

No. 680,539.

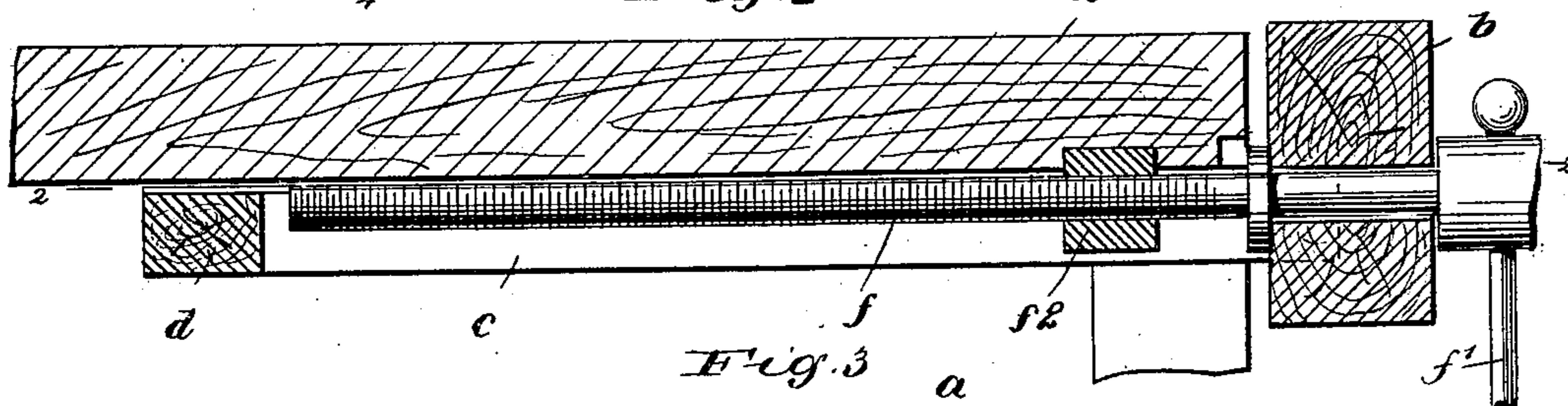
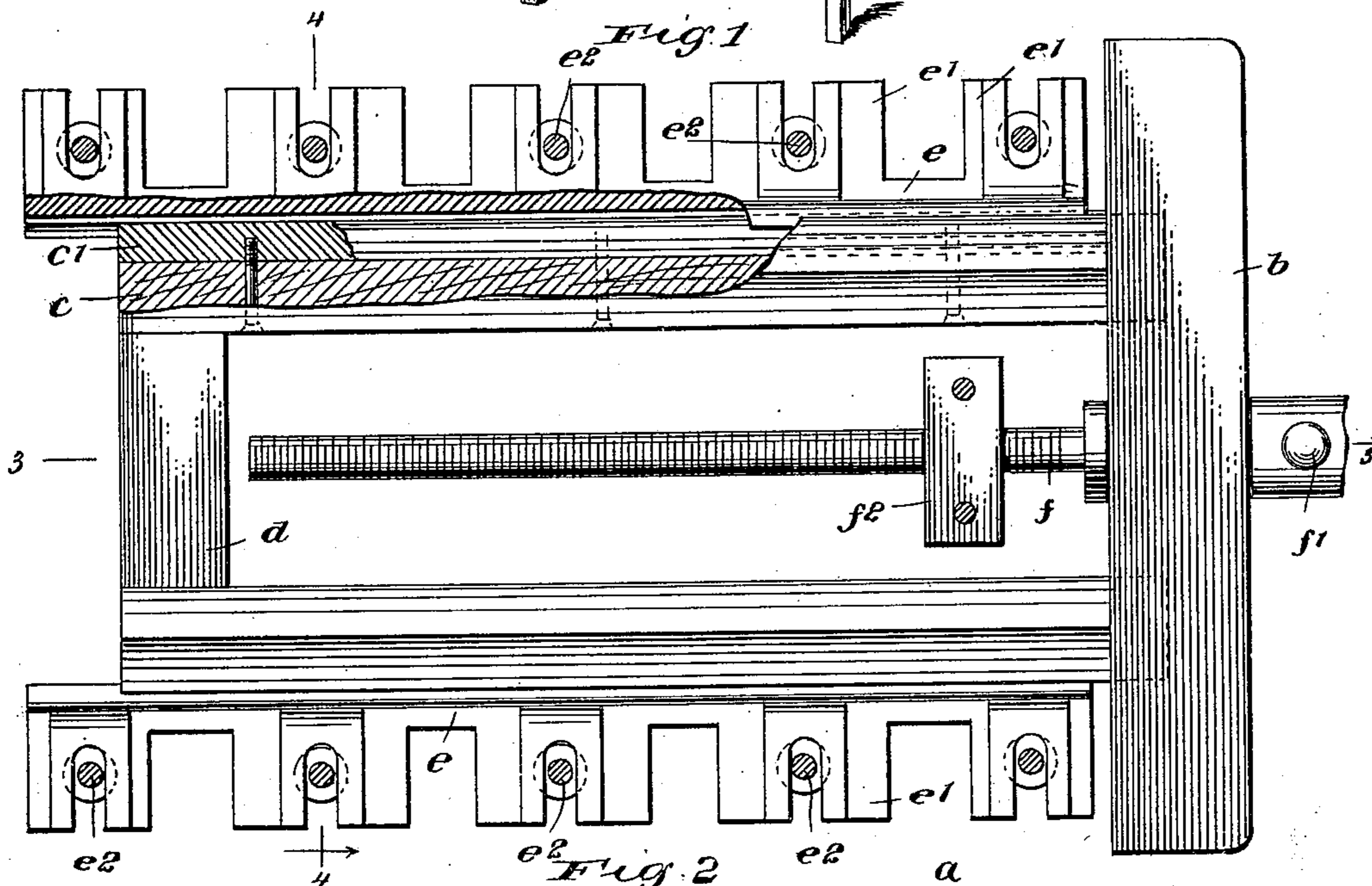
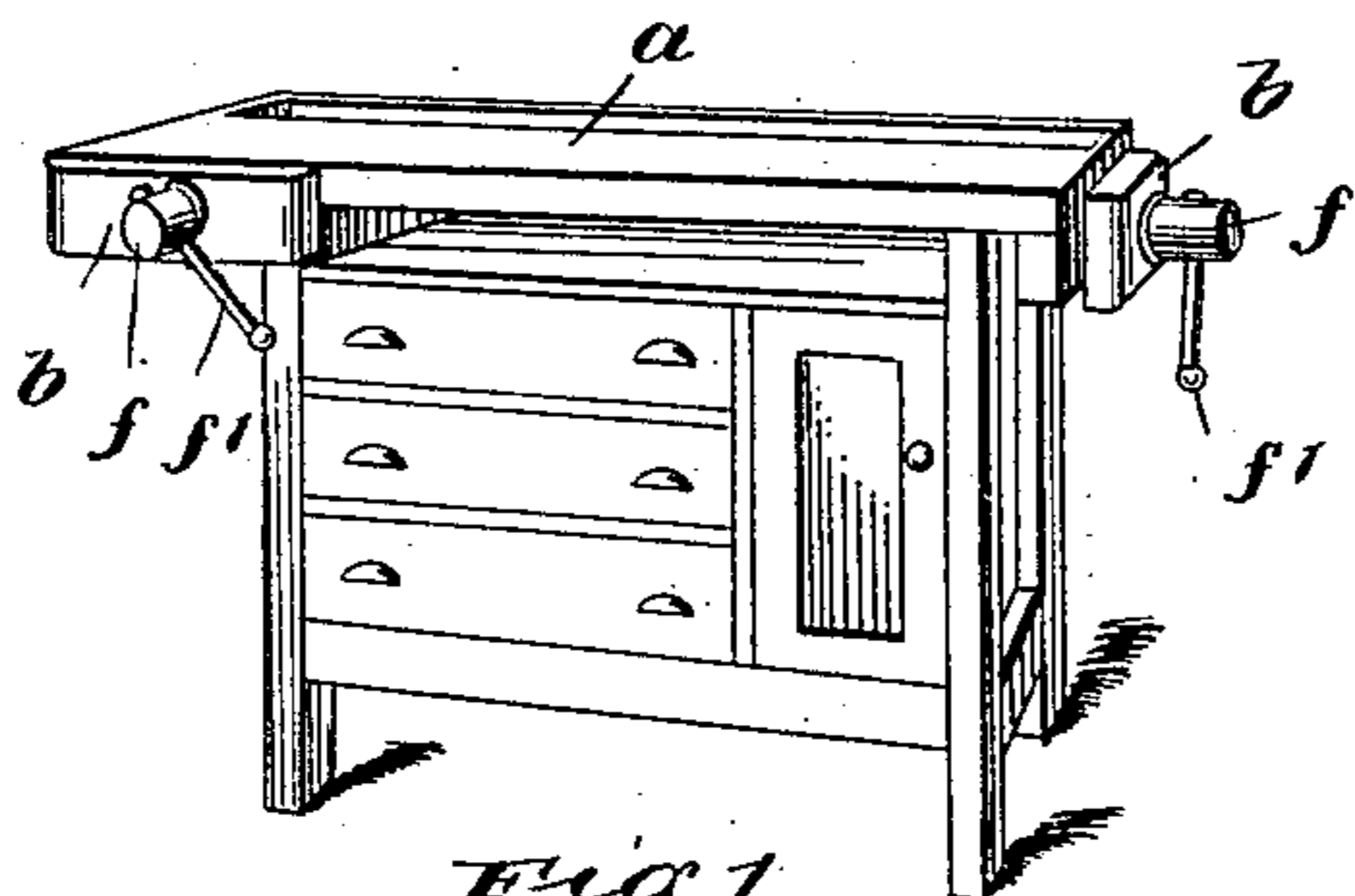
Patented Aug. 13, 1901.

G. W. NORTON.

BENCH VISE.

(Application filed Mar. 11, 1901.)

(No Model.)



WITNESSES:

John A. Begeton
J. B. Owens.

INVENTOR

George W. Norton

BY

Murray
ATTORNEYS

Fig. 4

UNITED STATES PATENT OFFICE.

GEORGE WINGATE NORTON, OF PHILADELPHIA, PENNSYLVANIA.

BENCH-VISE.

SPECIFICATION forming part of Letters Patent No. 680,539, dated August 13, 1901.

Application filed March 11, 1901. Serial No. 50,663. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WINGATE NORTON, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Bench-Vise, of which the following is a full, clear, and exact description.

This invention relates to a vise adapted particularly for use in manual-training institutes, and it is of that class in which a movable jaw is provided and works against the edge of the bench or table, such edge constituting the other jaw of the vise.

This specification is a specific description of one form of the invention, while the claims are definitions of the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of a work cabinet or bench fitted with my invention. Fig. 2 is a bottom plan view of the device with parts shown in section. Fig. 3 is a section on the line 3 3 of Fig. 2, and Fig. 4 is a section on the line 4 4 of Fig. 2.

a represents the top of a bench or cabinet, and b represents the movable jaw of the device, which works toward and from the edge of the top a . In Fig. 1 is shown a cabinet fitted with two vises. Attached rigidly to the jaw b and projecting horizontally under the top a of the bench are two slide-bars composed of main portions c , preferably of wood, with metallic rails c' set into the surface thereof, so that the metallic parts are wood covered and cannot be struck by the tools to the injury of the latter. These slide-bars are rigidly connected together at their front ends by the jaw b and at their rear ends by a cross-bar d . The parts c c' and d constitute a sort of shank for the jaw b , and they are held to slide horizontally under the top a by means of guide-bars e , fastened to the bottom thereof. These guide-bars are grooved to receive the double-beveled working faces of the rails c' of the slide-bars, and the guide-bars are provided with transversely-disposed slotted lugs e' , through the slots of which are adapted to pass bolts or other fastening de-

vices e^2 , which serve adjustably to hold the guide-bars in place.

Fitted to turn but not to slide in the jaw b is a screw f , provided at its front end with the usual cross-rod f' for facilitating its operation. This screw works in a stationary nut f^2 , fastened to the under side of the top a , and by means of the screw the jaw b may be advanced toward or removed from the top. With this construction the jaw is held to move in absolute parallelism with the coacting edge of the top a . In vises of this class it is generally a great defect that the moving jaw will become strained out of proper relation to the edge which coacts therewith, and the vise then becomes ineffective; but owing to the connection of the slide-bars with the movable jaw and with the cross-bar d a rigid jaw-shank is formed, and this shank is held properly with respect to the parts a and b by the guide-bars of the construction described.

Under the former construction of vises of this class the shrinking of the top of the bench rendered the movement of the movable jaw of the vise to and from the edge of the bench very difficult. This difficulty is easily overcome by means of the slotted lugs on the guide-bars, as these slots admit of an easy adjustment of the guide-bars to counteract any shrinking in the top of the bench.

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

1. A bench-vise, comprising a movable jaw adapted to work against a relatively stationary surface forming a fixed jaw, a screw mounted to turn in the movable jaw, a fixed nut in which the screw works to operate the movable jaw, two slide-bars rigidly attached to the movable jaw and projecting transversely therefrom in parallelism with each other, a cross-bar connecting the opposite ends of the slide-bars rigidly together, and guide-bars having transversely-disposed slotted lugs projecting outwardly therefrom, whereby the guide-bars may be fastened to the bench and adjusted toward and from the slide-bars, the guide-bars bearing respectively against the outer side edges of the slide-bars to hold the movable jaw properly in place.

2. A bench-vise, comprising a movable jaw

adapted to work against a relatively station-
ary surface forming a fixed jaw, slide-bars
attached to the movable jaw, and comprising
wooden body portions with metallic rails set
5 into the surface thereof, for the purpose speci-
fied, guides on which said metallic rails run,
and means for operating the movable jaw.

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

GEORGE WINGATE NORTON.

Witnesses:

LEROY A. HOWLAND,
L. J. WILKINSON.