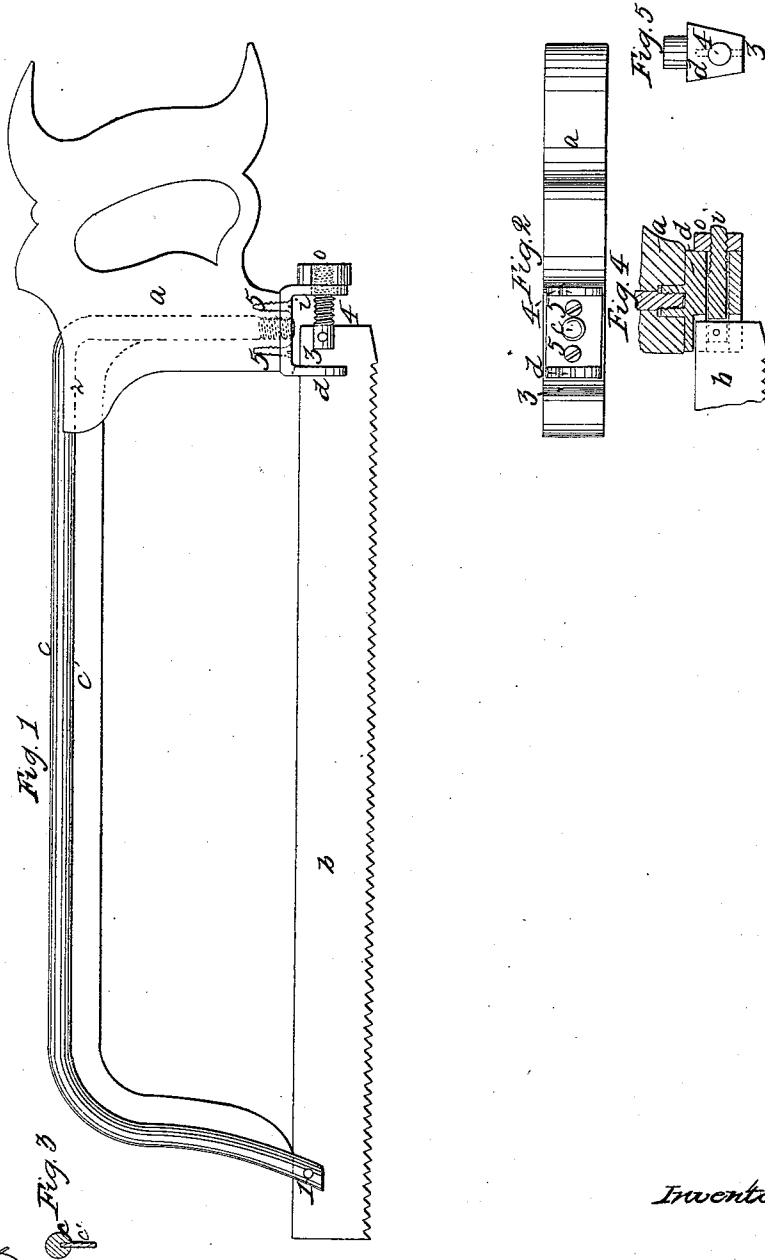


W. H. Livingston,

Hand Saw.

N^o 64,118.

Patented Apr. 23, 1867.



Witnesses:

B. A. Smith.

David Cameron

Inventor:

W. H. Livingston

United States Patent Office.

WILLIAM H. LIVINGSTON, OF JOHNSTOWN, NEW YORK.

Letters Patent No. 64,118, dated April 23, 1867.

IMPROVEMENT IN HAND-SAWS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM H. LIVINGSTON, of Johnstown, in the county of Fulton, and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Saws; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a side elevation of my improved saw.

Figure 2 is a view of the tightening buckle edgewise of the saw.

Figure 3 is a section of the frame.

Figure 4 is a section, and

Figure 5 is a rear view of a modification of the tightening-buckle.

Similar letters indicate the same parts.

The frame-saws generally used by butchers are made with a metal back bent nearly at right angles at the handle, and inserted in a groove cut in the forward part of the handle, and there secured by rivets. This construction is costly, and the frame cannot be disconnected with facility from the handle in case said handle becomes broken or the frame requires hammering and straightening.

The nature of my said invention consists in a metal frame passing into a hole in the handle so that it can be connected to or disconnected from the handle with facility, and a groove is provided in the upper edge of the handle, so as to prevent the handle turning upon the frame. And I employ a tightening-buckle that is attached to the lower edge of the handle and receives the screw and nut that are employed for straining the saw.

In the drawing, *a* represents the handle, of any usual size or shape; *b* is the saw, and *c* is the metal back, made of a round rod split at one end for receiving the saw and the cross-pin or rivet *l*. At the other end the rod *c* is bent at right angles, or nearly so, and inserted into the handle *a*, a hole being bored for its reception, and I stiffen the rod *c*, by inserting the plate *c'* in a groove in the under side of said rod *c*, and securing the two together by pressing the metal of the rod *c* down against the sides of the plate *c'*. The handle is prevented from turning around upon the rod forming the back by the said rod *c*, or the plate *c'* entering a groove in the upper edge of the handle. I employ a tightening-buckle, *d*, formed of metal, bent up at right angles, as seen in figs. 1 and 2, or solid, as seen in figs. 4 and 5, and in one side is a slot for the saw, as at 3, and at the other side is a hole at 4, for the screw *i* to pass through and receive the nut *o* by which the saw is strained. This tightening-buckle *d* is attached to the lower edge of the handle, and I prefer that it be also employed to aid in holding the rod *c* into the handle, for which purpose I screw the turning-buckle itself, or its projecting hub upon the end of the rod *c*, and the screws 5 5 may be employed for more firmly attaching the tightening-buckle *i* to the handle *a*.

This mode of construction is cheap, light, and durable; no rivets are employed for attaching the back to the handle, and if required the handle can be taken off and another handle put on, or the back hammered or straightened if required. The round rod employed for the back *c* is light and stiff, and lessens the cost of manufacture. The slot at the forward end of the tightening-buckle prevents the saw being twisted when tightened.

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

1. Connecting the metallic back of a frame-saw to the handle, by passing the frame into a hole in the handle, substantially as specified.
2. I claim attaching the metallic tightening-buckle *d* to the lower edge of the wooden-handle *a*, in the manner set forth.
3. I claim a metallic tightening-buckle formed with a slot for the reception of the end of the saw, a hole for the screw-rod *i*, and a nut to screw upon the rod *c*, as set forth.
4. I claim the stiffener plate *c'*, and the rod *c*, forming the frame of the saw, as and for the purposes set forth.

In witness whereof I have hereunto set my signature this 28th day of December, 1866.

WM. H. LIVINGSTON.

Witnesses:

DANIEL CAMERON,

B. D. SMITH.