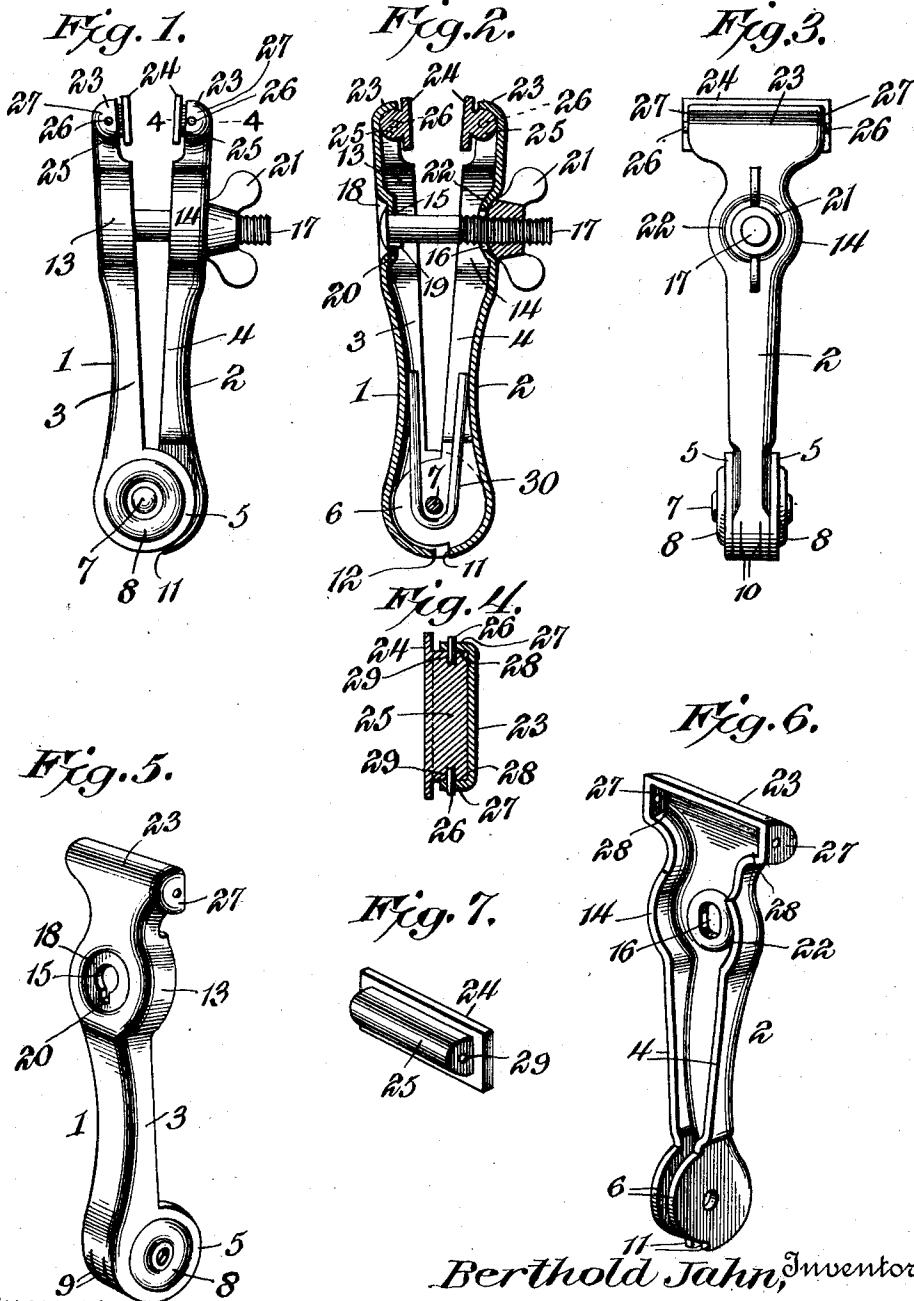


998,248.

Patented July 18, 1911.



Witnesses
 Howard D. Orr
 H. J. Riley

Berthold Jahn, Inventor,
 By C. J. Siggers, Attorney

UNITED STATES PATENT OFFICE.

BERTHOLD JAHN, OF NEW BRITAIN, CONNECTICUT.

HAND-VISE.

998,248.

Specification of Letters Patent. Patented July 18, 1911.

Application filed December 7, 1909. Serial No. 531,821.

To all whom it may concern:

Be it known that I, BERTHOLD JAHN, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented a new and useful Hand-Vise, of which the following is a specification.

The invention relates to improvements in hand vises.

The object of the present invention is to simplify and improve the construction of vises, and to lessen the cost of the same, and to enable a hand vise of the requisite strength to be constructed of wrought or sheet metal, whereby the weight of the hand vise will be reduced more than half.

Another object of the invention is to provide a hand vise of this character, equipped with adjustable jaws, pivotally connected with the members of the vise and supported by the latter, whereby the pivots will be relieved of strain.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a side elevation of a hand vise, constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a front elevation of the hand vise. Fig. 4 is a transverse sectional view on the line 4—4 of Fig. 1. Figs. 5 and 6 are detail perspective views of the pivoted sides or members of the hand vise. Fig. 7 is a detail perspective view of one of the adjustable jaws.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

In the embodiment of the invention illustrated in the accompanying drawing, the hand vise comprises in its construction pivoted members 1 and 2, constructed of wrought or sheet metal pressed into the form shown and to provide longitudinal side flanges 3 and 4, which reinforce and brace the members 1 and 2 and afford the

necessary strength. The side flanges 3 and 4 are enlarged at the inner ends of the members 1 and 2 to provide circular outer and inner ears 5 and 6, which are interfitting and pivoted together by a transverse pin 7, piercing the circular enlargements or ears 5 and 6 at the centers thereof. The inner ears 6 are flat and present flat faces to the outer ears 5, which are preferably strengthened and reinforced by exterior annular beads 8, arranged concentric with the pivot openings. The metal at the inner ends of the members 1 and 2 is split at 9 and 10 adjacent to the circular enlargement or ears in order to form tongues, which are bent or curved at the adjacent portions of the peripheries of the said ears. By this construction the members provide a hollow closed inner end for the vise. The member 4 is provided at the bottom of the ears with shoulders 11, arranged to engage the terminal edge 12 of the member 1 to limit the opening movement of the members.

The members 1 and 2 are provided with intermediate annular enlargements 13 and 14, and they are tapered therefrom to their inner ends. The annular enlargements 14 have registering openings 15 and 16 for the reception of a screw 17, having its head seated in an annular recess or indentation 18 of the enlargement 13. The screw is also provided adjacent to its head with a lug 19, which fits in a notch 20, consisting of an extension of the opening 15. By this construction the screw is interlocked with the member 1 and is held against independent rotary movement. The threaded portion of the screw 17 receives a thumb nut 21, which extends in an annular recess 22 of the member 2.

The members 1 and 2 are enlarged at their outer ends to provide transversely disposed approximately semi-cylindrical vise jaws 23 to which are pivoted adjustable jaws 24. The adjustable jaw 24 consists of an oblong engaging portion and an inner rounded bearing rib or portion 25, fitting in the recess formed by the vise jaw 23 and bearing against the inner faces thereof, whereby the pivots 26 are relieved of strain. The end walls 27 of the vise jaws are approximately semi-circular or segmental, and the end portions 28 of the recess of the vise jaw 23 support the rounded rib or bearing portion 25 of the adjustable jaw 24 at opposite sides of the pivots 26, which pierce the

end walls 27 of the vise jaw 23 and extend into sockets 29 in the ends of the bearing portion 25. The adjustable jaws, which may have either smooth or file tooth engaging faces, are automatically adjustable to fit the object placed in the vise.

The members are automatically spread by means of an approximately U-shaped spring 30, retained in place in the hollow closed inner end of the vise by the pivot 7 and having its sides housed in the grooves or spaces between the longitudinal side flanges 3 and 4, and concealed by the same. The sheet metal, which renders the hand vise exceedingly light, furnishes all the requisite strength and enables the hand vise to be employed for all the purposes for which an ordinary cast or forged hand vise may be used.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A hand vise including two members constructed of sheet metal and having their side edges bent inwardly to form longitudinal flanges, the latter being provided at their inner ends with interfitting inner and outer circular ears or enlargements, and the metal of each member being split adjacent to the latter and the tongues so formed extending partially around the peripheries of the said ears and arranged to abut against each other, a pivot piercing the ears, and means for adjustably connecting the members.

2. A hand vise including two members constructed of sheet metal and having their

side edges bent inwardly to form longitudinal flanges, the latter being provided at their inner ends with inner and outer interfitting ears or enlargements, the inner ears or enlargements having peripheral shoulders and the metal of each member being split adjacent to the ears or enlargements and the tongues so formed extending partially around the peripheries of the same and arranged to abut against each other, one of the tongues terminating at the said peripheral shoulders, a pivot piercing the ears or enlargements, and means for adjustably connecting the members.

3. A hand vise including two members constructed of pressed sheet metal and having their side edges bent inwardly to provide spaced longitudinal flanges, the latter being provided at their inner ends with inner and outer interfitting ears arranged in pairs and spaced apart and forming a hollow closed end, a pivot passing through the ears and connecting the inner ends of the members, a spring located between the side flanges and passing partially around the pivot and between the said ears and retained in place by the side flanges, the pivot and the said hollow closed end, and means for adjustably connecting the members.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

BERTHOLD JAHN.

Witnesses:

EDWARD A. JUDD,
CHARLES R. GILBERT.