A. LÜNGEN.

BINDING POST.

APPLICATION FILED JAN. 16, 1909.

940,397. Patented Nov. 16, 1909.

Fig. 1.

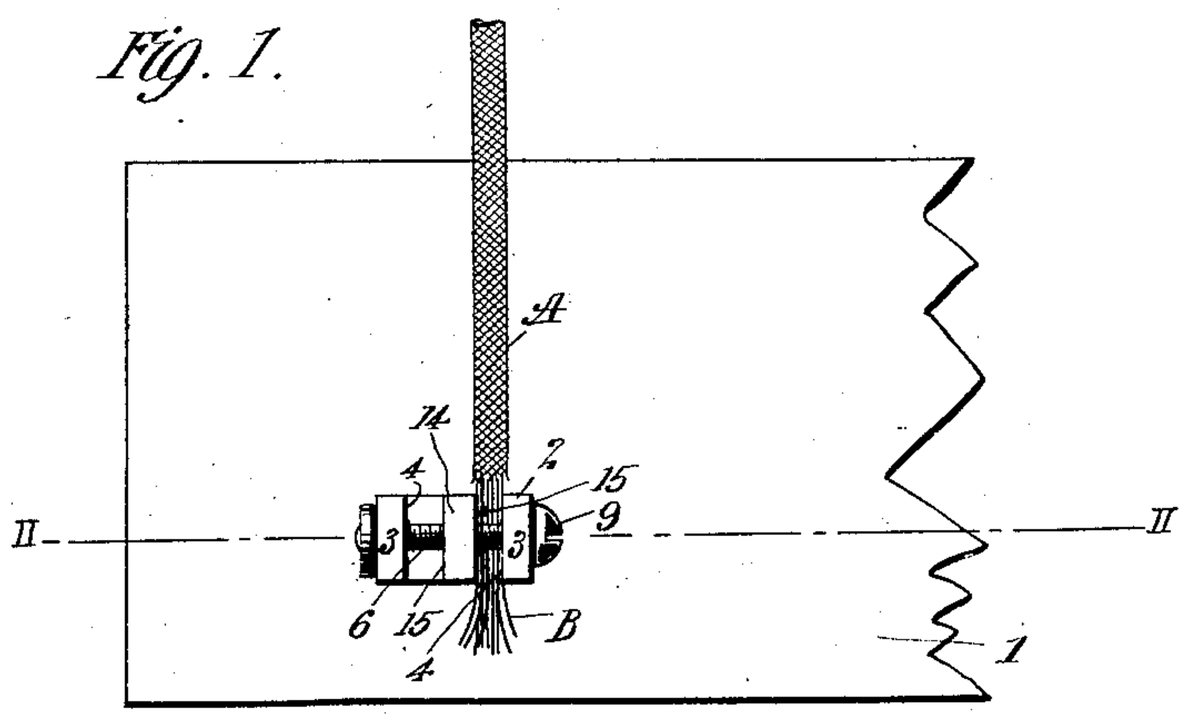


Fig. 2.

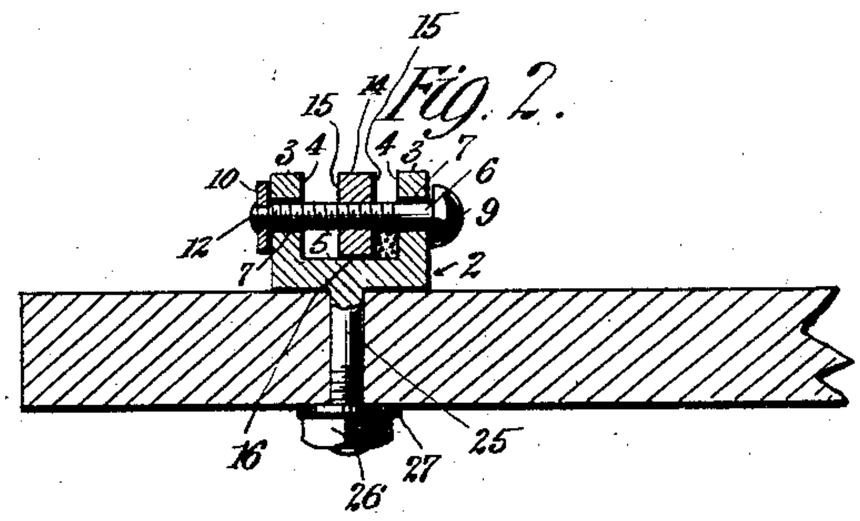


Fig. 3.

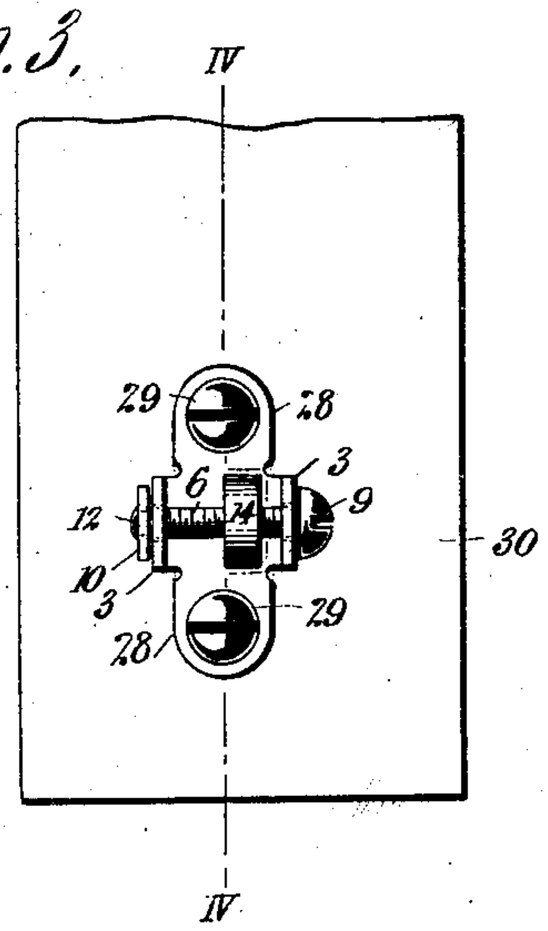
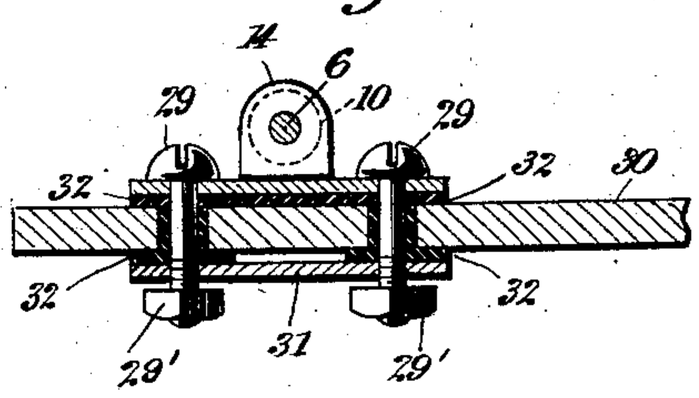


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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BINDING-POST.

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Application filed January 16, 1909. Serial No. 472,642.

To all whom it may concern:

Be it known that I, ADAM LÜNGEN, a citizen of the United States, residing at the city of New York, in the borough of Manhattan and State of New York, have invented certain new and useful Improvements in Binding-Posts, of which the following is a full, clear, and exact description.

My invention relates to binding posts for electrical apparatus, and particularly small appliances such as telegraph and telephone instruments, electric bells, induction coils, switchboards and lamp receptacles, where a good permanent electrical connection is required, while ease of manipulation and cheapness of construction are desirable factors.

Stranded conductors are now increasingly used for circuit wires on account of their flexibility and other reasons, and the brush of strands or filaments, which is exposed to make an electrical connection, is not well adapted to be clamped under the head of a screw as in one common form of binding post, or fixed in a socket hole by a set screw, as in another common construction. The former arrangement has a tendency to spread the strands out from under the screw head, as it is tightened, and the last mentioned arrangement not only has the same general defect of diverting the strands out of the path of the screw, but also tends to cut or sever the few strands which remain in the path of the screw.

It is the purpose of my invention to provide a binding post which is as cheap and as easily manipulated as the present constructions of binding post now in use, but which wholly avoids all the above mentioned difficulties. I provide a simple permanent electrical connection having a current carrying capacity equal to, and in many cases decidedly better than that of the remainder of the circuit conductor.

With the above objects in view my invention consists in the features of construction and combination as hereinafter set forth and claimed.

In the drawings: Figure 1 is a plan view of a binding post embodying the principles of my invention, in use upon a supporting base; Fig. 2 is a sectional view of the same on the line II—II of Fig. 1; Fig. 3 is a view similar to Fig. 1 showing a slightly modified construction; Fig. 4 is a sectional view on the line IV—IV of Fig. 3.

Referring to the drawings in which like parts are designated by the same reference sign, 1 designates a base which may be considered a wooden supporting board of any electrical appliance, such as a telegraph relay.

2 denotes the body of the binding post which comprises a U-shaped metallic part having vertically projecting arms 3 with interior parallel flat faces 4.

5 designates an interior bottom face extending between the faces 4 and perpendicular thereto.

6 indicates a screw which is passed through alined holes 7 of the arms 3, said holes being smooth or unthreaded, and loosely fitting enough to permit a free rotative movement of the screw therein. The screw is constrained against longitudinal movement in any desired way. I have illustrated a screw having a head 9 fitting closely against the outside face of one arm 3 and having a collar 10 at the other end fitting against the outside face of the opposite arm 3. The collar 10 may comprise a simple centrally perforated washer fitted on a reduced extremity of the screw 6, and fixed thereon by riveting or peening over the material of the screw at 12.

14 denotes a traveling nut into which the screw 6 is threaded and which comprises a flat metallic plate or block having side faces 15 perpendicular to the length of the screw 6 upon which said block is threaded. The traveling nut or block 14 also has a lower flat face 16 fitting against the face 5 of the body. This engagement prevents the nut 14 from turning under the torsional impulse of the screw rotation, so that when the latter is turned the part 14 is constrained to move longitudinally toward or from an adjacent face 4 of the body, without any angular displacement.

The conductor A being stripped or bared at its end B, is inserted between the traveling nut 14 and an adjacent face 4 of the body 2. The conductor is best passed into this relation beneath the screw 6 in which case it is inclosed from all sides, as clearly shown in Fig. 2. When the screw 6 is turned by an ordinary screw driver, the nut 14 is forced against the stranded conductor and

binds the same in an engagement between the faces 4 and 15 extending along the entire width of the binding post. The strands of the conductor are prevented from spreading sidewise in this action by the bottom face 16 and the screw 6, but the electrical connection is substantially perfect whether some spreading takes place or not, because any dislocation of the strands can only result in pressing them more nearly into a flat sheet engaged throughout its area by its adjacent faces 15 and 4 of the traveling nut and the body 2, respectively. It is obvious that the connection is not only very perfect electrically, but is strong and permanent mechanically considered, being unlikely to be stripped out or broken off from strains on the conductor A.

The manner of supporting the body 2 and its general outlines are of course, dependent on the particular use of the binding post and may be varied as desired. In Figs. 1 and 2, the body 1 has a depending threaded stem 25 which receives a nut 26 and washer 27 on its lower extremity, the binding post being clamped thereby to the base 1. In Figs. 3 and 4, the body 2 has laterally extending ears 28 through which short bolts 29 are received to connect the binding post to a metallic base or plate 30. 31 denotes a metallic strip or plate beneath the nuts 29′ of the bolts 29 in lieu of the washer 27 of the previous construction. It is evident that any desired electrical connection or connections from the binding post may be made by wires engaged beneath the nuts 26 and 29′ of the respective forms, coöperating with their associated washers or plates. Where a metallic base is employed, it of course becomes necessary to provide insulating plates and bushings 32 to insulate the parts of the binding post from such metallic base.

What I claim is:—

1. A binding post comprising a body with a pair of upwardly projecting arms, a screw journaled in both of said arms and extending therebetween, means for preventing longitudinal displacement of said screw in either direction, said arms, and a traveling nut on said screw guided by said body in a longitudinal but non-rotative movement.

2. A binding post comprising a body having upwardly bent arms, a screw journaled in both of said arms and extending therebetween and having a head and a collar to prevent its longitudinal movement in either direction, and a traveling nut having a lower flat face guided against said body.

3. A binding post comprising a body having upwardly projecting arms with flat inside faces parallel to one another, and a flat bottom face perpendicular thereto, a screw loosely received between said arms, said screw having a head at one end and a collar at the other end to limit its longitudinal movement, and a traveling nut having end faces parallel to the faces of said arms, and having a bottom face guided upon said remaining face of said body.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

ADAM LÜNGEN.

Witnesses:
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