W. R. ARMOR & L. A. YOUNG.

RECEIVER SUPPORTING ARM.

APPLICATION FILED NOV. 2, 1914.

1,162,012.

Patented Nov. 30, 1915.

2 SHEETS—SHEET 1.

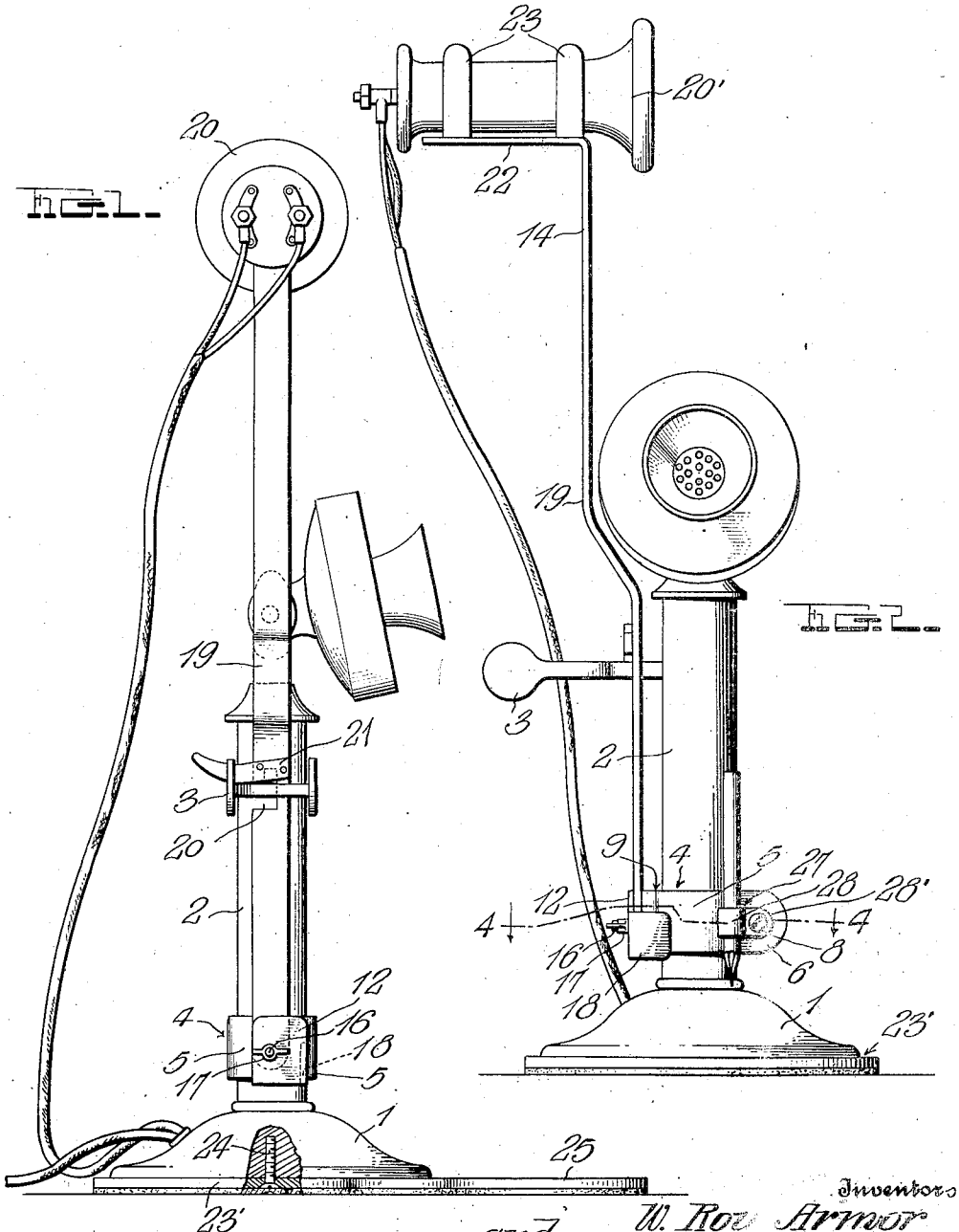

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FIG. 4.

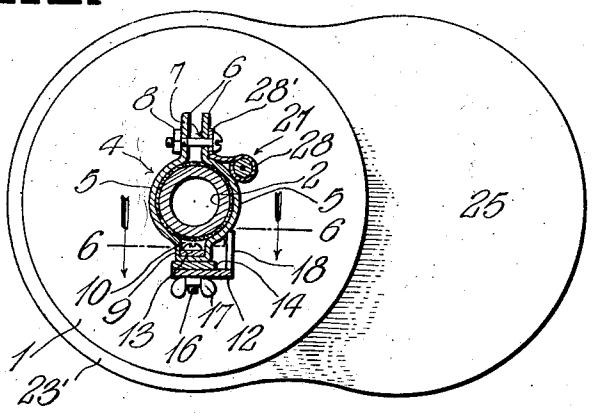

FIG. 6.

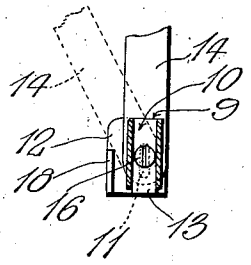

FIG. 3.

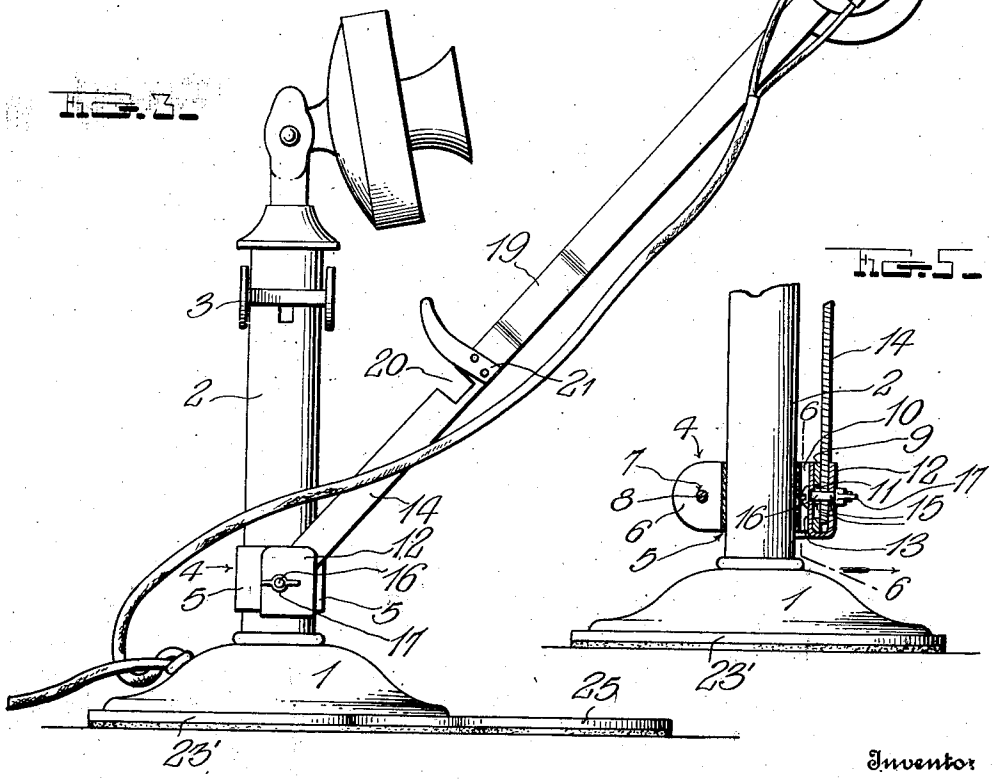

FIG. 5.

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UNITED STATES PATENT OFFICE.

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RECEIVER-SUPPORTING ARM.

1,162,012. Specification of Letters Patent. Patented Nov. 30, 1915.

Application filed November 2, 1914. Serial No. 869,964.

To all whom it may concern:

Be it known that we, WILLIAM ROY ARMOR and LOWELL ALLISON YOUNG, citizens of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Receiver-Supporting Arms; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention generically relates to telephone attachments, but more particularly to that class of the latter, used for supporting telephone receivers, and particularly applicable to desk telephones.

One object of the invention resides in providing a telephone receiver supporter by means of which the receiver may be readily and quickly brought to the proper position at a person's ear, and one which will at the same time automatically coöperate with the switch hook to release the latter and permit of conversation.

Another object of the invention resides in providing a novel means in combination with a clamp to limit the outward movement of the receiver supporter so as to maintain the latter in proper angular relation with respect to the telephone.

A still further object resides in providing an auxiliary base adapted to be attached to the base of the telephone and coöperate with the latter to counteract the overbalancing effect produced by the receiver when the latter is disposed in operative position.

With these and other objects in view, the invention consists of certain novel details of construction and combination and arrangement of parts to be more particularly set forth and claimed.

In the accompanying drawings in which similar reference characters indicate corresponding parts, Figure 1 is a side elevation of our improved receiver supporter illustrating the latter as applied to a standard desk telephone and in vertical position; the base of the telephone being partly in section illustrating the disposition of the screw for connecting our auxiliary base to that of the telephone; Fig. 2 is a front elevation of the receiver supporter showing the latter attached to a standard desk telephone having our auxiliary base attached; the supporting arm being in a vertical or inoperative position; Fig. 3 is a side elevation showing the receiver supporting arm disposed in operative or angular relation to the telephone and also our auxiliary base attached and having its extension disposed in angular relation with respect to said telephone. Fig. 4 is a transverse horizontal section taken on the line 4—4 of Fig. 2; Fig. 5 is a longitudinal vertical section of our improved clamp illustrating the latter in connection with the lower half of a telephone having our auxiliary base attached also showing in section the receiver supporting arm pivoted in the clamp; Fig. 6 is a transverse vertical section on the line 6—6 of Fig. 4 showing a fragment of the pivotally connected arm in elevation and also showing in dotted outlines the angular position of said arm.

Referring more particularly to the drawings, 1 indicates the base of an ordinary desk telephone having the usual pedestal 2 and movable switch hook 3. The foregoing forms no part of this invention but is simply recited to illustrate the form best adapted to receive our improved receiver supporter. Disposed upon the pedestal 2 is a clamp 4, having the arcuate-shaped jaws 5 provided with the usual lips 6, which latter have therein registering openings 7 for reception of a suitable adjusting screw and nut 8, for maintaining the clamp in its adjusted position. Of course, it is to be understood that a suitable protecting medium such as felt or the like is to be interposed between the inner surface of the clamp and pedestal 2, so as to protect the latter and prevent scratching on the part of said clamp. The rear or intermediate portion 9 of the clamp 4 is formed perfectly flat and slightly offset from the jaws 5 so as to provide a channel 10, the purpose of which will be hereinafter referred to. Also formed in the back or intermediate portion 9 of the clamp is a longitudinally extending slot 11 for receiving an adjusting screw, that supports a washer in the manner about to be described.

Secured to the clamp 4, contiguous to the intermediate portion thereof is a washer 12 carrying an integrally formed tongue 13 which projects laterally and then upwardly in a plane parallel to that of said washer. This tongue 13 has a width corresponding to

that of channel 10, into which it is adapted to project when the washer is in its proper position.

From the structure just outlined, it will become apparent that when the tongue 13 is properly positioned in the channel 10, the washer 12 will be disposed in offset relation to the intermediate portion 9 of the jaws and also in a plane parallel thereto, and forms a pocket for the lower end of the arm 14. The washer 12 and its tongue 13 are both provided with registering openings 15 which, when the washer is in position, coincides with the longitudinal slot 11 formed in the intermediate portion 9 of clamp 4. To pivotally connect the lower extremity of the arm 14 within the pocket formed by washer 12, its lower extremity is provided with an opening to receive the adjusting screw 16, passing through the openings formed in the tongue 13, intermediate portion 9 of clamp 4, and washer 12. The free end of the screw 16 is threaded and provided with a winged nut 17 for adjusting purposes as will be readily understood without further description. By pivotally connecting the arm 14 in this manner it will be seen that the latter may not only have motion to and from the telephone, but also owing to the longitudinally extending slot formed in the intermediate portion 9 of the clamp 4, it can be adjusted vertically, in other words, it will be seen that the washer and its tongue can be moved vertically the length of said slot.

As it is necessary to limit the outward movement of the arm 9 and maintain the latter in proper angular relation, with respect to the telephone, we provide washer 13 with a laterally projecting plate 18, whose upper edge coöperates with the outer edge of arm 14 and maintains the latter in an annular position as clearly shown in Figs. 3 and 6.

Arm 14 which, when disposed in a plane parallel that of the telephone pedestal 2, has its upper end projecting considerably above the transmitter and its intermediate portion offset as at 19, so that the latter will readily clear the annular portion of the transmitter when brought to vertical position. Formed in the arm 14, immediately below the offset portion 19 is a notch 20, which when the arm is brought to a vertical position, engages the shank of the telephone switch hook 3 and retains the latter in its inoperative position. It has been found, however, that sometimes the arm 14 when hurriedly brought to a vertical position, does not properly engage the switch hook shank, and we therefore provide a guide plate 21 riveted immediately above the upper edge of notch 20, the lower edge of said plate being arcuate shaped and forming a continuation of the upper edge of said notch.

To maintain the receiver 20′ in proper horizontal position, the arm 14 has its upper extremity provided with an extension 22, projecting in a plane at right angles to that of said arm. Pivotally secured in spaced relation upon the upper surface of extension 22 are a pair of resilient clips 23, which, when the receiver is disposed upon the extension 22 encircles the tubular portion of the receiver and maintains the same in a permanent position. By the arrangement hereinbefore set forth, it will be seen that when arm 14 is brought to a vertical position, the shank of the movable switch hook will be engaged by the notch 20 therein, so as to hold said hook in inoperative position and disconnect the receiver, and when said arm is moved downwardly from the phone, the switch hook will be released and the receiver placed in circuit, as will be readily understood without further description. Furthermore, the outward movement of the arm 14 will be checked by the laterally projecting plate formed on washer 13, which will thus support the receiver in proper position at the speaker's ear. Inasmuch as when the arm 14 is disposed in angular relation with respect to the telephone pedestal 2, the weight of the receiver has a tendency to overbalance the telephone, to counteract this we provide what might be termed, an auxiliary base 23′, which has its main portion annular, conforming to the under surface of the base of the telephone 1, to which it is secured by means of the vertically extending screw 24, which arises from the central portion of said auxiliary base, this screw being adapted to project in the opening formed for the central screw usually employed with standard telephone constructions. The annular portion of the auxiliary base 23 is provided with an extension 25 which, when said base is in position, projects at an angle from the telephone and, as will be apparent, counteracts any tendency on the part of said telephone to overbalance. In this connection, it is to be understood that the lower surface of the auxiliary base 23′ and its extension 25, is covered with felt or other suitable material for protecting the desk or whatever other article the telephone may be disposed upon. Also as an additional convenience, we provide a unique pencil supporter 27 in connection with the clamp 4, which has an arcuate-shaped body 28 for the reception of the pencil and a perforated extension 28′, the opening in this extension is adapted to register with the opening in one of the clamp lips so that when the screw is passed through the latter, it will also engage and maintain the holder in position as clearly seen in Figs. 2 and 4.

Although in the foregoing we have described certain elements as best adapted to perform the functions ascribed to them,

nevertheless, it is to be understood that various minor changes, as to form, substance, etc., may be made within the scope of the appended claims without departing from or sacrificing any of the principles of this invention.

Having thus described our invention, what we claim is:

1. A receiver supporter of the character described, comprising a clamp adapted to engage the pedestal of a telephone, a resilient washer carried by said clamp in offset relation thereto, a movable arm having its lower end pivotally engaged intermediate said washer and clamp, means on the upper end of said arm to engage and horizontally support a telephone receiver, said arm being offset in the central portion thereof and provided with a notch therein, immediately below said offset portion for coöperation with the switch hook of said telephone, and means carried by said washer to co-act with one edge of said arm to limit the outward movement of the latter.

2. A receiver supporter of the character described, comprising a clamp adapted to engage a telephone pedestal, said clamp having the rear portion thereof formed with a transversely extending channel, a washer plate disposed in offset relation to the rear of said clamp and having an integrally formed tongue adapted to project within the channel formed within the latter, an arm having one end pivotally engaged intermediate said washer and clamp, a laterally projecting plate carried by said washer and adapted to coöperate with one edge of said arm to limit the outward movement of the latter, a receiver supporting extension carried by said arm, means on said extension to engage a receiver, and means formed on the intermediate portion of said arm to co-act with the switch hook of said telephone, substantially as and for the purpose set forth.

3. A receiver supporter of the character described, comprising a clamp adapted to engage the pedestal of a telephone, said clamp having the rear portion thereof longitudinally slotted and offset, whereby to form a transversely extending channel, a washer disposed in spaced relation to said clamp, contiguous to the offset portion thereof, said washer having an integrally formed tongue projecting in a plane parallel thereto, and adapted to project within the channel formed in said clamp, said washer and tongue having therein registering openings adapted to coincide with the slot formed in the offset portion of said clamp, an adjusting screw extending through said openings, an arm pivotally mounted upon said screw intermediate the washer and clamp, a laterally projecting plate carried by said washer and adapted to engage one edge of said arm to limit the outward movement of the latter, a receiver supporting and retaining means on the free extremity of said arm, and means formed in the intermediate portion of the latter for coöperation with the switch hook of said telephone, substantially as and for the purpose set forth.

4. A receiver supporter of the character described comprising a clamp adapted to engage the pedestal of a telephone, a washer disposed in offset relation to the rear of said clamp, means for adjusting said washer vertically upon said clamp, a receiver supporting bracket having its lower extremity pivotally mounted intermediate said clamp and washer, a laterally extending plate formed on said washer to coöperate with one edge of said bracket to limit the outward movement of the latter, and means carried by said bracket for coöperation with the switch hook of a telephone, substantially as and for the purpose set forth.

5. A receiver supporter of the character described, comprising a clamp adapted to engage the pedestal of a telephone, said clamp having the rear portion thereof offset whereby to produce a transversely extending channel, a washer, a tongue integrally formed with the latter and projecting in a plane parallel therewith and adapted to extend within the channel formed in the rear of said clamp, whereby to dispose said washer in offset relation with respect to the latter and forms a seat for said tongue, means to maintain said washer in adjusted position, an arm having its lower extremity pivotally connected with said last mentioned means, a laterally extending plate carried by said washer to coöperate with one edge of said arm for limiting the outward movement of the latter, a receiver supporting extension on the free extremity of said arm, resilient clips disposed in spaced relationship upon said extension and means at the intermediate portion of said arm for coöperation with the switch hook of said telephone, substantially as and for the purpose set forth.

6. A receiver supporter of the character described comprising a clamp adapted to engage the pedestal of a telephone, said clamp having the rear portion thereof formed with a transversely extending channel, a washer disposed in offset relation to the rear of said clamp, a tongue carried by said washer and adapted to project within the channel formed within said clamp, an arm having one end pivotally engaged intermediate said washer and clamp, means on said washer to coöperate with one edge of said arm to limit the outward movement of the latter, means on the upper end of said arm to engage and horizontally support a telephone receiver, said arm being offset in the central portion thereof, and additional

means formed on the intermediate portion of said arm immediately below the offset part thereof to coöperate with the switch hook of said telephone, substantially as and for the purpose set forth.

7. A receiver supporter of the character described comprising a clamp, adapted to engage the pedestal of a telephone, a resilient washer carried by said clamp in offset relation thereto, a movable arm having its lower end pivotally engaged intermediate said washer and clamp, means on the outer end of said arm to engage and horizontally support a telephone receiver, said arm being offset in the central portion thereof, means in connection with said washer to cooperate with one edge of said arm to limit the outward movement of the latter, and additional means formed on the intermediate portion of said arm to coöperate with the switch hook of said telephone, substantially as and for the purpose set forth.

8. A receiver supporter of the character described comprising a clamp adapted to engage a telephone pedestal, said clamp having the rear portion thereof formed with a transversely extending channel, a washer plate disposed in offset relation to the rear of said clamp, a tongue carried by said washer plate and adapted to project within the channel formed in said clamp, an arm having one end pivotally engaged intermediate said washer and clamp, a laterally projecting plate carried by said washer and adapted to coöperate with one edge of said arm to limit the outward movement of the latter, a receiver supporting extension carried by said arm, means on said extension to engage a receiver, and additional means formed on the intermediate portion of said arm to coöperate with the switch hook of said telephone, substantially as and for the purpose set forth.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

WILLIAM ROY ARMOR.
LOWELL ALLISON YOUNG.

Witnesses:
HARRY ZIMMERHACKEL.
CHARLES L. AVERY.