Nov. 8, 1949 J. M. SUTTER 2,487,742

CLAMP HAVING JAWS ADJUSTABLY MOUNTED ON RESILIENT DOOR-SUPPORTING PLATE

Filed April 19, 1948 2 Sheets-Sheet 1

Fig. 1.

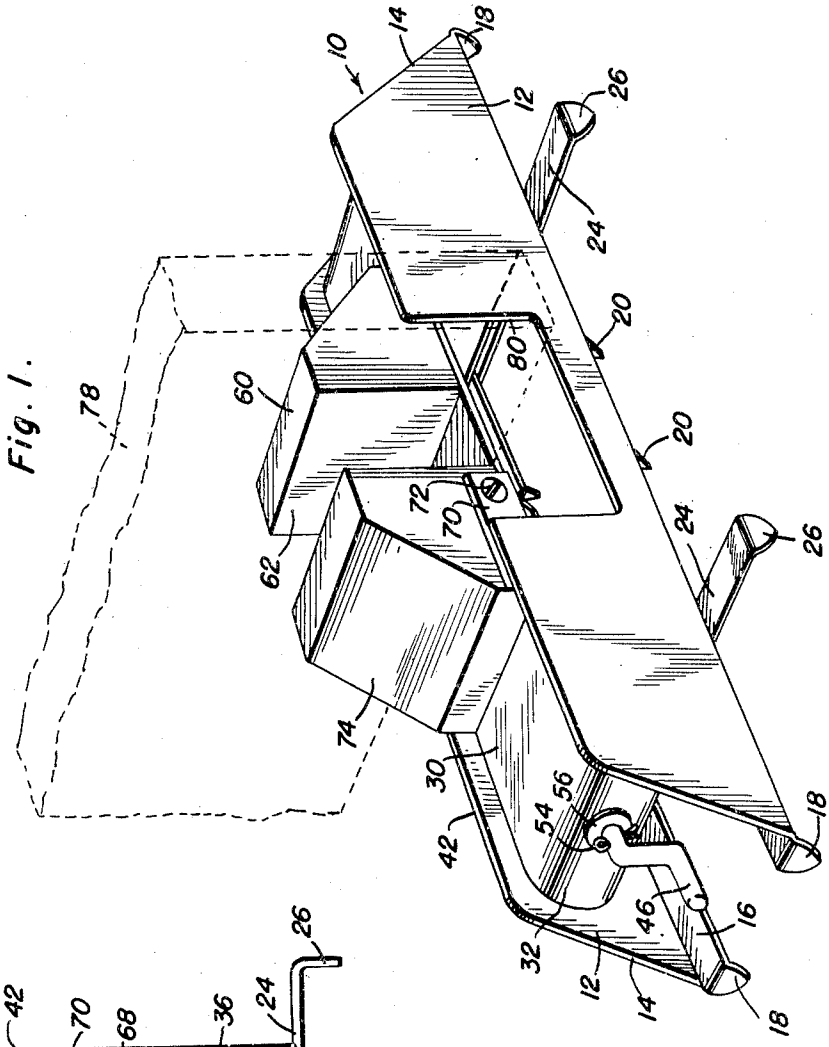
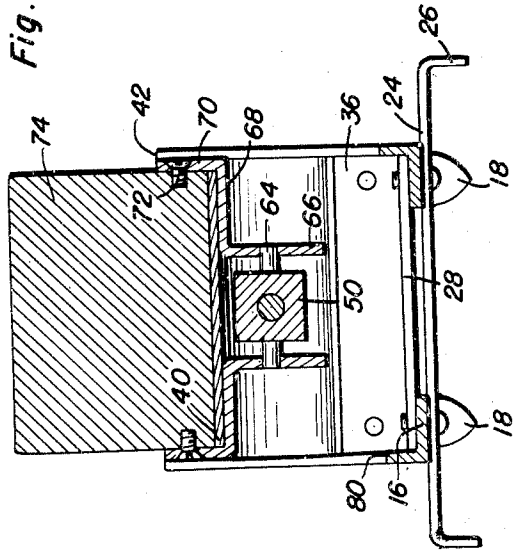


Fig. 4.



Inventor

John M. Sutter

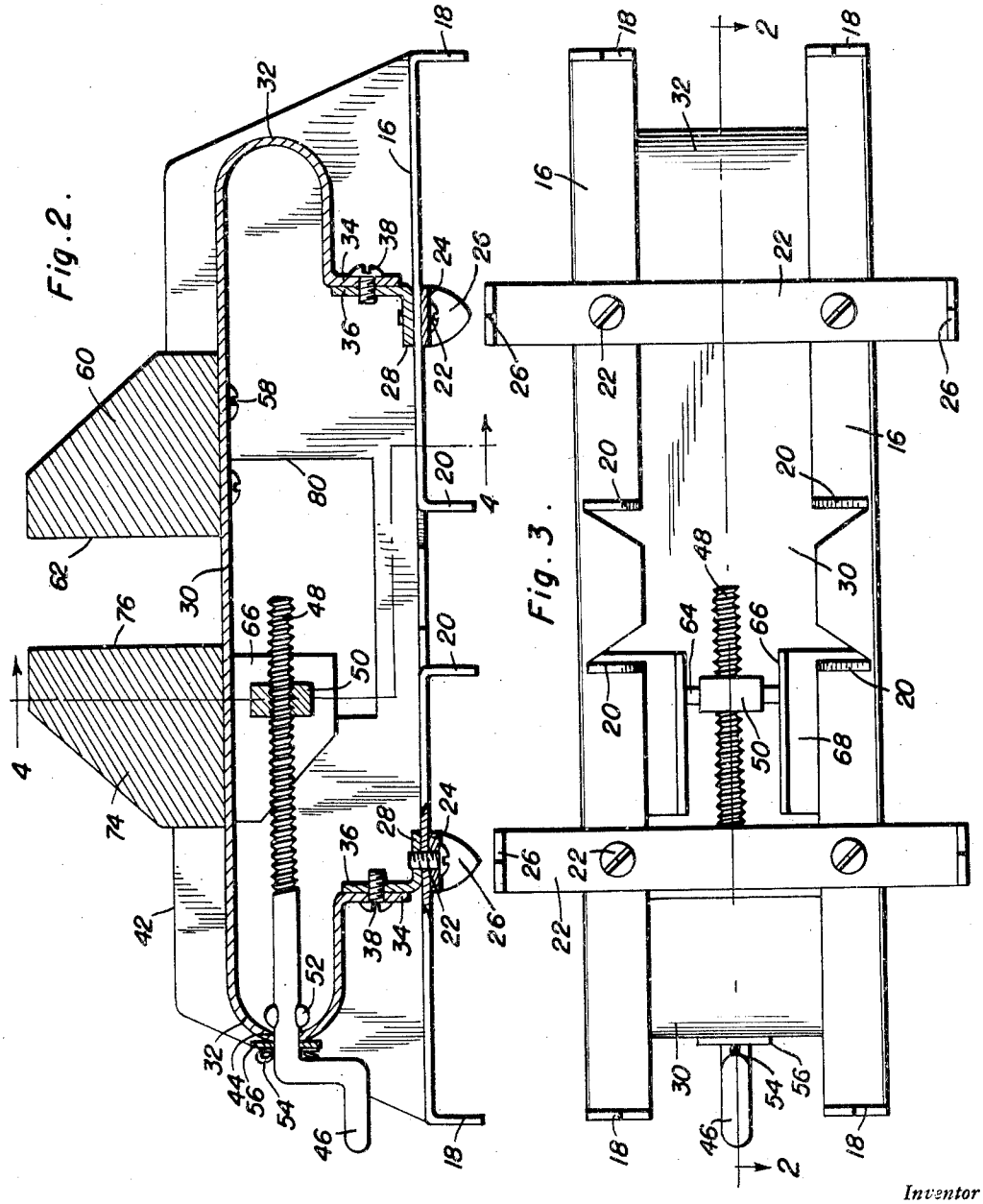
By Clarence A. O'Brien and Harvey B. Jackson

Attorneys

Nov. 8, 1949 J. M. SUTTER 2,487,742

CLAMP HAVING JAWS ADJUSTABLY MOUNTED ON RESILIENT DOOR-SUPPORTING PLATE

Filed April 19, 1948 2 Sheets-Sheet 2



Inventor

John M. Sutter

By Clarence A. O'Brien and Harvey B. Jackson

Attorneys

Patented Nov. 8, 1949 2,487,742

UNITED STATES PATENT OFFICE

2,487,742

CLAMP HAVING JAWS ADJUSTABLY MOUNTED ON RESILIENT DOOR-SUPPORTING PLATE

John M. Sutter, St. Louis, Mo.

Application April 19, 1948, Serial No. 21,907

2 Claims. (Cl. 144—296)

1

This invention relates to new and useful improvements in vises and the primary object of the present invention is to provide a clamp having jaws adjustably mounted on a resilient door-supporting plate for holding doors and the like so that the same may be conveniently planed, sawed, sanded, painted and otherwise worked in a desirable and accessible manner by a craftsman.

An important feature of the present invention is to provide a vise including a support, a fixed jaw removably carried by the support, a movable jaw cooperating with the fixed jaw and slidably positioned on the support, and embodying novel and improved means for guiidng and positioning the movable jaw relative to the fixed jaw for clampingly retaining an article of work therebetween.

A further object of the present invention is to provide a vise that is extremely small and compact in structure and which includes separable parts that are quickly and readily assembled or disassembled in a convenient manner.

A still further aim of the present invention is to provide a vise that is simple and practical in construction, strong and reliable in use, neat and attractive in appearance, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which;

Figure 1 is a perspective view of the vise constructed in accordance with the present invention, and with dotted lines showing a portion of a door applied thereto;

Figure 2 is a longitudinal vertical sectional view of the present invention taken substantially on the plane of section line 2—2 of Figure 3;

Figure 3 is a bottom plan view of the present vise; and,

Figure 4 is a transverse vertical sectional view taken substantially on the plane of section line 4—4 of Figure 2.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents the present work holding vise generally, including a pair of side members or walls 12 having downwardly and outwardly inclined end edges 14.

The lower edges of the side walls 12 are turned

2

inwardly toward each other to provide longitudinal strips or flanges 16 having pointed extensions that are turned downwardly to form end bearing feet 18.

Struck downwardly from the central portions of each of the strips 16 are further pairs of pointed feet 20 which are co-planar with the aforementioned end feet 18.

Removably secured to the lower faces of the strips 16 by fasteners 22, is a plurality of transversely disposed, spaced parallel connecting strips 24 the ends of which project outwardly from the side walls 12 and are turned downwardly to provide pointed bearing feet 26 that are co-planar with the feet 18 and 20.

The lower horizontal legs of angle iron strips 28 are secured to the upper faces of the strips 16 preferably by the same fasteners 22 that are employed for securing the strips 24 to the strips 16.

Disposed between the side walls 12, is a longitudinal, substantially rectangular support plate 30 of spring steel the ends of which are turned inwardly and downwardly to provide substantially U-shaped portions 32 having angulated or vertical integral extensions 34 that are removably secured to the upstanding legs 36 of the angle iron strips 28 by fasteners or the like 38. The longitudinal side edges 40 (see Figure 1) of the support plate 30 are spaced relative to the inner faces of the side walls 12 and that the upper face of the support plate 30 is disposed in a plane spaced below the upper edges 42 of the side walls 12.

Rotatably supported in an aperture 44 provided in one of the portions 32, is a crank-handle 46 having a screw shaft portion 48 that engages in an internally threaded opening provided in a traveling nut block 50.

Protuberances 52 provided on the shaft 48 limit the outward movement of said crank-handle relative to the portion 32 on which the same is supported, and in conjunction with a cotter pin 54 and washer 56 carried by the crank-handle 48, swivel the shaft in aperture 44.

Removably secured to the support plate 30, by fasteners or the like 58, is an upstanding fixed jaw or block 60 having a gripping face 62 which may or may not be toothed.

Pins 64, which project outwardly from opposite sides of the traveling block 50, are pivotally mounted in the depending legs 66 of a pair of angulated strips 68 having upstanding ears 70 that are disposed between the side walls 12 and the longitudinal side edges 40 of the support

plate 30 and which are secured by fasteners 72 to the sides of a movable block jaw 74 having a bearing face 76 that opposes and cooperates with the bearing face 62 of the fixed jaw 60.

In practical use of the present invention, a door 78, or such other article that is to be worked, is placed between notches 80 provided in the side walls 12 and bears upon the support plate 30. The movable jaw 74 is then adjusted by the crank-handle 48 toward the fixed jaw 60 so that the door 78 will be clampingly retained between the jaws 60 and 74.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the function of the invention as herein disclosed and by the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A door clamp comprising a pair of spaced side members, a pair of spaced angle bars extending between and connecting said side members, a support plate located between said side members and having substantially U-shaped end portions, said U-shaped portions of said support plate being secured to said angle bars, a fixed jaw carried by the support plate, a movable jaw slidably carried by the support plate and cooperating with the fixed jaw, a screw shaft having a crank handle and journaled for rotation on one U-shaped portion of said support plate, a traveling nut block threaded onto said shaft, and means connecting the movable jaw to the traveling nut block.

2. The combination of claim 1 wherein said support plate includes longitudinal side edges spaced relative to the side members, and said connecting means includes angulated strips having upstanding end portions removably engaging said movable jaw, the upstanding end portions of said angulated strip being positioned between the side members and the side edges of said support plate.

JOHN M. SUTTER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
960,258	Boudreau	June 7, 1910
997,103	Thompson	July 4, 1911
1,202,209	Nunemaker et al.	Oct. 24, 1916
2,430,980	Goodwin	Nov. 18, 1947