Jan. 2, 1923. 1,440,843.

O. A. SMITH.

METHOD OF MAKING BINDING POSTS.

FILED DEC. 16, 1920.

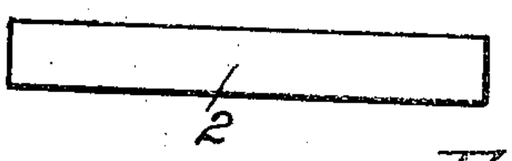


Fig. 1.

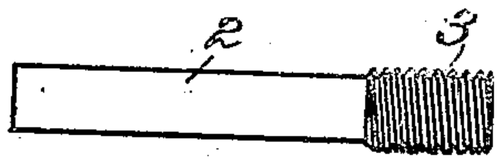


Fig. 2.

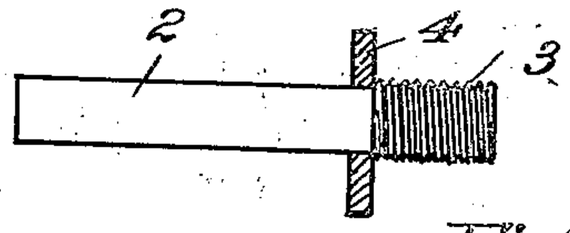


Fig. 3.

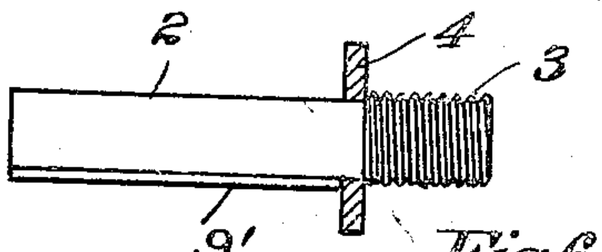


Fig. 6.

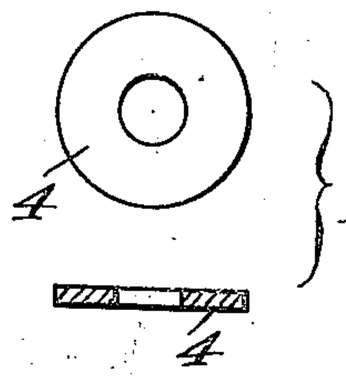


Fig. 7.

Fig. 8.

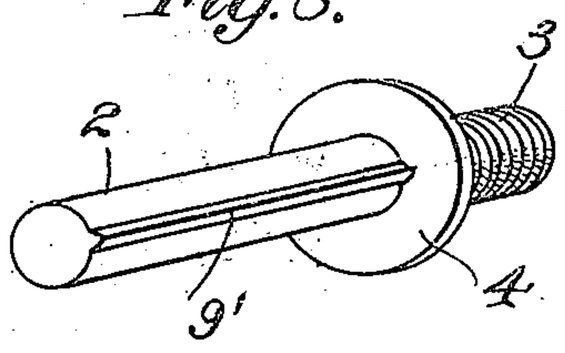


Fig. 4.

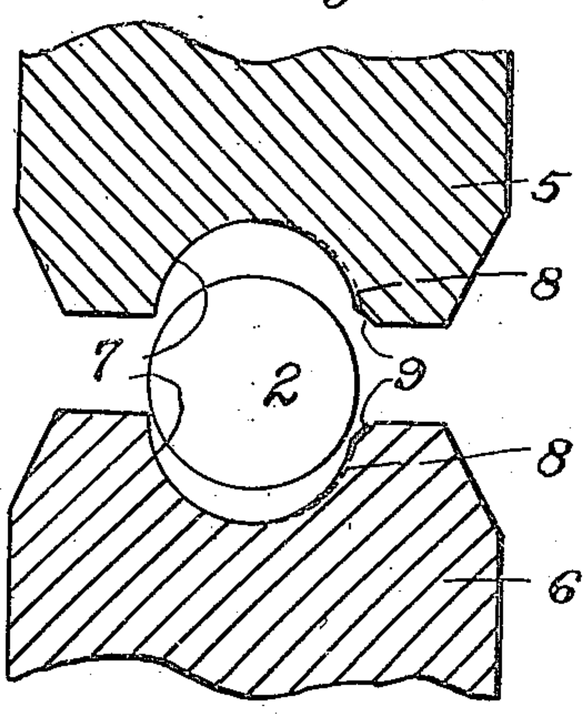
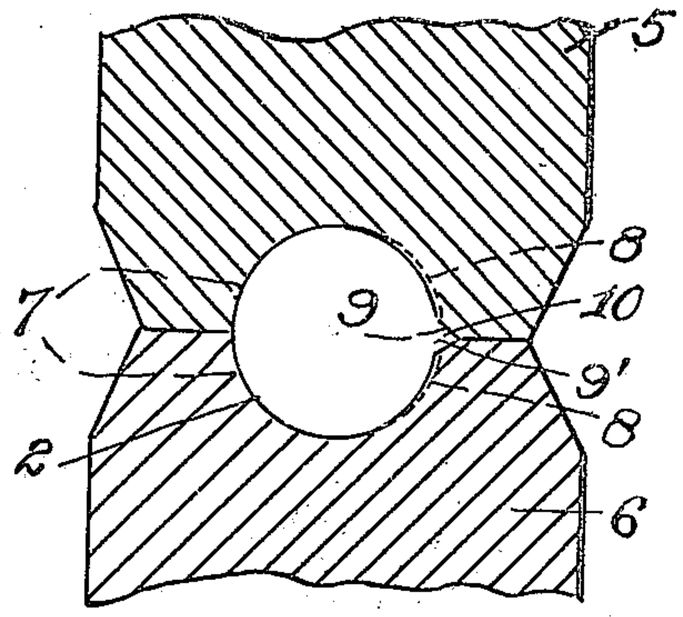


Fig. 5.



INVENTOR

Oscar A. Smith

BY HIS ATTORNEYS

Weed & Gray

Patented Jan. 2, 1923. 1,440,843

UNITED STATES PATENT OFFICE.

OSCAR AUGUST SMITH, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO WILLIAM R. MITCHELL, OF CLEVELAND, OHIO.

METHOD OF MAKING BINDING POSTS.

Original application filed August 2, 1919, Serial No. 314,885. Divided and this application filed December 16, 1920. Serial No. 431,245.

To all whom it may concern:

Be it known that I, OSCAR A. SMITH, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Methods of Making Binding Posts, of which the following is a specification.

This invention relates to the method of making binding posts adapted for use with the carbons of batteries, the object of the invention being to provide an improved method of making binding posts adapted for the attachment of electrical conductors or wires to the carbon of a battery and the present application is a division of my co-pending application for binding posts Serial No. 314,885 filed Aug. 2, 1919.

I am aware of the patent of E. C. Henn 813,093 of Feb. 20, 1903, in which the post is provided with a circular series of longitudinally extending ribs located around the shank of the post, but in practice I found that these posts frequently tend to split the carbon, having had considerable to do with the making of the post described in said patent and also found that they were expensive to make.

In the drawings accompanying and forming a part of this specification Fig. 1 illustrates a piece of stock cut to the desired length to form the post; Fig. 2 illustrates the stock threaded at one end for the reception of the terminal nut; Fig. 3 illustrates the punched washer in position against the thread; Figs. 4 and 5 illustrate forms of dies which may be used in forming this post; Fig. 6 illustrates a completed post; Fig. 7 illustrates the punched washer; and Fig. 8 is a perspective view of the completed post.

Similar characters of references indicate corresponding parts in the several figures of the drawings.

The stock 2 cut to the desired size is provided at one end with a suitable thread for the reception of the terminal nut and upon this post is a suitable flange 4, shown in the present instance as a punched washer. The post is then placed between a pair of meeting dies 5 and 6 each provided with a substantially semi-circular recess 7 formed to fit the curved surface of the stock, one portion of which however is of smaller radius (see dotted lines 8), to stamp and form the metal and which portion of smaller radius terminates in a beveled portion 9 forming a V-shaped recess 10 when the die members are brought together. By this means when the binding post is placed between the meeting dies and pressure exerted upon the post through the dies a fin 9′ is formed at one side thereof, which is sufficient to prevent the turning of the post within the carbon while at the same time the post may be forced into a suitable drilled opening of the carbon without the liability of splitting the carbon as heretofore, especially as this fin is of a V-shaped formation and therefore formed with a relatively sharp cutting edge as it were, owing to the V-shaped recess 10 of the dies so that it tends to cut its way into the carbon and thus prevents the splitting thereof.

It will be seen therefore that by virtue of the present improved method I am enabled to provide the binding post with a rib or projection wherein the metal is forced or projected outwardly and shaped into wedge or tapered form or so as to have substantially a cutting edge designed to facilitate the forcing of the posts into the carbon of the battery cell. In the present instance mechanism is shown by way of example for carrying out my improved method and a part of the stock is thereby subjected to transverse wedging pressure in order to form a wedge projection, the metal in this instance being projected outwardly and pressed or forced into a tapered or wedge form. Of course any other suitable mechanism may be used for carrying out this improved method, an important feature thereof being to force a portion of the metal outwardly and also form substantially a cutting edge or a tapered face or a wedge formation.

That part of each die member having the smaller radius or built on portion 8, may have this gradually formed and extending over about 90° of each member if preferred, thus owing to this difference in radii, the metal of the post will be subjected to greater pressure at the parts having the smaller radius thereby to squeeze the metal into the V-shaped recess throughout substantially the length of the smooth portion of the post.

It will be observed that as hereinbefore stated, the provision of the threads form a shoulder for the punched washer to rest against while the longitudinally extending projection 9 also forms a shoulder against the washer after the same is in place to prevent the dislocation thereof.

The various details may be more or less changed without departing from the spirit or scope of this invention.

I claim as my invention:

1. The method of making a carbon binding post having a smooth portion which consists in subjecting substantially the major part of the length of said smooth portion to transverse wedging pressure thereby to form a longitudinally extending wedge projection.

2. The method of making a binding post which consists in subjecting a part of said post to transverse pressure in order to project a portion of the metal thereof outwardly, and then shaping such projecting portion into substantially a cutting edge.

3. The method of making a carbon binding post which consists in subjecting a part of said post to transverse pressure, greater at one part of the circumference of the post than at another part of such circumference to form a projection, and shaping said projection into wedge form.

4. The method of making a binding post which consists in subjecting a part of said post to transverse pressure in order to project a portion of the metal thereof outwardly, and forcing such projecting portion into tapered form.

5. The method of making a binding post which consists in subjecting a part of said post to wedging action or pressure in order to project a portion of the metal thereof outwardly into wedge form.

6. The method of making a carbon binding post, having threads at one end and a relatively smooth end throughout the circumference of the major portion of such post, which consists in placing such post in a pressure exerting means, and exerting pressure upon the post in order to force a portion of the metal thereof outwardly, and shaping such projecting portion into substantially a cutting edge.

7. The method of making a binding post having threads at one end and a relatively smooth end throughout the circumference of the major portion of such end, and which consists in placing such smooth portion between a pair of dies and exerting pressure through said dies upon the stock in order to form a longitudinally extending rib, and also exerting pressure in order to taper said rib.

8. The method of making a binding post which consists in forcing a portion of the metal thereof outwardly, and forming a portion of said metal with a tapered face.

9. The method of making a binding post which consists in forcing a portion of the metal thereof outwardly, and exerting pressure on a part of said metal to form a tapered face.

10. The method of making a binding post which consists in forcing a portion of the metal thereof outwardly, and forming a cutting edge on said metal.

Signed at Cleveland, county of Cuyahoga, and State of Ohio, this 13th day of December, 1920.

OSCAR AUGUST SMITH.