(No Model.)

S. S. VAIL.

SAW GUIDE.

No. 351,672. Patented Oct. 26, 1886.

Fig. 1.

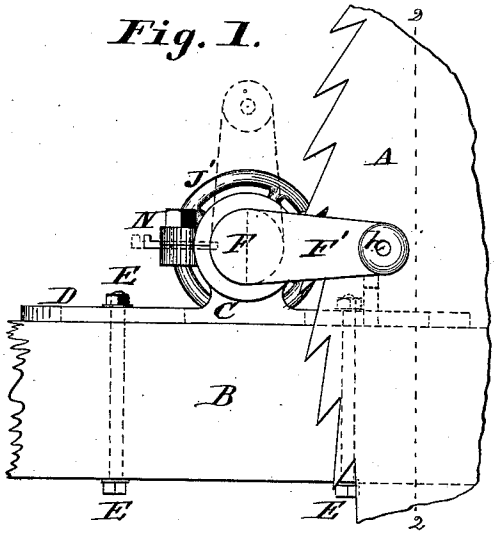


Fig. 2.

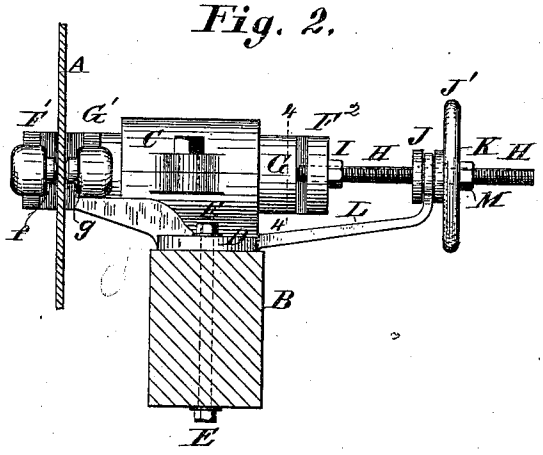


Fig. 3.

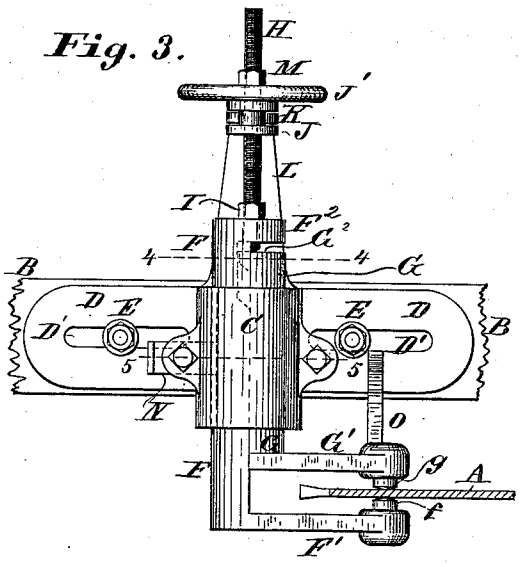


Fig. 4.

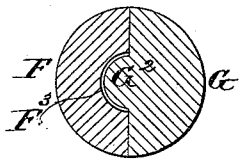
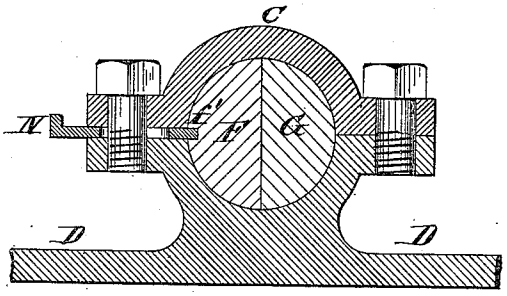


Fig. 5.



Attest:
F. A. Hopkins,
Geo. L. Wheelock

Inventor:
Samuel S. Vail.
By. Knight Bros.
Attys.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

SAMUEL S. VAIL, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE CURTIS & CO. MANUFACTURING COMPANY, OF SAME PLACE.

SAW-GUIDE.

SPECIFICATION forming part of Letters Patent No. 351,672, dated October 26, 1886.

Application filed March 1, 1886. Serial No. 193,702. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL S. VAIL, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Saw-Guides, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is an end view of the guide. Fig. 2 is a side view of the guide, showing the saw and the timber to which the guide is attached in section at line 2 2, Fig. 1, with top and bottom of the saw broken away. Fig. 3 is a top view of the guide with part of the saw shown in horizontal section. Fig. 4 is an enlarged vertical section at 4 4, Figs. 2 and 3. Fig. 5 is an enlarged cross-section at 5 5, Fig. 3.

This is a guide having two jaws adjustable relatively to each other, and also adjustable in their cannon-bearing by a single adjusting-screw.

A is part of a circular saw, and B is one of the longitudinal timbers of the bed-frame.

C is the bearing-box of the gage-shaft, the box having lugs D, with longitudinal slots D′, through which pass the screw-bolts E, by which the box C is secured to the timber B. The shaft is formed of two semi-cylindrical members, F and G, whose flat sides are fitted together, and which have a limited rotary movement in the box C and endwise movement on each other. The outer guide-jaw, F′, is upon the member F, and the inner guide-jaw, G′, upon the member G. The semi-cylindrical member F has a lug, F^2, having a screw-threaded hole, in which works the adjusting-screw H. This screw may be rigidly connected with the member F by means of a lock-nut, I, which turns on the screw, and may be made to bear against the lug F^2 for this purpose. The point of the screw H bears against a lug, G^2, projecting from the flat side of the member G, so that when the screw H is moved inward in the lug F^2 the jaw F′ is made to approach the jaw G′. This lug G^2 moves in a recess, F^3, of the member F.

J is a hand-nut working on the screw H, and having a hand-wheel, J′, by which it may be turned. The nut has a circumferential groove occupied by the prongs of an upright fork, K, upon an arm, L, extending inwardly from the side of the box C.

M is a lock-nut on the screw H, which is made to bear against the nut J when it is desired to turn the screw with the nut J. The jaws F′ and G′ are counterbored to receive the bearing-sets *f* and *g*, which form the bearings for the sides of the saw. There is a small hole, *h*, extending from the counterbores to the outsides of the jaws, which allows the introduction of a punch to force the sets from the counterbores.

The jaws may be turned down in a horizontal or working position, as shown in full lines, or may be thrown upward, to disengage them from the saw, as shown in dotted lines in Fig. 1.

To hold the guide in working position, the member F has a longitudinal slot at *f′*, which is entered by a key, N, working in a mortise of the box C, the key being placed in its inner position, as shown in full lines, to lock the guide in working position, and drawn outward, as seen in dotted lines in Fig. 1, to allow the jaws to be turned up, as aforesaid.

The operation is as follows: To set the two jaws outward or inward without changing their relative position, the lock-nut M is slacked up, the lock-nut I being tight against the lug F^2. In this case the screw H will not turn with the hand-nut J, as it is turned in the fork K, and of course the screw and the shaft with the jaws will be moved endwise. On the other hand, when the lock-nut M is made fast against the hand-nut J, and the nut I is made loose from the lug F^2, the screw H turns with the nut J, and the jaw F′ is moved inward or outward, the jaw G′ remaining at rest, or at least not being directly moved by the screw, as the screw has no endwise movement.

It will be understood that the member F is positively held in position or moved endwise by the adjusting-screw H, and that the member G is held in position by the end of the screw H upon the inside and by the saw upon the outside. The members F G are shown and described as semi-cylindrical in cross-section. This precise sectional form is not essential, the essential thing being that they shall together form a cylindrical shaft capable of turning in its bearing.

O is a bar supporting the guide-jaws in working position.

I am aware that one jaw of a saw-guide has been secured to and carried by a shaft, which is of cylindrical form on its exterior, excepting for a deep longitudinal groove cut therein for the reception of a slide carrying the other jaw, said shaft being mounted in a suitable bearing-box, and said jaws adjusted and held to the proper distance asunder by means of a set-screw tapped into one and swiveled to the other. This, however, is not the equivalent of my invention. This method of forming the shank of the guide of two parts (one member nearly cylindrical and having a longitudinal groove therein, and the other of such size and shape as to fill said groove and complete the cylindrical form of said shank) is much more expensive than forming the shaft of two semi-cylindrical members.

I claim as my invention—

1. In a saw-guide, the combination, with the two jaws F′ and G′, of the two members F and G, to which said jaws are respectively secured, the outer surface of each of said members being formed on an arc and the two uniting to form a cylindrical shaft, the lug F^2, formed on the member F, and having the screw-threaded perforation, the screw H, passing through said lug, and the lug G^2, formed on the member G, against which the extremity of said screw bears, substantially as set forth.

2. In a saw-guide, the combination of the jaws, a cylindrical shaft to which they are secured, having a groove, *f′*, the two-part journal-box C, having a mortise between its meeting surfaces, the key N, fitting in said mortise and having an elongated slot or perforation, and the bolt by which the two parts of the journal-box are secured together passing through said slot, substantially as and for the purposes set forth.

3. In combination with the two jaws F′ and G′ and the two members F and G, to which they are respectively secured, of the screw H, tapped through a lug on one member and bearing upon the other, a hand-nut on said screw having a circumferential groove, a fork, K, engaging said groove, for confining the nut against movement, and a lock-nut on said screw for optionally locking said screw to the member F or to the hand-nut J, substantially as and for the purpose set forth.

4. In combination, the jaws F′ and G′, the semi-cylindrical members F and G, having the groove F^3 and lug G^2, respectively, the lug F^2, secured to the member F, the screw H, tapped through said lug, and the hand-nut J, and the lock-nut M, for locking said nut to the screw, substantially as and for the purposes set forth.

SAMUEL S. VAIL.

Witnesses:
SAML. KNIGHT,
BENJN. A. KNIGHT.