

1,431,925.

The drawing illustrates a mechanical device, possibly a clock or watch movement, with a main assembly and four detailed views.

Fig. 1 shows the main assembly, featuring a large circular component (11) at the top, a vertical shaft (18), and a base (8). Various numbered parts are labeled throughout the drawing.

Fig. 2 is a detailed view of the top section, showing a vertical shaft (18) with a central component (10) and a series of small circular elements (12) arranged in a ring. Other parts labeled include 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Fig. 3 is a detailed view of the middle section, showing a vertical shaft (18) with a central component (10) and a series of small circular elements (12) arranged in a ring. Other parts labeled include 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Fig. 4 is a detailed view of the bottom section, showing a vertical shaft (18) with a central component (10) and a series of small circular elements (12) arranged in a ring. Other parts labeled include 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Fig. 5 is a detailed view of the side section, showing a vertical shaft (18) with a central component (10) and a series of small circular elements (12) arranged in a ring. Other parts labeled include 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Fig. 6 is a detailed view of the front section, showing a vertical shaft (18) with a central component (10) and a series of small circular elements (12) arranged in a ring. Other parts labeled include 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

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UNITED STATES PATENT OFFICE.

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DESK STAND.

Application filed May 27, 1918. Serial No. 236,733.

To all whom it may concern:

Be it known that I, ERNEST A. BOHLMAN, a citizen of the United States of America, residing in Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Desk Stands, of which the following is a specification.

My invention relates to subscribers' telephone instruments and more particularly to instruments of the desk stand type.

The object of my invention is to simplify and cheapen the construction of telephone desk stand sets and to provide a neat, compact and efficient set having the usual necessary devices and, in addition, means for rendering the transmitter of the telephone set inoperative.

One of the features of my invention is the novel means provided for supporting the switch hook and its related parts.

Another feature of my invention is the novel manner in which I make use of the means which holds the transmitter head or support to the supporting tube or standard of the set, for securing the hook switch bracket or supporting member in place.

A still further feature of my invention is the manner in which I make use of the switch hook bracket for supporting the additional means that I provide for rendering the transmitter of the telephone inoperative.

These and other features of my invention will be hereinafter more fully set forth in the ensuing specification and in the appended claims.

One embodiment of my invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a sectional view of a telephone desk stand embodying the improvements;

Fig. 2 is a right end view of a part of Fig. 1 with the tube broken away to more fully show the switch hook bracket;

Fig. 3 is a sectional view taken along line 3—3 of Fig. 2;

Fig. 4 is a sectional view taken along line 4—4 of Fig. 1;

Fig. 5 is a sectional view showing the top of the switch hook bracket taken along line 5—5 of Fig. 1; and

Fig. 6 is a perspective view of the switch hook bracket.

The desk stand comprises a base 2 formed of any suitable material, having a central aperture 3 from which extends a standard

consisting of a tube 4 having at its lower end a threaded ring or nut 5 resting upon the upper edge of the central aperture 3. A cylindrical member 6 is placed on the tube 4 immediately below the upper peripheral portion of the base 2. A mounting plate 7 which supports the hook switch springs 8 and the other mechanism mounted in the base of the telephone (not shown) is provided with a central opening through which the tube 4 extends. A lock nut 9 is then threaded onto the lower portion of the tube to maintain the different parts in the positions shown. At the upper end of the standard, a head 10 is provided, to the upper end of which a transmitter 11 is connected in any desired manner. The head 10 is provided with a dependent circular flange, cylindrical in form, which fits over the upper portion of the tube 4 and is secured thereto by means of a screw 12. A hard rubber tube 18' or a tube formed of bakelite or some other suitable material is slipped over the tube 4 to provide a better appearance. The upper outside peripheral surface of the tube 18' is flush with the lower outside peripheral surface of the dependent flange of the head 10. A slot 13 is cut in the tube 4 through which the arm 16 of the switch hook 14 extends. Likewise, a slot 15 is cut in the dependent flange of the head 10 to permit the arm 16 of the switch hook to extend therethrough.

A switch hook bracket or switch hook supporting member 17 is provided, which is saddle-shaped, and is formed by punching the same from a sheet of metal and then forming it into the desired shape, as shown most clearly in Fig. 6. The bracket 17 is provided with a pair of downwardly projecting members 18 and 19 and with a U-shaped hooked portion 20 which U shaped form of the portion 20 gives a spring effect. The upper portion of the bracket which extends to the left is provided with a pair of shoulders 21 and with a second pair of shoulders 22. When the bracket 17 is placed in position, the shoulder 21 rests in the slot 15 cut in the cylindrical flange of the head piece 10, and the shoulder 22 rests in the slot 13 cut in the tube 4. The portion 20 is provided with an outwardly extending raised portion 23 which fits into a cylindrical orifice 24 cut in the tube 4 to help hold the bracket in place. The U shaped portion 20 when in its mounted position in the tube 4

is pressed inwardly slightly, thus producing a spring effect, whereby the outwardly extending portion 23 is pressed into the orifice 24 by said U shaped portion 20. The portion 20 of the bracket or saddle piece 17 is also provided with a tapped orifice 25 for receiving the screw 12 which passes through openings in the cylindrical flange of the head piece 10 and of the tube 4. The outer peripheral surface of the portion 20 is rounded to fit the inner peripheral surface of the tube 4. The withdrawal of the screw 12 will not cause the displacement of the saddle piece 17, since the spring effect of the member 17 is sufficient to hold the shoulder portion 22 and portion 23 in engagement with the mounting member. Thus it will be seen that the screw 12 is permitted to be withdrawn to permit the removal of the transmitter without affecting the saddle piece 17 and that the saddle member 17 does not solely depend upon the screw 12 in being retained in its mounted position.

From the foregoing, it is at once apparent that the screw 12 is used not only for holding the saddle piece 17 in position but also for holding the head 10 in position. A pair of springs 26 is insulatingly secured to a strip 27 which in turn is secured to the arm 19 of the saddle piece 17 by means of a pair of screws 28. The springs 26 provide means for rendering inoperative the transmitter of the subscriber's set. A circular orifice 29 is cut in the front side of the cylindrical flange of the head piece 10, and a similarly situated orifice 30 is cut in the tube 4. A button of insulating material 31, provided with a flange 32, extends through these orifices and is used for moving one of the contact springs 26 into engagement with the other contact spring 26. The one spring 26 maintains the button 31 in its normal position.

A circular opening is provided in each of the arms 18 and 19 and through these openings a rivet 33 is extended to pivotally support the switch hook. The switch hook which is pivoted upon this bolt or rivet 33 is provided with outwardly extending arms 34 which are formed into a hook upon which the receiver is adapted to be hung when the instrument is not in use. The switch hook also includes an arm 35 which extends downwardly through the standard or tube 4. The arm 35 is rigidly connected to the arm 38 of the switch hook 14 by means of a pair of rivets 36. On account of ease in manufacture, the switch hook 14 is formed of two punched pieces riveted together by means of rivets 37. The downwardly extending arm 38 of the switch hook 14 is practically at right angles to the arm 16 of the switch hook 14 which extends through the slots 13 and 15. The rivet 33 passes through an orifice 39 cut in the switch hook

14 to pivotally support the same. The two punchings which form the switch hook 14 are separated at the lower extremity of the arm 38 of the switch hook to receive the two strips or punchings that form the arm 35 which extends downwardly through the standard or tube, as previously described.

A stop piece 40 is provided in the form of hard felt or some other suitable material and securely held between the two strips that form the arm 35, and is used to limit the movement of the switch hook. The third part of the switch hook comprises the bar 41, also preferably formed from two pieces of punched sheet metal riveted together by means of rivets 42, the upper end of which is pivoted to the lower end of the arm 35 by means of a rivet or bolt 43 and the lower end of which carries a roller 44 formed of insulating material, which roller is suitably formed to receive the curved end of the lower switch hook spring 8. The switch hook springs in any desired number are supported in the hollow of the base 2 and as shown are insulatingly connected to the circular mounting piece 7 by means of screws 45. When the receiver is placed upon the switch hook, the arm 38 thereof is turned to the right about the pivot 33 which causes the toggle mechanism to straighten out, thereby separating the contact springs 8 and changing the circuits controlled thereby from talking condition to normal condition.

When it is desired to operate the contact spring 26 to render the transmitter inoperative, it is only necessary for the subscriber to press inwardly on button 31, thereby moving the one contact spring 26 into engagement with the other contact spring 26. It will be noted that I have placed the button 31 in a position where it can be readily operated by the thumb of the subscriber as he holds a desk stand in his hand. I have not shown the circuits or the wiring of the desk stand to which my improvements are applied as they form no part of the invention and may conform to the particular instrument and circuits with which the invention may be employed.

From the foregoing, it is thus apparent that I have provided a switch mechanism which overcomes undesirable features and which is positive and efficient in operation, and is comparatively simple and cheap to manufacture. It is also evident that various details may depart from those specifically described. Hence, I do not desire to be limited in all respects to the exact structure shown, but aim to cover all modifications that come within the spirit of the appended claims.

It is also apparent from the foregoing that the bracket 17 which can be manufactured cheaply by being punched and formed

from sheet metal is not only used to support the switch hook and to receive the screw which holds the head 10 in position on the tube 4, but also supports the springs 26.

5 Having thus described my invention in one practical form, what I claim and desire to secure by Letters Patent is:

1. A telephone desk stand including a cylindrical tube having an orifice, a transmitter support, means for securing said transmitter support to said cylindrical tube, a switch hook lever, and a member for pivotally supporting said switch hook lever extending into the orifice in said cylindrical tube and adapted to receive the means for securing the transmitter support to the said cylindrical tube.

2. A telephone desk stand including a standard provided with an orifice, a transmitter support attached to said standard, a switch hook lever, a member pivotally supporting said switch hook lever, said member extending into the orifice in said standard, and means for securing the transmitter support to the standard and for securing the switch hook supporting member to the said standard.

3. A telephone desk stand provided with a cylindrical tube having an orifice, a transmitter support for attachment to said tube, a switch hook lever supporting member for pivotally supporting the said switch hook extending into the orifice in said cylindrical tube, means for securing the switch hook supporting member and the transmitter support to said cylindrical tube, and a contact spring attached to said switch hook supporting member adapted to be operated by the subscriber.

4. A telephone device of the character described, including a cylindrical tube having an orifice, a switch hook supporting member extending into said orifice, and means for securing said switch hook supporting member to said tube.

5. A telephone device of the character described, including a cylindrical tube having an orifice, a transmitter support, a switch hook supporting member mounted within said tube and having a part thereof projecting into said orifice, means for securing said transmitter support to said tube, said means also securing the said switch hook supporting member to the said cylindrical tube, and a contact spring supported by said switch hook supporting member.

6. A telephone desk stand including a standard or tube, a switch hook supporting member provided with an extension, an angular switch hook supported by said supporting member, and a pair of contact springs supported by the extension of said switch hook supporting member.

7. A telephone desk stand including a standard or tube, a switch hook supporting

member provided with an extension, an angular switch hook supported by said supporting member, a contact spring secured to the extension of said supporting member, and a contact button protruding through an orifice in said standard for actuating said contact spring.

8. A telephone instrument including a mounting support having an orifice, a switch hook supporting member having a portion thereof extending into said orifice, means for securing the said switch hook supporting member to the said mounting member, a depending member formed integrally with said switch hook supporting member, and a contact spring supported by said depending member.

9. A telephone instrument including a standard, a switch hook supporting member adapted to be secured within said standard, a raised element formed on said member and an orifice cut in said member, a pair of orifices cut in said standard, one of said latter orifices adapted to receive said raised element, and means passing through the other of said latter orifices and the orifice cut in said switch hook supporting member for retaining said switch hook supporting member in position.

10. A telephone instrument of the character described including a supporting standard, a transmitter support provided with a cylindrical flange adapted to fit over said supporting standard, a switch hook supporting member adapted to be mounted within said standard, means for securing said transmitter support and said switch hook support to said standard, and a contact spring supported by said switch hook support.

11. A telephone instrument of the character described including a supporting standard, a transmitter support provided with a cylindrical flange adapted to fit over said supporting standard, a switch hook supporting member adapted to be mounted within said standard, means for securing said transmitter support and said switch hook support to said standard, a contact spring, and a button for operating said contact spring protruding through an orifice in said transmitter support.

12. A telephone instrument of the character described including a supporting standard, a switch hook provided with an arm extending through a slot in said standard, a switch hook supporting member provided with a shoulder adapted to fit into said slot, and a member passing through an orifice in said standard into an orifice in said switch hook supporting member.

13. A telephone instrument of the character described including a standard, a transmitter support provided with a cylindrical flange adapted to fit over said stand-

ard, a slot cut in said standard, a slot cut in the cylindrical flange of said transmitter support, a switch hook supporting member provided with shoulders adapted to fit into said slots, and a screw adapted to extend through an orifice in said standard into an orifice in said switch hook supporting member.

14. A telephone instrument of the character described including a standard, a transmitter support provided with a cylindrical flange adapted to fit over said standard, a slot cut in said standard, a slot cut in the cylindrical flange of said transmitter support, a switch hook supporting member provided with shoulders adapted to fit into said slots, and a screw adapted to extend through an orifice in said transmitter support into an orifice in said switch hook supporting member.

15. A telephone instrument including a mounting support provided with a slot, a switch hook supporting member having an ear adapted to fit into said slot and a shoulder portion abutting against said mounting support, and means for fastening the said switch hook supporting member to said mounting support thereby holding the switch hook supporting member in position.

16. A telephone instrument including a mounting support having an orifice, a switch hook supporting bracket having a lug extending into said orifice, and a portion projecting in juxtaposition to said mounting support, and means extending through the mounting support into the portion of said switch hook supporting member adjacent said mounting support for holding said switch hook supporting member in position.

17. A telephone instrument including a mounting support having orifices, a switch

hook supporting bracket having a lug extending into one of said orifices and a projecting portion extending adjacent said mounting support, and means extending through the mounting support into the portion of said switch hook supporting member adjacent said mounting support for holding said switch hook supporting member in position, and a raised portion for said switch hook supporting member extending into the other of said orifices in said mounting support.

18. A telephone instrument including a mounting support provided with orifices, a switch hook supporting member having means extending into said orifices, and means for fastening said switch hook supporting member to said mounting support.

19. A telephone instrument of the character described, including a mounting support, a switch hook lever, a switch hook supporting member solely attached to said mounting support, a screw member, and means integrally formed on said switch hook supporting member, said screw member and said last means securing said switch-hook supporting member in position in said mounting support.

20. A telephone instrument of the character described including a mounting support, a transmitter support for attachment to said mounting support, a switch hook lever, and switch hook lever supporting means attached to said mounting support by means integrally formed on said switch-hook lever supporting means.

Signed by me at Chicago, in the county of Cook and State of Illinois, this 24th day of May, 1918.

ERNEST A. BOHLMAN.