(Model.)

W. A. ALLEN.

MACHINE FOR SAWING KINDLING WOOD.

No. 248,686. Patented Oct. 25, 1881.

Fig: 1.

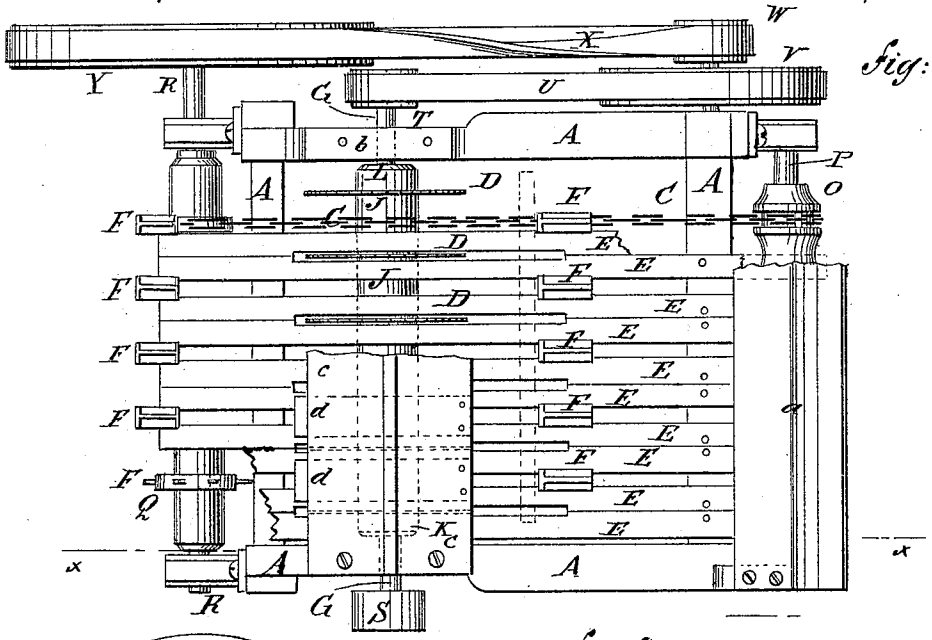


Fig: 2.

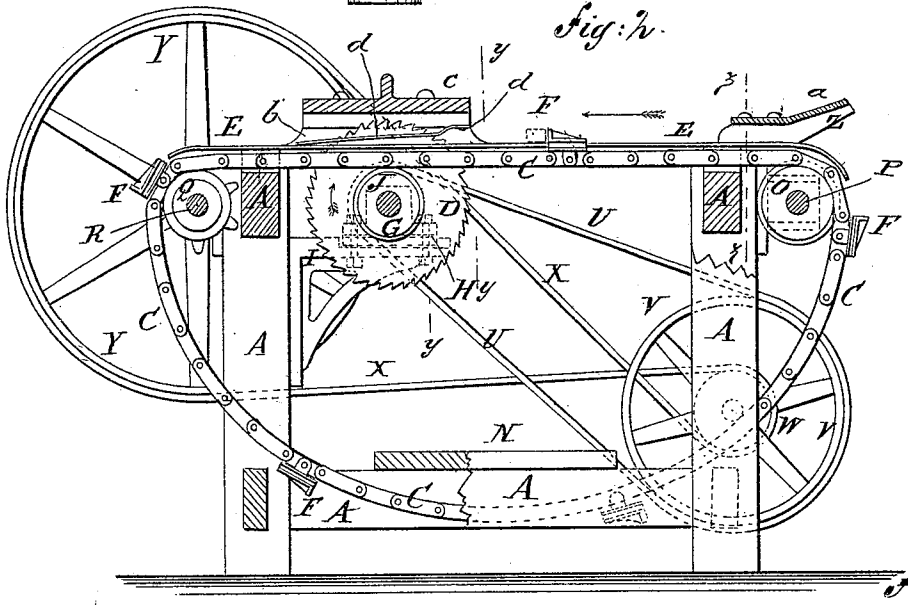


Fig: 4.

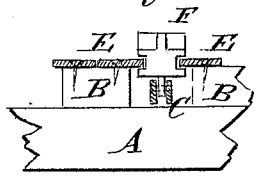
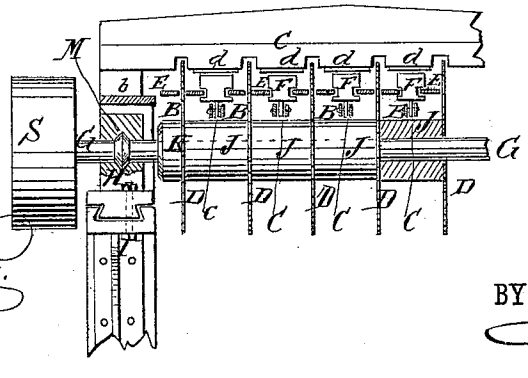


Fig: 3.



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MACHINE FOR SAWING KINDLING-WOOD.

SPECIFICATION forming part of Letters Patent No. 248,686, dated October 25, 1881.

Application filed June 25, 1881. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM A. ALLEN, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Machines for Sawing Kindling-Wood, of which the following is a specification.

Figure 1 is a plan view of my improvement, parts being broken away. Fig. 2 is a sectional side elevation of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a sectional end elevation of a part of the same, taken through the line *y y y*, Fig. 2. Fig. 4 is a sectional end elevation of a part of the same, taken through the line *z z*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of my invention is to improve the construction of the machines for sawing kindling-wood, for which Letters Patent No. 95,406 were issued to me October 5, 1869, in such a manner as to make them more effective and reliable in operation.

The invention consists in the combination, with the table and the set of parallel saws, of the guard-plate and the holding-springs, whereby the stick of wood will be held in place while being sawed, and thus prevented from clogging or breaking the machine, as will be hereinafter fully described.

In the accompanying drawings, A represents the frame of the machine, the table B of which is slotted longitudinally for the passage of the endless chain C, and also to receive the saws D. The table B is faced with metal plates E, to prevent wear, spaces being left between the edges of the pairs of plates to receive the necks of the hands F, attached to the endless chains C, to carry the wood forward to the saws D, and slots being formed in the adjacent edges of the plates of each pair to receive the saws D, the said slots being made of such a length as to allow the said saws D to move forward so far that the bearings H for the saw-mandrel G can be slipped off the brackets I that support them, as will be hereinafter described. The saws D are kept at a proper distance apart upon the mandrel G by tubular washers J, interposed between them, and are secured in place by a stationary collar, K, at one end of the mandrel, and a screw-collar, L, at the other end.

Upon the journals of the mandrel G are formed one or more V-shaped heads, M, which work in correspondingly-shaped grooves in the bearings H, to prevent the mandrel G from having a longitudinal movement and giving the saws D a lateral movement. The lower part of the bearings H are dovetailed, and work in dovetailed grooves in the brackets I, where they are secured in place by bolts passing through them and through the said brackets. With this construction, by taking out the fastening-bolts the bearings H can be slipped off the brackets I, and the mandrel G and its saws D laid upon the board or table N, laid upon the lower side bars of the frame A, so that they and the board N can be readily removed from the machine. To allow this to be done the endless chains C must be made so slack that their lower parts will pass beneath the board N, as shown in Fig. 2. The endless chains C pass around chain-pulleys O, attached to the shaft P, which works in bearings at the forward end of the machine. The endless chains C also pass around chain-wheels Q, attached to the shaft R, which revolves in bearings at the rear end of the machine, and which are so arranged that the hands F will be carried forward parallel with each other, as shown in Fig. 1.

To one end of the saw-mandrel G is attached a pulley, S, to receive the driving-belt, and to its other end is attached a pulley, T, to receive a band, U, which also passes around a large pulley, V, pivoted to the lower forward part of the frame A.

With the pulley V or its journal is rigidly connected a small pulley, W, around which passes a band, X. The band X is crossed, and is passed around a large pulley, Y, attached to the end of the chain-wheel shaft R. The large pulley Y is made heavy to serve as a fly-wheel, to give momentum and steadiness of motion to the saws D.

To the forward corners of the top of the frame A are attached brackets or blocks Z, to which are secured the ends of the table *a*, from which the wood is fed to the machine, one or more sticks of wood being placed in front of each row of hands F.

To blocks *b*, attached to the side bars of the frame A directly over the mandrel G, are attached the ends of a plate, *c*, which extends across the machine, and is grooved upon its

lower side to receive the upper parts of the saws D. The plate *c* is of a width about equal to the diameter of the saws, that the stick of wood to be sawed may pass beneath the forward edge of the said plate before coming in contact with the saws D, so that the said stick of wood will be inclosed between the plate *c* and the hands F when first struck by the saws D, and will thus be prevented from jumping out of place.

To the forward part of the lower side of the plate *c* are attached the forward ends of springs *d*, which pass back between the saws D, incline downward to or nearly to the table B, and terminate at or a little beyond the rear edge of the plate *c*, so that the stick of wood will be securely held until it has been severed by the saws D and carried past them. The sawed sticks drop from the rear end of the machine upon the floor or into a receiver. With this construction the sticks will be held in place while being sawed, and will thus be prevented from getting out of place and clogging or breaking the saws or any other part of the machine.

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

In a machine for sawing kindling-wood, the combination, with the table B and the set of parallel saws D, of the guard-plate *c*, of a width about equal to the diameter of the saws, and arranged directly over the said saws, and the holding-springs *d*, having one end secured to the under side of the forward edge of the said guard, and their free ends inclined downward and extending a little beyond the rear edge of the said guard, substantially as and for the purpose set forth.

WILLIAM A. ALLEN.

Witnesses:
JAMES T. GRAHAM.
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