No. 804,133. PATENTED NOV. 7, 1905.

W. KAISLING.

ELECTRICAL BINDING SCREW.

APPLICATION FILED MAY 22, 1903.

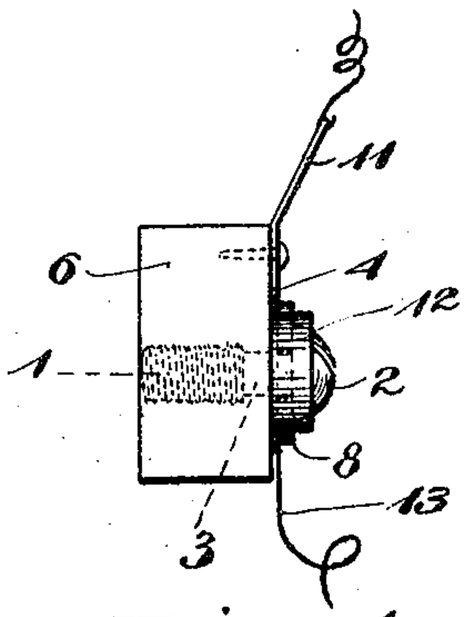

Fig. 1.

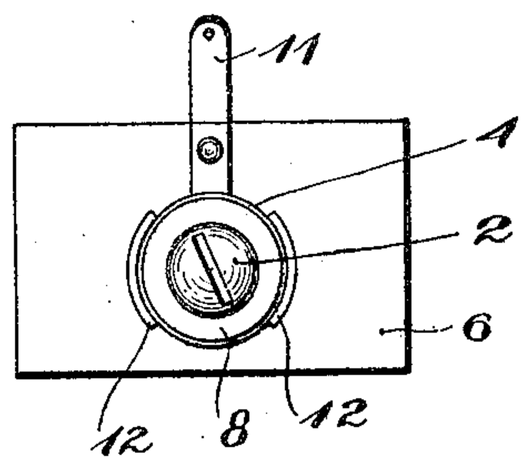

Fig. 3.

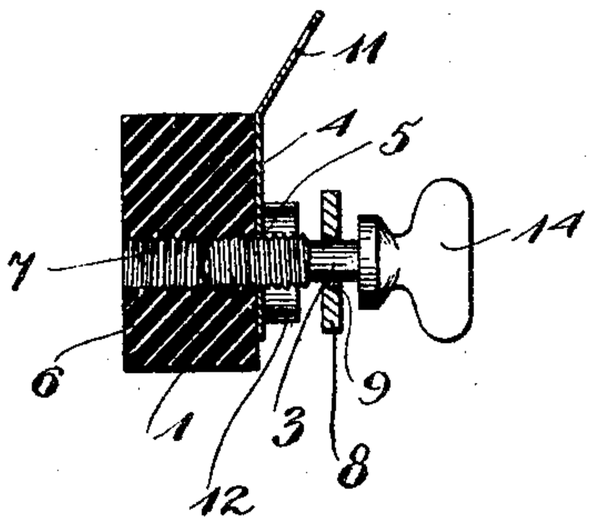

Fig. 2.

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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.

ELECTRICAL BINDING-SCREW.

No. 804,133. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed May 22, 1903. Serial No. 158,231.

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 Electrical Binding-Screws, (Case No. 8,) 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 electrical binding-screws, and has for its object an improved device to which a conductor or electrical terminal may be more readily applied and secured.

My invention is particularly adaptable in the telephone art, where a great number of such binding-screws are employed and where such binding-screws are very small and employed in crowded and cramped places. Such binding-screws usually consist of a screw over which may be passed a washer, the conductor or terminal being secured between the washer and a receiving member which said screw engages.

Heretofore it has been very difficult and trying to apply the conductor in place below the washer, and my invention provides means whereby the washer may be raised to leave a clear space to which the conductor or terminal may be readily applied.

Generally speaking, my invention consists of a screw having a threaded end, the diameter of the shank portion between the threaded end and the head being reduced. A receiving member, which may form the terminal of a conductor, has a threaded opening to receive the threaded end of the screw. A washer is mounted upon the reduced shank portion of the screw and is retained thereon and adapted to move only between the threaded portion and the head of the screw. Upon unscrewing of the screw the washer is carried away from the receiving member, thus leaving a clear space for receiving a conductor-tip or a wire, which may be clamped between the washer and the receiving member as the screw is again brought into engagement with the receiving member.

I shall describe my invention more fully with reference to the accompanying drawings, in which—

Figure 1 is an elevation view of the device, showing its adaptation for connecting conductors. Fig. 2 shows a vertical central sectional view therethrough. Fig. 3 is a front view thereof.

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

A screw has a threaded end 1, a head 2, and a reduced shank portion 3, the diameter of the shank portion being preferably slightly less than the diameter at the base of the threads at the end of said screw. A receiving-base 4 may have a threaded opening 5 for receiving the screw. A mounting-block 6, which may be of insulating material, has a threaded opening 7 for receiving the screw, the receiving-base 4 being secured to said mounting-block so that the opening therein alines with the opening in the block. In ordinary practice the base-piece 4 is very thin and the opening instead of being threaded may be made large enough to allow the threaded portion of the screw to pass therethrough, the screw being engaged by the threaded opening in the mounting-block. A washer 8 is retained upon the shank portion between the threaded portion and the head of the screw. This retention may be accomplished by threading the opening 9 through the washer to receive the threaded end of the screw, the washer after passing out of engagement with said threaded end passing on to the reduced unthreaded shank portion and being prevented from removal therefrom otherwise than by being unscrewed over the threaded portion.

The conductor or conductor-tip desired to be secured is introduced between the base portion 4 and the washer 8, being clamped therebetween as the screw is brought into threaded engagement with the mounting-block. To facilitate the insertion of the conductor or conductor-tip 13 between the washer and the base portion, the washer may be raised away from said portion by a sufficient disengagement of the screw from the mounting-block, whereby the washer is carried away from the receiving portion. The conductor or terminal may now be inserted without the trying operation of first removing the washer against the impedance of the threads on the screw. The receiving member 4 may be provided with a contact-tip 11, and to hold the wire or terminal 13 in place as the washer is brought into clamping engagement therewith sections 12 12 of annular walls are provided upon said

receiving member between which walls the washer is adapted to fit as the wire or terminal is clamped into engagement with the receiving member. The head of the screw may be slotted to receive a screw-driver or other instrument or may be provided with a thumb-screw head 14, as shown in Fig. 2.

I claim as new and desire to secure by Letters Patent—

1. In a device of the class described, the combination with a screw provided with threads only at its end and having a reduced shank portion between said threaded end and its head, of a washer, and a threaded opening for said washer for engaging said threaded end, the threaded end serving for retaining said washer upon the unthreaded shank portion of said screw, so that it may have free longitudinal motion thereon, substantially as described.

2. In a device of the class described, the combination with a screw threaded only at its end portion, of a receiving member having a threaded opening for receiving the threaded end of said screw, the unthreaded shank portion of said screw having a reduced diameter, a washer loosely engaging said unthreaded portion, and having a threaded opening for receiving said screw, the threads on said screw preventing said washer from leaving said shank portion otherwise than by being unscrewed from said screw, substantially as described.

3. In combination, a screw threaded only at its end portions, a receiving member for receiving said screw, the diameter of the unthreaded shank portion being less than the diameter at the base of the threads upon said end portion, a washer normally engaging said unthreaded and reduced shank portion to be longitudinally freely movable thereon, said washer having a threaded opening to engage the threaded end of said screw, the threads on said screw portion preventing removal of said washer otherwise than being unscrewed from the screw, substantially as described.

4. In combination, a screw having a threaded end portion, a reduced shank portion between said threaded end and the head of said screw, a washer loosely and rotatably retained upon said reduced shank portion, a receiving member having a threaded opening for receiving the threaded end of said screw, and annular walls extending from said receiving member and disposed to surround said washer as said screw is screwed into said receiving member, substantially as described.

5. In combination, a mounting, a base member secured to said mounting, a screw having a threaded end passing through said base member into threaded engagement with said mounting, the shank portion of said screw between the threaded end and the head thereof having a reduced diameter, a washer loosely retained upon said unthreaded shank portion, and annular walls extending from said base member and disposed about the periphery of said washer as said screw is brought into threaded engagement with said mounting, substantially as described.

6. In combination, a mounting-block of insulating material, a terminal member secured thereto, a screw having threads only at its end and passing through an opening through said terminal member to engage a threaded opening in said mounting-block, the unthreaded shank portion of said screw having a diameter less than the diameter at the base of the threads of said screw, a washer normally engaging said unthreaded and reduced shank portion to be longitudinally freely movable thereon, said washer having a threaded opening to engage the threaded end of said screw, the threads on said screw preventing removal of said washer otherwise than being unscrewed therefrom.

7. In combination, a mounting-block of insulating material, a terminal member secured thereto, a screw having threads only at its end and passing through an opening through said terminal member to engage a threaded opening in said mounting-block, the unthreaded shank portion of said screw having a diameter less than the diameter at the base of the threads of said screw, a washer normally engaging said unthreaded and reduced shank portion to be longitudinally freely movable thereon, said washer having a threaded opening to engage the threaded end of said screw, the threads on said screw preventing the removal of said washer otherwise than being unscrewed therefrom, and annular walls extending from said terminal member between which said washer is disposed as it is brought into clamping engagement with said terminal member, substantially as described.

8. The herein-described binding-screw, having a threaded washer under its head, mounted but free to turn on the neck of the screw, substantially as described.

9. The herein-described binding-screw having a reduced neck with a washer on the said neck, the washer being provided with a central threaded opening for passing over the threaded portion of the screw.

In witness whereof I hereunto subscribe my name this 18th day of May, A. D. 1903.

WILLIAM KAISLING.

Witnesses:
LYNN A. WILLIAMS,
CHARLES J. SCHMIDT.