(No Model.)

W. REINHARD, Sr. & C. KALANQUIN.

CHISEL SHOE.

No. 327,312. Patented Sept. 29, 1885.

Fig. 1.

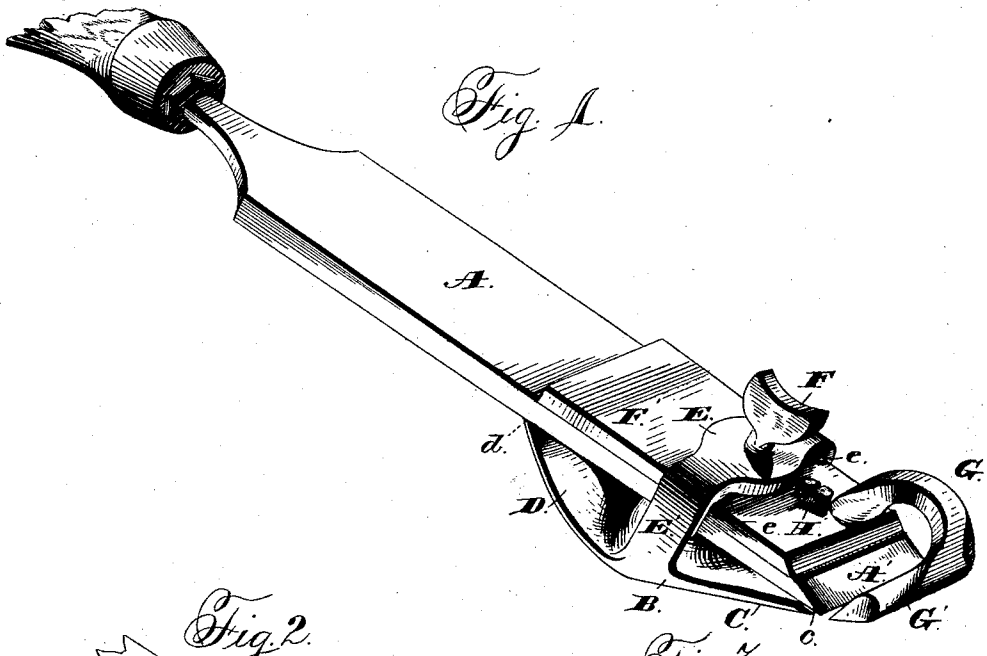


Fig. 2.

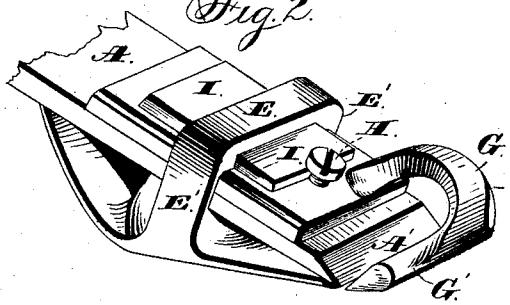


Fig. 3.

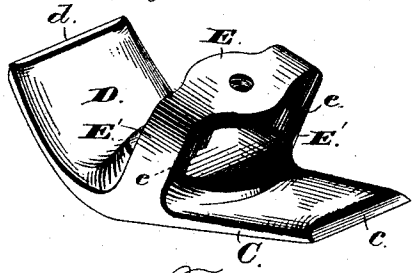


Fig. 4.

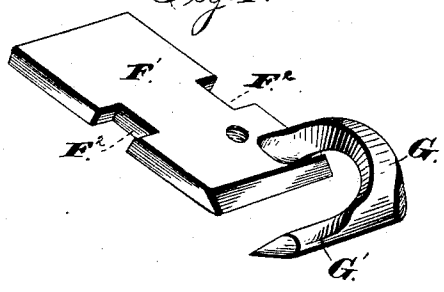
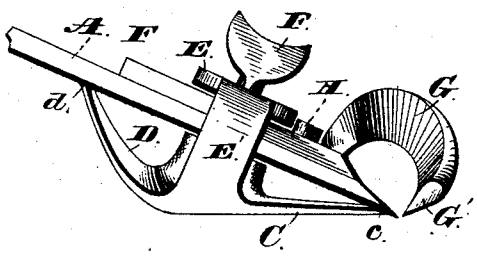


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM REINHARD, SR., AND CHARLES KALANQUIN, OF EAU CLAIRE, WIS.

CHISEL-SHOE.

SPECIFICATION forming part of Letters Patent No. 327,312, dated September 29, 1885.

Application filed June 18, 1885. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM REINHARD, Sr., and CHARLES KALANQUIN, of Eau Claire, in the county of Eau Claire, and in the State of Wisconsin, have invented certain new and useful Improvements in Chisel-Shoes; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 shows a perspective view of our invention as applied to a chisel; Fig. 2, a similar view of a slightly-modified form thereof; Fig. 3, a detail perspective view of the shoe detached; Fig. 4, a similar view of the gage-plate detached, and Fig. 5 a view in side elevation of a chisel with our shoe and gage attached.

Letters of like name and kind refer to like parts in each of the figures.

The object of our invention is to provide an attachment for chisels by which a chisel may be adapted for use as a spokeshave, block-plane, or framing-sleek, being capable of use in places where the work could not be got at with such tools as ordinarily made; and to this end our invention consists in the construction, arrangement, and combination of parts as hereinafter specified.

In the drawings, A designates the blade of the chisel, of the usual and well-known form, having the beveled cutting-edge A′. Such blade, as is usual, tapers slightly down toward the cutting end. This taper serves a very useful purpose with our attachment, as will be shown hereinafter fully.

B designates the sole-plate or face part of the chisel-shoe. On its lower side it is formed with two longitudinally-sloping faces, C and D. The face C, which is the forward one, is longer than the other, sloping upward and forward from a line to the rear of the middle of the shoe. As shown in the drawings, the two faces are relatively so inclined as to form an obtuse angle. The upper ends of these inclines are formed so as to make the two bearing-surfaces *c* and *d* in the same plane. This sole-plate or face part B is formed with the upright loop or inverted-U-shaped piece E extending across it, as shown in the drawings. The lower ends of the legs E′ E′ of this loop are rabbeted or cut away on their inner sides from the points where they join the sole-plate. The upper ends of these rabbets *e e* are preferably made square, or at right angles to the legs.

Through the top of loop E is tapped the set-screw E′, for a purpose to be hereinafter set forth.

The blade A of the chisel, with the bevel of its cutting-edge upward, is passed through the loop E, with its lower side resting upon the bearing-surfaces *c* and *d* at the forward and rear ends of the sole-plate, so that its cutting-edge extends a little beyond the front end of such plate. The sides of the chisel-blade pass through and are situated in the rabbets *e e* in the legs of the loop or inverted-U piece. The gage-plate F′ also passes through the loop, being situated on top of the chisel-blade, and being provided with the recesses F^2 F^2 in its sides, to receive and embrace the upper portions of the legs of the loop E, so as to be held by such legs from longitudinal movement through the loop. At its forward end this plate is provided with the gage-arm G, extending up from one side of the top of the plate, preferably the left side looking from the rear end of the plate. This arm is curved upward and then forward and downward to a point just above and forward of the edge of the chisel when the chisel-blade is in place, as described, and the gage-plate is resting thereon. The forward end of this arm is, as shown, provided with the arm or side extension, G′, extending entirely across in front of and above the cutting-edge of the chisel. The forward side of this transverse arm is preferably rounded, as shown, but can be beveled, if desired.

The lower side or edge of the arm is, as shown, parallel to, above, and in front of the edge of the chisel.

The inner side of the gage-arm, at and near the point at which it joins the gage-plate, is preferably beveled or inclined from the rear side of the arm forward and outward.

To adjust the height of the transverse arm G′ of the gage with reference to the chisel-edge, we have provided a small set-screw, H, tapped through the forward part of gage-plate and adapted to bear upon the chisel-blade.

The set-screw F, tapped through the top of the inverted-U piece E, engages and bears upon the top of gage-plate F, forcing it down upon the chisel-blade. When the gage-plate has thus been forced and is held down upon the chisel-blade, it cannot move or be forced back along the blade, because the latter, on account of its taper form described, grows thicker to the rear of than under the gage-plate.

Instead of the set-screw for forcing and holding the gage-plate down upon the chisel-blade, we contemplate using a wedge, I, adapted to be forced or driven under the top of the loop E, between such top and the gage-plate.

We have shown the set-screw F as provided with a head or thumb-piece; but of course the shape of the screw can be changed as desired without departure from our invention.

In practice our chisel-shoe is used as follows: The gage-plate, which, as shown, is so wide as to just pass through between the rabbeted lower portions of the legs of the loop or inverted U on the sole-plate, is slid into the loop until the recesses in its sides come opposite the sides of the loop. The plate is then raised, the upper unrabbeted portions of the sides or legs of the loop entering and being engaged by said recesses. The chisel-blade is then slid under the gage-plate until its cutting-edge extends the desired distance beyond the front end of the sole-plate. The set-screw P is then screwed down to force and hold the gage-plate firmly down upon the chisel-blade, and cause such plate to hold the blade between it and the bearing-surface at the ends of the sole-plate; or, where a wedge is used, said wedge is driven between the top of the loop E and the gage-plate for the same purpose. As set forth above, the shoe cannot then be moved backward along the chisel-blade, because of the taper shape of the latter. The blade then having been set so that its edge projects the desired distance beyond the forward end of the sole-plate, it will, after the parts are tightened up, as described, remain so set without change as long as desired.

The gage, formed as described, engages the surface of the wood being cut, and prevents the chisel from running into the wood, and regulates the thickness of the shaving or chip taken off.

The inclined inner side of the gage-arm at and near the point where it joins the gage-plate serves to turn the shavings to one side to clear the chisel and shoe.

The small set-screw can be used to raise or lower the gage, as desired, by screwing it down against the chisel-blade or unscrewing it. The thickness of the shaving can thus be accurately gaged and difference in thickness of the chisels used can be compensated for.

A chisel provided with our shoe, as described, can be used as a block-plane, spokeshave, or framing-sleek in places where the ordinary forms of such tools could with difficulty or not at all be used.

Having thus described our invention, what we claim is—

1. In a shoe for attachment to a chisel-blade, in combination with the sole-plate, the loop on the upper side thereof extending across the same, the plate extending through the loop, and means, substantially as described, for forcing and holding the plate down toward the sole-plate, substantially as and for the purpose described.

2. In a shoe for attachment to a chisel-blade, in combination with the sole-plate inclined upward toward its ends, the bail or loop on its upper side, the plate situated within and passing through the loop, and means, substantially as described, for forcing and holding such plate down toward the sole-plate, substantially as and for the purpose described.

3. In a shoe for attachment to a chisel-blade, in combination with the sole-plate having the forward portion of its lower face inclined upward and forward, the loop on the upper side of the plate, through which a chisel-blade can be passed, the gage-plate situated in and passing through the loop, the gage arm on the forward end of the plate, and means for forcing and holding the plate down toward the top of the sole-plate, substantially as and for the purpose described.

4. In combination with the sole-plate inclined upward toward each end of the plate, and provided with the loop extending across its upper side, through which a chisel-blade can be passed, the gage-plate situated in and passing through the loop adapted to engage the upper side of the chisel-blade, and provided at its forward end with a gage-arm having its lower side or edge so situated as to stand in front of and above the edge of the chisel-blade passed through the loop, substantially as and for the purpose described.

5. In combination with the sole-plate and the transverse loop on the upper side thereof, having the lower portions of its legs rabbeted on their inner sides to allow of the passage of a chisel-blade resting upon the sole-plate, the gage-plate extending through the upper portion of the loop, and provided with notches or recesses in its sides to engage the upper portions of the legs of the loop, the gage-arm on the gage-plate curved upward, forward, and downward from the forward end of the plate, the set-screw tapped through the forward portion of the plate, and the set-screw tapped through the top of the loop, substantially as and for the purpose described.

6. In combination with the sole-plate having the forward and rearwardly inclined surfaces on its lower side, and the transverse loop on its upper side, with its legs rabbeted on their inner sides at or near their lower ends, the chisel-blade passing through the lower portion of the loop and resting upon the top of the sole-plate with the bevel side of its edge upward, the gage-plate notched at its sides to engage the sides of the loop through which it passes, means, substantially

as described, for forcing and holding such plate down upon the chisel-blade, and the gage-arm extending from the front end of the gage-plate upward, forward, and downward, provided at its forward end with an arm extending parallel with but above and in front of the edge of the blade, substantially as and for the purpose described.

In testimony that we claim the foregoing we have hereunto set our hands this 16th day of April, A. D. 1885.

WILLIAM REINHARD, SR.
CHARLES KALANQUIN.

Witnesses:
TERENCE DEVITT,
WILLIAM FOWLER.