

(No Model.)

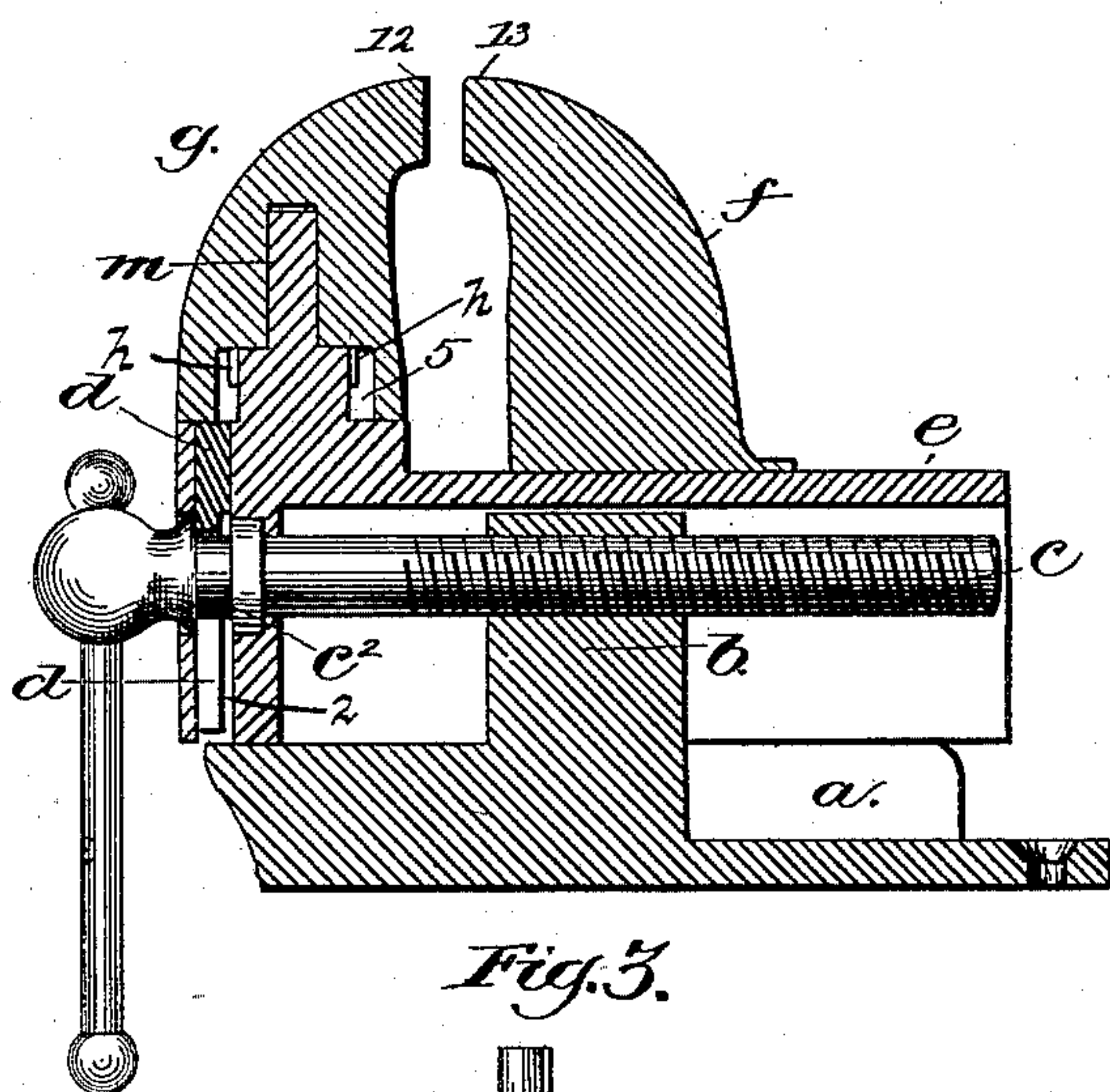
N. M. McLEOD.

WISE.

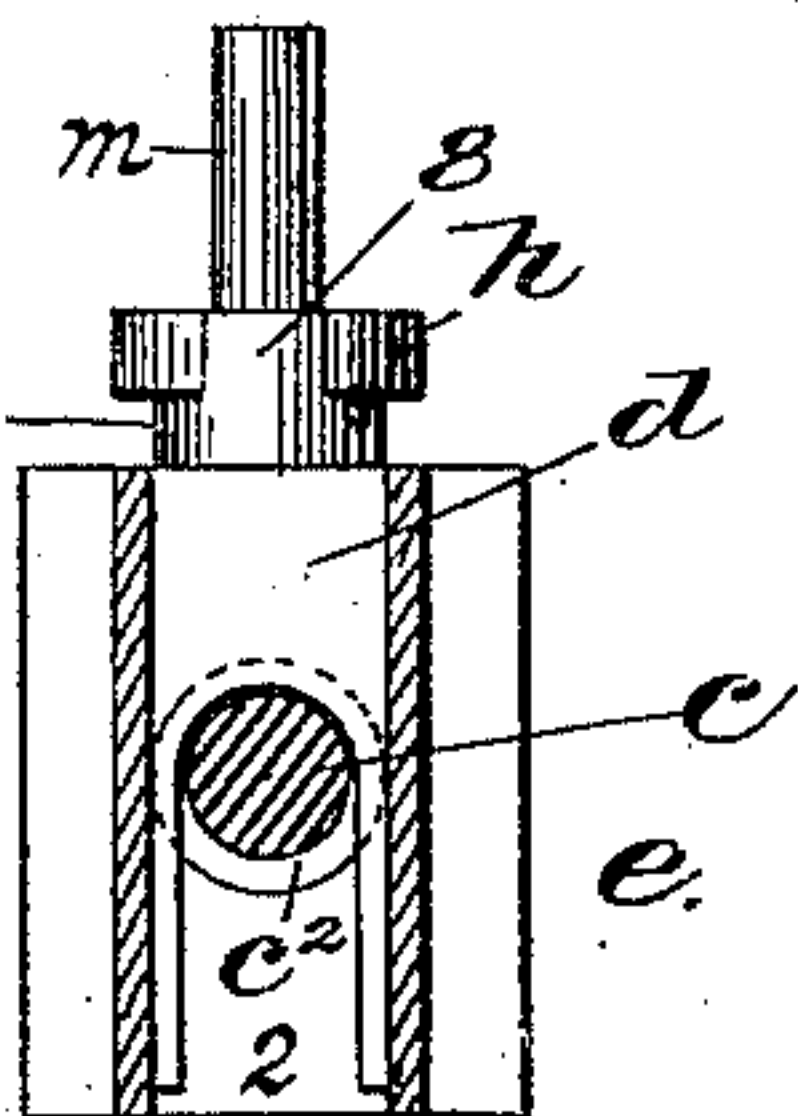
No. 277,592.

Patented May 15, 1883.

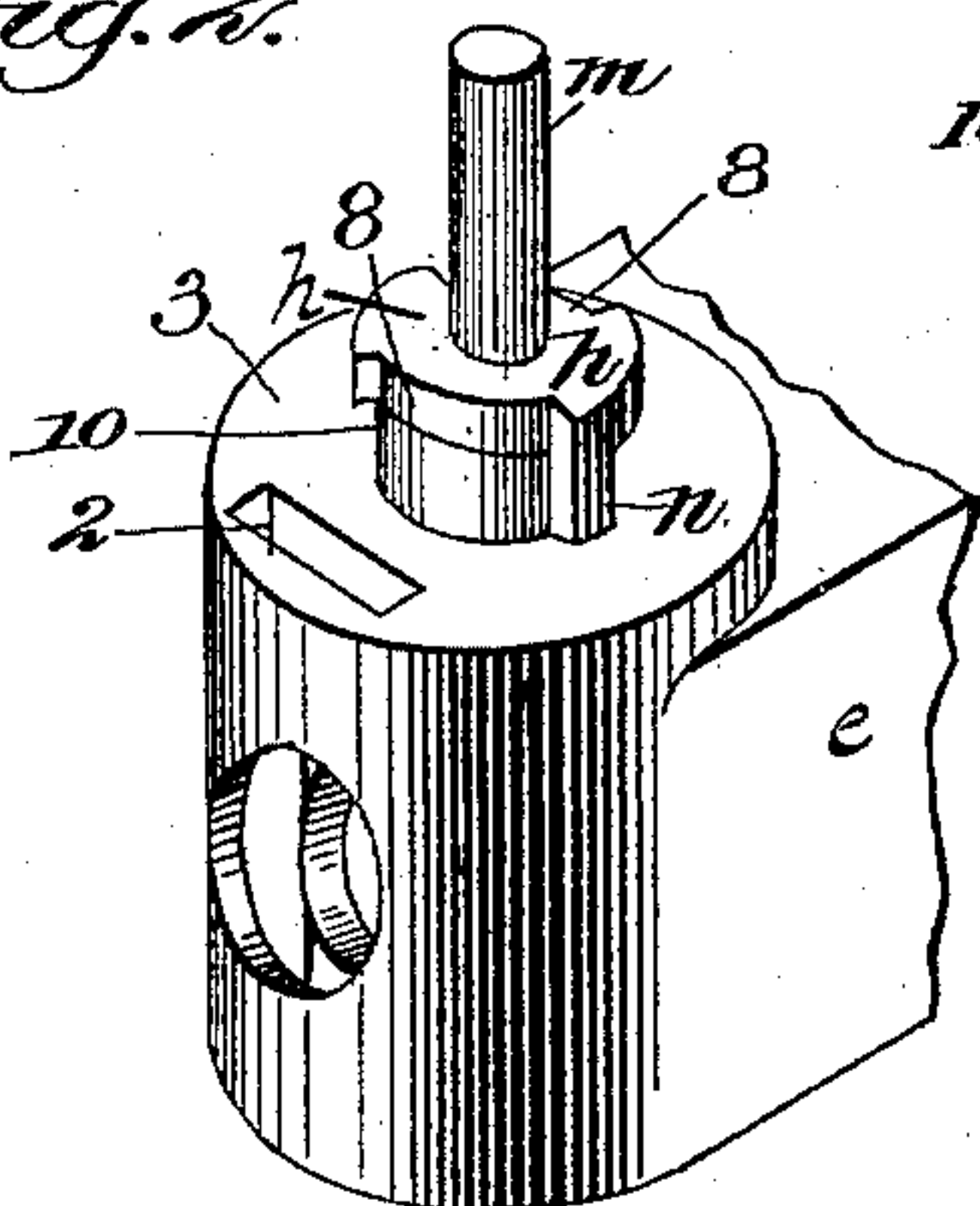
*Fig. 1.*



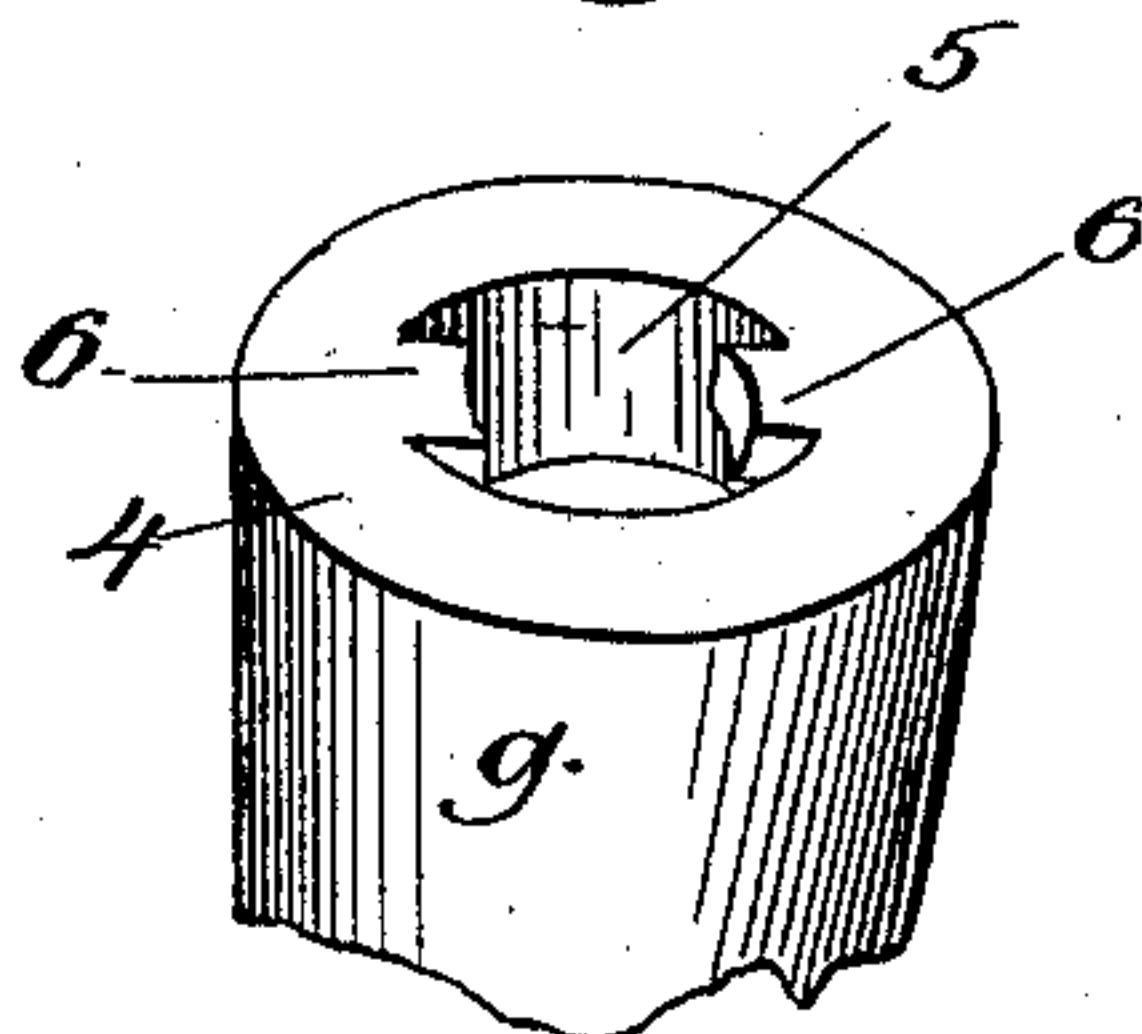
*Fig. 3.*



*Fig. 2.*



*Fig. 4.*



*Witnesses.*  
*John F. C. Peinkert*  
*Fred A. Powell.*

*Inventor:*  
*Norman M. McLeod*  
*by Crosby & Gregory Attys*



# UNITED STATES PATENT OFFICE.

NORMAN M. McLEOD, OF CAMBRIDGE, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO WILLIAM McINTYRE, OF SAME PLACE.

## WISE.

SPECIFICATION forming part of Letters Patent No. 277,592, dated May 15, 1883.

Application filed April 6, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, NORMAN M. McLEOD, of Cambridge, county of Middlesex, State of Massachusetts, have invented an Improvement in Vises, of which the following description, in connection with the accompanying drawings, is a specification.

My invention has for its object the production of a vise where one of the jaws is free to swivel or turn, to thereby adapt the jaws to the taper of the article to be clamped between them.

In this my invention I have mounted upon the jaw-carriage a jaw which is free to swivel or turn axially to enable a tapering or other shaped stick or article to be firmly clamped between the faces of the jaws. The connection between the swiveling-jaw and jaw-carriage is herein shown of such construction that the said jaw may be moved vertically with relation to the carriage, or be removed from the said carriage only when the said jaw has its face substantially at right angles to the face of the opposed jaw, so there is no possibility of the said swiveling jaw moving vertically when the vise is in operation. The screw for operating the jaw carriage has an annular groove which receives a forked key inserted in a groove or guideway of the said carriage, the said fork holding the screw in position with relation to the said carriage, so that the screw has only a movement of rotation with relation to the said carriage. The threaded shank of the screw is entered into a long threaded nut rising from the base holding the fixed jaw.

Figure 1 represents in vertical longitudinal section a vise embodying my invention; Fig. 2, a detail of the forward end of the jaw-carriage, with the swiveling or axially-movable jaw removed to show the construction of the devices for holding the jaw upon the carriage. Fig. 3 is a front view of Fig. 2, partially broken out to show the forked key for holding the screw in position with relation to the carriage; and Fig. 4 is a perspective view, bottom up, of a part of the swiveling or axially-movable jaw.

The base *a*, which will be fixed to a bench or otherwise by suitable screws or bolts, has rising from it a block, *b*, provided with a screw-

thread to receive the threaded shank of the screw *c*, provided near its outer end or head with an annular groove, *c*<sup>2</sup>, which is entered by the forked key *d*, inserted in the passage or guideway 2, made for its reception at the front end of the jaw-carriage *e*. The key *d*, entering the said groove *c*<sup>2</sup>, as shown in Figs. 1 and 3, maintains the screw *c* in place with relation to the carriage, so that as the screw is rotated with its shank in the block *b* the screw rotates in its bearing in the said carriage and draws the carriage with it. The jaw *f* is made as a fixed part of the base *a*. The carriage *e* is made hollow to permit the extension of the screw *c* through it longitudinally, and to permit the carriage to be moved freely past the block *b*. This carriage has a seat, 3, for the lower end, 4, of the swiveling or axially-movable jaw *g*. The shank of jaw *g* is provided with a chamber, 5, and one or more projections, 6, (see Fig. 4,) and the carriage, a short distance above the seat 3, is provided with a flange, *h*, cut away at one or more places, (herein shown as two places,) to form spaces 8, through which the projections 6 of the jaw *g* may pass during certain positions of the said jaw—viz., when its acting face is substantially at right angles to the face of the opposed jaw, *f*, the said projection 6 having passed down through the said spaces 8 by a partial rotation of the jaw *g*, coming into the annular groove 10 below the projecting parts of the flange, thus holding the jaw *g* down in such position that it can move only axially. The pin *m* is extended upward from the flange or head *h* into a hole made in the jaw *g*, the said pin steadying the jaw *g* in its movements. Swiveling or pivoting the jaw *g* in this way permits it to be turned more or less axially, so as to place its face 12 more or less out of parallel with relation to the face 13 of the fixed jaw *f*, thus enabling the said jaws to firmly clamp for their whole length a tapering rod, bar, or other article, such adaptation of the jaws to the surface of the material held between them being advantageous in carriage and other work. Immediately below the flange *h*, I have placed a stop, *n*, against one side of which one of the projections 6 strikes when the faces of the jaws *f g* are parallel. The jaw *g*, when turned

out of parallel with relation to the face of jaw *f*, can move only in one direction—that is to say, only away from the stop *m*.

I claim—

- 5 1. The combination, substantially as shown and described, of the fixed portion of a vise with the movable carriage provided with a seat, 3, for the movable jaw, the flange *h* on said seat, cut away at 8, and having the groove 10, 10 pin *m*, and stop *n*, and the said movable jaw *g*, having a socket to receive the pin *m*, and a subjacent chamber, 5, provided with projec-  
15 tions 6 to receive and engage the flange *h*, all constructed and arranged to operate substan-  
tially as specified.

2. The base *a*, its threaded block *b*, and the screw *c*, provided with the annular groove *c*<sup>2</sup>, combined with the forked key *d*, the jaw-carriage into which the said key is fitted to slide, and the swiveling or axially-movable jaw *g*, to 20 operate substantially as and for the purpose set forth.

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

NORMAN M. McLEOD.

Witnesses:

G. W. GREGORY,  
WILLIAM McINTYRE.