

**No. 707,803.**

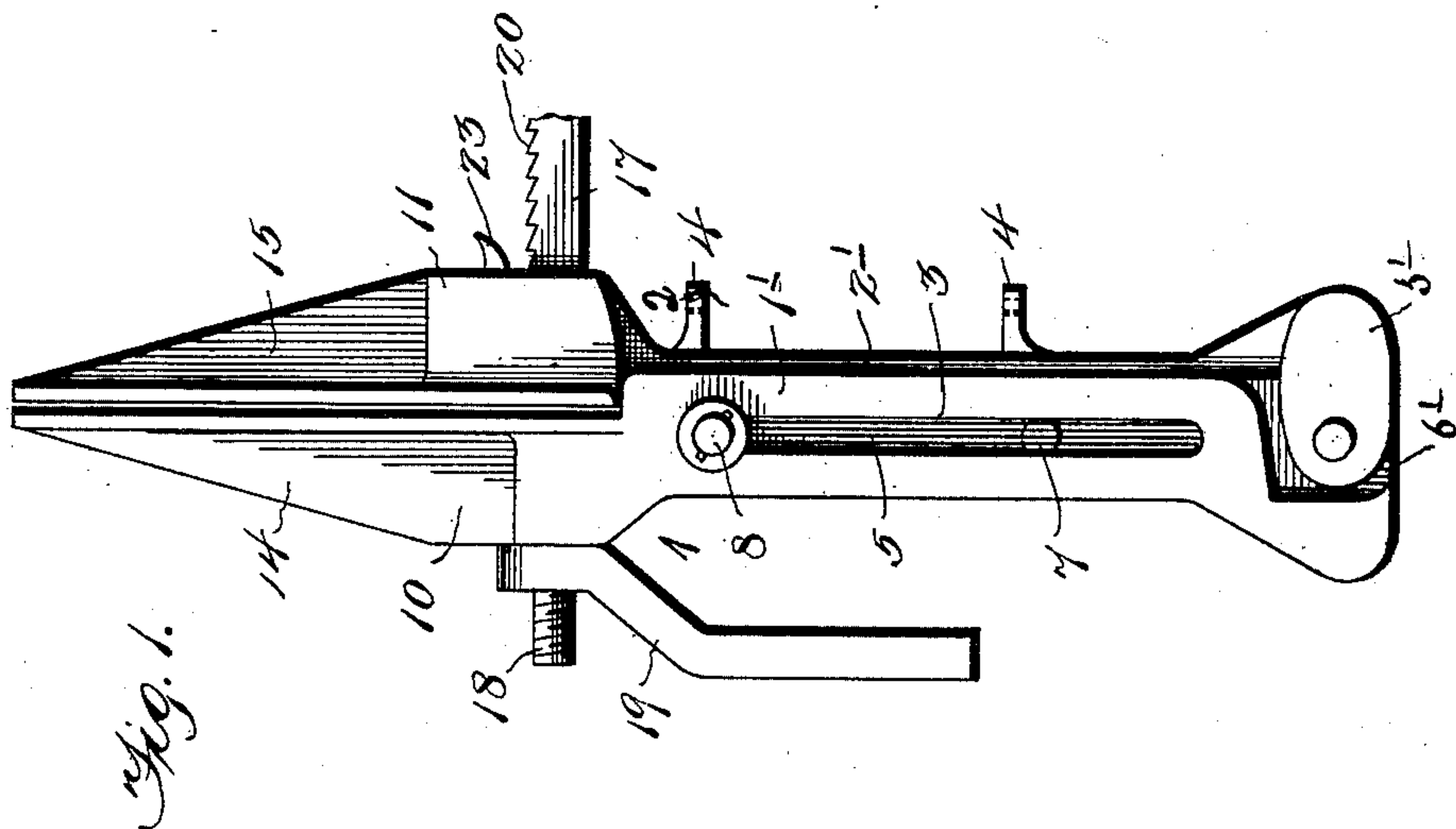
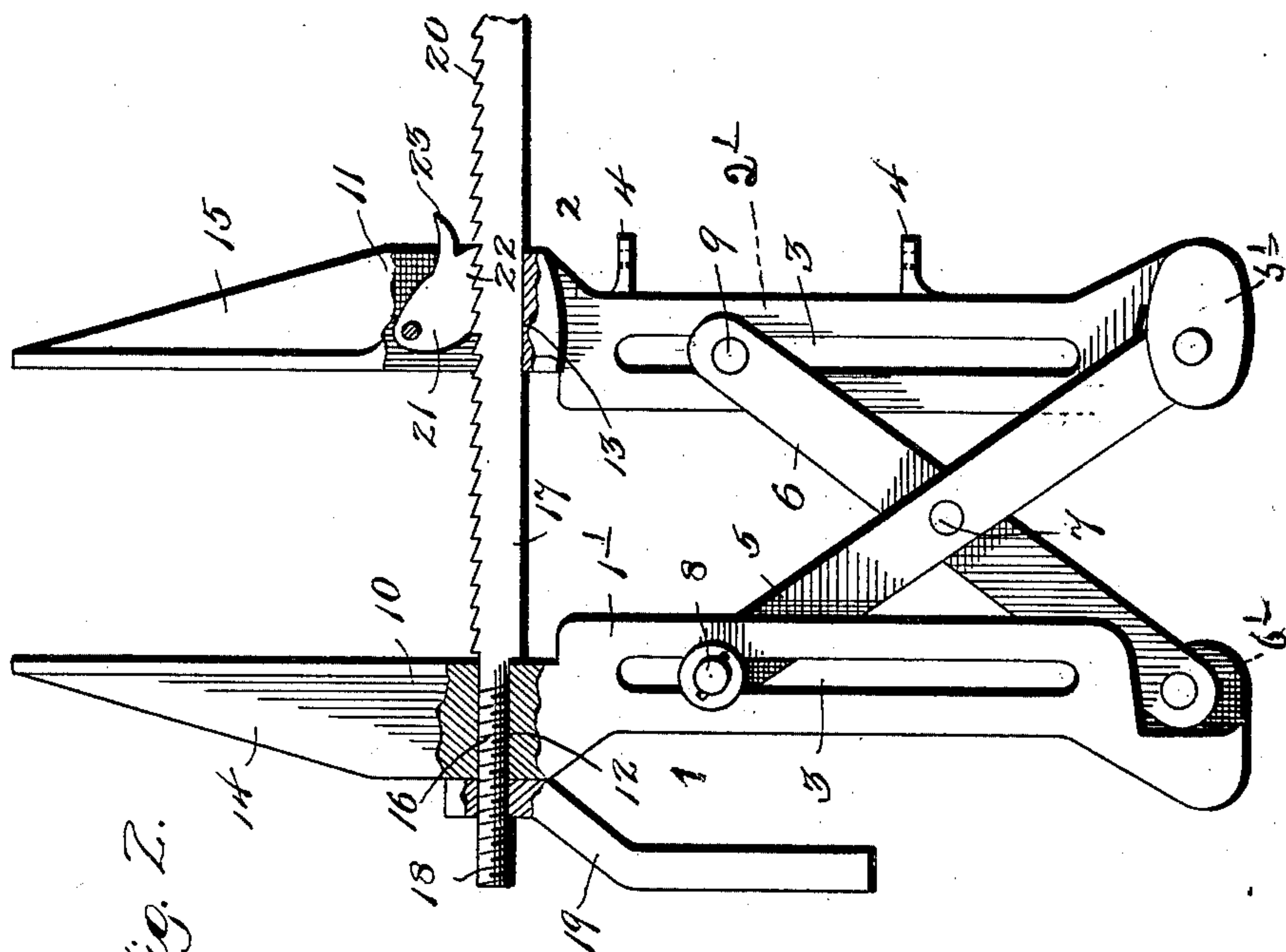
**Patented Aug. 26, 1902.**

**J. A. SMITH.**

**CLAMP.**

(Application filed Dec. 12, 1901.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN AMBROSE SMITH, OF DAYTON, OHIO.

## CLAMP.

SPECIFICATION forming part of Letters Patent No. 707,803, dated August 26, 1902.

Application filed December 12, 1901. Serial No. 85,592. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN AMBROSE SMITH, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Clamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to clamps and vises, but more particularly to clamps used by pattern and cabinet makers, woodworkers, &c., where a device is needed which may be quickly closed and clamped and in cases where glue is used to secure together two or more pieces of wood, thus enabling the work to be properly done before the glue hardens. While this is the principal object of my invention, it is not limited to any particular purpose, as it is so rapidly adjusted it would be of material advantage where any vise is needed, thus facilitating labor and time.

My invention is a parallel vise; and it consists in two longitudinally-slotted beam terminating at their upper ends in jaws, said beams united together and adapted to be moved in parallel lines by crossed toggle-levers and held in position by a notched bar, dog, and threaded nut, with means to house said toggle-levers and means for securing said vise to a bench.

In the accompanying drawings, Figure 1 is an elevation of my parallel vise closed. Fig. 2 is an elevation of the same opened.

Both sides of my vise are exactly alike; but in describing it I shall call the side presented on the drawings the "front" side and the reverse side the "back" side and the beam next the top of the sheet the "right-hand" beam and the one next the bottom of the sheet the "left-hand" beam.

My invention is described as follows:

1 represents the left-hand beam, and consists of a vise-jaw 14, and below the jaw and integral therewith a square part 10, provided with a horizontal smooth-bore perforation 12, (see Fig. 2,) and extending below said square part and from the front face thereof a longitudinally-slotted arm 1'. Said arm is only one-half ( $\frac{1}{2}$ ) as thick as the square part, and said arm has extending rearwardly from its

lower end a short arm, and from the rear end of said short arm a perforated bearing 6' extends inwardly, to which the lower end of a toggle-lever 6, hereinafter described, is pivoted.

2 represents the left-hand beam and consists of a vise-jaw 15, and below said jaw and integral therewith a square part 11, provided with a smooth-bore rectangular perforation 13, and extending from said square part and from the rear side thereof a longitudinally-slotted arm 2'. Said arm is only one-half ( $\frac{1}{2}$ ) as thick as the square part and has extending from its lower end forwardly a short arm, and from the forward end of said short arm extends inwardly a bearing 5', to which the lower end of a toggle-lever 5 is pivoted. Thus there is left between the rear face of the arm 1' and the front face of the arm 2' room for the two toggle-levers, hereinafter described, to be housed when the vise is closed. Two flat toggle-levers 5 and 6 are pivoted together at their centers by a bolt 7. The lower end of lever 5 is pivoted to the bearing 5', and the lower end of the lever 6 is pivoted to the bearing 6'. The upper ends of these levers are perforated and are provided with bolts 8 and 9, which pass through said perforations and slots 3 of the said arms 1' and 2', and these bolts are loosely secured in said slots, so that they may move up and down, and thus the levers may be opened or shut and keep the two beams 1 and 2 always parallel one to the other.

Fitting in the circular smooth-bore perforation 12 is the cylindrical and threaded end 16 of a bar 17. On said threaded end works a lever-handle nut 19, which turns against the outer face of the square part 10 and presses the jaw 14 to the right. The right-hand end of the bar 17 is square, or it may be deeper than it is wide, and has on its upper face notches 20, which lean to the left, and the lower edge of said bar slides on the lower wall of the perforation 13. The perforation 13 extends above the bar 17 and the notches 20 and has pivoted therein a dog 21, provided with teeth 22, adapted to catch in the notches 20 and to hold the jaw 15 from moving to the right when the said dog is in place. Extending from the right-hand edge of the dog 21 is a thumb-lift 23.



4 represents perforated lugs. These lugs are for the purpose of securing said vise to a work-bench or other equivalent thing. This vise, however, may be manufactured without lugs.

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

A parallel vise, having two beams 1, and 2; beam 1, consisting of a vise-jaw 14, and below said jaw and integral therewith, a square part 10, provided with a smooth-bore horizontal perforation 12, and extending from the lower end and front face of said square part, a longitudinally-slotted arm 1', just one-half the thickness of said square part; a short arm extending rearwardly from the lower end of said arm; a bearing 6', extending inwardly from the rear end of said short arm; beam 2, consisting of a vise-jaw 15, a square part 11, provided with a smooth-bore rectangular perforation 13, a slotted arm 2', extending from the rear face of said square part; a short arm, extending in forwardly from the lower end of said arm; a bearing extending inwardly from the front end of said arm; cross toggle-levers 5, and 6, their lower ends pivoted to

the bearings 5', and 6', respectively, their upper ends perforated; bolts 8, and 9, passing through the perforations in the upper ends of said arms, and through the slots 3, and secured loosely, so that they may slide up and down in said slots; a bar 17, having one end cylindrical and threaded, and working in said smooth-bore perforation 12; a lever-handle nut working on the threads of the cylindrical part of said bar 17, and against the outer face of said beam, the other end of said bar working in the rectangular smooth-bore perforation 13, and having in its upper edge, notches 20; a dog 21, provided with a thumb-lift 23, and with teeth 22, adapted to catch in the notches 20, of said bar; said beams adapted to be moved to the right and left in parallel lines, and to be held in place by said bar, a dog and lever-handle nut, substantially as shown and described and for the purposes set forth.

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

JOHN AMBROSE SMITH.

Witnesses:

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HARRY J. MILLER.