J. S. RUSSELL.

MORTISING-CHISELS.

No. 194,180. Patented Aug. 14, 1877.

Fig. 1

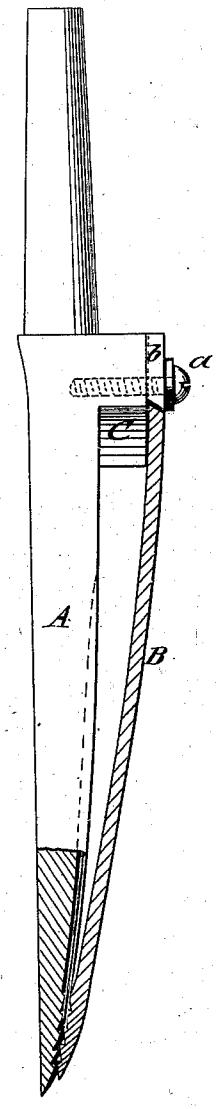


Fig. 2

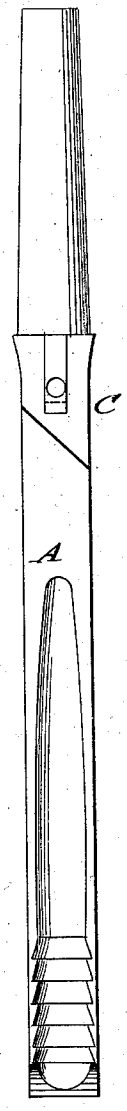
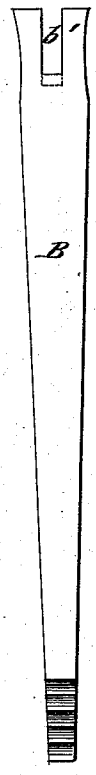


Fig. 3



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JASPER S. RUSSELL, OF INDIANA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND JAS. FEATH, OF SAME PLACE.

IMPROVEMENT IN MORTISING-CHISELS.

Specification forming part of Letters Patent No. **194,180**, dated August 14, 1877; application filed June 11, 1877.

To all whom it may concern:

Be it known that I, JASPER S. RUSSELL, of Indiana, in the county of Indiana and State of Pennsylvania, have invented a new and Improved Mortising-Chisel, of which the following is a specification:

In the accompanying drawings, Figure 1 represents a sectional side elevation of my improved mortising-chisel; Fig. 2, an end view of the same with spring-piece detached, and Fig. 3 a bottom view of spring-piece.

Similar letters of reference indicate corresponding parts.

The invention refers to an improved mortising-chisel that removes the chips as fast as they are cut in reliable and effective manner; and it consists of a mortising-chisel having a spring-piece attached to the tongue on the beveled shank-piece of the chisel, said spring being extended forward to the cutting-point of the chisel, and being pointed at the end and serrated at the under side, where it forms contact with the fluted and serrated chisel.

In the drawing, A represents the mortising-chisel, and B a spring-piece that is fastened to the back of the chisel and extended forward to or near the cutting-point of the same.

The spring B is fastened to the raised shank-piece C of the chisel by a screw, *a*, the slotted rear end of the spring fitting on a tongue, *b*, of the shank-piece, said tongue having a beveled front shoulder, which binds on the correspondingly-beveled rear part of the slot *b'*. The tongue takes up thereby part of the strain of the spring off the screw, and produces, with the screw, the reliable connection of spring and chisel.

The shank-piece C is forged to the shank of the chisel, and beveled off at the front, for the purpose of throwing the chips out from under the spring by their striking against the bevel of the shank-piece C, the chips being forced upward by the following chips as they are taken up successively by the strokes of the chisel.

The back of the chisel is fluted and serrated at the lower end, where it forms contact with the similarly-serrated under side of the spring.

The point of the spring is sharpened, the bevel of the upper side being equal, or nearly so, to the bevel of the under side next to the chisel, so as to insure thereby the passing of the chips between the chisel and the spring, the chips striking the beveled or sharpened end, and being conducted under the spring.

The spring is nearly straight, and receives the force of the stroke at the end, so as to resist, in effective manner, the strain to which it is exposed. The cutting-edge of the spring cuts its way into the wood until the chisel moves forward, when it strikes in the track of the chisel.

The serrations of the spring and chisel catch and hold the chips in a superior manner, so as to gradually pass them back between chisel and spring by the successive strokes, until they come in contact with the beveled deflecting shank-piece, which throws the chips sidewise out of the chisel in uniform manner, and in the same proportion as they are taken up at the points.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A chisel, A, having a beveled shank-piece, C, and a tongue, *b*, with beveled front shoulder, in combination with a chip-holding spring, B, having slotted rear end, and with a fastening-screw, *a*, substantially in the manner and for the purpose specified.

2. The combination, with a chisel, A, being fluted at the back and serrated near the point, of a serrated and pointed spring, B, for reliably holding the chips, substantially as described.

JASPER S. RUSSELL.

Witnesses:
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