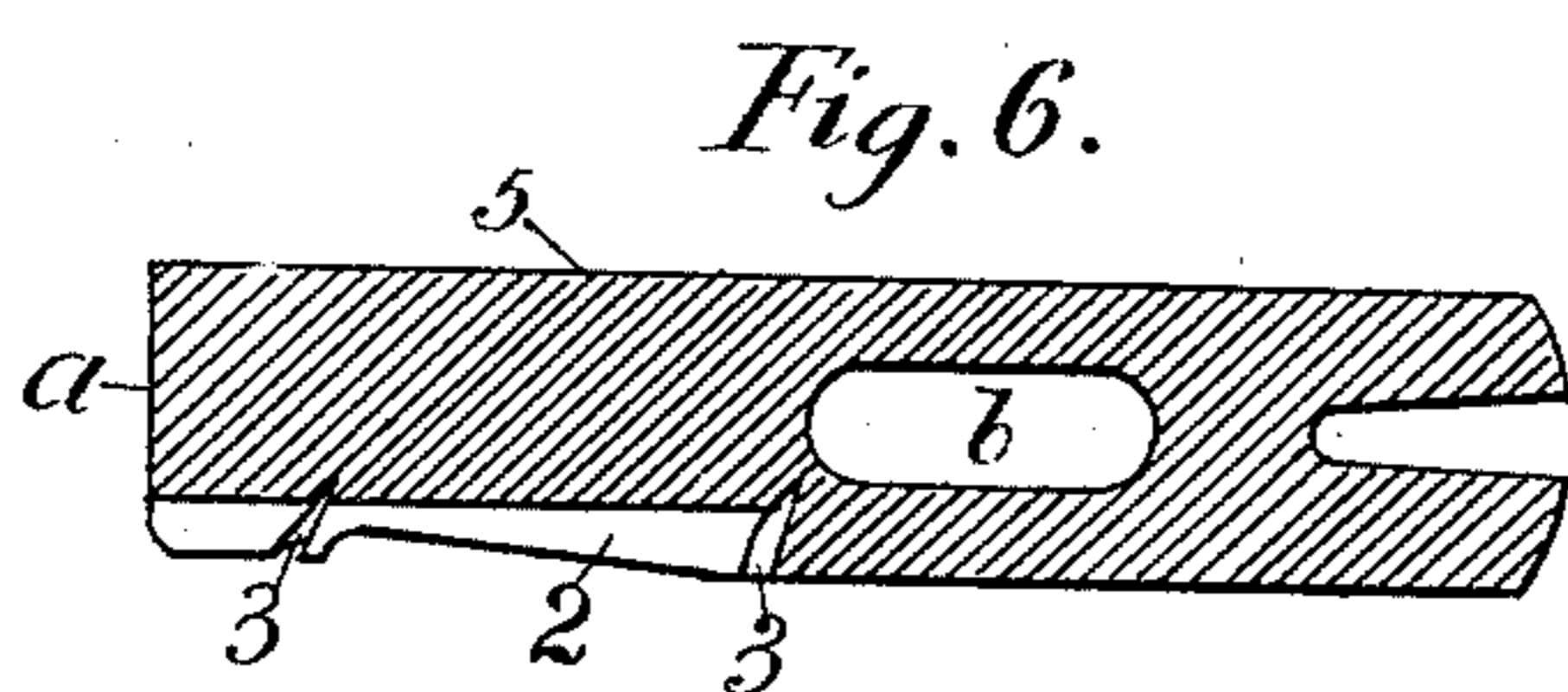
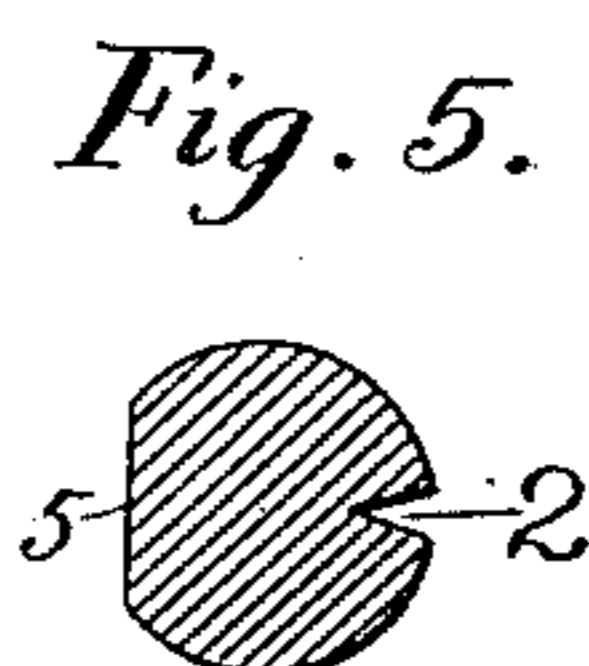
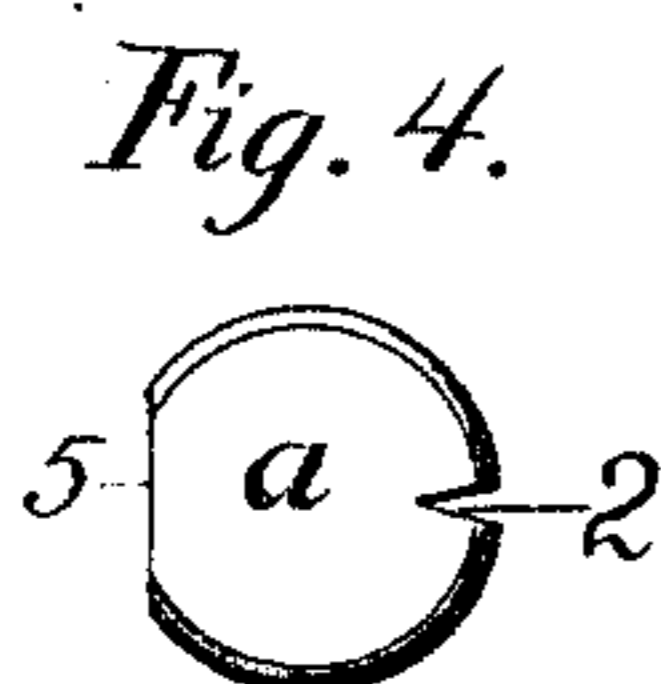
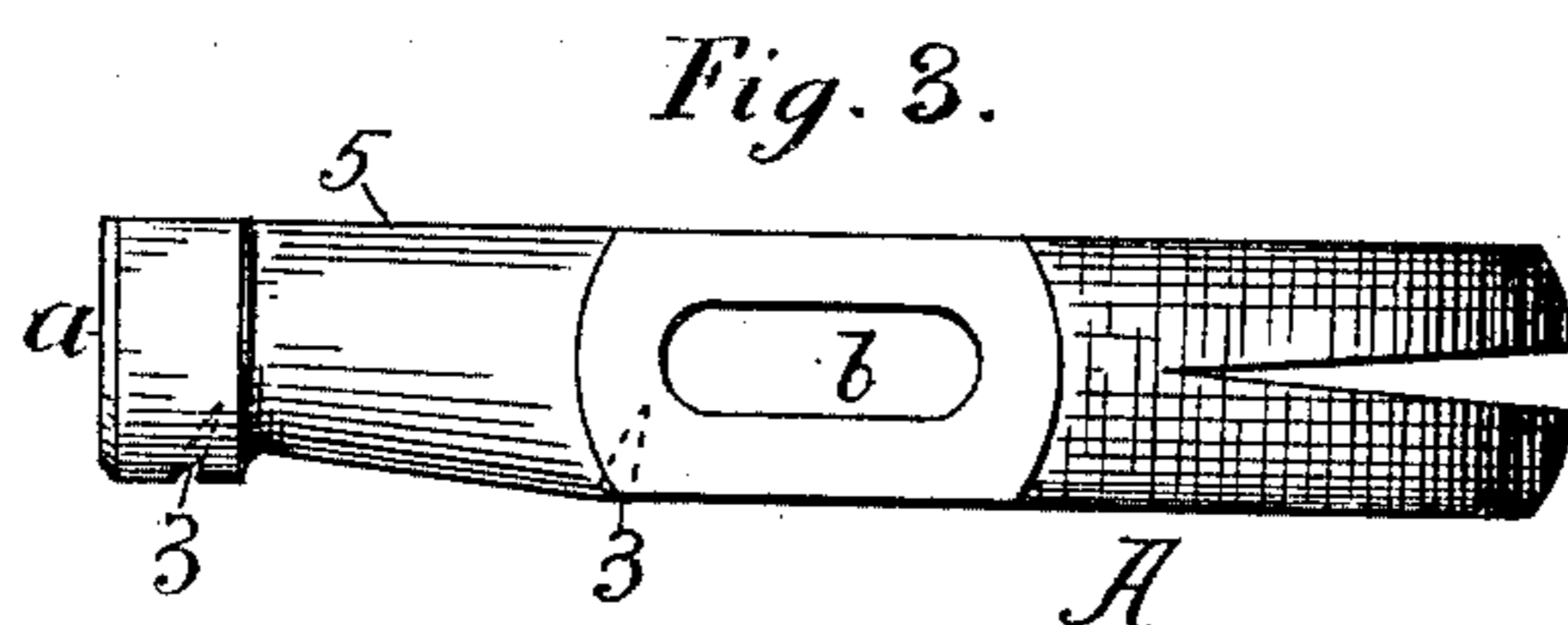
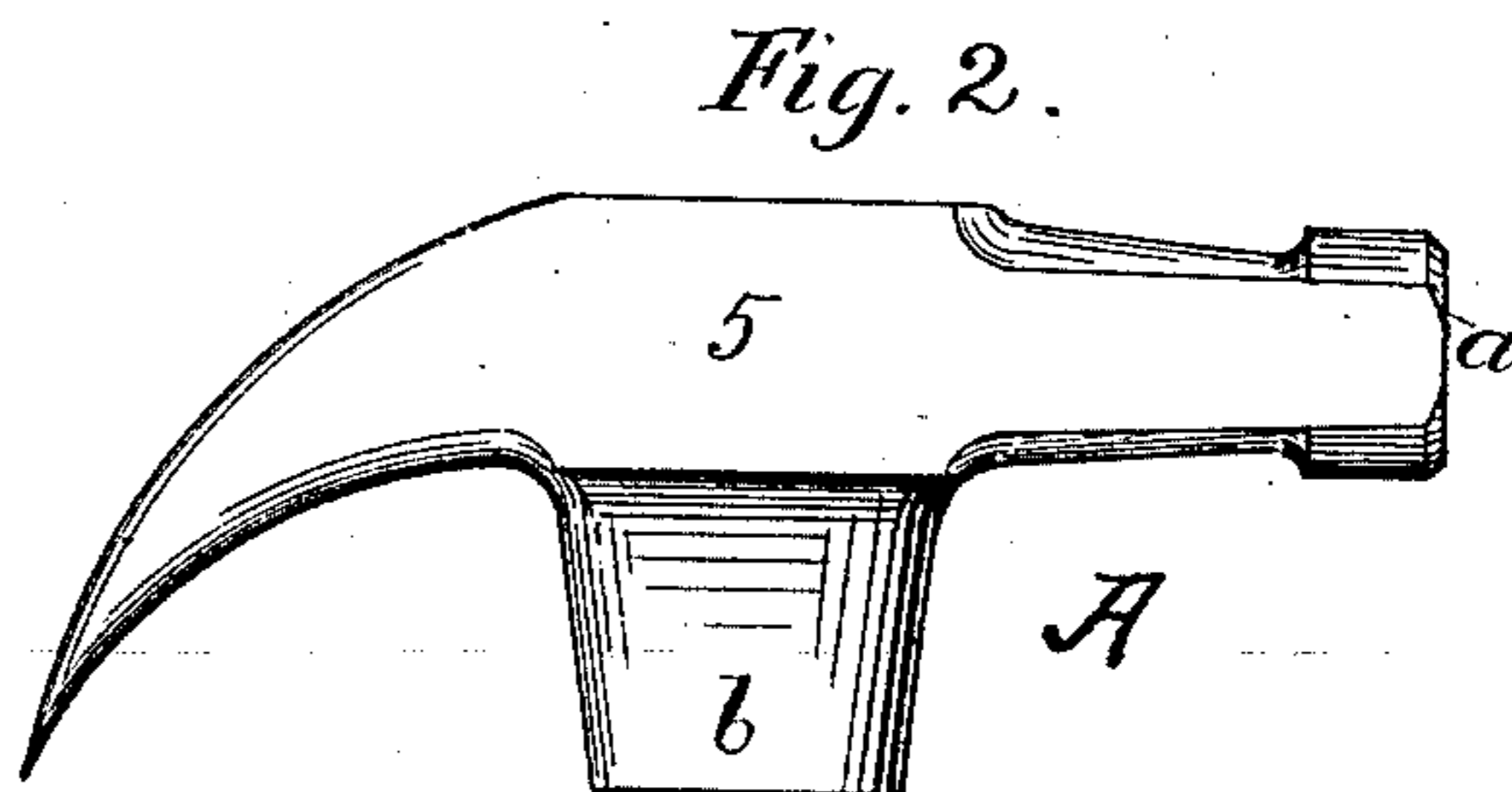
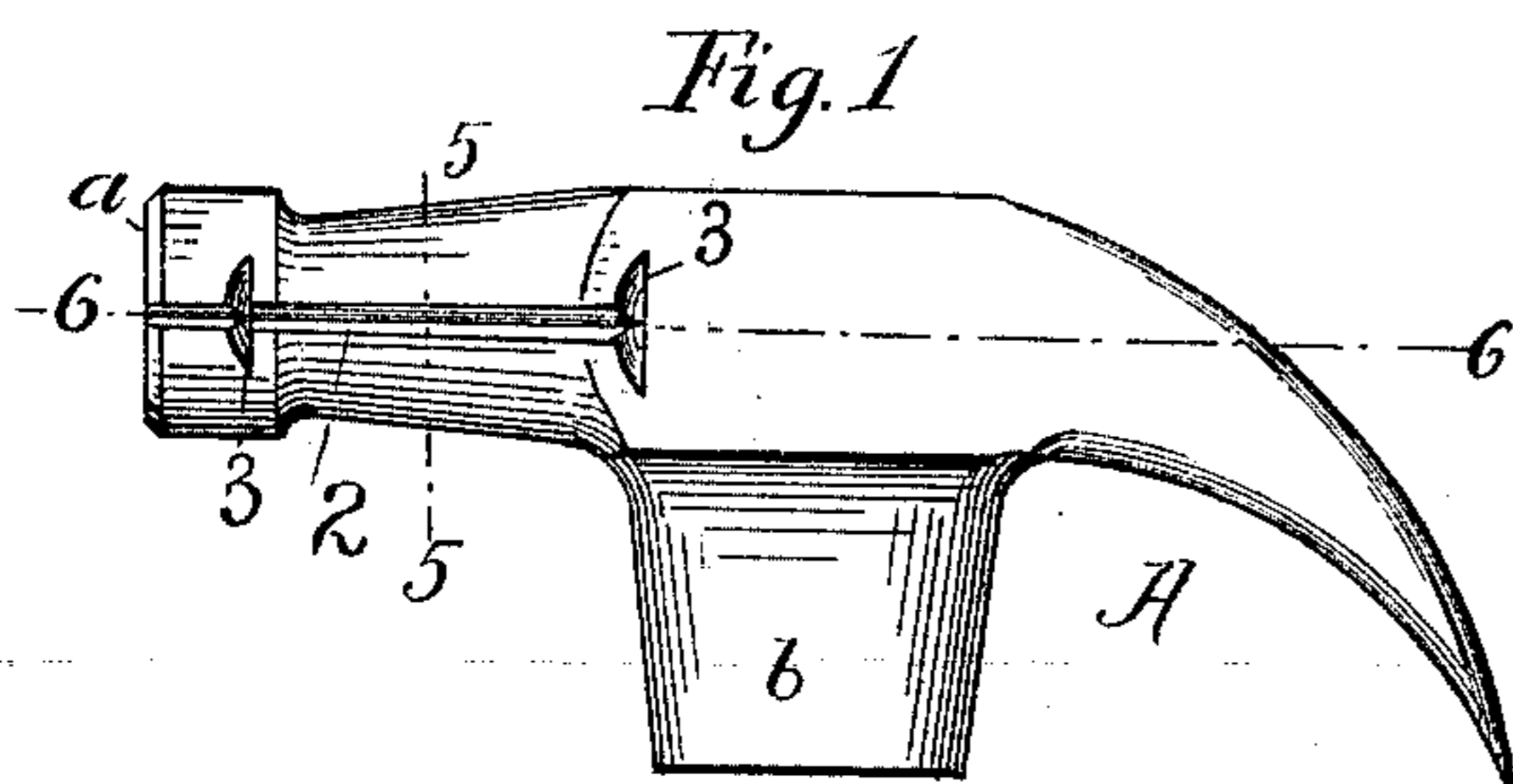


(No Model.)

J. C. RICHARDSON.  
NAIL HOLDING TOOL.

No. 509,399.

Patented Nov. 28, 1893.



Witnesses  
Chas. W. Parker  
H. N. Low

Inventor.  
Julius C. Richardson  
by J. S. Barker  
his atty.

# UNITED STATES PATENT OFFICE.

JULIUS C. RICHARDSON, OF SMETHPORT, PENNSYLVANIA.

## NAIL-HOLDING TOOL.

SPECIFICATION forming part of Letters Patent No. 509,399, dated November 28, 1893.

Application filed February 8, 1893. Serial No. 461,445. (No model.) Patented in Canada February 13, 1893, No. 41,943.

*To all whom it may concern:*

Be it known that I, JULIUS C. RICHARDSON, a citizen of the United States, residing at Smethport, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Nail-Holding Tools, (for which I have received Letters Patent in Canada, No. 41,943, dated February 13, 1893,) of which the following is a specification.

The object of my present invention is to improve hammers and like tools in such manner that they shall be adapted to temporarily and yet with a considerable degree of tenacity, hold nails or tacks so that they may be driven or set into the wood at places beyond the reach of the hand of a person using one of such tools.

The invention consists of a tool the body portion of which is formed with a nail-holding groove or recess of peculiar shape or construction, into which the nail is placed and wherein it is held; the invention being of such nature that the tool is in nowise rendered less useful for its ordinary uses by reason of the invention applied thereto, and being so simple that the cost and difficulty of its manufacture are but little increased.

Hammers and like tools have heretofore been provided with a variety of means for the purpose of adapting them to hold nails while being set into the wood at places beyond the reach of the user. A common expedient has been to secure to the body of the tool some accessory device by which the nail was temporarily held. Such means are objectionable in that they increase the cost and difficulty of manufacture of the tool, which when complete is composed of a plurality of parts and is therefore liable to get out of order or fail to operate satisfactorily. It has also been proposed to magnetize the tool body, and to form therein a long longitudinal groove or recess into which the nail could be laid,—the magnetism of the tool body being relied upon to hold the nail in the groove while it is being set into the wood. A tool of this character has certain objectionable features, because, being magnetic, it is constantly attracting and holding pieces of iron which interfere with the use of the tool.

I have sought by my invention to overcome all the objectionable features incident to each style of device intended for a purpose similar

to mine, and to do this without impairing the efficiency of the tool in any particular.

The invention is applicable to tools of many different kinds, but is particularly adapted for the use of hammers and hatchets, used by carpenters.

I do not consider it essential to a complete understanding of my invention that every embodiment thereof should be shown, and accordingly in the accompanying drawings have only shown it as applied to a claw hammer.

In said drawings, Figure 1 is a view of one side of a hammer having my present invention applied thereto. Fig. 2 is a view of the opposite side or face. Fig. 3 is a top view of the same. Fig. 4 is an end view. Fig. 5 is a cross section on the line 5—5 of Fig. 1. Fig. 6 is a longitudinal section on the line 6—6 of Fig. 1.

In the drawings A represents the tool body having the ordinary end striking head or face *a*.

In the body A,—preferably in the shank or portion which terminates in the face *a*,—is formed the nail sustaining groove or channel 2, which extends longitudinally of the body, from the face *a* inward the desired extent. This groove is V-shaped in cross section, so that when a nail is pressed into it, it is held therein by a wedging action.

In order to receive the head of a nail the channel or groove 2 is provided with a short transverse groove or depression 3. There is one of these depressions or recesses at the inner end of the nail-groove, and, preferably, one or more between its ends, whereby the groove is adapted to receive and hold nails of different lengths. These short transverse grooves or depressed portions of the nail-groove are somewhat deeper than the longitudinal channel portion, 2, thereof, and incline at an angle to the plane of the nail head,—which is practically transverse to the plane in which the nail body lies,—so that when the nail is pressed into the groove, the head wedges in the depression 3. The direction of the incline of the grooves or depressions, 3, is, preferably, backward,—that is, toward the handle socket *b*,—as they enter the body of the tool.

When it is herein stated that the depressed portion, 3, of the nail-groove inclines relative to the plane of the nail-head, it is meant that

both the front and the rear faces or walls of these depressions are inclined; because, if but one of such faces were inclined,—the back or inner one, for instance,—the nail-head would not be held in such depression by a wedging action. In fact, in the instance just supposed, the recess for the nail-head could not be said to be inclined relative to the nail-head; it would rather be a recess parallel with the nail-head, but tapering inward. When the depression 3 inclines inward, as shown in the drawings, and a nail is pressed into the groove, 2, 3, it is not only held securely, before the blow which sets the nail is struck, but when such blow is delivered, the peculiar shape of the recess or depression 3, forms an abutment against which the nail rests, and at the same time causes the nail to crowd down more closely into the nail-groove, so that the tendency for the nail to fly out of its groove before it is firmly set into the wood, is overcome. The nail-groove may be formed in the upper, the lower, or in either side face of the tool body, as found most desirable; but in a hammer of the kind shown in the drawings the side is the preferred place.

The nail-groove herein described is produced by suitable machinery after the tool body is formed.

In forcing together flooring and other matched boards it is impracticable to use the ordinary striking head *a* of the hammer for striking the edges of the boards, as the tongues or grooves thereon would be thereby injured; and accordingly it is customary to place a piece of wood, of such length as to give it a considerable bearing, against the edge of the

board and to strike such piece of wood, which, receiving the direct blow from the tool transmits it to the board to be forced into place. 40

The hammer which I have shown in the drawings is adapted to be used for the purpose just referred to without necessitating the use of an intermediate piece of wood. To this end one face of the tool is made flat or plane throughout practically the entire length of the tool, as shown at 5. This results in making a striking face which is so extended that it may be used to strike the edge of the matched board directly, without seriously injuring or marring it. 50

Having thus described my invention, what I claim is—

1. A tool having formed in its body a nail-holding groove formed with a transverse depression for the head of the nail the opposite sides or walls of the depression being inclined relative to the plane of the nail-head, substantially as set forth. 55

2. A tool having formed in its body a nail-holding groove with a transverse groove or depression 3 deeper than the main channel portion, 2, of the groove, and having the opposite sides or walls inclined inward or toward the handle of the tool as the depression enters the body of the tool, substantially as set forth. 60

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

JULIUS C. RICHARDSON.

Witnesses

A. F. RITCHIE,  
SHERIDAN GORTON.