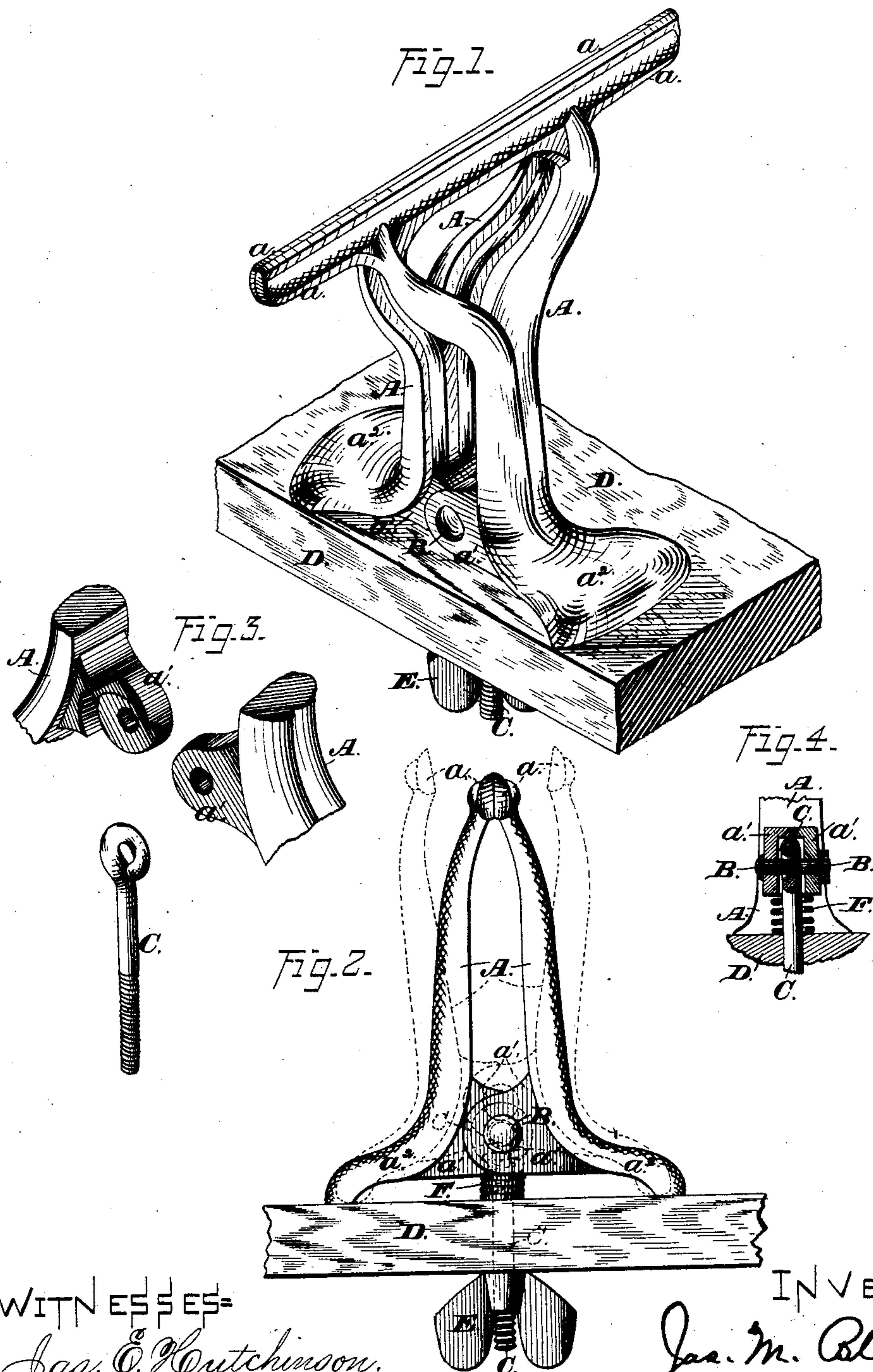


J. M. BLACK.  
Vise.

No. 227,210.

Patented May 4, 1880.



WITNESSES=

Jas. C. Hutchinson.  
 Henry C. Hazard.

INVENTOR-

Jas. M. Black, by  
 Geo. S. Prindle, his Atty



# UNITED STATES PATENT OFFICE.

JAMES M. BLACK, OF CHICAGO, ILLINOIS, ASSIGNOR TO SAMUEL B. SHERER, OF SAME PLACE.

## WISE.

SPECIFICATION forming part of Letters Patent No. 227,210, dated May 4, 1880.

Application filed April 26, 1879.

*To all whom it may concern:*

Be it known that I, JAMES M. BLACK, of the city of Chicago, in the county of Cook, State of Illinois, have invented certain new  
5 and useful Improvements in Vises; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

10 Figure 1 is a perspective view of my vise in position for use. Fig. 2 is an end elevation of the same, the full lines showing the relative position of parts with the jaws closed, and the dotted lines the positions of said parts when  
15 said jaws are opened. Fig. 3 is an enlarged perspective view of the pivotal lugs and the operating-bolts, separated from each other; and Fig. 4 is a vertical central cross-section of said parts when connected together.

20 Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to furnish a simple, cheap, and efficient vise which may be easily attached to and removed from a  
25 bench; and it consists in a vise in which are combined the following elements, viz: two jaws hinged or pivoted together near their lower ends, and each provided with a foot that extends laterally outward and downward from  
30 the pivotal connection and furnishes a bearing or support, and means whereby said pivotal connection may be moved vertically, so as to cause said jaws to be opened or closed, substantially as and for the purpose hereinafter specified.

35 In the annexed drawings, A represents one of the jaws of my vise, having any desired form at its upper engaging end,  $a$ , and near its lower end provided with an ear or lug,  $a'$ ,  
40 which fits upon or against a corresponding lug,  $a'$ , of a second jaw, A, and receives a bolt, B, that passes through said parts and forms a pivotal bearing for and upon which such jaws may turn for the purpose of bringing said en-  
45 gaging ends  $a$  together or moving the same apart.

From its pivotal connection each jaw A extends outward and downward, and at its lower end is extended horizontally, so as to form a

foot,  $a^2$ , which, in connection with the foot  $a^2$  50 of the opposite jaw, furnishes a broad substantial bearing for and upon which is supported the vise.

Pivoted upon the bolt B, between the lugs  $a'$ , is one end of a bolt, C, which has such 55 length as to enable it to pass downward through the top D of an ordinary bench and to extend several inches below the same. The lower portion of said bolt is threaded exteriorly, and upon the same is fitted a wing- 60 nut, E, which may be easily turned with the hand, and bears against the lower side of said bench-top D.

As thus arranged it will be seen that the bearings or feet  $a^2$ , upon which the jaws A 65 are supported, are upon opposite sides of and at some distance from a line passing vertically through the pivotal connection of the latter, so that by turning the nut E upward the bolt C will be drawn downward, and with 70 it the upper portion of said jaws, the result being the closing together of the upper ends of the latter, so as to gripe any object placed between the same, while by turning said nut in an opposite direction said bolt will be per- 75 mitted to rise and said jaws to open.

A spring, F, placed around the bolt C, between the bench-top D and the pivotal lugs  $a'$ , raises the latter, and opens the jaws A when- 80 ever the nut E is turned backward.

The inward pressure obtainable at the upper ends of the jaws A by the application of a given amount of power to the nut E will depend upon the relative lengths of the portions of said jaws above and below their pivotal 85 connections, as by lessening the length of the upper portions, or increasing the length of the lower portions or feet, an increase of leverage is obtained, while by decreasing the length of said feet or increasing the length of the up- 90 per portions of said jaws a decrease in leverage results.

To place the vise in position for use, it is only necessary that the nut should be removed, the bolt passed downward through a suitable 95 hole in a bench, and said nut again placed in position upon said bolt.

I am aware that it is not new to pivot jaws

together so that their clamping ends may be closed by means of a tapering nut arranged to be pressed between and to spread their opposite ends.

5 Having thus fully set forth the nature and merits of my invention, what I claim as new is—

10 A vise in which are combined the following elements, viz: two jaws hinged or pivoted together near their lower ends, and each provided with a foot that extends laterally outward and downward from the pivotal connec-

tion and furnishes a bearing or support, and means whereby said pivotal connection may be moved vertically, so as to cause said jaws 15 to be opened or closed, substantially as and for the purpose specified.

In testimony whereof I hereunto set my hand this 12th day of April, A. D. 1879.

JAMES MADISON BLACK.

Witnesses:

CHAS. T. BACKUS,  
N. E. WHITNEY.