

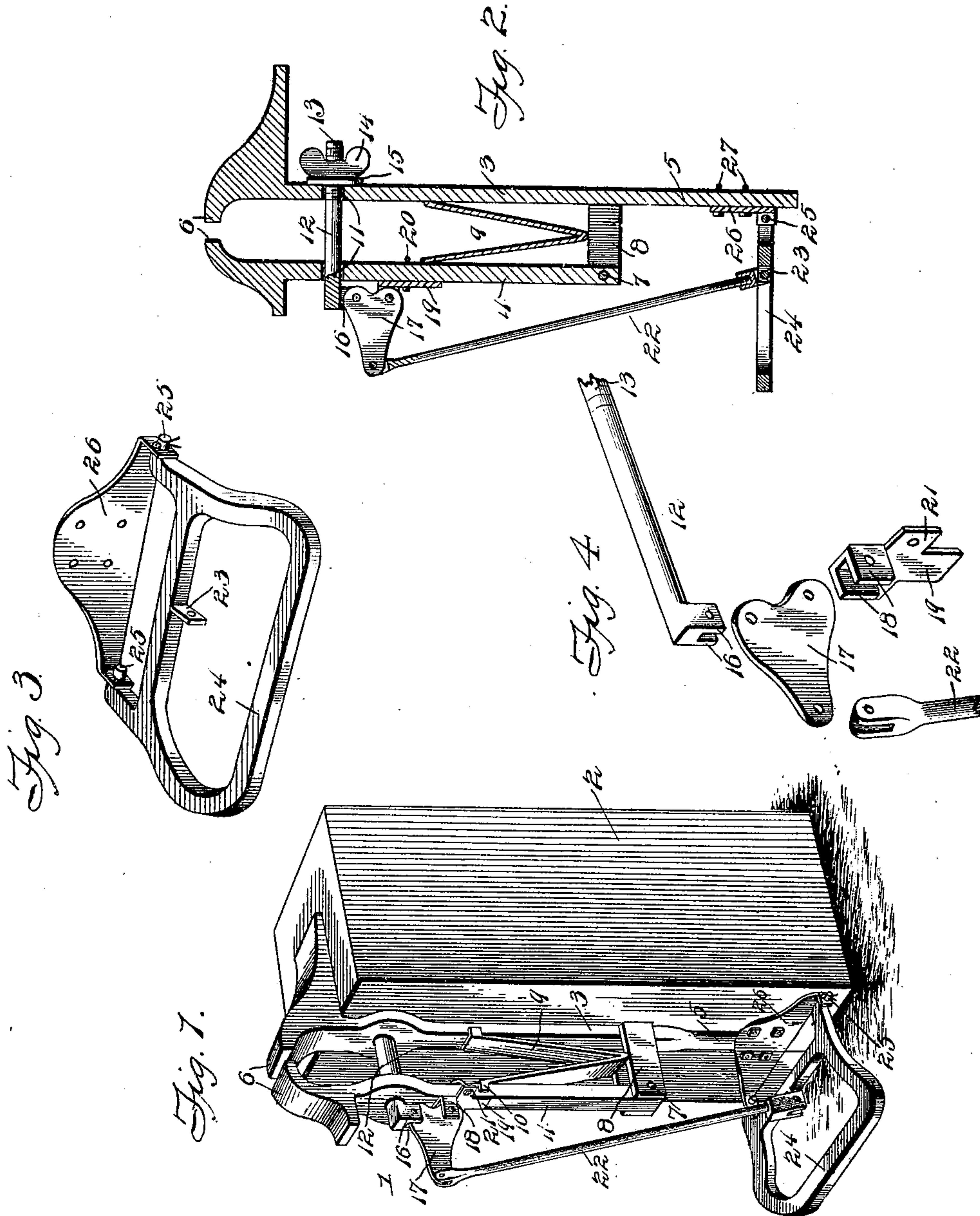
No. 631,538.

Patented Aug. 22, 1899.

J. D. DECELLE.  
VISE ATTACHMENT.

(Application filed Nov. 30, 1898.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

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## WISE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 631,538, dated August 22, 1899.

Application filed November 30, 1898. Serial No. 697,902. (No model.)

*To all whom it may concern:*

Be it known that I, JERRY D. DECELLE, a citizen of the United States, residing at Fort Collins, in the county of Larimer and State of Colorado, have invented a new and useful Wise Attachment, of which the following is a specification.

This invention relates to work-holding vises, and more especially to that type of vises known as "blacksmiths' vises," which are specially designed to facilitate the calking of horseshoes and upsetting metal for various purposes; and it has for its object to provide an improved operating attachment for the vise which will insure a quick action of the clamping-jaws and a powerful grip thereof on the work being operated upon, while at the same time enabling the vise to be controlled with but little exertion on the part of the operator.

To this end the invention contemplates an attachment capable of general application to vises having relatively fixed and movable jaws and providing simple and efficient means for opening and closing the vise-jaws without the use of the ordinary screw commonly employed.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a perspective view of a blacksmith's vise equipped with an operating attachment constructed in accordance with the present invention. Fig. 2 is a vertical sectional view of the vise and the attachment. Fig. 3 is a detail in perspective of the treadle and its supporting-bracket. Fig. 4 is a detail in perspective of the lever, the fulcrum-plate, and the adjusting-bolt separated from each other.

Referring to the accompanying drawings, the numeral 1 designates a vise of the type usually employed as a blacksmith's vise, which when in use is mounted in position on and at one side of the pedestal or block 2, and said vise essentially consists of the relatively fixed and movable vise-jaws 3 and 4, respectively, the fixed or stationary vise-jaw 3 forming a continuation of the main stand-

ard or shank 5 of the vise, which is arranged at one side of the supporting pedestal or block 2. Both of the vise-jaws 3 and 4 are provided at their upper ends with opposing inturned gripping-heads 6, between which the work to be operated upon is held, and the movable vise-jaw 4 is of a shorter length than the combined length of the standard or shank 5 and its jaw extension 3 and is pivoted at its lower end, as at 7, to the offstanding supporting arm or yoke 8, rigidly connected with the standard or shank 5 of the fixed jaw.

In the present invention the relatively fixed and movable jaws 3 and 4 of the vise are normally separated by means of a substantially V-shaped leaf-spring 9, interposed between the jaws and provided at its extremities with yokes 10, embracing the inner edges thereof. The lower end or apex of the spring 9 usually rests upon the offstanding supporting-arm 8 for the movable jaw to prevent downward displacement of the spring, while lateral displacement is prevented by the engagement of the yokes 10 thereof with the jaws.

Above the plane of the upper ends of the spring 9 the oppositely-located jaws 3 and 4 of the vise are provided with the bolt-openings 11, receiving therein the adjusting-bolt 12. The adjusting-bolt 12 is provided at one end with a threaded terminal 13, receiving thereon the nut 14, bearing on the washer 15, placed against the adjacent side of the fixed or stationary jaw 3 of the device, and by means of which before mounting against a support the jaws may be primarily adjusted a suitable distance. The opposite end of the bolt 12, which extends through the opening 11 in the movable jaw 4, is provided with a fork having oppositely-located pivot-ears 16, between which is pivotally mounted the lever 17, at one corner thereof. The lever is of an approximately triangular shape, and the corner thereof below its pivotal connection with the bolt 12 is pivotally mounted between the pivot-ears 18 of the fulcrum-plate 19. This fulcrum-plate is arranged flat against the outer side of the movable jaw 4 and is detachably clamped thereto by means of the clip-bolt 20, embracing said jaw and bolted in the perforated side wings 21 of the fulcrum-plate.



The outer extremity of the lever 17, beyond its connection with the bolt and the movable vise-jaw, has pivotally connected thereto one end of the operating-rod 22, the lower end of which rod is similarly connected to the pivot-arm 23, projected centrally from the inner side of a skeleton treadle-plate 24. The skeleton treadle-plate 24 is of a substantial U shape and in rear of the central pivot-arm 23 thereof has the pivot-stud connections 25 with opposite ends of the supporting-bracket 26, detachably held to the standard or shank 5 of the vise by means of clip-bolts 27, embracing said standard or shank and bolted through the said plate 26.

Normally the jaws of the vise are separated by the spring 9; but when the work is placed between the jaws the operator places his foot on the treadle and depresses the latter, which movement rocks the lever 17 on its fulcrum connection with the adjusting-bolt 12 and moves the jaw 4 inward or toward the fixed or stationary jaw 3, thereby securing a very quick, positive, and firm adjustment of the movable jaw of the vise.

From the foregoing it will be observed that all parts of the attachment are readily separable, so that the same can be easily fitted to a vise having a relatively fixed and movable jaw.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a vise, the combination of fixed and movable jaws, the fixed jaw having an offset intermediate its length to which the movable jaw is pivoted, a substantially V-shaped spring interposed between the jaws and having its

reduced portion or angle resting on the offset and its free ends or extremities formed with embracing-yokes freely movable over the opposite jaws, said spring normally separating the jaws, an adjusting-bolt having positive connection with the fixed jaw and extending through an opening in the movable jaw, a lever connected to the outer portion of the bolt and also to a part of the movable jaw below the said bolt, and means for actuating said lever attached to the outer portion of the latter.

2. In a vise, the combination with fixed and movable jaws, of a spring normally separating said jaws, an adjusting-bolt having positive connection with the fixed jaw and extending through an opening in the movable jaw, a lever having pivot-ears respectively connected to the outer free end of the said bolt and to a part of the movable jaw below the said bolt, and a treadle connection movably attached to the outer portion of the said lever.

3. In a vise, the combination with the fixed and movable jaws, of a bolt having an adjustable connection at one end with the fixed jaw and loosely extending through an opening in the movable jaw, said bolt being provided with a forked end at one side of the movable jaw, a fulcrum-plate detachably bolted to the movable jaw, a lever pivotally connected to the fork of the bolt and also to the fulcrum-plate, a supporting-bracket detachably bolted to the standard of the vise, a treadle pivotally mounted on said standard, and a rod connection between the treadle and the lever, substantially as set forth.

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

JERRY D. DECELLE.

Witnesses:

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