L. D. BENSON & L. C. BENSON.

Improvement in Stave Dressing Machines.

No. 115,811. Patented June 13, 1871.

Fig. 1.

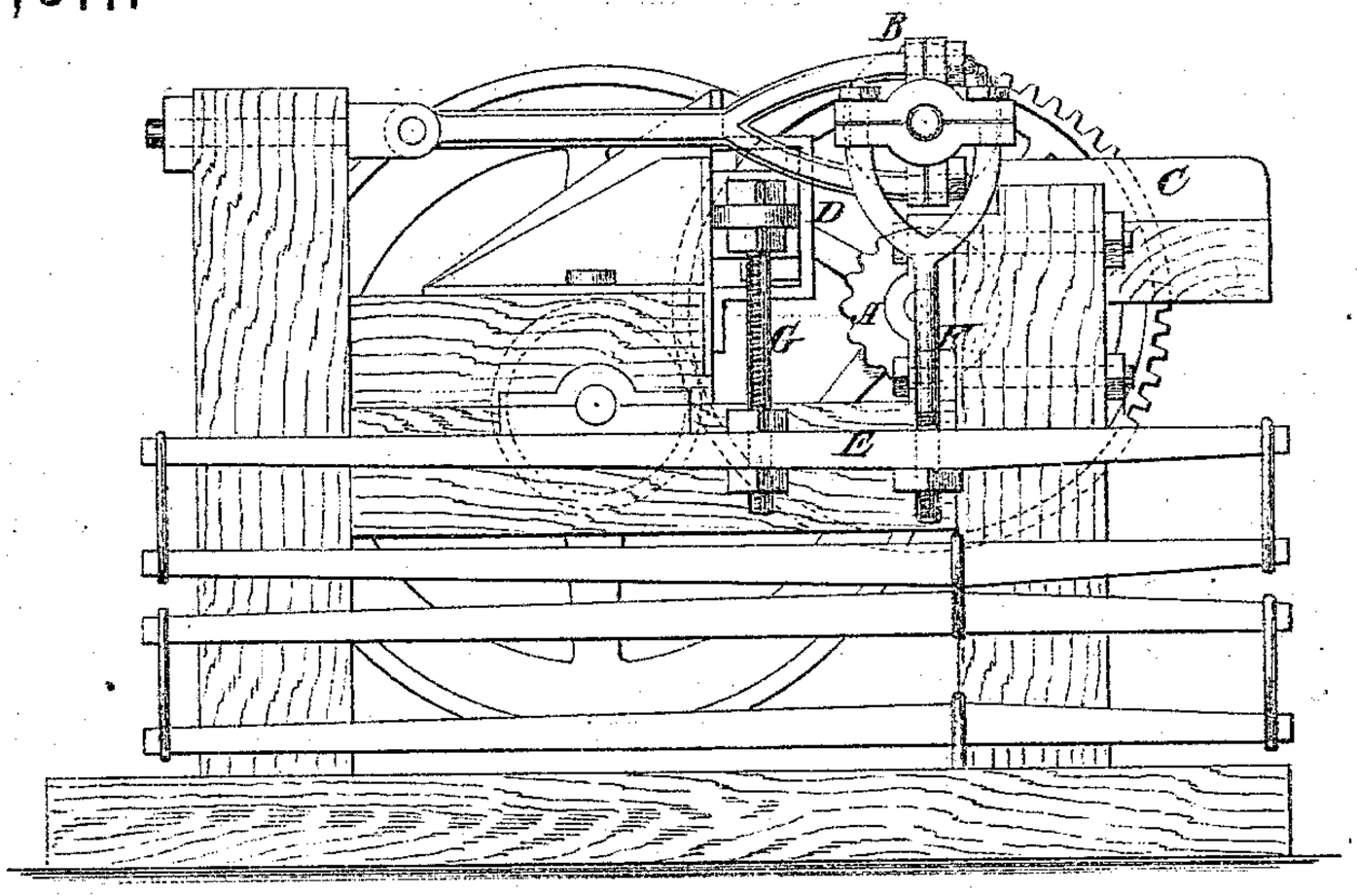


Fig. 2.

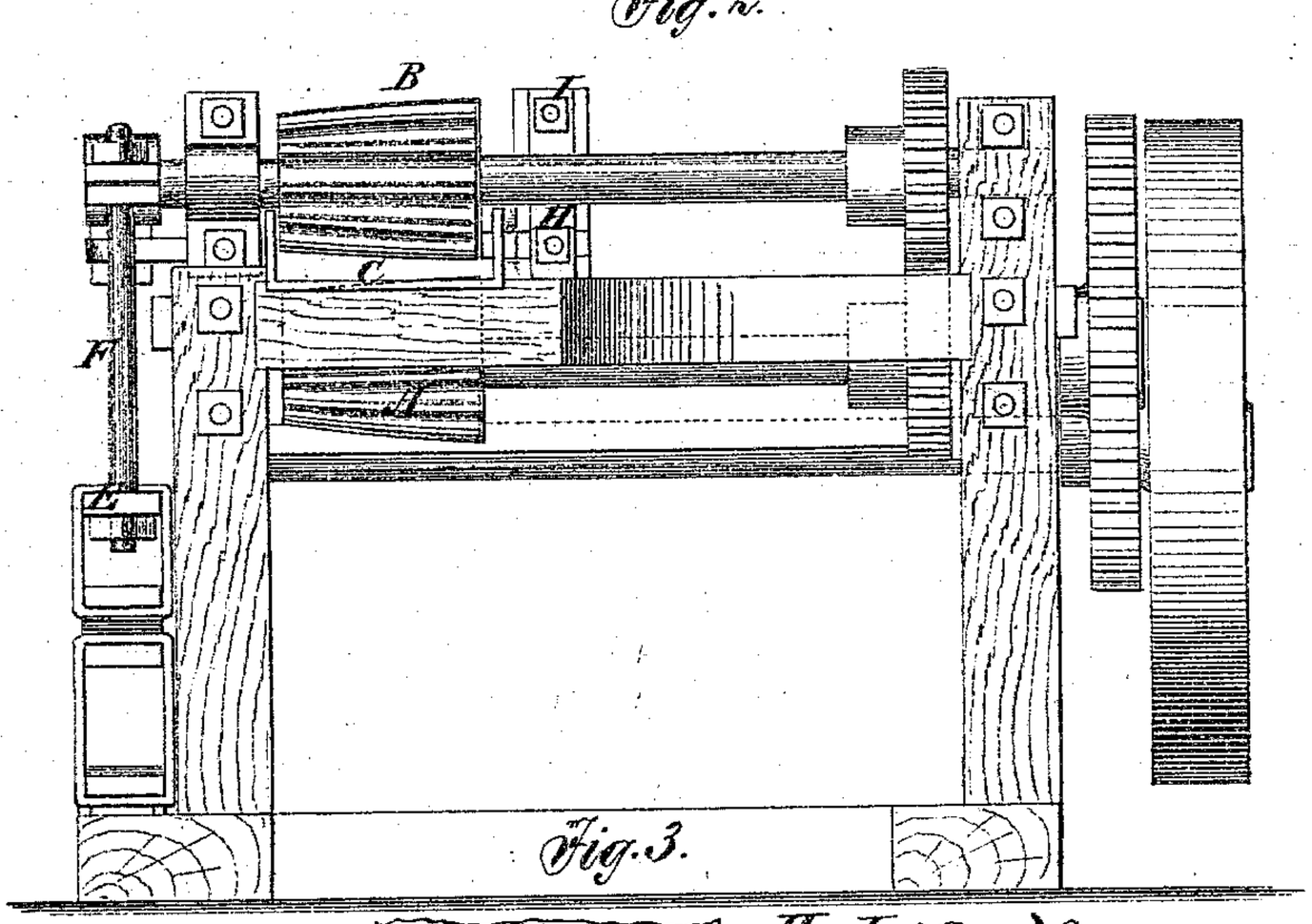
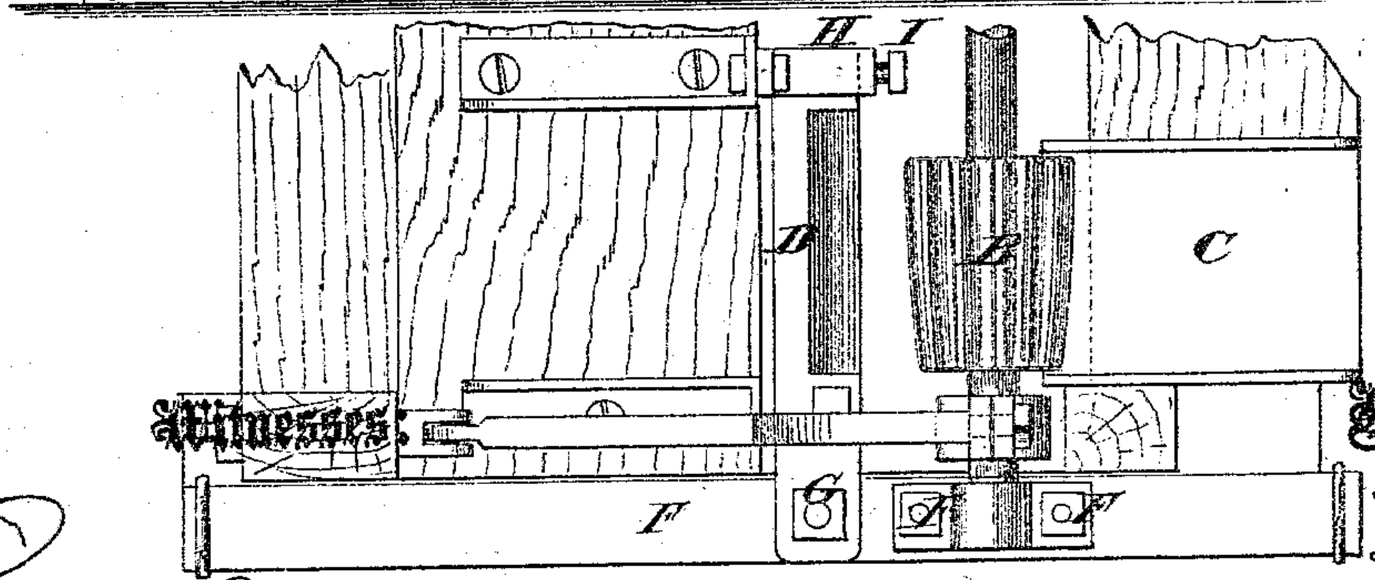


Fig. 3.



Witnesses:

Gustave Dieterich

Wm. H. C. Smith.

Inventors:

L. D. Benson.

L. C. Benson.

Per Munn & Co

Attorneys.

115,811

UNITED STATES PATENT OFFICE.

LORENZO D. BENSON AND LEANDER C. BENSON, OF NORTH JACKSON, PENNSYLVANIA.

IMPROVEMENT IN STAVE-DRESSING MACHINES.

Specification forming part of Letters Patent No. 115,811, dated June 13, 1871.

To all whom it may concern:

Be it known that we, LORENZO D. BENSON and LEANDER C. BENSON, of North Jackson, in the county of Susquehanna and State of Pennsylvania, have invented a new and Improved Stave-Dressing Machine; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The invention relates to a new and improved stave-dressing machine in which the feed rollers, springs, self-adjusting knives, &c., are so arranged and attached that they will dress the timber to an equal thickness, reducing it on both sides alike, regardless of the size of stave.

Figure 1 is a side elevation of our improved machine; Fig. 2 is a plan view; and Fig. 3 is a partial plan view.

Similar letters of reference indicate corresponding parts.

A and B represent oval-tapered fluted feed-rollers provided with suitable driving-gear, and arranged at the end of the feeding-trough C. The lower one is in fixed bearings, but the bearing of the shaft of the upper one nearest to it is supported on the upper spring E of a set of wood springs placed at the side of the machine, as shown, by a crotched bolt, F, so that said upper roller can vibrate toward and from the lower one, as may be required, by the varying of the thickness of the staves. Our invention consists in supporting the knives F, in connection with these rollers, at one end on the said spring, and pivoting them at the other end also, for allowing them to vibrate with the roller so as to cut evenly on both sides of the staves regardless of the variations in thickness. They are connected to said spring by the adjustable bolt G, and pivoted to the frame and the yoke H on a bolt, I. The manner of pivoting them is not essential, however. The movable ends of the knives, being on the same side of the machine with the small ends of the tapering rollers, are specially adapted for dressing the staves which are split, so that one edge is only thick enough to dress smooth, while the other edge has considerable surplus of timber, the staves being placed with the thin edge toward the thick ends of the rollers and pivot of the cutters, where the vertical movement of the knives relatively to the lower roller is the least, while it is greatest on the side where the thickest edge is; consequently, the vertical vibration of the knives caused by the vibration of the upper roller adjusts them to cut nearly even on both sides without danger of cutting off too much on the thin edge.

Other machines are in use with stationary knives, and others with movable cutters, but neither arrangement is so well adapted for dressing the staves evenly, but make rough work and waste stock. With our machine it does not matter whether the staves are crooked, winding, thick, or thin. In either case they will be dressed perfectly, with no undue waste of stock. The knives are controlled by the stave, so that the timber cut from it will be equal on both sides. The rollers, shaped as in our machine, pass hardest on the thick edge of the stave and gently on the thin edge, so that when it is finished the marks do not show, being wholly removed with the greater amount removed from the thick edge.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The knives pivoted at one end and movable at the other, substantially as specified.

2. The combination, with the knives being movable at one end and pivoted at the other, of the tapered feed-rollers, one of which is adjustable, and the small ends being arranged relatively to the movable ends of the knives, all substantially as specified.

3. The combination of the conical rollers, springs, and knives, one roller being adjustable and mounted on the springs, and the knives also mounted on them, all substantially as specified.

LORENZO D. BENSON.
LEANDER C. BENSON.

Witnesses:
MARIA N. BENSON,
FRANK. A. BENSON.