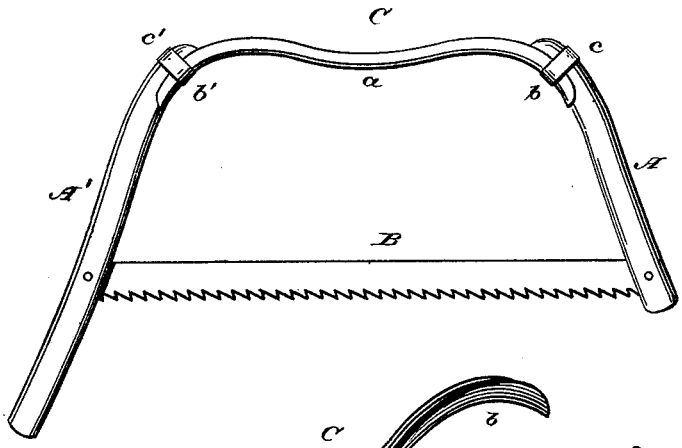
E. ANDREWS.
Saw-Frame.

No. 206,760. Patented Aug. 6, 1878.

Fig. 1.



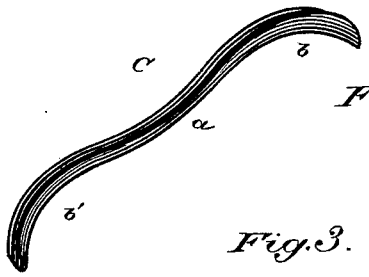
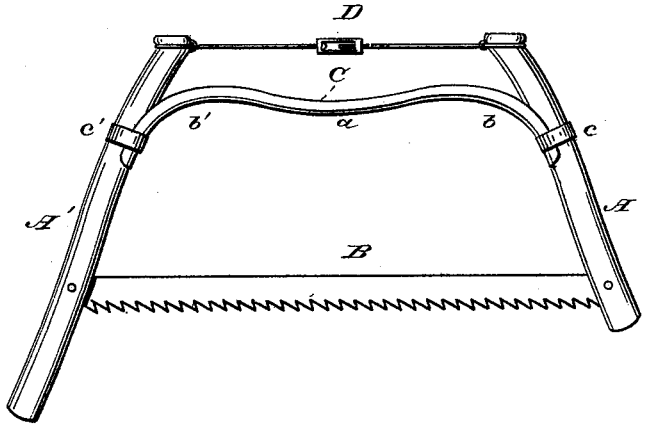


Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

EMANUEL ANDREWS, OF WILLIAMSPORT, PENNSYLVANIA.

IMPROVEMENT IN SAW-FRAMES.

Specification forming part of Letters Patent No. **206,760**, dated August 6, 1878; application filed March 23, 1878.

To all whom it may concern:

Be it known that I, EMANUEL ANDREWS, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Improvement in Saw-Frames; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to an improvement upon the self-straining saw for which Letters Patent No. 103,700 were granted to me May 31, 1870; and its object is to produce a saw-frame which, while possessing all the advantages of being self-straining, will also be much lighter than those I have heretofore made, and consequently cheaper to manufacture and more salable.

My invention therein consists, first, in constructing a self-straining frame for wood-saws with wooden end pieces of the ordinary form, and with a spring-metal back secured at its ends to the said wooden end pieces; and, further, in the construction of the metallic back of the saw-frame and the manner of securing it to the wooden end portions, as fully hereinafter explained.

To enable others skilled in the art to manufacture my saw-frame, I proceed to describe the same, having reference to the drawings, in which—

Figure 1 is a side view; Fig. 2, a separate view of the elastic metallic back, and Fig. 3 a modification of the frame.

Like letters denote corresponding parts.

A A′ are the wooden end pieces of the saw-frame, in which is secured the saw B. The end piece A′ is extended below the saw in the usual manner to form a handle. C is the metallic back, bent preferably in the form shown, with an inwardly-curved center, *a*, to give longitudinal stiffness, and inwardly-bent ends *b b′*. This back is made from spring-steel, and, in cross-section, may be of any desired form; but I have found the **U** shape described in my former patent the best to give the necessary elasticity and stiffness with a small amount of metal. The curved ends *b b′* of the back C are placed against the insides of the wooden end pieces, the wood entering the groove in the metallic back; and metal bands *c c′* are placed around the ends of the wooden portions and around the curved ends *b b′*, thereby securely holding the back to the end pieces. The curved ends *b b′* extend far enough below the metal bands to give a sufficient leverage on the end pieces, and the bands hold the parts so firmly together as to permit the back to spring the end pieces outwardly and strain the saw.

The wood end pieces and the elastic back being secured together, and the frame being sprung inwardly to hold the saw, a continued strain or tension will be maintained upon the saw, and no further tightening or straining will be required.

In the modification, Fig. 3, a screw straining-rod, D, is added, the end pieces A A′ being extended for that purpose. In this form the elastic back can be shaped so that the saw can be used to cut large sticks.

The advantages of my improved elastic self-straining wood-saw frame lie principally in its simplicity, its lightness, and the cheapness with which it can be manufactured. I have also designed to apply this method of straining saws to other than wood-saws, such, for instance, as turning webs or jig-saws.

I am aware of the self-straining saw-frame patented January 14, 1868, by Moses J. Jones, and hereby disclaim the same.

Having thus fully described my saw-frame, what I claim as new therein, and desire to secure by Letters Patent, is—

1. A self-straining frame for wood-saws having the wooden end pieces A A′, in which the saw B is secured, and the spring-metal back C, secured at its ends to the said wooden end pieces, substantially as described and shown.

2. The elastic metal back C, secured to the wooden end pieces by bands *c c′*, substantially as described and shown.

This specification signed and witnessed this 18th day of March, 1878.

EMANUEL ANDREWS.

Witnesses:
A. B. NEYHART,
JAMES M. WOOD.