2A FARM INTERPHONE

IDENTIFICATION AND OPERATION

1.00 GENERAL

1.01 The 2A farm interphone provides the following features:

- Connection to one central office line with holding, plus connection to a local intercommunicating line, at any telephone location of the system.
- Voice-calling service from any telephone location to all loudspeaker locations.
- Hands-free operation on local communication at all remote loudspeaker locations.
- Monitoring of sound activity in the area of the remote loudspeakers.
- Tone signal broadcast over loudspeakers to indicate a central office call.

1.02 Apparatus may be arranged in various combinations (see Fig. 1). However, the

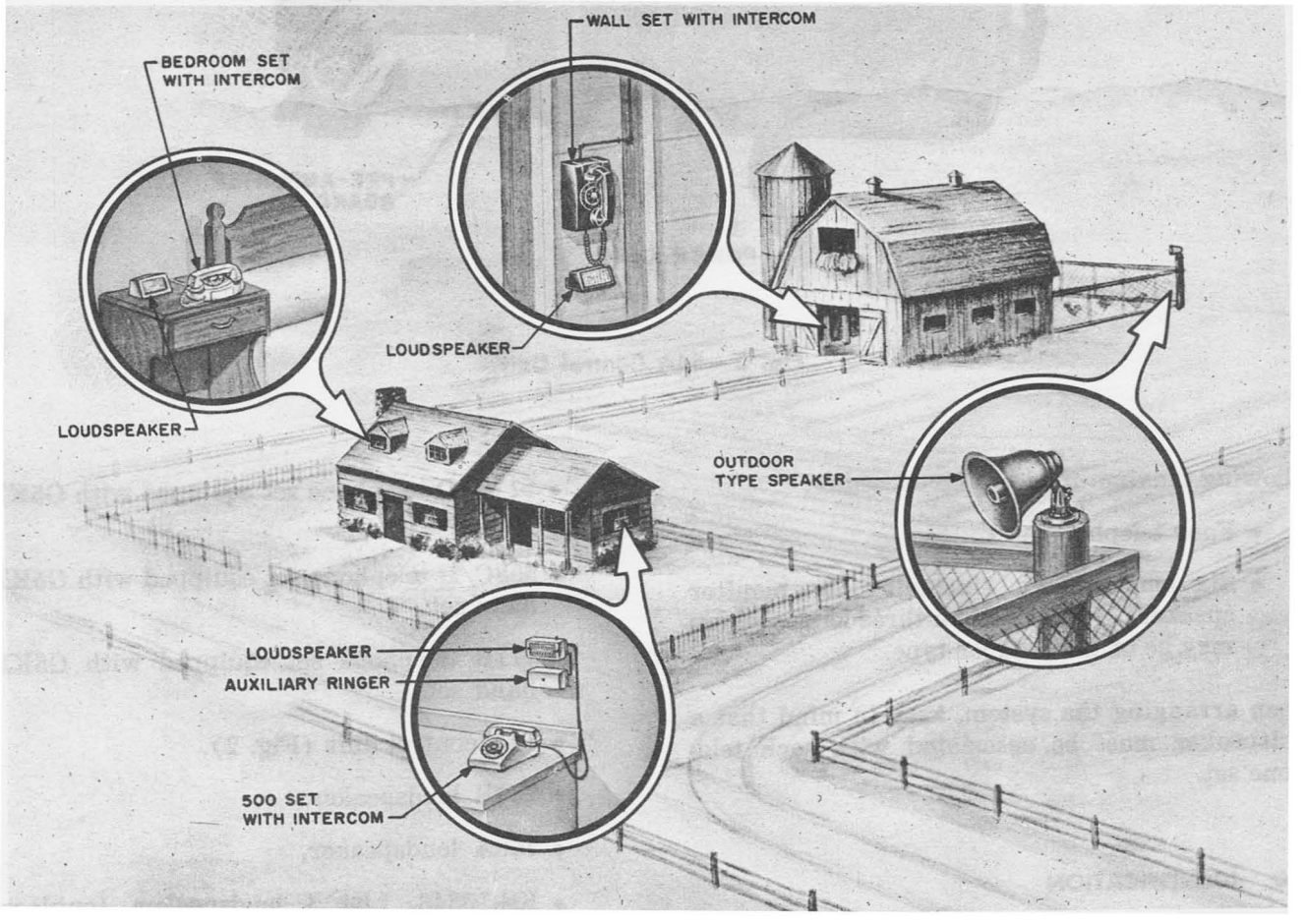

Fig. 1 — Typical Farm Arrangement

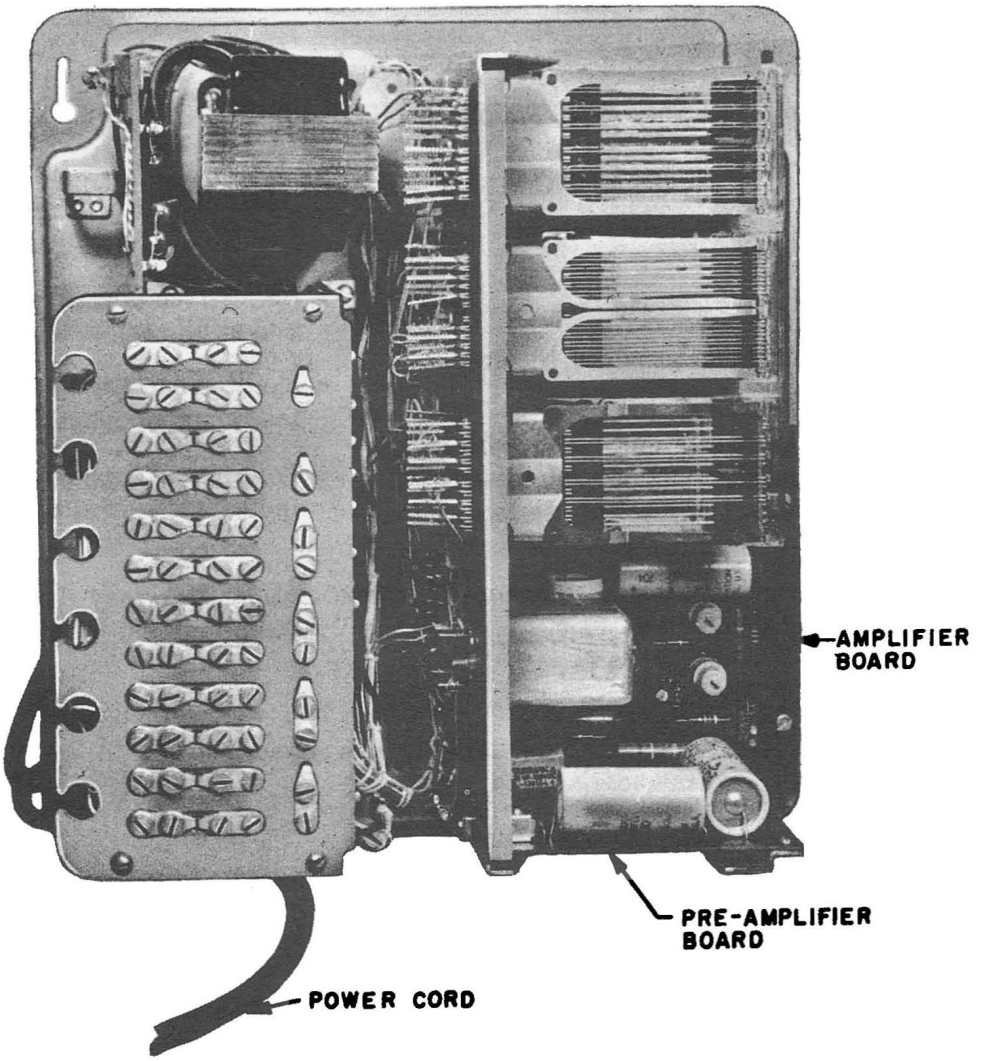

Fig. 2—54A Control Unit

following maxima may not be exceeded:

- Four telephone sets.
- Six loudspeakers (including the monitor speaker). No more than three loudspeakers may be of the outdoor type.

When arranging the system, keep in mind that a loudspeaker must be associated with each telephone set.

2.00 IDENTIFICATION

2.01 The following components are used in the 2A farm interphone:

- 511C/D telephone set equipped with G5KR hand set.
- 558C/D telephone set equipped with G5KR hand set.
- 711B telephone set equipped with G5KR hand set.
- 54A control unit (Fig. 2).
- 759B loudspeaker.
- 760A loudspeaker.
- KS-16846, List 1 loudspeaker (outdoor, horn-type).
- E1B ringer.

2.02 The telephone sets used in the 2A farm interphone are standard 511C/D, 558C/D, or 711B instruments with field modifications. Modification consists of internal wiring changes and the substitution of a G5KR hand set for the G1- or G3-type hand set furnished with the set.

2.03 The 54A control unit (Fig. 2) is housed in a metal apparatus box approximately 11 by 10-1/2 inches. The unit consists of four relays to provide the voice-calling, quieting, and tone-ringing features. The amplifier, preamplifier, and power supply for the system are also part of the control unit. Amplifiers are on wiring boards and use transistors throughout. A 4-1/2 foot power cord is provided with the unit.

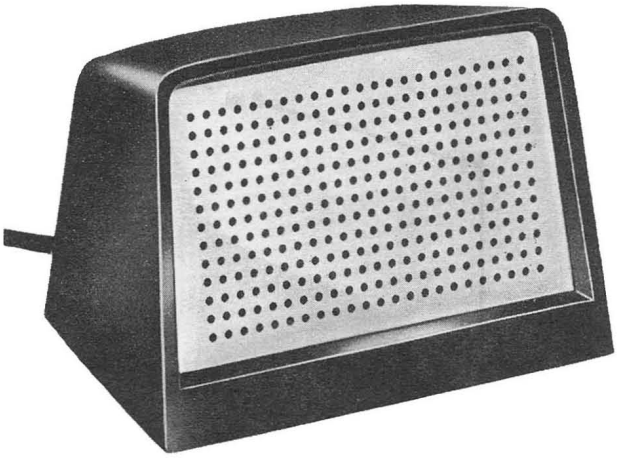

Fig. 4 — 760A Loudspeaker

2.04 The 759B loudspeaker (Fig. 3) consists of a small dynamic speaker and a 12-terminal connecting block and is equipped with a volume control switch. These components are mounted on a metal base and covered with a plastic housing. This speaker is used at the monitor station only and is designed for wall mounting.

2.05 The 760A loudspeaker (Fig. 4) consists of a small loudspeaker mounted on a metal base and a metal grill front, and is covered with a molded plastic housing. This speaker is used at the remote station locations in the system. Although it is normally used as a desk or table mounting, it may be mounted on a wall or other vertical surface by using the 69A bracket.

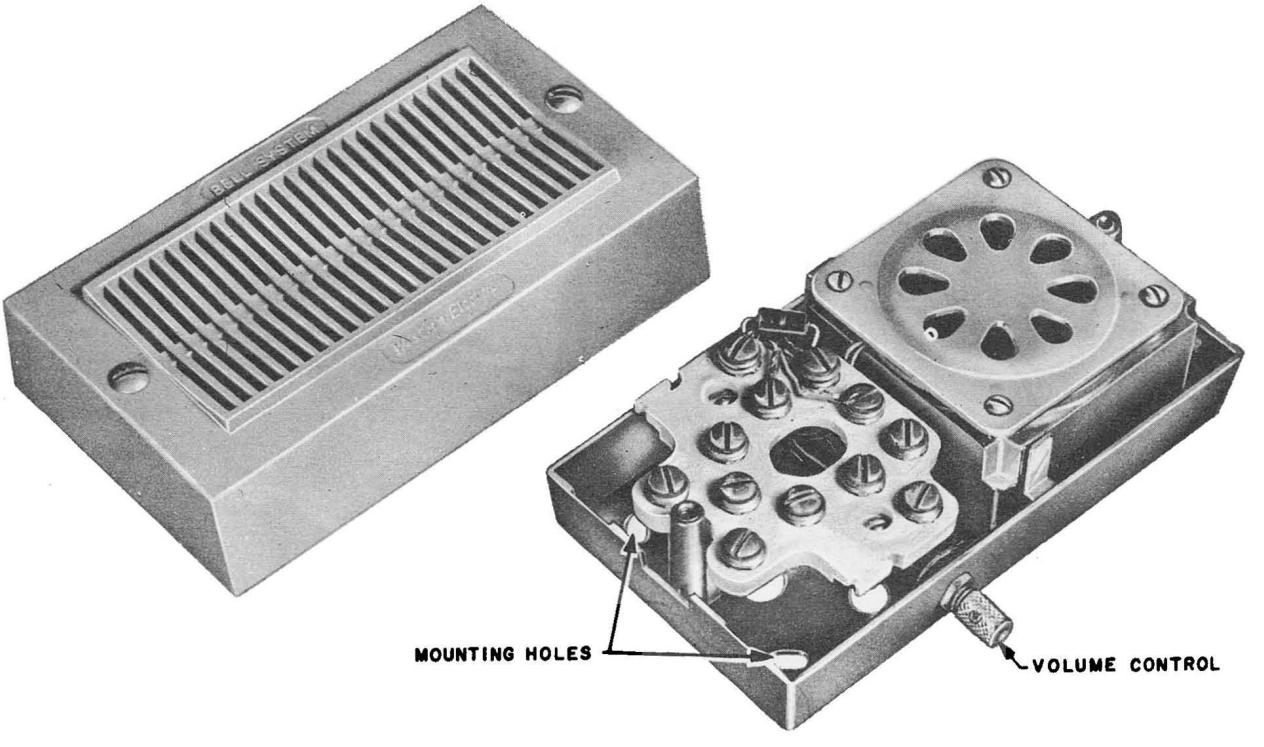

Fig. 3 — 759B Loudspeaker

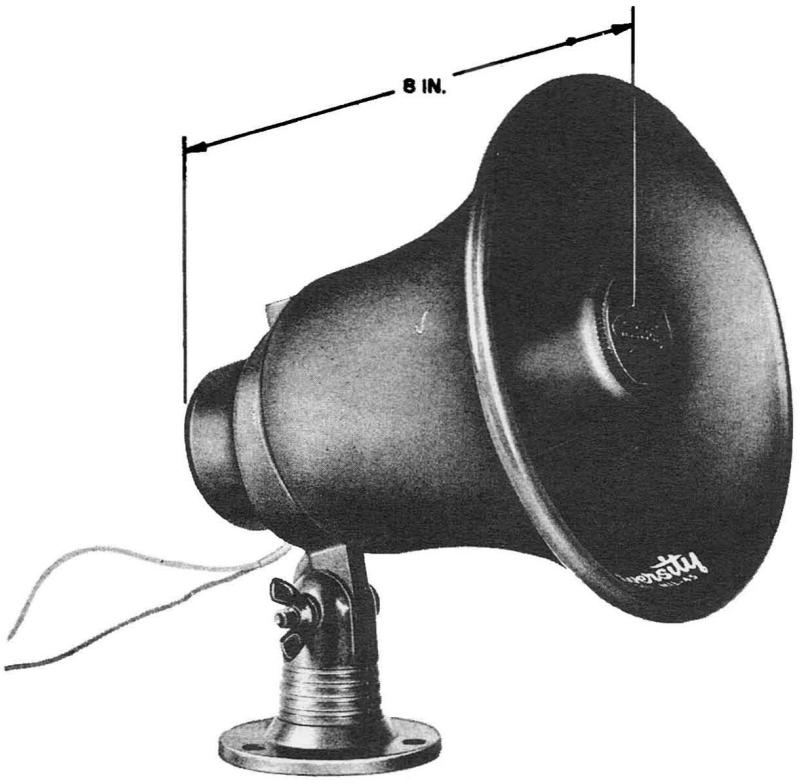

Fig. 5 — KS-16846, List 1 Loudspeaker

2.06 The KS-16846, List 1 loudspeaker (Fig. 5) is an outdoor, horn-type speaker. This speaker is equipped with a universal swivel-type mounting and may be mounted on a wall, eave, or pole. The mounting may also be attached to a 1/2-inch pipe without additional fittings.

2.07 The E1B ringer (Fig. 6) is similar to the E1A except that a set of contacts has been added to actuate the tone signal when a central office call is received. The contacts are so arranged that when the volume control arm is in the extreme loud position, the contacts are opened, preventing the operation of the tone signal.

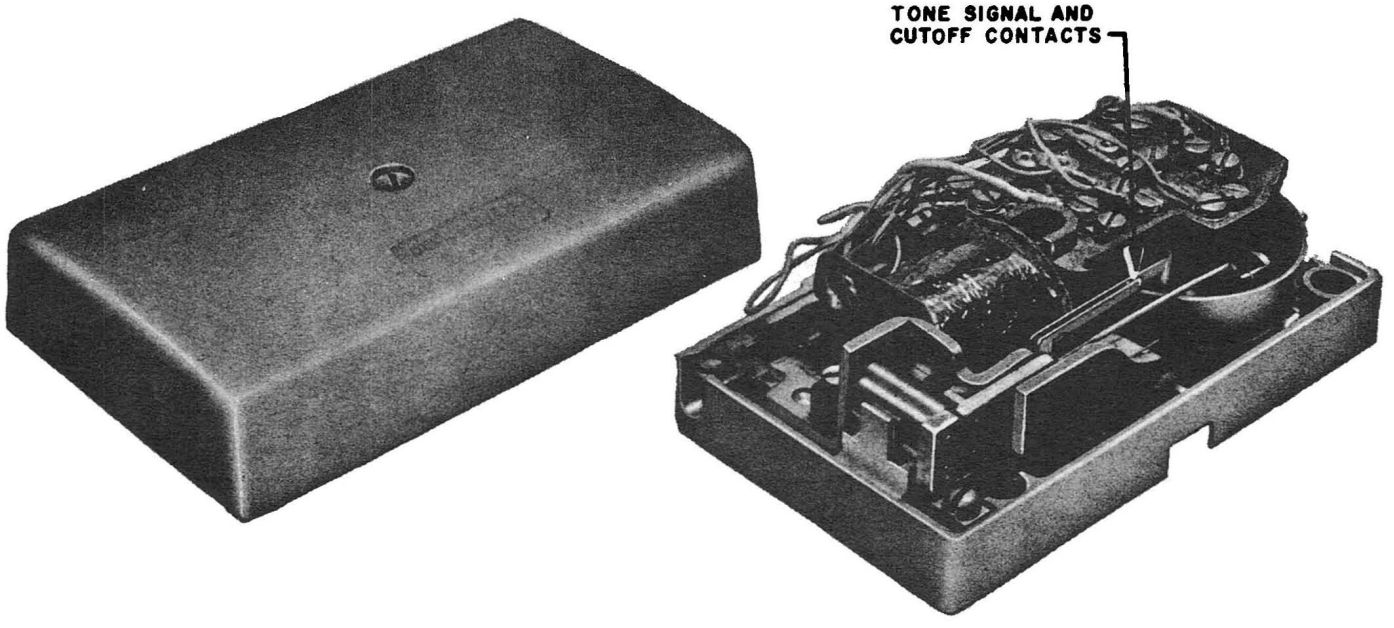

Fig. 6 — E1B Ringer

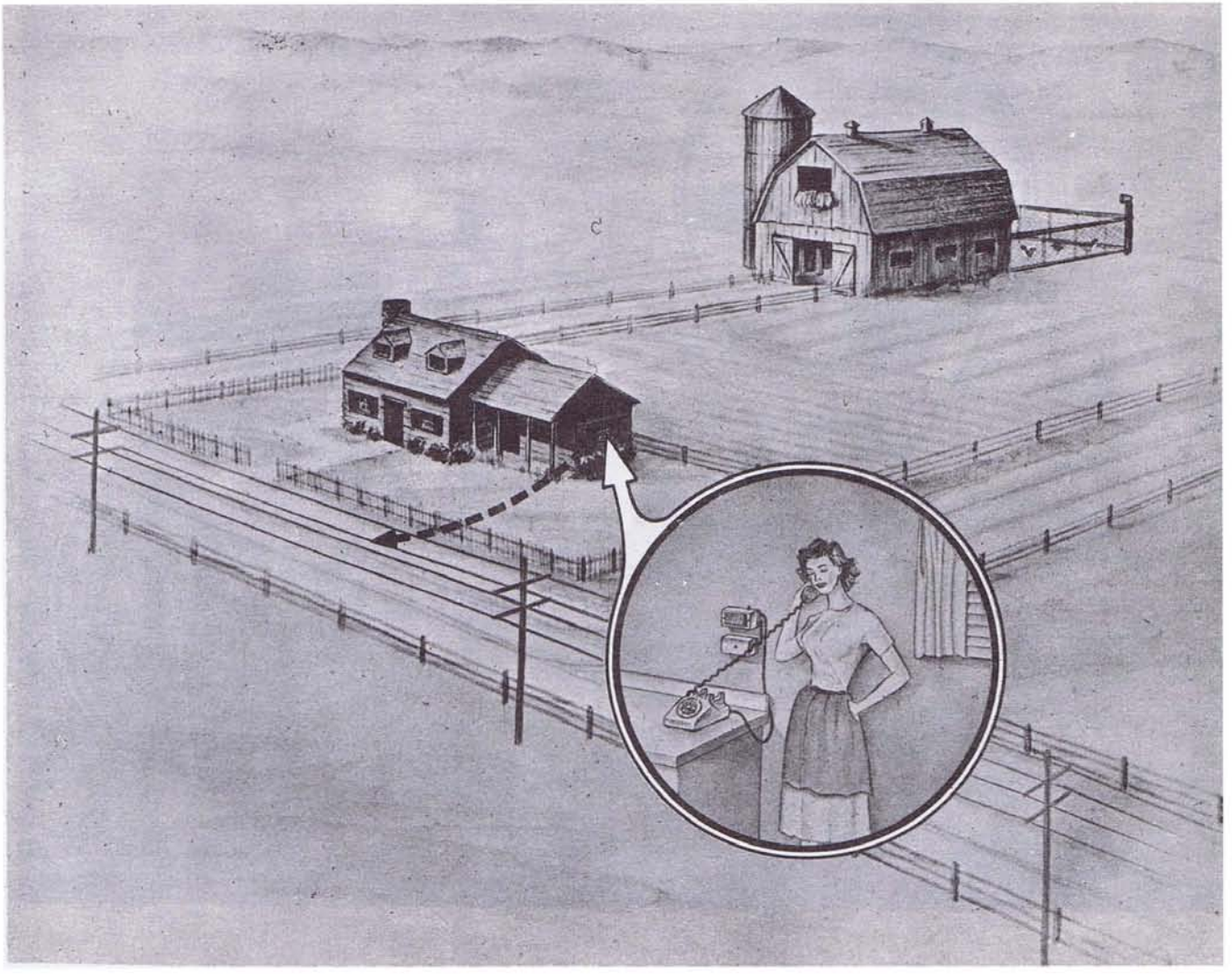

Fig. 7 — Central Office Call

3.00 OPERATION

3.01 To connect a central office line at any telephone set, place the line key in the line 1 position. The ringer operates on a central office call regardless of the position of the line key. (See Fig. 7.)

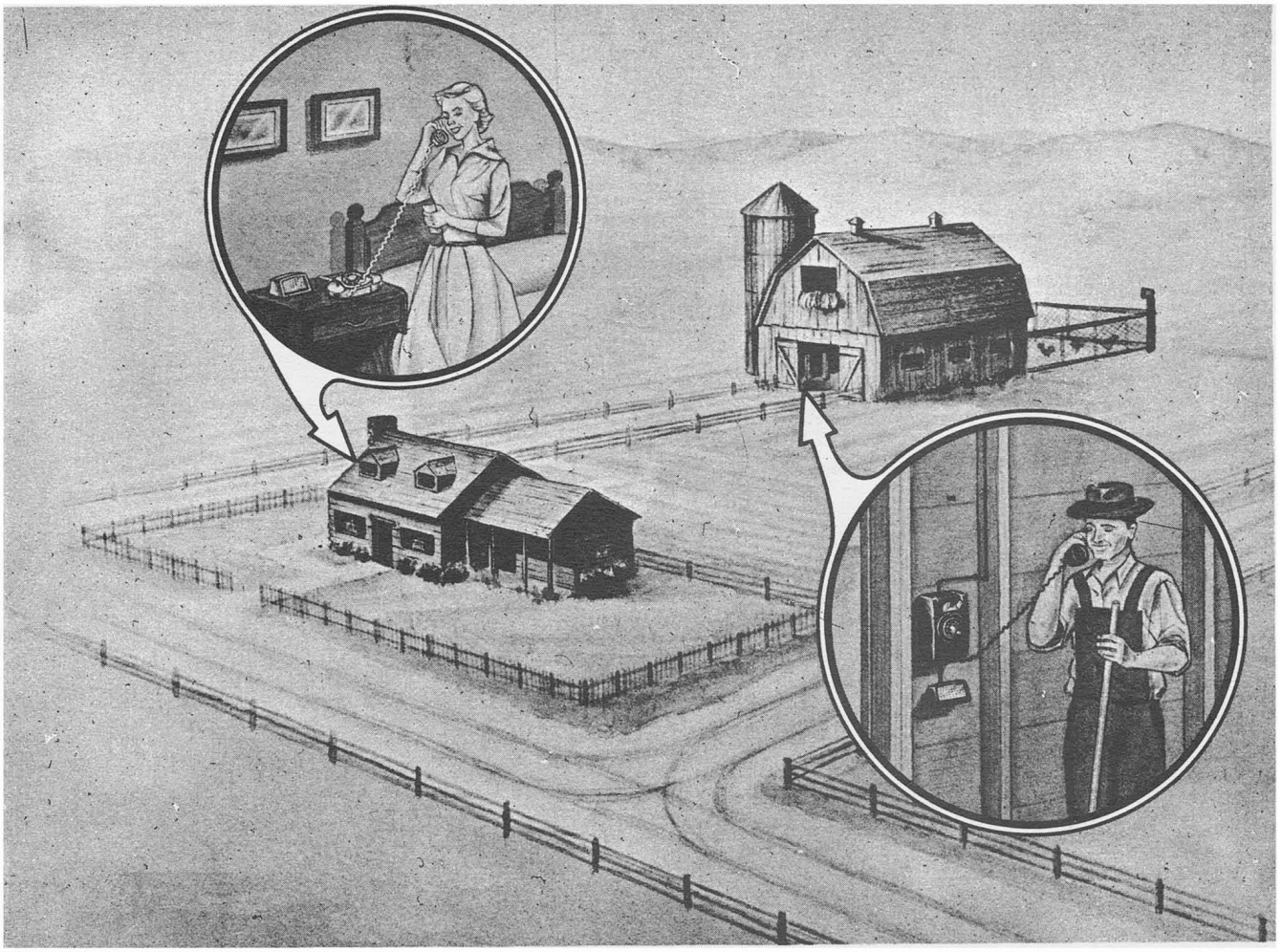

Fig. 8 — Interphone

3.02 To hold a central office line, operate the hold key at the telephone set. The holding arrangement is a manual type and therefore must be released at the telephone set that originally held the call. To avoid the possible loss of calls, the hold key should not be released until the telephone set is again connected to the central office line.

3.03 For local communication place the line key of any telephone set in the line 2 position (see Fig. 8).

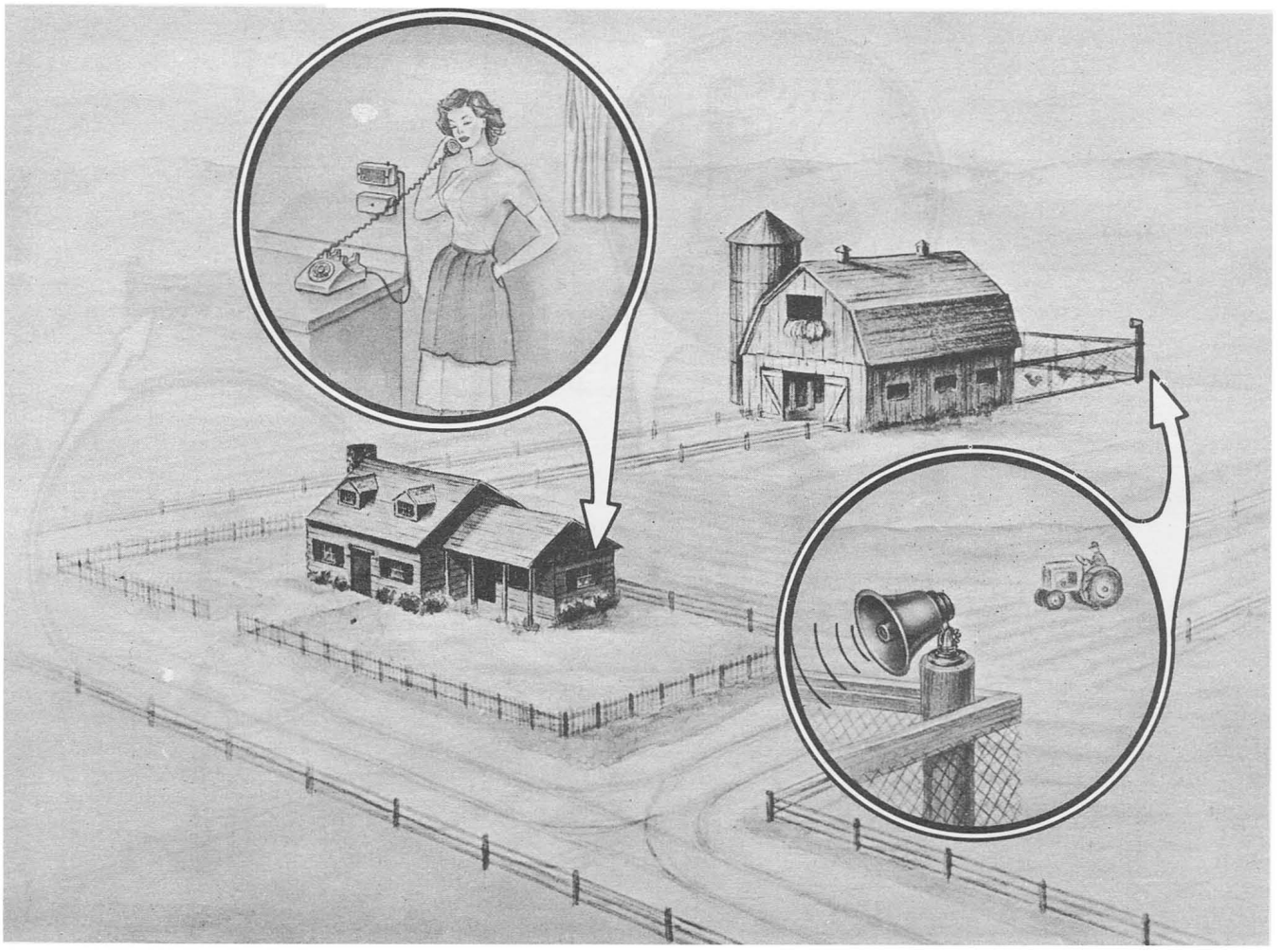

Fig. 9 — Voice Calling

3.04 To signal from any telephone set, the user operates the push-to-talk bar of the handset. This connects the calling station to all loudspeakers in the system via the amplifier in the control unit. There is no way to select certain speakers since all loudspeakers are bridged at the control unit. (See Fig. 9.)

3.05 On local communications, the called location can carry on a hands-free conversation through the loudspeaker. The loudspeaker unit also acts as a microphone pickup.

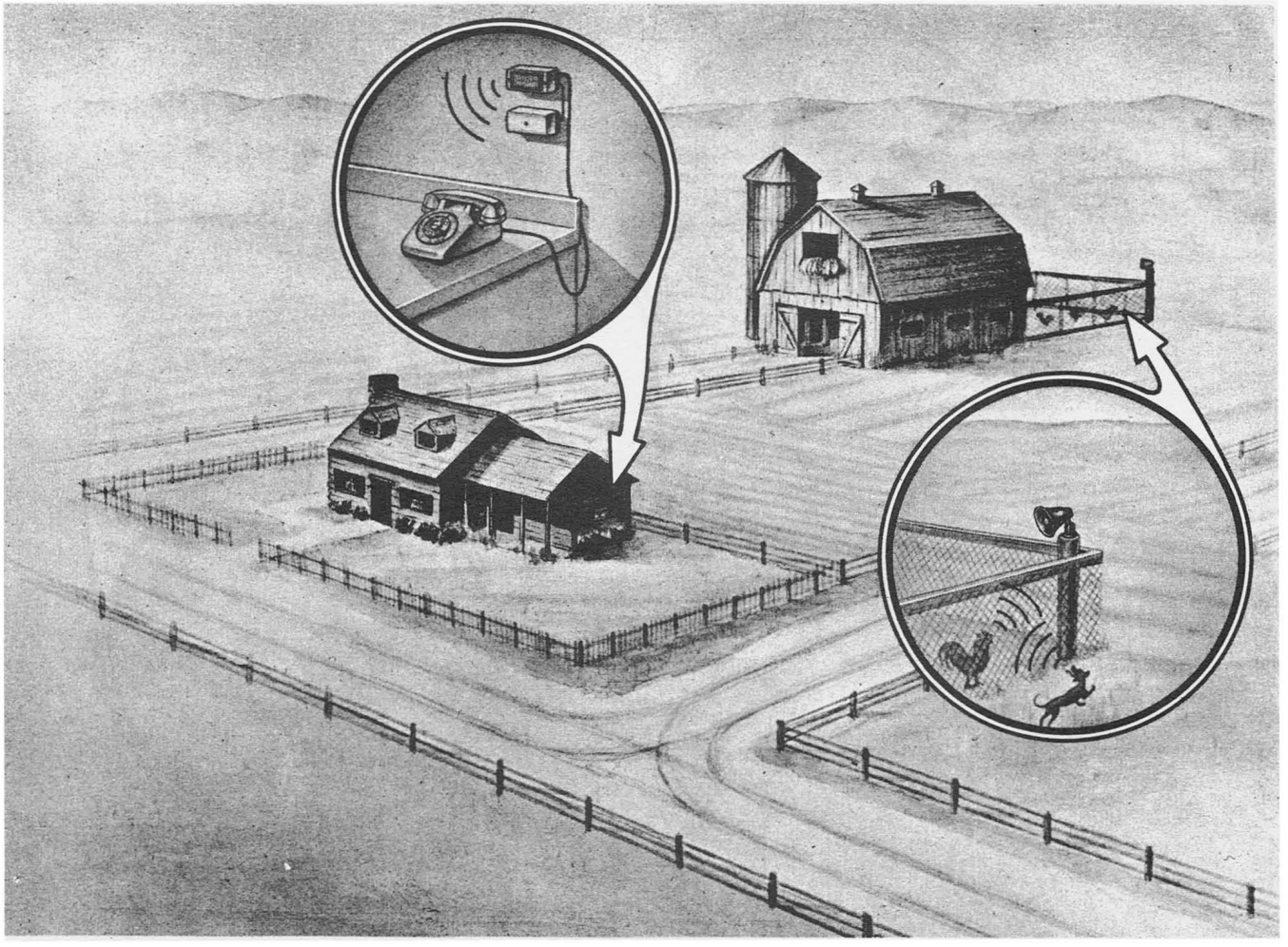

Fig. 10 — Monitoring

3.06 Except when used for talking or signaling, the microphone property of the loudspeakers is used to monitor any sound activity in the vicinity of the loudspeakers. The sound picked up by the loudspeakers is amplified and is heard over the monitor speaker. (See Fig. 10.) In order to remove this from the intercommunicating line while two stations are talking handset to handset, the quieting relay is operated by pushing the pushbutton at either station. All loudspeakers are then disconnected from the line and remain disconnected until these handsets and any others that may be in the off-hook position are placed on the hook.

3.07 Since ringing bridge limitations are a major consideration on most rural service, this system uses a tone signal to indicate an incoming central office call. This method of signaling requires only one ringer per system. When the ringer operates, it closes the armature contacts and causes the tone signal to be broadcast over all loudspeakers.