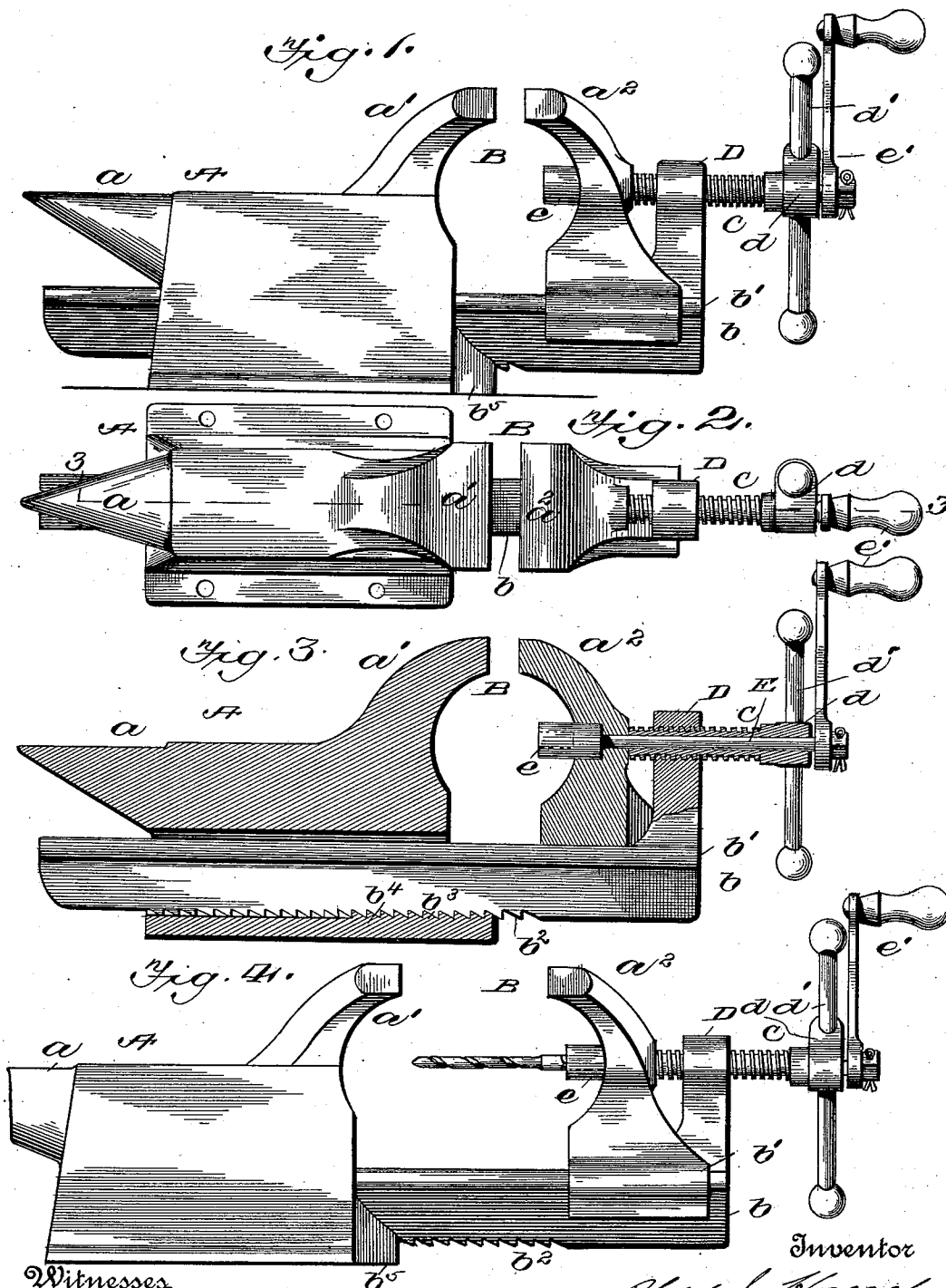


(No Model.)

P. J. HARRAH.
COMBINED VISE AND DRILL.

No. 566,170.

Patented Aug. 18, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

PHILIP J. HARRAH, OF BLOOMFIELD, INDIANA.

COMBINED VISE AND DRILL.

SPECIFICATION forming part of Letters Patent No. 566,170, dated August 18, 1896.

Application filed April 11, 1896. Serial No. 587,145. (No model.)

To all whom it may concern:

Be it known that I, PHILIP J. HARRAH, of Bloomfield, in the county of Greene and State of Indiana, have invented certain new and useful Improvements in a Combined Vise and Drill; 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.

This invention contemplates certain new and useful improvements in combined vises and drills.

The object of the invention is to provide a combination device of the character specified, having simple and efficient means for clamping or binding a piece of wood or metal and effecting the drilling of a hole therein. This I accomplish by mounting the adjustable jaw of a vise on a longitudinally-adjustable supporting-bar having rack-teeth for engaging corresponding teeth on the base of the vise frame or body. This jaw is adjustable by means of a screw-rod working in a threaded supporting-post. This screw-rod is hollow and through it extends a drill-rod having a socket at its inner end and a crank-handle on its outer end.

The frame or body of the vise is in the form of an anvil and a projecting lip of the latter enables it to serve all the purposes of an ordinary anvil.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation. Fig. 2 is a plan view. Fig. 3 is a central longitudinal sectional view on line 3 3, Fig. 2. Fig. 4 is a view showing the device used as a drill.

Referring to the drawings, A designates a frame or body having at its top the outline and general character of an anvil, the office of which it is designed to serve. From one end of the top of this body extends a tapered or V-shaped lug a . With the other end of this body is formed the stationary jaw a' of a vise B, the movable or adjustable jaw a^2 of which is mounted on a supporting-bar b , having upper lateral flanges b' , which are hugged by the lower end of the jaw a^2 .

The supporting-bar b is longitudinally ad-

justable within the body A, through which it is extended. The under side of this bar has rack-teeth b^2 formed therewith, which are designed to engage corresponding rack-teeth b^3 on the base b^4 of frame A, said latter teeth being located between guide-flanges b^5 , between which the bar b fits snugly. These rack-teeth b^3 , being inclined or beveled oppositely to the teeth b^2 , serve to hold the bar b as against outward movement while said teeth are in engagement. The bar can be easily slid inward, but to effect its outward movement said teeth must first be disengaged by the raising of said bar.

C is a hollow screw-rod working in a threaded opening of a post D, mounted on the supporting-bar b at the outer end of the latter. The inner end of this screw-rod bears against the outer face of the adjustable jaw a^2 , so that the turning of said screw-rod in one direction will force said jaw toward the stationary jaw a' . At the outer end of this screw-rod is a laterally-projecting lug d , through an opening in which fits a handle-rod d' , by which the turning of the screw-rod is effected.

E is a drill-rod extended longitudinally through the screw-rod C, beyond the ends of which it projects, and also through a hole in the vertical portion of the adjustable jaw. On this latter end of the drill-rod is a socket e , designed to receive an ordinary drill-tool. On the other end of this drill-rod is a crank-handle e' , by which said rod can be rotated. By turning the inner drill-rod E the drill-tool will operate on that portion of the article in line therewith. The drill and its rod are adjusted by turning the screw-rod C.

It will be seen that, the supporting-bar for the adjustable jaw being adjustable longitudinally and said jaw being further adjustable on said bar, articles of different width or thicknesses can be operated upon by the drill, and that by operating the drill-rod a hole or opening can be easily and quickly formed in such article. The body of the frame being in the form of an anvil, I have in the one device all the advantages of three separate tools, namely, an anvil, a vise, and a drill.

The advantages of my invention are apparent, and it will be specially observed that a device constructed as herein described is

simple and inexpensive and not liable to readily get out of order or be deranged.

I claim as my invention—

1. A device of the character herein described, comprising a stationary body having a longitudinal opening with rack-teeth on its bottom, a rigid stationary jaw extending from said body, a supporting-bar designed to fit in said opening and having rack-teeth engaging said former rack-teeth, an adjustable jaw adapted to slide on said bar, a post rigid with said bar having a threaded hole therein, a hollow screw-rod working in said hole and engaging said adjustable jaw, and a drill-rod extended through said screw-rod and through a coincident opening in said jaw, substantially as set forth.

2. A device of the character herein described, comprising a stationary body having an opening extending longitudinally there-

through provided with rack-teeth on its bottom, a rigid jaw extending from said body, an adjustable supporting-bar designed to extend through said opening and having rack-teeth on its bottom and upper longitudinal side flanges, an adjustable jaw mounted on said bar and hugging said flanges, a post rigid with one end of said bar having a threaded hole, a hollow screw-rod working in said hole and engaging said adjustable jaw, and a drill-rod extended through said hollow rod and through a coincident opening in said jaw, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

PHILIP J. HARRAH.

Witnesses:

J. E. HARREL,
MOLLIE WARREN.