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DROP-SIGNAL HOLDER

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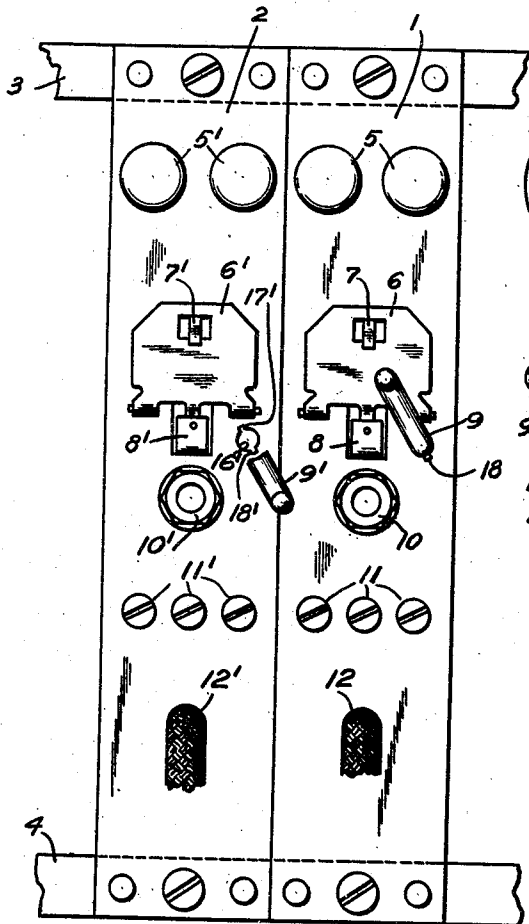


Fig. 1

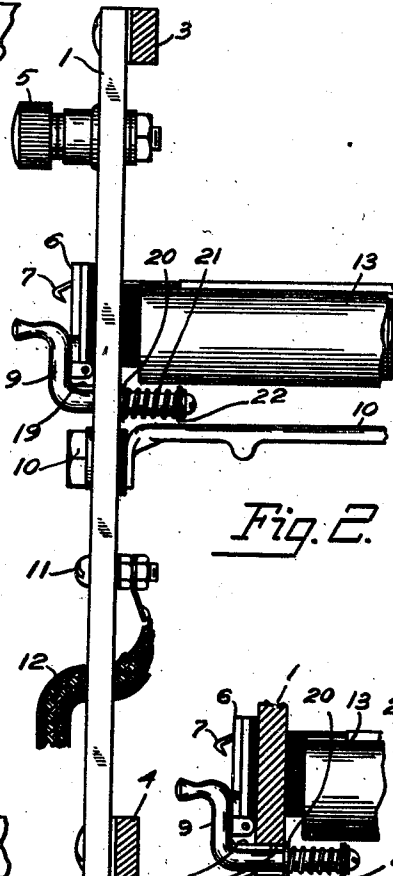


Fig. 2

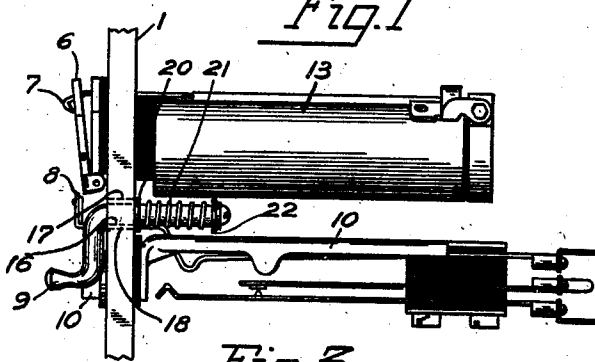


Fig. 3

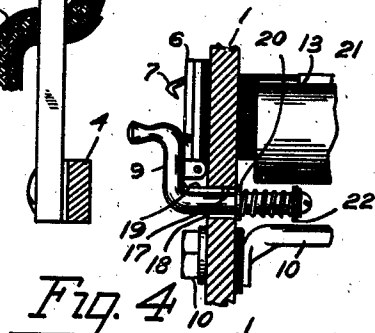


Fig. 4

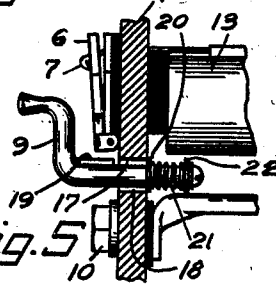


Fig. 5

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DROP-SIGNAL HOLDER

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3 Claims. (Cl. 177—329)

This invention relates to drop-signal holders for portable magneto telephone switchboards, such as used by the Army, for example.

The drop signals with which magneto telephone switchboards are equipped must be fairly sensitively constructed and adjusted in order to readily respond to ringing current, from a magneto telephone, for example. A portable switchboard is often subjected to rough usage and considerable jarring when being transported, causing the drop signals (if not fastened in place) to fall down and be jerked violently around, thereby breaking the signal or destroying its adjustment.

The main object of the invention is the provision of a suitable arrangement for holding the drop signal securely in place while the switchboard is being transported from one location to another.

A further object is to provide a signal holder which remains attached to the switchboard for repeated use, and which may readily be brought into holding position when the switchboard is to be moved, and which may be readily moved out of the way when the switchboard is set up for use.

The accompanying drawing, comprising Figures 1 to 5, show a preferred embodiment of the invention applied to a portable magneto switchboard of the unit type, commonly used for Army field communications.

In the drawing:

Figure 1 is a front view of a portion of the switchboard, showing equipment units mounted thereon for two lines, each of the units being equipped with the improved drop-signal holder;

Figure 2 is a partial side view of the right-hand unit shown in Figure 1;

Figure 3 is a similar view of a portion of the equipment shown in Figure 1; and

Figures 4 and 5 are further views, partly in section, similar to Figure 3, but with parts broken away.

As seen best in Figures 1 and 2, the illustrated portion of the switchboard comprises horizontal mounting bars 3 and 4 to which line units such as 1 and 2 may be detachably secured in place as illustrated.

The unit 1 comprises:

The upright mounting strip 1 having binding posts 5 at the upper portion thereof;

Pivoted drop signal 6, normally held in position by catch 7, as best illustrated in Figures 3 and 5;

The new and improved drop-signal holder 9, 55

shown in engaged position in Figures 1, 2 and 4;

The jack 10, adapted to receive the usual type of switchboard plug;

Terminal screws 11; and

5 The cord 12, having the conductors thereof secured to the terminal screws 11, the other end of which cord may be provided with the usual type of switchboard plug.

The parts mounted on unit 2 have similar reference numerals applied, but primed.

10 For illustrative purposes, the drop-signal holder 9 is shown in its active holding position on the strip 1, while the similar device 9' on the unit 2 is shown adjusted to its passive or non-
15 holding position.

As shown in Figures 3 and 5, drop signal 6 is normally held in position by latch 7, controlled by the usual electromagnetic drop device 13. When the latch 7 is raised, the signal 6 drops in the usual manner to indicate a call. When a plug is inserted into the jack 10, the signal 6 may be automatically restored by the usual signal restorer 8, comprising an extension of the illustrated tip spring of the jack.

20 The signal holder 9 is preferably of the illustrated crank-like construction. The axis portion of the device extends through opening 16, and is constantly urged inwardly or toward the rear of the panel by compression spring 21, applied between washers 20 and 22. Washer 20 lies against the back of the panel, while washer 22 may be detachably held to the rear end of the holder, by the illustrated machine screw, for example.

35 A longitudinal key 19, seen best in Figures 2, 4, and 5, is formed on the axis portion of the holder 9, which may be conveniently done in manufacture by an upsetting or similar operation. Keyways 17 and 18 are provided on the opposite side of the opening 16 through which the signal holder 9 passes, as illustrated best at 40 17' and 18' in connection with the opening 15' through the panel of unit 2.

As seen best in Figure 4, when the signal holder 9 is in its active position, the key 19 lies partially within the upper keyway 17 to retain the holder in place against rotation.

When the signal holder 9 is to be moved from the active position illustrated in Figures 1, 2, and 4 to the passive position indicated for the device 9' in Figure 1 and the device 9 in Figure 3, the outwardly turned portion of the device 9 may be grasped and the device pulled outwardly to the position illustrated in Figure 5. When the pulled-out device is rotated, key 19 passes away from

the vicinity of the keyway 17, permitting the rear portion of key 19 to ride along on the surface of the panel as the device is further rotated about its axis toward passive position. When this passive position is reached, the compression spring 21 draws the key 19 into the lower keyway 18, thus holding the device against rotation in the passive position indicated at 9 in Figure 3 and at 9' in Figure 1.

When it is desired to transport the switchboard to another location, the line wires may be disconnected from the binding posts such as 5 and 5', and the signal holders 9 and 9' are pulled forward and rotated from the passive position to the active position shown at 9 in Figures 1, 2, and 4 to hold the drop signals 6 and 6' snugly in place as illustrated. When the switchboard reaches the intended new location, the signal holders may be moved outwardly and rotated substantially 180°, whereupon each of them is snapped into place as illustrated at 9 in Figure 3 and at 9' in Figure 1, being held by the compression spring 21 and the key 19 in the lower notch 18.

I claim:

1. In combination, portable telephone switchboard apparatus including a panel having a drop signal mounted on the front thereof and arranged to drop to display position when tripped, a signal holder comprising a crank-like device, said device having an axis portion passing through the switchboard panel and an arm portion extending generally parallel to the panel, the arm portion of the device being rotatable about the axis portion into and out of a position to overlie said signal closely to hold it from dropping from normal position to display position, and means operative to hold said signal holder securely in the position it occupies when overlying said signal.

2. In combination, portable telephone switchboard apparatus including a panel having a drop signal mounted on the front thereof and arranged to drop to display position when tripped, a signal holder comprising a crank-like device, said device having an axis portion passing through the switchboard panel and an arm por-

tion extending generally parallel to the panel, the arm portion of the device being rotatable about the axis portion into and out of a position to engage the drop signal in normal position and urge it rearwardly, spring means lying behind the panel and engaging the axis portion to urge the device rearwardly of the panel and means rendered effective thereby to retain the said arm either in its operative or inoperative position.

3. In combination, portable telephone switchboard apparatus including a panel having a drop signal mounted on the front thereof, said signal being pivoted to drop from a normal position generally parallel to the panel to the display position when tripped, there being an opening through the panel laterally displaced from said signal, a signal holder comprising a crank-like device, said device having an axis portion passing through said opening and an arm portion lying in front of the panel and extending generally parallel thereto, the arm portion of the device being adapted to be rotated about the axis portion to an active position in which it overlies the signal to hold it from dropping from normal position to display position and a passive position in which it is out of the path of movement of the signal between the said positions thereof, a key secured to the axis portion slightly to the rear of the arm portion, said opening through the panel including a keyway in a position to receive said key when the arm is in its active position and the signal holder is moved rearwardly in the opening, said opening including a further keyway angularly displaced from the first and so located as to receive the key when the signal holder is in its passive position and is moved rearwardly in the opening, movement of the signal holder from one position to the other being accomplished by moving the holder forwardly, rotating it to the new position and moving it rearwardly to engage the key in the concerned keyway, and spring means located behind the panel and interacting between the panel and the axis portion of the device for retaining the key in the concerned keyway when the device is in either of the said positions thereof.

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