

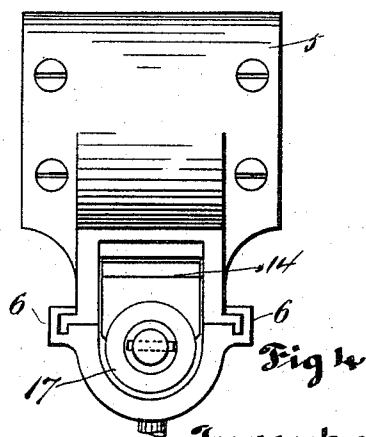
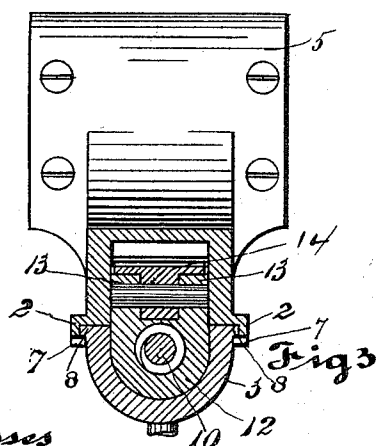
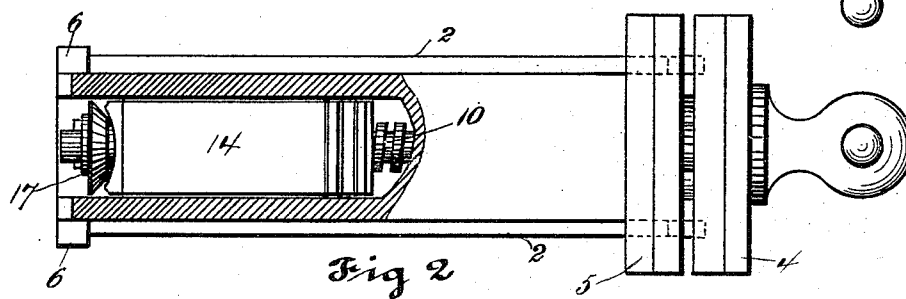
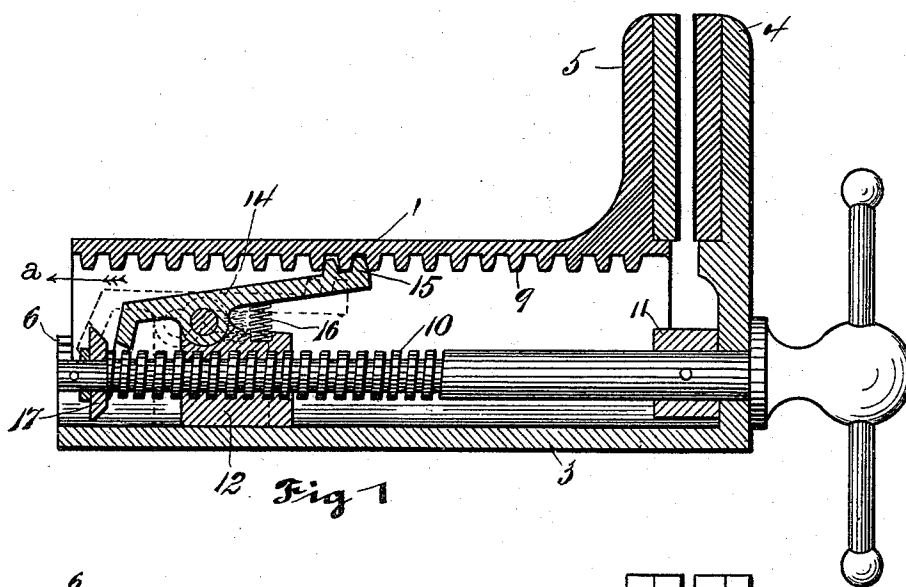
(No Model.)

2 Sheets—Sheet 1.

J. M. VAN METER.
VISE.

No. 573,056.

Patented Dec. 15, 1896.



Witnesses

W. P. Appenham.

E. E. Paddock.

Inventor

James M. Van Meter
By his Attorney
Thompson & Bell

UNITED STATES PATENT OFFICE.

JAMES M. VAN METER, OF CAMBRIDGE CITY, INDIANA.

WISE.

SPECIFICATION forming part of Letters Patent No. 573,056, dated December 15, 1896.

Application filed May 20, 1895. Serial No. 549,918. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. VAN METER, a citizen of the United States, residing at Cambridge City, in the county of Wayne and State of Indiana, have invented new and useful Improvements in Vises, of which the following is a specification.

My invention relates to certain new and useful improvements in vises; and it consists in a novel mechanism whereby the clamping mechanism is automatically disengaged from the movable jaw, thereby permitting the said movable jaw to be moved manually to be adjusted to the size of the work to be held by the vise, and will be hereinafter more fully set forth.

The object of my invention is to provide means whereby the clamping-screw of the vise may be operated to disengage the top jaw-frame and to permit the lower or movable jaw-frame to be moved manually, to provide means whereby the movable jaw-frame of the vise will be prevented from becoming detached from the fixed or upper jaw-frame, and to provide suitable stops on the said movable jaw-frame and the fixed jaw-frame whereby the said frames are held or retained in sliding position and whereby the said movable jaw-frame is prevented from overrunning its full limit of travel. I attain these objects by means of the vise illustrated in the accompanying drawings, in which similar numbers of reference designate like parts throughout the several views.

Figure 1 is a longitudinal sectional view of the vise. Fig. 2 is a broken plan view of the same. Fig. 3 is a transverse sectional view. Fig. 4 is a rear end elevation, and Fig. 5 is a perspective view of the vise.

The vise is composed of an upper or fixed jaw-frame 1, which is of a channel form and has the longitudinal guide-ribs 2 formed integral on the lower bearing edges of the fixed jaw-frame, between which the lower movable jaw-frame 3 accurately fits and freely slides longitudinally. The movable jaw-frame 3 is of a U-section and is provided with the clamping-jaw 4, which is formed integral thereon, its opposing or fixed jaw 5 being formed integral on the fixed jaw-frame.

On the rear end of the movable jaw-frame 3 and on the opposite top sides thereof are

formed the lips 6, which are adapted to receive the side guide-strips 2, and on the front bottom edge of the strips 2 are also formed the guide lugs or lips 7, which are adapted to receive the side bearing-strips 8, formed integral on the top edge of the bearing edge of the movable jaw-frame, said guide-lugs provided for the purpose of retaining said movable jaw-frame in bearing contact with its upper fixed jaw-frame, and said lugs are arranged in the manner shown more clearly in Fig. 5 for the purpose of forming a stop and preventing the movable jaw-frame 3 from becoming detached from its upper or fixed jaw-frame when pulled out its fullest extent.

The rack 9 of the fixed jaw-frame may either be formed integral therewith or it may be firmly secured thereto.

The clamping-screw 10 of the vise is threaded at its rear end for a small portion of its length and is journaled at its forward end in the movable jaw-frame 3 and is held from moving longitudinally in said journal by the collar 11, firmly secured thereon. The traversing nut 12 is threaded to receive its clamping-screw 10 and loosely fits in the interior or hollow portion of the movable frame 3, wherein it is adapted to traverse longitudinally in either direction.

On the top of the traversing nut 12 are formed the lugs 13, between which the latch 14 is pivoted at a point intermediate between its ends. The forward end of the latch 14 is provided with one or more gear-teeth 15, which are adapted to engage the rack 9. Said latch 15 is held in engagement with said rack 9 by a suitable spring, as the coil-spring 16.

At or near the rear or reduced end of the clamping-screw 10 is secured the collar 17, the beveled peripheral edge of which is adapted to contact with the bent rear end of the latch 14 to tilt or raise said bent end to cause the opposite engaging end to be disengaged from the rack 9 when the said clamping-screw 10 is turned to traverse said nut 12 backwardly or in the direction of the arrow *a*.

When the latch is tilted into the position shown in dotted lines in Fig. 1, it is clear that the movable jaw-frame 3 may be moved forwardly or backwardly to adjust the jaws 4 and 5 to the size of the work required to be held by the vise, and the clamping-screw 10

may be turned in the opposite direction to
release the bent end of the latch 14 from the
throw-out collar 17 and to permit the teeth
15 of the latch to engage the rack-teeth 9, and
5 the clamping-screw being still further turned
will cause the movable frame to move to clamp
the work between the said jaws 4 and 5.

Having thus fully described the nature of
my invention, what I claim as new and use-
10 ful, and desire to cover by Letters Patent of
the United States therefor, is—

In a clamping-vise, the combination with a
fixed jaw-frame and a movable jaw-frame

adapted to slide longitudinally along said
fixed jaw-frame, of retaining-lugs on the end 15
of said fixed jaw-frame, and rear-end retain-
ing-lugs on said movable jaw-frame, both of
said lugs arranged to contact to form a stop.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing 20
witnesses.

JAMES M. VAN METER,

Witnesses:

FRANK W. HARNED,
CHARLES J. MARSON.