No. 663,772. Patented Dec. 11, 1900.

J. H. MILLETT

MEANS FOR ATTACHING WOODEN HANDLES TO METAL SPINDLES.

(Application filed Dec. 2, 1897. Renewed Nov. 13, 1900.)

(No Model.)

Fig. 1.

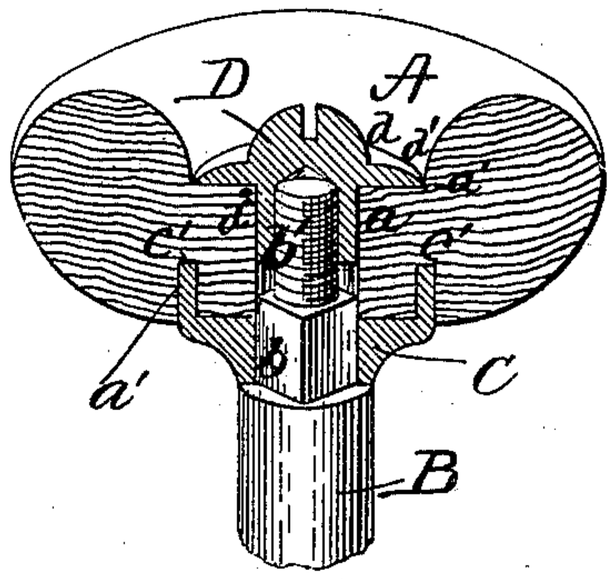
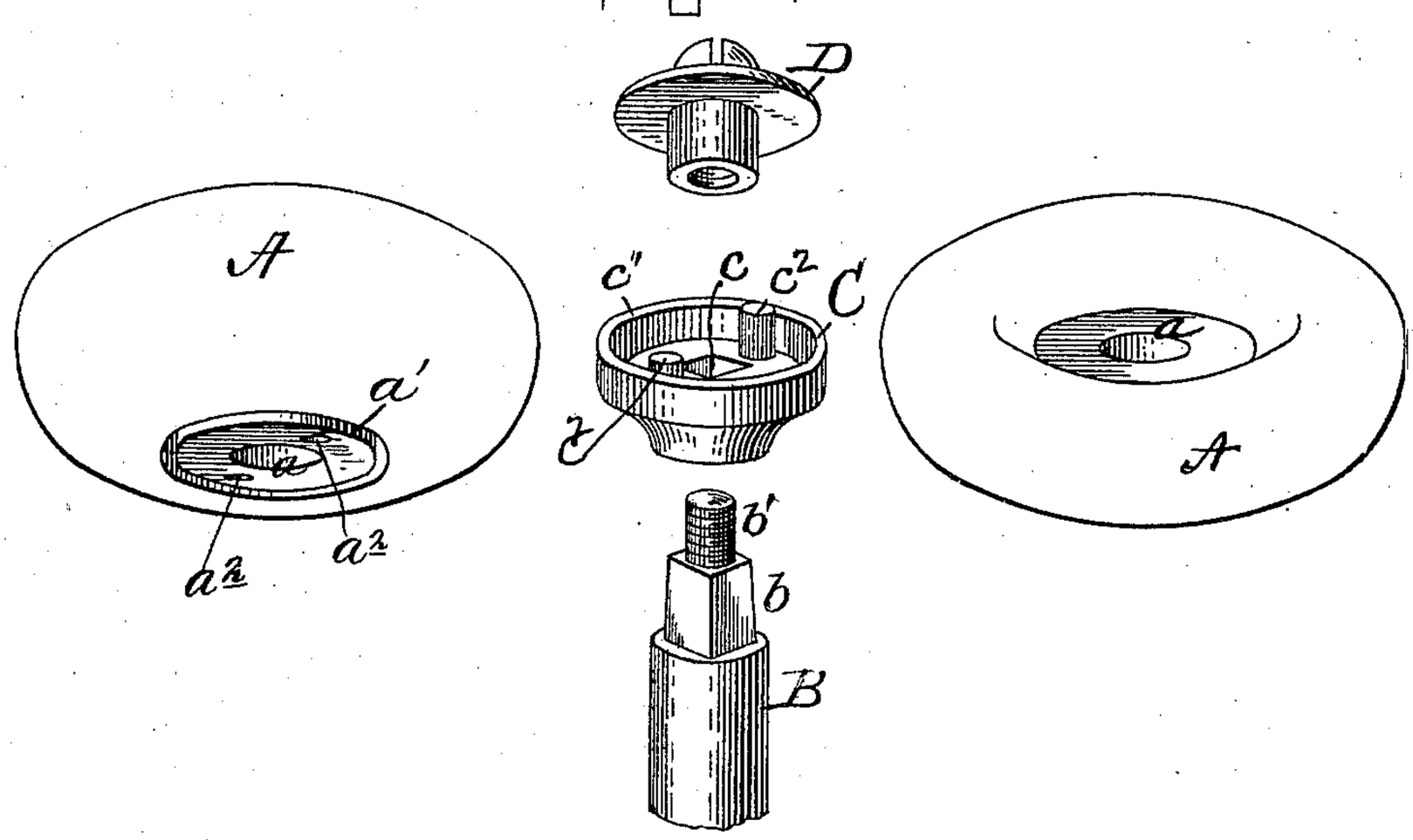


Fig. 2.



WITNESSES.

L. L. Durand.

George J. Weber.

INVENTOR.

Joshua H. Millett.

per W. H. Singleton

atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSHUA H. MILLETT, OF MALDEN, MASSACHUSETTS, ASSIGNOR TO THE CROSBY STEAM GAGE AND VALVE COMPANY, OF BOSTON, MASSACHUSETTS.

MEANS FOR ATTACHING WOODEN HANDLES TO METAL SPINDLES.

SPECIFICATION forming part of Letters Patent No. 663,772, dated December 11, 1900.

Application filed December 2, 1897. Renewed November 13, 1900. Serial No. 36,408. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA HOWARD MILLETT, a citizen of the United States, residing at Malden, in the county of Middlesex and State of Massachusetts, have invented a certain new and useful Improvement in Means for Attaching Wooden Handles to Metal Spindles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a new and useful improvement in means for attaching wooden handles to metal spindles.

Metal spindles provided with wooden handles are well known in the art and various means for attaching the two together have been devised; but in all such devices brought to my attention there has been one serious defect, and that is that the wooden handles become broken in use and split off from the spindle, rendering the spindle difficult to be managed or requiring new handles to be placed thereon.

The object of the present invention is to provide such devices with means whereby the breaking of the handles is sensibly diminished and should they split the several parts are held together and do not fall apart.

To this end the invention consists in the construction hereinafter pointed out, wherein a wooden handle and metal spindle are connected together and held by a holder secured to the spindle and engaging the handle and a nut holding the spindle and handle together, as hereinafter set forth.

In the annexed drawings, Figure 1 represents a view of the device, partly in section. Fig. 2 represents the several parts of the device separated and ready to be put together.

In the annexed drawings the letter A represents the wooden wheel or handle provided with a central bore a and upon the under side with a circular groove a', placed circumferentially around the bottom of the bore a', and between the groove and bore with holes a^2 a^2. The letter B represents the metallic spindle, having at its top a square portion b and above that a threaded portion b'. Placed upon the end of the metal spindle B is the holder C, having a square-shaped bore c, corresponding to and fitting the square-shaped portion b of the metal spindle B. Projecting upwardly from the holder C is a rim c' and within the rim standards c^2. A nut D is adapted to the threaded end b' of the metal spindle B. This nut D has a flange d, the edge d' of which bears down into the circular shoulder or groove-like depression a' around the hole a. The nut D also is provided with a sleeve d^2, which extends down into the hole a, surrounding the end b' of the stem B, thus forming a bearing between this stem and the handle A.

The parts are assembled by placing the rim c' of the holder C into the groove a' and the standards c^2 into the holes a^2. The metallic spindle B is united to the handle by slipping the handle, with the holder C, upon the end of the spindle B, the bore c fitting the square-shaped portion b. The parts are then secured together by the nut D, which is screwed down upon the threaded portion b' of the spindle B. A device of this kind effectually prevents the wooden handle from splitting and the parts falling off. The rim c' is a binder, which holds the fiber of the wooden handle together. As the holder C is secured to the spindle B and the rim c' engages the handle A, all three are firmly united, so that any wrench or strain on the handle is resisted by the union of the three parts and the handle is not liable to be twisted off from the spindle. So firmly does it do this that it effectually prevents any ordinary injury from separating them, and should they become injured, split, or broken this binder will effectually hold the parts together and prevent them from falling apart.

I am aware of United States Patent No. 413,313, in which is shown a metal spindle, a wooden handle, a metal ring fitting into a kerf in the under side of the handle, and a washer in an upper depression of the handle, the washer held by a screw to the spindle.

In my device the binder or holder is secured to the spindle so that the handle, spindle, and holder are bound together. When this binder is thus connected or secured to the handle, should the wood split or break into pieces

still these pieces would be held together with the handle. Moreover, any strain on the holder is transferred to the spindle, the parts being thus securely bound together.

I am aware that it has been proposed to strengthen wooden handles by means of a binder, the object being to prevent the wood from splitting; but in such devices the binder has either been separate from the spindle or where attached to the spindle has not fitted itself circularly into the wooden handle.

To better insure the wooden handle from splitting and to prevent the crowding or twisting of the fibers of the wood, the preferable way of making the circular binder is with its sides parallel. In this way the fibers maintain their natural position and are not crowded together.

Having described my invention, what I claim is—

The combination of the metal spindle B; the holder C secured to the end of the spindle B and having the circular rim c'; the nut D having the flange d with edge d' and the sleeve d^2 the latter surrounding the end b' of the spindle B, and the wooden handle A, having the circular groove a' into which the rim c fits, the depression a' into which the edge d' bears and the central bore into which fit the spindle B and sleeve d^2.

In testimony whereof I affix my signature in presence of two witnesses.

JOSHUA H. MILLETT.

Witnesses:

ARTHUR L. BOWKER,

E. M. TAYLOR.