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E. R. SAFARIK

2,812,387

TELEPHONE SET

Filed April 12, 1954

3 Sheets-Sheet 1

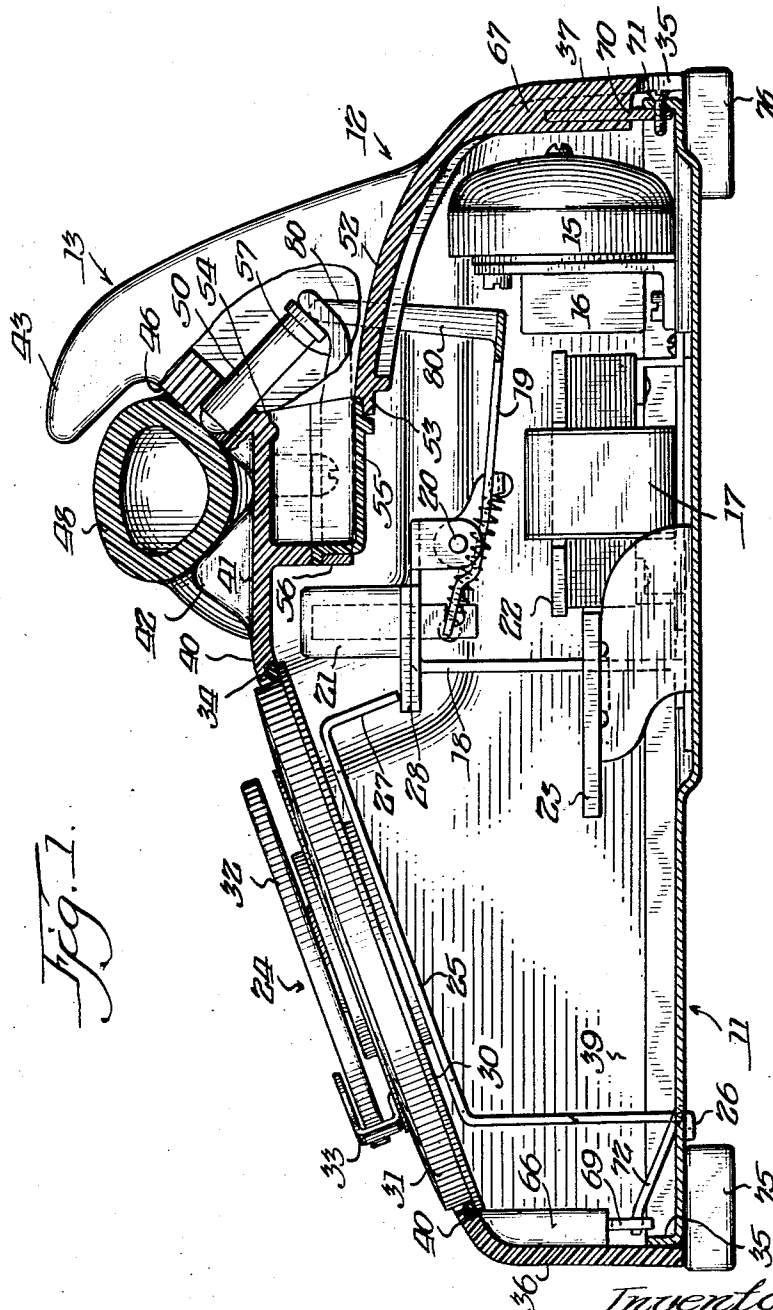


Fig. 1.

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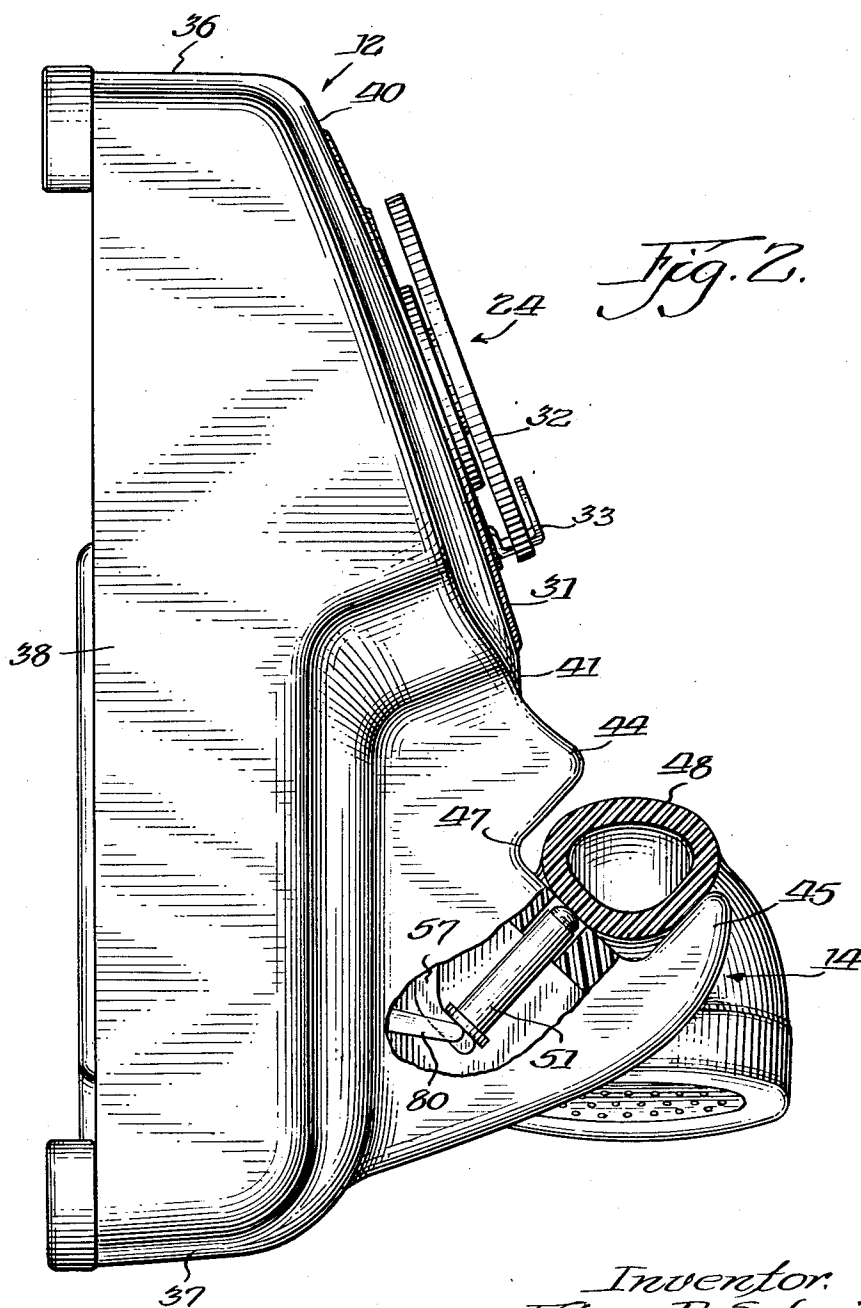
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3 Sheets-Sheet 2



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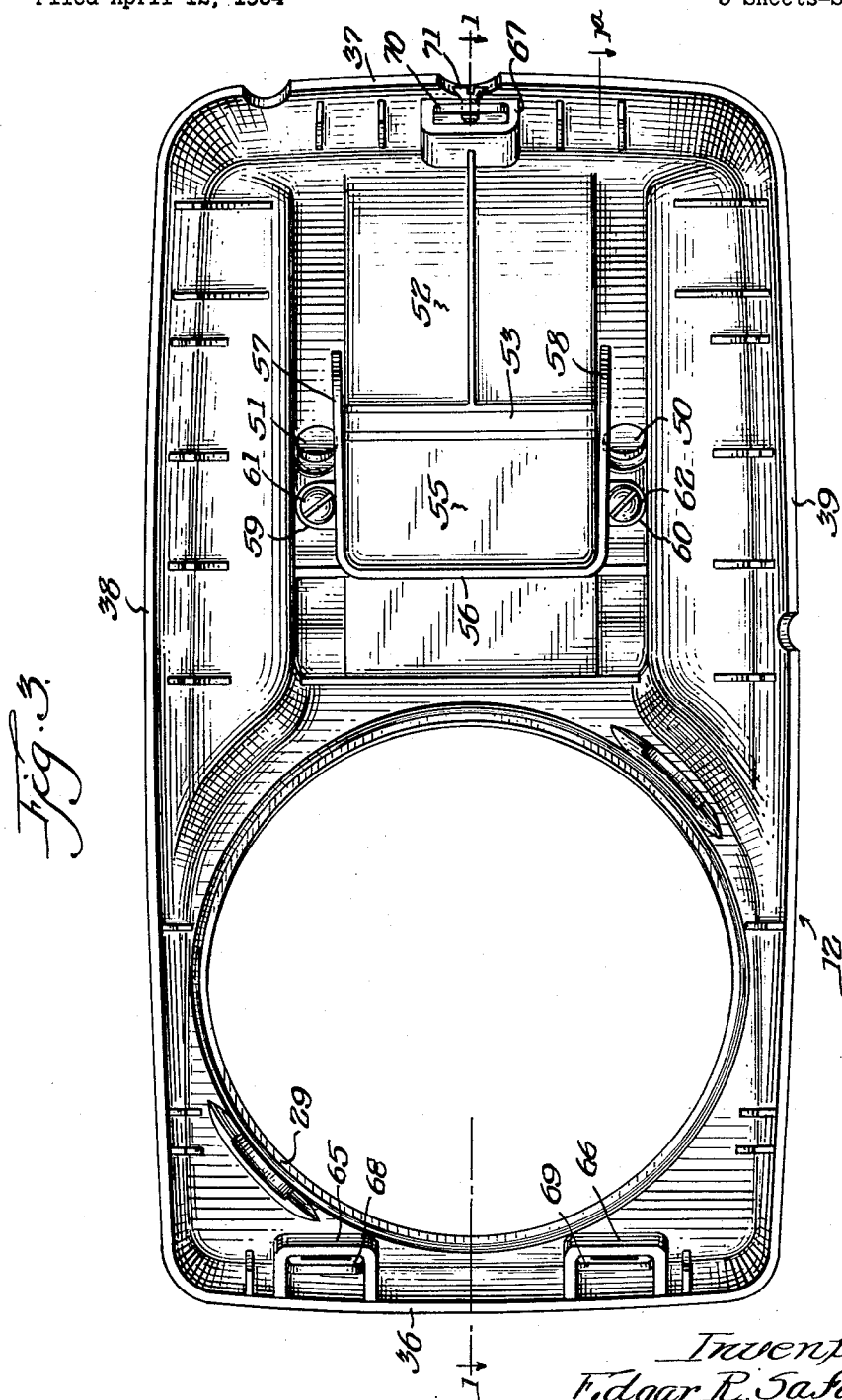
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TELEPHONE SET

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Application April 12, 1954, Serial No. 422,360

10 Claims. (Cl. 179—100)

This invention is concerned with a telephone set adapted for use upon a horizontal surface such as formed by a desk or upon a vertical surface such as formed by a wall. Certain features of the new telephone set may be considered in the nature of improvements on the structure described in Patent No. 2,492,375, dated December 27, 1949.

The various objects and features of the invention are noted below.

One object is to provide a hand telephone set comprising a cradle structure for supporting the handle portion of the hand telephone, such cradle structure extending from the cover of the set near one end thereof and integral therewith and having two pairs of tines, each pair forming a generally U-shaped recess, the bottom wall of each recess being disposed in a plane which extends at an angle of about 45° with respect to the base of the set. The recesses formed by the respective pairs of tines provide in this manner two generally V-shaped permanently available seats for the handle portion of the hand telephone, one seat for receiving the handle portion when the set is used on a horizontal surface and the other seat for receiving the handle portion when the set is mounted on a vertical surface. A switch hook plunger extends through the wall of the seats which is respectively common to both seats, namely, through the bottom wall of said U-shaped recess formed by the respective pairs of tines.

The new cradle structure places the hand telephone in a more favorable position for handling and provides for improved actuation of the switch hook plungers. The positioning of the cradle structure near one end of the cover of the telephone set provides for a more favorable distribution and mounting of the various component parts such as the ringer, the induction coil, the capacitor, the switch contacts and the terminals, and also permits placement of the dial in a more favorable position and at an improved angle for operation by the subscriber whether the telephone set is mounted on a horizontal surface such as formed by a desk or on a vertical surface such as formed by a wall.

Another object is to provide a telephone set having a molded cover forming a cradle structure as noted above and providing an opening extending between the pairs of tines underneath thereof, an interiorly disposed closure member for closing said opening to form the usual hand hole or recess for manipulating the set, and a bracket having the dual purpose of securing the closure member in position and of forming stops for retaining the switch hook plungers in their guide bores formed in the cradle seats.

The provision of the closure member simplifies the molding of the cover, requiring in the molding merely an opening at the place where the hand hole is to be formed; and the provision of the dual purpose bracket simplifies assembly of the switch hook plungers with the cover.

Still another object is to provide a base carrying all

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previously mentioned component parts, comprising means for pivotally removably mounting thereon the dial assembly, and simplified means on the base for coaction with retainer means in the cover, for removably securing the latter on the base.

The foregoing objects and additional objects and features of the invention will appear from the detailed description of an embodiment thereof which will presently be rendered with reference to the accompanying drawings.

In these drawings,

Fig. 1 shows the new telephone set as it would appear when mounted on a horizontal surface such as formed by a desk, with the cover in simplified sectional view as seen approximately along line 1—1 of Fig. 3, and with one portion of the cradle structure forming the far pair of tines in part sectional view taken approximately along the line 1a in Fig. 3;

Fig. 2 is an elevational side view of the telephone set as it would appear when mounted on a vertical surface such as formed by a wall, with one portion of the cradle structure forming the near pair of tines in part sectional view; and

Fig. 3 shows the cover removed from the base and looking inside thereof to illustrate the dual purpose bracket which holds the closure member for the hand hole and forms stops for retaining the switch hook plungers in assembly with the cover.

Referring now to the drawings, there is provided a base generally indicated in Fig. 1 by numeral 11; a cover generally indicated by numeral 12 forming the integral cradle structure having the far pair of tines 13 visible in Fig. 1, and the near pair of tines 14 visible in Fig. 2.

On the base 11 are mounted all component parts including the ringer 15; the capacitor 16; the induction coil 17; the bracket 18 carrying the switch hook 19 pivotally mounted thereon at 20; the contact spring assembly 21; and also the terminal plates 22 and 23. The wiring has been omitted to avoid obscuring the drawing. The dial assembly 24 is carried on a bracket 25 which is pivotally mounted in the base at 26. An arm 27 of the dial bracket 25 is in stop engagement with the top portion 28 of the mounting bracket 18. This feature is more particularly described in U. S. Patent No. 2,186,078 to A. C. Reid. This arrangement permits a convenient means of access to the dial assembly 24 for reversing the dial for either desk use or wall mounting. The dial 24 is disposed in a hole 29 (see also Fig. 3) formed in the upwardly and rearwardly sloping front wall 40 of the cover. The dial assembly includes a molding having a rim 30, an upstanding wall 31, the dial face and the finger disk 32, and the finger stop 33. A rubber ring or tubing 34 is provided to cushion the marginal engagement of the dial molding with the inside of the marginal portion of the cover adjacent the hole 29. The base 11 is provided with a peripheral upstanding wall 35 which fits into the large opening formed by the lower front and rear portions 36 and 37 and by the side walls 38 and 39 of the cover 12.

From the front wall 36 of the cover extends the upwardly and rearwardly sloping wall 40 in which is formed the hole for receiving the dial assembly 24. The sloping wall 40 terminates in a wall portion 41 which extends rearwardly between the two pairs of tines 13 and 14 in a plane which substantially parallels the plane of the base. The far pair of tines 13 (visible in Fig. 1) comprises the tine prongs 42 and 43, and the near pair of tines 14 (visible in Fig. 2) comprises the tine prongs 44 and 45. The respective pairs of tines form generally U-shaped recesses having the bottom walls 46 and 47, respectively, which are disposed in planes extending at an angle of about 45° with respect to the plane of the base plate 11. The corner of the U-shaped recesses are well rounded,

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These recesses provide in this manner two pairs of generally V-shaped seat portions forming two seats, one for supporting the handle portion 48 of the hand telephone when the set is disposed on a horizontal surface, e. g., on a desk, as is assumed in Fig. 1, and another for supporting the handle portion when the set is disposed on a vertical surface, e. g., on a wall, as is assumed in Fig. 2. The angular extending bottom wall 46 is common to the seat portions formed by the tines 42 and 43 and the corresponding angularly extending bottom wall 47 is common to the seat portions formed by the tines 44 and 45.

In the common walls 46 and 47 of the respective seat portions are formed holes or guide bores for receiving the respectively associated plungers 50 and 51. Each plunger is provided with a collar at its inner end as shown.

The rear wall 37 of the cover extends upwardly and arcuately forwardly as shown in Fig. 1 at 52 and terminates at the inner end 53 at a point below the rearward end 54 of the rearwardly extending front wall portion 41 thus forming an opening therewith.

A traylike closure member 55 is provided which is seated at one end thereof in abutment with the inner end 53 formed by the rear wall 52 with its inner end wall and its side walls abutting ribs extending downwardly from the rearwardly extending front wall portion 41.

This closure member 55 is secured in position by a generally U-shaped bracket member having the base 56 and the rearwardly extending arms 57 and 58. As shown particularly in Fig. 3, the arms 57 and 58 are respectively provided with ears 59 and 60 which are mounted on the inside of the cover by screws 61 and 62. The rearwardly angularly extending portions of the arms 57 and 58 of the bracket terminate at points disposed underneath the plungers 50 and 51.

The bracket 56—57—58 thus provides means for mounting the closure member 55 to form the hand hole and in addition thereto means for securing the plungers 50 and 51 in their respective guide bores in the cradle walls 46 and 47 which are respectively common to the two seat portions formed by each of the respective pairs of tines 42/43 and 44/45.

The switch hook lever 19 is normally spring biased in counterclockwise direction, as seen in Fig. 1, and the free ends of its two arms 80 are thus held in pressure engagement with the corresponding plungers 50 and 51, respectively.

The weight of the hand telephone acts on the plungers 50 and 51 against the pressure of the spring bias exerted by the switch hook lever 19, holding them in the position shown in Figs. 1 and 2, so long as the hand telephone is in the respective "on" position. Removal of the hand telephone effects angular counterclockwise displacement of the switch hook lever 19, thereby effecting actuation of the contact springs in the contact set 21 for well known switching purposes and moving the plungers outwardly so that they will project from their associated cradle walls.

The cover is provided with bosses 65 and 66, integral therewith, on the inside of the front wall 36 thereof, and with a similar integral boss 67 on the inside of the rear wall 37. The bosses 65 and 66 carry metallic extensions 68 and 69, respectively. These extensions are slotted. The boss 67 carries a similar metallic member 70 which carries a screw 71.

The base 11 is provided with punched out fingers 72 and with a recess formed in the rear wall 37. The base is joined with the cover after all in part previously mentioned components of the set, including the dial assembly, are mounted thereon, by slipping the fingers 72 into the slots in the members 68 and 69, extending from the bosses 65 and 66, thus joining the front of the base with the front wall 36 of the cover and thereafter moving the rear portion of the cover (rear wall 37) over the rear portion of the base with the recess in the rear rim 35 of the base around the screw 71. This screw is thereupon tightened to secure the metallic member 70 extending from the boss

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67 of the cover in firm engagement with the rear rim of the base.

Numerals 75, 76 indicate rubber members suitably secured at the corners of the base to provide feet for disposing the telephone set in engagement with the surface of a desk or with a wall respectively.

What is believed to be new and desired to have protected by Letters Patent is defined in the appended claims.

I claim:

1. A telephone set comprising a base, a cover on said base forming a rearwardly and upwardly directed front wall merging into a rearwardly extending intermediate wall which extends substantially in parallel with said base, a cradle comprising spaced U-shaped tines and extending from said intermediate wall, switch hook plungers operatively supported in the base of each of said U-shaped tines, a rearwardly and downwardly directed rear wall spaced from said intermediate wall and forming a rearwardly facing opening therewith, a cover for said opening, and retainer means for operatively supporting said switch hook plunger and for securing said cover to form a hand hole for manipulating the set.

2. The telephone set defined in claim 1, wherein said switch hook plungers are movably disposed in guide bores formed in the base of each of said U-shaped tines of said cradle, and said retainer means comprising rearwardly extending arms for securing said plungers within their respective guide bores.

3. A telephone set for desk or wall mounting comprising, a base, a cover thereon forming a cradle, a hand telephone having a handle portion, said cradle providing two permanently available seats for supporting said handle, said cover formed with a rearwardly and upwardly sloping front wall merging into a rearwardly extending intermediate top wall portion which extends substantially in parallel with said base, said cradle comprising a pair of tines disposed on each side of said intermediate top wall portion near the rear of said cover at the top thereof and integral therewith, a bottom wall formed in said cradle connecting each pair of tines and extending at an angle of about 45° relative to the general plane of the base, said bottom wall forming with each pair of tines a generally U-shaped recess, one of said tines of each pair of tines forming with said bottom wall a generally V-shaped seat portion for supporting said handle when the set is mounted on a desk, and the other of said tines of each pair of tines forming with said bottom wall a generally V-shaped seat portion for supporting said handle when the set is mounted on a wall, and a switch hook plunger disposed movably in a guide bore formed in said bottom wall and which is common to both seat portions.

4. The telephone set for desk or wall mounting defined in claim 3, comprising means operatively supported from said intermediate top wall portion for retaining said plungers in their guide bores.

5. The telephone set for desk or wall mounting defined in claim 3, wherein the handle of said hand telephone comprises diverging walls extending generally in the manner of the legs of a V for seating disposal within either of said generally V-shaped seat portions.

6. The telephone set for desk or wall mounting defined in claim 3, wherein the handle of said hand telephone comprising diverging walls extending generally in the manner of the legs of a V for seating disposal within either of said generally V-shaped seat portions, one of said diverging walls of said handle co-acting with said plunger when said set is mounted on a desk and the other one of said diverging walls co-acting with said plunger when said set is mounted on a wall.

7. The telephone set for desk or wall mounting defined in claim 4 wherein said means for retaining said plungers is a generally U-shaped bracket supported within said cover and underneath said intermediate wall portion thereof, the legs of said bracket extending rearwardly

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to hold said plungers within their respective guide bores.

8. A telephone set for desk or wall mounting comprising a base, a hand telephone including a handle provided with diverging walls, a cover operatively mounted on said base, a cradle formed on said cover and including two operatively permanently available seats for supporting the handle of said hand telephone incident to either use of said set, each of said seats of generally V-shaped configuration and having both seats with one wall in common, a guide bore in each of said common walls, and a switch hook plunger movably disposed in each of said guide bores for cooperation with one of said diverging walls of said handle when said handle is in supporting engagement with either one of said seats.

9. The telephone set defined in claim 8 comprising, U-shaped retainer means affixed to the cover for retaining said switch hook plunger within its guide bore in said cradle.

10. In a telephone set for desk or wall mounting, a base, a cover on said base forming a cradle, a hand telephone having a handle portion, said cradle providing two permanently available seats for supporting said handle, said seats formed in said cover by two pair of upstanding longitudinally extending tines, each pair of said tines having a bottom wall connecting said tines and extending

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at an angle of about 45° with said base, one tine of each pair of tines forming with said bottom wall a generally V-shaped seat portion for supporting said handle portion when the set is supported on a desk, the other tine of each pair of tines forming with said bottom wall a generally V-shaped seat portion for supporting said handle portion when the set is supported on a wall, said wall tine extending a greater distance from said base than said desk tine, said handle formed with diverging walls extending generally in the form of a V for seating within either of said V-shaped seat portions, and a switch hook plunger disposed movably in said bottom wall for engagement by said handle portion in either wall or desk supporting position of said set.

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