

No. 714,387.

Patented Nov. 25, 1902.

W. MAXWELL.
PIPE TONGS.

(Application filed Oct. 2, 1902.)

(No Model.)

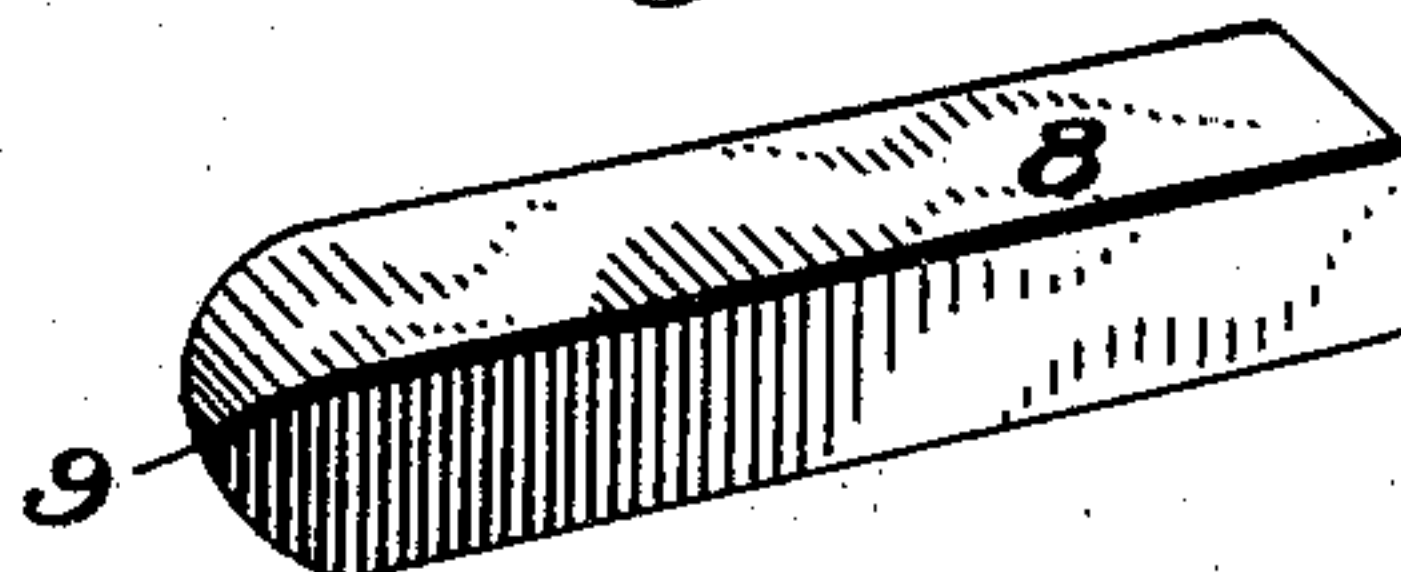
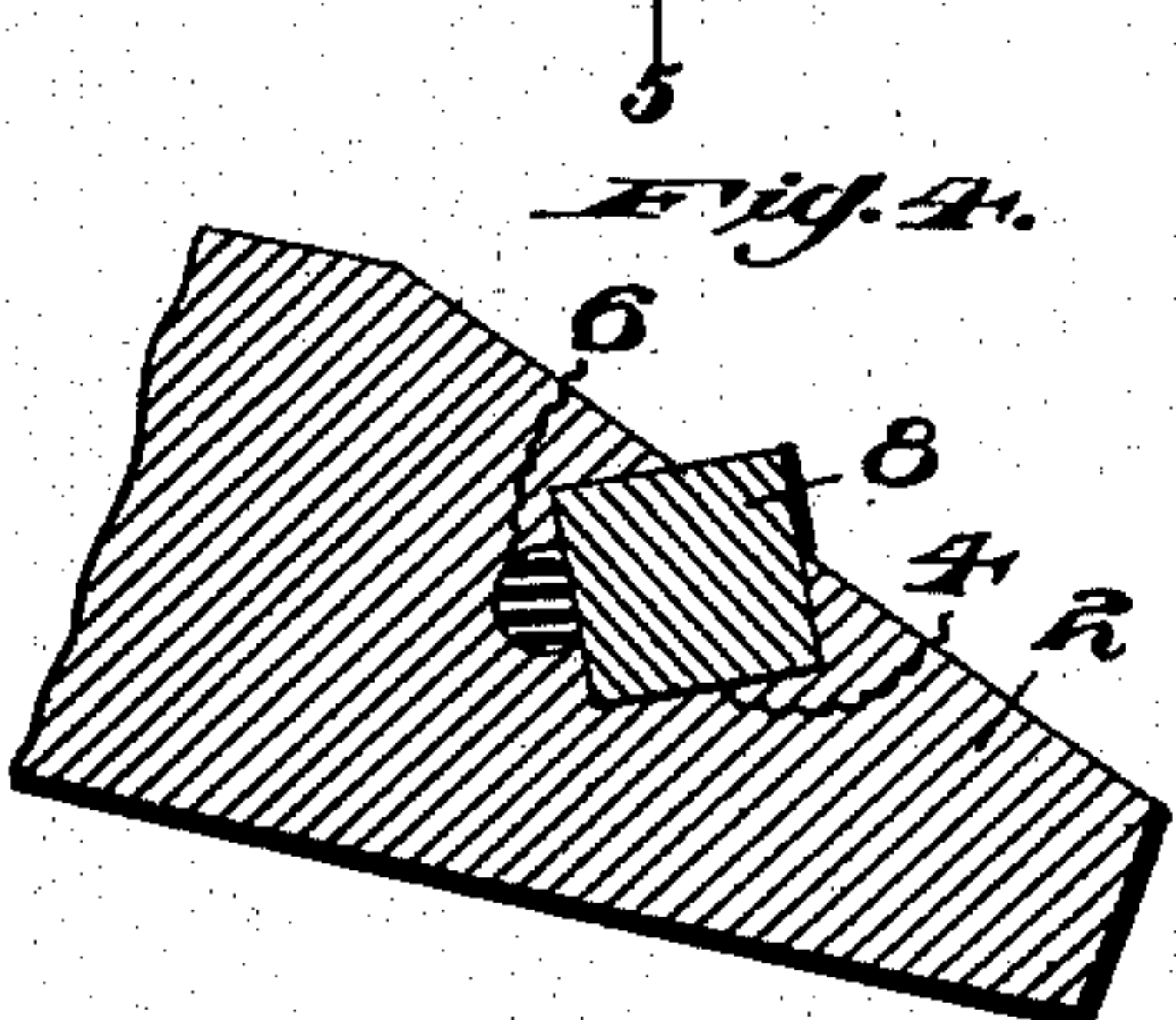
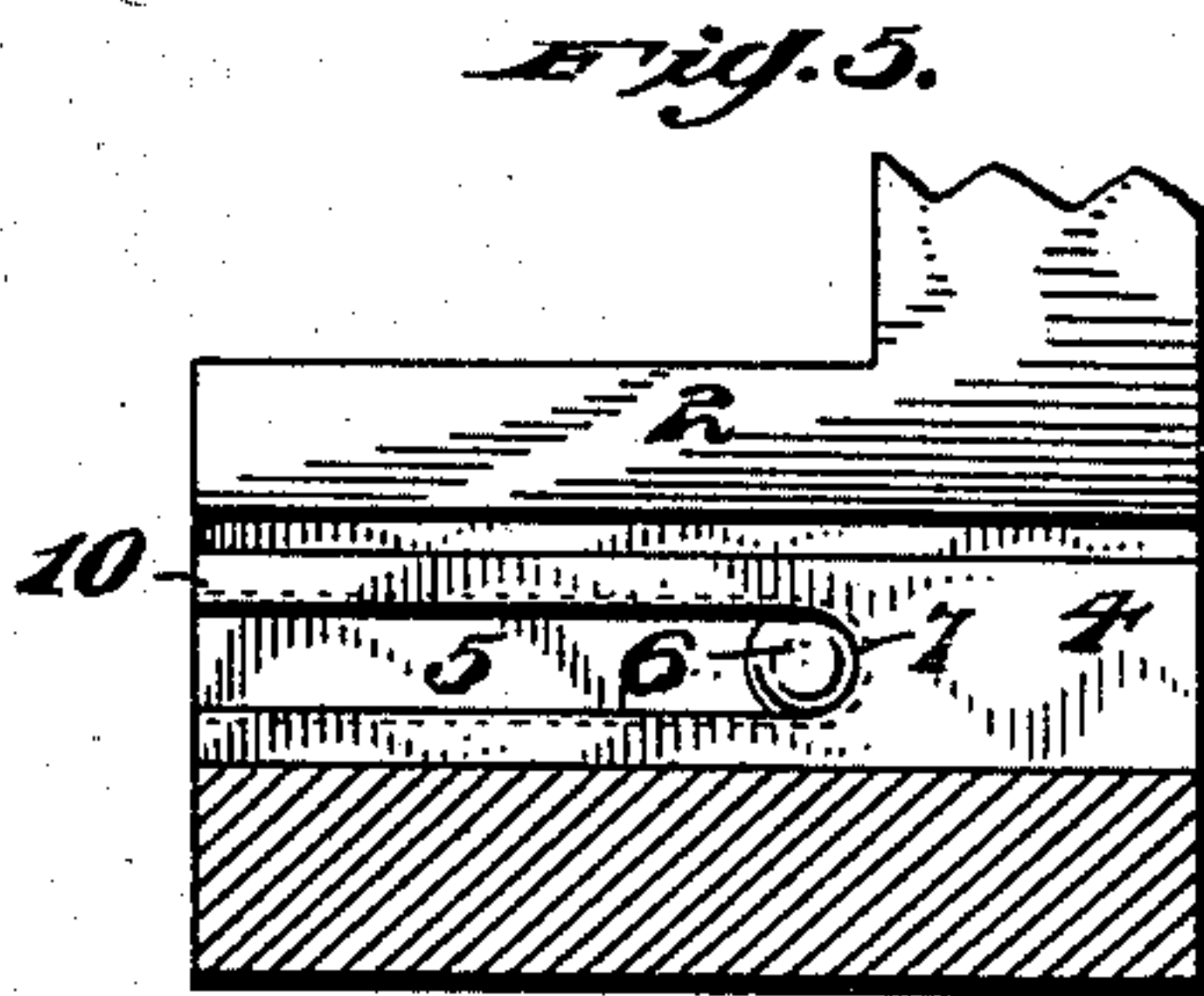
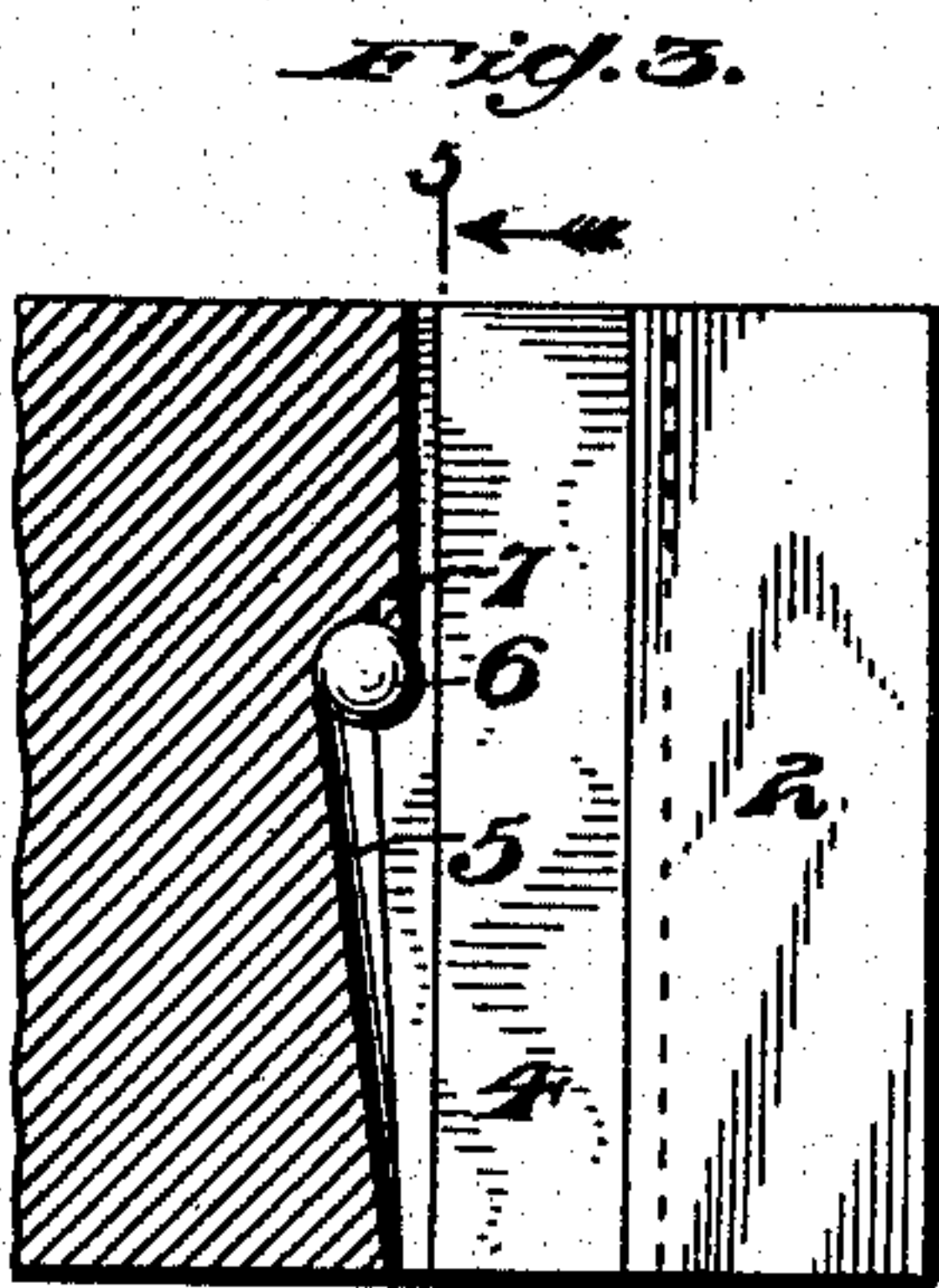
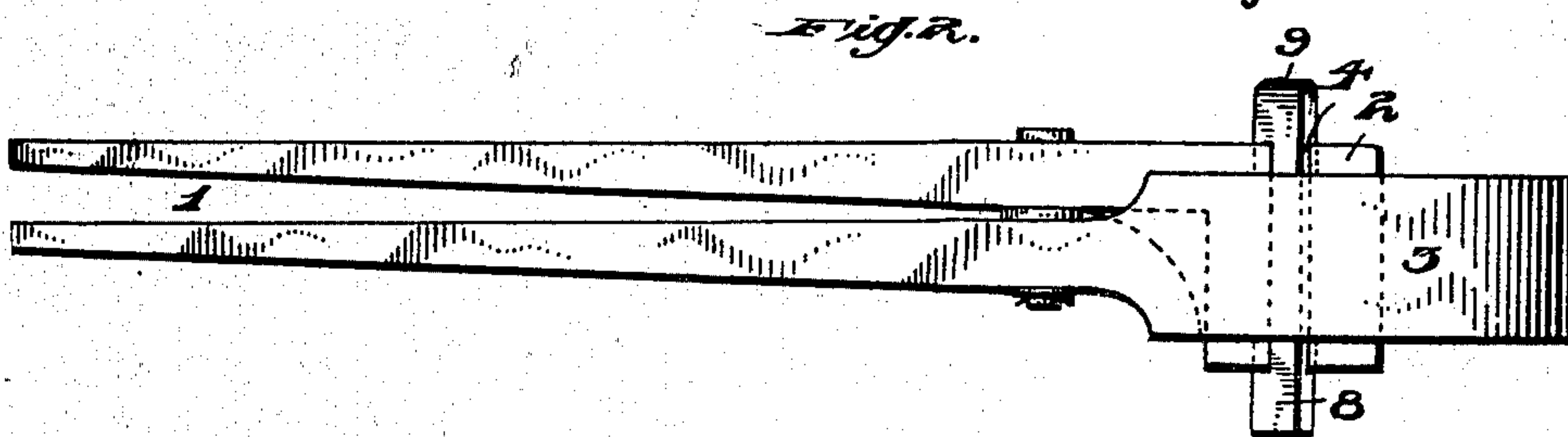
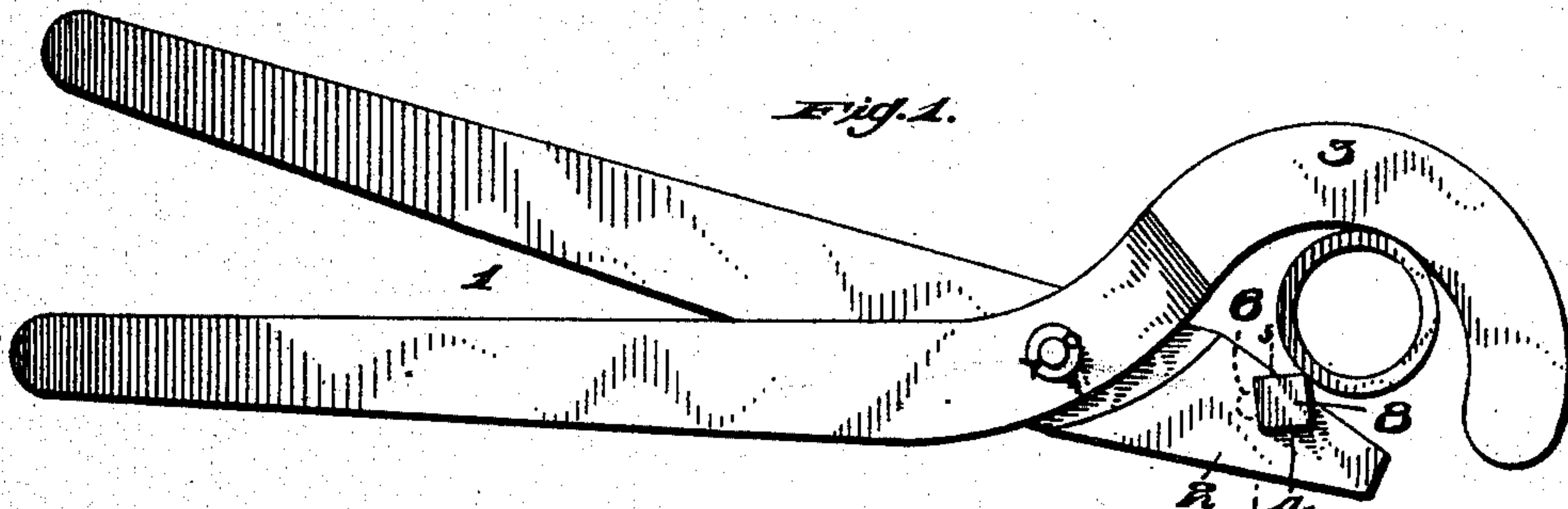


Fig. 7.



Witnesses:

J. C. Appleman,
M. B. Schley

Inventor
William Maxwell.

By
John Roland

Atty.

UNITED STATES PATENT OFFICE.

WILLIAM MAXWELL, OF PITTSBURG, PENNSYLVANIA.

PIPE-TONGS.

SPECIFICATION forming part of Letters Patent No. 714,387, dated November 25, 1902.

Application filed October 2, 1902. Serial No. 125,630. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MAXWELL, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Pipe-Tongs, of which the following is a specification.

My invention relates to an improvement in pipe-tongs, and more especially to that type in which a removable bit is provided in one of the jaws.

In tongs of the type to which my invention applies the bit is made somewhat longer than the width of the jaw, so that it projects from the sides thereof. This affords a better grip with less injury to the pipe than if the bit were short and confined to the limits of the jaw. It has been the practice heretofore to secure the bit in the jaw by wedges, set-screws, and various other devices, which devices hold the bit very nicely until the tongs are thrown down, when nine times out of ten the projecting portion of the bit strikes the ground, and thus dislodges the wedge or breaks off the set-screw or other fastening means, thereby loosening the bit, which falls or works out of the jaw. This makes the tongs useless until the bit is again fastened, which is not always an easy matter, as the fastening means is often lost and another is not always available, and besides the continual loosening of the bit is not only a nuisance, but causes the loss of much time and patience.

The object of my invention is to provide a simple and efficient means for securing the bit in the jaw and such a means as will securely retain the bit in the jaw against all jar and vibration, but allow it to be readily removed therefrom.

Another object resides in providing a fastening means which will be contained wholly within the jaw of the tongs, thereby preventing the bit from being loosened by the fastening means or the projecting ends of the bit coming in contact with various obstacles.

Finally, the object of my invention consists in the novel details of construction and operation a preferable embodiment of which is described in the specification, and illustrated in the drawings, wherein—

Figure 1 is a side elevation view of a pair

of pipe-tongs, showing my fastening in dotted lines. Fig. 2 is a top plan view of the tongs shown in Fig. 1. Fig. 3 is a transverse view, partly in section, taken on the line 5 5 of Fig. 1 with the bit removed to show the rubber ball for fastening the bit. Fig. 4 is a longitudinal section view taken through the end of the inner jaw. Fig. 5 is a vertical sectional view taken on the lines 5 5 of Figs. 1 and 3. Fig. 6 is a perspective view of the bit, and Fig. 7 is a perspective view of the rubber ball.

In the drawings the numeral 1 indicates an ordinary pair of pipe-tongs provided with the usual inner and outer jaws 2 and 3, respectively. The inner jaw 2 is provided with an angular groove 4, which is formed in one of its walls with an annular channel 5, tapering downwardly from the edge 10 of the jaw. A ball 6, preferably of rubber or other resilient material, is adapted to be inserted in the channel 5, which is deep enough at its lower end to receive the ball and allow a slight portion of the same to project therefrom.

The channel 5 is rounded to conform to the contour of the ball and is provided at its lower end with a spherical seat 7, adapted to receive the ball and hold it with a slight portion of its surface projecting above the channel when it is inserted therein. An elongated bit 8, having a rounded end 9, is adapted to be inserted into the groove 4 and to project from the ends thereof.

It will be readily seen that by inserting the rounded end 9 of the bit 8 into the end 10 of the jaw 2 after the ball 6 has been inserted in the channel 5 and seated in the seat 7 the rounded end of the bit will ride over the projecting portion of the ball 6 and compresses the latter, which, owing to its resilient and expansive qualities, will force the bit against the opposite walls of the groove 4, and when the bit has been inserted to the desired point it will be there held by the expansion of the ball.

When it is desired to remove the bit to sharpen or turn it, it is only necessary to drive it on through the groove 4 until the ball ceases to press upon the bit, when it may be readily withdrawn.

It is to be understood that the bit fits quite snugly in the groove and that a very slight

compression and expansion of the rubber ball will be sufficient to securely hold the bit in the jaw.

From the foregoing it will be evident that
5 I have provided a simple, strong, and durable fastening means for bit and one that will accomplish the desired results and yet be inexpensive to produce and also one in which the several parts are not liable to get out of
10 working order.

I do not care to limit myself to the exact details of construction and operation herein set forth, as I may make various changes in the same without departing from the spirit of my
15 invention.

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

1. The combination with a pair of pipe-
20 tongs, of a bit removably secured in one of the jaws of the tongs, and resilient means for holding the bit in the jaw, substantially as described.

2. The combination with a pair of pipe-
25 tongs, of a bit removably secured in one of the jaws of the tongs, and resilient means adapted to be compressed by the bit for holding the latter in the jaw, substantially as described.

3. The combination with a pair of pipe-
30 tongs, of a bit removably secured in one of the jaws of the tongs, and a resilient ball held in

one of the jaws for securing the bit in place, substantially as described.

4. The combination with a pair of pipe-
tongs, of a bit removably secured in one of the 35 jaws of the tongs, one of the jaws having a groove adapted to receive the bit, and a resilient ball held in the groove for retaining the bit therein, substantially as described.

5. The combination with a pair of pipe- 40 tongs, of a bit removably secured in one of the jaws of the tongs, one of the jaws having a groove provided with a channel and adapted to receive the bit, and a resilient ball in the channel for holding the bit in the groove, sub- 45 stantially as described.

6. The combination with a pair of pipe-
tongs, of a bit removably secured in one of the jaws of the tongs, one of the jaws having a groove provided with a tapering channel and 50 adapted to receive the bit, and a resilient ball compressed in the channel by the bit for holding the latter in the groove, substantially as described.

In testimony whereof I affix my signature, 55 in the presence of two witnesses, this 30th day of September, 1902.

WILLIAM MAXWELL.

Witnesses:

JOHN NOLAND,
M. B. SCHLEY.