

W. L. Williams.

Wood Splitting Mach.

N^o 89,906.

Patented May 11, 1869.

Fig. 2.

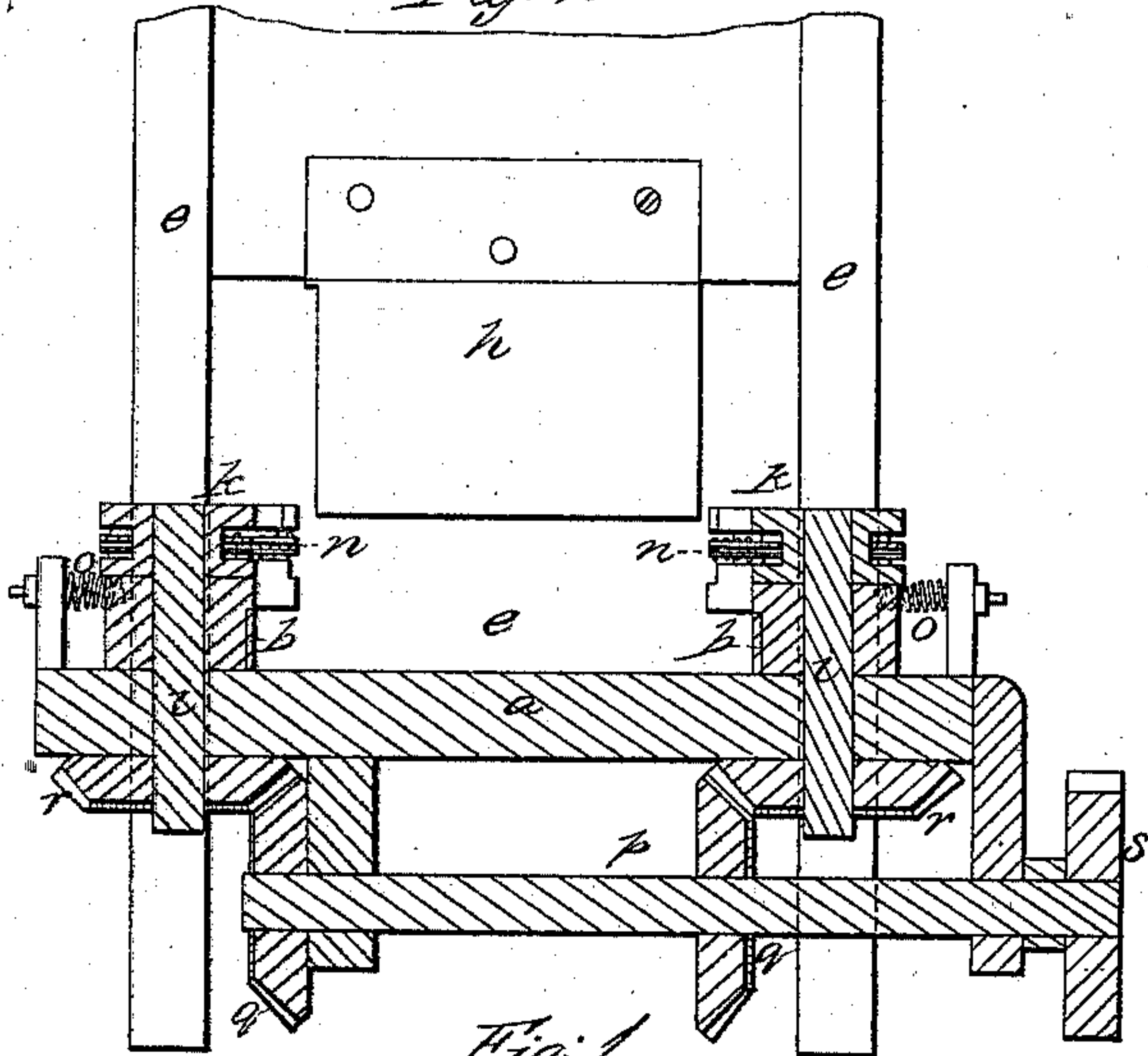
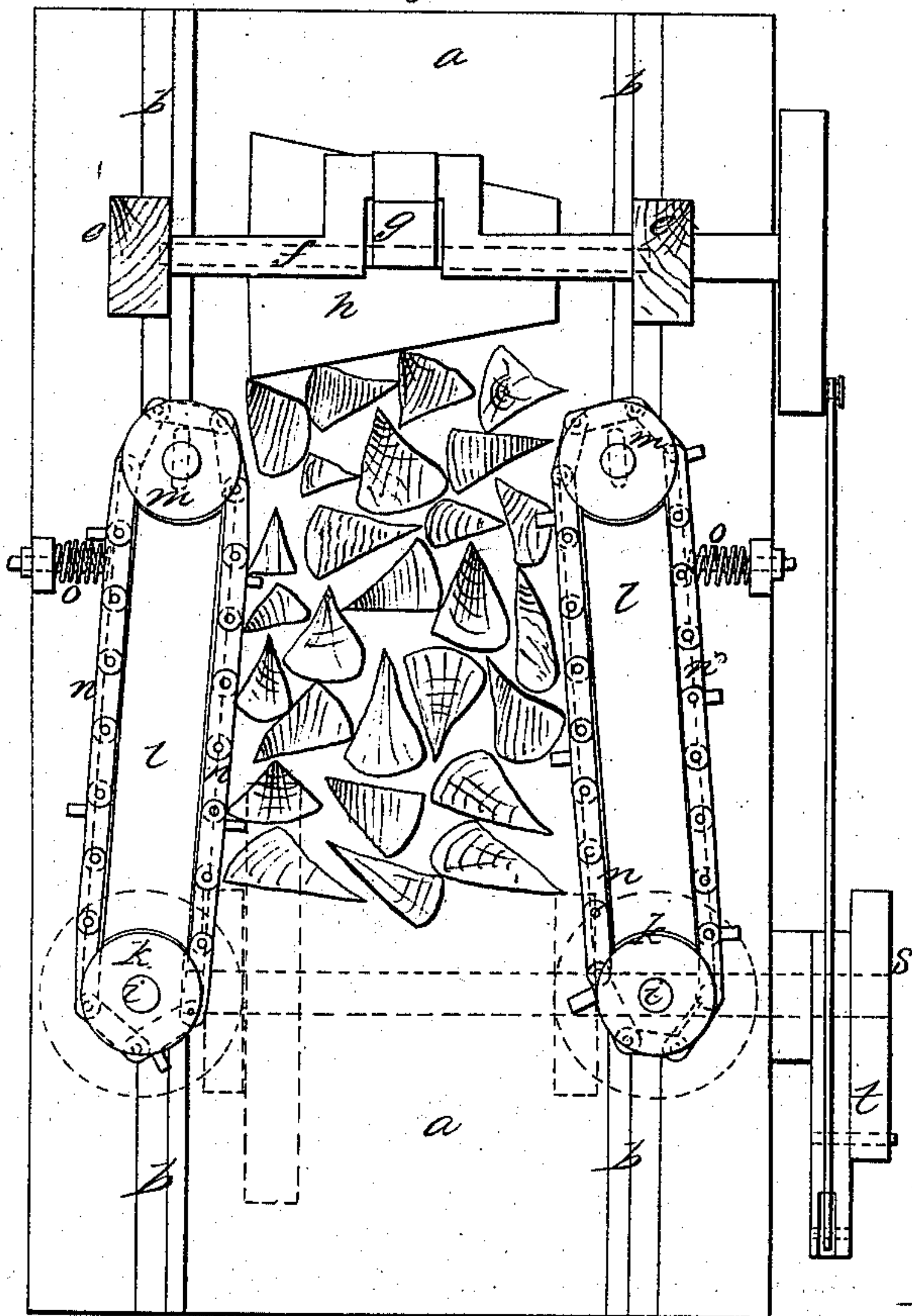


Fig. 1



Witnesses:

Chas. H. Smith
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United States Patent Office.

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

Letters Patent No. 89,906, dated May 11, 1869.

IMPROVEMENT IN WOOD-SPLITTING MACHINES.

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 Means for "Feeding" Kindling-Wood-Splitting Machines, &c.; 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 plan of the said machine.

Figure 2 is a vertical section of the same.

Similar marks of reference denote the same parts.

In machines for splitting kindling-wood, a difficulty has been experienced in feeding the wood along to the knives; this has arisen in consequence of the angular pieces becoming wedged together in the feeding trough.

To obviate this difficulty the sides of the trough have been fitted to yield, and the feeding-chain has also been made to yield. This generally prevents obstruction to the movement of the wood, but does not insure the feeding of the same when there may be only a small quantity of wood to be operated upon by the feeding-chains at any given time; hence in the splitting machines heretofore in use, the wood frequently had to be pushed forward by hand, at the risk of injury to the attendant, and irregularity of feed.

The nature of my said invention consists in the arrangement of the swinging arm to which the chain is applied, the moving end of the arm being nearest to the knives, or towards which swinging end the wood moves. The arm is kept towards the wood by a yielding pressure from a spring or weight, so as to yield to the wood when the mass is increased, or follow up in contact with the same, if the quantity is lessened, thereby insuring a continuous action upon the wood and a regularity of feed to the kindling-wood machine.

In the drawing—

a is the bed;

b b, the side pieces forming the feeding-trough;

e, the frame carrying the crank-shaft *f*; and *g* is the pitman to the knives or cutters *h*.

These parts are to be of any usual or desired character.

k is a pulley on a vertical shaft, *i*, which shaft also forms the centre on which the arm *l* swings.

n is the feeding-chain carrying the dogs or feeding-hooks, and this chain passes around the pulley *k*, and also around the pulley *m*, at the moving end of the arm *l*.

The arm *l* should have offsets for the chain to run upon, and the pulley *k* be provided with spurs or recesses to cause the proper movement of the chain by the rotation of the pulley by competent power.

o is a spring, or it might be a weight acting to press the moving end of the arm towards the wood.

It will be evident that when two chains and arms are employed upon opposite sides of the trough, as shown, the feed of the wood will be more reliable than with only one chain. I do not, however, confine myself to the use of two.

I have represented the shaft *p*, and mitre-gears *q r*, and the ratchet-wheel *s* and pawl *t*, actuated from the shaft *f*, as the means for giving motion to the shafts *i*.

The pulley *m* should be fitted upon an adjustable gudgeon, so as to allow for tightening the feeding-chain when required.

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

The swinging arm *l* and pulley *k*, arranged as specified, to carry the feeding-chain for moving the wood in the trough of a wood-splitting machine, substantially as set forth.

In witness whereof, I have hereunto set my signature, this 28th day of September, A. D. 1868.

W. L. WILLIAMS.

Witnesses:

CHAS. H. SMITH,

GEO. T. PINCKNEY.