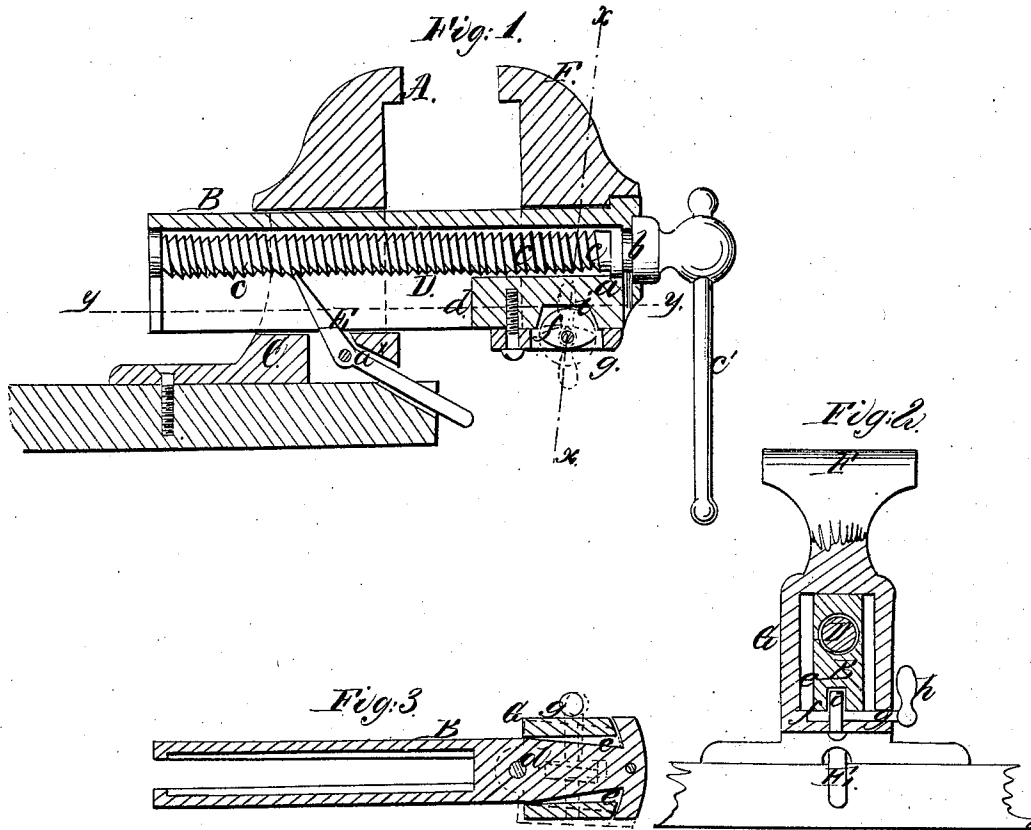


C. B. Clark,

Vise.

N^o 19,622.

Patented Mar. 16, 1858.



UNITED STATES PATENT OFFICE.

CHARLES B. CLARK, OF ORISKANY FALLS, NEW YORK.

WISE.

Specification of Letters Patent No. 19,622, dated March 16, 1858.

To all whom it may concern:

Be it known that I, CHARLES B. CLARK, of Oriskany Falls, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Vises; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a horizontal central section of a vise constructed according to my improvement. Fig. 2, is a transverse section of ditto taken in the line (*x*) (*x*) Fig. 1. Fig. 3 is a horizontal section of ditto taken in the line (*y*), (*y*), Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in the employment or use of a peculiarly constructed screw and pawl arranged and applied to the vise as hereinafter shown and described, whereby the movable jaw is rendered susceptible of being quickly and also firmly adjusted to the work to be held or clamped.

The invention also consists in a peculiar arrangement of the movable jaw whereby the same, when irregular shaped article, or articles of taper form are to be held or grasped by the jaws, is allowed to adjust itself to the article so that it may be held equally as firm as if its sides were parallel.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents the stationary jaw of a parallel vise, constructed in the usual way, and B, is the horizontal bar which works loosely through the stock C, of the jaw A.

D, is a screw rod which is fitted longitudinally within the bar B, and secured within it by a pin (*a*) which fits in a groove (*b*) in the rod as usual, the outer end of the screw rod being provided with a handle (*c'*). The flanch or thread (*c*) which forms the screw of the rod D, is not constructed in the usual way, one side of the thread being radial with the rod, or projecting from its periphery at right angles and the opposite side being quite inclined as shown in Fig. 1.

E, is a pawl which is pivoted at (*a''*) within the stock C, of the jaw A. The upper end of this pawl catches into the thread (*c*) of the rod D, and is so beveled or formed as to fit the pitch of the thread. The lower part of the pawl E, below the point (*a''*) is

heavier than the upper part so that the upper part will, by gravity, remain engaged with the screw rod D, when not otherwise acted upon.

F, is the movable jaw which is of the usual form. The stock G, of this jaw is fitted on the outer end of the bar B, and is connected therewith by a screw or pivot (*d*) which passes up through the lower part of the stock at its inner end and into the under side of the bar B. The stock G is allowed to work on the screw or pivot (*d*) and the sides of the bar B are each recessed as shown at (*e*), (*e*), Figs. 2 and 3 to permit a requisite degree of play or movement of the same. In the lower part of the stock G, below the bar B, a button (*f*) is fitted. This button is of semi-circular form and is placed on a small shaft (*g*) which is fitted transversely in the stock and provided with a handle or crank (*h*) at its outer end. In the under side of the bar B, a slot (*i*) is made to receive the button (*f*) when required.

The operation is as follows: It will be seen that in consequence of the form of the thread (*c*) of the rod D, the movable jaw F, may be shoved inward or toward the stationary jaw A, for the inclined side or surface of the thread will slip over the upper end of the pawl E. The jaw F, cannot however be drawn outward from the jaw A, as the pawl E, prevents such movement by catching against the opposite side of the thread. In order therefore to adjust or secure an article in the vise, the jaw F, if it is not out far enough from the jaw A, is drawn out, the lower end of the pawl E, being elevated by the hand of the operator so that the upper end will be disengaged from the screw rod D. The article is then placed between the two jaws and the jaw F, shoved inward until its face side is brought in contact with the article. The screw rod D, is then turned by means of the handle (*c'*) and the pawl F, being engaged with the screw rod it performs the function of a nut and the jaw will be firmly secured against the article. Thus the jaw F, may not only be quickly adjusted to the work or article to be held, but also firmly screwed up so as to cause the article to be firmly held or grasped by the jaws. In case the article to be held or grasped by the vise is of taper form the button (*f*) is turned down out from the recess (*i*) in the under side of the bar B, as shown in red Fig. 1, and the jaw F, is therefore

allowed to move or vibrate on the bar B, to a certain extent so that the face of the jaw F, may adjust itself parallel with the side of the article to be grasped or held by it. The jaw F, is held or prevented from turning on the bar B when not required by turning the button (f) up within the recess (i) as shown in black Figs. 1 and 2.

I do not claim broadly a jaw arranged so that it may adjust itself parallel with one side of taper articles to be grasped, without reference to the particular means employed for effecting the purpose, for jaws have been previously arranged to effect this purpose; neither do I claim broadly the construction of the screw rod D, irrespective of the pawl E, and the particular adaptation of said parts as herein shown and described; but,

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

1. The arrangement and combination of the bar B, screw rod D, (having a thread (c) of the peculiar form shown,) and pawl E, the latter serving the double purpose of a pawl and nut, substantially as and for the purposes described.

2. Providing the bar B with recesses (e) so that the jaw F may adjust itself or turn upon its pivot (d) substantially as and for the purposes set forth.

CHARLES B. CLARK.

Witnesses:

W. HAUFF,
W. TUSCH.