

WILLIAM H. SULLENBERGER.
Improvement in Saw Frames.

No. 120,123.

Patented Oct. 17, 1871.

Fig. 1.

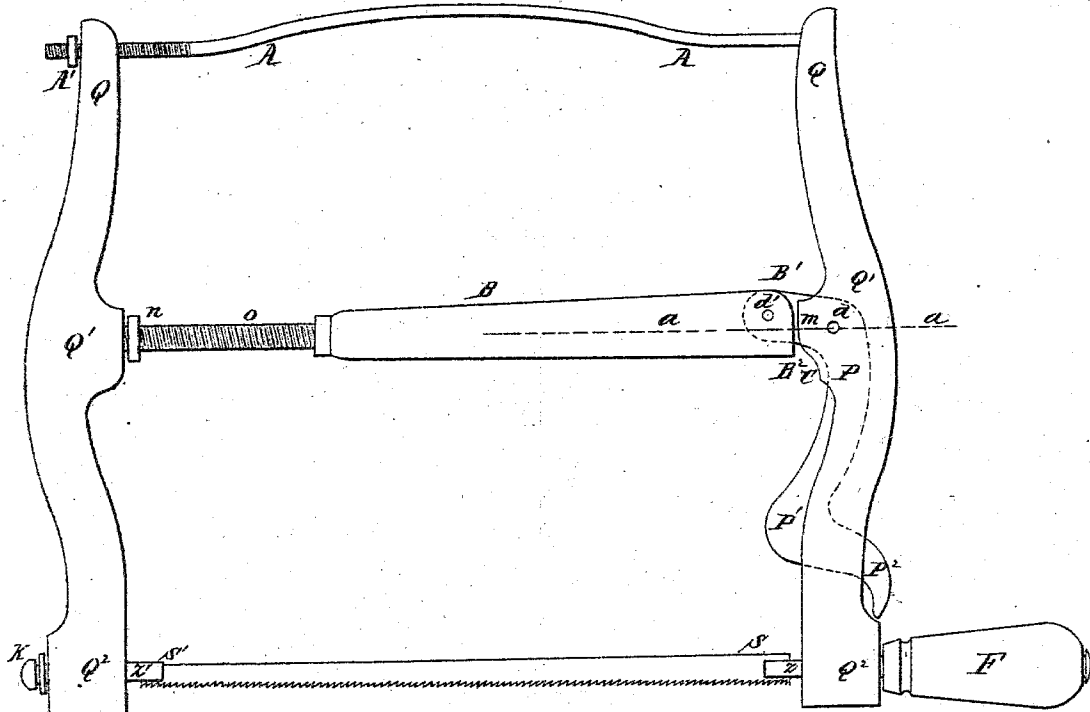
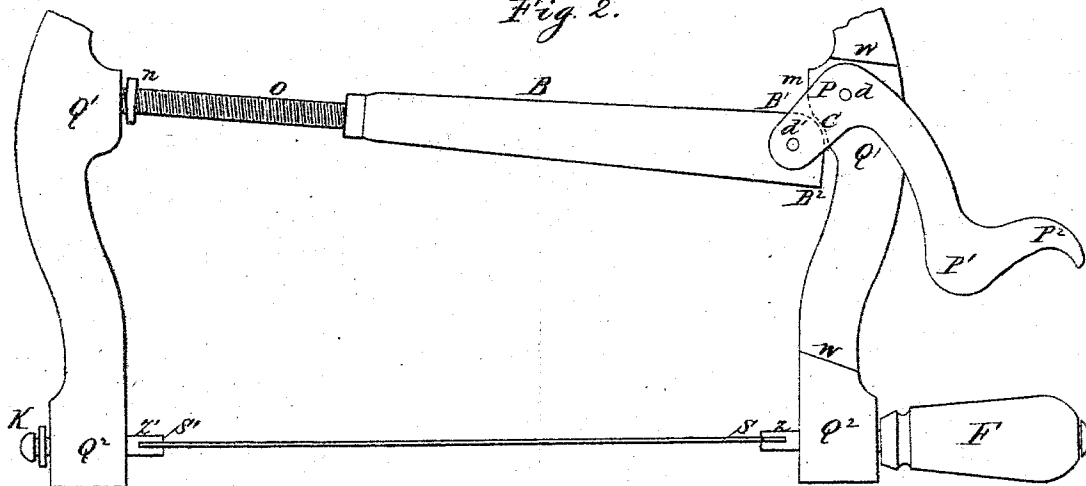


Fig. 2.



Witnesses.

Theophilus Weaver.
Peter Stuckev.

Inventor.

William H. Sullenger.

UNITED STATES PATENT OFFICE.

WILLIAM H. SULLENBERGER, OF HARRISBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN KERPER, OF SAME PLACE.

IMPROVEMENT IN SAW-FRAMES.

Specification forming part of Letters Patent No. 120,123, dated October 17, 1871.

To all whom it may concern:

Be it known that I, WILLIAM H. SULLENBERGER, of the city of Harrisburg and State of Pennsylvania, have invented an Improved Whip-Saw, of which the following is a specification:

The nature and object of my invention consist, mainly, in rendering the saw speedily adjustable by one handle, which is effected by several devices acting conjointly, namely, an elastic top brace, an adjustable middle brace connected at its one end with the saw-frame standard by an angular lever, a peculiar joint of the shoulder on said standard with the end of said middle brace, and a swiveled support or stock at the taper end of the saw.

In the accompanying drawing, Figure 1 is a side elevation of the saw, in which the lever is shown as turned down to exert tension on the saw. Fig. 2 is a side elevation of a section of a saw-frame, in which the lever is shown as turned up, to release the saw of tension for adjustment.

A is the top brace, which is an elastic rod or wire, bowed in its middle, rigidly attached to the frame-standard at one end, and free to be lengthened or shortened by a screw and nut, A', its other end outside the other frame-standard. Q¹ Q¹ Q² are the frame-standards, which are made nearly in the usual form, slender at the top Q, enlarged toward the shoulders Q¹ at their middle, and provided with the butts Q² at their lower ends. The standard shown at the left has an ample hole to let the screw O, on the middle brace cant in it when the other end of said brace is moved by the lever. The standard shown on the right has a slot in it to admit the angular lever shown at W W', Fig. 2, and has its shoulder Q¹ so curved on its inside at C that it will match the curve at the end of the middle brace when the lever is turned up, as shown in Fig. 2, and has also a plane or seat, m, immediately above said curve to receive and stay the end of said brace when the lever-handle is turned down, as shown in Fig. 1. B, the middle brace, is provided with screw O and nut n on its left end, as stated. This screw, in connection with the screw on the top brace A, is used to regulate the degree of tension to be exerted by the lever on the saw. The throw of the lever being a con-

stant quantity, the tension will vary as the screw on the middle brace is lengthened or as the screw on the top brace is shortened. They are also used to reduce the breadth of the frame, in case the saw-blade should be shortened by a break, which generally occurs at its taper end.

The other end of brace B is rounded at B' on its upper side or half, and angular at its under half, or more. It is thus formed as stated to match the form of the shoulder Q¹; partly angular to have a good set against the plane on said shoulder; partly rounded to pass clear of the shoulder in turning the lever. The curves B' and C are described with the radiuses d m. P P¹ P² is the shifting or angular lever, and has somewhat the form of the inverted letter L. Its shorter limb is above, and engages the brace B at the pivot d', and its longer limb P¹ P² is a handle, which opens and shuts into a slot in the standard at W W', Fig. 2, like a knife-blade. Said lever is pivoted at its angle at d in the shoulder Q¹, in a line, a a, lower than the pivot d' on the brace B. This arrangement of the pivots d d', in connection with the spring of brace A, insures a reliable stay for the brace B to its proper place, and also insures a clearance for the brace end in turning the lever, as then the brace end is carried from the shoulder Q¹ in passing the line a a. The handle of the lever is so bent that a part at P¹ projects out of the slot in the standard, on its inside, when the tension is on the saw. It can thus be easily reached to trip it back out of the slot far enough to reach the end P² from the outside. The parts P¹ P² are wider than the standard, so that the hand of the operator may grasp both easily while sawing. The saw is mounted in slotted stocks Z Z', which are made to revolve loosely when the tension is off the saw. The stock Z has the handle F on its outer end. The stock Z' is a bolt, K, whose friction is relieved by a washer under its head.

The advantages gained by this mode of construction are, that the blade of the saw may be adjusted or rotated by the handle F without warping, and without sighting, as is the case where two handles, one at each end, are employed, and no release adjustment provided.

The adjustment is also very rapid, the parts being so arranged as to be instantly under the control of the operator. The device is a cheap and durable improvement.

I claim—

The combination of the angular lever P P¹ P² pivoted at *d* and *d'*, the middle brace B, the top brace A, and the standards Q Q¹ Q², when these parts are constructed as set forth and arranged

to act in regulating the tension of the saw S S' mounted in revolving stocks Z Z' substantially in the manner as and for the purpose hereinbefore set forth.

WILLIAM H. SULLENBERGER.

Witnesses:

THEOPHILUS WEAVER,
PETER STUCKER.