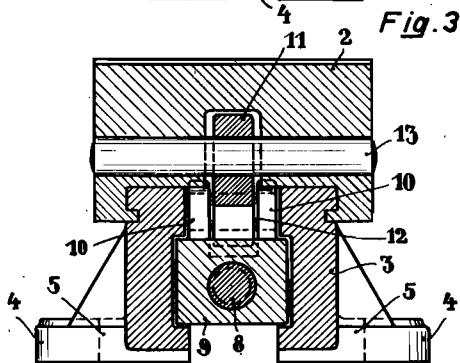
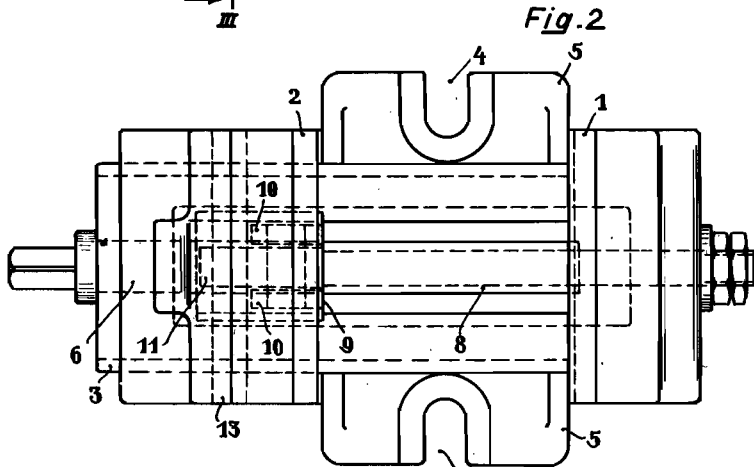
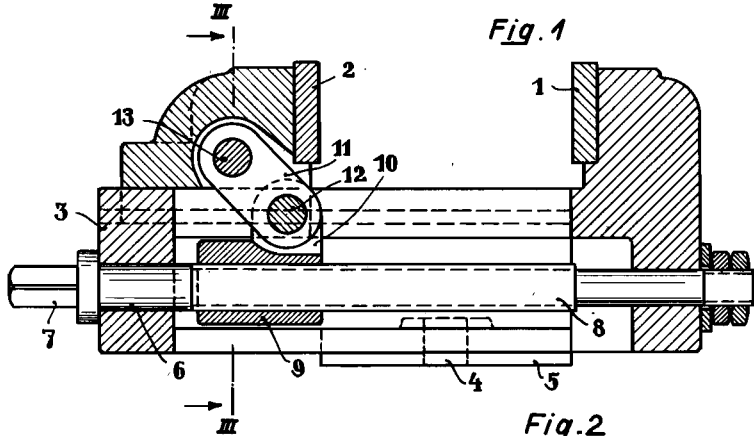


PUBLISHED
MAY 4, 1943.
BY A. P. C.

G. HASSE
PARALLEL VISE TO BE USED WITH
MACHINE TOOLS, ETC.
Filed April 28, 1941

Serial No.
390,677



Georg Haase
by
Dean Fairbank and Hirsch
Attorneys.

ALIEN PROPERTY CUSTODIAN

PARALLEL VISE TO BE USED WITH MACHINE TOOLS, ETC.

Georg Haase, Dresden, Germany; vested in the Alien Property Custodian

Application filed April 28, 1941

This invention relates to a parallel vise to be used with machine tools, etc.

In vises of this class the movable jaw 1 is moved relative to the fixed jaw by causing an eye of the movable jaw to engage the spindle of the vise in such manner that during turning of the spindle the eye acting as nut effects displacement of the movable relative to the fixed jaw. Experience has shown, however, that a vise of this type does not insure accurate parallel holding of the work with respect to its clamping surface, since the thrust of the spindle acting only on one side tends to lift the jaw sliding in a prismatic guide with the result that bending of the work occurs or is favored thereby.

When according to a known proposal the eye engaging the spindle is constructed as a block member forming a separate unit that is movable on the spindle below the bed of the movable jaw, the disadvantage mentioned will still be there as long as the block member projects directly into a recess of the movable jaw, though displacement or turning of the jaw relative to the block member is possible.

The invention solves the problem by providing an obliquely extending link for connecting the member riding on the spindle with the movable jaw. The connection thus established between the rider and the movable jaw effectively prevents tilting and consequent seizing of the member riding on the spindle and also wearing out and seizing of the connecting means at the point of application. Furthermore, the connection according to the invention makes it possible to control the vertical bearing pressure exerted by the movable jaw upon its guide in such manner that it is at least as great as the horizontally acting gripping pressure, whereby tipping of the jaw with respect to its guide is absolutely prevented.

It is particularly advantageous to arrange the link at an angle of 45° between the rider member acting as nut for the spindle and the movable jaw.

The invention is illustrated by way of example in the accompanying drawing, in which

Figure 1 is a vertical longitudinal section of a vise according to the invention;

Fig. 2, a top view thereof; and

Fig. 3, a vertical cross section on the line III—III, of Fig. 1, seen in the direction of the arrow.

1 designates the fixed jaw and 2 the movable one. In the lower part 3 of the vise secured in known manner to the machine table by screws whose bolts pass through clearances 4 of the base 5 a spindle 6 is rotatably yet non-displaceably in longitudinal direction arranged. A projecting square 7 to which a hand crank, not shown, is attached serves for turning the spindle 6 unless mechanical operation is provided for. On the threaded portion 8 of the spindle 6 a nut 9 is disposed which, as indicated particularly in Fig. 3, has prismatic shape and runs in a corresponding guide of the part 3 of the vise. The nut 9 is fitted with upwardly extending eyes 10 between which a link 11 is movably positioned on a pin 12. The other end of the link 11 is movably disposed on the movable jaw 2 by means of a pin 13. The member 11 is arranged between these two parts in such manner that the angle formed by the connecting line of the centers of the two pins 12, 13 and the horizontal amounts to 45°, since this degree of inclination of the link 11 is the most advantageous as mentioned.

The body of the movable jaw 2 is guided in the part 3 of the vise in the manner shown in Fig. 3, i. e., horizontally and parallelly to the longitudinal direction of the spindle 6.

Although only one link has been provided in the embodiment shown and described, it is possible of course to employ several links distributed over the width of the jaw or nut and arranged parallel to one another.

In the example shown the link 11 is disposed at an angle of 45° which has been chosen as affording the most advantageous inclination, but any other angle may be selected also, since the desired effect occurs at any inclination, though not in such perfect manner as at an angle of 45°

GEORG HAASE.