B. E. SMITH.

SAW HOLDER.

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1,094,939. Patented Apr. 28, 1914.

Fig. 1.

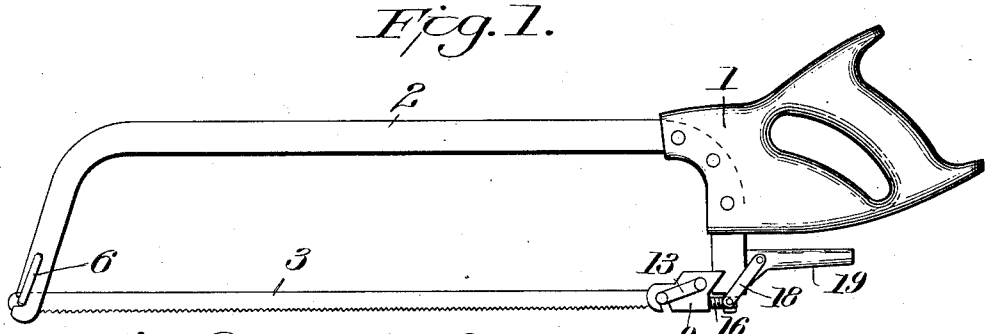


Fig. 2.

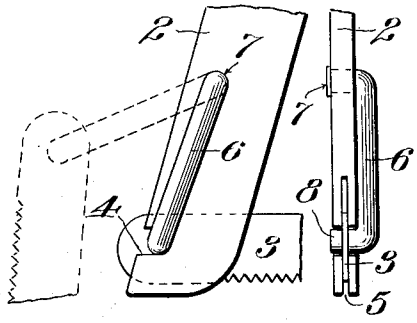


Fig. 3.

Fig. 4.

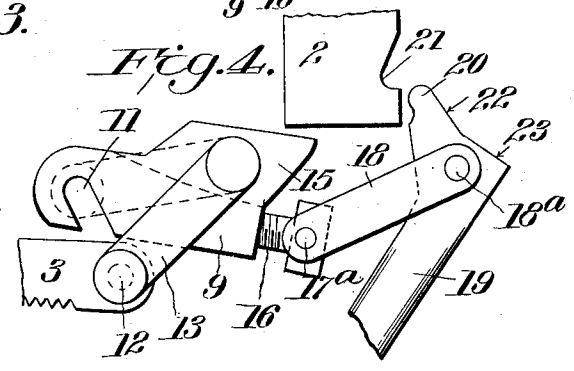


Fig. 5.

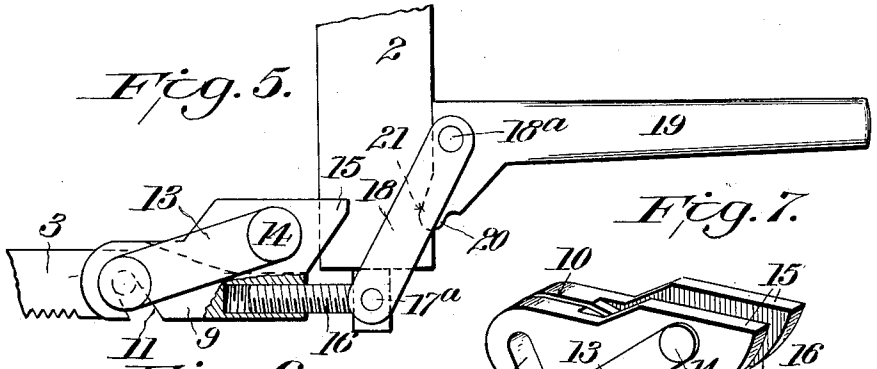
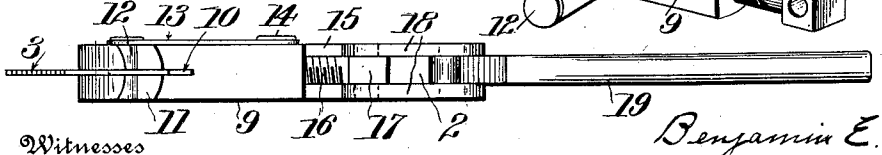


Fig. 7.

Fig. 6.



Witnesses

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SAW-HOLDER.

1,094,939. Specification of Letters Patent. **Patented Apr. 28, 1914.**

Application filed May 15, 1913. Serial No. 767,797.

To all whom it may concern:

Be it known that I, BENJAMIN E. SMITH, a citizen of the United States, residing at Latrobe, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Saw-Holders, of which the following is a specification.

My invention relates to saw holders of that class which consist of a U-shaped frame having means for securing a comparatively narrow saw blade thereto and for placing the same under tension.

The objects of the invention are to provide improved holding and locking means for the saw which shall be simple in construction and operation, and by means of which the tension can be varied as desired.

With the above general objects in view, the invention consists in the construction and arrangement of parts hereinafter described and claimed, and illustrated in the accompanying drawings, in which,

Figure 1 is a side elevation of a complete saw holder showing my invention as applied thereto; Fig. 2 is a fragmentary detail in side elevation, on an enlarged scale, of one end of the saw frame; Fig. 3 is an end elevation or edge view of the same; Fig. 4 is a similar view showing the other end of the saw frame, the parts being illustrated in unlocked position; Fig. 5 is a view of the parts shown in Fig. 4, but showing the device in locked position; Fig. 6 is a bottom plan view of Fig. 5; and, Fig. 7 is a perspective view of my improved holding device and tension adjusting means.

Referring to the drawings in detail, 1 indicates a handle of any desired pattern and 2, a U-shaped frame or holder to which said handle is secured. The saw blade is designated by the reference character 3. At the end of the frame, remote from the handle, is a transverse notch 4 and a slit 5 in which the blade 3 is adapted to fit. A swinging link 6, pivoted at 7 to the frame 2, carries at its free end a transversely extending pin 8 which is adapted to pass through a perforation in the saw blade 3 and lie in the notch 4, as clearly shown in Figs. 2 and 3. To disengage the saw from the pin, it is swung into the position shown in dotted lines in Fig. 2, as will be obvious. At the opposite end of the frame, adjacent the handle, I provide an improved locking and adjusting device for tensioning the saw. This device comprises a block 9 having a slit 10 in one end thereof to receive the saw blade, and also having a transverse notch 11. A pin 12 is carried by a swinging link 13, pivoted at 14 to the block 9. This pin is adapted to pass through an opening in the end of the saw blade and to lie in the notch 11, as clearly shown in Figs. 5 and 6.

In Fig. 4, the parts are shown in full lines as in the position they occupy when being assembled. The block 9 carries a pair of spaced lugs 15, adapted to embrace the frame 2 and hold the parts in proper alinement. Set into the block 9 and extending in line with the saw 3 is an adjustable pin 16, which, in this instance, is shown as screw-threaded. This pin has a flattened head 17 and to this head is connected one end of a pair of links 18, as by means of a cross-pin 17^a. A locking lever 19 is pivoted between the other ends of the links 18, as indicated at 18^a, and is provided with a rounded extension or toe 20. This toe 20 is adapted to engage a notch 21 formed in the outer edge of the frame 2. The end of the lever 19 consists of an inclined portion 22, adapted to fit against the wall of the notch 21, as clearly shown in Fig. 5, and a flat heel portion 23, which, when the lever is in locking position, is adapted to lie against the straight outer edge of the frame 2 in such a manner that the lever is maintained substantially at right angles to such edge. The handle 1 is preferably so designed that its lower edge extends parallel with the lever when in this position.

It is obvious that by assembling the parts as shown in Fig. 4 and then placing the toe 20 of the lever in the notch 21 and swinging such lever to the right, as viewed in Fig. 4, and then upwardly until the parts assume the position shown in Fig. 5, the saw will be placed under tension and the resilience of the frame 2 will maintain the parts in such locked position. This, of course, is due to the fact that the point 18^a, to which the strain is applied, is carried from one side of the pivotal point 20, as shown in Fig. 4, to the other side of said pivotal point, as shown in Fig. 5, thus passing across the center and holding the lever firmly seated against the frame, as shown in Figs. 1 and 5, with the head 17 of the pin 16 in contact with the end of the frame. In other words, it will be seen from the above that the block is provided with a pair of extensions 15, adapted to em-

brace the sides of the saw frame, and with a third extension 16, which is adapted to lie against the end of the frame when the parts are in normal position. It is also obvious that when the parts are in the position shown in Fig. 4, the pin 16 may be set to a greater or less depth into the block 9 and thus vary the tension applied to the saw, or, in other words, adapt the device to saws of slightly different lengths. It will be observed that during this adjusting operation, the links 18 and lever 19 serve as a crank by means of which the screw-pin 16 may be turned so that no tool or implement is required to make the adjustment. It is believed to be broadly new with applicant to secure the locking lever in this manner to an adjustable pin, and it is thought that the many advantages of this arrangement will be obvious without further discussion.

The use of the swinging pins 8 and 12 eliminates the necessity for pins being carried by the blade itself, as in former constructions, and render the device available for use with any saw blade having an opening through each end.

What I claim is:

1. A saw holder comprising a frame having a notch in its outer edge, a locking lever having a toe adapted to engage said notch and having a flat heel portion adapted to lie against the outer edge of the frame when the lever is in locking position, a block having means for holding a saw blade, and a swinging link connection between said block and lever.

2. A saw holder comprising a frame having a straight outer edge, a locking lever having a flat end adapted to lie against said straight edge so as to maintain said lever projecting at substantial right angles thereto when in locking position, a block adapted to engage and hold a saw blade, and a swinging link connection between the said block and said lever adjacent its flat end.

3. A saw holder comprising a frame, a locking lever coöperating therewith to tension the saw, a block adapted to engage and hold a saw blade, a pin screw-threaded into said block, and a pivotal link connection between the end of said pin and said lever, whereby the tension of the saw may be adjusted by setting said screw-threaded pin.

4. A saw holder comprising a U-shaped frame having at one end means for detachably connecting a saw blade thereto, and means coöperating with the other end of said frame for adjustably connecting the saw thereto, said last mentioned means comprising a block adapted to hold the saw blade, a pin screw-threaded into said block and extending in line with the saw blade, a locking lever adapted to engage the said frame to place the saw under tension, and a link connection between said lever and said screw-threaded pin, the arrangement being such that by screwing up said pin more or less the tension of the saw can be varied.

5. A saw holder comprising a frame and a tensioning and locking device coöperating therewith, said locking device comprising a lever unconnected with but adapted to engage the frame, a block to which said lever is pivotally connected, said block having means for holding a saw blade, and a pair of spaced lugs carried by said block independent of such pivotal connection and adapted to embrace the said frame, whereby the parts are maintained in proper alinement, said lugs forming, between them, an open ended slot.

6. A saw holder comprising a frame, a locking lever having a toe adapted to engage the outside edge of said frame, a block having means for engaging a saw blade, said block having a pair of lugs or extensions adapted to embrace the sides of said frame, and also having a third extension adapted to rest against the end of said frame when the parts are in normal position, and a link connection pivoted at one end to said third extension, and at the other to said lever eccentrically to the toe thereof, whereby, when said lever is swung about such toe as a pivot, the parts are moved into locked position.

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

BENJAMIN E. SMITH.

Witnesses:
H. W. WALKINSHAW,
LEWIS C. WALKINSHAW.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."