

(No Model.)

A. FORNANDER.

HANDSAW.

No. 330,104.

Patented Nov. 10, 1885.

Fig. 1

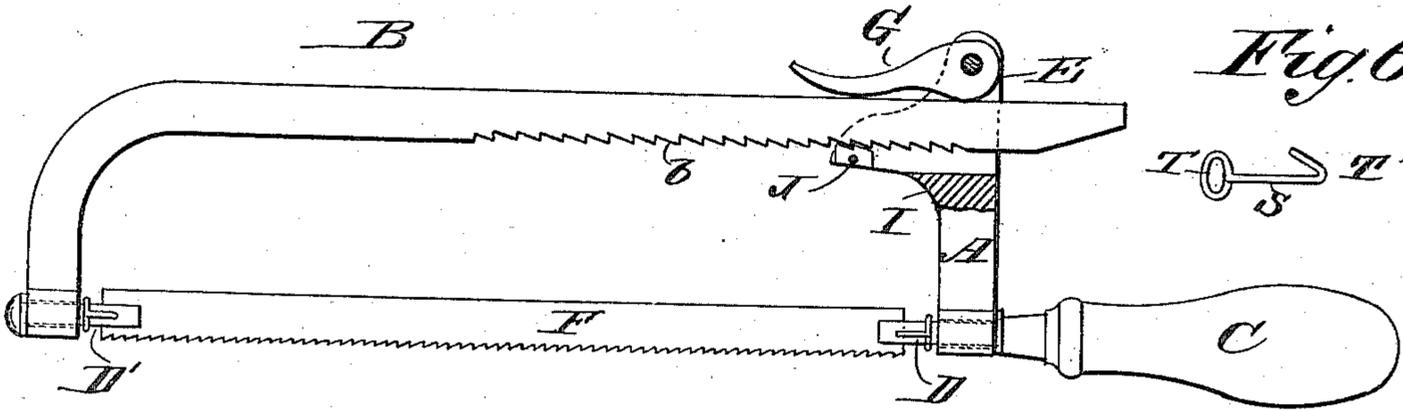


Fig. 6



Fig. 2

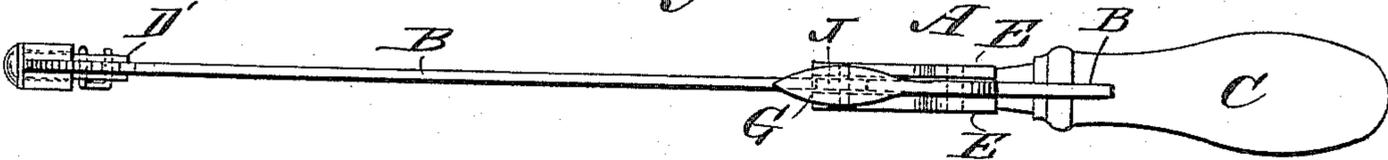


Fig. 3

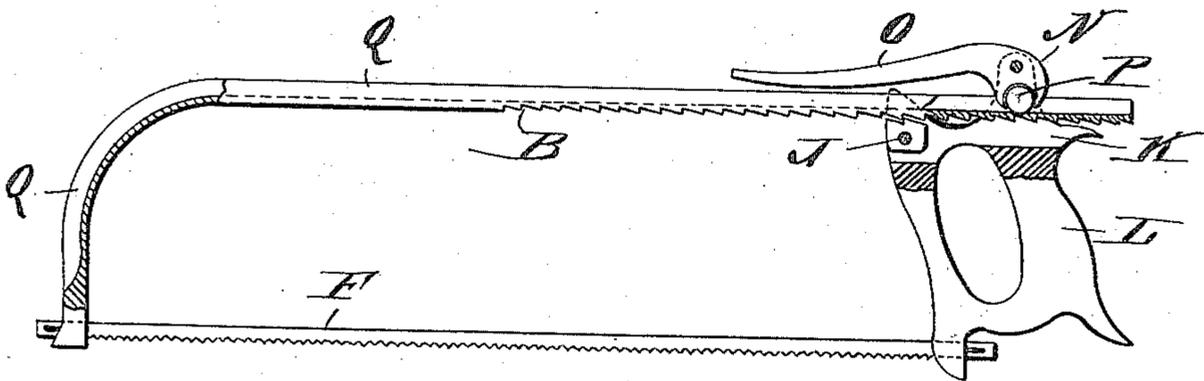


Fig. 4

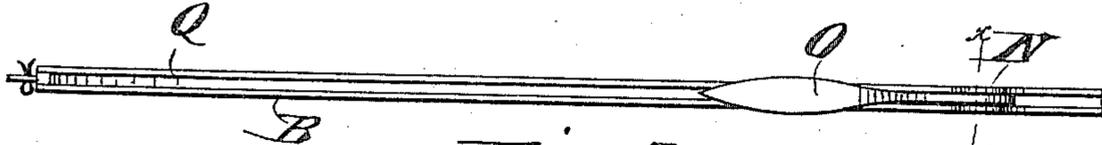


Fig. 5

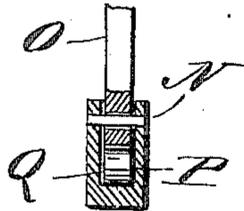
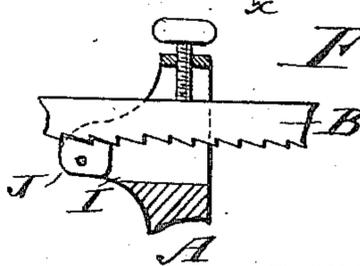


Fig. 7



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HANDSAW.

SPECIFICATION forming part of Letters Patent No. 330,104, dated November 10, 1885.

Application filed July 23, 1885. Serial No. 172,422. (No model.)

To all whom it may concern:

Be it known that I, ALFRED FORNANDER, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Saw-Frames, of which the following is a full, clear, and exact description.

This invention relates to certain new and useful improvements in frames for holding hack-saws, butchers' saws, &c.; and the object of my invention is to facilitate placing the saw-blades of various sizes in the frame and securing them.

The invention consists in the combination, with a stock or handle, of a straining-bar and a cam-lever for locking the straining-bar on the stock or handle.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of my improved saw-frame and a hack-saw held in the same, parts being in section. Fig. 2 is a top view of the same. Fig. 3 is a side view of a modified construction of the saw-frame and a butchers' saw held in the same, parts being in section. Fig. 4 is a top view of the same. Fig. 5 is an enlarged cross-sectional view on the line *x x*, Fig. 4. Fig. 6 is a side view of the locking-pin. Fig. 7 is a detail view of a modification.

The saw-frame is composed of two main parts—namely, the stock A and the straining-bar B, which is curved at one end. The stock A is provided with the handle C, by means of which the saw is grasped and held. On the lower part of the stock, at the inner end of the handle and on the outer end of the straining-bar B, the shanks D D' are held, which project toward each other, and each is split and provided with an aperture. The split shanks serve to receive the ends of the saw-blades.

The stock is provided on its top with two upwardly-projecting jaws, E, between which the bar B can pass, and between said jaws a cam-lever, G, is pivoted. In the projecting part I of the stock a lug, J, is held, the top of which is toothed, and the said toothed top is adapted to engage with teeth *b* in the bottom or inner edge of the straining-bar B. The ends of the blade F are held in the split shanks D D' by means of pins, or in the manner that

will be described hereinafter, or in any other suitable manner.

The cam-lever G is raised and the straining-bar is moved in the direction from the handle until the saw-blade is perfectly taut. Then the cam-lever G is swung down on the top edge of the bar B, and presses the toothed edge of the said bar on the toothed edge of the lug J on the stock, whereby the straining-bar is locked securely in place on the stock, and the blade is held stretched. The same frame can easily be adjusted for longer or shorter blades, all that is necessary being to move the outer end of the bar B a greater or less distance from the stock.

In butchers' saws, a longitudinal groove, K, is formed in the top of the stock or handle L, and at the inner end of said groove and at the inner edge of the handle the toothed lug J is held, with which the teeth on the bottom edge of the bar B engage. The handle is provided with jaws N at the top, between which a lever, O, is pivoted, in the inner or cam end of which a flat disk, P, is held loosely to revolve. The inner end of the cam-lever and the disk P on said lever are in a longitudinal groove, Q, in the top edge of the bar B. The ends of the blade F are passed through slots in the end of the bar B and in the handle L, and keys or pins are passed through apertures in the ends of the blade; or the blade can be secured in any other suitable manner. The blade is then stretched by moving the bar B in the direction from the handle, and then the parts are locked in place by pressing down the cam-lever, the disk P working on the bottom of the groove in the top edge of the bar B.

In place of the usual pin for holding the end of a blade in a shank, D, the pin S may be used, which is provided at one end with a ring, T, fitting quite snugly on the shank and having a bend, T', at the opposite end.

To fasten the saw-blade, the ring T is slipped on the shank, the apertured end of the blade is passed into the slit in the shank, and then the bend T on the end of the pin is passed through the apertures in the shank and in the blade.

In place of a cam, a screw may be used for locking the blade in place, as shown in Fig. 7.

Having thus described my invention, what I

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

1. In a saw-frame, the combination, with a stock, of an adjustable straining-bar and a cam-lever for locking said bar in place on the stock, which cam-lever acts on the straining-bar, the edge of the cam-lever resting upon the edge of said straining-bar, substantially as herein shown and described.
2. A saw having a stock provided with a toothed edge and a groove or recess, through which the straining-bar can be passed, a straining-bar having a toothed bottom or inner edge, which engages with the toothed edge of the stock, and a saw-blade having one end secured to the stock and the other end secured to the end of the straining-bar, substantially as herein shown and described.
3. In a saw-frame, the combination, with a stock, Δ , having the toothed lug or part J and the saw-blade-holding shank D, for holding one end of the saw-blade, of the straining-bar B, having the saw-blade-holding shank D' at one end, for holding one end of the blade, and of the cam-lever G, pivoted on the stock above the straining-bar at the toothed part of the same, for the purpose of pressing the toothed edge of the straining-bar on the toothed edge of the stock, substantially as herein shown and described.

4. In a saw-frame, the combination, with a handle or stock having a toothed part, of a toothed straining-bar having a longitudinal groove, and of a cam-lever pivoted on the stock or handle, the said cam-lever being passed into the groove in the stock, substantially as herein shown and described.

5. In a saw-frame, the combination, with a stock or handle having a toothed part, of a toothed straining-bar having a longitudinal groove in its top edge, a cam-lever pivoted on the stock or handle and fitting within the groove, and of a disk held loosely in the inner end of the cam-lever, substantially as herein shown and described.

6. The combination, with a saw-frame having split apertured shanks for receiving the ends of the blade, of the pin S, having a ring on one end, which ring can be slipped on the shank, and a bend, T, on the other end, said bend forming a prong which can be passed through the aperture in the shank and an aperture in the end of the saw-blade held in the slot of the shank, substantially as herein shown and described.

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