

sawing toths &c.

Fig. 1.

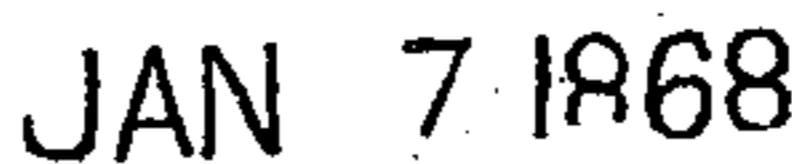


Fig. 2.

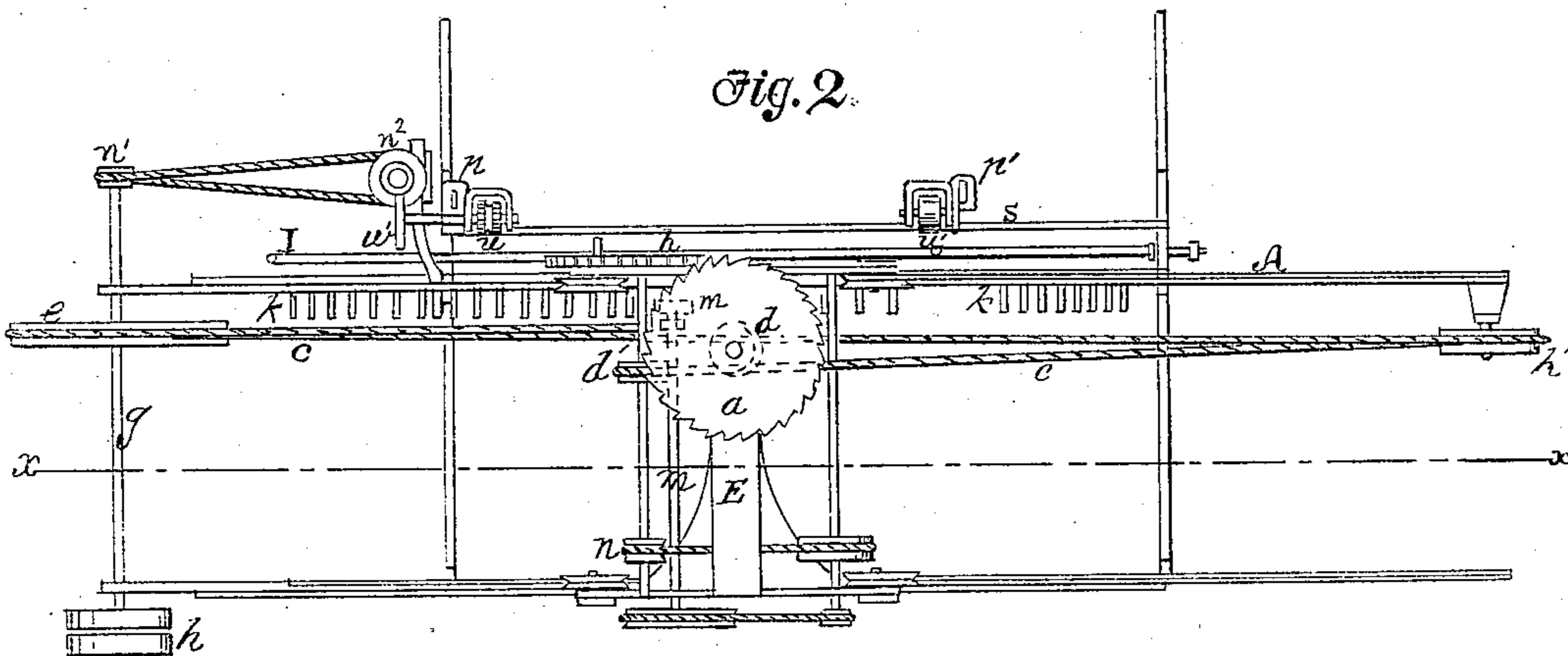
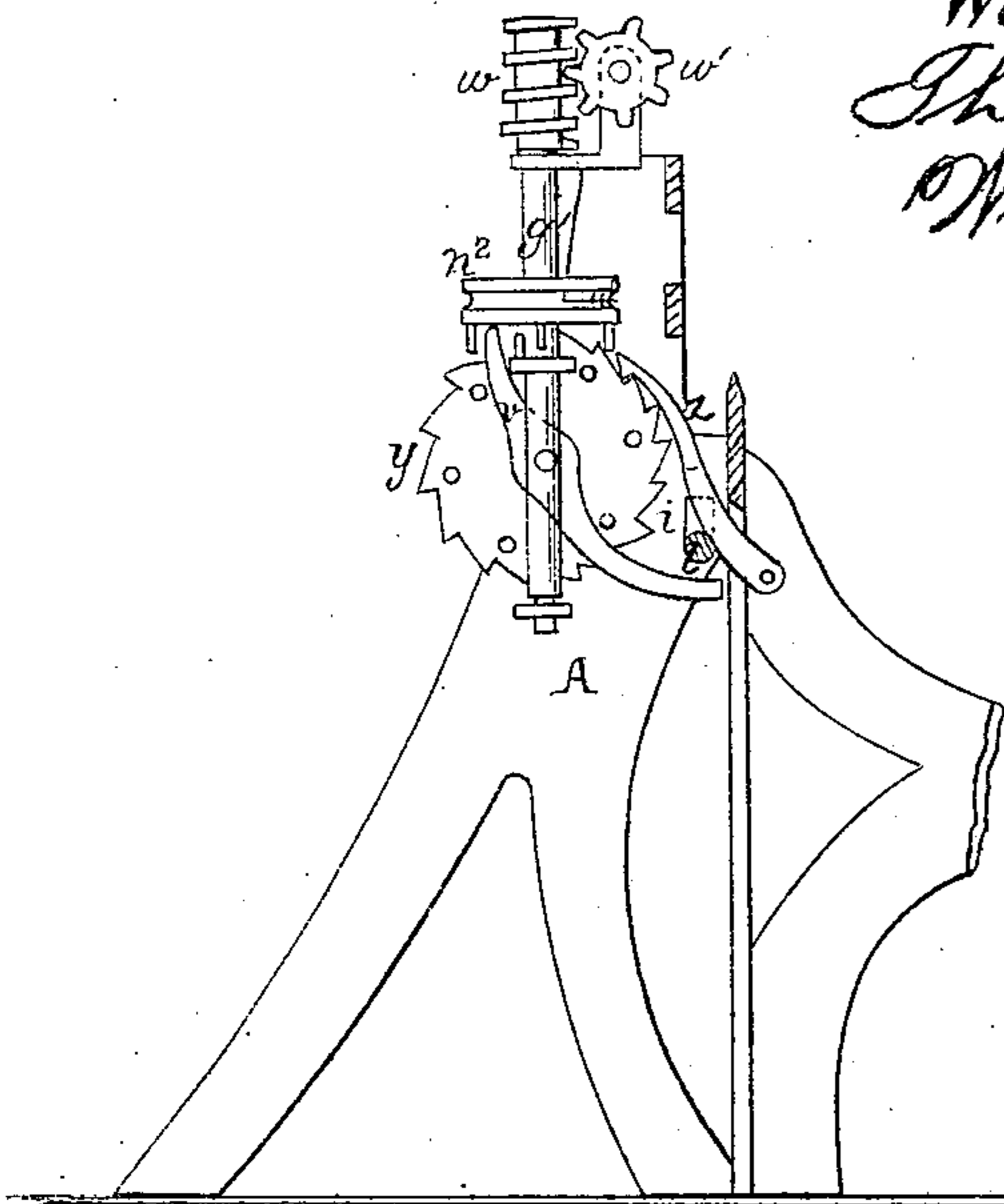


Fig. 3.



Witnesses.

Theo Fische
W. Brown

Fig. 4.

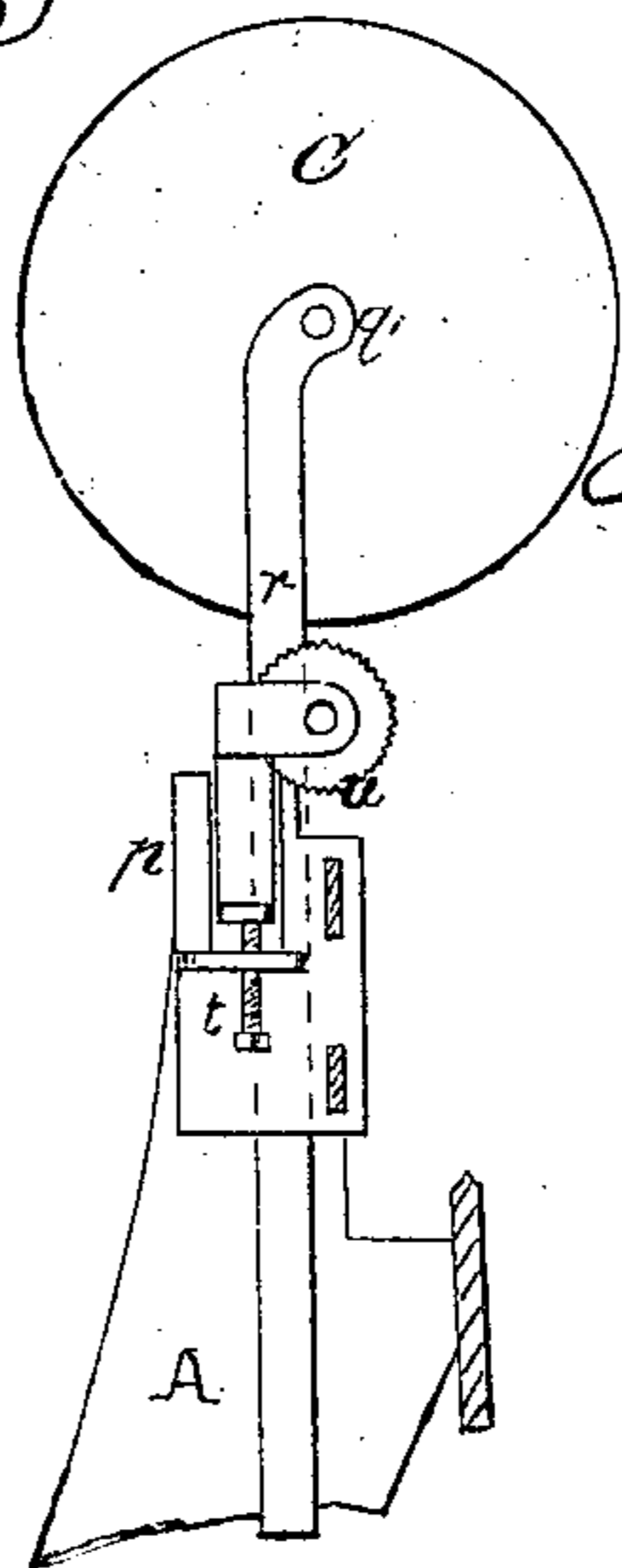
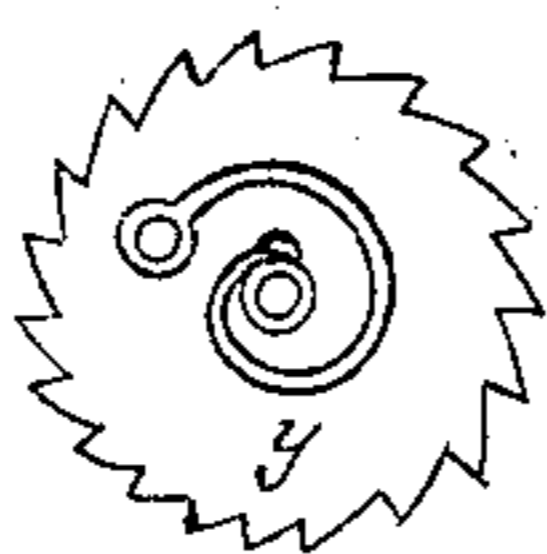


Fig. 5.



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EMERY T. WHEELER AND WILLIAM H. VAUGHAN, OF CANNELTON,
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Letters Patent No. 73,214, dated January 7, 1868.

IMPROVEMENT IN MACHINES FOR SAWING LATHS.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that we, EMERY T. WHEELER and WILLIAM H. VAUGHAN, of Cannelton, in the county of Perry, and State of Indiana, have invented a new and useful Improvement in Machine for Sawing Laths, &c.; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side sectional elevation of an improved lath and strip-sawing machine, taken in the line *x x*, fig. 2.

Figure 2 represents a plan.

Figure 3 represents a partial end elevation.

Figure 4 represents a similar view of opposite end.

Figure 5 represents a detached side view of a clutch-wheel, with spring attached.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved machine for sawing laths, pickets, and strips for wheel-spokes, chair-stuff, &c., directly from the circumference of a log, without waste; and the improvement consists in placing upon a reciprocating carriage vertical and horizontal circular saws, which work in concert, and cut together at the same time a lath or strip from the side of a rotating log, suspended on a feed-rest, made adjustable to a log of any length and size, all operated by machinery automatically, as hereinafter particularly described.

A is the bed-frame. B is the reciprocating carriage, on which are hung the horizontal circular saw *a* and the vertical saw *b*, which take motion by a continuous band, *c c*, passing over pulleys *d d'* on the saw-shafts, from the pulley *e*, on the driving-shaft *g*, actuated by pulley *h*, and also passing over a counter-pulley, *h'*, at the opposite end of the bed-frame. The carriage B is moved back and forth on a rack, *k*, by a pinion, *m*, on a shaft, *m'*, that takes motion from a pulley, *n*, on the shaft of the vertical saw *b*, by bands running over intermediate pulleys, shown clearly in fig. 2. Provision is made for reversing the motion to suit the length of the cut. The saw-boxes are made adjustable, to keep the saws in line and compensate for their wear. The log C is supported over one side of the saws, on a rest formed of a stationary head, *p*, and a sliding head, *p'*, moving on horizontal bars *s s*, to adapt it to logs of various lengths. The log is hung by spindles *q q*, driven or screwed into the centre of the ends, and hung in the upper ends of sliding upright bars *r r*, connected with the heads *p p'*. The upright bars are raised and lowered, to vary the width of the cut as required, by adjusting-screws *t t*, figs. 1 and 4, which work under the feed-wheels *u u'*, which bear the log and rotate it, one of which, on the stationary head *p*, is toothed, and the other, on the sliding head *p'*, is loose and smooth-faced. The log is fed to the saws by means of a belt from a pulley, *n'*, on the driving-shaft *g*, which passes to a clutch-wheel or pulley, *n''*, on a vertical shaft, *g'*, on the upper end of which is a worm, *w*, that works a worm-wheel, *w'*, on the shaft of the toothed feed-wheel *u*. The clutch-pulley *n''* is thrown in and out of gear by an arm, *v*, moved forward by a pin in the side of a gauge-wheel, *y*, which is propelled by teeth in the clutch-pulley. The gauge-ratchet wheel *y* is held stationary by a pawl, *z*, until the pawl is raised by a double incline, *i*, on a horizontal sliding rod, *l*, having fingers *f f'*, which are struck by a pin in the side of the reciprocating carriage B, at both ends of its traverse, to raise the pawl *z*, and release it from the gauge-wheel *y*. The gauge-wheel is thrown back by a spring, fig. 5, and a movable pin is also provided, to be set at any point in the gauge-wheel, for tripping the arm under the clutch-pulley, and letting it drop into gear. The worm-shaft and gauge-wheel then both begin to revolve, and the pin being moved, allows the clutch-wheel to turn only a given number of times before the other pin brings the arm *v* up, and throws the clutch-wheel out of gear again. This movement regulates the thickness of the stuff sawed. The finger *f* is made adjustable on the sliding rod *l*, and fastened by a set-screw, for the purpose of placing it to strike the pin on the carriage at any given point, adapted to long or short logs.

It will be observed that the machine cuts as well with the back as the forward motion of the carriage, the saws striking either end of the log alike, and thus making no loss of motion.

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

1. The adjustable rests *p p'*, in which are mounted feed-wheels *u u'*, in combination with the sliding sup-

porting rods *r r* and bars *s*, all constructed, arranged, and operating substantially as and for the purpose herein shown and described.

2. The carriage B, on which the vertical saw *b* and horizontal saw *a* are mounted, when arranged to be moved on ways A A, by means of a rack and pinion, and when arranged to operate a rod, *i*, through the medium of a pin, *f*, on the same, substantially as and for the purpose described.

3. I claim the rod *l*, provided with pins *f f'* and double incline *i*, when arranged to be operated from carriage B, in combination with the pawl *z* and gauge-ratchet wheel *y*, constructed, arranged, and operating substantially as and for the purposes set forth.

4. I claim the toothed feed-wheel *u*, to which motion is given by worm *w*, on shaft *g'*, through the medium of clutch-pulley *n*², on same shaft, substantially as described.

5. I claim the combination of the clutch-pulley *n*², arm *v*, gauge-ratchet wheel *y*, and shaft *g'*, all constructed and arranged substantially as described.

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Witnesses:

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