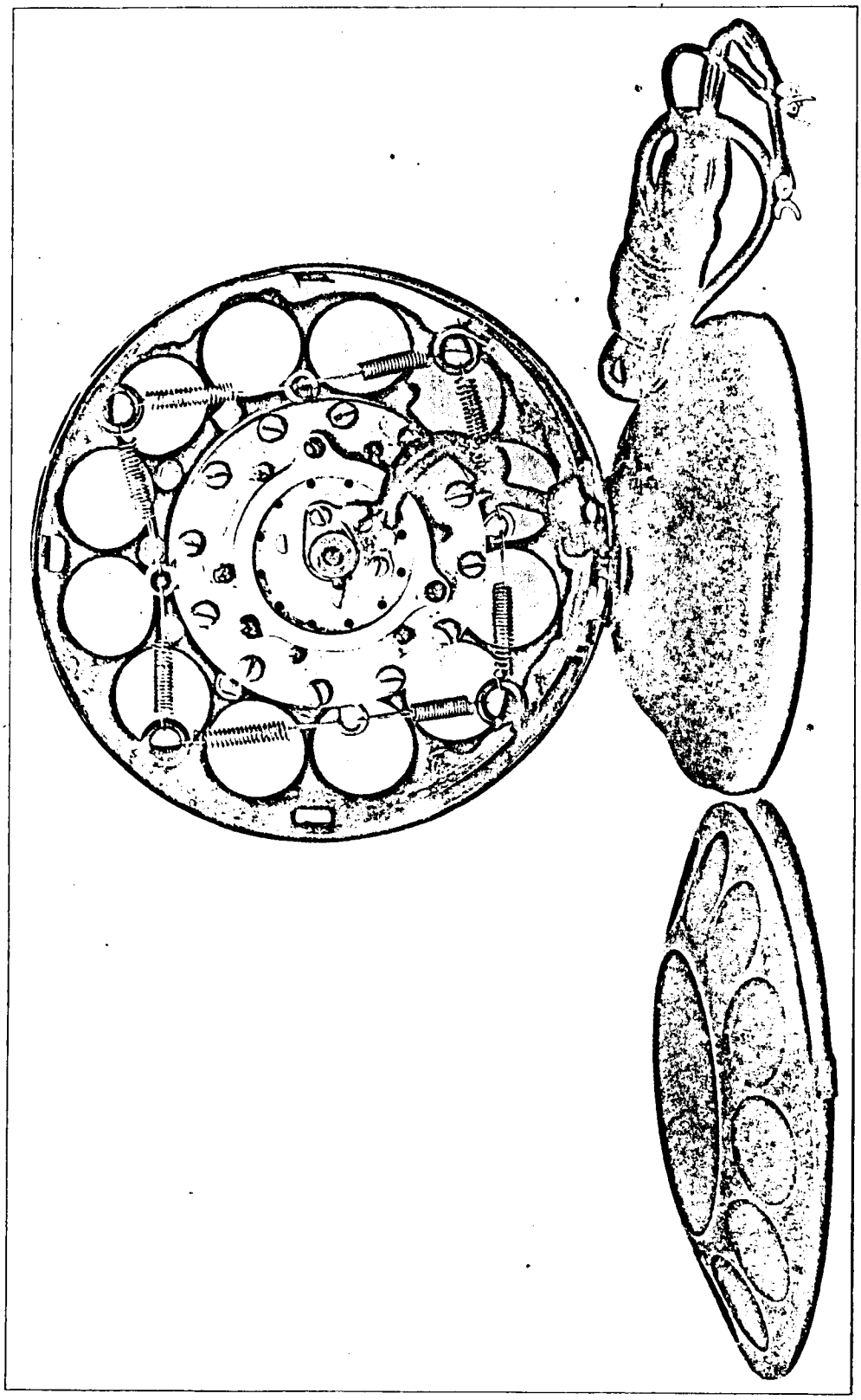

FIG. 2—TRANSMITTER IN NO. 1-A TRANSMITTER MOUNTING

amperes per button. This gives as good results as a higher value and the life of the transmitter is correspondingly increased.

If the current in either side of the transmitter circuit exceeds 35 milliamperes or if the difference between the currents in the two sides of the circuit exceeds the above limits, it indicates that the transmitter has become "packed" or permanently aged. "Packing" consists of a coherence of the carbon granules and is accompanied by a drop in the resistance of the transmitter and a loss of sensitivity. A transmitter which has become "packed" may be brought back practically to normal by disconnecting it and gently rotating or tapping it so as to shake up the carbon granules. If this does not remedy the "packing" a new transmitter should be used. Current readings should be taken after the current has been flowing through the transmitter for a few minutes.

Although this transmitter is of rather rugged construction it has a very thin diaphragm, and unless the transmitter is handled carefully the diaphragm may be damaged or put out of adjustment. Do not attempt to repair a defective transmitter, but return it to the nearest distributor to be repaired. Transmitters may be obtained from the nearest distributor and should be ordered as follows:

No. 387-W Transmitter.

NO. 1-A AND NO. 1-B TRANSMITTER MOUNTINGS

Each of these transmitter mountings is intended to mount one No. 373-W or No. 387-W Transmitter in such a manner as to present a pleasing appearance and protect the transmitter from jars and mechanical vibration.

The No. 1-A Transmitter Mounting is a drum shaped metal cage provided with metal gauze screens. It is mounted on a circular base and is equipped with coil springs for suspending the transmitter. It has a three conductor cord by means of which the transmitter is connected to the circuit with which it is used. The No. 1-B Transmitter Mounting is the same as the No. 1-A except that no cord is furnished with it.

To assemble the transmitter in the transmitter mounting, remove the side of the cage marked "BACK" and suspend the transmitter by the coil springs as shown on Fig. 2. The back of the transmitter should always face the side of the

FIG. 3—NO. 2-A TRANSMITTER MOUNTING

transmitter mounting marked "BACK" and the mounting should always be placed so that this side is away from the source of sound.

The cord of a No. 1-A Transmitter Mounting should be connected to the transmitter as follows: conductor with red tracer to the screw marked "A" in Fig. 1; conductor with green tracer to the screw marked "B" and the plain conductor to the screw marked "C." The plain conductor without any tracer is common to both sides of the transmitter circuit. After the assembly is complete, replace the side of the cage.

If the cord becomes defective and replacement is necessary, remove the transmitter from the transmitter mounting and disconnect the cord. Untie the knot in the cord and pull it out of the base. Remove the bottom from the base by removing the screw in the center. Insert a new cord through the hole in the side of the base and run it up into the cage, so that the end with the short leads is inside. Tie a knot in the cord just below the point where the leads are joined and the external braiding ends. Replace the bottom of the base and connect the transmitter as before.

New cords may be obtained from the nearest distributor and should be ordered as follows:

No. 793 Cord.

NO. 2-A TRANSMITTER MOUNTING

The No. 2-A Transmitter Mounting (see Fig. 3) accommodates two No. 373-W or No. 387-W Transmitters and is primarily designed for outdoor use with the No. 1-A Pedestal. It consists of a felt lined wooden box, the front and back of which contain an opening covered with wire gauze and is equipped with coil springs for suspending the transmitters. The bottom of the box is provided with contact shoes for engaging the springs on the No. 1-A Pedestal. Flexible leads soldered to these shoes furnish connections to the terminals of the two transmitters inside.

To assemble the transmitters in the transmitter mounting, loosen the two screws on the front of the box, open the box and suspend the transmitters by the coil springs. The method of suspension is the same as that shown for the No. 1-A Transmitter Mounting in Fig. 2. The front of the transmitters should face

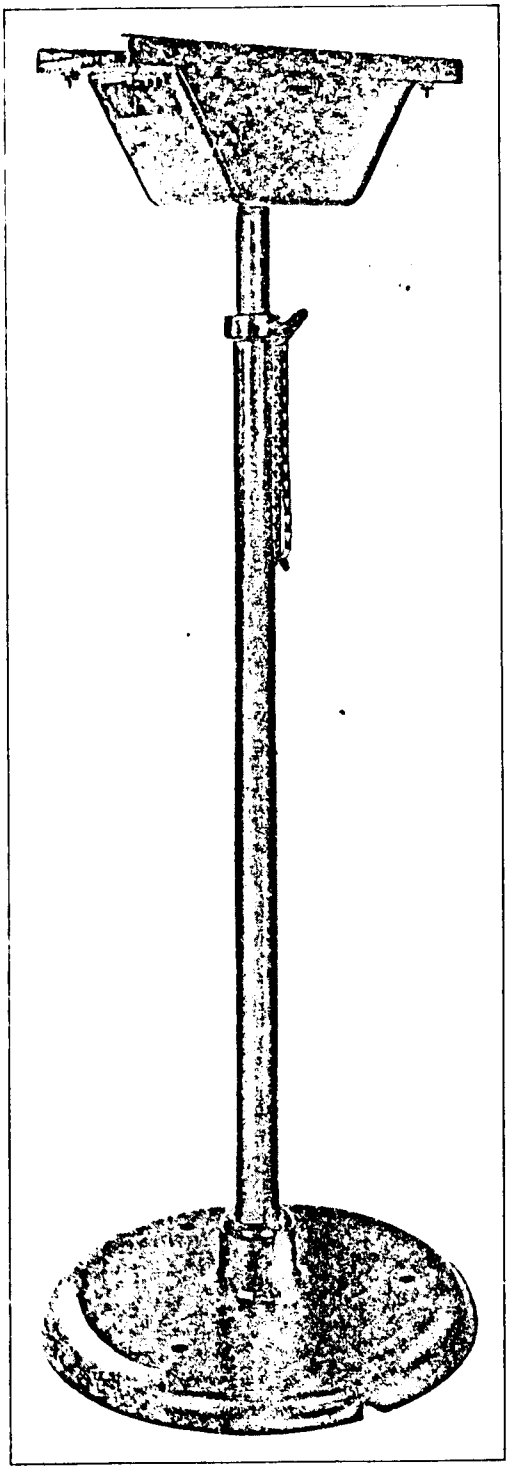

FIG. 4—NO. 1-A PEDESTAL

the hinged side of the box. The leads should be connected to the transmitters as follows: conductors with red tracers under the screws marked "A" on Fig. 1; conductors with green tracers to the screws marked "B" and conductors with yellow tracers to the screws marked "C."

The hinged side of the transmitter mounting should always face the source of sound.

NO. 1-A PEDESTAL

The No. 1-A Pedestal (see Fig. 4) is intended to hold the No. 2-A Transmitter Mounting. The top of the pedestal consists of a metal contact box provided with guides which fit the base of the No. 2-A Transmitter Mounting. This box is mounted on a stand consisting of two pieces of metal pipe sliding one within the other. The lower pipe is set in a heavy circular base.

The No. 2-A Transmitter Mounting is attached to the No. 1-A Pedestal by simply sliding the base of the former into the guides on the contact box; this box is provided with contact springs which automatically engage the shoes on the base of the mounting. The two springs marked "BUTTON 1" are then connected to terminals "A" and "B" of one transmitter and the two springs marked "BUTTON 2" are connected to terminals "A" and "B" of the second transmitter. The spring marked "GROUND" is connected to the common terminal of each transmitter. The wires of the outside transmitter circuit should be connected to the terminal screws associated with the springs. The two insulated wires of one circuit should go to the springs marked "BUTTON 1," and those of the other circuit to the springs marked "BUTTON 2," while the common or grounded conductor goes to the spring marked "GROUND."

If desired, the outside wiring can be brought in at the base of the pedestal and run up to the terminals of the springs through the pipe.

The height of the pedestal can be adjusted by unscrewing and removing the pin on the side of the stem and sliding the top up or down until the desired height is reached and then replacing the pin. The height may be adjusted from approximately 3 feet 11 inches to 6 feet 3 inches in 2 inch steps. The base of the pedestal is about 16 inches in diameter and is provided with three $\frac{9}{16}$ inch holes for fastening it to the floor.

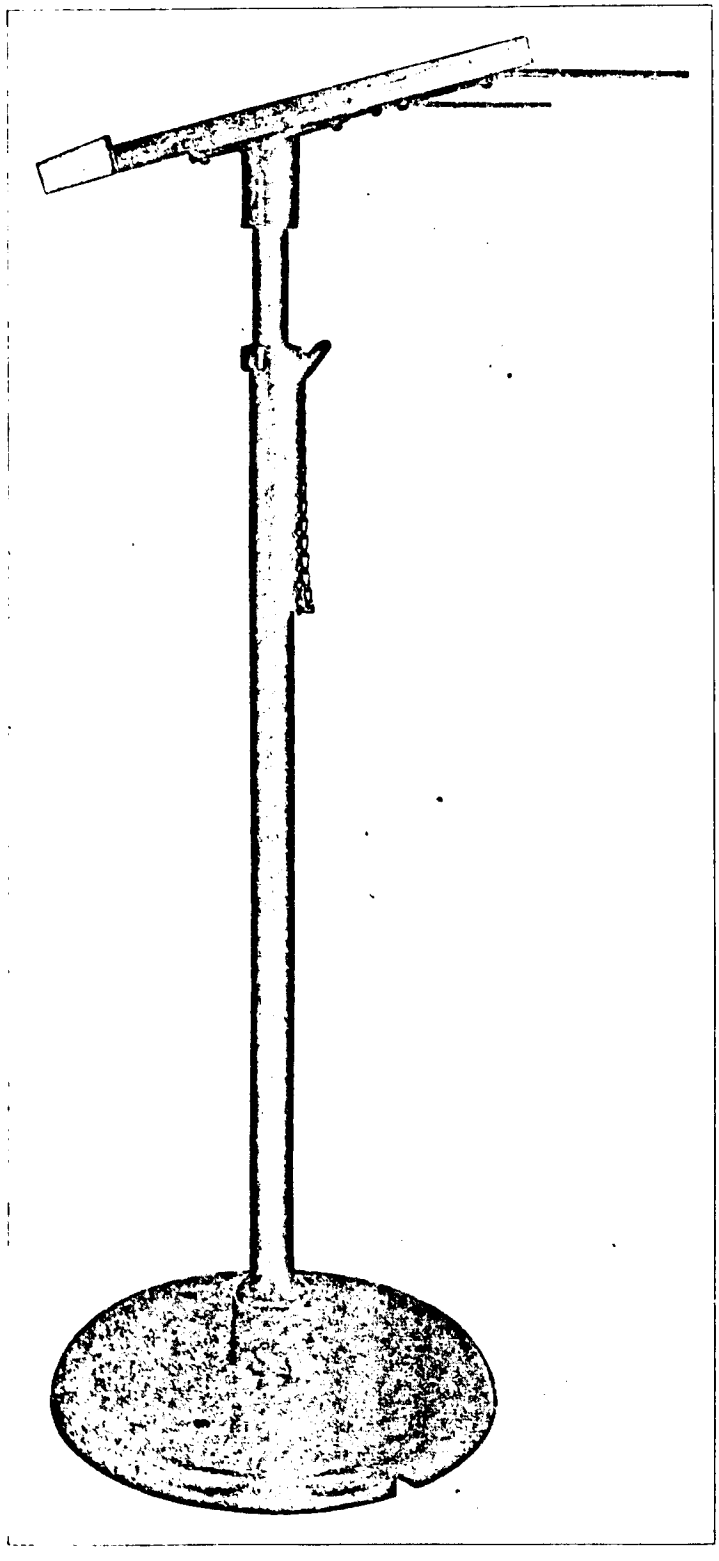

FIG. 5—NO. 2-A PEDESTAL
(With Brackets Reversed)

NO. 2-A PEDESTAL

The No. 2-A Pedestal (see Fig. 5) is intended for use by a speaker for holding notes or for use as a reading stand. It is similar to the No. 1-A Pedestal except that the top is replaced by a sloping table top. If necessary, it can also be used to hold a No. 2-A Transmitter Mounting, on the box top of a No. 1-A Pedestal, but this arrangement is not advisable unless space is very limited. To do this reverse the two iron brackets on the under side of the top, attaching them as shown in Fig. 5, and fasten to them the upper part of a No. 1-A Pedestal, using the bolts on the upper part of the pedestal for fastening.

The height of this pedestal can be adjusted in the same way as the No. 1-A Pedestal.

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