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J. J. HANSEL

VISE

Original Filed April 23, 1924

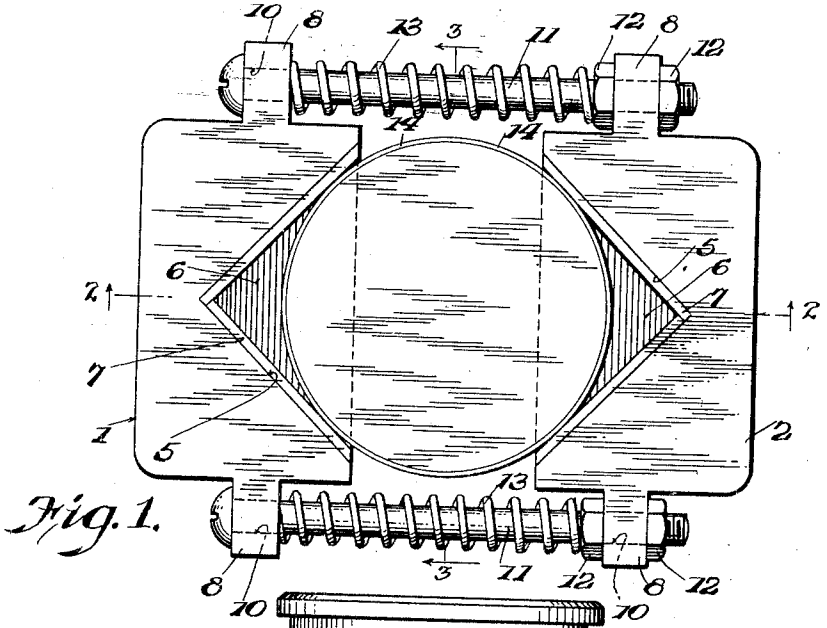


Fig. 1.

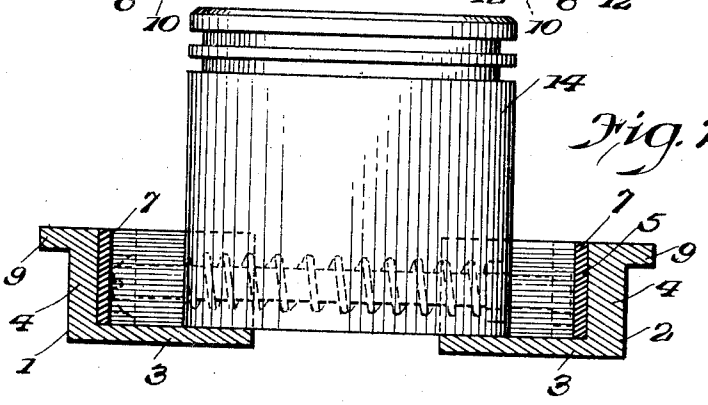
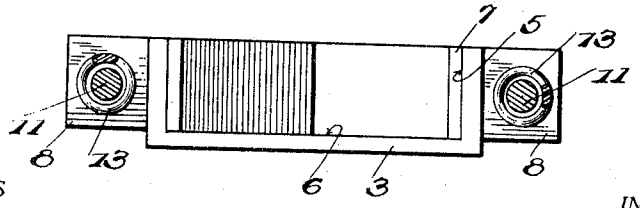


Fig. 2.

Fig. 3.



WITNESSES

Chr. Nielsen

INVENTOR

John J. Hansel,

BY Munn & Co.

ATTORNEYS

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UNITED STATES PATENT OFFICE.

JOHN J. HANSEL, OF FREMONT, MICHIGAN.

VISE.

Refiled for abandoned application Serial No. 708,534, filed April 23, 1924. This application filed September 4, 1926. Serial No. 133,718.

This application is intended to replace my early application Serial #708,534, filed April 23, 1924, and allowed August 21, 1924.

My invention relates generally to improvements in vises, more particularly to vises which are adapted to support and hold a piston or like article, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of the invention is to provide a vise which affords facilities for gripping and firmly holding a piston or like article without causing any injury to the outer surface of the piston or like article.

A further object of the invention is to provide a vise of the character described which is adjustable to permit of the holding of articles of different sizes.

A still further object of the invention is to provide a vise of the character described which comprises but relatively few parts, is easy to manipulate, and is thoroughly practicable commercially.

Other objects and advantages will be apparent from the following description, considered in conjunction with the accompanying drawings, in which—

Figure 1 is a plan view showing a vise embodying the invention with a piston held therein,

Figure 2 is a section along the line 2—2 of Figure 1, and

Figure 3 is a section through the vise, the view being taken along the line 3—3 of Figure 1.

In carrying out the invention, I provide a pair of similar blocks which respectively are indicated at 1 and 2. Each of these blocks comprises a base portion 3 and a jaw 4 which is upstanding from the base. The base 3 is substantially rectangular in configuration and the jaw 4 is formed with a substantially V-shaped notch 5 in one longitudinal side wall of the block, the walls of the notch 5 terminating at their outer ends flush with the said one side wall of the block, thus leaving the upper face of a portion of the base 3 unobstructed, as indicated at 6, for a purpose to be presently described. The faces of the notch 5 are lined with a face plate 7 which is made of lead or other relatively soft metal.

The transverse side walls of the jaw portion of each block are provided with oppositely extending aligned ears or lugs 8, and the second longitudinal side wall of the jaw, which is opposite that provided with the notch 5, is extended laterally at its upper edge in the form of a flange 9. The respective ears 8 of each block are provided with parallel openings 10 which extend in parallel relation to the transverse axis of the block.

The two blocks 1 and 2 are connected together by bolts or headed rods 11, each bolt extending slidably through the opening 10 of an ear of one of the blocks, in the present instance, the block 1, until the head of the bolt abuts said ear. The shank of the bolt extends through the opening 10 of the corresponding ear of the other block and the bolt is adjustably secured to said ear of the second block by a pair of clamping nuts 12 which threadedly engage the shank of the bolt at opposite sides of the ear of the second block. An expansion spring 13 is disposed on each bolt 11 between the ear 8 of the block 1 and the adjacent nut 12. The expansion springs 13 tend to hold the blocks 1 and 2 in resiliently spaced relation. The blocks 1 and 2, of course, are arranged and connected together in the manner described so that the notches 5 of the respective jaws are in confronting relation in respect to each other and in position to cooperate with each other to grip the peripheral wall of a piston 14 or like article which is disposed between the jaws and is supported at its lower end upon the portions of the bases 3 which extend forwardly of the walls of the notches of the respective jaws. The position of the two blocks in respect to each other may be adjusted by screwing the nuts 12 on the bolts 11 toward the heads of the bolts to draw the blocks toward each other or by loosening the nuts 12 to permit the blocks to be moved apart by the action of the springs 13. The laterally extending flanges or lips 9 provide handles which may be conveniently grasped to affect manipulation of the blocks to adjust the position of the blocks as desired. Since the faces of the jaws which grip the piston 14 or like article are lined with face plates made of lead or like soft metal, the blocks may be adjusted so that the piston is firmly gripped by the jaws without there being any likelihood of injury to the peripheral wall of the piston.

Obviously, the invention is susceptible of embodiment in forms other than that illus-

trated in the accompanying drawings, and I, therefore, consider as my own all such modifications and adaptations thereof as fall within the scope of the appended claims.

I claim:—

1. A device of the character described comprising a pair of similar blocks, each consisting of a base and a jaw upstanding from the base, said jaw having a V-shaped notch in one side wall thereof, the faces of said notch terminating at their outer ends flush with the corresponding side wall of said base, thus leaving the upper face of a portion of the base unobstructed by said jaw, and means adjustably connecting said blocks together in such manner that the notches of said jaws will be disposed in confronting relation to each other, said blocks having handles extending oppositely from the walls of the block which are remote from each other.

2. A device of the character described comprising a pair of similar blocks, each comprising a substantially rectangular base portion and a jaw upstanding from the base, each jaw having a substantially V-shaped notch in a longitudinal side wall of the block, the outer ends of the faces of said notch being flush with the corresponding side wall of said base, each block having a pair of aligned ears respectively disposed at opposite ends of the block, each ear being provided with an opening extending in parallel relation to the transverse axis of the block, a pair of bolts each extending through the openings of corresponding ears of the two blocks, means adjustably engaging said bolt for securing the ear of one block to said bolt, the ears of the other block slidably receiving the bolt, and an expansion spring disposed on each bolt between the corresponding ears of each block and urging said blocks apart.

JOHN J. HANSEL.