No. 802,644. PATENTED OCT. 24, 1905.

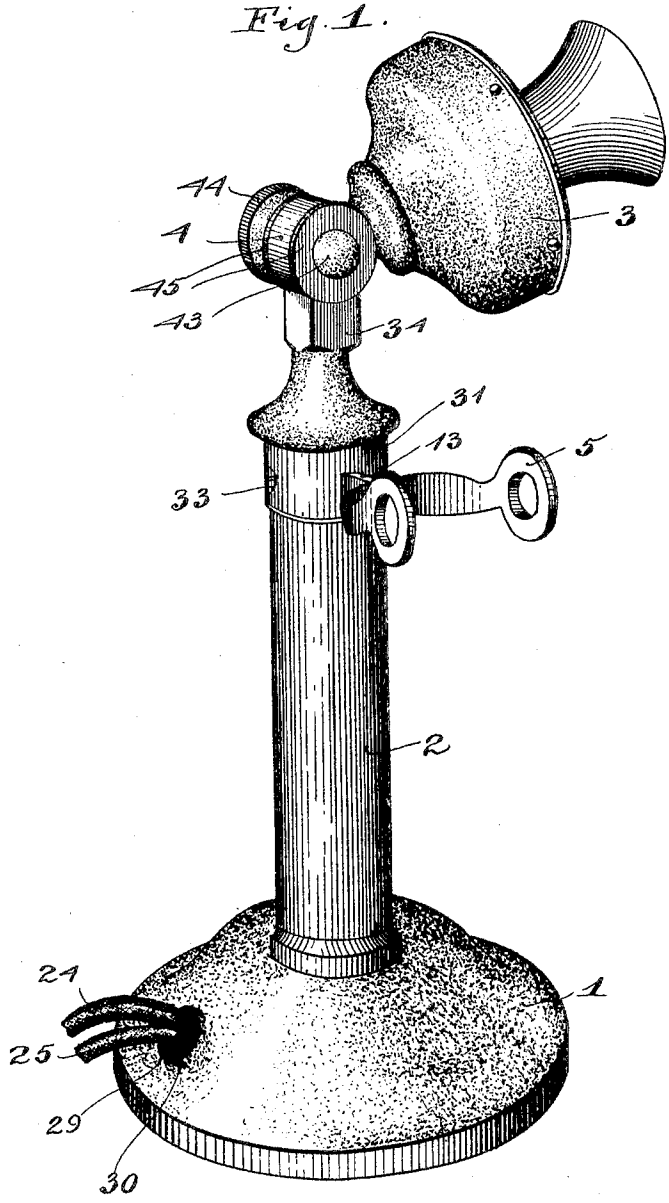
W. KAISLING.

TELEPHONE DESK SET.

APPLICATION FILED NOV. 28, 1903.

2 SHEETS—SHEET 1.

Fig. 1.



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No. 802,644. PATENTED OCT. 24, 1905.

W. KAISLING.

TELEPHONE DESK SET.

APPLICATION FILED NOV. 23, 1903.

2 SHEETS—SHEET 2.

Fig. 4.

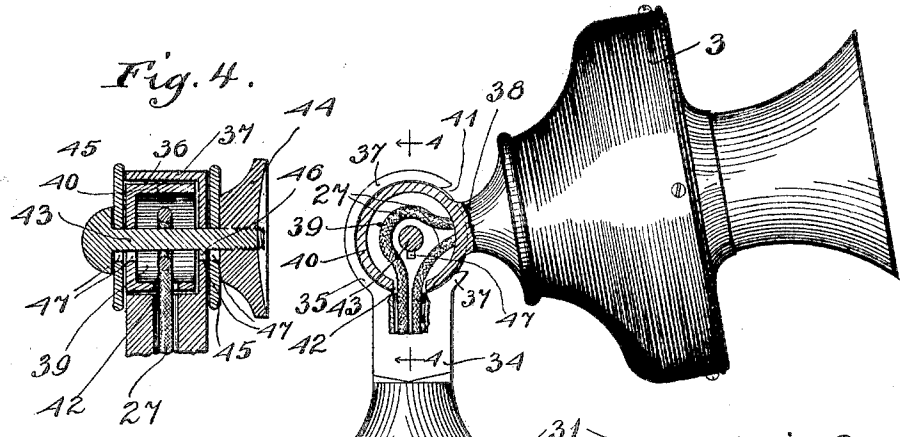


Fig. 3.

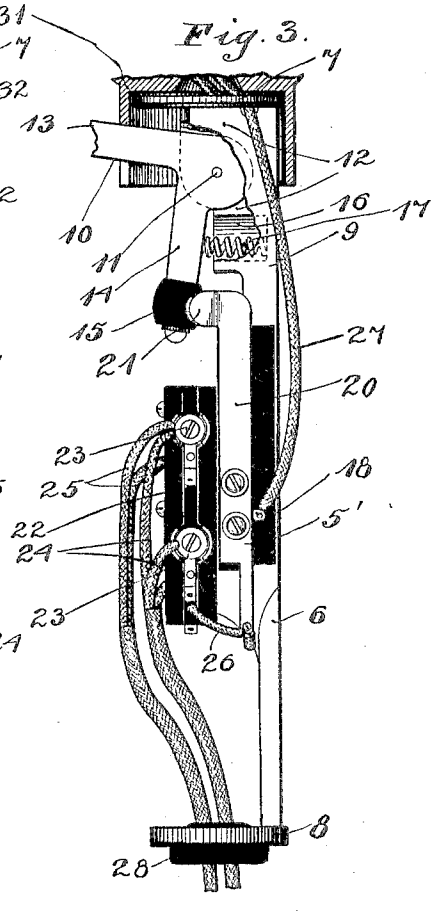
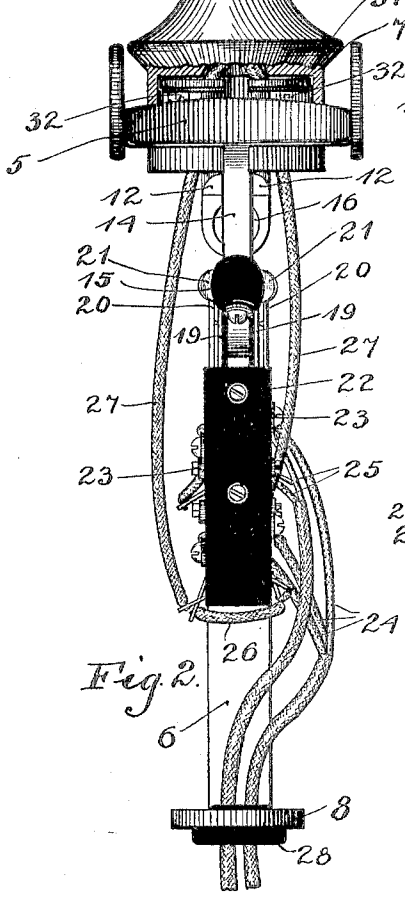


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM KAISLING, OF CHICAGO, ILLINOIS, ASSIGNOR TO STROMBERG-CARLSON TELEPHONE MANUFACTURING COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

TELEPHONE DESK SET.

No. 802,644 Specification of Letters Patent. Patented Oct. 24, 1905.

Application filed November 23, 1903. Serial No. 182,389.

To all whom it may concern:

Be it known that I, WILLIAM KAISLING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Telephone Desk Sets, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to telephone desk sets, and has for its object a novel and improved construction of the operative parts therefor, its particular object being to provide an improved joint between the transmitter and the body portion.

In a desk set it is desirable that the parts thereof be connected in circuit independently of the instrument-frame to prevent shocks to the user. It is also important that the connecting conductors in the instrument be removed from the outside thereof to protect them and to prevent them from being ruptured by the user. I therefore provide a hollow joint which allows free passage of the conductors therethrough, leading to the transmitter, and which joint allows the transmitter to be readily swung about its pivot-point without cutting or in any way interfering with the conductors passing through the joint.

In the accompanying drawings, Figure 1 is a perspective view of the complete desk set. Fig. 2 is a view of the operative parts of the instrument, the body portion and base being removed. Fig. 3 is a side elevation view of the apparatus removed from the body; and Fig. 4 is a detail sectional view of the joint, taken on line 4 4 of Fig. 2.

Like characters of reference refer to like parts in the various figures.

The instrument consists of a base portion 1, a tubular inclosing body portion 2, a transmitter 3, connected with said body portion by the joint 4, and a receiver-hook 5, which communicates with the interior of the body 2 to actuate the switching apparatus 5′. Within the body portion 2 is disposed a supporting-frame 6, consisting of a head portion 7 and a round foot portion 8, adapted to fit the bore of the body portion. The top 9 of the supporting-frame 6 is bifurcated, and a switch-hook 10 in the shape of a bell-crank lever is supported from a pivot 11, extending between the limbs 12 12 of the bifurcated end 9. The horizontal arm 13 of the lever extends outwardly and terminates in the switch-hook 5, the vertical arm 14 extending downwardly and terminating in an actuating-button 15, of insulating material. A pocket 16 is disposed below the bifurcated end, and a spring 17, resting in said pocket, bears against the vertical arm 14 of the lever to press said vertical arm outward upon removal of the receiver from the hook. The switching mechanism 5′ is supported by, but insulated from, the frame 6 by means of insulation 18, and this switching mechanism may consist of inner contact-springs 19 19 and outer actuating-springs 20 20, terminating in flared ends 21 21, which extend perpendicularly from the end of said actuating-springs. Normally these actuating-springs are out of engagement with the inner springs 19; but upon removal of the receiver from the hook the actuating-button 15 is withdrawn from between the flared ends of said springs, and said springs retract to engage the inner springs, the instrument in this position being connected with the telephone-circuit. A mounting-block 22, of insulating material, is secured to the supporting-frame 6 and serves to carry terminals 23 23, to which the line conductors 24 24 lead and from which the receiver-terminals 25 25 and the transmitter-wires 26 26 lead, the transmitter-wires 26 26 passing to the springs of the switching device and from there by means of conductors 27 27 to the transmitter. A bushing 28, of insulating material, passes through the foot portion 8 of the frame 6, and the line conductors 24 and receiver conductors 25 pass therethrough and through the base portion, emerging through an opening 29, provided with a bushing 30, of insulating material, the line-wires 24 leading to the induction-coil or other apparatus, while the wires 25 lead into the receiver. A cap portion 31 passes over the head portion 7 of the supporting-frame 6, being secured thereto by means of screws 32 32 and being secured to the body portion 2 by means of a screw 33. A neck portion 34 connects the head portion with the joint member 35, said neck portion being hollow. The joint member 35 is in the shape of a cylindrical chamber 36, surrounded by the annular wall 37, the hollow neck leading into said chamber. The transmitter-stock 38 terminates in a similar bearing member, which

consists of a cylindrical chamber 39, surrounded by the annular wall 40, part of the wall 37 being cut away to leave an opening 41, in which the stock 38 of the transmitter may swing. The lower part of the wall 40 is provided with an opening 42, disposed over the hollow neck portion 34, the transmitter conductors passing from the transmitter into the chamber 39, through the opening 42, through the hollow neck portion 34, through openings in the head portion 7 to connect with the switching-springs. A pivot-pin 43 passes through the center of the two chambers, and a thumb-nut 44 engages the threaded end of said pivot-pin, a washer 45 being interposed upon each side of the joint. To prevent turning of the pivot-pin as the thumb-screw 44 is applied, I provide a lug 46 on said pin, said lug being adapted to engage a corresponding slot 47 in the rigid wall of the joint member 35. Similar slots are also provided in the washers 45 and in the wall of the joint member 40 to allow passage therethrough of said stud. One of said transmitter-wires preferably passes directly to the transmitter from the neck portion, while the other conductor passes over and around the pivot-pin 43, as shown in Figs. 2 and 4. I thus provide a joint which allows ready adjustment of the tramsmitter and which in no way interferes with the transmitter conductors or in any way injures them. At the same time these conductors are entirely protected and tampering therewith prevented.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a telephone desk set, the combination with a tubular body portion, of a supporting-frame upon the inside thereof having a bifurcated top end, a bell-crank lever pivoted at its elbow in said bifurcated end, one arm of said lever extending to the exterior of the body portion and terminating in a receiver-hook, the other arm of the lever extending downwardly and terminating in an actuating-button, switch-springs mounted upon said supporting-frame in the path of said actuating-button, a spring extending between said other arm of the lever and the supporting-frame tending to maintain the receiver-hook in an upper position, a transmitter, and a hollow pivotal joint intervening between said transmitter and the top of said body portion, the conductors from said transmitter passing through said hollow joint and into the body portion to connect with said switching-springs.

2. In a telephone desk set, the combination with a body portion, of a transmitter, a joint intervening between said body portion and said transmitter to enable said transmitter to swing vertically, said joint members being cup-shaped and fitting one within the other to form an inclosed cylindrical chamber, a pivot-pin passing through said members, a washer upon each side of said joint, a thumb-nut for engaging the threaded end of said pin to clamp said joint members in adjustment, an opening in the side of the stationary joint member for allowing rotation of the rotatable member, and an opening through the lower wall of said rotatable member, the conductors from the transmitter passing through the interior of the rotatable member and through the opening therein into said body portion.

3. In a telephone desk set, the combination with a tubular body portion, of a supporting-frame on the inside thereof having a bifurcated top end, a bell-crank lever pivoted at its elbow in said bifurcated end, one arm of said lever extending to the exterior of the body portion and terminating in a receiver-hook, the other arm of the lever extending downwardly and terminating in an actuating-button, switch-springs mounted on said supporting-frame in the path of said actuating-button, a transmitter, and a hollow joint connecting said transmitter with said body portion, the joint members being cup-shaped and fitting one within the other to form a cylindrical chamber, the conductors from the transmitter passing through said chamber and into the body portion.

In witness whereof I hereunto subscribe my name this 9th day of November, A. D. 1903.

WILLIAM KAISLING.

Witnesses:
CHARLES J. SCHMIDT,
JOHN STAHR.