A. C. Kasson:

Tool-Handle Bushing,

No. 85,230. Patented Dec. 22, 1868.

Fig. 1.

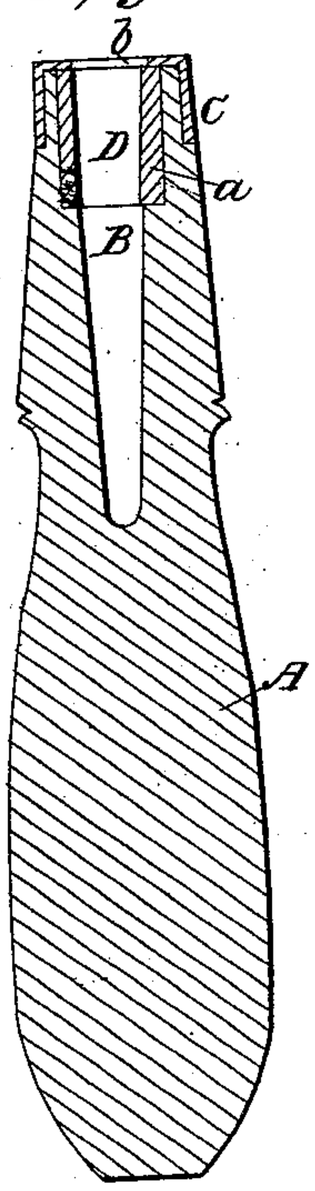


Fig. 2.

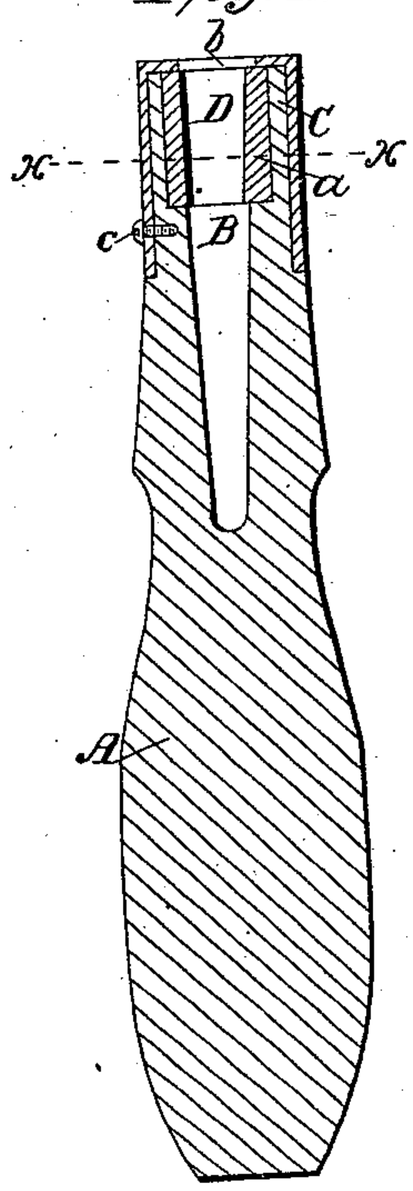


Fig. 4

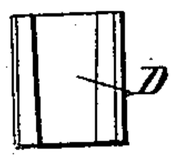


Fig. 3.

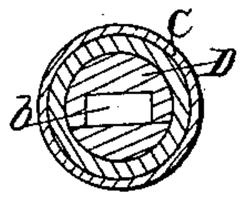
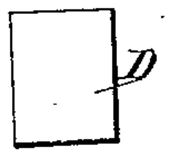


Fig. 5.



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AMASA C. KASSON, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO HIMSELF AND NELSON C. GRIDLEY, OF SAME PLACE.

Letters Patent No. 85,230, *dated December* 22, 1868.

IMPROVEMENT IN BUSHING FOR TOOL-HANDLES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, AMASA C. KASSON, of the city of Milwaukee, in the county of Milwaukee, and State of Wisconsin, have invented certain new and useful Improvements in File and Tool-Handles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention relates to improvements in tool-handles, and consists in bushing or packing their chambers with rubber or gutta-percha, for the purpose of holding the tool firmly and securely in its seat, and at the same time admit of its being conveniently and easily inserted or removed.

In the drawings—

Figures 1 and 2 are longitudinal sections of my handle, with the bushing inserted, and with cap-ferrules of different lengths.

Figure 3 is a cross-section in the line *x–x* of fig. 2.

Figure 4 is a longitudinal sectional view of the rectangular, and

Figure 5, a side view of the circular bushing.

It is well known to all who have occasion to use the same handle for different tools, or the same handle for the same tool, that the chamber often becomes smooth or enlarged, so that the tool is constantly working loose, and has to be frequently driven back to its seat, and sometimes wedged there, in order to keep it in its place.

To obviate this difficulty, tool-handles are often provided with set-screws, spring-clamps, or other devices for conveniently holding the tool in place, and permitting its removal, and the insertion of another, when desired.

My invention, which consists in the insertion of vulcanized rubber in the chamber of the tool-handle, is for the purpose of securing the same results at far less trouble and cost, and this is done by the friction and elasticity of the rubber, as hereafter explained.

I construct my handle A out of any suitable material, preferring wood, and in any of the usual forms.

The end designed to receive the tool, I provide with an oblong tapering chamber B, as shown in figs. 1 and 2.

The outer end of the chamber B, and extending a short distance within it, depending upon the size and purpose of the handle, I enlarge, so as to leave a shoulder, *a*, at the inner end of the enlargement, as shown in the same figures.

Within this enlargement, I insert rubber or gutta-percha bushing, D, long enough to extend through its entire length, and thick enough to not only fill the enlargement, but to extend a short distance into the original chamber. When the enlarged chamber is circular, or its sides of the same width, the bushing may be of the same thickness, but when these sides differ in width, the bushing opposite the wider sides may be correspondingly thicker than it is opposite the narrower ones. When the enlarged chamber is circular, with circular bushing, as shown in fig. 5, inserted, and having a rectangular opening, as shown in fig. 3, it is obvious that the bushing will be thickest opposite the longest sides of the opening.

The bushing, when inserted, will rest against the shoulder *a*, and be prevented by it from being shoved further into the chamber.

After it is inserted, I fit on the end of the handle, and over the bushing, for the double purpose of strengthening the handle and securing the bushing, a cap-ferrule, C, with an opening, *b*, in its top, corresponding in shape with the opening through the bushing, as shown in figs. 1, 2, and 3, and, if desired, make it long enough to receive a screw, *c*, as shown in fig. 2.

In using my handle, I insert the shank of the tool in the opening, *b*, and drive it to its seat. As it passes in, and while being forced home, the bushing will be crowded back, but, when fairly in its place, the bushing, by its elasticity, as well as by the friction nature of its surface, will clasp it tightly, and prevent its slipping or working loose. The tapering chamber, in connection with the bushing, will also serve to centre the tool in the handle.

When desired, the tool may be readily removed, and another inserted.

In this way I am able to produce a cheap and convenient handle for tools, which can be readily attached or removed, and at the same time will not slip or work loose.

Having thus described my invention,

What I claim, is—

The packing or bushing D, composed of rubber or gutta-percha, either raw or vulcanized, when applied to a tool-handle, substantially as and for the purpose described.

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Witnesses:

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