

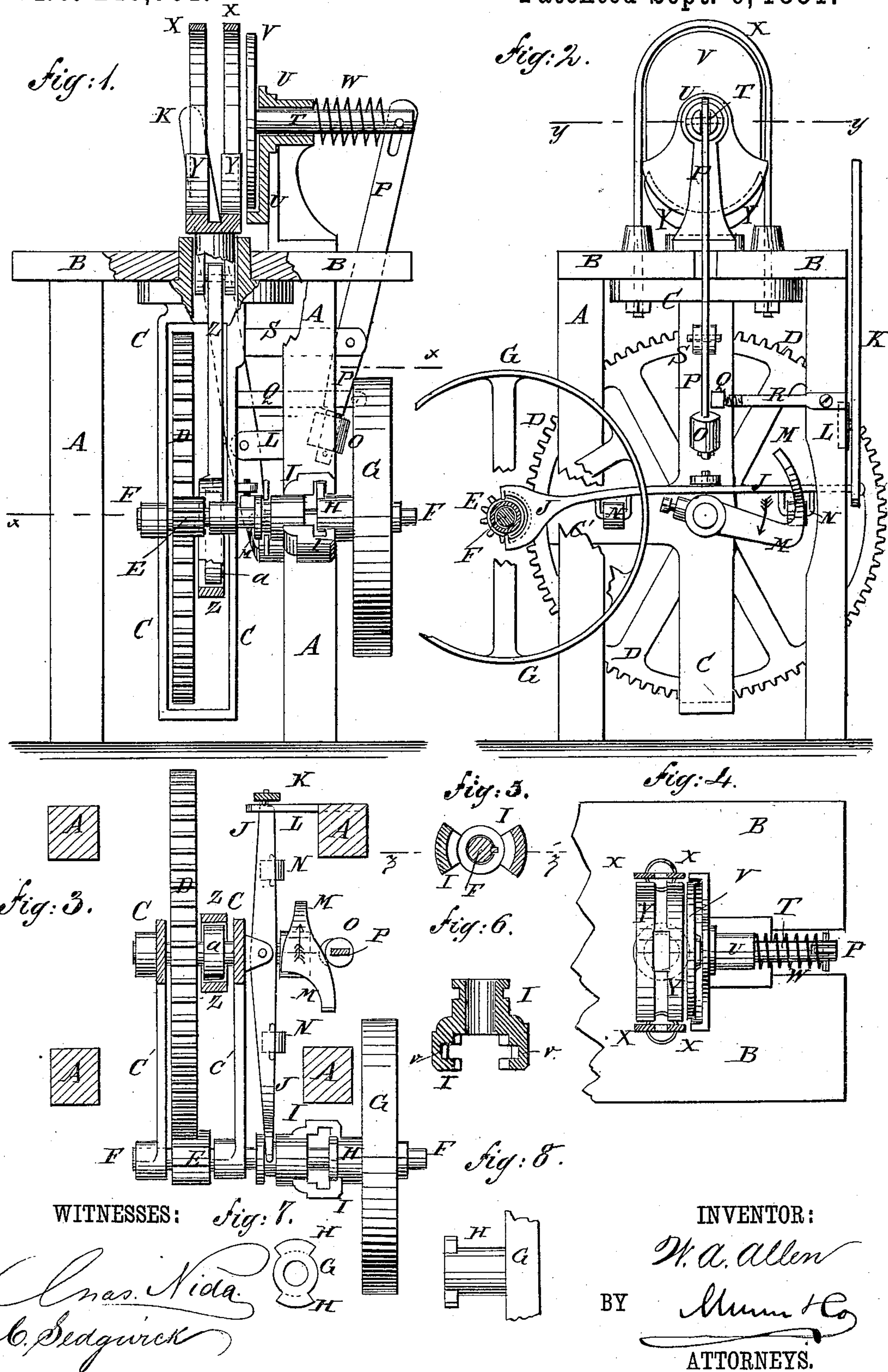
(Model.)

W. A. ALLEN.

MACHINE FOR BUNDLING KINDLING WOOD.

No. 246,701.

Patented Sept. 6, 1881.





# UNITED STATES PATENT OFFICE.

WILLIAM A. ALLEN, OF JERSEY CITY, NEW JERSEY.

## MACHINE FOR BUNDLING KINDLING-WOOD.

SPECIFICATION forming part of Letters Patent No. 246,701, dated September 6, 1881.

Application filed June 21, 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 certain useful  
5 Improvements in Machines for Bundling Kindling-Wood, of which the following is a specification.

Figure 1 is a side elevation, partly in section, of my improvement. Fig. 2 is a rear elevation of the same, part being broken away.  
10 Fig. 3 is a sectional plan view of the same, taken through the broken line *xx*, Fig. 1. Fig. 4 is a sectional plan view of the same, taken through the line *yy*, Fig. 2. Fig. 5 is a cross-section of the clutch, taken through the line *vv*,  
15 Fig. 6. Fig. 6 is a longitudinal section of the clutch, taken through the line *zz*, Fig. 5. Fig. 7 is an end view of the driving-pulley hub, showing the clutch-teeth. Fig. 8 is a side view  
20 of the driving-pulley hub, showing the clutch-teeth.

Similar letters of reference indicate corresponding parts.

The object of this invention is to facilitate  
25 the bundling of kindling-wood, and also to pack the bundles so that they can be handled without coming in pieces.

In the accompanying drawings, A represents the frame of the machine, and B the table. To the under side of the middle part of the table B is bolted or otherwise secured a stirrup or frame, C, in bearings in the middle part of which revolve the journals of a large gear-wheel, D. The teeth of the gear-wheel D  
30 mesh into the teeth of the small gear-wheel E, attached to the shaft F, which revolves in bearings in the ends of arms C', formed upon the suspended stirrup or frame C. Upon the end of the shaft F revolves a pulley, G, which is  
35 made large and heavy to serve as a fly-wheel to give steadiness of motion to the machine. The pulley G has clutch-teeth H formed upon the inner end of its hub to engage with the clutch I sliding upon the shaft F, so that the  
40 said pulley may be thrown into and out of gear with the shaft F when desired. The clutch I is made double or with two sets of clutch-teeth, as shown in Figs. 3 and 6, so that when out of gear with the clutch-teeth H it can be thrown  
45 into gear by being moved in either direction. The clutch I is grooved to receive the forked end of the lever J, which is pivoted at its mid-

dle part to supports attached to the frame C. To the other end of the clutch-lever J is pivoted the lower end of a lever, K, which is piv-  
55 oted to an arm, L, attached to the frame A, in such a position that the upper end of the said lever K will project above the table B, so that it can be conveniently reached and operated.

The journal of the large gear-wheel D projects, and to it is secured, by a set-screw or  
60 other suitable means, a double cam, M. At each revolution of the large gear-wheel D the inner part of the cam M comes in contact with rollers N, pivoted to the arms of the clutch-le-  
65 ver J upon the opposite sides of, and equally distant from, its pivot, so that the said clutch-lever will be operated twice at each revolution of the gear-wheel D to throw the clutch I out of gear with the clutch-teeth H. At each revo-  
70 lution of the gear-wheel D the outer part of the cam M comes in contact with a roller, O, pivoted to the lower end of the lever P, and pushes the said lever outward. The lever P is held from being moved laterally by the cam M by  
75 a bar, Q, the inner end of which is attached to the frame C, and its outer end is attached to the end of a bar, R, secured to the frame A. The lever P is pivoted to an arm, S, attached to the frame C, and its upper end is slotted to  
80 receive the pin or bolt by which it is hinged to the shaft T, so that the said shaft T can slide back and forth in a straight line while being operated by the upper end of the lever P, moving in an arc. The shaft T slides in a  
85 long bearing, U, attached to the top of the table B, and to the forward end of the said shaft T is attached a plate or disk, V, to push the bundle of kindling-wood out of the form or holder. The disk or push-plate V is drawn back,  
90 when the lower end of the lever P is released from the cam M, by a spiral spring, W, placed upon the outer part of the shaft T and interposed between the lever P and the bearing U.

To the top of the table B is attached a frame,  
95 X, the upper part of which is curved, as shown in Fig. 2, to give a proper form to the bundles of kindling-wood, and is slotted vertically, as shown in Fig. 1, to allow the bundle to be tied while under pressure. In the lower part of the  
100 interior of the form X is placed a curved follower, Y, which is also slotted in line with the slot of the form X. The follower Y is attached to the upper end of a connecting-bar, Z, the



lower end of which is placed upon an eccentric, *a*, formed upon or attached to a journal of the large gear-wheel D, so that the said follower Y will be moved up and down at each revolution of the said gear-wheel.

With this construction, in using the machine, when the various parts are in the position shown in Fig. 1, the attendant places a cord in the slots of the form X and follower Y, and arranges the proper amount of kindling-wood for a bundle upon the follower Y within the form X, and then operates the lever K to throw the clutch I into gear with the pulley G. As the gear-wheel D is revolved the eccentric *a* raises the follower Y and compresses the kindling-wood into a bundle in the upper part of the form or holder X. When the follower Y has been raised to the proper height the cam M, striking one of the rollers N, operates the lever J and throws the clutch I out of gear. When the bundle has been tied the attendant can operate the lever K and throw the clutch into gear. The cam M then strikes the roller O and operates the lever P to move the push-plate V forward and push the tied bundle out, the movement of the gear-wheel D, that carries the cam M against the roller O moving the follower Y downward, so as to release the bundle and allow it to be easily pushed out. The attendant then places another cord in the slots of the form X and follower Y, and repeats the operation, as hereinbefore described.

Having thus fully described my invention, I

claim as new and desire to secure by Letters Patent—

1. In a machine for bundling kindling-wood, the combination of the driving-shaft F, the loose driving-pulley G, having clutch-teeth H, the double clutch I, adapted to be moved in either direction to engage with clutch H, the clutch-lever J, having roller N, the hand-lever K, the pinion E, wheel D, double cam M, lever P, having roller O, and push-plate V, substantially as herein shown and described, whereby the machine can be readily thrown into and out of gear, as set forth.

2. In a machine for bundling kindling-wood, the combination, with the vertically-slotted form or holder X, of the curved and slotted follower Y and the push-plate V, and suitable mechanism for operating said parts, substantially as shown and described.

3. In a machine for bundling kindling-wood, the combination, with the form or holder X and the cam M, connected with the large gear-wheel D, of the lever P, the sliding shaft T, spring W, and the push-plate V, substantially as herein shown and described, whereby the said push-plate will be moved forward to push the bundle of wood from the form or holder by the revolution of the said gear-wheel, as set forth.

WILLIAM A. ALLEN.

Witnesses:

JAMES T. GRAHAM,  
C. SEDGWICK.