No. 664,361. Patented Dec. 18, 1900.

H. F. RENNER.

PIPE VISE.

(Application filed Oct. 19, 1900.)

(No Model.)

Fig. 1.

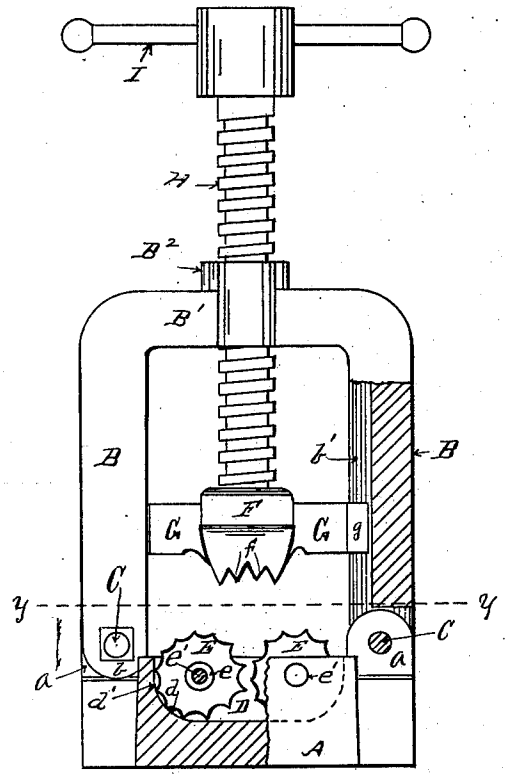


Fig. 3.

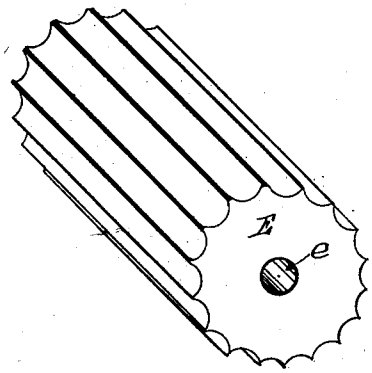
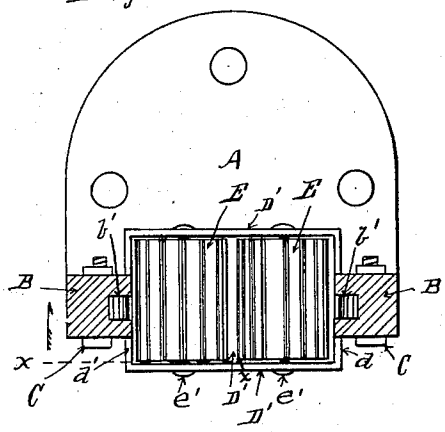


Fig 2.



Witnesses.
A. M. Sturgeon.
A. L. Jackson

Inventor.
Henry F. Renner.
By A. M. Sturgeon
atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY F. RENNER, OF ERIE, PENNSYLVANIA, ASSIGNOR TO THE HOLLANDS MANUFACTURING COMPANY, OF SAME PLACE.

PIPE-VISE.

SPECIFICATION forming part of Letters Patent No. 664,361, dated December 18, 1900.

Application filed October 19, 1900. Serial No. 33,537. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. RENNER, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Pipe-Vises; and I do hereby 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 of reference marked thereon, forming part of this specification.

My invention relates to improvements in pipe-vises; and the leading feature thereof consists, substantially, in constructing the bearing-surface of the lower or stationary jaw of the vise of longitudinally-fluted rollers which rest upon the bottom of the vise-frame and which may be held in place by means of rivets passing through enlarged central openings in the rollers or in other convenient manner, so as to admit of a slight lateral movement of the rollers. These rollers perform the function of the fixed jaws ordinarily used in pipe-vises and being cylindrical as the flutes thereon become worn can be rotated and new surfaces presented for use. This and other features of my invention are hereinafter fully set forth, described, and illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation of a pipe-vise embodying my invention, part of the uprights being in section and part of the base being broken away on the line $x\ x$ in Fig. 2. Fig. 2 is a transverse section of the same on the line $y\ y$ in Fig. 1 looking in the direction of the arrow. Fig. 3 is a perspective view of one of the jaw-rolls detached from the vise.

In the drawings illustrating my invention, A is the base, and B B the upright part, of the frame, joined together at the top by a cross-bar B′. The lower ends of the uprights B B are secured to the base by means of removable bolts C passing through ears $a\ a$ on the base and $b\ b$ on the upright portions B of the frame.

In the base A of the frame I cast a rectangular recess D, the ends d of the bottom of which curve up to the ends d' thereof. In this recess I place two longitudinally-fluted metal rollers E E. (See Fig. 3.) In the centers of these rollers there are openings e. Through these openings e in said rollers I place rivets e', which are considerably smaller than the openings e in the rollers, the rivets e' extending through the sides D′ D′ of the recess D, so as to retain the rollers E in the recess, yet permit of their lateral and vertical movement therein. It will thus be seen that when a pipe is pressed down between the rollers E E it operates to move the rollers slightly apart until they contact with the curved portions $d\ d$ of the recess D, where they remain stationary until the pressure is removed therefrom.

The upper or movable jaw F is provided with a serrated face f, adapted to contact with the upper surface of a pipe placed upon the rollers E E. The jaw F is mounted upon a cross-bar G, the ends g of which extend into vertical grooves b' in the uprights B, so that it will move up and down freely therein. This cross-bar G is pivoted upon the lower end of a screw H, which extends up through a nut B^2 in the cross-bar B′, and on the upper end of the screw there is an operating-lever I, by means whereof the screw H is turned up and down, carrying the cross-bar G and the jaw F therewith in the usual manner. It will be observed that by this construction and arrangement of the lower jaw and the upper jaw F, I am enabled to get a large bearing-surface upon the pipe to be secured therein, and thus avoid the danger of crushing the pipe, as is frequently the case with pipe-vises as ordinarily constructed, while at the same time I can utilize the vise upon a wide range of sizes of pipe with equal facility, and in case the serrations upon the rollers E E become worn the rollers can be rotated so as to present new surfaces for use until the serrations around the entire peripheries or the rollers E are worn out.

Having thus fully described my invention, so as to enable others to construct and use the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A vise-jaw comprising substantially longitudinally fluted rollers mounted in a recess

in a vise-frame, substantially as and for the purpose set forth.

2. In a pipe-vise the combination of a stationary jaw comprising substantially longitudinally fluted rollers mounted in a recess in the base of the vise-frame, with a movable serrated jaw, and a screw for operating the same, substantially as and for the purpose set forth.

3. The combination in a pipe-vise, of a base A having a recess D therein, and uprights B B secured thereto, fluted rollers E E mounted in said recess, a movable serrated jaw F secured to a cross-bar G mounted in the uprights B B, and a screw H for operating said jaw F, substantially as and for the purpose set forth.

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

HENRY F. RENNER.

Witnesses:
E. S. ROCKAFELLAR,
H. M. STURGEON.