

July 16, 1935.

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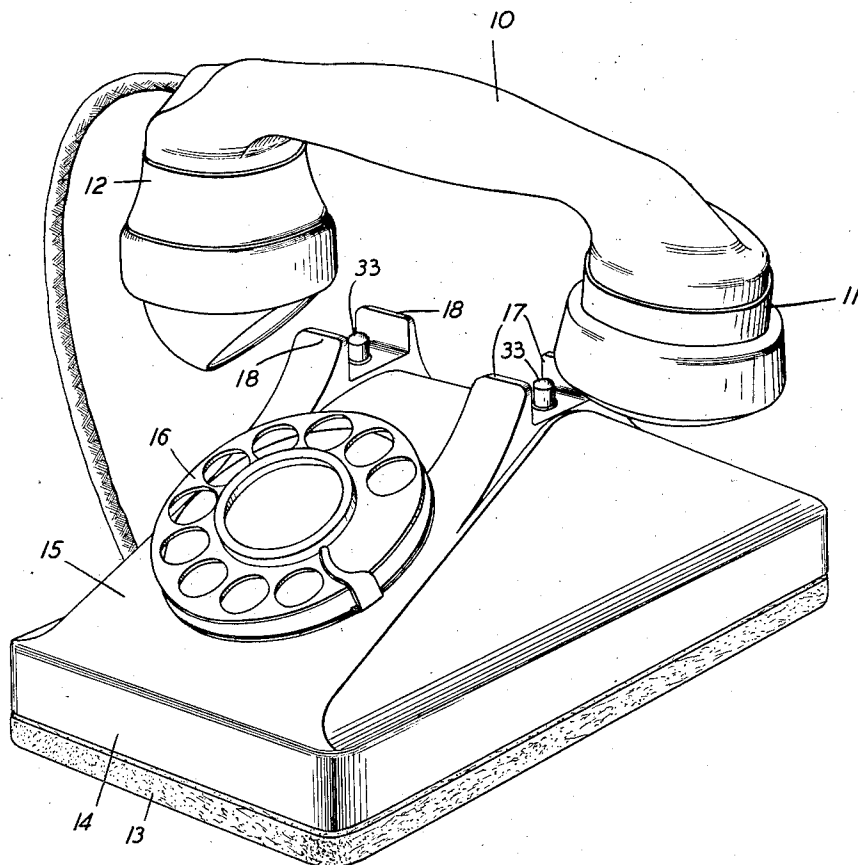
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TELEPHONE SUBSTATION APPARATUS

Filed Oct. 20, 1932

4 Sheets-Sheet 1

FIG. 1



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Filed Oct. 20, 1932 4 Sheets-Sheet 2

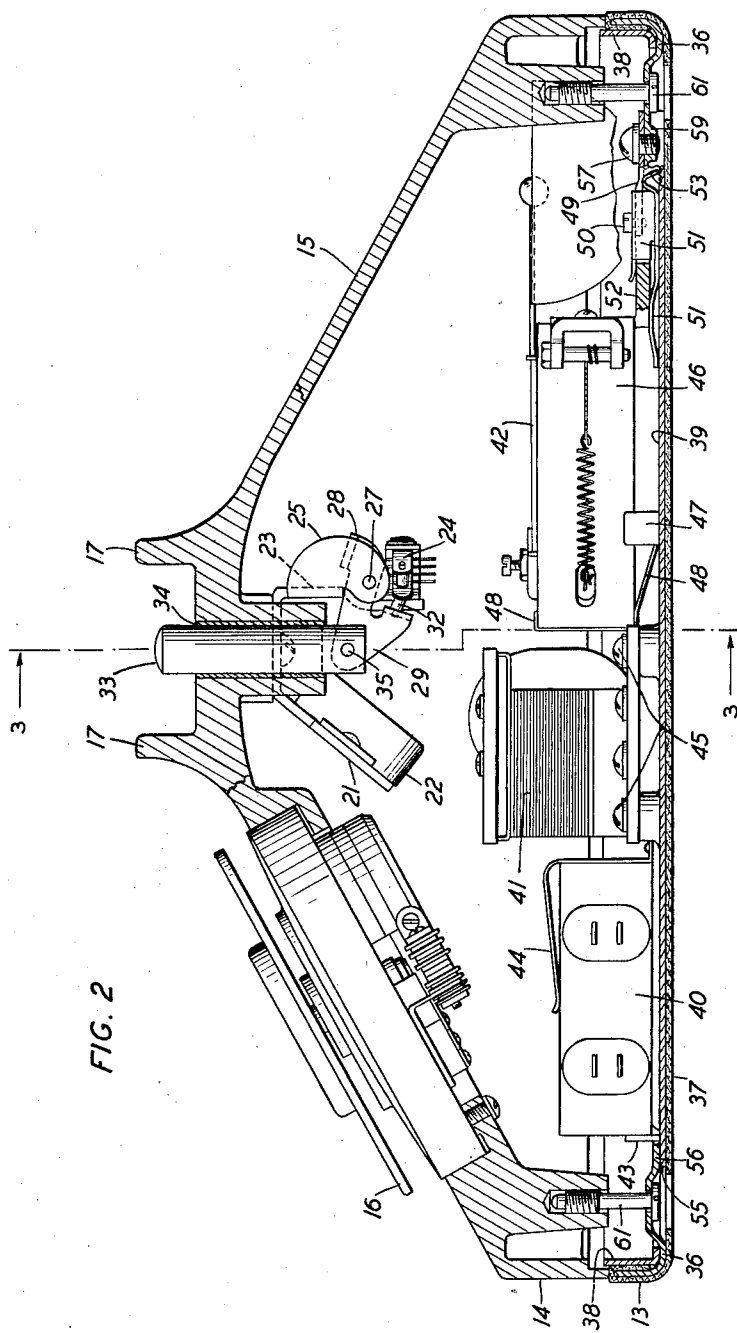


FIG. 2

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4 Sheets-Sheet 3

FIG. 3

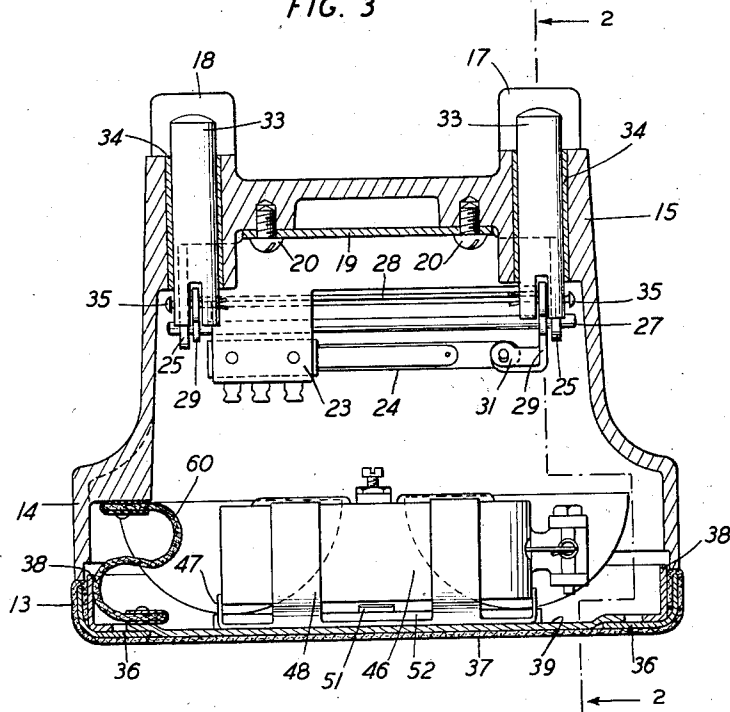
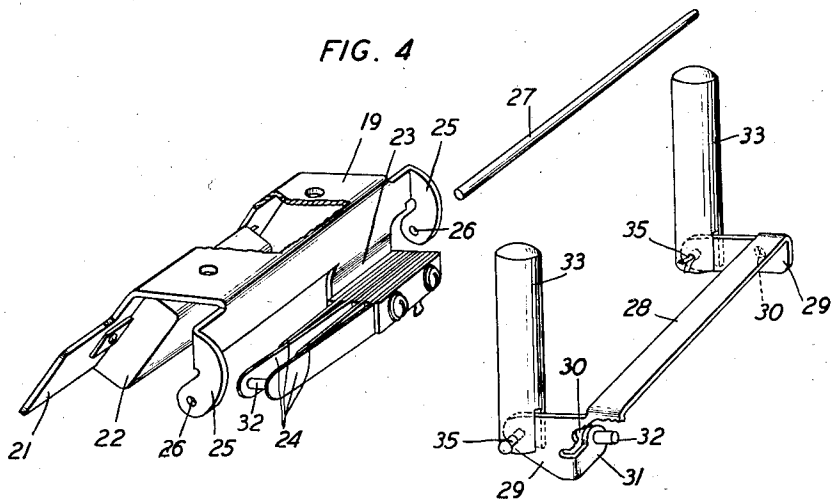


FIG. 4



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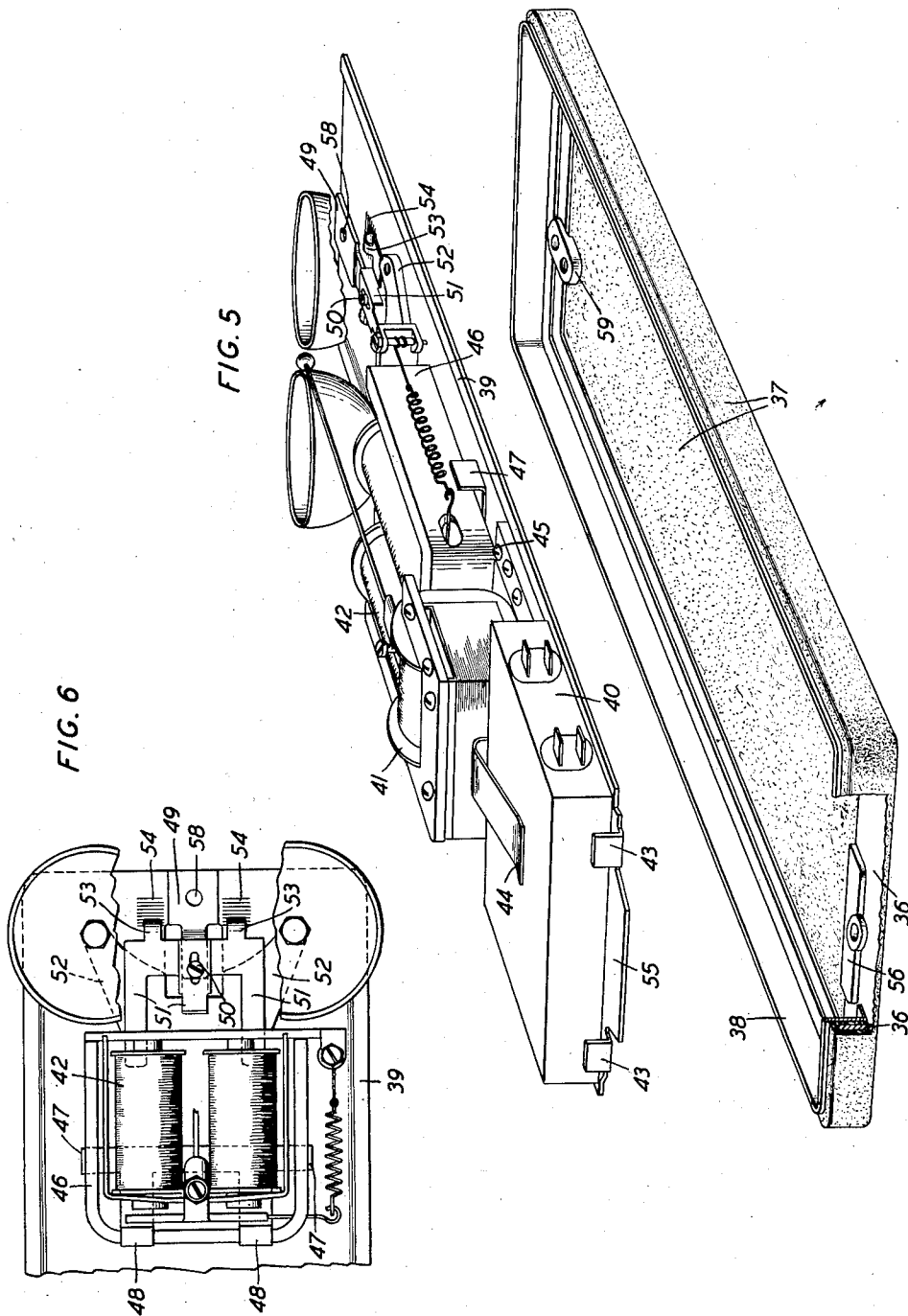
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TELEPHONE SUBSTATION APPARATUS

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Application October 20, 1932, Serial No. 638,679

3 Claims. (Cl. 179—100)

This invention relates to telephone substation apparatus and more particularly to desk stands for hand telephones.

One object of this invention is to prevent accidental actuation of the line contacts in desk stands for hand telephones.

Another object of this invention is to simplify the structure, to expedite the manufacture, and to reduce the manufacturing cost of telephone substation apparatus.

In one embodiment illustrative of this invention, a desk stand for hand telephones comprises a casing having a base portion and a pedestal portion, and a plurality of pairs of tines extending from the pedestal portion and forming a cradle for accommodating the handle of the hand telephone. A plurality of plungers are disposed one between each pair of tines and extend into the casing to actuate line contacts when the hand telephone is placed upon or removed from the cradle. A metallic support or stamping is mounted within the casing and includes a pair of spaced parallel arms, and a third arm upon which the line contacts are mounted. A bracket member is rockably mounted between the parallel arms of the stamping and is provided with a plurality of extensions each of which is connected to a corresponding one of the plungers. The bracket member is also provided with an extension engaging the line contact assembly.

A base plate is hinged to the base of the casing and has mounted thereon a supporting plate upon which various elements of substation apparatus, such as a ringer, condenser and induction coil of a telephone subset are mounted. The supporting plate is secured to the base plate by a single screw.

The invention and the features will be understood more fully and clearly from the following detailed description with reference to the accompanying drawings in which:

Fig. 1 is a perspective view of a telephone desk set including a desk stand constructed in accordance with this invention;

Fig. 2 is a side elevational view in cross-section of the desk stand shown in Fig. 1;

Fig. 3 is a front elevational view in cross-section of the desk stand shown in Fig. 1;

Fig. 4 is an exploded view showing the elements of the line contact and switch assembly;

Fig. 5 is an exploded view in perspective of the base of the desk stand and the apparatus mounted thereon; and

Fig. 6 is a plan view showing details of the assembly illustrated in Fig. 5.

Referring now to the drawings, the telephone desk set in one form of this invention comprises a hand telephone including a handle 10 having receiver 11 and the transmitter 12 mounted thereon at opposite ends. The desk stand for the hand telephone comprises a base plate 13, to be described in greater detail hereinafter, and a casing or housing including a base portion 14 and a pedestal portion 15 having substantially triangular side walls and sloping end walls upon one of which a dialing mechanism 16 is mounted. A plurality of pairs of tines 17 and 18 extend from the pedestal portion adjacent the apices of the side walls and define a cradle for accommodating the handle 10 of the hand telephone. The tines 17 and 18 may be formed integrally with the casing which may be cast as a unitary element of metal or molded of a suitable insulating material such as a phenolic condensation product.

A unitary switch assembly, which may be of the general construction disclosed in the copending application of Douglas H. King, Serial No. 638,666, filed October 20, 1932, comprises a metallic stamping or bracket 19, shown more clearly in Fig. 4, which is disposed within the pedestal portion 15 of the casing and is secured to the top wall of the casing by screws 20 which are threaded into the casing. The stamping or bracket 19 is provided with a downwardly extending flange 21 upon which an electrical filter 22 including a condenser and an inductance (not shown) is mounted. The filter 22 is connected across the terminals of the dialing mechanism 16 to prevent interference with nearby radio receiving apparatus when the dialing mechanism 16 is operated. The stamping or bracket 19 is also provided with a downwardly extending arm 23 upon which a contact assembly 24 is mounted. A pair of parallel arms 25 extend from the stamping 19 and are provided with apertures 26 for receiving a rod or shaft 27. A metallic rocker or bridge member 28 is rockably mounted upon the rod or shaft 27 and is formed with parallel extensions 29 which are disposed one adjacent each of the arms 25 and are provided with apertures 30 to receive the rod or shaft 27. One of the extensions 29 is formed with an arm 31 which extends parallel to the shaft 27 and is provided with a projecting stud 32 adapted to engage one of the spring fingers of the contact assembly 24. Parallel plungers or cylindrical rods 33 extend slidably through tubular metallic inserts 34 in the top of the pedestal 15 and project one between each of the pairs of tines 17

and 18. Each of the extensions 29 is pivotally connected at one end to a plunger or rod 33 by a cotter pin 35. The plungers or rods 33 reciprocate in accordance with the association or dis-
 5 association of the hand telephone with the cradle of the desk stand and thereby rock the bracket member 23 to actuate the contact assembly 24.

This construction prevents accidental operation of the contacts 24 by tilting of the hand telephone in the cradle and also insures quick action of the contacts 24 when the hand telephone is placed upon the cradle.

The base plate 13 which may be of metal comprises a rectangular frame 36 over which a sheet 37 of felt or similar material is clamped by a band 38 fitted in the frame. An auxiliary base or mounting plate 39 has mounted thereon the usual substation apparatus such as a condenser 40, induction coil 41 and ringer 42. The condenser 40 is clamped against flanges 43 on the plate 39 by a spring clip 44. The induction coil 41 may be secured to the plate 39 by screws 45. The ringer 42 is disposed with its magnet 46 positioned between tabs 47 extending from the plate 39, and is locked in position by a multi-arm spring member or clip 48 integral with the tabs 47 and engaging the magnet and another spring or locking member which is secured to a raised portion 49 on the plate 39 by a single screw 50 and is provided with a plurality of fingers 51 which engage the gong supports 52 of the ringer. The spring or locking member is also provided with curved extensions 53, the ends of which engage corrugations 54 in the plate 39 and prevent rotation of the spring member about the bolt 50.

The auxiliary base or mounting plate 39 is provided with a projecting tongue 55 which is adapted to fit in a groove or slot formed by a raised portion 56 on the frame 36. A single screw 57 extends through an aperture 58 in the raised portion 49 of the mounting plate 39 and is threaded into an extension 59 on the frame 36
 45 to lock the mounting plate within the frame.

It will be readily apparent that the aforedescribed construction greatly expedites the assembly, manufacture and repair of telephone desk stands. The various elements of substation apparatus may be easily mounted on the

auxiliary base or mounting plate 39 and the complete apparatus assembly may be easily mounted as a unit on the frame 36 and secured thereto by a single screw such as 57. The entire base assembly is hinged to the casing by a flexible strip of leather or woven fabric 60 as shown in Fig. 3 and may be secured to the casing by screws 61 as shown more clearly in Fig. 2.

What is claimed is:

1. A telephone mounting comprising a casing, 10 a base for said casing having a slot in one end thereof, a mounting plate, substation apparatus including a condenser, an inductance coil and a ringer supported on said mounting plate, said plate having a projection at one end disposed 15 in said slot, and a single screw securing said mounting plate to said base.

2. A desk stand for a hand telephone comprising a casing having a cradle thereon for receiving the handle of said hand telephone, contact members within said casing, means including a plunger member projecting into said cradle for actuating said contact members in accordance with the association and disassociation of said hand telephone with said cradle, a base 25 plate hinged to said casing having a slot in one wall thereof, a mounting plate having a plurality of tabs extending therefrom, a condenser on said mounting plate positioned against certain of said tabs, a spring clip secured to said mounting plate and holding said condenser against said certain tabs, a ringer assembly including a magnet positioned between and in engagement with other of said tabs, a spring clip secured to said mounting plate and holding said magnet 35 on said mounting plate, a locking member secured on said plate member and engaging said ringer assembly, said mounting plate having a tongue extending into said groove, and a single screw securing said mounting plate to said base 40 plate.

3. A telephone mounting comprising a base having a groove at one end thereof, an auxiliary base on said base having a tongue fitting in said groove, a condenser and a ringer on said auxiliary base, and means including spring clips detachably securing said condenser and said ringer on said auxiliary base.

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