

No. 614,724.

W. JENNINGS.

Patented Nov. 22, 1898.

WISE.

(Application filed Mar. 18, 1898.)

(No Model.)

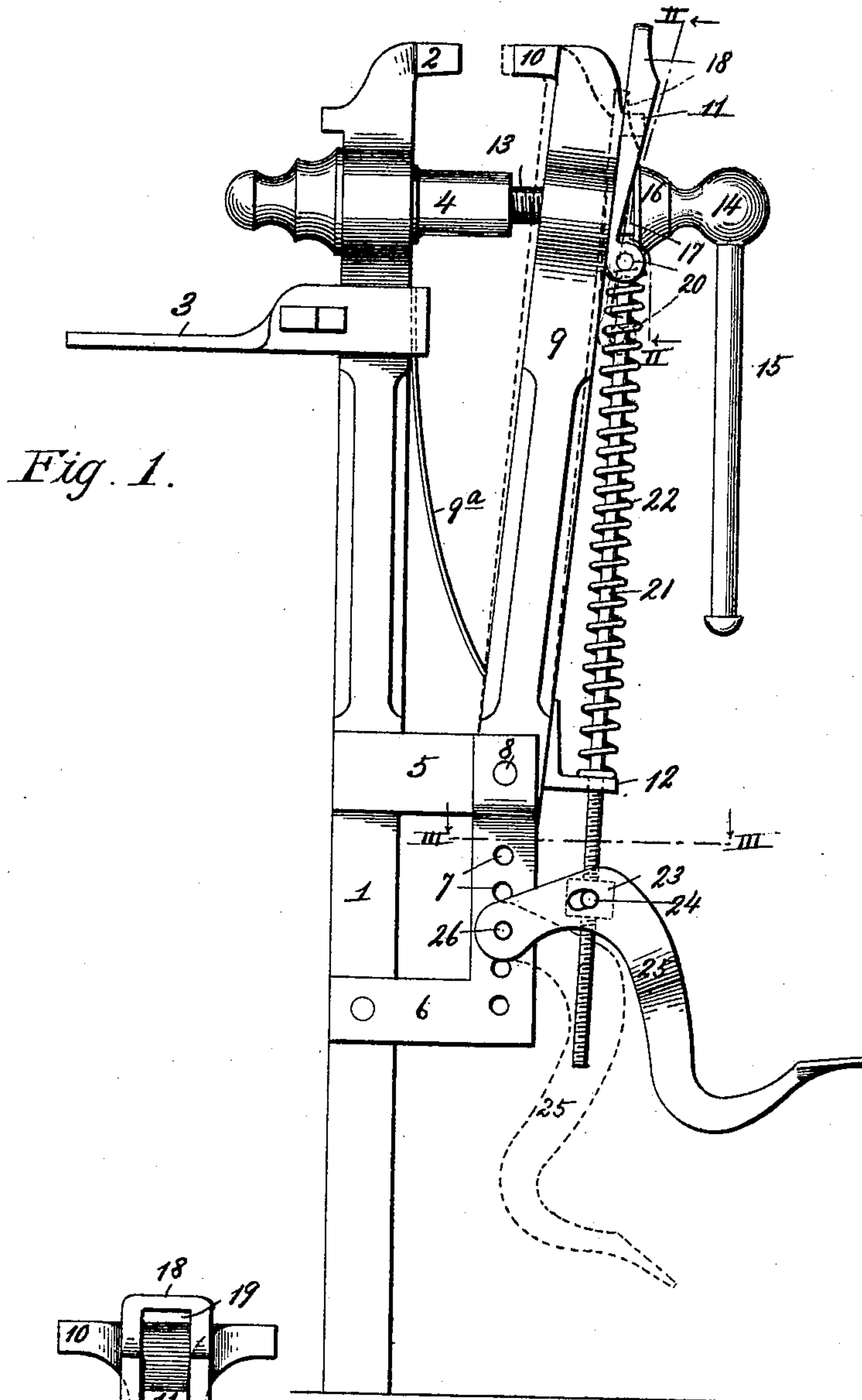


Fig. 1.

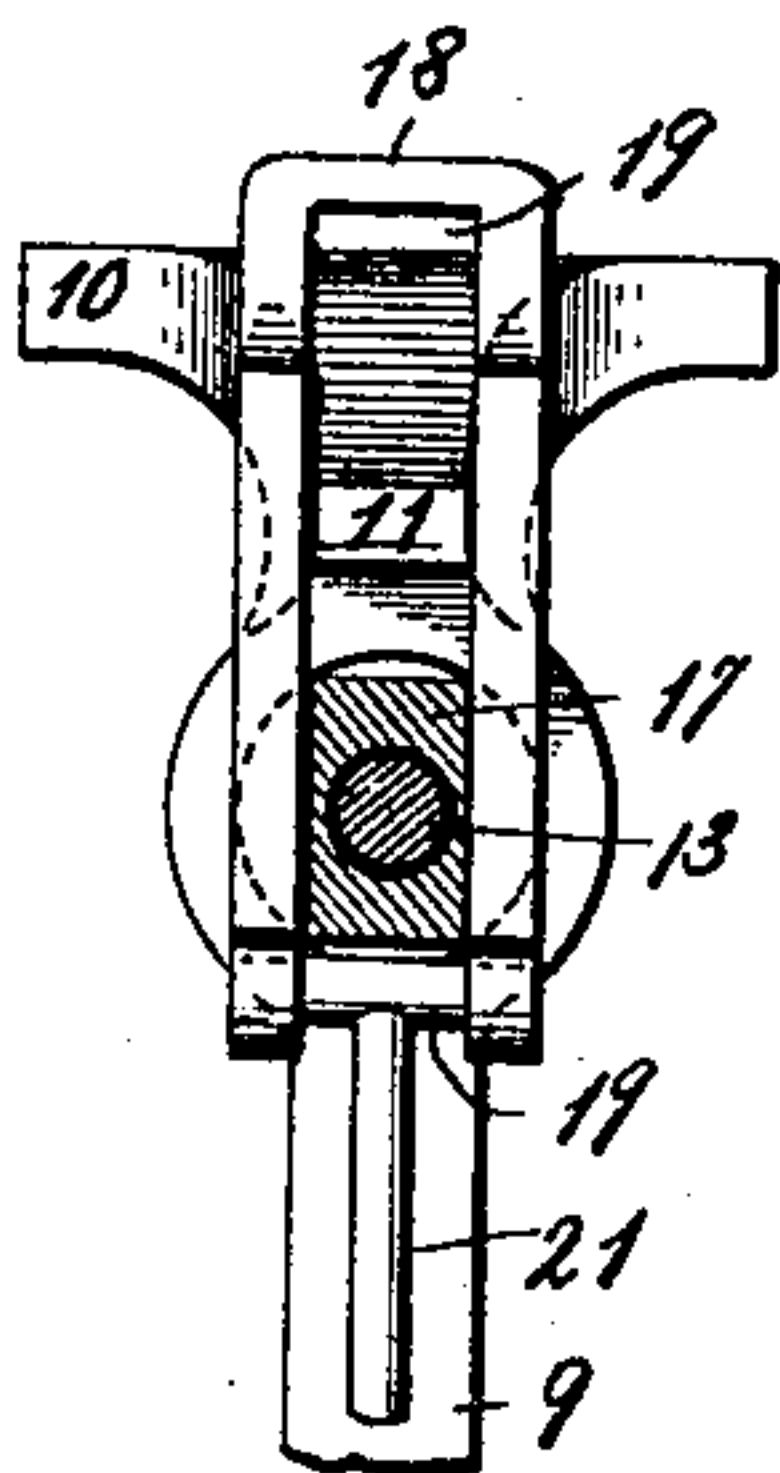


Fig. 2.

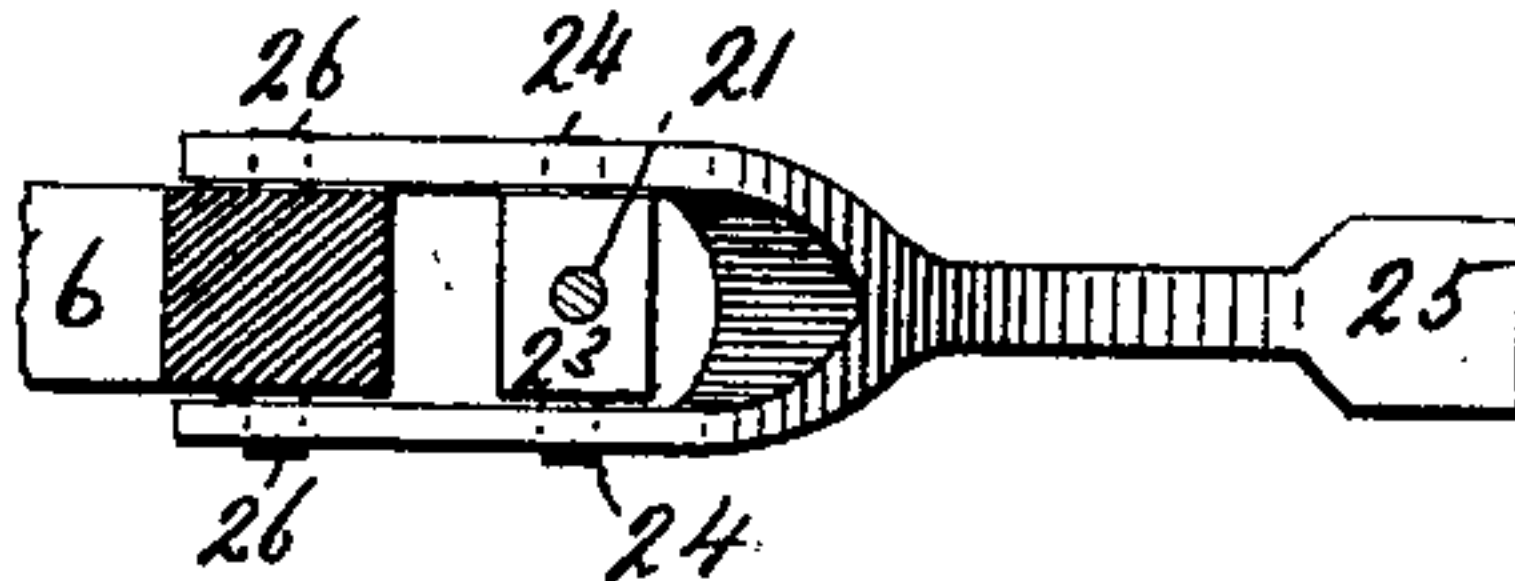


Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM JENNINGS, OF RAYTOWN, MISSOURI, ASSIGNOR OF ONE-HALF TO
GEORGE B. JENNINGS, OF SAME PLACE.

WISE.

SPECIFICATION forming part of Letters Patent No. 614,724, dated November 22, 1898.

Application filed March 18, 1898. Serial No. 674,382. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JENNINGS, of Raytown, Jackson county, Missouri, have invented certain new and useful Improvements in Vises, of which the following is a specification.

My invention relates to vises; and my object is to produce a device of this character whereby objects may be more quickly and easily secured in or removed from the vise than is possible with the type in general use, and, furthermore, a vise which is easily manipulated and is simple, strong, durable, and inexpensive of manufacture.

The invention consists in certain novel and peculiar features of construction and combinations of parts, as will be hereinafter described and claimed, and in order that it may be fully understood I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 represents a side elevation of a vise constructed in accordance with my invention. Fig. 2 is a vertical section taken on the line II II of Fig. 1. Fig. 3 is a horizontal section taken on the line III III of Fig. 1.

In the said drawings, 1 designates a standard which is adapted to rest at one end upon the ground or floor and is provided at its upper end with an outward projection constituting the stationary jaw 2 of the vise, and 3 an arm or plate by which the standard is secured reliably against a work bench or table in the customary manner.

Between the table and jaw is the customary internally-threaded sleeve 4, which is by preference keyed to the standard.

5 designates an arm which may be formed integral with or secured to the standard and projects from the same, preferably about midway its length, and secured at its opposite ends to said arm and the standard is an angle-bracket 6, provided with a vertical series of perforations 7.

Mounted pivotally at its lower ends upon the bolt 8, which connects arm 5 and bracket 6, is a swinging standard 9, terminating at its upper end in a projection 10, constituting the movable jaw of the vise, arranged opposite

the stationary jaw 2, and said standard 9 is normally pressed away from standard 1 by the customary spring 9^a, clamped at its upper end to standard 1 by arm or plate 3. The swinging standard is provided near its upper and lower ends, respectively, with a lug 11 and perforated angle-bracket 12 and is also provided with the customary opening (not shown) through which extends horizontally the screw 13, engaging the sleeve 4, hereinbefore referred to. Said screw at its outer end is provided with the head 14, carrying the customary handle 15, by which it is turned. Mounted loosely upon the screw inward of the head is a collar 16, provided with a rectangular neck 17, projecting loosely into the opening of standard 9.

18 designates a wedge which is adapted to slide between the standard 9 and collar 16 and is provided with a longitudinal slot 19, fitting snugly upon the rectangular neck 17 and lug 11 of the standard. It is pivotally connected at its lower end, as at 20, to the upper end of a rod 21, said rod extending down through the perforated bracket 12 and having its lower end screw-threaded. A spring 22, coiled around said rod, bears at its opposite ends against the bracket 12 and the pivot-bolt 20 and when unopposed holds the wedge elevated, as shown in full lines, Fig. 1, and with its attenuated end between the swinging standard and the collar 16.

23 designates a collar internally threaded and mounted upon the lower end of the rod 21, and projecting from opposite sides of the same are trunnions 24, pivotally mounted in the foot-lever 25, said lever being fulcrumed upon a pin or bolt 26, engaging one or another of the openings 7, in order that the foot-lever may occupy a position convenient to the operator—that is to say, it may be fulcrumed higher or lower on the bracket 6, as convenience or circumstances require or make necessary.

Supposing that the vise is to be employed by a blacksmith for turning heel and toe calks, it is obvious that it will facilitate the work if the shoes, which are substantially of uniform thickness and therefore require practically the same adjustment of the movable

jaw relative to the stationary jaw, can be clamped firmly in the vise with only a partial turn of the screw and yet give sufficient room between the jaws to permit the shoes to be positioned between them with ease and dispatch. With my improved vise this may be accomplished by simply opening the jaws a distance apart slightly exceeding the thickness of the wedge at its wide end and the shoe. The shoe is then positioned between the jaws without difficulty, and the operator with one foot presses down upon the foot-lever and overcoming the resistance of spring 22 draws the wedge down between the collar 16 and the movable standard 9, thereby causing the latter to assume the position indicated by dotted lines, Fig. 1, with its jaw just about in contact with the shoe, and the instant this is accomplished he grasps the handle 15 and gives it a very slight turn, possibly a quarter-turn, in order to move the jaw slightly nearer the stationary jaw and consequently clamp the shoe firmly and reliably in position. As soon as this is accomplished he may remove his foot from the foot-lever, as the pressure of the collar upon the wedge prevents the spring from forcing the latter upward, though in practice the wedge is not quite so abrupt as illustrated, and thereby prevents any possibility of slippage, which would permit spring 9^a to force jaw 10 outward and the shoe or other object to drop down out of position. It is apparent, of course, that this vise will be found convenient in any line of work where a large number of articles or parts of substantially the same thickness are to be successively operated upon and that the use of the sliding wedge makes possible a great saving both of time and labor.

From the above description it will be apparent that I have produced a vise which embodies the features of advantage enumerated in the statement of invention, and it is to be understood, of course, that slight changes in the form, detail construction, or arrangement may be resorted to without departing from its spirit and scope or sacrificing any of its advantages.

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

1. A vise, comprising a stationary jaw, provided with a threaded sleeve, and a screw engaging the same, having a handle, a movable jaw through which said screw extends, a collar upon said screw, a sliding wedge interposed between the collar and the movable jaw, and means for adjusting said wedge so

as to force the movable jaw toward the stationary jaw, substantially as described. 60

2. A vise, comprising a stationary jaw, provided with a threaded sleeve, a screw engaging the same, having a handle, a movable jaw through which said screw extends, a collar upon said screw, a sliding wedge interposed between the collar and the movable jaw, a rod connected to the narrow end of said wedge, a lever connected to said rod so that when depressed it draws the widened portion of the wedge between the collar and the movable jaw, and a spring for reëlevating said wedge when the power is removed which depresses said lever, substantially as described. 65 70

3. A vise, comprising a stationary jaw, provided with a threaded sleeve, a screw engaging the same, having a handle, a movable jaw through which said screw extends, a collar upon said screw, a sliding wedge interposed between the collar and the movable jaw, a rod pivotally connected to the narrow end of said wedge, and having its lower end threaded, a stationary bracket, a lever pivotally adjustable upon said bracket, a threaded collar journaled in said lever and engaging said rod, a bracket suitably supported, through which said rod extends, and a spring pressing at its opposite ends against said bracket and the lower or narrow end of said wedge, substantially as described. 75 80 85

4. A vise, comprising a stationary jaw, and a movable jaw provided with a guide-lug at its outer side, a threaded sleeve secured to the stationary jaw, a screw mounted therein and extending through the movable jaw, and provided with a head and handle at its outer end, a collar loosely mounted on said screw between its head and the movable jaw, and provided with a rectangular neck, a sliding wedge, provided with a longitudinal slot engaging the lug of the jaw and the neck of said collar, an apertured bracket secured to the movable jaw, a bracket secured to the stationary jaw, a rod pivoted to the lower end of the wedge and extending through said apertured bracket, a spring interposed between the latter and the wedge, and a lever fulcrumed upon the bracket of the stationary jaw and connected to said rod, substantially as and for the purpose described. 90 95 100 105

In testimony whereof I affix my signature in the presence of two witnesses. 110

WILLIAM JENNINGS.

Witnesses:

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