

No. 740,553.

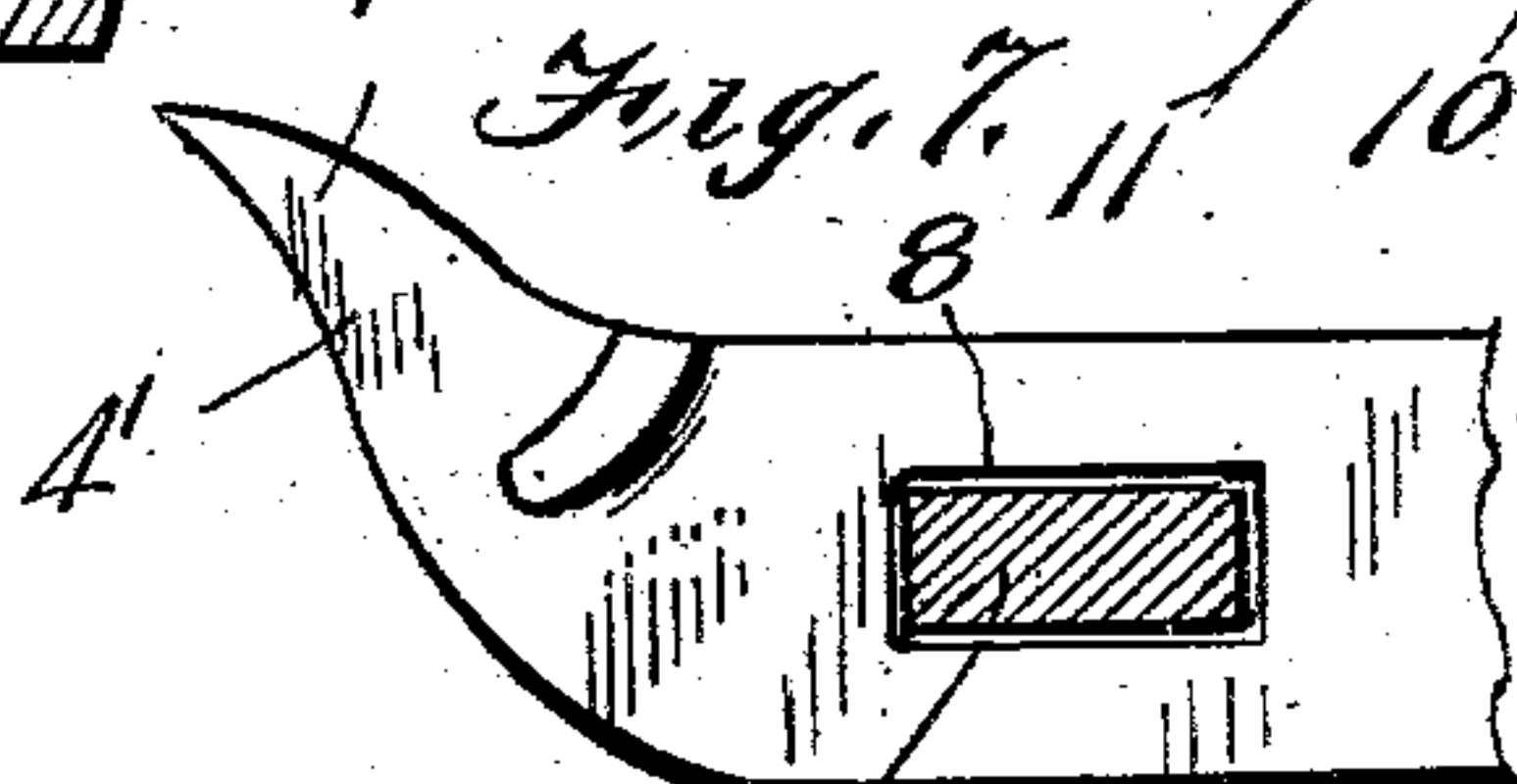
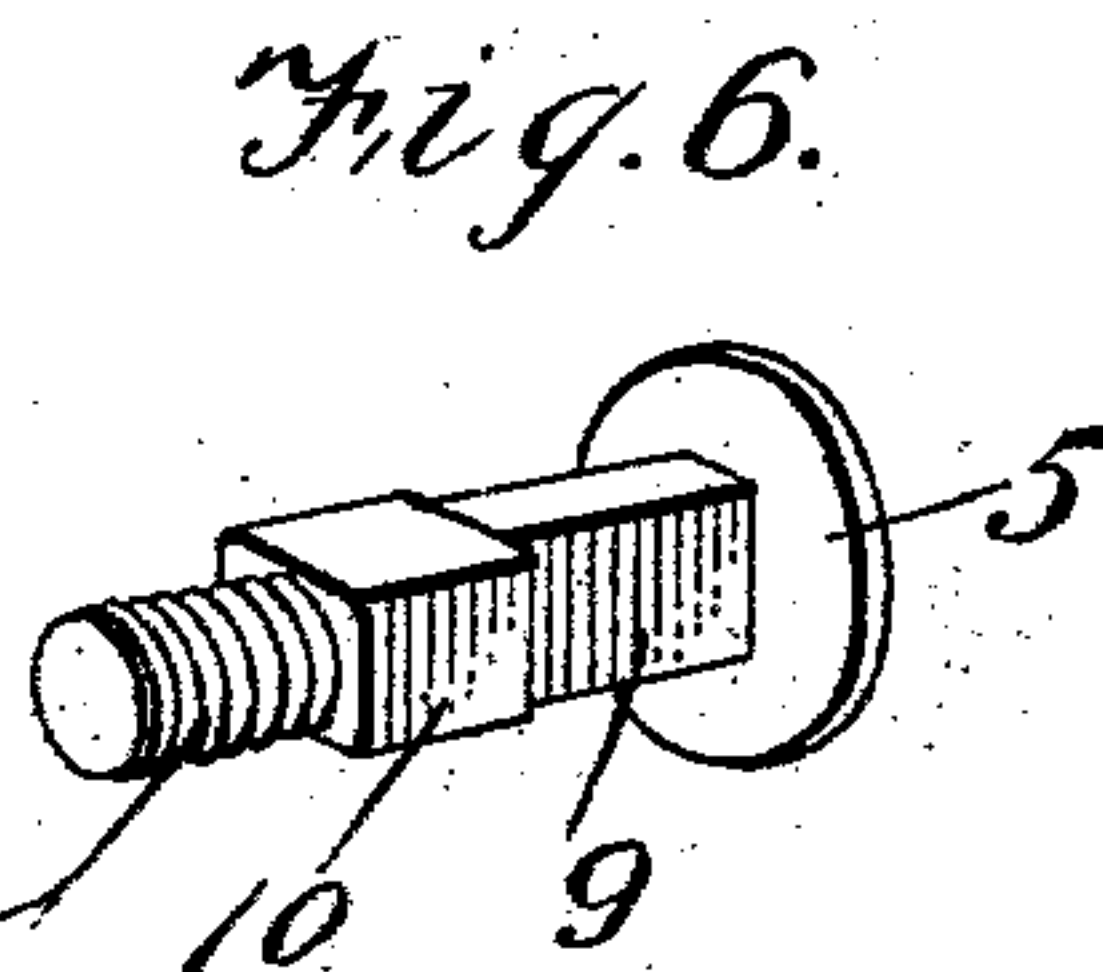
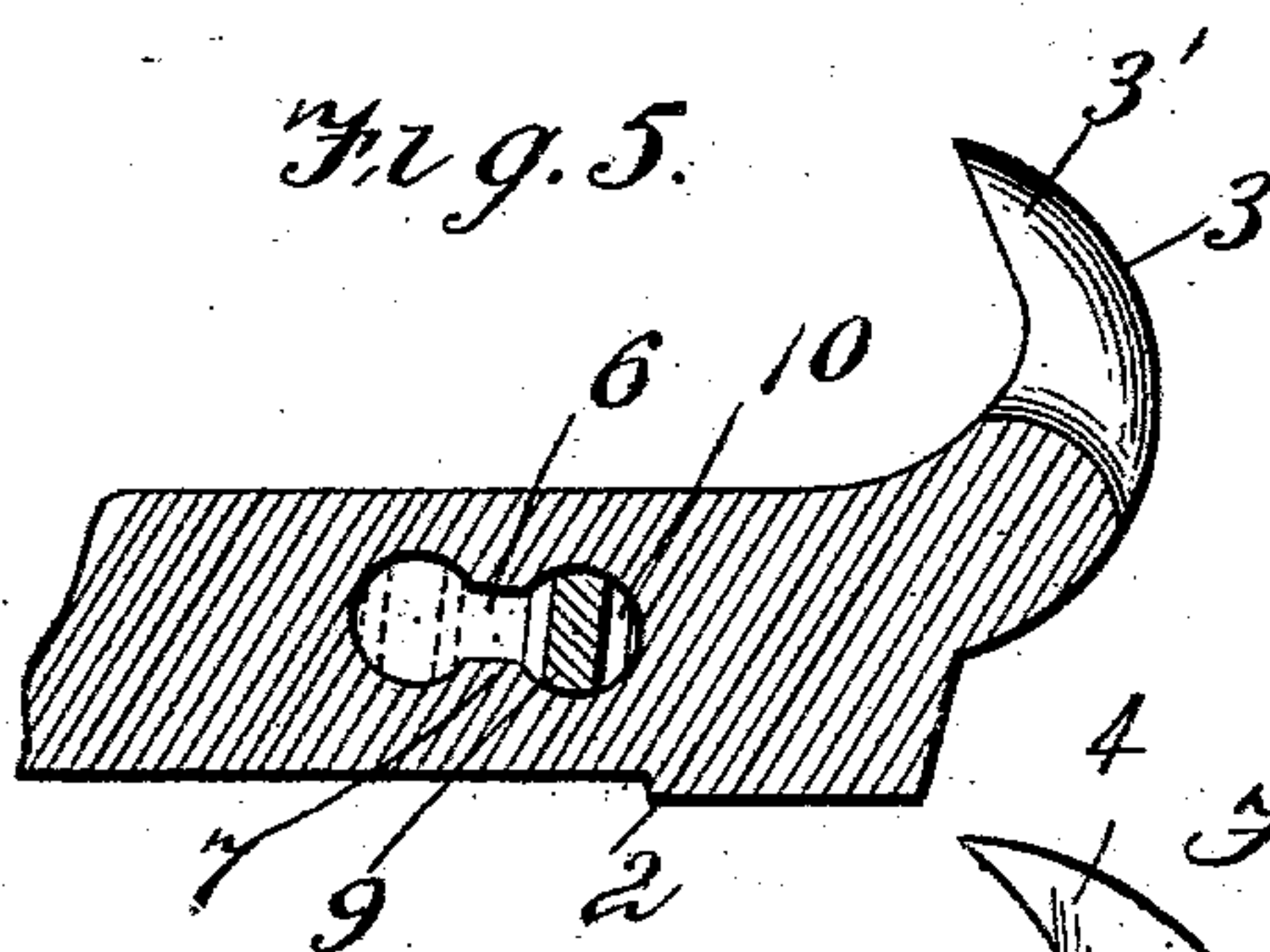
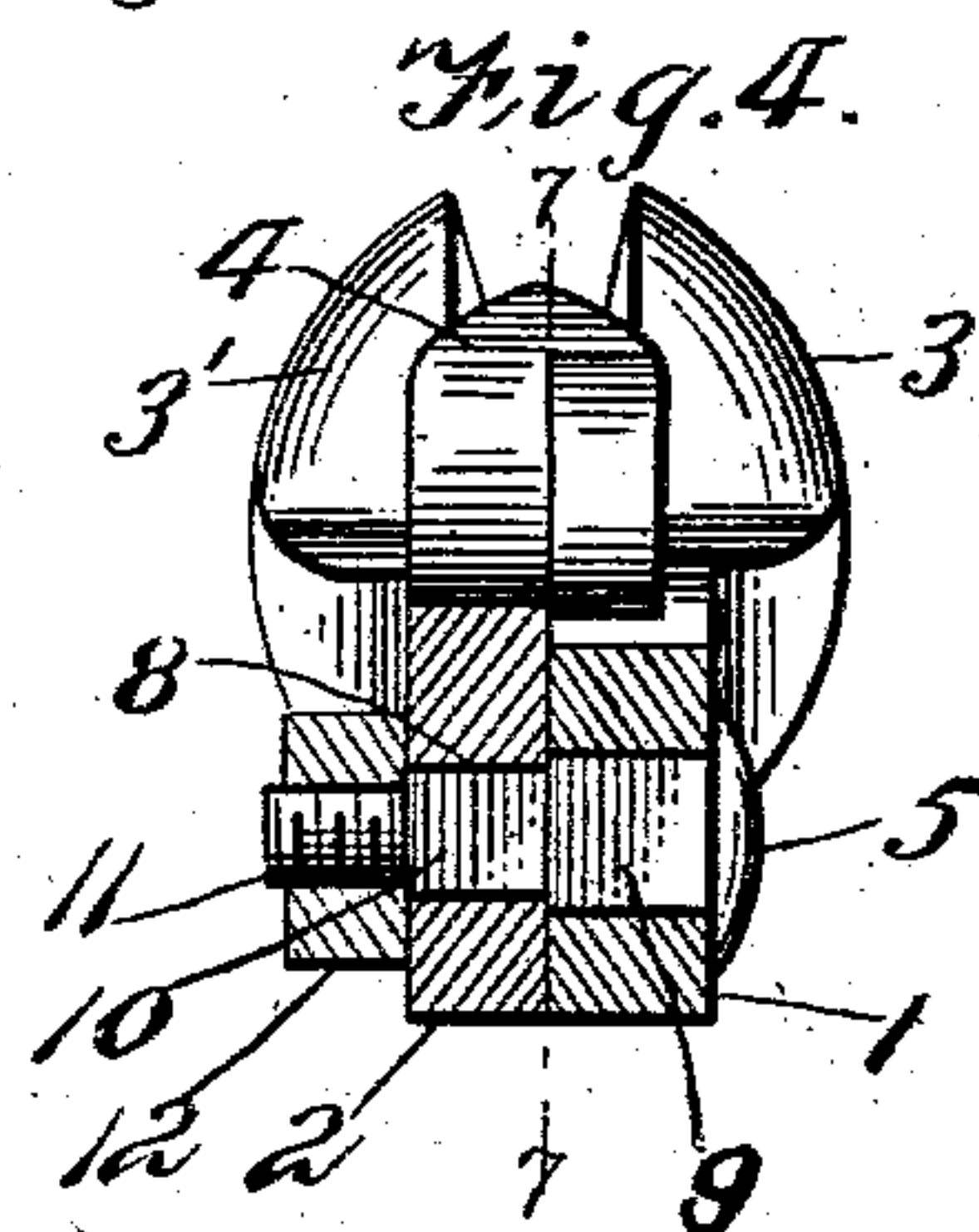
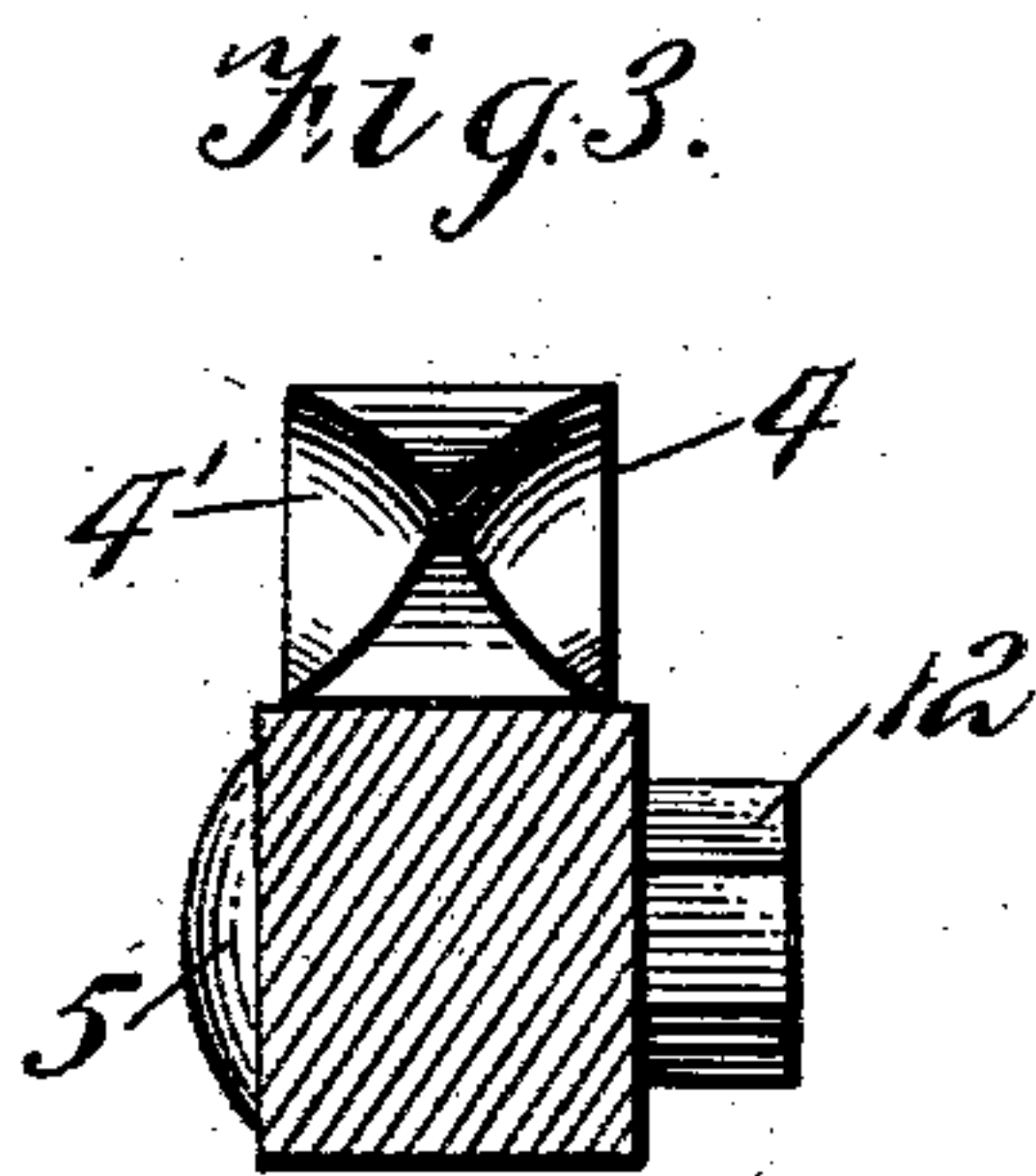
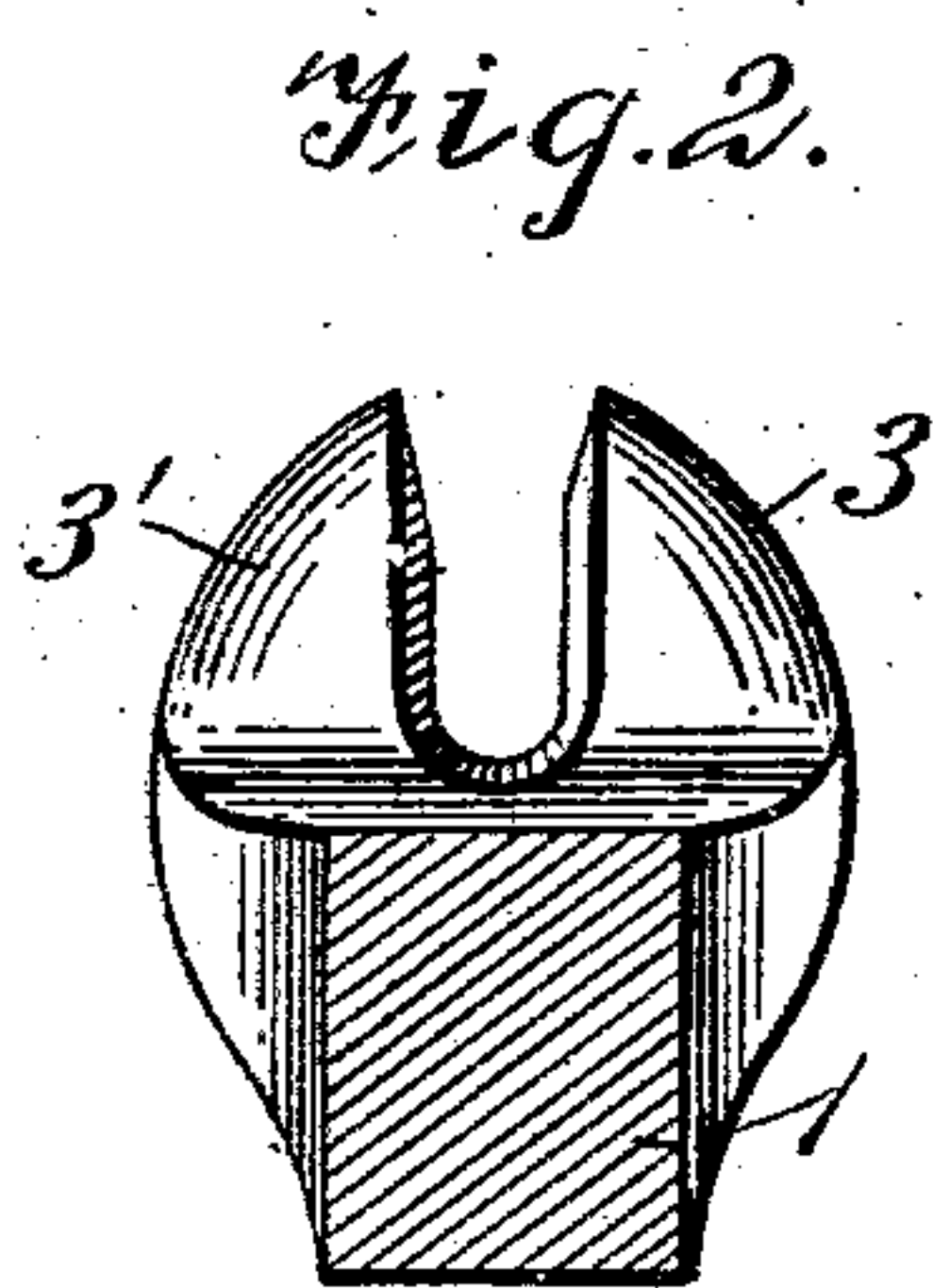
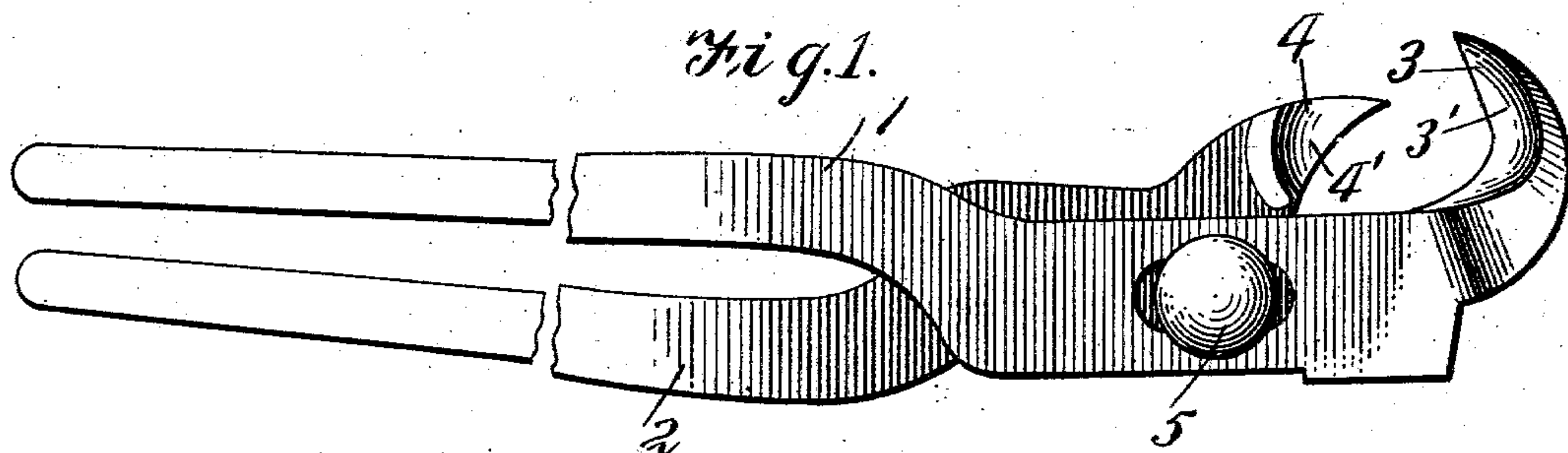
PATENTED OCT. 6, 1903.

N. GRANDCHAMP & J. A. SCHLEHR.

BOLT HOLDER.

APPLICATION FILED APR. 6, 1903.

NO MODEL.



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# UNITED STATES PATENT OFFICE.

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## BOLT-HOLDER.

SPECIFICATION forming part of Letters Patent No. 740,553, dated October 6, 1903.

Application filed April 6, 1903. Serial No. 151,374. (No model.)

*To all whom it may concern:*

Be it known that we, NAPOLEON GRANDCHAMP and JOSEPH A. SCHLEHR, citizens of the United States, residing at Frazee, in the county of Becker and State of Minnesota, have invented certain new and useful Improvements in Bolt-Holders; and we 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.

This invention relates to a tool for holding bolts to prevent the same from turning while nuts are being screwed on or off, thereby facilitating the insertion and removal of the nuts, and which may also be used for extracting refractory bolts from their receiving-openings.

The invention has for its object to provide a device of this character by means of which bolt-heads of different shapes and sizes and embedded or unembedded may be gripped with equal facility to hold the bolt securely while a nut is being screwed on or off the same or to enable it to be withdrawn from the part to which it is applied; and the invention further has for its object to provide such a tool in which the gripping-jaws are adapted to be quickly adjusted to suit the size of the bolt-head without the necessity of removing or loosening or tightening any fastenings.

With the accomplishment of these ends in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a bolt-holder embodying our invention. Figs. 2 and 3 are cross-sections looking in reverse directions toward the jaws. Fig. 4 is a cross-section on the line of the pivot-bolt. Fig. 5 is a longitudinal section showing two positions of the pivot-bolt. Fig. 6 is a detail view of the pivot-bolt, and Fig. 7 is a detail section on line 7 7 of Fig. 4.

Referring now more particularly to the

drawings, the numerals 1 and 2 represent the handles of the bolt-holder, the former being provided with a pair of spaced gripping-jaws 3 and the latter with a single gripping-jaw 4, disposed on a line between said jaws 3. The jaws 3 have outer beveled sides 3', and the jaw 4 is provided with opposite beveled sides 4', which cause the said jaws to taper to a point. This construction adapts the jaws to engage different forms of bolt-heads, so that the same may be conveniently gripped to hold the bolt from rotation while a nut is being screwed on or off the same.

The two handles are connected by a transverse pivot-bolt 5, which is of peculiar construction to cooperate with locking-notches in the handle 1 to enable the jaws to be adjusted to engage bolt-heads of different sizes and to lock said jaws in adjusted position. As shown, the handle 1 is provided with a longitudinal slot 6, having circular end portions which are connected by an intermediate contracted portion 7, while the handle 2 is provided with a polygonal opening 8. The pivot-bolt 5 is formed with a flattened shank 9, a polygonal portion 10, and a screw-threaded end 11. The flattened portion 9 is connected directly at its outer end to the head of the pin or bolt and is adapted to operate in the longitudinal slot 6, while the polygonal portion 10 fits within the corresponding opening in the handle 2, and the latter is retained in position thereon by a nut 12, applied to the screw-threaded end 11. By this construction it will be seen that the handle 2 is rigidly connected to turn with the pivot pin or bolt.

In the operation of the device it is desirable to adjust the handles at times to cause the jaws to approach each other or recede from each other to adapt them to engage bolt-heads of different sizes. This is effectively permitted by means of the peculiarly-constructed pivot-bolt 5 and the slot 6. When the flattened shank of the bolt occupies the forward portion of the slot 6, the jaw 4 is brought closer to the jaw 3 of course than if said shank were disposed in the rear portion of said slot, so that, according to the position of the shank within the slot, the jaws will be



relatively adjusted to engage smaller or larger bolt-heads.

It will be observed that the shank 9 is so disposed that when the handle 2 is turned at right angles to the handle 1 the jaw 4 may be freely adjusted toward and from the jaws 3, as the flat side of the shank will be disposed parallel to the sides of the contracted portion 7 of the slot 6, which will permit the shank to be moved into either of the circular ends of said slots. When the shank is disposed in either circular end, however, the movement of the handle 2 toward the handle 1 to bring the jaws into gripping position will cause the major axis of the flattened shank 9 to be disposed at an angle to the slot portion 7, so that while the bolt is free to turn in the circular end of the slot in which it is disposed it cannot move out of said portion of the slot, because the position of the shank does not admit of its movement through the contracted portion 7. Hence it will be seen that in either position of adjustment of the jaw 4 the handle 2 may be freely moved on its pivot to adjust the jaw 4 toward and from the jaws 3, but that the jaws cannot be moved out of their proper relation, because the bolt will be held from longitudinal movement in the slot. Thus by simply turning the handle 2 to a certain position the jaws may be adjusted to act upon different-sized bolt-heads, and when so adjusted the handles may be drawn together to grip the bolt-heads without liability of the pivot-bolt slipping in the slot. This action, it will be observed, is attained without the necessity of loosening or detaching any fastenings, but merely by the simple adjustment of the handle 2 to a prescribed extent in its arc of movement on the pivot.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the inven-

tion will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A tool of the character described, comprising pivoted handles, one provided with a pair of parallel jaws having beveled outer faces, and the other having a jaw lying in rear of and between said parallel jaws and having its opposite sides beveled outwardly from the center, substantially as described.

2. A tool of the character described, comprising pivoted handles, one of said handles having a pair of jaws beveled on their outer faces, and the other an intermediate jaw beveled upon both sides from the center thereof, the latter-named handle being provided with a polygonal opening and the first-named handle with a longitudinal slot formed with circular ends and an intermediate plane-edged constructed portion, and a pivot-bolt passing through said slot and opening and pivotally connecting the handles, said bolt having a polygonal portion to fit within the said polygonal opening, and a flattened shank portion coacting with the slot to effect an adjustment of one of the jaws and dispose the pivot closer to or farther from the other jaw.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

NAPOLEON GRANDCHAMP.  
JOSEPH A. SCHLEHR.

Witnesses:

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