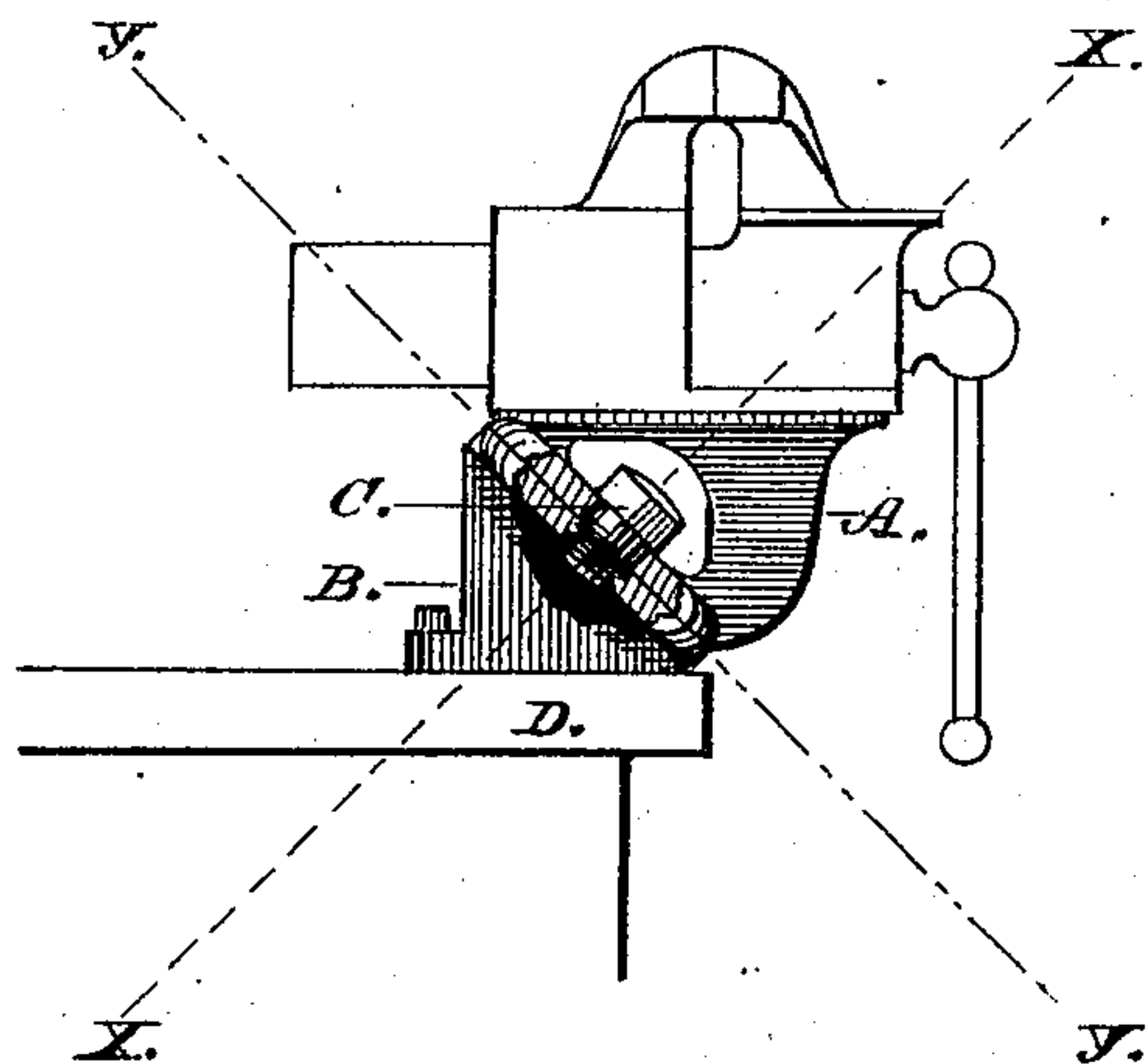


W. X. STEVENS.  
Vise.

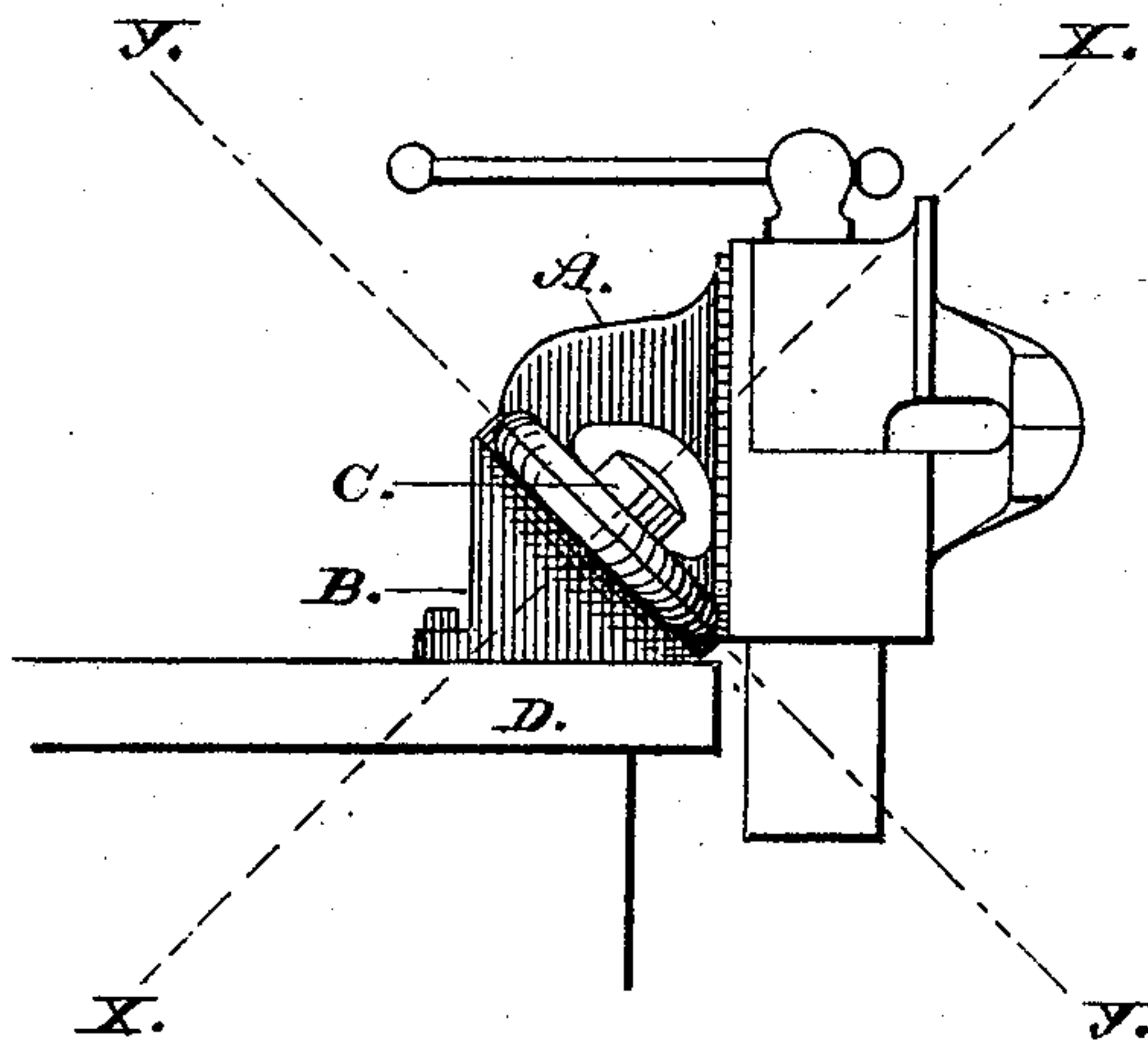
No. 209,142.

Patented Oct. 22, 1878.

*Fig. 1.*



*Fig. 2.*



Witnesses:

Lebulton E. Cary

Antoinette Merriam

Inventor;

William X. Stevens.

# UNITED STATES PATENT OFFICE.

WILLIAM X. STEVENS, OF EAST BROOKFIELD, MASSACHUSETTS.

## IMPROVEMENT IN VISES.

Specification forming part of Letters Patent No. **209,142**, dated October 22, 1878; application filed April 1, 1878.

*To all whom it may concern:*

Be it known that I, WILLIAM X. STEVENS, of East Brookfield, Worcester county, Massachusetts, have invented a Bench-Vise, of which the following is a specification:

The object of my invention is to hold work in either a vertical or horizontal position, or at any angle of inclination between, by means of a bench-vise arranged to turn on an axis inclined to the plane of contact of the vise-jaws.

Figure 1 of the accompanying drawing is an elevation, part in section, of a vise in the usual vertical position mounted on a swivel in accordance with one form of my invention. Fig. 2 is an elevation of the same, showing the vise turned about its axis  $xx$  a half-circle from its former position, the jaws now being horizontal.

A is the bed-piece, either cast as a part of the body of the vise, or, as here represented, made separate, to be attached to the body of the vise in any suitable manner.

B is the base-piece, which is secured to the bench D. The bed-piece A is arranged to turn upon the base-piece B on an axis inclined to the plane of the jaws, and the two parts may be secured together at any desired point of revolution, thus fastening the vise to the bench in that position. There are many ways in which the parts A and B can be arranged to operate on this principle; but I prefer the one here shown as the most simple and efficient.

The lower face of the bed-piece A and the upper face of the base-piece B come to a bearing in a circular form on a plane,  $yy$ , at right

angles to the axis of revolution  $xx$ . The bolt C is concentric with the axis of revolution, and when it is loosened the bed-piece A revolves freely upon it; but it may be tightened by the usual screw and nut, securing the bed-piece A to the base-piece B in any desired position. This kind of attachment is commonly called a "swivel;" and should greater range of adjustment of positions to the vise be desired, the vise may be attached to the bed-piece A by such a swivel.

The axis of revolution of my vise will be usually fixed at forty-five degrees inclination to the plane of the jaws, that being the angle required to revolve the vise-jaws from a vertical to a horizontal position.

For special purposes vises may be made on this principle, with the axis fixed at other angles.

I am aware that vises are common which turn upon an axis parallel to the face of the jaws, that others turn on an axis perpendicular to the face of the jaws, and that others have a ball-and-socket adjustment not capable of giving the jaws both a vertical and horizontal position; but

I claim as my invention—

A bench-vise arranged to turn upon an axis inclined to the plane of the jaws, so that the vise may be set with its jaws in either a practically vertical or horizontal position, substantially as and for the purpose specified.

WILLIAM X. STEVENS.

Witnesses:

ZEBULON E. CARY,  
ANTOINETTE MERRIAM.