

(No Model.)

H. RUPPERT.
MORTISING CHISEL.

No. 571,400.

Patented Nov. 17, 1896.

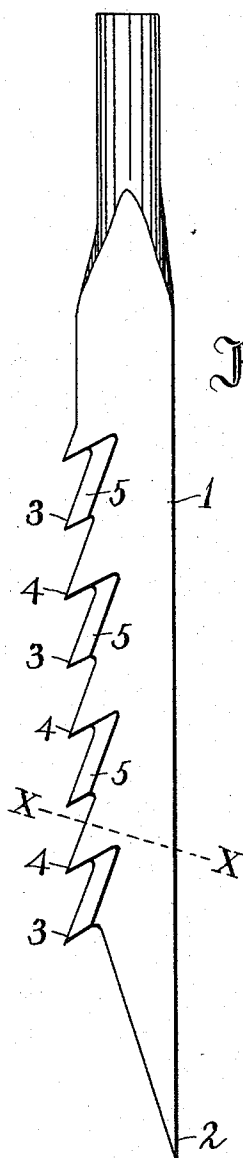


Fig. 1

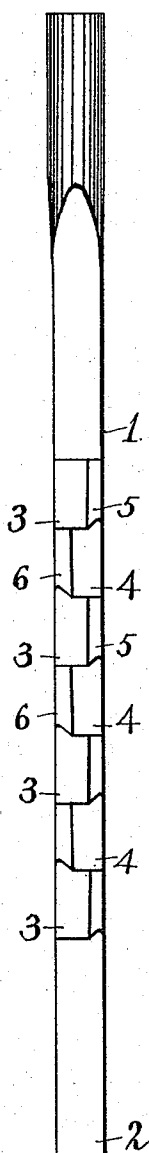


Fig. 2

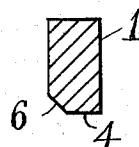


Fig. 3

WITNESSES:

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HENRY RUPPERT, OF SEBEWAING, MICHIGAN.

MORTISING-CHISEL.

SPECIFICATION forming part of Letters Patent No. 571,400, dated November 17, 1896.

Application filed August 17, 1896. Serial No. 603,027. (No model.)

To all whom it may concern:

Be it known that I, HENRY RUPPERT, a citizen of the United States, residing at Sebe-
waing, in the county of Huron and State of
Michigan, have invented certain new and use-
ful Improvements in Mortising-Chisels; and
I do 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, ref-
erence being had to the accompanying draw-
ings, and to the figures of reference marked
thereon, which form a part of this specifica-
tion.

My invention is a mortising-chisel, its ob-
ject being to provide means for clearing the
mortise of shavings during the operation, so
that when the mortise is formed no shavings
will be left within it, as is common. In the
ordinary method of cutting a mortise a large
part of the shavings is left within the mor-
tise, and a separate tool has to be taken and
inserted into the mortise to drive the shav-
ings out, often wedging the shavings between
the tool and the mortise and cracking open
the stile or in some other way ruining the
mortise. With the tool hereinafter described
the mortise is cut clean and smooth, and with
the last stroke of the chisel all of the shav-
ings have been expelled.

In the drawings, Figure 1 is a side eleva-
tion. Fig. 2 is a front view. Fig. 3 is a cross-
section on line X X of Fig. 1.

1 is the chisel, and 2 the cutting-point of
the chisel. The rear edge of the chisel is pro-
vided with a number of teeth 3 and 4, the
points of the teeth extending downward and
from the back of the chisel.

Each tooth has a bevel upon one side of the
rear of the tooth, sloping toward the side of
the chisel, the bevel alternating on the teeth—
that is, the tooth 3 has a bevel upon the front
side, as shown in the drawings, and the tooth
4 has a bevel upon the opposite side.

In Fig. 3, 6 represents the bevel in cross-
section. The points of these teeth extending
downward, it is obvious that they will cut
their way through any obstruction, such as
the shavings in their path.

It has been common to form a groove in the
back of the chisel for the purpose of enabling
the chisel to pass more freely through the

shavings, the shavings wedging themselves
up through the groove, and serrations have
been cut in the edges of the groove with walls
sloping upward instead of downward, as the
walls of the teeth do in my tool, for the pur-
pose of engaging and carrying the shavings
out of the mortise as the tool is withdrawn,
while the object of my tool is to push the
shavings through the mortise when the hole
is finally cut through.

In operating a mortising-chisel it is com-
mon to commence at one side of the space to
be mortised and cut in with one stroke of the
chisel a short distance, the second stroke cut-
ting a little deeper and farther to the oppo-
site side of the mortised space, the third stroke
cutting still deeper, and so on until a space
has been cut out somewhat triangular in form.
Then the mortising-chisel is reversed in the
chuck, and the first blow commences at the
bottom of the mortise already cut and works
backward, as previously described, across the
mortise, cutting out the balance of the space
to be mortised. If, however, the material
through which the mortise is to be cut is wide,
it is common to cut the mortise but half-way
through upon one side and then turn the piece
over and cut from the other side in the same
manner, reversing the tool as before. In
using my tool, however, it will be noticed that
instead of starting the chisel four times in
order to complete the mortise, twice upon each
side of the mortise, my chisel only makes three
starts, twice upon one side and once upon the
other, the mortising-machine being arranged
so as to give a long stroke to the lever.
Therefore when the tool is reversed in the
chuck and proceeds to cut its way back across
the mortise it is forced clear through the
piece, the teeth 3 and 4, as described, engag-
ing and carrying along with the chisel in its
downward stroke any shavings that may be in
its path. Upon the upper stroke of the chisel
any shavings that may have been wedged into
the teeth will be forced out by the upward
movement of the chisel, the sloping walls of
the teeth described aiding the free extraction
of the chisel from the shavings.

What I claim as new, and desire to secure
by Letters Patent, is—

1. A mortise-cleaning chisel comprising a
chisel having teeth on the back edge thereof

and above the sloping side of the chisel, each tooth cut with its sloping side extending to one side of the chisel, the teeth alternating up the chisel edge, whereby the sloping side of one tooth will be upon one side of the chisel, the sloping side of the next tooth above or below upon the opposite side of the chisel, substantially as specified.

2. In a mortise-cleaning chisel, teeth upon the back edge of the chisel the proper distance above the sloping wall of the chisel, the teeth sloping downward and outward, each tooth having from its upward slant a beveled portion extending to the side of the chisel.

3. In a mortising-chisel, rake-teeth upon the back edge of the chisel, each tooth extending part way across the edge of the chisel and having the beveled wall extending to the side of the chisel, the bevel upon one tooth

being opposite to the bevel upon the other, substantially as specified.

4. In a mortising-chisel, rake-teeth upon the back of the chisel, each tooth extending part way across the edge and alternating, substantially as specified.

5. A mortising-chisel having a cutting edge, and above the sloping side of the chisel a number of drag-teeth, each tooth extending part way across the edge of the chisel with their cutting edges arranged in opposite sides thereof and in opposition to each other, substantially as specified.

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

HENRY RUPPERT.

Witnesses:

JOHN RIEDEL,
OLIN PENGRA.