

No. 853,172.

PATENTED MAY 7, 1907.

O. P. HUGHES.  
MACHINIST'S WRENCH HAMMER.  
APPLICATION FILED JULY 17, 1906.

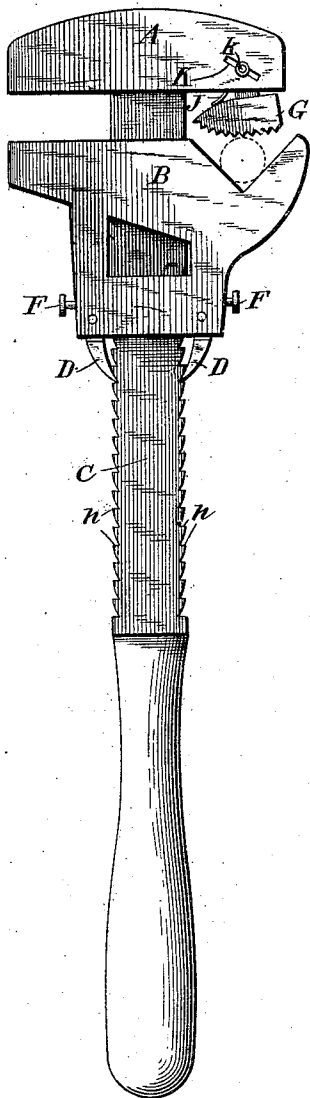


Fig. 1.

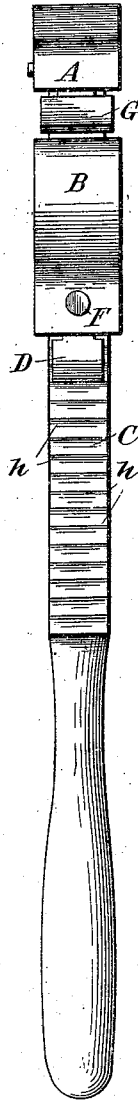


Fig. 2.

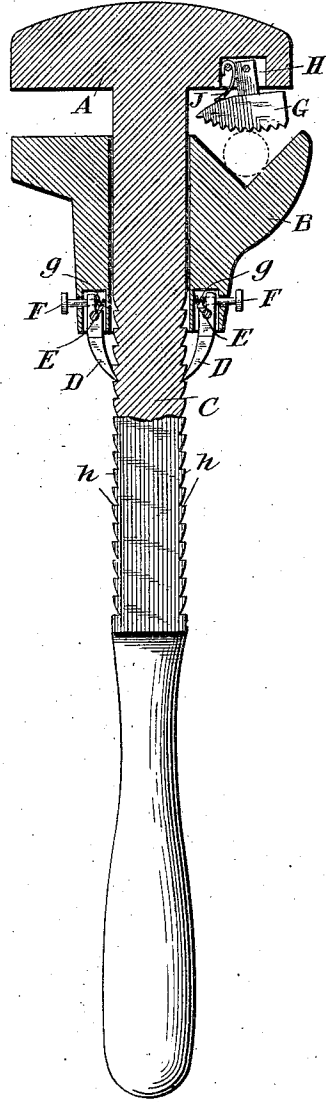


Fig. 3.

Witnesses:  
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# UNITED STATES PATENT OFFICE.

OWEN PARRY HUGHES, OF NEW CASTLE, PENNSYLVANIA.

## MACHINIST'S WRENCH-HAMMER.

No. 853,172.

Specification of Letters Patent.

Patented May 7, 1907.

Application filed July 17, 1906. Serial No. 326,542.

*To all whom it may concern:*

Be it known that I, OWEN PARRY HUGHES, a citizen of the United States, residing at New Castle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Machinists' Wrench-Hammers; 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The objects of my improvement are: First. To provide for the automatic gripping of the pipe, rod, or other object, without manual adjustment of the wrench at each grip. Second. To increase the firmness of the grip. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical side view of the wrench. Fig. 2 is a vertical front view of the same. Fig. 3 is a vertical sectional side view of the same.

Similar letters refer to similar parts throughout.

The hammer-head A is firmly attached to the handle C, slightly oval on top, and flat surfaced on the under side. In the mortise H in the right under side of the hammer-head is attached the stem, or shank, of the grip-block G by means of a pin *k*, passing through the hammer-head in the oblique slot K. (The purpose of this is to give free play to the grip-block.) The grip-block is square at the heel, or outer end, and convex on the upper and lower sides of the inner end; the lower side being roughened to prevent slipping. Immediately on the inner side of this grip-block is a steel spring J, attached in the mortise H, the lower point of which spring rests on the upper and inner surface of the grip-block for the purpose of pressing down the inner point, and raising the heel of the block when pressure on it is relaxed, so that it may return to its normal horizontal position when the wrench is at rest.

On either side of the handle of the wrench C are teeth *h h*, and about the handle a movable jaw B. The upper left face of this jaw is flat, and parallel to the under left face of the hammer-head A, forming an ordinary wrench. The upper right face of the jaw is

obtusely angled, forming in conjunction with the grip-block the grip or bite of the wrench. The movable jaw B, is held firmly in place by means of the pawls D D pivoted in the mortises E E in the lower opposite sides of the jaw by means of a pin *g g*, and meshing in the teeth *h h* on the sides of the handle C. The exterior, or lower ends of these pawls are provided with shoulders that rest against the sides of the mortises E E, relieving the strain on the pivoting pins *g g*. The pawls are held in contact with the teeth *h h* by a coil spring underneath their interior ends, which contact is relieved by means of the thumb-presses F F which pass through the movable jaw, and are attached to the ends of the pawls immediately over the coil springs.

The mechanical operation of the above described wrench is as follows: The pipe or rod to be grasped is placed in the bight of the obtuse angle in the upper face of the movable jaw; the points of the pawls are raised from contact with the teeth on the handle by pressing on the thumb-presses; the movable jaw is slid upward on the handle until the pipe or rod comes in contact with the under surface of the grip-block; the pressure on the thumb-presses is then relieved when the exterior points of the pawls drop into the teeth on the handle, locking the movable jaw in place; the handle is then drawn toward the operator. This motion throws the convex end of the grip-block upward against the lower face of the hammer-head, and the heel downward into the obtuse angle on the upper face of the movable jaw, contracting the space, and tightening the grip. To release the grip, and secure another hold, pressure on the handle is relieved, and the spring J forces the grip-block back into normal position and the jaws are ready to again grasp the pipe or rod.

I am aware that prior to my invention wrenches, and wrench hammers of various patterns, and various modes of adjusting the jaws thereof have been in use; particularly the use of the pawls acting in notches, or teeth on the handle, C, as a means for adjusting and holding in place the movable jaw, for which I make no claim; but

What I claim as distinctively new in my invention, and for which I desire to secure a patent is:

1. The combination of the grip-block G, having the upper and lower sides of the inner end convex, and the outer end, or heel,

square, secured in the stationary hammer-head A, in the mortise H, and pivoted therein by the pin *k*, passing through the hammer-head in the oblique slot K, and automatically controlled by the spring J, with the obtusely angled upper face of the movable jaw B, so as to form a machinist's wrench-hammer.

2. The combination of the grip-block G, having the upper and lower sides of the inner end convex, and the outer end or heel square, secured in the stationary hammer-head A in the mortise H by means of the pin *k* passing through the hammer-head in the oblique slot K, and automatically controlled by the spring J fastened on the mortise by a pin through said hammer-head, with the movable jaw B, having the obtusely angled

upper face; said movable jaw being held in continuity with said grip-block, preferably, by means of the pawls D D, pivoted in the mortises E E, in the lower end of the movable jaw, the exterior points of the pawls meshing in the teeth *h h*, on the opposite sides of the handle C, and holding the movable jaw firmly in place, thus forming a machinist's wrench-hammer, as substantially set forth in the drawings and specifications.

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

OWEN PARRY HUGHES.

Witnesses

G. M. CLARK,  
D. B. LONG.