E. F. BOHN.

Relishing-Machine.

No. 168,867. Patented Oct. 19, 1875.

Fig. 1.

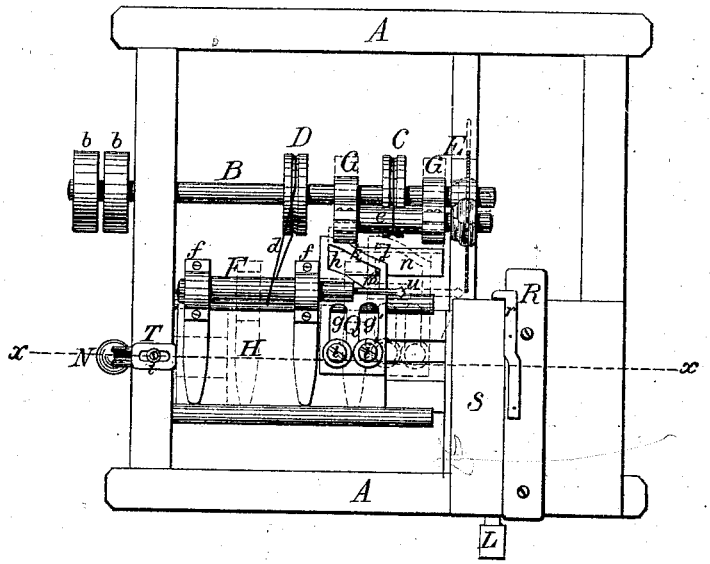


Fig. 2.

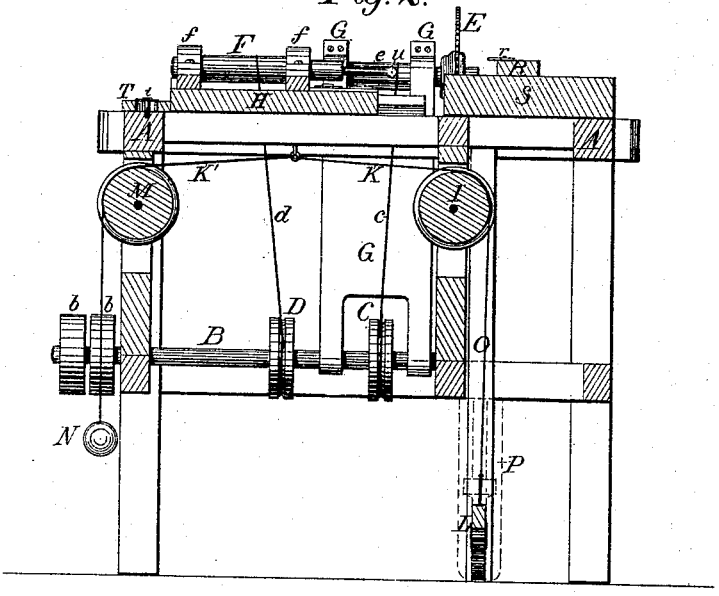
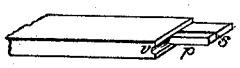


Fig. 3.



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UNITED STATES PATENT OFFICE.

EMIL F. BOHN, OF CLINTON, IOWA.

IMPROVEMENT IN RELISHING-MACHINES.

Specification forming part of Letters Patent No. **168,867**, dated October 19, 1875; application filed March 25, 1875.

To all whom it may concern:

Be it known that I, EMIL F. BOHN, of Clinton, in the county of Clinton and State of Iowa, have invented certain new and useful Improvements in Relishing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

This invention consists of a combination of devices, whereby the relish of a door-rail, or of sash, blinds, &c., may be cut, and the part removed, by two successive operations on the same machine.

Figure 1 is a plan view. Fig. 2 is a sectional elevation of my improved machine, taken on the line *x x* in Fig. 1; and Fig. 3 is a portion of a window-blind rail, showing the relish.

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

A is the frame of the machine, which may be constructed in any suitable manner to carry the operative parts. B is the drive-shaft, having the belt-drums *b*, and also the pulleys C and D, through which, by the endless bands *c* and *d*, a rotating motion is imparted, when the shaft B revolves, to the arbor *e* of the saw E, and to the mandrel F. The arbor *e* is journaled in an upright bearing, G, which rests loosely in boxes upon the shaft B, in such a manner as to straddle the pulley C. The mandrel F is journaled in bearings *f*, which are secured upon a slide, H. A rope or chain, K, is secured to the under side of this slide, and passes over the pulley I down to the treadle-lever L, where it is secured adjustably. Another rope, K′, (or it may be a continuation of the rope K,) passes over the pulley M, and has a weight, N, attached to the end.

A spiral or other spring may be substituted for the weight N.

The treadle-lever L is pivoted to the bottom of a post, O, and passed through a slotted guide, P. Q is an iron plate, provided with the slots *g g′*, by means of which, in combination with the set-screws *i i′*, it may be secured in any desired position upon the slide H, so as to project more or less over the side of the said slide. It has a third slot, *h*, of the conformation shown in Fig. 1, so as to form a gage, *k*, which runs between two spools, *l* and *m*, secured upon a bracket, *n*, which projects from the upright bearing G, on that side which faces the slide H with its gage-plate Q. R is a guide, adjustably secured upon the top of the removable table S. It is provided with a stop, *r*, which may be adjusted so as to bring it nearer to or farther from the saw E. T is a slotted slide, which may be secured in any desired position by the set-screw *t*, and acts as a stop to the slide H when moving in that direction.

The rail to be operated upon is first rabbeted in the usual manner, so as to form the tenon *p*. (Shown in Fig. 3.) It is then placed upon the table S, one side bearing against the guide R, and pushed toward the saw E, which rips the tenon down to the shoulder of the rabbet. It is prevented from cutting farther by the stop *r*, which meets the shoulder of the rabbet when the tenon has been ripped the proper length. Pressure is then brought to bear upon the treadle-lever L, by which the rope K is pulled, and the slide H, with the mandrel F and auger *u*, is moved sidewise against the rail operated upon. By the same operation the saw E is pushed out of the way by the forward motion of the plate Q and gage *k*, the latter sliding between the spools *l m*, and forcing them, with the upright G, backward from the rail. At this point the auger *u* meets the side of the tenon just where the shoulder is, and bores into it, as shown at *v* in Fig. 3, until the cut *s*, made by the saw, is reached, when the piece falls out, and the relish is thus made. The foot is then removed the treadle, the weight N pulls the slide H from and mandrel F back again, placing at the same time the upright G and saw E in their former position, and the other end of the rail is operated upon in the same manner.

The position of the saw E, in relation to the operating table S, may be gaged by the plate Q by the means already set forth, so as to move the saw back a greater or lesser distance, according to the length of the tenon operated upon.

My machine may be used for rip-sawing only, or as a boring-machine only, when it is

desired so to use it. This is a great and important advantage, which my machine possesses over other relishing-machines now in use. It may be used in three different capacities, and for three distinct purposes, viz: as a relishing-machine, for rip-sawing, and as a boring-machine.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The combination of the slide H, having the rotating mandrel F, with the oscillating saw-carrying standard G, substantially as and for the purpose set forth.

2. The combination of the slide H, gage-plate Q, and oscillating standard G, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own, I have hereunto affixed my signature in presence of two witnesses.

EMIL F. BOHN.

Witnesses:
MURRAY HAYWOOD,
W. H. BARTON.