

C. GILPIN & J. T. HILL.

Improvement in Machines for Rossing Bark.

No. 128,612.

Patented July 2, 1872.

Fig. 1.

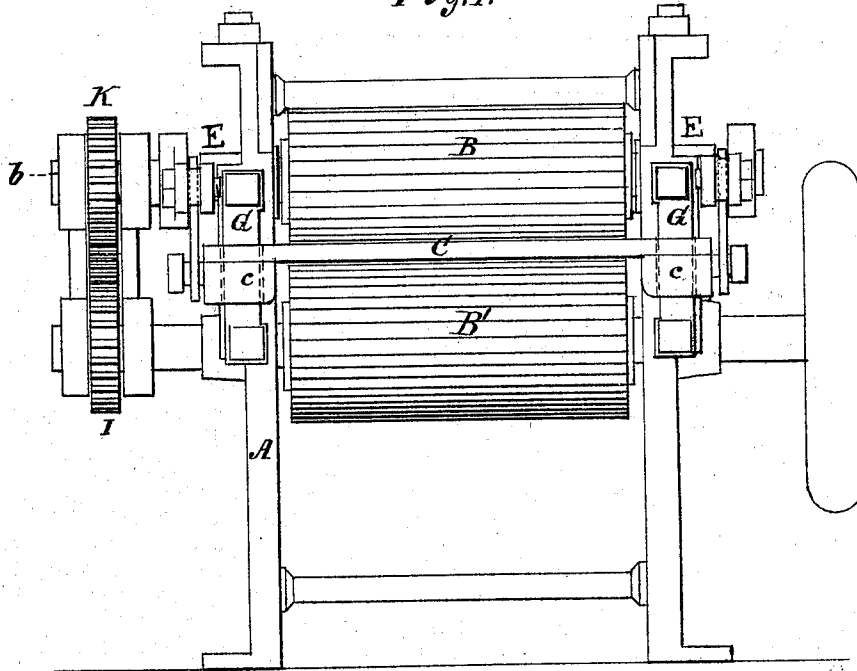
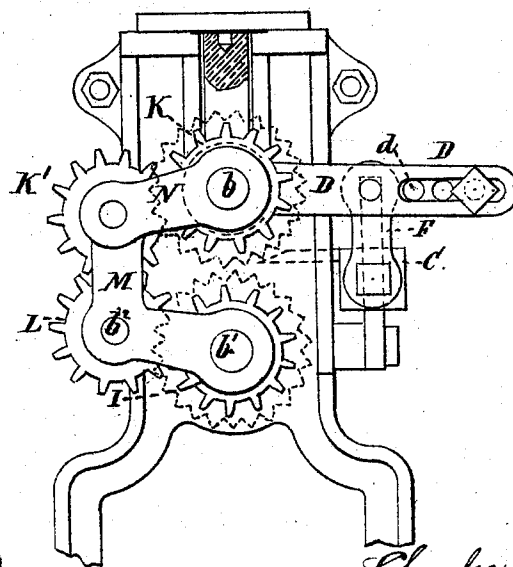


Fig. 2.



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UNITED STATES PATENT OFFICE.

CHARLES GILPIN AND JAMES T. HILL, OF CUMBERLAND, MARYLAND.

IMPROVEMENT IN MACHINES FOR ROSSING BARK.

Specification forming part of Letters Patent No. 128,612, dated July 2, 1872.

Specification describing an Improved Rossing-Machine, invented by CHARLES GILPIN and JAMES T. HILL, of Cumberland, in the county of Alleghany and State of Maryland.

The invention consists in causing the knife of a rossing-machine to change its position automatically, according to the thickness of bark passing between the rolls.

It consists, secondly, in the peculiar arrangement of devices, by which this new idea is carried out.

Figure 1 is a rear elevation, and Fig. 2 an end view, of the machine.

A represents the frame; B B', two fluted rolls; and C, the splitting-cutter of an ordinary rossing-machine. The upper roll is held in its bearings by springs. Heretofore the cutter C has not been self-adjusting, but has cut the same degree of refuse from one thickness of bark as another. Hence, in order to do accurate and proportional work, the different thicknesses of bark would have required to be assorted and cut at different times and to a separate adjustment of the knife. This state of things, therefore, involved bad work or extra labor. We have discovered that by causing the knife to move with the adjustable top-roll, and to a distance correspondent to thickness of bark which is passing between the rolls, the proportion to be cut off from varying thicknesses will always be accurately and automatically obtained.

The means which we employ to connect the knife C to the shaft *b* of top-roll B consist of the lever D D, fulcrumed on pivots *d* in the rigid arms E E that project from the frame, and the links F F, which connect these levers with the knife. The knife C has two end-pieces, *c c*, that are slotted and slide upon the guides G G of frame.

The bark from which tannin is obtained is composed of the cortex or layer which contains the tannic acid, the cellular integument next thereto which contains the coloring matter, and the epidermis or outer bark. What thickness of the cellular integument should be removed from the whole bark is an open question, and one upon which there is a wide difference of opinion. In order to meet this difference of opinion, and to accommodate the machine to qualities of bark which actually

require a difference of thickness to be removed, we provide the rigid arms E E with a series of perforations. By changing the fulcrum of lever D the relative proportion removed may be readily changed to suit different opinions or different qualities of bark.

I is a spur-wheel; K is the spur-wheel which rotates the shaft *b*. These spurs K I are connected by two idlers, K' L, which are pivoted in the angled lever M, which is pivoted to shaft *b'* and attached to shaft *b* by the pivoted link N. As the upper shaft rises or falls the lever M is vibrated in the arc of a circle about the shafts *b b'*, so that the spur-wheels are always retained in gear. The operation is as follows: The bark is inserted between the rolls in front of the mill, and with the cortex or "dermis" down, while the cellular integument and "epidermis," which constitute what is technically called the "ross," are placed upward. If the knife is to cut off one-fourth the bark then the lever is fulcrumed so as to raise the knife three-fourths the distance that the top roll is raised above the lower one by the bark passing therethrough. Thus, if a piece of bark of one inch in thickness passes through the rolls, the knife rises three-fourths of an inch and takes off one-fourth at the top; but if the next piece of bark is two inches in thickness the knife rises one and a half inches and takes off half an inch.

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

1. The combination, with the two rolls B B' of a rossing-machine, of a knife, C, whose position is regulated by the thickness of bark passing between the rolls, as and for the purpose described.

2. The combination of the spring-pressed roll B and knife C with levers D D pivoted to shaft *b*, fulcrumed to rigid arms E, and connected by intermediate links F F to the knife, as and for the purpose described.

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