

No. 631,056.

Patented Aug. 15, 1899.

I. S. VAN ETTEN & W. E. BERRY.

PIPE WRENCH.

(Application filed Apr. 12, 1899.)

(No Model.)

Fig. 1.

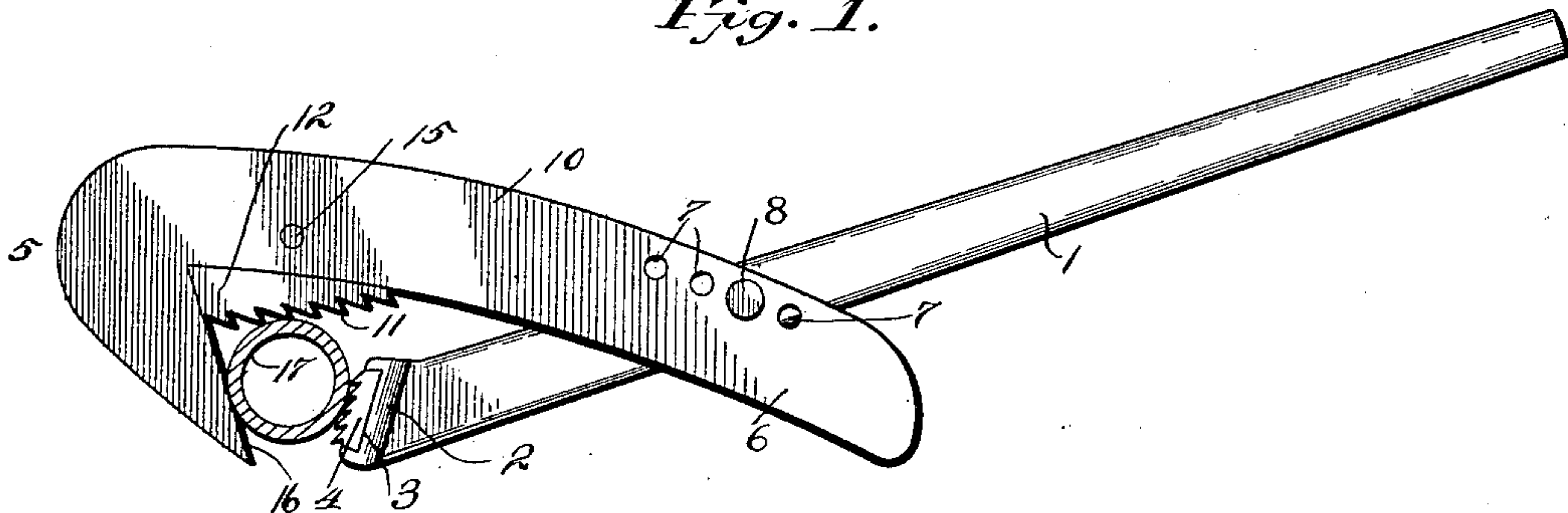


Fig. 2.

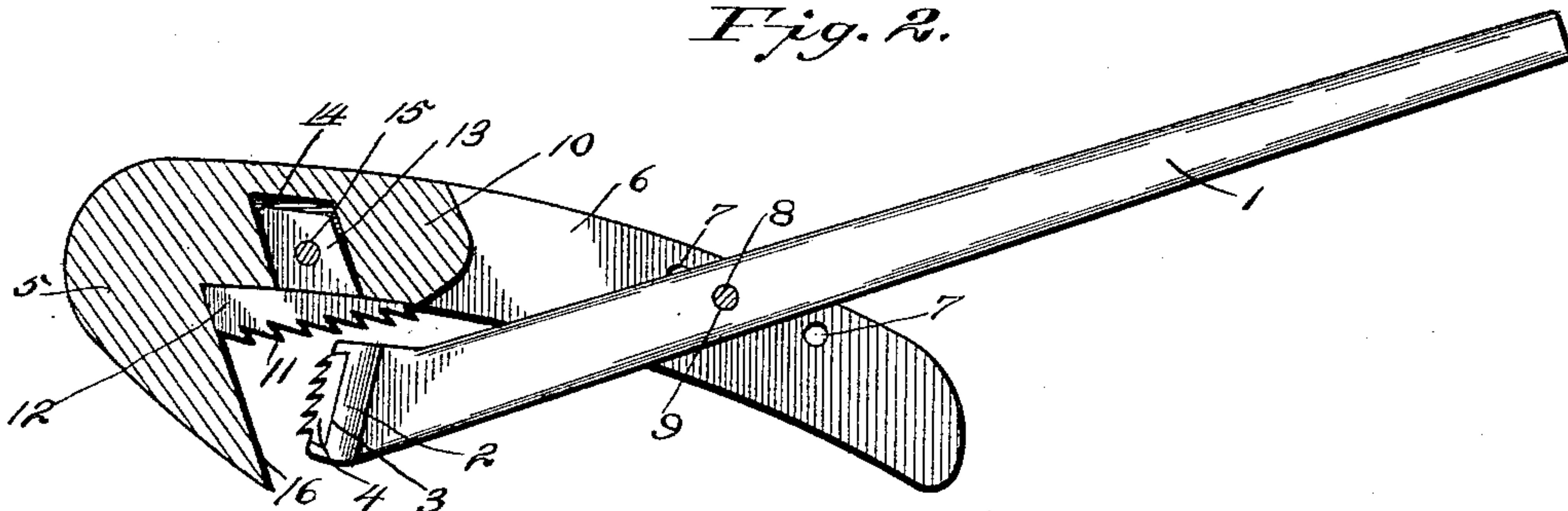
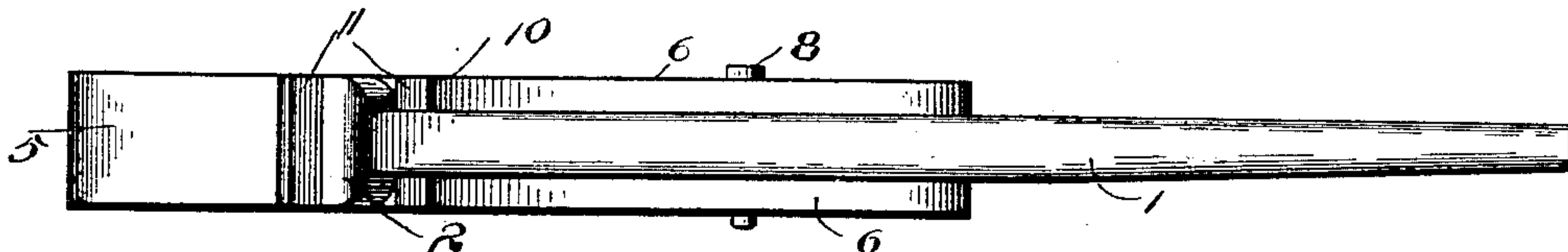


Fig. 3.



Witnesses

Flarence H. Walker

A. B. Shepard

By his Attorneys,

Ira S. Van Etten.
William E. Berry. Inventors

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

IRA SYLVESTER VAN ETTEN AND WILLIAM EDWARD BERRY, OF CYGNET, OHIO; SAID BERRY ASSIGNOR TO SAID VAN ETTEN; SAID VAN ETTEN ASSIGNOR OF ONE-HALF TO CHARLES M. STANBURROUGH AND WILLIAM J. CHRISTIE, OF SAME PLACE.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 631,056, dated August 15, 1899.

Application filed April 12, 1899. Serial No. 712,789. (No model.)

To all whom it may concern:

Be it known that we, IRA SYLVESTER VAN ETTEN and WILLIAM EDWARD BERRY, citizens of the United States, residing at Cygnet, in the county of Wood and State of Ohio, have invented a new and useful Pipe-Wrench, of which the following is a specification.

This invention relates to wrenches, and particularly to pipe wrenches or tongs; and the object thereof is to provide such a wrench which will tightly grip a pipe or other similar object without slipping and which may be readily released therefrom at the desired moment.

To this end the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the drawings, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of the wrench fitted to a pipe. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is an edge view of the wrench.

Referring to the accompanying drawings, 1 designates a long operating-lever having at one end a rigid transverse and beveled or inclined jaw 2, forming the inner jaw of the wrench. The face of this jaw is provided with a dovetailed groove 3, in which is detachably fitted a serrated block 4, forming the clamping-face of the jaw.

The outer jaw 5 has a slightly-curved shank 10, disposed at an acute angle to the jaw and bifurcated, as shown in Fig. 3, forming opposite arms 6, which are adapted to embrace the lever 1 below the fixed jaw thereof. These arms are provided with a plurality of openings 7 near their outer edges, and a removable pivot-pin 8 is adapted to be passed through an opening 9 in the lever 1 and through any one of the openings 7, whereby the outer jaw 5 may be adjusted upon the lever with respect to the inner jaw in order to accommodate the wrench to pipes of different sizes.

Upon the inner edge of the shank 10 just below the outer jaw 5 and opposite the inner jaw a serrated surface 11 is provided upon a removable block 12, which fits in the acute

angle formed by the jaw 5 and its shank 10. This block 12 has a shank or tongue 13, which is fitted in a recess 14, provided in the inner edge of the shank 10, as best shown in Fig. 2. A pin or key 15 is passed transversely through the shank and the shank of the block 12, whereby the latter is removably fitted in place. The block is wedge-shaped, being widest at its upper end, tapering downward and inward toward the shank 10 upon its outer serrated face, and is adapted to engage the back of a pipe placed between the jaws 4 and 5 and form a stop to prevent the pipe from slipping backward and out from between the said jaws. The teeth or serrations of the wedge-block 12 are inclined downward and outward from the shank 10, and the serrations of the block 4 also are inclined away from the shank. The under face 16 of the outer jaw is without serrations or teeth of any character.

In applying the wrench the outer jaw is engaged about a pipe 17, and by pressing upon the lever 1 in a direction to draw the jaw 2 toward the serrated block 12 of the shank 10 the pipe is firmly clamped between the jaws 2 and 5 and the serrated face of the block 12. It will be noted that by reason of the inclination of the jaw 2 the serrations thereof extend upwardly and those of the block 12 extend downwardly, which different direction of the serrations prevents the wrench from slipping or turning upon the pipe. Immediately upon relieving the pressure from the lever 1 the wrench is perfectly free to be removed from the pipe or to be worked backward to obtain a new grip. This movement is permitted by reason of the smooth gripping-face of the outer jaw and the outward inclination of the serrations of the inner jaw 2, for the smooth jaw offers no resistance and neither do the outwardly-inclined serrations of the jaw 2. When the wrench is set upon a pipe, the serrated faces of the jaw 2 and the block 12 prevent the wrench from turning, as explained, and it is therefore not necessary to provide the outer jaw with serrations, and by having the said jaw smooth or free from serrations the wrench loosens its

grip and is perfectly free to be moved independently of the pipe immediately upon relieving the pressure from the lever 1.

5 This relative arrangement of the serrated and non-serrated gripping-faces of the wrench is the characteristic and essential feature of the present invention and results in an improved and highly-useful form of wrench.

10 Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

15 Having thus described the invention, what is claimed is—

1. In a wrench, the combination of a lever having a toothed or serrated face which forms the inner jaw, an outer jaw having a plain face and a shank which is hinged to the lever so
20 that the outer jaw may cooperate with the inner jaw, the inner edge of the shank being provided with a removable block having a serrated face, said block fitting in the angle formed by the outer jaw and its shank and
25 abutting against the shank and jaw, the serrations of the inner jaw and those on the removable block being inclined in different directions, substantially as described.

2. In a wrench, the combination of a lever one end of which is provided with serrations
30 extending outwardly, forming the inner jaw, an outer jaw having a smooth gripping-face, and a shank which is pivoted or hinged to the lever so that the outer jaw may cooperate with the inner jaw, and a removable wedge-shaped
35 block, having an attaching-shank fitted in a recess formed in the extension immediately below the outer jaw, the gripping-surface of the block being inclined downward and inward toward the shank of the jaw, and pro-
40 vided with serrations which extend downward, whereby the serrated surfaces are adapted to grip a pipe and prevent the wrench from turning thereon, and the wrench is free
45 to be moved independently of the pipe, immediately upon relieving the pressure from the lever, substantially in the manner shown and described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures
50 in the presence of two witnesses.

IRA SYLVESTER VAN ETTEN.

WILLIAM EDWARD BERRY.

Witnesses:

P. I. McVELIA,

H. V. MCGIVERN.