J. HARRIS.

Cone Sawing-Machines.

No. 155,440. Patented Sept. 29, 1874.

Fig. 1

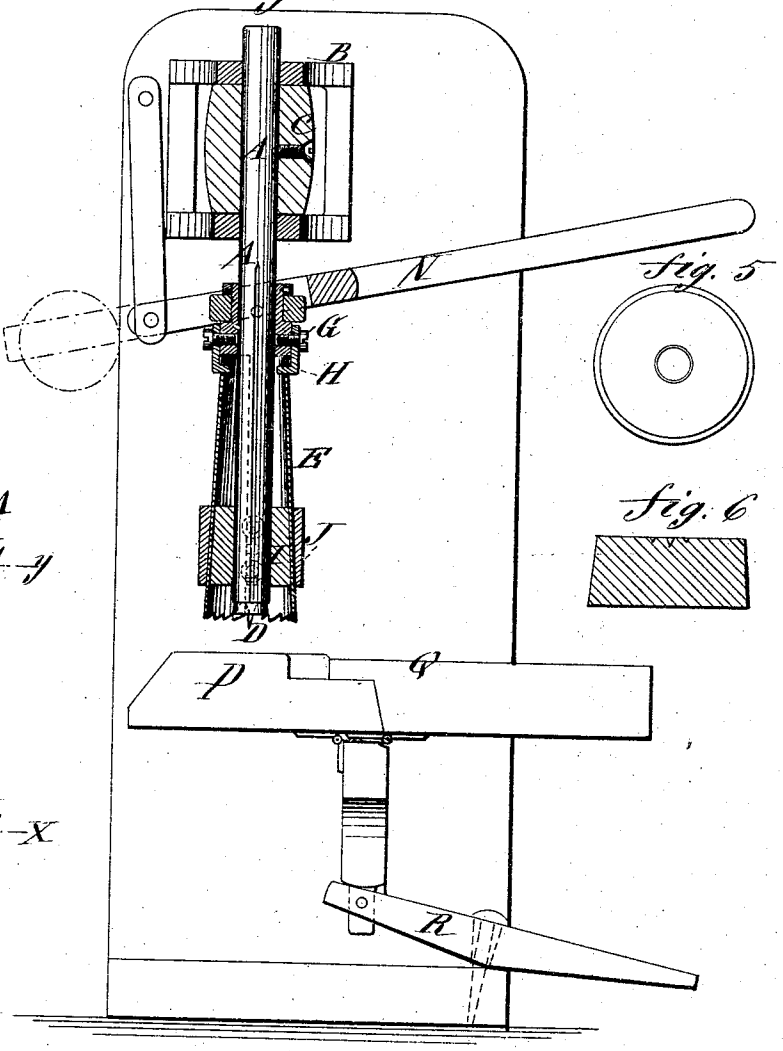


Fig. 2

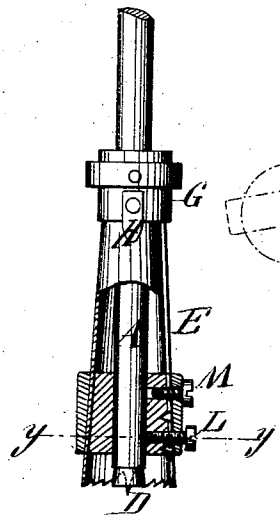


Fig. 3

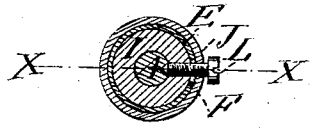
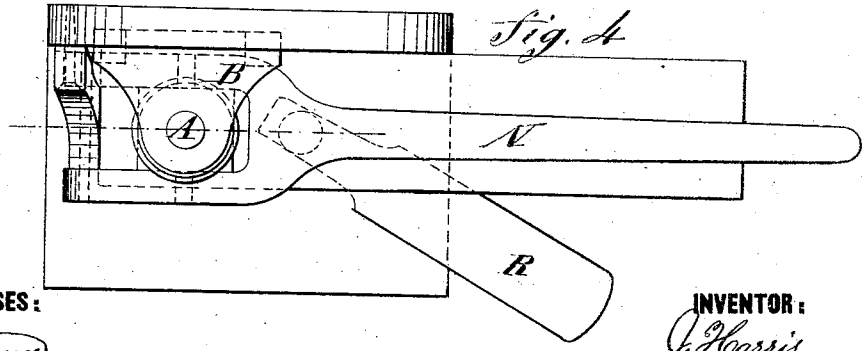


Fig. 5

Fig. 6

Fig. 4



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UNITED STATES PATENT OFFICE.

JUNIUS HARRIS, OF TITUSVILLE, PENNSYLVANIA.

IMPROVEMENT IN CONE-SAWING MACHINES.

Specification forming part of Letters Patent No. **155,440**, dated September 29, 1874; application filed June 20, 1874.

To all whom it may concern:

Be it known that I, JUNIUS HARRIS, of Titusville, in the county of Crawford and State of Pennsylvania, have invented a new and Improved Cone-Sawing Machine, of which the following is a specification:

My invention consists of a cone-saw in the form of a tapered tube, with teeth on the large end, the tube being slitted along one side from end to end, to allow it to expand and contract, and near the large end fitted between a cone on the shaft for turning the saw and a corresponding collar, which is secured to the cone by a screw passing through the slit, and at the other end is connected to a sliding collar on the shaft, provided with a lever, by which the saw is shoved forward along the cone and collar to the work, and expanded and drawn back and contracted suitably for sawing bungs and other conical articles. My invention also consists of a table-top for holding the work to the saw, contrived with a hinge-joint and a foot-treadle for working it, so as to press the work up to the centering-point in the end of the shaft over which the saw works, to hold the work at the beginning, and to drop down to discharge the sawed pieces.

Figure 1 is partly a side elevation and partly a sectional elevation of my improved machine. Fig. 2 is a sectional elevation of the saw, taken at right angles to the section of Fig. 1, and in the line *x x* of Fig. 3. Fig. 3 is a transverse section of the saw and shaft, taken on the line *y y* of Fig. 2. Fig. 4 is a top view of the machine. Fig. 5 is a top view, and Fig. 6 is a sectional elevation, of a bung such as it is designed to make with my improved sawing-machine.

Similar letters of reference indicate corresponding parts.

A is the revolving shaft or mandrel, suspended in the brackets B by its pulley C, so as not to have lengthwise motion, and having a center-point, D, at the lower end. E represents the saw-tube, of conical form, having a slit, F, along one side from end to end, connected at the upper end to the sliding collar G by the hooks H bolted onto it, and near the lower end arranged between the conical hub I and the collar J, so as to slide forward and backward to be expanded and contracted at the end. The hub is secured to the shaft by a set-screw, L, and the collar is secured to the hub by a set-screw, M, both passing through the slit F, so that the saw can be moved along unobstructedly. The set-screw L is used to fasten the hub, so that it can be shifted up and down to adjust the saw for blocks of different sizes. The hand-lever N is connected to the collar G, for shifting the saw. P is the work-holding table, which is hinged to a stationary portion, Q, and connected to a foot-treadle, R, which is employed for dropping the strip to be sawed enough to pass under the center-point of the shaft, and press it up onto the bit; also for dropping to throw off the sawed piece. The piece to be sawed will be made a trifle wider than the interior diameter of the saw, and its edges tapered to correspond with the taper of the saw, so that it will cut out of the wood at both edges of it to discharge the sawdust.

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

1. The combination of the driving-spindle A, having centering-point D, slitted conical saw E, guide-cone I, collar J, sliding collar G, and lever N, the various parts being constructed and arranged to operate in the manner and for the purpose set forth.

2. In combination with the spindle A, slitted conical saw E, cone-block I, and collar J, the set-screws L M, applied as shown, for the object stated.

3. The combination of the jointed table P Q and foot-treadle R with the center-bit and cone-saw, substantially as specified.

JUNIUS HARRIS.

Witnesses:

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AUGUSTUS A. DAME.