

R. H. SHULTIS.  
Bark Mill.

No. 103,246.

Patented May 17, 1870.

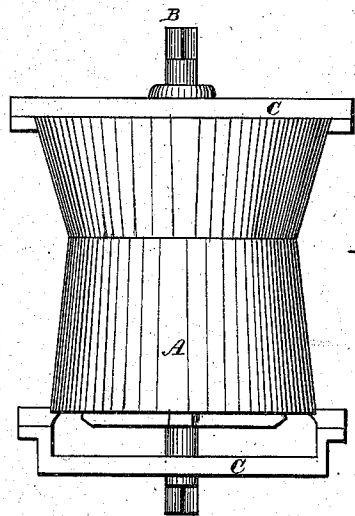


Fig. 1.

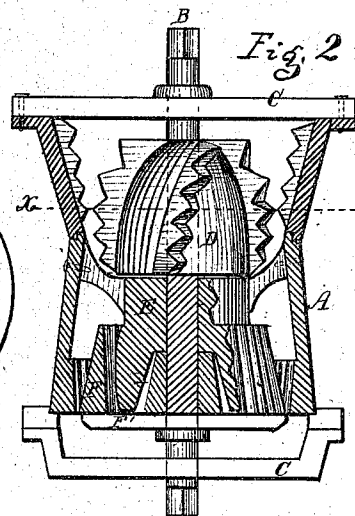


Fig. 2.

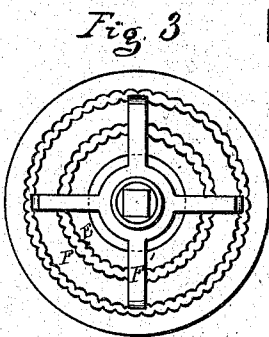


Fig. 3.

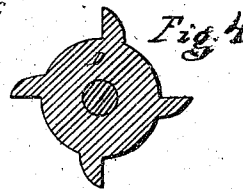


Fig. 4.

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# United States Patent Office.

ROBERT H. SHULTIS, OF ELLENVILLE, NEW YORK.

Letters Patent No. 103,246, dated May 17, 1870.

## IMPROVEMENT IN BARK-MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

### To all whom it may concern:

Be it known that I, ROBERT H. SHULTIS, of Ellenville, in the county of Ulster and State of New York, have invented an Improvement in Bark-Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

### Drawings.

Figure 1 is an elevation of my improved mill.

Figure 2 is a sectional elevation, partly in section, showing the coarse teeth for crushing the bark, the revolving cones, and the stationary ring for completing the operation of grinding.

Figure 3 is a bottom view of the revolving cone, and the spider upon which it rests, and also of the stationary ring within said revolving cone.

Figure 4 is a sectional elevation of the upper cone, on line *x x* of fig. 2.

Corresponding letters refer to corresponding parts in each of the figures.

This invention relates to an improvement in bark-mills; and

It consists in combining with such mills an interior ring, around which the usual grinding cone revolves, such ring being made stationary, as a consequence of which I am enabled to largely increase the grinding surface of the mill, as will be more fully set forth hereinafter.

A, in the drawings, refers to the shell or casing of the mill, which may be of any required size, but is best when made of similar form to that shown in the drawings.

Upon the upper portion of its interior surface it is to be provided with serrated projections or teeth, as shown, for the purpose of breaking the bark as it is introduced into the mill, while from its lower end there extends upward, upon its inner surface, series of projections or teeth, which may be vertical, as shown, or which may be placed at an angle to the axis of the mill, as preferred.

These last-named projections or teeth are to be smaller than those upon the upper portion of the shell, so that, as the pieces of bark, which have been broken by the coarser ones, come in contact with these, they shall be reduced in size to the extent required for use in the preparation of leather for market.

B refers to a shaft which passes vertically through the mill, and to which the revolving cones are attached.

This shaft may be connected with and moved by any motor which is arranged to drive it.

C C refer to cross-trees or bars, which are attached to lugs formed upon the outer surface of the case at each end thereof, their center being provided with apertures for the reception of the shaft B, for which they form bearings.

D refers to a cone which has, upon its outer surface, a series of serrated projections or teeth, corre-

sponding to those upon the interior of the case in that portion thereof in which it rotates.

This cone is secured to the shaft B in such a manner as to be caused to rotate with it, its base or lower end being turned or smoothed to rest upon the upper surface of the stationary ring.

This cone is so constructed in relation to the stationary ring as to prevent the bark and the like from getting in between said parts, thus interfering with the free movement of cone and beveled ring upon the shaft B.

E refers to a stationary ring, which has upon its upper end a series of projecting arms, by which it is secured centrally within the case or shell A.

The upper portion of this ring, and for some distance below the projecting arms, is smooth upon both its outer and inner surfaces, but, near its lower end and upon its outer surface, it is provided with projections or teeth, similar in form and size to those upon the lower portion of the case of the mill.

These teeth extend upward for a greater or lesser distance, in proportion to the dimensions of the mill, they being designed to act in conjunction with those upon the revolving cone in completing the operation of grinding such portions of the bark as may pass between it and such cone in falling from the upper portion of the mill.

F refers to a revolving conical ring or cone, which has upon its lower end a series of cross-arms, with a hub in or at their center for attaching it to the shaft B, so as to cause it to rotate therewith.

The position of this conical ring is between the outer surface of the stationary ring E and the interior of the case A. It is provided, both upon its exterior and interior surfaces, with projections corresponding to those upon the case A and stationary ring E, as a consequence of which any pieces of bark which may fall between it and the case will be ground, and thus it will be seen two grinding-surfaces are provided for the finishing operation in bark grinding, the result of which is that a largely-increased amount of bark can be ground in a given length of time.

I do not claim the several devices above described separately, nor any general combination of the same; but

What I do claim, and desire to secure by Letters Patent, is—

In the bark-mill herein shown, an improved arrangement of parts, consisting of the casing A, shaft B, revolving breaking-cone D, stationary ring E, and revolving grinding-ring F, constructed specially as shown, and arranged to operate in the manner set forth and described.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

Witnesses: ROBT. H. SHULTIS.

G. M. NICKASON,  
JNO. McELHONE.