V. R. CANNON.

VISE FOR HOLDING VEHICLE SPRINGS.

APPLICATION FILED JULY 22, 1918.

**1,313,256.** Patented Aug. 19, 1919.

Fig. 1.

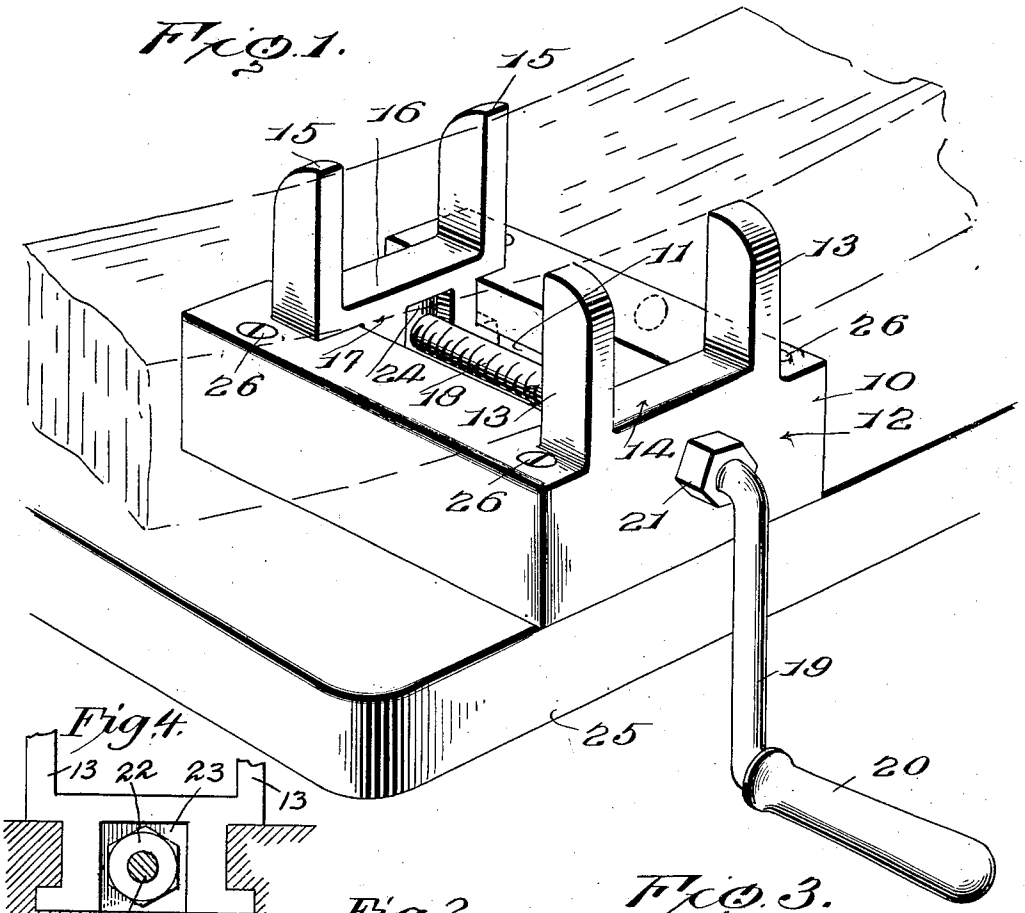



Fig. 4.




Fig. 2.

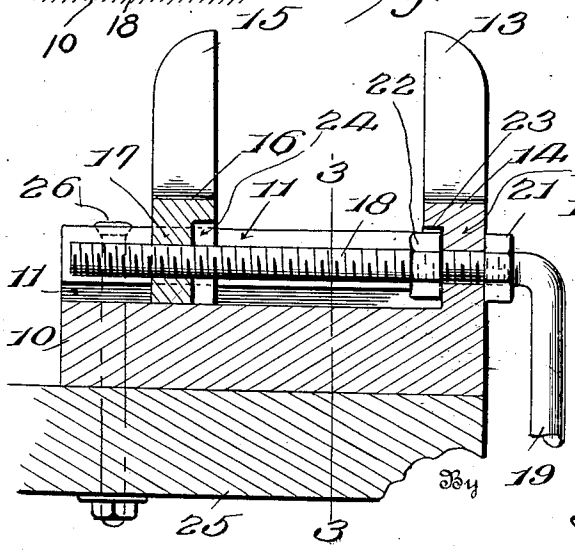
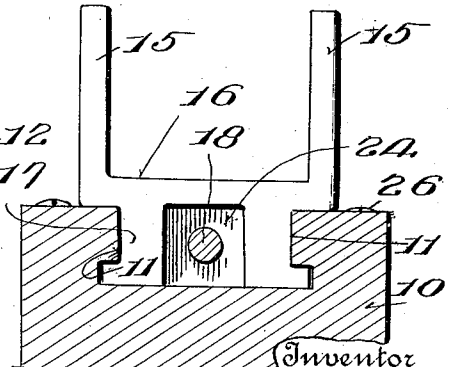



Fig. 3.




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# UNITED STATES PATENT OFFICE.

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## VISE FOR HOLDING VEHICLE-SPRINGS.

1,313,256. Specification of Letters Patent. Patented Aug. 19, 1919.

Application filed July 22, 1918. Serial No. 246,211.

*To all whom it may concern:*

Be it known that I, VERNON R. CANNON, a citizen of the United States, residing at Sapulpa, in the county of Creek and State of Oklahoma, have invented certain new and useful Improvements in Vises for Holding Vehicle-Springs, of which the following is a specification.

This invention relates to an improved vise especially designed for use in assembling the leaves of vehicle springs and has as its primary object to provide a device of this character adapted to hold and clamp the leaves of a spring together so that a centering bolt may be readily passed through the intermediate portions of the said leaves for connecting the leaves or so that a suitable saddle clip may be connected with the spring.

The invention has as a further object to provide a vise having a fixed jaw and a movable jaw and wherein each of the jaws will be provided with spaced arms in order that a centering bolt may be inserted between the arms of the jaws through the leaves of a spring held by the vise.

And the invention has as a still further object to provide a vise wherein the leaves of a spring may be placed edgewise between the jaws one against the other and wherein the body of the vise will be formed to support the spring leaves flush with each other so that the bolt holes in the leaves may be readily brought into register for receiving a centering bolt therethrough.

Other and incidental objects will appear as the description proceeds. In the drawings wherein I have illustrated the preferred embodiment of the invention, and wherein similar reference characters designate corresponding parts throughout the several views:

Figure 1 is a perspective view showing my improved vise mounted upon a suitable bench therefor and illustrating in dotted lines, the manner in which the leaves of a spring are placed between the jaws of the vise,

Fig. 2 is a longitudinal sectional view more particularly illustrating the mounting of the clamping screw of the vise,

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1 and looking toward the movable jaw, this view particularly showing the mounting of the movable jaw of the vise, and

Fig. 4 is a fragmentary section showing the manner in which the innermost stop nut on the adjusting screw is received within the recess of the fixed jaw.

In carrying out the invention I employ a preferably oblong body block or base 10 formed throughout the major portion of its length with a channel 11 opening through the top face of the base and one end thereof, this channel being substantially T-shaped in cross section. At one end the base is formed with an end wall 12 closing the channel at its adjacent end, and rising from this end wall is a fixed jaw including upstanding parallel arms 13 joined by a connecting portion 14 between the inner ends of the arms. The arms are, as best shown in Fig. 1, arranged in spaced relation at opposite sides of the channel 11 and the connecting portion 14 rises above the top face of the base. In this connection it should be observed that the top face of the base is flat and smooth throughout the entire area thereof in advance of the fixed jaw, and preferably the fixed jaw is formed integral with the base. Slidable upon the base toward and away from the fixed jaw is a movable jaw including upstanding parallel arms 15 corresponding to the arms 13 of the fixed jaw and spaced apart a distance corresponding to the distance between said latter arms. Joining the arms 15 at their inner ends is a connecting portion 16 seating against the upper face of the base and adapted to ride thereon at opposite sides of the channel 11. Depending from said connecting portion into the channel, is a substantially T-shaped head 17 slidably fitting within the channel and connecting the movable jaw with the base. As best shown in Fig. 2 of the drawings, the connecting portion 16 of the movable jaw is of a thickness corresponding to the connecting portion 14 of the fixed jaw so that these connecting portions thus rise an equal distance above the upper face of the base.

Loosely journaled through the end wall 12 of the base at the inner end of the channel 11, medially of the said channel, is a screw 18 threaded at its outer end through the head 17 of the movable jaw. At its inner end, this screw is extended to form an oper-

ating crank 19 for the screw and this crank is preferably equipped with a suitable handle 20. Threaded upon the screw to abut the outer face of the end wall 12 is a stop nut 21 and threaded upon the screw to abut the inner face of said end wall is a similar stop nut 22 coöperating with the nut 21 for holding the screw against longitudinal sliding movement upon the base. Thus, it will be clear that by operating the crank 18, the screw 17 may be rotated for shifting the movable jaw toward or away from the fixed jaw. As particularly shown in Fig. 2, the nut 22 is partly received within a suitable recess 23 in the inner face of the end wall 12 and the inner face of the head 17 of the movable jaw is provided with a similar recess 24 to accommodate the projecting portion of said nut so that the movable jaw may be shifted to abut the fixed jaw.

In use, the base of my improved vise may be rested upon a suitable bench therefor, as conventionally shown at 25, and is connected with the bench by a plurality of bolts or other suitable fastening devices 26 fitted loosely through the base adjacent its corners and at their lower ends receiving nuts for firmly clamping the vise to the bench. Leaves of a vehicle spring may thus, as shown in dotted lines in Fig. 1, be placed edgewise between the fixed and movable jaws resting flat upon the flat upper face of base, which will thus support the spring leaves flush with each other. Consequently, the leaves may be readily shifted longitudinally with respect to each other to bring the bolt openings in the intermediate portions of the leaves into register in a plane between the spaced arms of the jaws. Then, by turning the crank 19, the movable jaw may be shifted toward the fixed jaw for compressing the leaves of the spring and clamping them together when a centering bolt may be passed through the registering bolt holes of the leaves for firmly connecting the said leaves. In like manner a saddle clip may be readily attached with the spring. In this connection it is to be particularly noted that by employing the spaced arms upon the fixed and movable jaws of the vise, ample clearance is provided between the arms to allow ready access to the intermediate portions of the spring leaves at the registering openings therein, for inserting a centering bolt through the said registering openings between the arms. I accordingly provide a particularly efficient construction for the purpose set forth and, at the same time, a vise which is characterized by simplicity of construction and ease of operation.

It will, of course, be understood that while I have indicated that the vise is particularly designed to be employed in assembling the leaves of vehicle springs, still, the vise is also well adapted for general use and I do not, therefore, wish to be limited in this regard.

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

A vise of the character described including a base provided with a channel closed at one end by an end wall of the base, a fixed jaw rising from said end wall, a movable jaw rising from the base and provided with a head slidably engaging in said channel, a screw loosely fitted through said end wall and engaged with the head of the movable jaw for shifting the movable jaw toward or away from the fixed jaw, and inner and outer nuts threaded upon the screw to confront opposite sides of the end wall for holding the screw against longitudinal movement therethrough, the said end wall being provided with a recess partially receiving the inner nut and the head of the movable jaw being provided with a similar recess adapted to receive the projecting portion of said inner nut whereby the movable jaw may be shifted to abut the fixed jaw.

In testimony whereof I affix my signature.

VERNON R. CANNON. [L. S.]

**Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."**