

J. MARTIN & G. W. WILSON.

Machines for Rossing Bark.

No. 141,448.

Patented August 5, 1873.

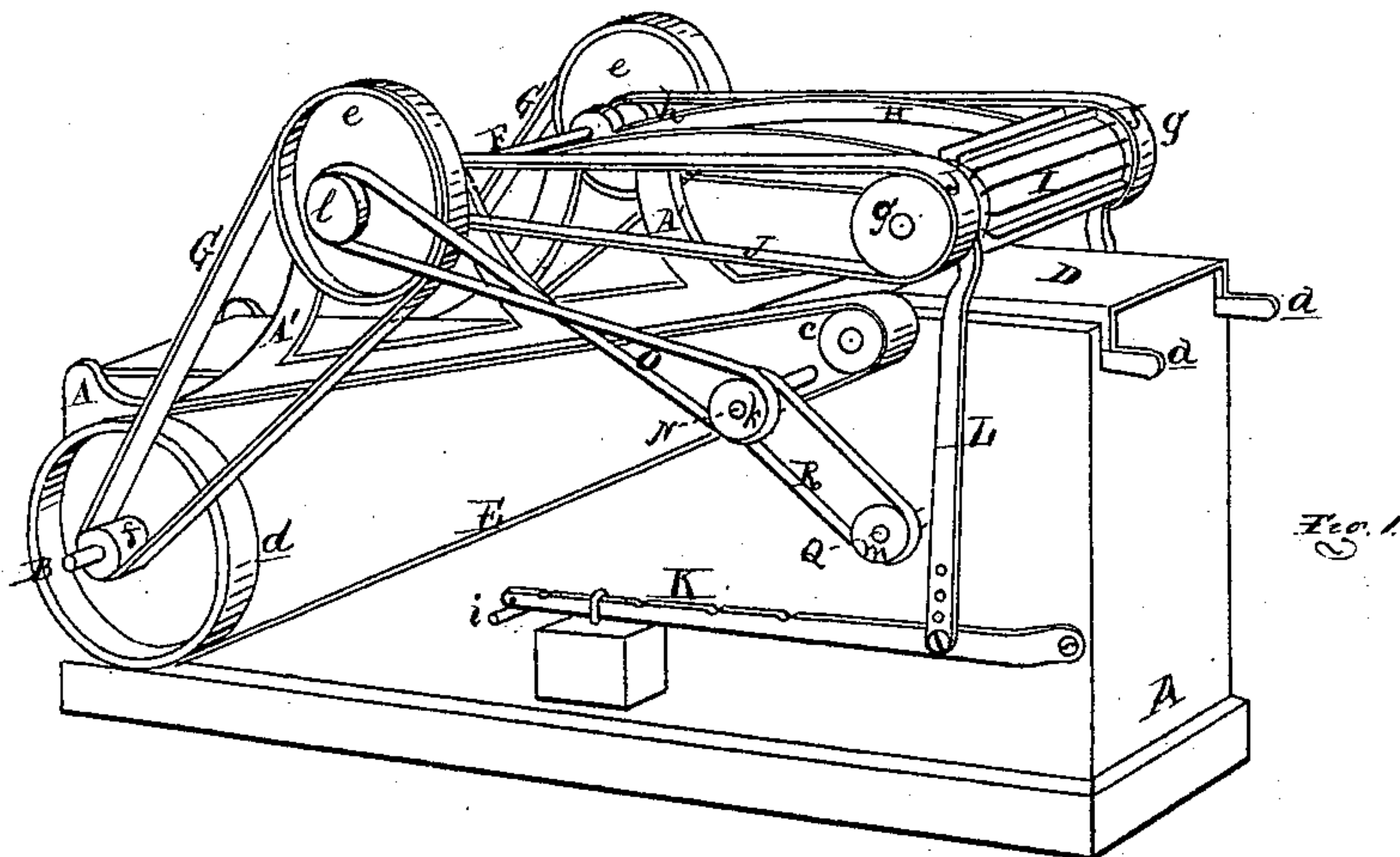


Fig. 1.

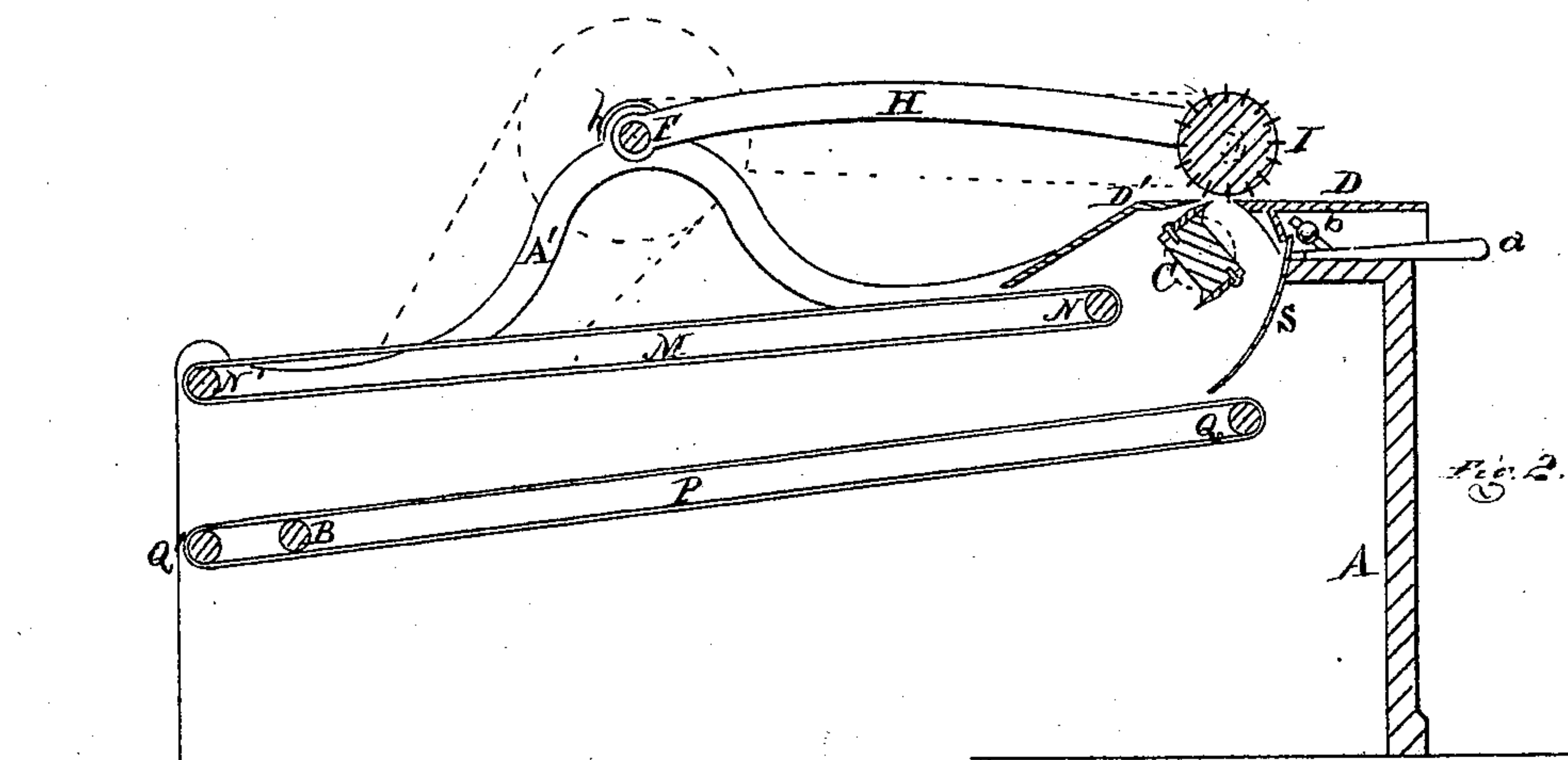


Fig. 2.

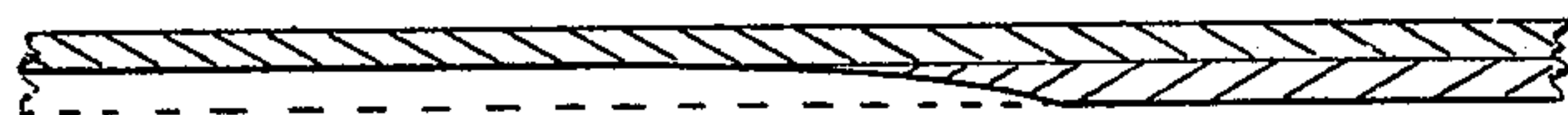


Fig. 3.

ATTEST:

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INVENTORS

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UNITED STATES PATENT OFFICE.

LEANDER BAKER, (ADMINISTRATOR OF JAMES MARTIN, DECEASED,) AND
GEORGE W. WILSON, OF MORENCI, MICHIGAN.

IMPROVEMENT IN MACHINES FOR ROSSING BARK.

Specification forming part of Letters Patent No. **141,448**, dated August 5, 1873; application filed
May 17, 1873.

To all whom it may concern:

Be it known that JAMES MARTIN, deceased, and GEORGE W. WILSON, all of Morenci, in the county of Lenawee and State of Michigan, did invent a new and useful Improvement in a Machine for Rossing Bark; and we do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is a longitudinal vertical section. Fig. 3 is a longitudinal section of a piece of bark from which a portion of the "flesh" has been removed.

Like letters refer to like parts in the several figures.

In preparing tan-bark for the leaching-vat, it has hitherto been the custom to remove the "ross" or thick outer skin from the flesh or inner part thereof, which flesh contains the tannin. The flesh is subsequently ground in a bark-mill, and placed in the leaching-vats to have the tannin extracted by maceration. In grinding the bark a portion is ground too coarsely, so that the tannin contained therein is not fully extracted, while much is also ground to dust and powder, which thickens the tan-liquor, and injures the leather in appearance and quality.

The object of this invention is so to prepare the flesh of the bark for the vat as to overcome both of these objections, by substituting a single cutting process for the separate rossing and grinding processes to which the bark has been hitherto subjected; and it consists in a machine having one or more knives on a revolving cutter-head, for removing the flesh, and provided with suitable carriers for separately removing the ross and the comminuted flesh, and with a suitable feed-roll for keeping the bark in contact with the knives of the cutter-head while passing over it, substantially as more fully hereinafter set forth.

In the drawing, A represents the frame of the machine, across one end of which is journaled the driving-shaft B. C is a revolving cutter-head, provided with two machine-knives, and is journaled in bearings near the

front end of the frame, under and in a throat formed by leaving a space between a feed-table, D, as to position and inclination, and a stationary table, D', at the other side of the cutter-head. The rear part of this latter table is an inclined apron. The table D is adjusted as to its vertical plane or height below the machine-knives by a pair of wedges, *a*, and to the opening of the throat by a pin, *b*, passing from the main frame through a diagonal slot at each side, so arranged as to give a width of throat-opening proportionate to the depth of cut taken by the knives from the bark, which is fed to them flesh side down. The cutter-head is driven by a belt, E, passing over a pulley, *c*, at its end, from a large pulley, *d*, on the driving-shaft. A similar belt and pulleys are arranged on the other side of the machine. F is a counter-shaft, journaled in standards A', rising from the sides of the main frame about midway of its length, and is provided with a pulley, *e*, near each end, around each of which passes a belt, G, from pulleys *f*, on the driving-shaft, to rotate the said counter-shaft. On the counter-shaft are sleeved the rear ends of a pair of radius-bars, H, connected by crossed diagonal braces, converting them into a frame, and in whose outer ends is journaled a ribbed feed-roll, I, having a pulley, *g*, on the extended end of each journal, around which passes a belt, J, from a small pulley, *h*, on the counter-shaft, thereby rotating the feed-roll at the proper speed. K is a weighted lever, pivoted to the side of the main frame at the front end, a similar lever being, in like manner, pivoted to the other side of the frame. L is a link-bar. Its lower end is pivoted to the weighted lever, while its upper end is sleeved on the journal of the feed-roll. A similar link-bar is, in like manner, arranged at the other side of the machine, so that the weighted levers cause the feed-roll to bear upon the bark with the required pressure to feed it, and also to hold it down while being subjected to the action of the cutter-head. A stop-pin, *i*, under the free end of each lever, arrests its descent in time to keep the feed-roll clear of the knives. M is an endless belt or apron, occupying in its width the space between the sides of the main

frame, passing around and moving with two roller-shafts, N N', transversely journaled therein. The shaft N projects at one end, to receive a double-grooved pulley, *k*, a crossed band, O, passing around this pulley *k*, and another, *l*, on the counter-shaft, gives the apron a continuous movement from the end of the inclined table to the rear end of the machine, where it delivers the ross of the bark. P is a similar endless apron, passing around roller-shafts Q Q', journaled in the frame, a band, R, passing around a pulley, *m*, on the shaft Q, from the pulley *k*, giving it motion. The "chips" or short-cut comminuted fibers cut from the flesh of the bark by the machine-knives being deposited on the upper end of this apron, guided by a deflector, S, are delivered at the rear end of the machine, separately from the ross, ready for the leaching-vat, without the intermediate process of grinding, the short comminuted fibers being far superior to the ground bark, for the reasons hereinbefore given.

It is customary for the tanner to purchase bark, which is piled up in the yard until needed for use, when it is rossed and ground. With this

machine the valuable portion of the bark may be prepared for use at the place of production, and shipped in casks or bulk to the tanner, who thus saves much more than half the freight on the bulky bark, besides requiring but little yard-room for storage, in addition to securing a superior article.

We are aware that machines have been heretofore employed for cutting tan-bark, substantially in the manner described; we do not, therefore, claim the same; but

What we claim as the joint invention of JAMES MARTIN and GEORGE W. WILSON, and desire to secure by Letters Patent, is—

The machine described, having the press-roller I, connecting-rod L, and weighted lever K, in combination with the cutter C and traveling belts M P, as described.

LEANDER BAKER,

*Administrator of the estate of
James Martin, deceased.*

GEO. W. WILSON.

Witnesses:

J. HAGAMAN,
E. W. GILLIS.