No. 789,405. PATENTED MAY 9, 1905.

L. ASCHER.

VISE ATTACHMENT.

APPLICATION FILED NOV. 25, 1904.

Fig. 1.

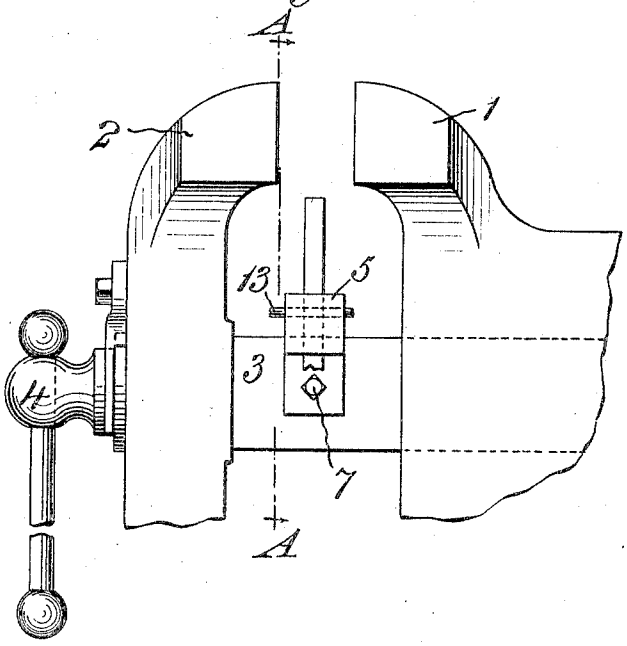


Fig. 2.

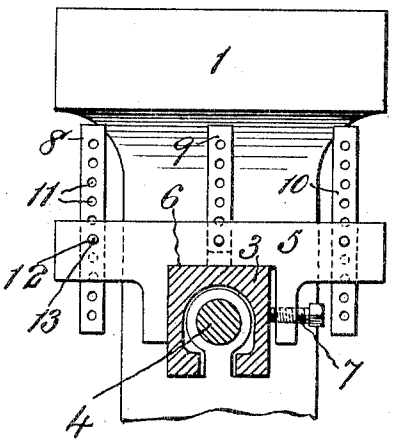


Fig. 3.

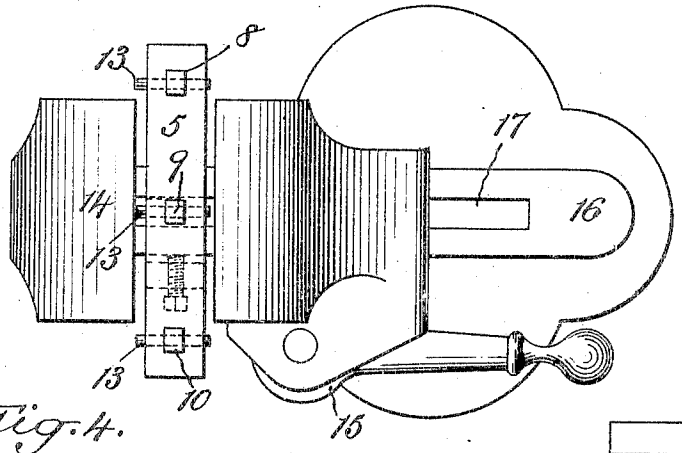


Fig. 4.

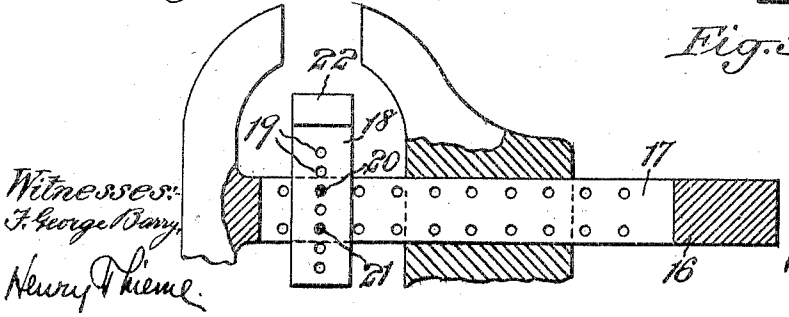
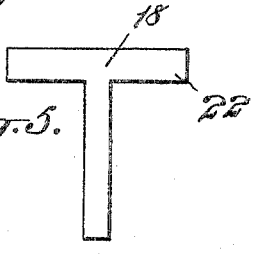


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

LUDWIG ASCHER, OF NEW YORK, N. Y.

VISE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 789,405, dated May 9, 1905.

Application filed November 25, 1904. Serial No. 234,141.

To all whom it may concern:

Be it known that I, LUDWIG ASCHER, a subject of the Emperor of Germany, and a resident of the borough of Manhattan, in the city and State of New York, have invented a new and useful Vise Attachment, of which the following is a specification.

My invention relates to a vise, with the object in view of providing an attachment for supporting the article located between the jaws of the vise from below, and thus obviating the necessity of gripping the article between the jaws with such pressure as to be liable to distort or damage the article and remove any liability of downward slip between the jaws when pressure is brought to bear on the article by a tool.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a side elevation of so much of a vise as will show the attachment in position as in use. Fig. 2 is a vertical section in the plane of the line A A of Fig. 1. Fig. 3 is a top plan view showing the attachment applied to a cam-operated vise as distinguished from a screw-operated vise. Fig. 4 is a view of the same in vertical section, showing a modified form of work-support; and Fig. 5 is a view of the modified work-support in detail.

Referring to the form shown in Figs. 1 and 2, the stationary jaw of the vise is denoted by 1, the movable jaw by 2, the slide-bar connected to move together with the movable jaw 2 is denoted by 3, and the screw for forcing the movable jaw toward the stationary jaw by 4.

As thus far explained the parts may be of any well-known or approved form, such as have been and are at the present time in use for purposes of holding work to be operated upon by a tool. My present invention contemplates an attachment which may be used in connection with vises as they are now constructed or in connection with a vise having its slide-bar modified, as the case may be, for the purposes of supporting the work from a point directly below it, so that the pressure of a tool or blow will be transmitted to the support below the article and the article thereby prevented from a tendency to slide downwardly between the jaws under such pressure and below even though the jaws are not forced together very tightly, the purpose being to use the jaws 1 and 2 to hold the article laterally in its position and to require only such pressure as will firmly seat the article between the jaws without requiring that extreme pressure which is commonly necessary when the jaws alone are relied upon to support the article, such pressure being sufficient in many instances to deface the surfaces of the articles which are in contact with the jaws. To this end I provide, as shown in Figs. 1, 2, and 3, a bar 5, intended to rest on and extend transversely across the slide-bar 3 and preferably provided with a recessed seat 6 for the reception of the top of the slide-bar 3, the wall on one side of the recess 6 being provided with a set-screw 7 for the purpose of holding the bar 5 in the desired adjustment along the slide-bar 3 to cause the support to maintain its position directly below the article held between the jaws 1 and 2 whatever be the thickness of the article. The bar 5 may be provided with one or more—in the present instance, three—vertically-adjustable work-supports, denoted, respectively, by 8, 9, and 10.

These supports 8, 9, and 10 are located in sockets extending vertically through the bar 5, and each is provided with a series of perforations 11, any one of which may be made to register with a perforation 12, passing transversely through the bar 5 to receive a pin 13.

In the form shown in Figs. 1 and 2 the supports 8 and 10 may pass downwardly through the bar 5 and be adjusted, by means of their adjusting-pins, to any desired height above the bar 5, while the central support 9 has a limited vertical adjustment because of the top of the slide-bar 3, through which the screw 4 extends. This vertical adjustment of the support 9 may, however, be made universal within the desired limits by having a few different lengths of supports 9, two being ordinarily sufficient, one of them a little shorter than the other, so that in the event it is desirable to lower the central support 9 farther than per-

mitted by the slide-bar 3 it may be removed and a similar shorter support inserted in its place. In the event, however, the movable jaw 14 (see Fig. 3) be operated by a cam 15, as is common in the art, the slide-bar 16, connected with the movable jaw 14, may be provided with an elongated central slot 17, through which the central support 9 may extend and be adjusted vertically to the same extent as the supports 8 and 10.

The form of vise represented in Fig. 3 because of the elongated slot 17 in its slide-bar 16 provides for the use of a modified form of work-support 18. (See Fig. 4.) This support 18, like the supports 8, 9, and 10, is provided with a series of perforations 19, through which it is directly connected in the desired vertical adjustment with the slide-bar 16 by means of pins 20 and 21, extending through a pair of perforations formed in the slide-bar 16. The perforations for receiving the pins 20 21 may be located at intervals apart for adjusting the support 18 below the work held between the jaws, and the support 18 may have an extended cross-head 22 formed thereon whenever it is desired to make the bearing against the work of greater extent than the width of the perforated standard or stem.

It is obvious that changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein set forth, but

What I claim is—

1. The combination with the jaws of a vise and means for forcing them one toward another, of a vertically and horizontally adjustable work-support located below the work-holding space between the jaws in position to form a bearing for the work held by the jaws.

2. The combination with the jaws of a vise and means for forcing them one toward another, of a plurality of vertically-adjustable work-supports located below the jaws in position to form a bearing for the work held by the jaws.

3. The combination with the jaws and slide-bar of a vise, of a bar adjustable along the slide-bar and provided with a bearing for the work below the jaws.

4. The combination with the jaws and slide-bar of a vise, of a bar adjustable along the slide-bar and vertically-adjustable work-support seated in said adjustable bar.

5. The combination with the jaws and slide-bar of a vise, of a bar adjustable along the slide-bar and a plurality of vertically-adjustable work-supports seated in said adjustable bar.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 19th day of November, 1904.

LUDWIG ASCHER.

Witnesses:
FREDK. HAYNES,
HENRY THIEME.