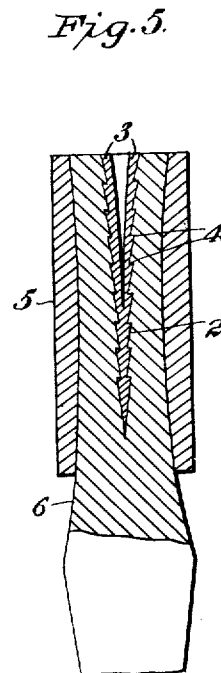
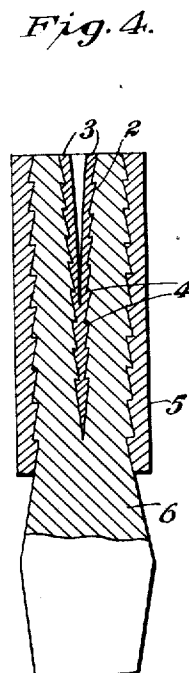
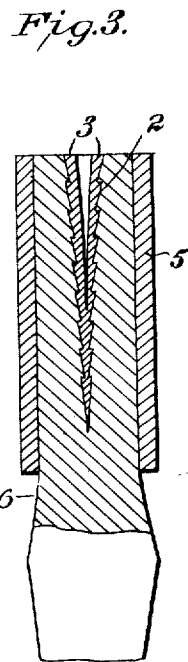
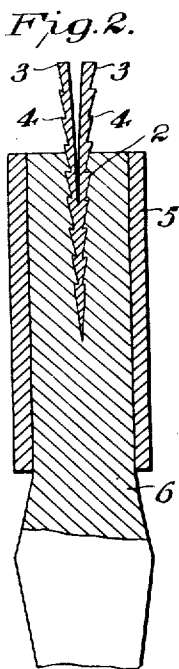
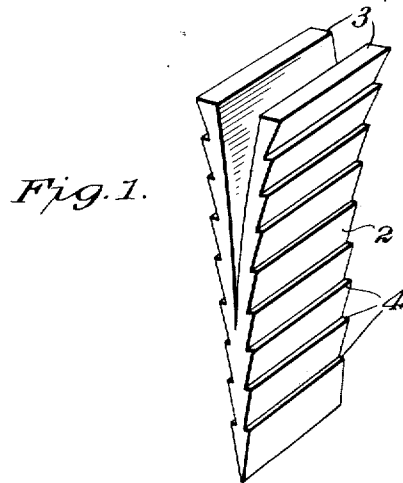


J. L. CLARKE.
 ATTACHING WEDGE.
 APPLICATION FILED MAY 10, 1909.

954,669.

Patented Apr. 12, 1910.



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UNITED STATES PATENT OFFICE.

JOHN LEE CLARKE, OF ALBUQUERQUE, TERRITORY OF NEW MEXICO.

ATTACHING-WEDGE.

954,669.

Specification of Letters Patent.

Patented Apr. 12, 1910.

Application filed May 10, 1909. Serial No. 495,008.

To all whom it may concern:

Be it known that I, JOHN LEE CLARKE, citizen of the United States, residing at Albuquerque, in the county of Bernalillo and Territory of New Mexico, have invented certain new and useful Improvements in Attaching-Wedges, of which the following is a specification.

My invention relates to improvements for fastening the heads of tools upon the handles thereof, the object being to provide means for wedging the handle into the head of the tool, and for tightening the handle therein as the wood becomes compressed through the use of the tool.

The invention consists broadly in the use of a split resilient wedge whose opposite faces are preferably ratchet-toothed so as to prevent any withdrawal of the wedge, the wedge being forced into the end of the handle as the handle becomes compressed.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a perspective view of my improved locking wedge; Fig. 2 is a longitudinal section of the upper end of a tool handle and socket, showing the wedge partly inserted; Fig. 3 is a like view, showing the wedge fully inserted; Figs. 4 and 5 are like views showing modifications in the handle.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to Fig. 1, 2 represents a wedge of resilient material such as steel which is longitudinally split from its broader end downward nearly to its extremity, the two sides of the wedge being forced outward by the resiliency of the material of the wedge. In the article itself, before insertion into a tool handle, the two sides 3 are preferably outwardly curved, as I find that this form resists compression better. The edge of the wedge is of course sharp enough to easily enter the tool handle or the slot which may be cut therein to receive the wedge. The outer faces of the walls of the wedge are ratchet-toothed, said teeth 4 having faces which are upwardly and then inwardly inclined so as to resist any withdrawal of the wedge after insertion.

In Figs. 2 to 5, I have shown my lock-

ing wedge in place. In Fig. 2, 5 designates the socket of any desired handle, such as the socket of an ax, hatchet, or other like device, and 6 the handle thereof. The wedge 2 is shown as inserted into the handle and partly driven into the wood thereof, thus expanding the sides of the handle against the inside face of the socket. As the wood of the handle becomes dry through use, and the tool loose thereon, the wedge is driven further into the wood, thus forcing out the handle and tightening it against the socket. In Fig. 3, the wedge is shown driven in to its full extent. As will be seen, the ratchet teeth on the side faces of the wedge will engage with the wood, and it will be impossible to remove the wedge after once it has been inserted, except by compression of the resilient sides of the locking wedge. This could be done by a powerful tool, but it would be impossible to remove it or the tool head unless this were done. In Fig. 4, the same wedge is used as in Fig. 3, but the interior face of the head is roughened or toothed, as at 7, so that as the wood is forced outward, it will become indented by these teeth and more rigid connection formed between the handle and tool head. In Fig. 5, the interior face of the tool head is convex, and the handle is slightly concave on its sides. My wedge will expand the handle against the convex sides of the head and hold it in absolute engagement therewith. The resiliency of the wedge caused by the sides thereof being divided from each other and then outwardly bent, permits it to be inserted with less danger of splitting the wood of the handle than would be the case were the wedge solid, and at the same time the resiliency of the two sides causes these two sides to be forced outward, and causes the tool to be embedded in the wood. This would not be the case were the wedge solid. The teeth would simply score the wood longitudinally, each successive tooth enlarging this score somewhat, but unless the wood were very elastic, there would be no embedding of the teeth in the wood, and as a consequence, the wedge would be much more wood of the handle than would be the case with my resilient wedge.

It will be seen that my device can be made as a separate article of manufacture, and sold separate from the tools. They do not require to be put in place by machinery, but may be driven in by anyone. While I

have shown my device as applied to tools, and find it of especial value for this purpose, I do not wish to be limited to this, as it would be possible to use the split resilient wedge whenever it was desired to connect a wooden shank to a rigid or metallic socket.

Having thus described the invention, what is claimed as new is:—

1. As an article of manufacture, a flat wedge of resilient material longitudinally split for a portion of its length from its thick end toward its thin end to form two resilient wings, the exterior faces of said wedge being formed with teeth inclined toward the butt end of the wedge.

2. The combination with a wooden shank and a metallic socket surrounding the same, said socket having inwardly toothed side walls, of a wedge driven into the end of said shank, said wedge being formed of resilient material longitudinally split for a portion of its length to form two resilient wings.

3. The combination with a wooden shank and a metallic socket surrounding the same, said socket having inwardly toothed side walls, of a wedge driven into the end of said shank, said wedge being formed of resilient

material longitudinally split for a portion of its length from its butt end toward its thin end to form two wings, said wings being divergently bent from each other, said wings on their outer faces being provided with teeth inclined toward the butt end of the wedge.

4. The combination with a wooden shank and a metallic socket surrounding the same, said socket having inwardly toothed side walls, of a wedge driven into the end of said shank, said wedge being formed of resilient material longitudinally split for a portion of its length from the butt end of the wedge toward the narrow end to form two wings, said wings being divergently curved from each other, said wings on their outer faces being provided with teeth inclined toward the butt end of said wedge, the teeth on said socket also being inclined toward the butt end of the wedge.

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

JOHN LEE CLARKE. [L. S.]

Witnesses:

JOHN B. McMANUS,
HUGH J. COLLINS.