

(No Model.)

A. L. ADAMS.

WISE.

No. 305,037.

Patented Sept. 16, 1884.

Fig. 1.

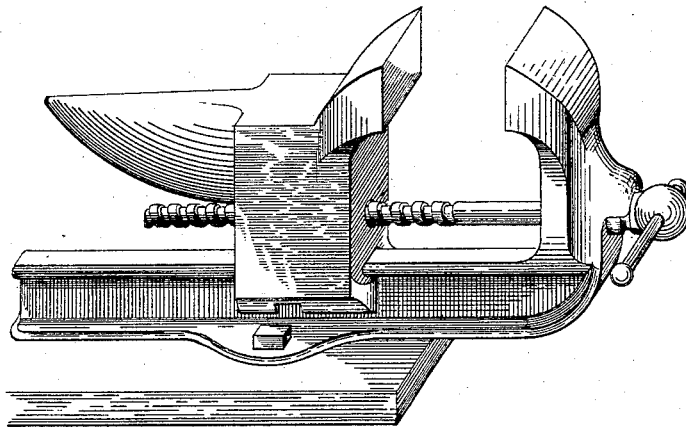
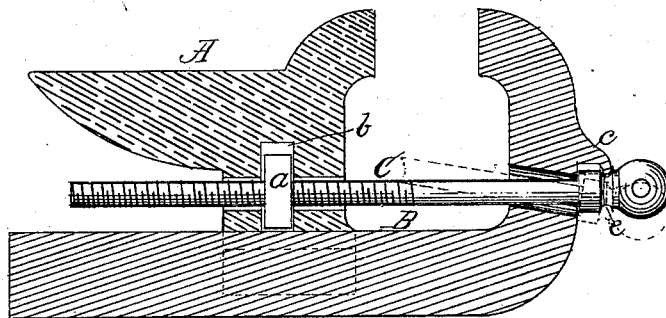


Fig. 2.



Witnesses,
Robert G. Clark
Samuel M. Endicott

Inventor:-
Albert L. Adams
By his Atty.
Justus M. St. John

UNITED STATES PATENT OFFICE.

ALBERT L. ADAMS, OF CEDAR RAPIDS, IOWA.

WISE.

SPECIFICATION forming part of Letters Patent No. 305,037, dated September 16, 1884.

Application filed December 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALBERT L. ADAMS, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Vises, of which the following is a specification.

The object of this invention is to simplify and cheapen the manufacture and increase the utility of parallel jaw-vises by means of the following-described improvements.

The invention consists in applying to the inner movable jaw of a parallel vise a wrought-iron nut in lieu of cutting the thread in the jaw, and in casting or otherwise forming upon the outer fixed jaw and integral therewith a semi-annular collar to hold the screw in position when turned in the direction to open the vise, the jaw being provided with a vertically angled or elongated hole to admit the screw to place, the detail of which will be more particularly hereinafter described.

In the accompanying drawings, forming a part of this specification, Figure 1 represents the vise in perspective, and Fig. 2 a sectional side elevation of the same.

The vise, as will be seen, is of a style usually constructed of cast-iron. It is desirable, by reason of its simplicity and utility, that the outer jaw should be the fixed one, and the inner jaw slide upon a suitable right-angled extension of the same. When so constructed, the screw C is placed above the bearing-rail and relatively near the holding part of the jaw, and the result is a strong vise with a powerful grip.

I make no claim on this arrangement of parts; but in practice I prefer this form where a cheap and effective parallel jaw-vise is required.

Heretofore in the manufacture of these vises it has been the custom to drill the inner or back jaw and tap out the hole to fit the screw; but a cast-iron thread wears out and breaks away rapidly, and when this takes place the jaw is rendered useless. Besides, the operation of drilling and tapping is necessarily slow and expensive. It is to obviate these difficulties and disadvantages that I con-

ceived of supplying the movable jaw with a wrought-iron nut, so connected therewith as to move it in and out by the corresponding revolutions of the screw. This I accomplish by placing the nut near the center of the jaw and in line with the hole, with a bearing of cast-iron each side of it. By a suitable arrangement of cores the nut may be cast solidly within the jaw, leaving a hole for the screw; but in order to allow for any slight variations in the screw, I prefer in practice to make the jaw with a socket, into which the nut may be inserted at will, giving it room to move slightly with the irregularities of the screw. This socket *b* preferably opens from the bottom of the jaw, as appears in Fig. 1, and when in position the nut rests upon or just clears the top of the guide-rail. This prevents the nut from dropping out of range with the screw when the latter is entirely withdrawn, and insures its quick and easy return when desired. In putting the vise together, the nut is first placed in the socket, and the jaw is then slipped upon the guide-rail and the screw inserted.

The improvement in the fixed jaw consists in making the collar *c*, which retains the screw in position, a part of the jaw, thereby avoiding the usual fitting and attaching of the same.

The device is so simple as to be easily understood by reference to the drawings. The collar being permanently connected with the jaw, in order to insert the screw the latter must be placed at an angle, as indicated by the dotted lines in Fig. 2. To admit of this being done, the hole in this jaw is somewhat elongated vertically, and so formed that when the screw is horizontal the bottom of it will rest upon the bottom of the hole, while the upper arc of the groove in its neck is in juxtaposition with the semi-annular flange of the collar above mentioned.

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

1. In combination with the inner movable jaw of a parallel vise, a wrought-iron nut inclosed in a socket in said jaw, the socket be-

ing so constructed as to prevent the nut from turning and afford a bearing for the whole surface of both faces of the nut, substantially as shown and described.

- 5 2. As an independent new article of manufacture, the parallel jaw-vise having an outer fixed jaw with a screw-retaining collar formed thereon, and with a vertically-elongated hole, and an inner movable cast jaw provided with

a wrought-iron nut, all constructed and arranged substantially as set forth.

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

ALBERT L. ADAMS.

Witnesses:

SAMUEL M. ENDICOTT,
JUSTUS M. ST. JOHN.