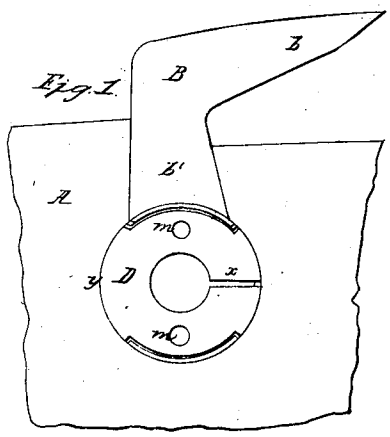
C. DISSTON.

SAW.

No. 63,024. Patented Mar. 19, 1867

Fig. 1.



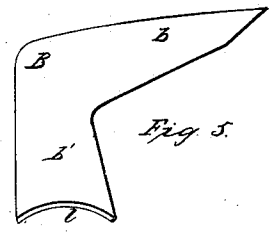


Fig. 5.

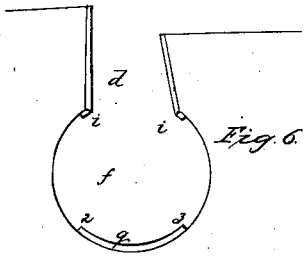


Fig. 6.

Fig. 4.

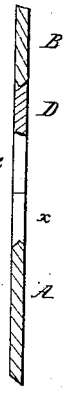
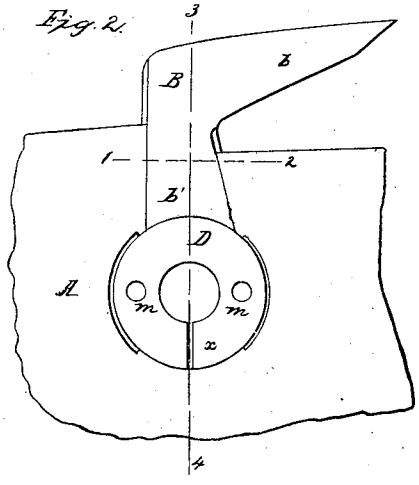


Fig. 2.



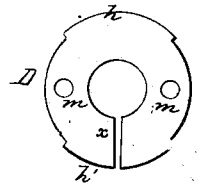
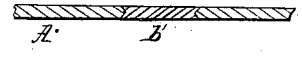


Fig. 7.

Fig. 3.



Witnesses:

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CHARLES DISSTON, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 63,024, *dated March* 19, 1867.

IMPROVEMENT IN SAWS.

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, CHARLES DISSTON, of Philadelphia, Pennsylvania, have invented an improved Mode of Securing Detachable Teeth to the Blades of Saws; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention consists of a mode, described hereafter, of securing detachable teeth to the blades of saws, whereby the use of rivets and other appliances, which tend to wound and warp the blades, is obviated, and the removal and replacing of teeth rendered easy of accomplishment.

In order to enable others skilled in the art to make my invention, I will now proceed to describe the manner of carrying it into effect.

On reference to the accompanying drawing, which forms a part of this specification—

Figure 1 represents a detachable saw-tooth, and part of a saw-blade, and illustrates my improved mode of securing the former to the latter.

Figure 2 the same as fig. 1 in section.

Figure 3, a section on the line 1–2, fig. 2.

Figure 4, a section on the line 3–4, fig. 2; and

Figures 5, 6, and 7, views of the several parts detached from each other.

Similar letters refer to similar parts throughout the several views.

A represents part of the blade of a saw, B one of the detached teeth, and D the retaining ring or washer.

The tooth consists of the cutting projection *b* and the arm *b'*, the latter being secured to the blade. The arm *b'* is of the tapering or wedge form represented, and is adapted to the tapering opening *d* (fig. 6) in the blade, the two edges of the arm having V-shaped grooves, corresponding to V-shaped ribs formed on each edge of the said tapering opening *d*, into which the arm can be fitted by first depressing the tooth, then adjusting the grooves to the projections, and then elevating the tooth so that its arm becomes wedged in the opening. In order to retain the tooth in its position, I use the ring or washer D, which is adapted to a circular opening, *f*, fig. 6, in the blade.

The lower edge of this opening, from 2 to 3, consists of a V-shaped rib, *q*, there being two similar but smaller ribs, *i i*, at the upper edge of the said opening *f* where the latter communicates with the tapering opening *d*, and these smaller ribs, when the tooth is in place, form continuations of a similar-shaped rib, *t*, formed on the lower end of the tapering arm *b'* of the tooth.

The ring D has two projections, *h* and *h'*, fig. 7, with V-shaped grooves, adapted to the ribs on the edge of the opening *f* and under side of the arm *b'* of the tooth.

This ring and the opening *f* in the blade are of such dimensions that the former can be pushed freely into the latter, when the ring is in the position shown in fig. 1, after which the ring is turned until the V-shaped ribs *i i*, on the edge of the opening *h*, together with the rib *t* on the under side of the arm *b'* of the tooth, fit into the groove of one of the ribs *h* of the ring, and the rib *q* on the lower edge of the opening *f* fits into the groove of the other projection, *h'*, of the ring.

Not only is the tooth now firmly held up to its place, but the retaining ring itself is locked to the blade of the saw, as it cannot be pushed out laterally, and as no action of the same can turn it round.

I split the ring at one point, *x*, and then hammer it at *y*, fig. 1, so that it may be slightly expanded in diameter and require to be contracted before it is introduced to its place. It will, consequently, bind hard against the edge of the opening *f*, and cannot be turned round without a considerable effort. Two holes, *m m*, may be bored in the ring for the reception of projections on a suitable key, by means of which the ring may be turned round.

It will be seen that detachable teeth can be thus secured to the saw without the aid of rivets or screws, and that all the manipulation necessary in removing and replacing a tooth is the simple turning of the ring.

I claim as my invention, and desire to secure by Letters Patent—

The securing of detachable teeth in the saw-plates by means of the tapering arms *b'* of a saw-tooth, and the ring or washer D, when both are constructed and adapted to openings in a saw-blade, substantially in the manner and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHAS. DISSTON.

Witnesses:

H. HOWSON,

JOHN WHITE.