

O. Dean,

vise.

No. 109594.

Patented Nov. 29, 1870.

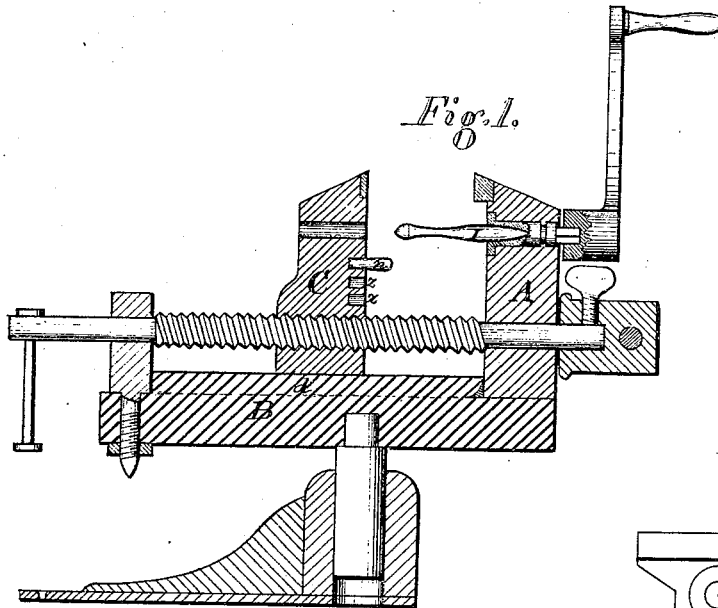


Fig. 2.

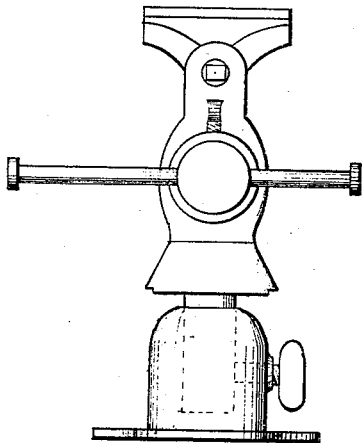
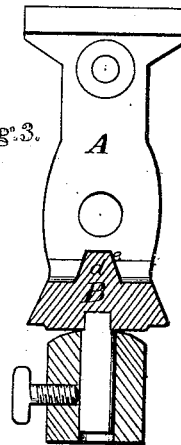


Fig. 3.



Witnesses
O. D. Kane.
Charles H. Lyon

Inventor
O. Dean
Chipman & Son, Co.,
Attorneys

United States Patent Office.

OTIS DEAN, OF RICHMOND, VIRGINIA.

Letters Patent No. 109,594, dated November 29, 1870.

IMPROVEMENT IN COMBINED VISES AND DRILLS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, OTIS DEAN, of Richmond, in the county of Henrico and State of Virginia, have invented a new and valuable Improvement in Combined Vises and Drills; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a vertical longitudinal section of my invention;

Figure 2 is an end view; and

Figure 3 is a cross-section of the same.

My invention relates to an improvement in the vise and drill for which Letters Patent were granted to me June 15, 1869, and for an improvement in which Letters Patent were issued to me October 12, 1869, and consists in the formation of a rib on the upper surface of the base of the fixed jaw to guide and steady the movable jaw; also, in the addition of certain small perforations below the countersink, in which a pin is adjusted to secure the article under the operation of the drill.

The letter A of the drawing designates the fixed jaw, and its base-plate is lettered B.

C represents the movable jaw, in which a channel, *c*, is formed to receive the rib *d*, cast on the upper surface of the base-plate B.

The rib *d* is usually made with sides inclined upward and inward, as shown at fig. 3 of the drawing,

and the channel in the movable jaw is formed with sloping sides to correspond.

It will be observed, on reference to my former patents above mentioned, that the same functions are therein performed by means of a rib on the base of the movable jaw, and a dovetailed groove in the base-plate of the fixed jaw. This construction necessitates the use of a care in casting the base-plate, which is expensive and otherwise objectionable.

In casting my improved jaw and base-plate the core is dispensed with, and there is no tendency to bind the movable jaw, as in the operation of the dovetailed groove.

The perforations *z z* are added below the countersink in the movable jaw, and serve as bearings for an adjustable pin, *n*, which is designed to secure the article under operation of the drill I, and to prevent it from turning.

What I claim as my invention, and desire to secure by Letters Patent, is—

As an improvement upon the combined vise and drill heretofore patented to me June 15 and October 12, 1869, the beveled guide rib *d*, cast in one piece with the parts A and B, and the channel *c*, and perforations *z* in the movable jaw C, as set forth.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

Witnesses:

J. F. BOOTH,
C. E. BOOTH.

OTIS DEAN.