# G. M. Hinkley,

## Shingle Machine.

No. 113666. Patented Apr. 11. 1871.

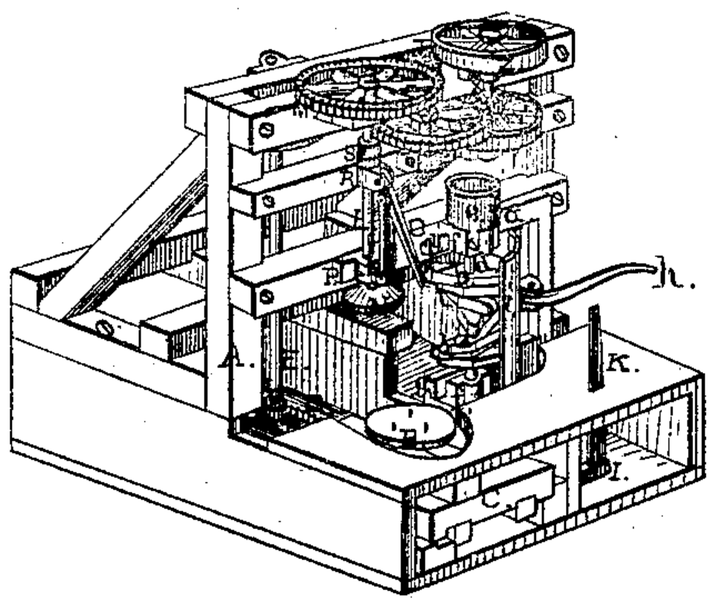


FIG. I.

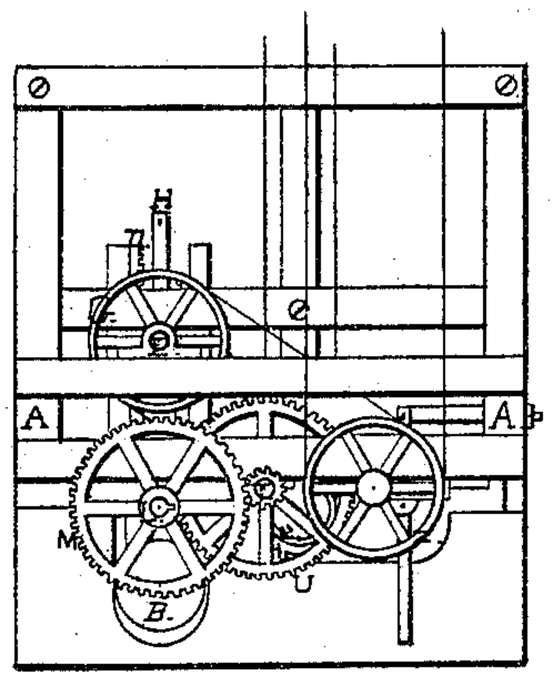


FIG. II.

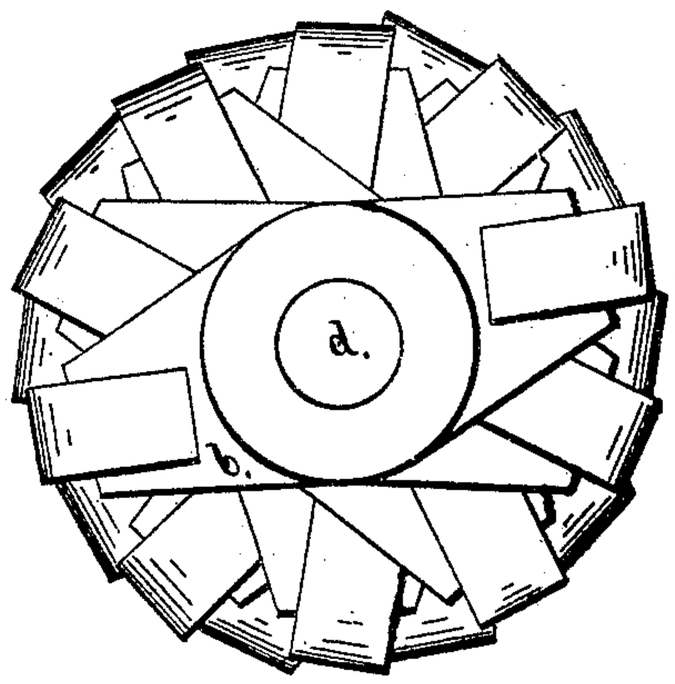


FIG. III.

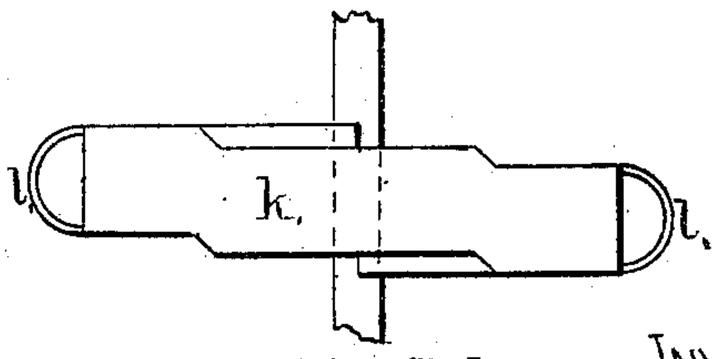


FIG. IV.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE M. HINKLEY, OF MILWAUKEE, WISCONSIN.

## IMPROVEMENT IN MACHINES FOR SAPPING TIMBER FOR SHINGLES.

Specification forming part of Letters Patent No. **113,666**, dated April 11, 1871.

*To all whom it may concern:*

Be it known that I, GEORGE M. HINKLEY, of Milwaukee, in the county of Milwaukee, in the State of Wisconsin, have invented certain Improvements in Sapping-Machines for Sapping Shingle-Timber, &c., of which the following is a specification.

My invention is for the purpose of sapping cuts of logs for various purposes, and is arranged so as to cut the sap from the cuts of logs by having the cuts revolve, and the sapper made of joints, so that the knives shall cut in rotation as the cutting-head revolves, and the cutting-head is on a movable carriage, which can be moved up to the revolving cutting-head just far enough to take off the sap, varying the cutting-head according to the configuration of the cut or thickness of the sap.

In the drawings forming part of this specification, Figure 1 is a perspective view. Fig. 2 is a top view of the machine. Fig. 3 is a top view of the cutting-cylinder. Fig. 4 is a section of the cylinder.

A is the frame of the machine; B, revolving head with spurs in it, moving in boxes and shaft, and on which the cut is to be placed to be sapped; C, the carriage on which this head B is hung; D, racks in this carriage; E, upright shaft, with pinion F on its lower end to mesh into the racks to carry the carriage up or back, as it may be meshed into either ratchet; G, driving-pulley on the top of shaft E; H, step on which shaft E stands, fastened at one end, and the other attached to a movable lever, I, operated by lever K; L, shaft, with a feather in it passing through cog-wheel M on its head, and a plate, N, with spurs in it, to hold the cut on the lower end; O, a hoisting-lever connected to the lower box, P, by link Q and slide R on the shaft L. This slide strikes against a collar and set-screw, S. This arrangement of shaft and its connections is to raise and lower the shaft to hold or release a cut to be sapped. T is a pinion meshing into wheel M; U, cog-wheel on shaft V, meshing into pinion W on shaft X, on the lower end of which is pulley Y and on the top end pulley Z. *a* is the frame of the sapping-head *b* on the shaft *d*, with pulley *e* to drive the sapper on the head of shaft *d*, working in boxes *f* in movable frame *a*, which works on ways *g*. Said frame *a* is moved up and back by means of lever *h* and the shield *i*, to keep the chips from flying against the party tending the machine. *k* is a section of the sapper-head, with knives *l* in its ends. This sapper-head is made of sections like *k*, set in the form of a screw, with bow-knives *l* in the ends of these sections, so that as the head is pressed up to the cut to be sapped by the lever *h* these knives *l* are presented to the cut in rotation.

The operation of this machine is as follows: The belts from the driving-shaft (not shown) pass onto pulleys Z and *e*, and a belt from pulley Y to pulley G. These belts put the machine in motion. A cut of a log is placed up endwise on head B, and the pinion F is set up to left-hand rack, and this rack is moved back to the right point under shaft and head L and N, and shaft L, with head N on it, is brought down onto the cut, and the spurs in head N enter the cut and put it in motion. These racks D are set on the carriage, so that when pinion F is set in on one side it carries the head B back just under head N, and the pinion runs off of the rack; and when the cut is sapped the pinion F is set up to the other rack, and the head B, with the sapped cut, is thrown back to the place where first started from. The sapping-head *b* is thrown up toward the cut to be sapped by lever *h*, and as it revolves one knife after another cuts the sap from the cut; and as the cut to be sapped turns very slow, the person feeding up the sapper-head can vary it by means of the lever, so as to cut just the amount necessary to take off all the sap.

I claim as my invention—

1. Revolving head B and carriage C, in combination with shaft L, plate N, and hoisting-lever O, substantially as and for the purpose described.

2. A sapping-machine made with sapping-head *b*, in combination with revolving head B, carriage C, shaft L, and lever O, substantially as and for the purpose described.

3. Movable frame *f*, ways *g*, and lever *h*, in combination with sapping-head *b*, substantially as and for the purpose described.

GEORGE M. HINKLEY.

Witnesses:

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