

March 24, 1942.

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2,277,296

HAND TELEPHONE MOUNTING

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2 Sheets-Sheet 1

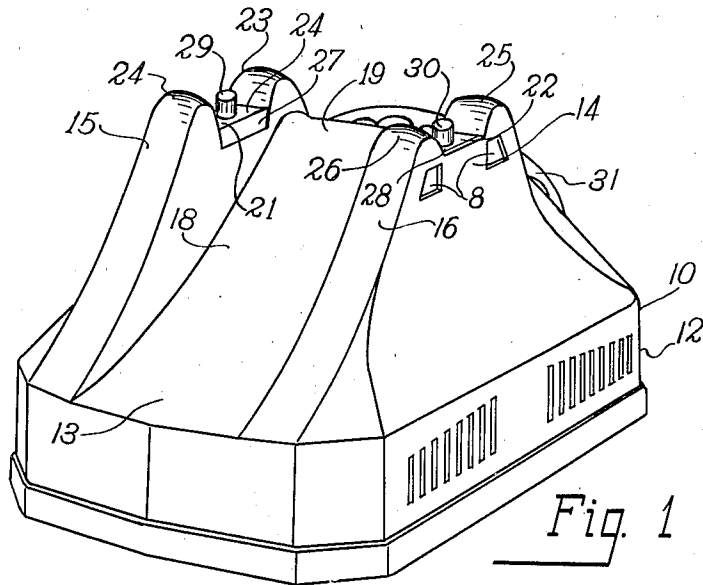


Fig. 1

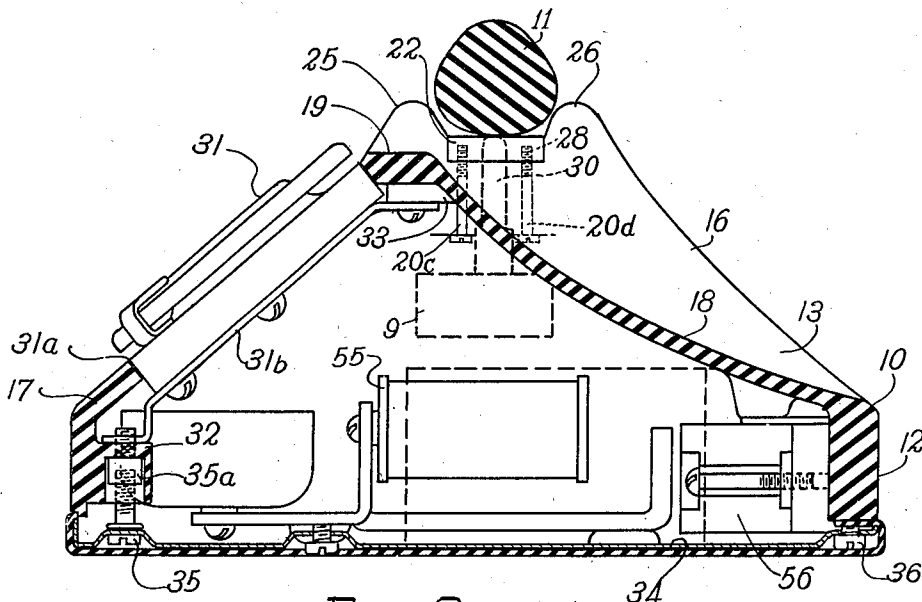


Fig. 2

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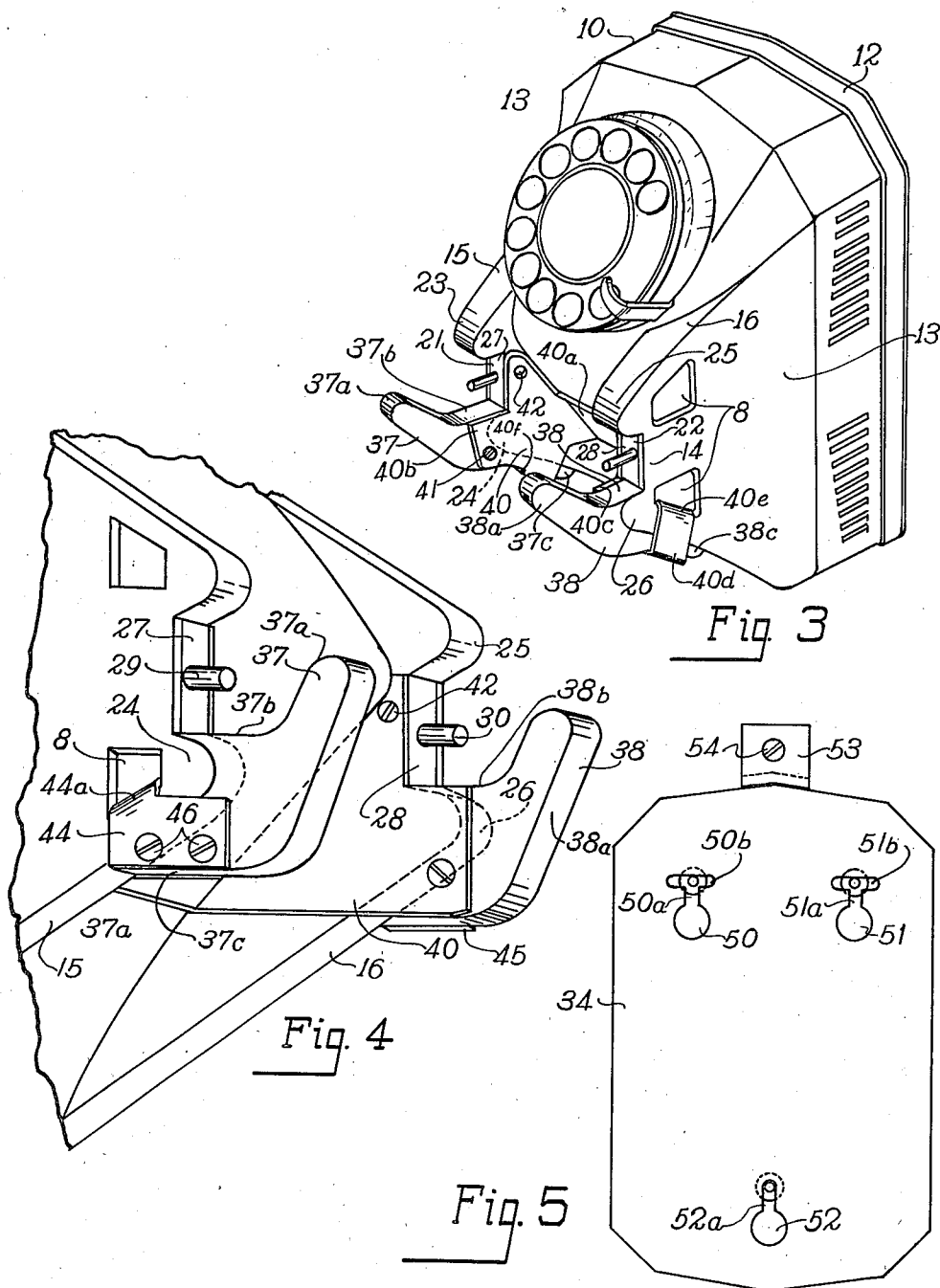
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UNITED STATES PATENT OFFICE

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HAND TELEPHONE MOUNTING

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6 Claims. (Cl. 179—146)

The present invention relates to mountings for telephones and more particularly to desk mountings for hand telephones. A mounting of this type conventionally comprises a supporting base, a pedestal and a cradle structure carried by the pedestal, which structure is provided with a cradle switch and is adapted to support a hand telephone or handset of the well-known monophone type. Various arrangements have been proposed in the past for adapting a mounting of this type for support upon a vertical surface, but all such arrangements require mechanical or structural alteration of the mounting parts in order to adapt the cradle structure for the support of the hand telephone when the mounting is supported upon both horizontal and vertical surfaces.

It is an object of the present invention, therefore, to provide a hand telephone mounting of the character described, which is structurally arranged for support upon a horizontal surface, such, for example, as a desk top, and may be adapted for support upon a vertical surface, such, for example, as a wall, without any modification or alteration of the parts of the mounting.

It is another object of the invention to provide a hand telephone mounting of the character described, which embodies an improved arrangement of simple and rugged construction for adapting the mounting for the support of the hand telephone regardless of whether the mounting is supported upon a horizontal or vertical surface.

It is a further object of the invention to provide an improved wall adapter attachment for a hand telephone mounting of the character described, which may be applied to a hand telephone mounting of standard construction without in any way altering the parts of the mounting.

It is a still further object of the invention to provide an improved and exceedingly simple arrangement for securing an adapter attachment of the character described to the pedestal portion of a hand telephone mounting of standard construction.

In the illustrated embodiment of the invention there is provided a hand telephone mounting, which comprises a base, a pedestal, a cradle structure carried by the pedestal and comprising tines defining a first cradle for supporting the hand telephone when the mounting is supported upon a substantially horizontal surface. The cradle structure is provided with finger receiving recesses adjacent opposite tines thereof,

these recesses being utilized to facilitate lifting and body movement of the mounting. A pair of tines, namely, those disposed rearwardly of the mounting, are provided with non-integral extensions, which are arranged to define a second cradle for supporting the hand telephone when the mounting is supported upon a substantially vertical surface. These extensions are secured to the two rear tines of the mounting through the provision of means coacting with the finger receiving recesses of the cradle structure. Switch operating elements in the form of plungers extending within the base or pedestal structure are provided, these elements including portions disposed to be controlled in accordance with the removal of the hand telephone from either of the two cradles, and the replacement of the hand telephone upon either of the two cradles.

The novel features believed to be characteristic of the invention are set forth with particularity in the appended claims. The invention, both as to its organization and method of operation, together with further objects and advantages thereof will best be understood by reference to the specification taken in connection with the accompanying drawings in which Figure 1 is a perspective view of a hand telephone mounting to which the invention may be applied; Fig. 2 is a side sectional view of the mounting illustrated in Fig. 1; Fig. 3 is a perspective view of the mounting shown in Figs. 1 and 2 when equipped in accordance with the present invention; Fig. 4 is a fragmentary detail view of a modified arrangement of the invention; and Fig. 5 illustrates an improved arrangement, whereby the base of the hand telephone mounting may be secured to a wall or the like.

Referring now more particularly to the drawings, there is shown a desk mounting or support 10 for a hand telephone or handset 11 of the well-known monophone type. Preferably, the hand telephone 11 is of the improved form disclosed and claimed in United States Letters Patent No. 2,205,906, granted June 25, 1940, Herbert F. Obergefell. Briefly described, the mounting 10 comprises a supporting base 12, a pedestal 13 and a cradle 14, which includes two spaced apart and upwardly extending cradle members 15 and 16. The pedestal 13 is provided with front and rear upwardly and inwardly extending walls 17 and 18, converging slightly forwardly of the cradle 14, a top wall 19 extending between the front and rear walls 17 and 18, and upwardly extending side walls formed by the cradle members

15 and 16. The top and rear walls 19 and 18, respectively, of the pedestal 13, and the cradle members 15 and 16 are so constructed and arranged that a continuously substantially channel shaped recess is provided in the top and rear of the pedestal 13. Aligned cradle seats 21 and 22 are provided in the cradle members 15 and 16, respectively, the cradle seat 21 provided in the cradle member 15 being disposed between spaced apart and upwardly extending front and rear tines 23 and 24, respectively; and the cradle seat 22 being disposed between spaced apart and upwardly extending front and rear tines 25 and 26, respectively. For the purpose of easily lifting the mounting 10 with the hand telephone 11 supported upon the cradle thereof, each of the cradle members 15 and 16 is provided with two recesses 8 in the outer side surfaces thereof. These four recesses are respectively disposed adjacent the bases of the four tines 23, 24, 25 and 26. The cradle seats 21 and 22 provided in the cradle members 15 and 16 have recesses formed therein, into which two metal inserts 27 and 28 are securely positioned by means of assembly screws 29a, 29b, etc. These metal inserts are provided with openings therethrough, through which the two cradle switch operating plungers 29 and 30, respectively, extend. It will be understood that these plungers are the switch operating elements for the diagrammatically illustrated cradle switch 9 which is mounted within the base 12. This cradle switch may be of any desired commercial construction, although, preferably, is of the form disclosed in copending application Serial No. 220,735, filed July 22, 1938, Herbert F. Obergfell. The mounting 10 is also provided with a calling device in the form of a dial controlled impulse transmitter 31, which, in the normal arrangement of the mounting, extends through an opening 31a provided in the front wall 17 of the pedestal and is secured to a bracket 31b extending between two mounting projections 32 and 33 of the mounting structure, in the manner disclosed in the above-mentioned copending application. When this mounting arrangement is used, the top of the body portion of the calling device 31 is substantially flush with the top surface of the front wall 17, whereby the dial of the device is disposed at the proper angle for easy manipulation thereof when the mounting is supported upon a substantially horizontal surface.

The operating elements of the instrument, aside from the handset and the above-mentioned calling device, are disposed within the base and pedestal portion of the mounting. Preferably, these elements, which include a ringer 55, an induction coil 56, the cradle switch mechanism 9, and one or more condensers, are mounted and arranged in the manner disclosed in the above-mentioned Obergfell application. As thus arranged, certain of the elements, principally the ringer 55, are supported upon a base plate 34 which is secured to the base portion of the mounting by means of assembly screws 35 and 36.

In the normal use of the instrument, the mounting is supported upon a horizontal surface, such, for example, as the top of a desk or table. With the mounting in this position, the cradle switch plungers 29 and 30 extend upwardly and are controlled in accordance with the removal of the handset 11 from the cradle seats 21 and 22, and the replacement of the handset upon these cradle seats in a manner well understood in the art. More specifically, 75

the plungers 29 and 30 are spring biased to assume the normal or closed-circuit positions illustrated in Fig. 1 of the drawings when the handle of the handset is removed from the cradle, and are moved downwardly to their off-normal or open-circuited operating position by the weight of the handset when the handset is replaced upon the cradle seats.

In order to adapt the mounting, as described above, for use when supported upon a substantially vertical surface, such, for example, as a wall, it is necessary to make provisions for supporting the handset in operative relationship with the cradle switch plungers 29 and 30 when the handset is not in use. To this end, and in accordance with the present invention, an auxiliary cradle structure is provided, which comprises two detachable extensions 37 and 38. These extensions may be of metal or moulded Bakelite material and are respectively mounted above the rearwardly disposed cradle structure tines 24 and 26. The extensions 37 and 38 respectively comprise tines 37a and 38a, the inner surfaces of which terminate in cradle seat surfaces 37b and 38b disposed substantially at right angles to the cradle seat surfaces between the tines of the cradle structure 14. The extensions 37 and 38 also provided with downwardly projecting base portions 37c and 38c, which are arranged to seat upon the edge surfaces of the side members 15 and 16, respectively.

For the purpose of mounting the extensions 37 and 38 upon the tines 24 and 26, either of the two arrangements illustrated in Figs. 3 and 4 of the drawings may be employed. In the arrangement illustrated in Fig. 3 of the drawings, a mounting structure is provided, which comprises a channel shaped member 40 of resilient metal stock having a transversely extending portion 40a which is shaped to seat within the channel 18 formed between the side members 15 and 16 of the pedestal 13. This transverse portion terminates in two upwardly extending side portions 40b and 40c, which are cut out to conform to the cradle seat surfaces 21, 37b, 22 and 38b. Each of the two side portions is provided with a resilient tongue which extends around the base portion of the associated extension 37 or 38, and terminates in a part or finger extending within one of the rearwardly disposed finger receiving recesses 8 provided in the outer walls of the side members 15 and 16. Thus, the side portion 40c is provided with a resilient tongue 40d, which is wrapped around the base portion 38c of the extension 38 and is provided with a flat fingerlike portion 40e which extends within and engages the rearwardly disposed edge of the finger receiving recess 8 provided at the base of the tine 26. The side portion 40b of the member 40 is similarly equipped with a resilient tongue 40f, which is wrapped around the base portion 37c of the extension 37 and is provided with a fingerlike part extending within and engaging the rearwardly disposed edge of the rearwardly disposed finger receiving recess provided at the base of the tine 24. For the purpose of completing the assembly, thereby rigidly to mount the extensions 37 and 38 upon the tines 24 and 26, respectively, assembly screws 41, 42, etc., may be provided which extend through the side portions 40b and 40c of the assembly member 40 and are threaded into the extensions 37 and 38 and into the side members 15 and 16 of the cradle structure.

In mounting the auxiliary cradle structure

upon the tines 24 and 26, the extensions 37 and 38 are first disposed within the side members 40b and 40c of the assembly member 40 and are secured to these side members by means of the screws 41. The resilient tongues of the side members 40b and 40c are next spread apart so that the recessed bases of the extensions 37 and 38 may be seated upon the tines 24 and 26. After the auxiliary cradle structure is thus positioned, the tongues are released permitting the fingerlike ends thereof to wedge against the rearwardly disposed edges of the finger receiving recesses provided at the bases of the tines 24 and 26. The camming action between the slanting inner surfaces of these tongues and the engaged slanting edges of the finger receiving recesses serves rigidly to clamp the base portions 37c and 38c of the members 37 and 38 to the edges of the side members 15 and 16, respectively. In order to complete the assembly, the screws 42 are threaded into the side members 15 and 16 through the openings in the side portions 40b and 40c of the member 40.

The mounting arrangement illustrated in Fig. 4 of the drawings is substantially similar to that just described, but in this arrangement the assembly member 40 is not equipped with tongues which overlap the base portions of the extensions 37 and 38, separate bracket pieces 44 and 45 being provided for completing the assembly. The bracket piece 44 is secured to the extension 37 by means of assembly screws 46 and is provided with a fingerlike portion 44a which extends into the finger receiving recess 8 provided at the base of the tine 24 and engages the rearwardly disposed edge of this recess. The camming action caused by the engagement of the slanting inner surface of the finger 44a with the slanting rearwardly disposed edge of the recess 8 provided at the base of the tine 24 which occurs during assembly serves rigidly to clamp the base portion 37c of the extension 37 to the rear edge of the side member 15. In a similar manner, the bracket 45 is secured to the extension 37 by means of assembly screws, not shown, and includes a fingerlike part extending within and engaging the rearwardly disposed edge of the finger receiving recess disposed at the base of the tine 26.

For the purpose of changing the position of the calling device 31, so that the front edge thereof is displaced outwardly from the base of the mounting 10, the improved bracket structure illustrated and described in copending application Serial No. K-235, Vaughan, may be utilized. In this regard it is pointed out that in order to adapt the calling device 31 for use when the mounting 10 is supported upon a vertical surface, the device is rotated through substantially 180 degrees, thus positioning the finger stop at a point along the lower edge of the dial.

In order to mount the mounting 10 upon a wall or other vertical surface, the arrangement illustrated in Fig. 5 of the drawings may be used. In this arrangement the base plate 34 of the mounting is provided with three openings 50, 51 and 52 of the proper size to receive the heads of the mounting screws which it is desired to use. Three channels 50a, 51a and 52a extending upwardly from the openings 50, 51 and 52, respectively, are cut in the plate, which channels are of the proper width for accommodating the shanks of the mounting screws. If desired, the two channels 50a and 51a, formed in the upper portion of the base plate, may be connected with transversely extending channels 50b and 51b, res-

spectively, to permit lateral adjustment of the mounting. With the base plate of the mounting 10 arranged in this manner, a template may be used for positioning the mounting screws upon the wall upon which it is desired to mount the mounting 10, the holes of the template being positioned in accordance with the arrangement of the openings 50, 51 and 52 provided in the base plate 34. After the mounting screws are thus positioned, the base plate of the assembled mounting may be hung on the projecting mounting screws with the heads of these screws extending through the openings 50, 51 and 52. After the mounting is thus positioned, the weight of the mounting will force the shanks of the mounting screws through the channels 50a, 51a and 52a. The transversely extending channels 50b and 51b permit a small amount of lateral movement of the upper portion of mounting for the purpose of properly positioning the mounting. After the proper position is obtained, a bracket 53, having an outwardly extending flange conforming in shape to the shape of the upper portion of the handset mounting, may be secured to the wall by means of an assembly screw 54 to prevent the mounting from being removed from its supporting or mounting screws.

It will be understood that after the mounting 10 is supported upon a wall or other vertical surface in the manner explained above, the cradle seat surfaces of the extensions 37 and 38 are utilized for supporting the handset when not in use. It will also be apparent that the downwardly sloping inner surfaces of the extensions 37 and 38 serve to force the handle of the handset into engagement with the cradle switch plungers 29 and 30 when the handset is replaced upon the cradle formed by these extensions. Further, the two cradle switch plungers are released when the handset is removed from this cradle. Thus, the cradle switch plungers are operatively associated with the handle of the handset for the same type of control thereby, regardless of whether the mounting is supported upon a horizontal or a vertical surface.

While there have been described what are at present considered to be the preferred embodiments of the invention, it will be understood that various modifications may be made therein, and it is contemplated to cover in the appended claims all such modifications as fall within the true spirit and scope of the invention.

What is claimed is:

1. A mounting for a hand telephone, comprising a base, a cradle structure carried by said base and comprising tines defining a first cradle for supporting a hand telephone when said mounting is supported upon a substantially horizontal surface, said cradle structure being provided with recesses adjacent opposite tines thereof, a pair of said tines being provided with non-integral extensions arranged to define a second cradle for supporting said hand telephone when said mounting is supported upon a substantially vertical surface, means coacting with said recesses to secure said extensions to said pair of tines, and a switch operating element disposed to be controlled in accordance with the removal of said hand telephone from either of said cradles and the replacement of said hand telephone upon either of said cradles.

2. A mounting for a hand telephone, comprising a base, a cradle structure carried by said base and comprising tines defining a first cradle for supporting a hand telephone when said mount-

ing is supported upon a substantially horizontal surface, said cradle structure being provided with recesses adjacent opposite tines thereof, a pair of said tines being provided with non-integral extensions arranged to define a second cradle for supporting said hand telephone when said mounting is supported upon a substantially vertical surface, clamping means comprising parts coacting with said recesses to secure said extensions to said pair of tines, and a switch operating element disposed to be controlled in accordance with the removal of said hand telephone from either of said cradles and the replacement of said hand telephone upon either of said cradles.

3. A mounting for a hand telephone, comprising a base, a cradle structure carried by said base and comprising tines defining a first cradle for supporting a hand telephone when said mounting is supported upon a substantially horizontal surface, said cradle being provided with finger receiving recesses suitably arranged on the outer sides thereof to facilitate lifting and bodily movement of the mounting and hand telephone, a pair of said tines being provided with non-integral extensions arranged to define a second cradle for supporting said hand telephone when said mounting is supported upon a substantially vertical surface, clamping means comprising parts co-acting with said recesses to secure said extensions to said pair of tines, and a switch operating element disposed to be controlled in accordance with the removal of said hand telephone from either of said cradles and the replacement of said hand telephone upon either of said cradles.

4. A mounting for a hand telephone, comprising a base, a cradle structure carried by said base and comprising tines defining a first cradle for supporting a hand telephone when said mounting is supported upon a substantially horizontal surface, said cradle structure being provided with recesses adjacent opposite tines thereof, a pair of said tines being provided with non-integral extensions arranged to define a second cradle for supporting said hand telephone when said mounting is supported upon a substantially vertical surface, each of said time extensions having a recess provided in the base portion thereof for receiving the associated tine, clamping means comprising parts coacting with said recesses to secure said extensions to said pair of tines, and a switch operating element disposed to be controlled in accordance with the removal of said hand telephone from either of said cradles and the replacement of said hand telephone upon either of said cradles.

5. A mounting for a hand telephone, comprising a pedestal having an upwardly and inwardly extending rear wall and two side walls terminating in tines defining a cradle for supporting a hand telephone when said mounting is supported upon a substantially horizontal surface, said walls being so constructed and arranged that a substantially channel-shaped recess is provided in the rear of said pedestal, said side walls being provided with finger receiving recesses suitably arranged on the outer sides thereof to facilitate lifting and bodily movement of said mounting and hand telephone, a pair of said tines being provided with non-integral extensions arranged to define a second cradle for supporting said hand telephone when said mounting is supported upon a substantially vertical surface, means comprising a channel-shaped member seated in said channel-shaped recess and a pair of finger-like parts coacting with two of said recesses for securing said extensions to said pair of tines, and a switch operating element disposed to be controlled in accordance with the removal of said hand telephone from either of said cradles and the replacement of said hand telephone upon either of said cradles.

6. A mounting for a hand telephone, comprising a pedestal having an upwardly and inwardly extending rear wall and two side walls terminating in tines defining a cradle for supporting a hand telephone when said mounting is supported upon a substantially horizontal surface, said walls being so constructed and arranged that a substantially channel-shaped recess is provided in the rear of said pedestal, said side walls being provided with finger receiving recesses suitably arranged on the outer sides thereof to facilitate lifting and bodily movement of said mounting and hand telephone, a pair of said tines being provided with non-integral extensions arranged to define a second cradle for supporting said hand telephone when said mounting is supported upon a substantially vertical surface, a channel-shaped member seated in said channel-shaped recess and having tongue-like extensions at each end thereof which embrace said pair of tines and include parts coacting with a portion of said recesses to secure said tine extensions to said pedestal walls, and a switch operating element disposed to be controlled in accordance with the removal of said hand telephone from either of said cradles and the replacement of said hand telephone upon either of said cradles.

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