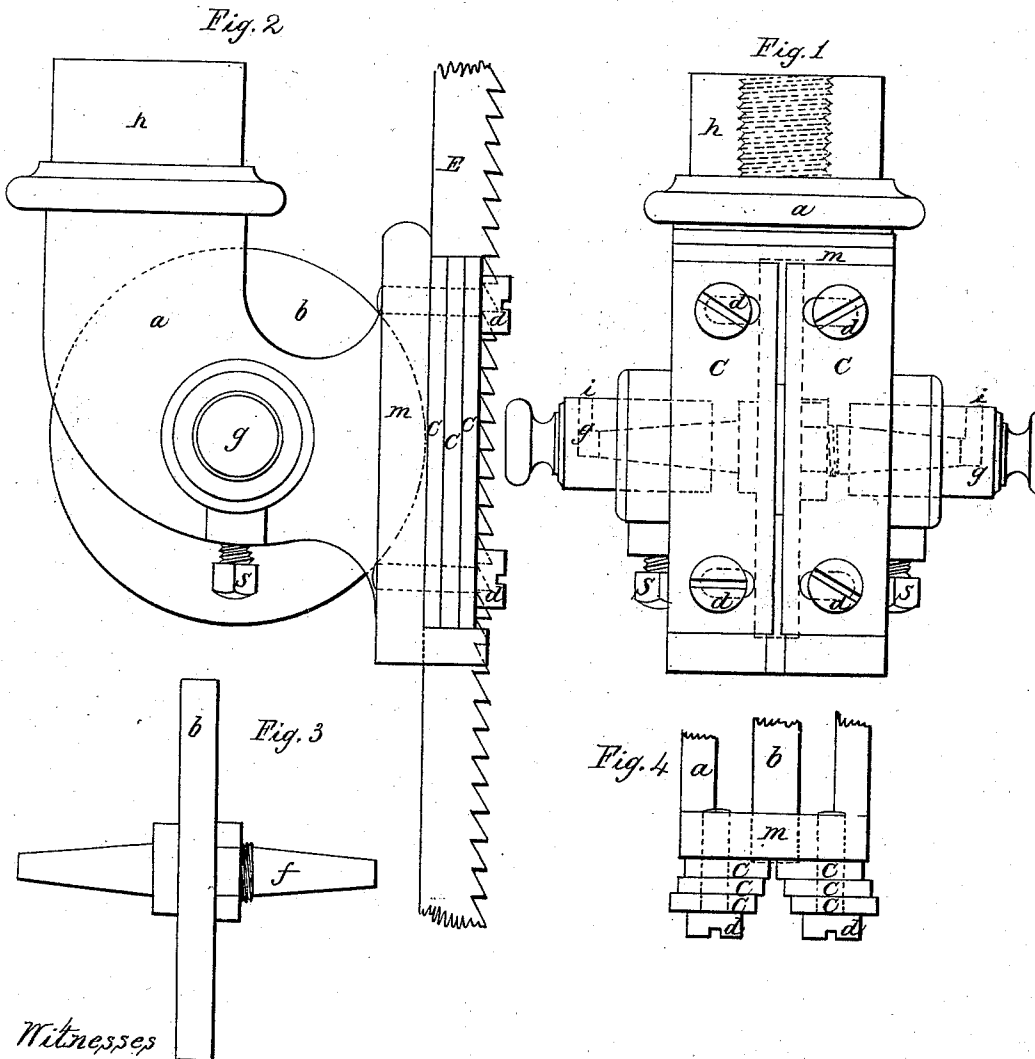


J. LEMMAN.
BAND SAW GUIDE.

No. 78,880.

Patented June 16, 1868.



Witnesses
Wm. L. Loo
Dan. Loo

Inventor
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United States Patent Office.

JOHN LEMMAN, OF CINCINNATI, OHIO, ASSIGNOR TO J. A. FAY & CO.,
OF SAME PLACE.

Letters Patent No. 78,880, dated June 16, 1868.

IMPROVEMENT IN GUIDES FOR BAND-SAWS.

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

TO ALL TO WHOM THESE LETTERS COME:

Be it known that I, JOHN LEMMAN, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented certain new and useful Improvements in Guides for Endless or Band-Saws; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a front elevation of one of my improved guides.

Figure 2 is a side elevation of the same.

Figure 3 is an elevation of the anti-friction roller *b*, removed from the guide, and

Figure 4 is a partial plan, showing the manner of adjusting the lateral guides.

Similar letters of reference in the different figures indicate corresponding parts.

In operating endless saws, guides are needed, both above and below the wood. As is well known, the high speed at which these saws are driven, and the small amount of surface presented to the guide from the edge of the saw-plate, cause fixed guides to wear away very fast, even if made of hardened steel or glass, particularly when heavy sawing is done, and the strain of the feed falls on the saw. Rolling-guides, while they have partially overcome the difficulty of friction and wear on the back of the saw, cannot be constructed to give a proper lateral support to the saw, as will hereafter be alluded to.

The object of the invention here illustrated is to obviate these several difficulties, and give important advantages in operating saws of this kind.

Its nature consists in a combination of anti-friction rollers and fixed guides, the first to support the back or thin edge of the saw, and to have lateral adjustment, presenting different points to wear; the fixed guides as a lateral support, and so constructed as to accommodate saws of different widths, as hereinafter explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe its mode of construction, and the manner of operating the same, with the aid of the drawings.

a is a frame or support for the guides. It is cored out to receive the wheel *b*, with room for lateral adjustment. On the top is a cylindrical extension, *k*, intended to be connected to a bar, on which the whole structure is adjusted up and down, to suit the thickness of the wood being sawed.

b is an anti-friction wheel, of hardened steel or other suitable material, mounted on an axis, *f*, as shown in fig. 3, and by red lines in fig. 1. This axis has conical bearings formed in the piece *g*, which allows of compensation for wear; and by loosening the screws *s s*, the wheel *b* and bearings *g g* can be adjusted laterally, so as to bring different points of the periphery of wheel *b* in contact with the saw.

c' c' c' are lateral guides, to keep the saw from turning, and in a true line. These guides are so arranged that two or more of them can be used, and the others removed or adjusted to receive a narrow saw, as shown in fig. 4. The holes through which the screws *d d* pass are slotted, as shown by red lines, fig. 1.

E is a section of a band-saw sufficiently wide to allow of all the plates, *c c c*, being used. The wheel *b* is so arranged as to barely pass through the plate *m* and come in contact with the saw *E*. Oil-holes are formed at *i i*, fig. 1, communicating with the bearings of axis *f*, as shown in fig. 1.

The operation will be readily understood.

Having thus explained the objects and nature of my invention, I do not claim the use of an anti-friction roller applied to the back of the saw; neither do I claim the fixed lateral guides; but

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

The combination of the roller *b* with fixed lateral guides, *c c c*, one or more, arranged and operating substantially in the manner and for the purposes specified.

JOHN LEMMAN.

Witnesses:

WALTER GOW,
DAN. S. LYON.