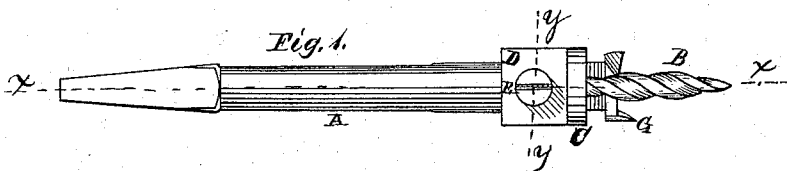
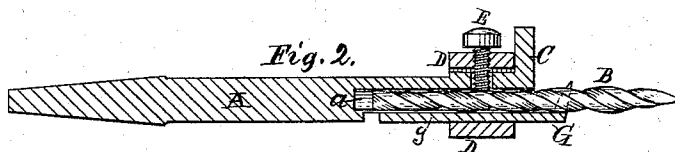
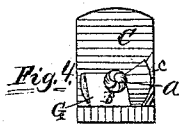
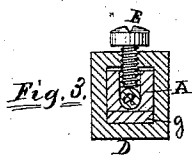


F. JONAS.
Adjustable Bits.

No. 137,373.

Patented April 1, 1873.



Witnesses:

Platt R. Richards.
M. H. Barringer.

Inventor:

Fredrick Jonas,

W. B. Richards.
Atty.

UNITED STATES PATENT OFFICE.

FREDRICK JONAS, OF BURLINGTON, IOWA, ASSIGNOR OF ONE-HALF HIS
RIGHT TO GEORGE O. RAY, OF SAME PLACE.

IMPROVEMENT IN ADJUSTABLE BITS.

Specification forming part of Letters Patent No. **137,373**, dated April 1, 1873; application filed
August 17, 1872.

To all whom it may concern:

Be it known that I, FREDRICK JONAS, of Burlington, county of Des Moines and State of Iowa, have invented certain Improvements in Adjustable Bits, of which the following is a specification:

The nature of my invention relates to improvements in bits for boring holes for screw-bolts, and at the same time cutting a countersink for the bolt-head and the inlaying plug. The invention consists in a new and improved combination of devices, whereby the bit for drilling or boring the hole for the bolt or screw and the bit for cutting the countersink for its head are secured on one stock by means of the same set-screw, in such manner as to permit of their being adjusted independently of, or with relation to, each other, as desired, all as hereinafter more fully set forth.

Description of the Accompanying Drawing.

Figure 1 is a side view of a bit and stock embodying my invention. Fig. 2 is a longitudinal sectional view of Fig. 1 on the line *x x*. Fig. 3 is a transverse sectional view of Fig. 1 on the line *y y*. Fig. 4 is an end view, and Fig. 5 is a view of the stock alone.

General Description.

A represents the stock, formed square, and tapering at one end for fitting into the ordinary brace, and with a cylindrical cavity, *a*, at its other end, making it tubular for the reception of a common gimlet-bit, B. C is a foot or flange on the tubular end of the stock A, for purposes hereinafter described. D is a collar, carried over that portion of the stock A just back of the flange C, and which is square in its cross-section, as shown in the drawing. E is a set-screw, which passes through one side of the collar D and one side of the tubular part of the stock A, its end resting against the gimlet B and securing it in place, at the same time securing the collar D in place and drawing it toward that side of the stock A. G is the countersinking-bit, having a flat, rectangular, oblong-shaped

shank, *g*, as shown at Figs. 2 and 3, carrying at its forward end the shearing-point and cutter of an ordinary center-bit, and its central forward part grooved out longitudinally for the reception of the gimlet-bit B, as shown at Fig. 4. The shank of the bit G rests against the side of the stock A, which is flattened slightly for its better security, and being inside of the collar D, it will be evident that said collar may be made to hold it securely in place by means of the set-screw E.

The operation of my invention is as follows: The bits B and G being placed in their respective seats, and the set-screw E turned back to allow them to be moved freely, they may then be adjusted as follows: First, the gimlet-bit B may be set with its boring end the distance from the foot or guide C which it is desired to bore the hole in depth for the reception of the screw-bolt shank; then the cutting end of the bit G may be set the distance from the foot C which it is desired to bore in depth the countersink for the bolt-head and the inlaying plug, and by turning the set-screw E both bits may be secured firmly in position, as hereinbefore described. The stock A may now be fixed in an ordinary brace, and the operation of boring the holes for the screw-bolts and countersinks rapidly performed at the same operation, the exact and relative depth of each being under the control of the operator by the adjustment of parts described, the foot C acting as a stop or guide for limiting the depths bored by each bit. A bevel, *c*, may be cut on the face of the flange C to allow the escape of the shavings.

Claim.

In combination with the stock A, the bits B and G, when each bit is made independently adjustable of, or with relation to, each other, by means of the collar D and set-screw E, substantially as and for the purpose specified.

FREDRICK JONAS.

Witnesses:

J. J. TUNNICLIFF,
M. H. BARRINGER.