(No Model.)

R. VOSBURGH.

COMBINED ANVIL, VISE, AND DRILL.

No. 328,550. Patented Oct. 20, 1885.

Fig. 1.

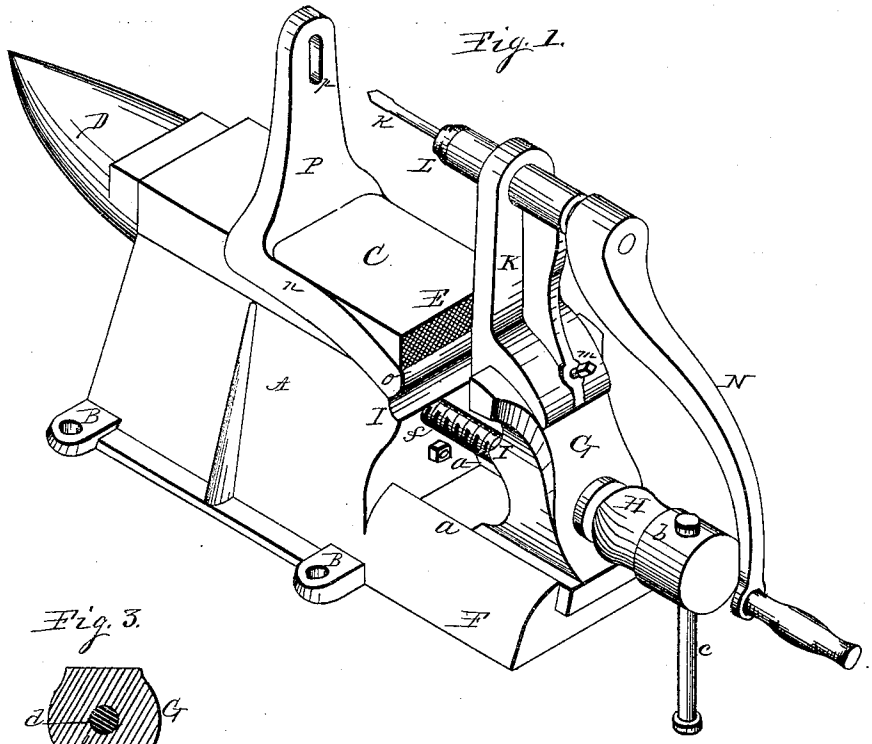


Fig. 3.

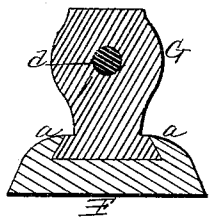
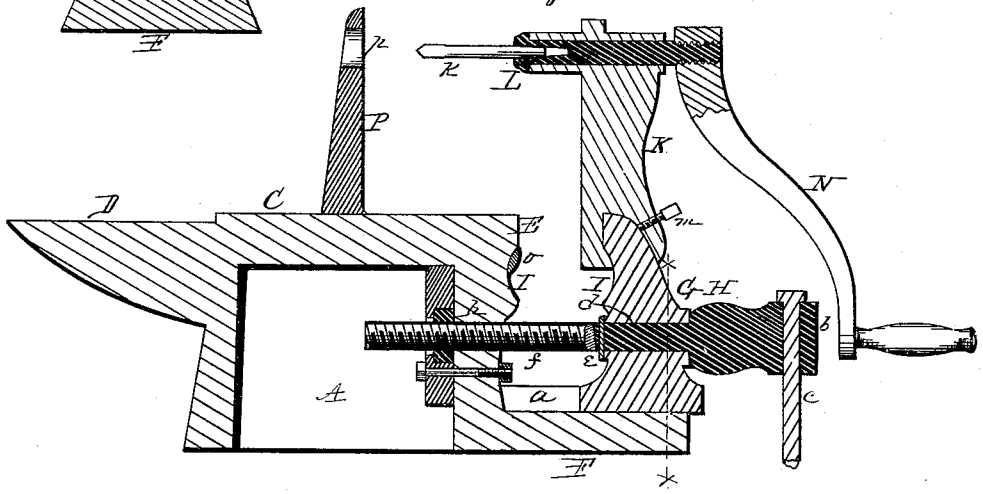


Fig. 2.



Witnesses.
A. O. Behel
F. J. Sovereign

Inventor.
Reuben Vosburgh.
Per Jacob Behel Atty.

UNITED STATES PATENT OFFICE.

REUBEN VOSBURGH, OF OREGON, ILLINOIS.

COMBINED ANVIL, VISE, AND DRILL.

SPECIFICATION forming part of Letters Patent No. 328,550, dated October 20, 1885.

Application filed May 1, 1883. Serial No. 93,596. (No model.)

To all whom it may concern:

Be it known that I, REUBEN VOSBURGH, a citizen of the United States, residing in the city of Oregon, in the county of Ogle and State of Illinois, have invented new and useful Improvements in Anvils, of which the following is a specification.

This invention relates to that class of anvils having a vise connected therewith; and the object of this invention is to produce a combined anvil, vise, and drill; and it consists in an improved connection of the movable vise-jaw with the anvil, and in a detachable drilling mechanism with the anvil and with the vise-jaw connected with the anvil. To accomplish these objects I have designed and constructed the anvil and the attachments represented in the accompanying drawings, in which—

Figure 1 is an isometrical representation of an anvil with the attachments in place thereon. Fig. 2 is a lengthwise vertical central section, and Fig. 3 is a transverse section on dotted line X.

The anvil in this instance, in its main features, consists of the box-like pedestal portion A, having lateral base-feet B by which to fix it in place. Face C, horn D, and vise-jaw E are substantially the same as some anvils now in use and to be found in the trade.

At F is represented an extension of the base, having its lengthwise edges on its upper side provided with uprising flanges *a*, the inner edges of which are inclined inward, producing a dovetailed guideway lengthwise in the upper face of the base-extension F.

At G is represented a vise-jaw having its lower end fitted to engage or enter the beveled guideway in the base-extension to slide therein lengthwise snugly, to give to the jaw a firm vertical position in its sliding movements. This jaw, from its connection with the base-extension, rises in position and of a proper form to engage the fixed jaw E on the end of the anvil.

At H is represented the screw employed to operate the vise. This screw is of the usual form employed in vises of most varieties, and it consists of the head *b*, provided with a free lever-handle, *c*, journal portion *d*, supported to revolve in a suitable bearing in the jaw, having a suitable colter, *e*, passed through it inside of the jaw, its screw-threaded portion *f* to enter and revolve in a suitable screw-nut, *h*, fixed within the central opening of the anvil in any suitable manner. This screw-connection with the movable jaw of the vise and with the anvil is not new, but is necessary to the operation of my improvements, and by means of this screw the jaw is made to move in its dovetailed guide-support toward and from the anvil to operate in connection with the fixed jaw thereon and for the purposes of a vise. These jaws at the points designated by the letter I, immediately below the serrated portion of the jaw, are produced in suitable concave curved form to serve the purpose of a pipe-vise.

At K is represented a drill-standard of suitable dimensions, having its lower or foot end fitted to embrace the upper portion of the free jaw snugly, to support it in a vertical position thereon to conform to the movements of the jaw. The upper end of this drill-standard is provided with a tubular bearing, in which a drill-spindle, L, is fitted to revolve, having its outer end fitted with a hand crank or winch, N, by which to rotate the drill-spindle. The forward end of this drill-spindle is fitted in the usual manner in socket form to receive the shank of a drill-bit.

At *k* is represented a drill-bit, which may be of any of the known forms, having its shank fitted to enter the socket in the forward end of the drill-spindle in such a manner that the drill shall revolve with the spindle. In this instance I have represented at *m* a set-screw, which I sometimes employ to prevent displacement of the drill-standard when in place on the vise-jaw.

P represents the vertical arm of a drill-rest, having its lower end fitted to engage the face of the anvil on which it is supported. This vertical arm is provided at its lower end edges with side arms, *n*, to embrace the sides of the anvil, and the end of these arms are connected by an end bar, *o*, to engage the end of the anvil immediately under the fixed serrated jaw E. The upper end of this drill-rest is provided with an opening, *p*, in line with the drill, to permit it to pass through the rest.

By this construction I produce an efficient drill-rest capable of a ready application and as readily removed, having no other fastening

than its self-locking construction. By this construction and arrangement I produce a press-drill capable of use when required in connection with the combined anvil and vise, and in which the clamping-screw of the vise is utilized as the drill-press.

From the foregoing it will be seen that I have produced a combination of the anvil, the vise, and the press-drill, all of which are capable of use for their respective purposes in a combined form.

I claim as my invention—

1. The moving jaw provided with the flattened face and the concaved curved face, in combination with the drill-standard slotted to fit the jaw and held in place thereby, and the set-screw for securing the standard at the proper point on the jaw, substantially as and for the purpose set forth.

2. The drill-rest composed of the vertical arm having its lower end fitted to engage the face of the anvil, the side arms, and the end bar to engage the curved face of the vise-jaw, whereby the same is held firmly in place and may be removed at will, substantially as and for the purpose set forth.

REUBEN VOSBURGH.

Witnesses:
JACOB BEHEL,
DANIEL J. HAUR.