W. BURGESS.

Saw-Set.

No. 169,144. Patented Oct. 26, 1875.

Fig 1

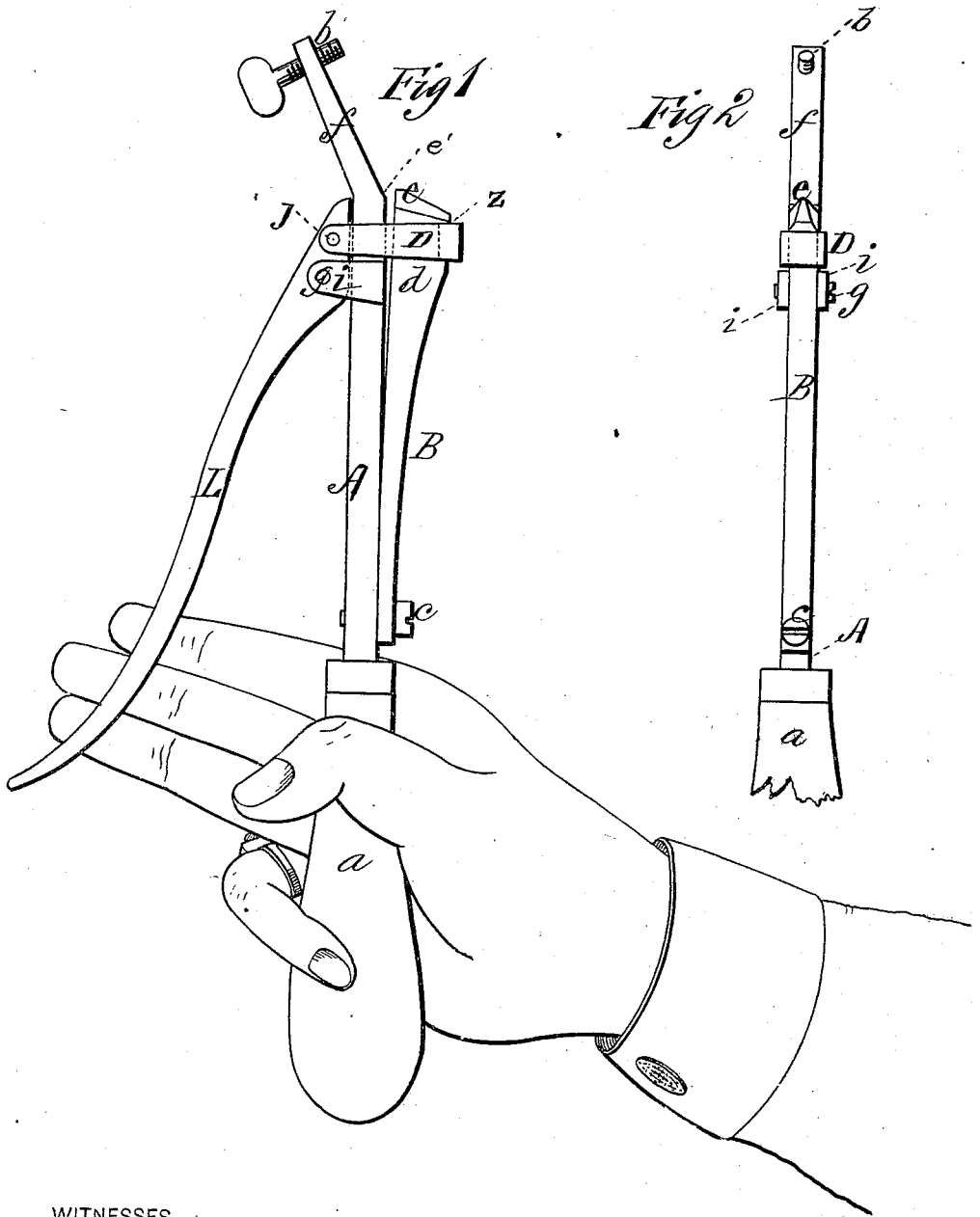

Fig 2

WITNESSES

E. H. Bates

Francis J. Clasi

INVENTOR

Warren Burgess

Chipman Hanes & C.

ATTORNEYS

UNITED STATES PATENT OFFICE.

WARREN BURGESS, OF TONICA, ILLINOIS.

IMPROVEMENT IN SAW-SETS.

Specification forming part of Letters Patent No. **169,144**, dated October 26, 1875; application filed April 24, 1875.

To all whom it may concern:

Be it known that I, WARREN BURGESS, of Tonica, in the county of La Salle and State of Illinois, have invented a new and valuable Improvement in Saw-Sets; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my device, and Fig 2 is a detail view of the same.

This invention has relation to improvements in devices for setting saw-teeth; and it consists in the construction and novel arrangement of the obtuse-angled guide-bend of the main stem extending transversely across the face of the jaw, and of the notched detachable spring-jaw, in combination with the lever-stirrup, as hereinafter shown and described.

In the annexed drawings, A designates the stem or body of the implement, which is made of any suitable metal, and is mounted, for convenience of manipulation, in a wooden handle, *a*. The free end of this stem is bent in a right line across the face of the jaw, at an obtuse angle to its length, so that the broad base of the tooth will have a full guide in bending, which will, in a manner, fill the angle and prevent the adjacent flexible part of the saw-blade from being bent too far in the opposite direction, which would tend to set the tooth farther out than the gage requires. Its extremity is provided with a screw-threaded perforation, into which is passed an adjusting thumb-screw, *b*, the object and mode of operation of which will hereinafter be made clear. B represents a strong steel spring, preferably of the same width of the stem, and rigidly secured thereto by means of a screw, *c*, passing through its end into the shank. This spring gradually thickens from its point of attachment to the stem until it reaches its free end, where it presents a considerable enlargement, *d*, the front edge of which is inclined and beveled, forming a point, *e*, greatly resembling the shape of a saw-tooth. This point extends somewhat beyond the bend *e'* of the main jaw, forming a recess to guide the tooth into the bite. It constitutes one of the jaws of my improved saw-set, the other being supplied at the angular bend *e'* of the adjusting-arm *f*, and the body of the stem and spring B is forced with its point *e* against the other jaw of the set by the following simple and reliable mechanism:

A lever, L, of suitable form and strength, is pivoted, by means of a screw, *g*, between two bearings, *i*, so that its weight end shall reach to the angle formed by the adjusting-arm and the body of the stem, its power-arm extending rearwardly to a point where it may be conveniently reached by the finger of the operator holding the handle in his hand. This lever is connected by means of a stirrup, D, to spring B, the said stirrup being seated in a notch, *z*, in the back of the spring-jaw, embracing both the spring and the stem, and being pivoted at *j* to the weight end of the lever; hence, when the power end of the lever L is thrust inward by the operator, its weight end will be thrust outward, thus drawing the spring-jaw into contact with the rigid stem, and rigidly griping the tooth of a saw interposed between them, so that it may be conveniently set at any desired angle, which angle will be increased by unscrewing the adjusting-screw *b*, and lessened by setting up the same. When the lever is released jaw B will automatically open for the insertion of a second tooth.

With a view to preventing stirrup D from slipping, it is received into a corresponding notch, *z*, in the back of spring-arm B, as shown in dotted lines, Fig. 1.

When the jaws require to be ground true the stirrup D is slipped out of its notch, screws *g* and *c* removed, and the jaws taken apart.

I am aware that a saw-set having its jaws constructed of one bent piece of metal has

heretofore been employed in connection with a lever and an adjustable stirrup, as shown in Letters Patent granted to E. S. Holkins, dated April 8, 1851, No. 8,026, and I therefore lay no claim to such invention.

What I claim as new, and desire to secure by Letters Patent, is—

The saw-set herein described, having the obtuse-angled jaw A, the detachable spring-jaw B, notched at *z*, and the lever L, having the stirrup D for engagement with said notch, as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WARREN BURGESS.

Witnesses:
HENRY GUNN,
JOHN A. WILSON.