

No 81,123,

W.L. Williams,
Splitting Wood,

Patented Aug. 18, 1868

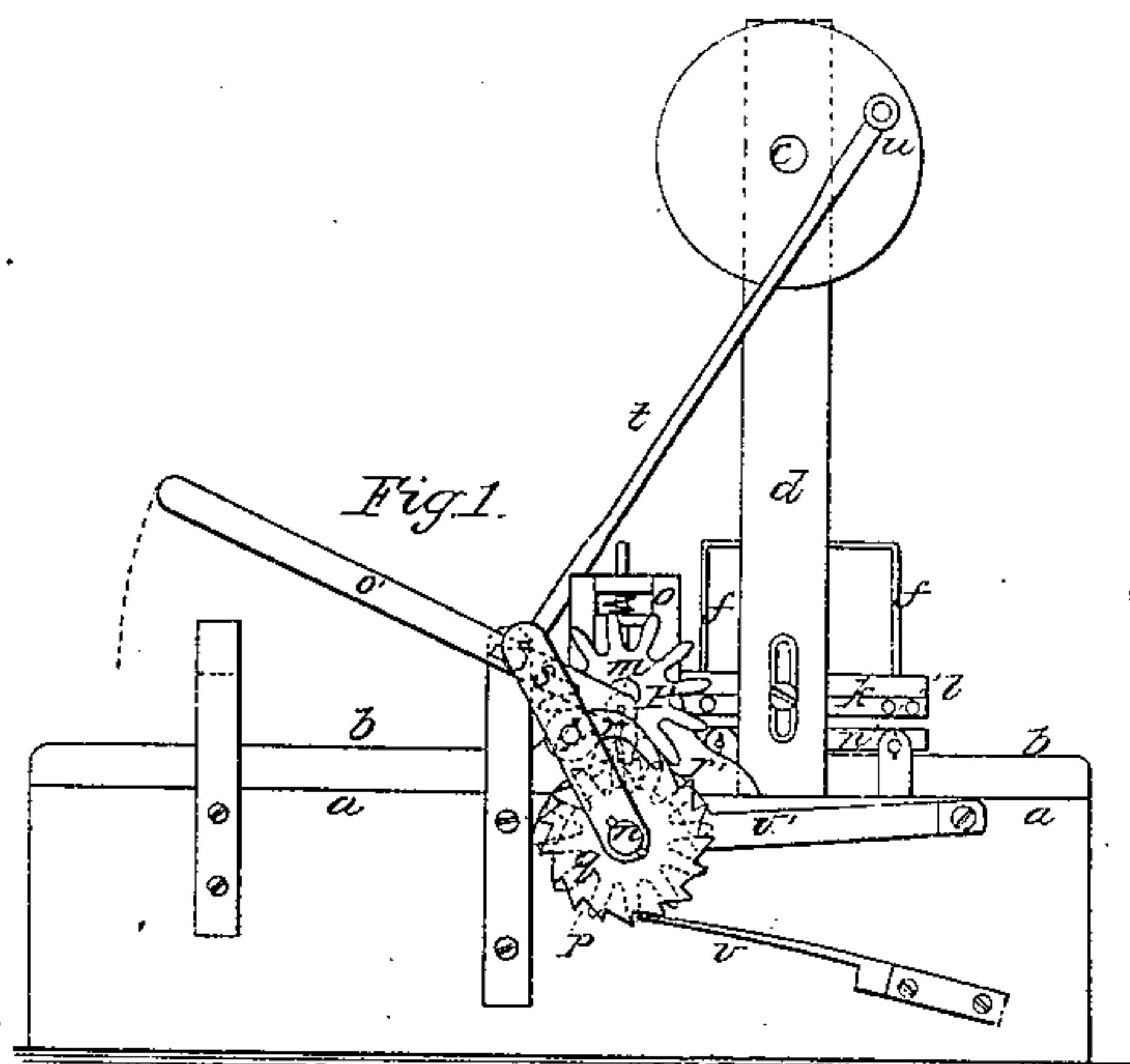


Fig. 2.

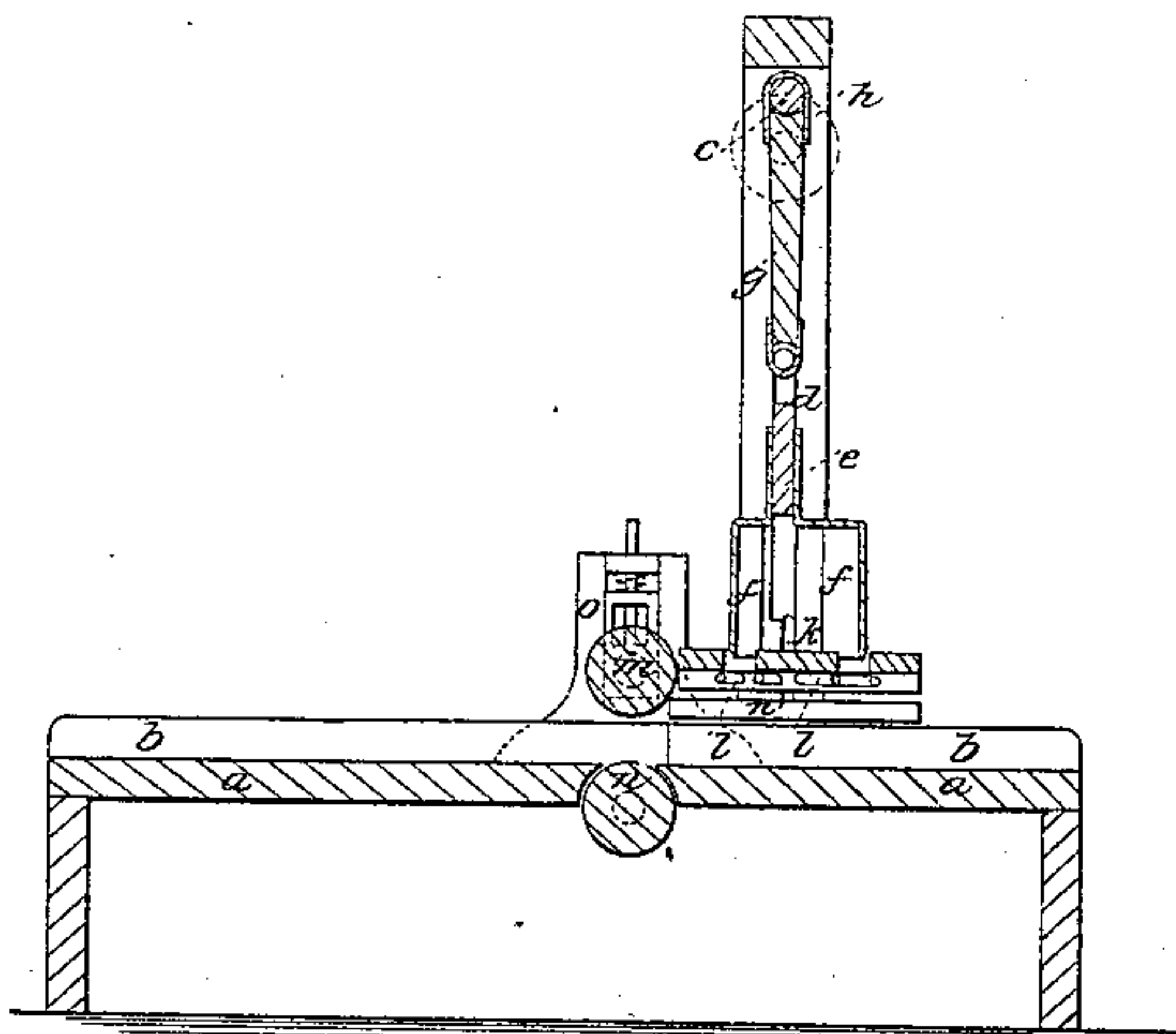
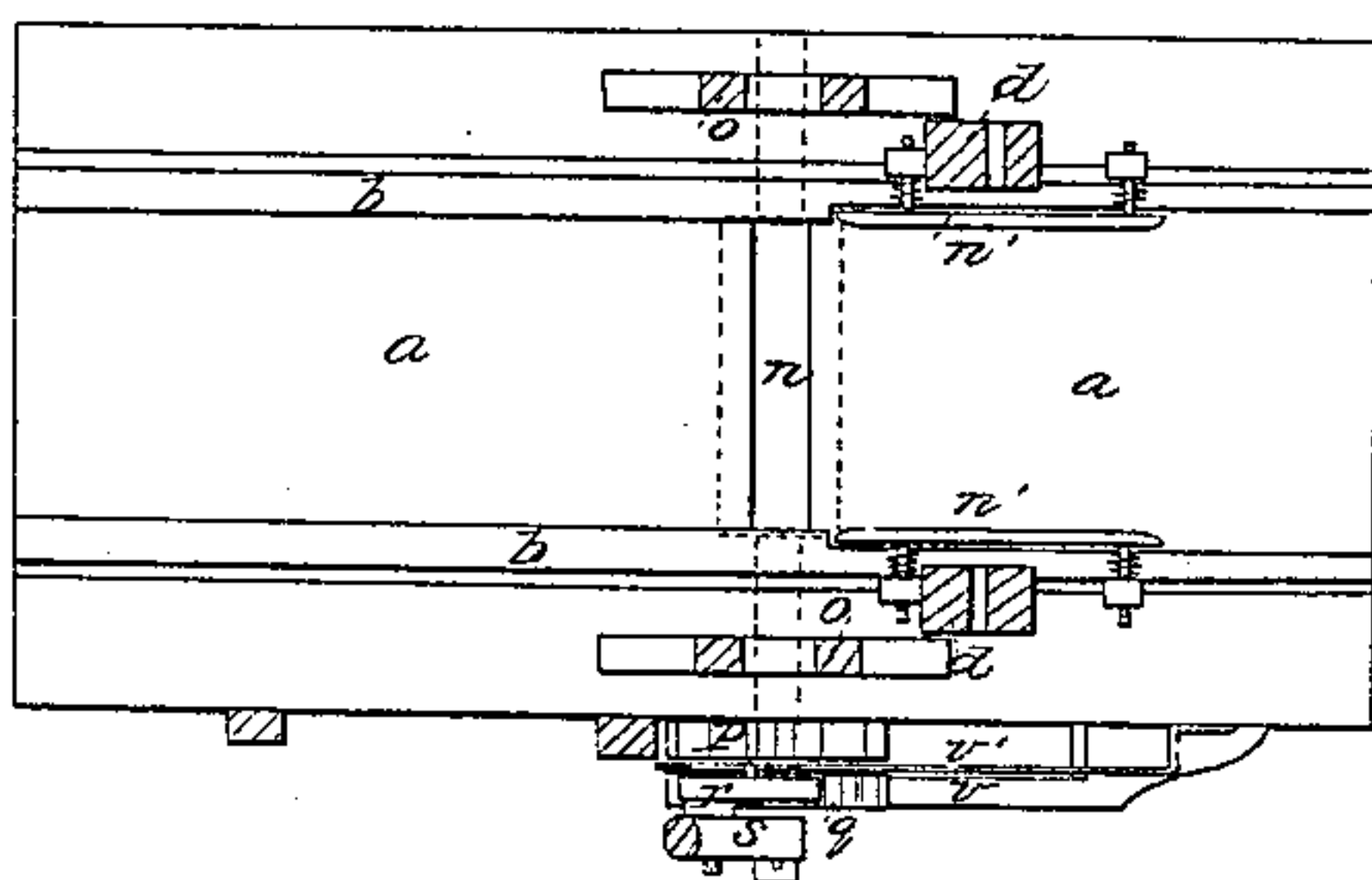


Fig. 3.



Witnesses.
Geo. A. Smith
Chas. H. Smith

Inventor:
Wm. L. Williams.
per L. W. Smith

United States Patent Office.

WILLIAM L. WILLIAMS, OF NEW YORK, N. Y.

Letters Patent No. 81,123, dated August 18, 1868.

IMPROVEMENT IN MACHINES FOR SPLITTING KINDLING-WOOD.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM L. WILLIAMS, of the city and State of New York, have invented and made a certain new and useful Improvement in Machines for Splitting Kindling-Wood; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a side elevation.

Figure 2 is a vertical section longitudinally of the machine, and

Figure 3 is a plan of the bed and trough for the wood to be split.

Similar marks of reference denote the same parts.

My improvement relates to a means for feeding forward to the cutting-knife the blocks of wood that are sawed up of a uniform length, and placed upon a bed or trough, in which they are sustained in an upright position while being acted upon by the splitting-knife.

The nature of my said invention consists in a pair of feeding-rollers acting upon the ends of the pieces of wood, to move them forwards in a trough at the time when the splitting-knives are raised above the wood, thereby causing the feed and the knives to alternate in their action; and, in combination with said feed-rollers and splitting-knives, I make use of steadying-bars that hold up the pieces of wood as they are split, but yield to the wood as that is spread by the entering of the knives.

In the drawing, *a* is a bed, upon which are side-pieces, *b b*, forming a trough, in which the wood is set up endwise, and moved forward by the attendant to the pair of feeding-rollers hereafter described.

Upon the bed *a* are the standards *d d*, sustaining the shaft *c*, and forming the slides for the stock *e* of the splitting-knives *f*, that converge and stand at an angle to the feeding-trough, as in Letters Patent granted to me, April 14, 1857, and reissued, December 19, 1865.

The knives *f* and stock *e* are reciprocated by the connecting-rod *g* and crank *h* and the slotted bed *k* and rollers *l*, as in Letters Patent granted to me, December 12, 1865.

I employ the pair of feeding-rollers *m n*, set so that the roller *n* is nearly flush at its upper side with the bed *a*, and the roller *m* is in bearings that are set to slide in the standards *o*, and are acted upon by springs, so as to cause the rollers to gripe and feed along the pieces of wood that are presented to them by the attendant, who packs them together within the trough, and keeps sliding the mass along to the rollers. This roller *m* is adjustable, to suit varying lengths of wood.

The rollers *m n* are geared together by the wheels *p*, and on the shaft of one roller (I have shown it on the shaft of the roller *n*) is a ratchet-wheel, *q*, the teeth of which are of a size adapted to giving the necessary feed by a pawl, *r*, upon a lever, *s*, that moves upon the shaft as its fulcrum, and receives motion from the connecting-rod *t* to a crank-pin, *u*, on the shaft *c*, and the connection of *t* and *s* may be by a slot and screw, so as to vary the amount of movement given to the pawl *r*, and hence the amount of feed to the wood each reciprocation of the knife.

A stop or spring-pawl is provided at *v* to the wheel *q*, and in order to stop the feed, if it becomes necessary at any time, I employ the segment *r'* on an arm, *v'*, that is operated by the lever *o'*, and, when lifted, acts upon a pin that projects from the side of the pawl *r*, and raises the same out of contact with the teeth of the wheel *q*.

As the wood is split by the knives *f*, it is apt to occupy more space than previous to being split. I therefore form the trough wider at the portion that is beyond the rollers *m n*, and apply the spring-steadying bars *n'* that act to hold up the wood and prevent its falling over, but yield sufficiently to allow for the increased space occupied after it has been split.

The rollers *m n* might be fluted, or formed with a roughened surface, to increase their hold upon the wood, and, if desired, a second pair of feeding-rollers may be employed to move the wood along in the trough.

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

1. A pair of feeding-rollers, *m n*, moved progressively when the splitting-knives are out of the wood, in combination with the said splitting-knives, and trough in which the wood is moved along by said rollers, and supported while being split, substantially as specified.

2. The spring-steadying bars *n'*, in combination with the feed-rollers *m n*, and splitting-knives *f*, as and for the purposes specified.

In witness whereof, I have hereunto set my signature, this 14th day of April, 1868.

W. L. WILLIAMS.

Witnesses:

GEO. D. WALKER,

CHAS. H. SMITH.