

(No Model.)

L. POOLE & F. P. SNOW.

WOOD PEELING MACHINE.

No. 314,876.

Patented Mar. 31, 1885.

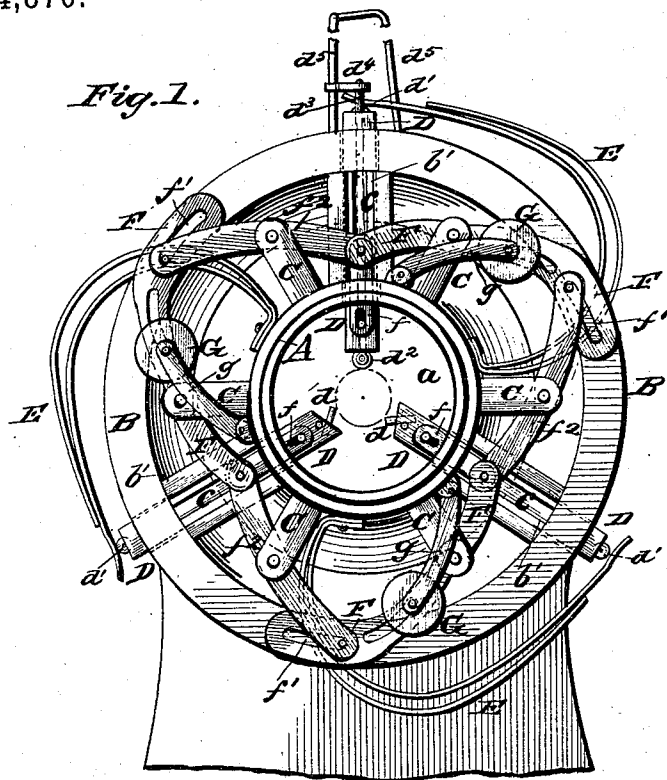
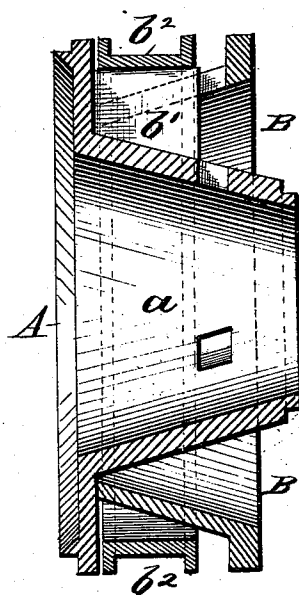


Fig. 2.



WITNESSES
Phil Masi.
E. H. Bates

INVENTORS
L. Poole
F. P. Snow
by *Auderson Smith*
Chas. H. Torneys

UNITED STATES PATENT OFFICE.

LORENZO POOLE AND FRED P. SNOW, OF ORANGE, MASSACHUSETTS; SAID
SNOW ASSIGNOR TO SAID POOLE.

WOOD-PEELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 314,876, dated March 31, 1885.

Application filed August 2, 1884. (No model.)

To all whom it may concern:

Be it known that we, LORENZO POOLE and FRED P. SNOW, citizens of the United States, residing at Orange, in the county of Franklin and State of Massachusetts, have invented certain new and useful Improvements in Peeling-Machines; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a front view of our device, and Fig. 2 is a vertical cross-sectional view of the same.

This invention relates to a machine for peeling or cutting the bark from logs of various sizes, or of rounding it up; and it consists, essentially, in feeding the logs through a short rotating cylinder into which two or more actuating-knives enter, being attached to the inner end of radial bars, the outer ends of which are pressed inward by springs, and are so connected together by slotted links that the knives will all move inward or outward simultaneously, and each to the distance required.

In the accompanying drawings, A represents a hollow feeding-cylinder having the feeding-entrance a funnel-shaped and attached concentrically within and forming part of a cylindrical case, B. The cylinder A has journals made on its ends which have bearings in and turn between the proper vertical supports *b' b'*, and radial bars, to the outward extension of which the pulleys *b b* are fixed. The said bars rise from one end of the cylinder and connect it to the inner surface of the case.

b' is a ring-shaped pulley fixed concentrically over one of the ends of the feeding-cylinder A to the extensions of the bars *b'* and driven by a band to make the case rotate.

C C, &c., are six similar supports rising from the outer surface of the feeding-cylinder at right angles to the same, and within the case B, and *c c c* are three nearly but not quite equidistant radial ways, each one of which is situated midway between two supports C C, the other ways being at similar points between other of the supports. The ways *c c c* lie to the inner side of the bars *b' b'*, and the two bars of

each way corresponding with two bars *b'*, which are bolted to the former to secure them in place.

D D are radial cutter-bars, each of which slides in one of the ways *c c*, and has fixed to its inner end the properly shaped cutting-knife *d*. The said inner end passes through an opening in the surface of the feeding-cylinder, while the outer end of the bar passes through a similar opening in the circumferential surface of the case B, and has secured to it a roller, *d'*. One of the radial bars D may have secured to its inner end a roller, *d'*, instead of the knife *d*, the said roller being attached to the inner end of a rod, *d''*, which passes longitudinally through the bar and carries near its outer end a guide-bar, *d'*, a notch in the end of which engages over the edge of a bar, *d'*, fixed at right angles to the surface of the case, the said edges being so twisted that, as the guide-bar rises when the cutter is driven outward by the increase in diameter of a log being operated on, the rod *d''* and roller *d'* will turn sidewise. The roller *d'* has a sharp cutting-edge which cuts into the wood and acts as a feed-knife. As the stick changes in size the roller twists, so that the feeding of the stick will remain the same and allow the cutting or peeling knives to take off the same-sized shaving.

E E are three leaf-springs, each properly fixed by one end to the cylinder passing into case B by a proper opening, and with its free end pressing on a roller, *d'*, of one of the radial bars D, so as to force the latter inward.

F F are three links each pivoted by its inner end to the outer end of a short rod or bar, *f*, lying parallel against one of the cutter-bars, and having its inner end pivoted to the same, as shown. Each bar *f* has on its inner end a short slot, as shown, through which the pivot passes. This slot is to allow the radial bar D to play over a knob or around an oval-shaped stick. The outer end of each link F is provided with a curved slot, *f'*, for a purpose hereinafter mentioned.

f'' f'' are links similarly pivoted by their inner ends to the short bars *f*, so as to form a joint with the links F, and have on the outer ends pins which enter and slide within the slots *f' f'* of the same. The links F F and *f'' f''* have their convexity outward, and all six

are united together, as described, so as to form one mechanism, the moving of any one link of which will move all equally.

G G are counterbalancing-weights for the cutter-bars, each having a pin on its surface, which enters and slides in the slot f' of one of the links F in such manner as not to interfere with the link f^2 , connected with the former.

g is an arm extending inward from the counter-balance, and pivoted by its inner end to a support, C.

The operation of the machine is as follows: When the log is fed to the machine, either by hand or by the carriage used when large logs are operated on, the rotating knives give, by the cutter-bars sliding outward in the ways c c , but are held sufficiently tight against the log to cut by the springs E E, which also cause them to follow each irregularity on the surface of the log. The log is kept central in the feeding-cylinder, because as one cutter-bar moves in or out it will cause the other to move equally in or out by means of the connecting-links F F and $f^2 f^2$. The rotating of the case B tends to throw the cutter-bars out of the ways by centrifugal force. This action is balanced by the centrifugal force of the weights G G, which act on the outer ends of the levers F, while the cutter-bars act on the inner ends of the same. As the cutter-bars move outward the weights G G move inward, and their centrifugal force is lessened, but their leverage is increased in an equal ratio, so that their action remains the same.

When it is desired to round up a stick, the slots in the bars $f f$ are dispensed with.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a machine to peel or trim the circumference of logs, the combination, with the horizontal feeding-cylinder A, case B, surrounding

the same, and springs E, having one end fixed to the said case, the radial cutter-bars D D, having their inner ends provided with cutters, and sliding on ways $c c$, secured to the case, and means for connecting said cutter-bars in such manner that the movement of one will cause all the others to move equally toward or from the center of the feeding-cylinder, substantially as specified.

2. In a machine for trimming the circumference of logs, the combination, with the horizontally-arranged feeding-cylinder, case surrounding the same, and the springs having their free ends engaging the outer ends of the cutter-bars, the cutter-bars sliding in ways arranged radial to the aperture of the said feeding-cylinder, the links F, pivoted to the outer ends of the rods f , links f^2 , pivoted to the said links F, the supports C, extending from the case, and the counterbalancing-weights pivoted to the said supports, substantially as specified.

3. In a machine to peel or trim the circumference of logs, the combination, with the feeding-cylinder A, case B, and springs E, of three or more cutter-bars, D D D, sliding in proper ways $c c$, fixed to the case, and connected by proper mechanism to make all three move together equally and similarly, two of said bars having proper cutters d attached to their inner ends, and the third being provided with the roller d^2 , rod d^3 , guide d^4 , engaging properly the bar d^5 , attached to the case, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

LORENZO POOLE.
FRED P. SNOW.

Witnesses:

EDWARD C. FOWLER,
HERVEY S. ALBEE.