

Oct. 25, 1927.

1,646,890

C. D. TUSKA

BINDING POST

Filed July 21, 1924

Fig. 1.

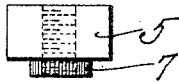


Fig. 3.

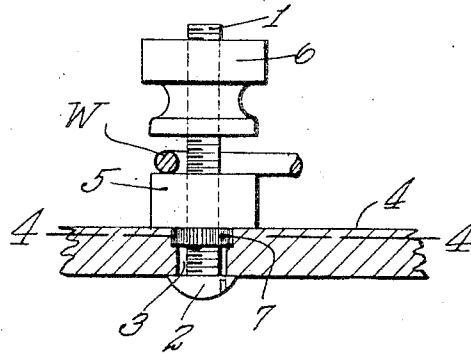


Fig. 2.

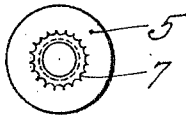
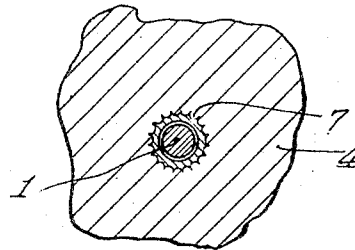


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BINDING POST.

Application filed July 21, 1924. Serial No. 727,172.

This invention relates to binding posts such as are used for making electrical connections and particularly to that type of a binding post wherein the connection is made by securing the conductor to the post by means of a thumb nut threaded on the post. The invention finds a useful application more particularly in instances wherein binding posts are to be secured to or mounted upon a panel or plate of hard material such as a phenol condensation product.

One object of the invention is to improve a binding post of the above type so that after the post is properly assembled upon the panel it will not become loosened by repeated changes of the electrical connections.

Another object is to provide an improved binding post which is easily and conveniently assembled upon the panel.

With these and other objects in view, my invention consists in employing with a binding post of the type above set forth a new and useful collar for same, the advantages of which will appear in the following detailed description and drawings in which:

Fig. 1 is a side view of my improved collar;

Fig. 2 is a plan view of the lower face of same;

Fig. 3 is a side view of a binding post assembled upon a panel and embodying my improved device; and

Fig. 4 is a section taken through the line 4-4 in Fig. 3.

Referring to the drawings, Fig. 3 represents a binding post of the type above referred to which consists of a screw 1 having a slotted head 2, passing through an aperture 3 formed in a panel or plate 4 of the usual hard insulating material and secured thereto by means of a collar 5 threadedly engaged by the screw 1. In assembling the post on the panel, the head 2 of the screw is turned up against the lower side of the panel 4 so that the collar 5 is drawn tightly against the upper side of the panel whereby the screw is rigidly secured to the panel. The screw 1 is provided with the usual thumb nut 6 which binds a conductor or wire such as W to the post when the nut is turned up.

Thus far I have described a binding post of a commonly known construction and before proceeding with a detailed description of my improved post I will set forth a few of the difficulties and objections experienced

with this present type in order that my invention may be better understood and more fully appreciated.

In the usual construction of a binding post of this character, the post becomes loosened on the panel after a number of connections and disconnections have been made due to the turning of the collar when the thumb nut is tightened or loosened. It is then necessary to turn up the screw head to tighten the post to the panel and in a great many instances the screw head is often in an inaccessible place and it is a difficult operation. This is especially true in radio receiving sets. Also in assembling or tightening a binding post on a panel it is necessary to hold the collar from turning while the screw head is turned up because the collar will turn with the screw. In holding the collar by means of pliers or a similar tool, the surface of the collar is marred and furthermore, this operation requires the use of a tool in each hand at the same time.

To overcome these objections, and to provide a binding post which will always remain tight upon a panel or other support and in which the collar will be prevented from turning, I have devised a simple and improved collar which is shown separately in Figs. 1 and 2.

This collar 5 is provided on its lower face with a reduced annular portion 7 coaxial with the threaded aperture of the collar. The exterior cylindrical surface of this portion is knurled or otherwise grooved to provide cutting teeth for the purpose to be later described. The outside diameter thereof is slightly greater than the diameter of the aperture 3 in the panel 4. The cutting edges of the knurled portion 7 are of such character that upon forcing the same by pressure into the aperture of the panel said edges will cut their own way through the sides of the aperture and form an interlocking engagement therewith sufficient to resist all ordinary tendency to turn after the post is once securely mounted.

It will be thus seen that when the post is assembled on the panel and the screw 1 is turned up, that the portion 7 of the collar 5 may be drawn into the aperture 3 of the panel 4 and that the cutting edges or teeth on the portion 7 will bite into the sides of the aperture 3. In other words, said cutting edges will cut themselves into interlocking

engagement with the wall of said aperture, whereby the collar will be held or locked from turning relatively to the panel or with the screw while the latter is being turned up.

5 While the knurled portion 7 may thus be drawn into the aperture by turning up the screw 1 it might also be forced by pressure down into the seat in the aperture before turning up said screw.

10 It will also be observed after the screw and collar are thus assembled upon the panel and a conductor is fastened to the assembly by the thumb nut, that any turning of the collar is prevented when the thumb nut is loosened or tightened up thereby providing a binding post which always remains tightly secured to the panel.

A still further advantage of my improved binding post is that any turning of the thumb nut after a conductor is securely fastened to the post will tend to still further tighten the post to the panel. The collar being prevented from turning, the binding or freezing of the parts due to the tightness of the connection will be between the thumb nut, conductor and the screw, and if the thumb nut is turned off while this binding action occurs, such a turning will tend to turn the screw in a direction which will tighten the screw head against the lower face of the panel and draw the collar still tighter against the upper face of the panel. If the thumb nut is turned down to make a still tighter connection and any binding action takes place, tending to turn the screw, such a turning of the screw would tend to unscrew it from the collar on the panel, but

before any such action can occur the lower face of the thumb nut engaging the upper face of the collar or the interposed conductor will prevent any movement of translation of said screw which would be necessary before the screw could turn out of said collar and therefore the binding post will remain tight on the panel.

I have thus provided by a simple and inexpensive device an improved binding post which obviates the faults of the usual post of this type and have designed a binding post which has added advantages and greater usefulness.

What I claim is:

In a device of the class described, the combination with a support of insulating material having an aperture therethrough, of a binding post for electrical conductors comprising a stem extending through said aperture with a head at one side of said support, a clamping collar screw threadedly engaged upon said stem at the other side of said support for clamping the binding post to said support, said collar having a reduced annular projecting portion provided with cutting edges adapted to be forced by pressure into a self-cutting interlocking engagement with the wall of said aperture to prevent turning movement of said collar relatively to said support, a clamping nut screw threadedly engaged upon the outer end of said stem and an electrical conductor clamped between said collar and nut.

In testimony whereof I have affixed my signature.

CLARENCE D. TUSKA.