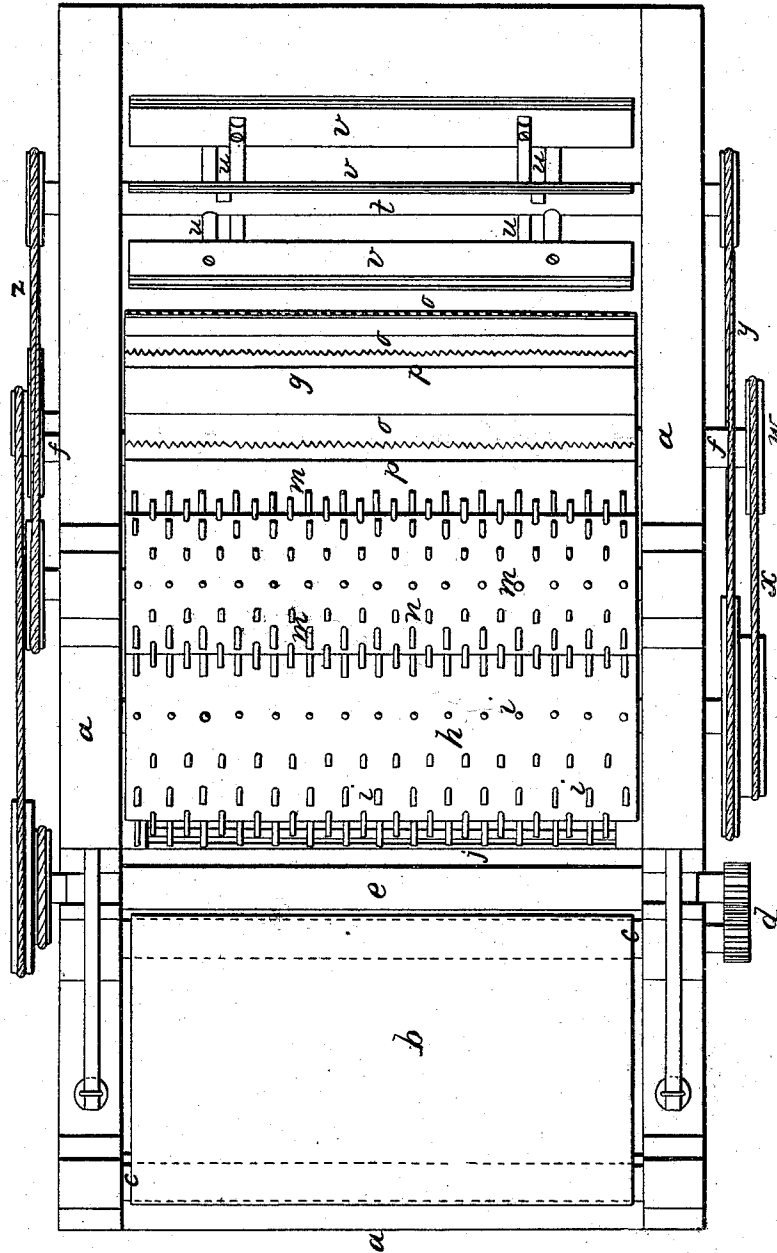


A. W. Putnam, Burring Machine

N^o 15,856.

Patented Oct. 7, 1856.

Fig. 1.



Witnesses.

Wm H Bishop
Andrew De Lacy

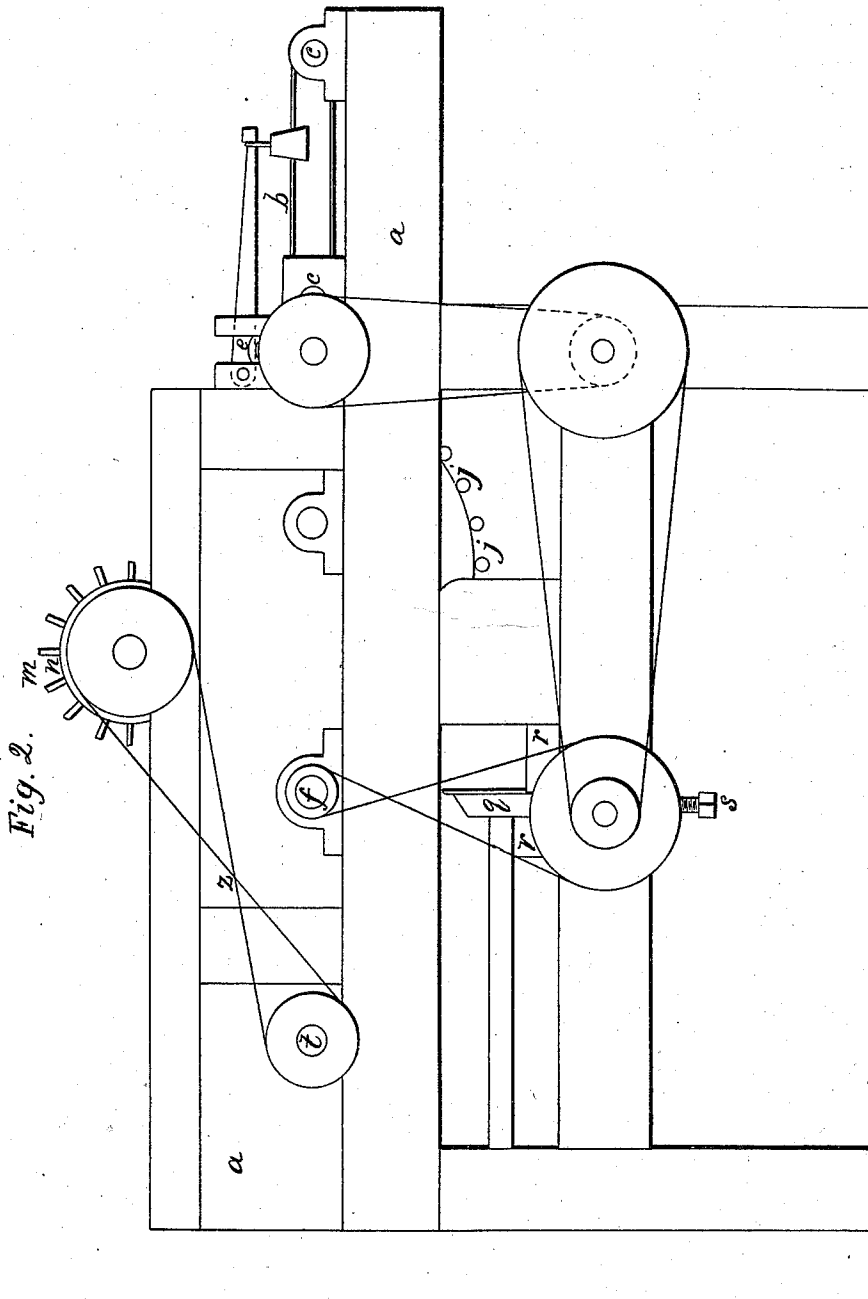
Inventor.

Andrew W Putnam

A. W. Putnam, Burring Machine.

No 15,856.

Patented Oct. 7, 1856.



Witnesses.

Wm H Bishop
Andrien De Luy

Inventor.

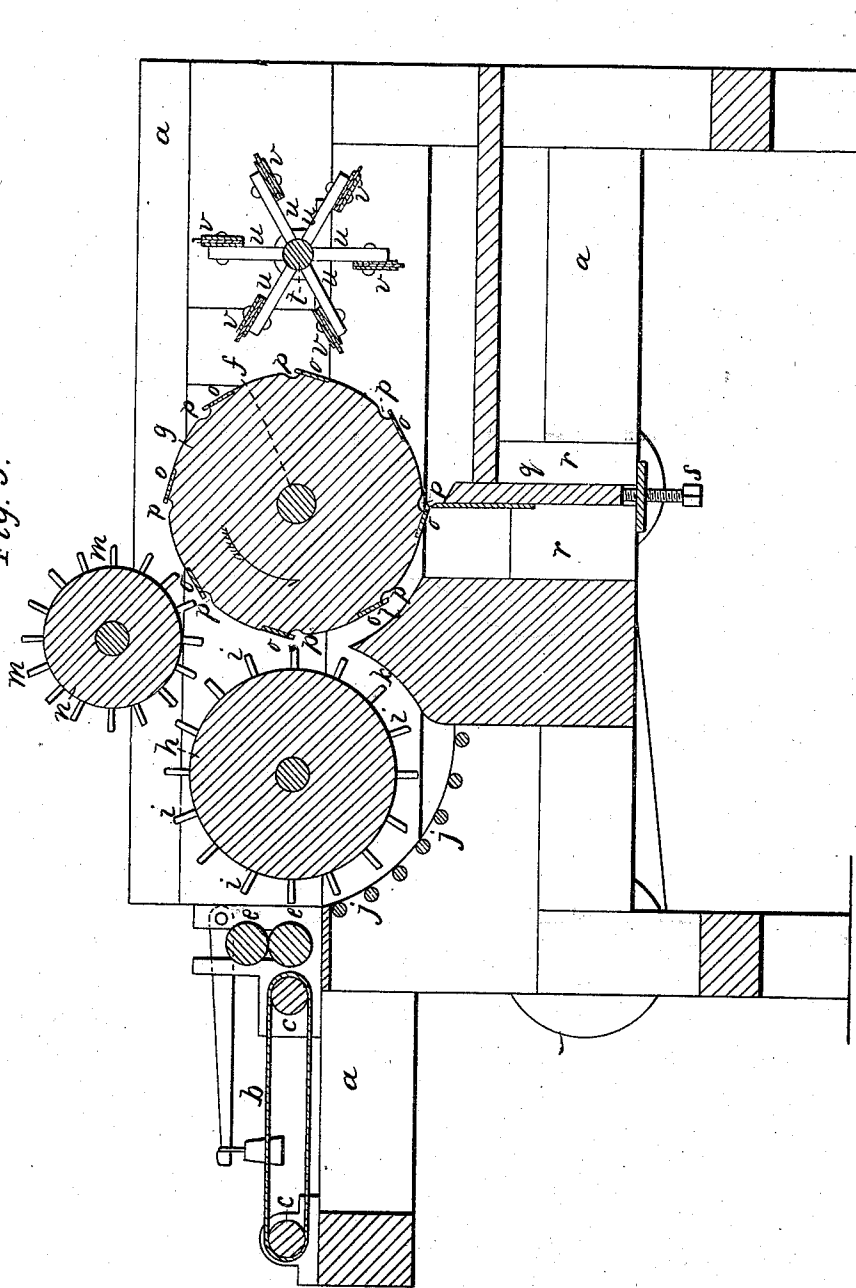
Andrew H. Putnam

A. W. Putnam, Burring Machine.

No 15,856.

Patented Oct. 7, 1856.

Fig. 3.



Witnesses.

Wm H Bishop
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Inventor.

Andrew H. Putnam

UNITED STATES PATENT OFFICE.

ANDREW W. PUTNAM, OF BROOKLYN, NEW YORK.

MACHINERY FOR CLEANING WOOL.

Specification of Letters Patent No. 15,856, dated October 7, 1856.

To all whom it may concern:

Be it known that I, ANDREW W. PUTNAM, of Brooklyn, in the State of New York, have invented certain new and useful Improvements in Machines for Picking, Cleaning, and Removing Burs from Wool, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan; Fig. 2, a side elevation; and Fig. 3 a longitudinal vertical section.

The same letters indicate like parts in the figures.

As wool is sold in the market and furnished to the manufacturer it is matted together, and contains motes and burs and other foreign substances which are held by the fibers with considerable tenacity. And before the fibers can be carded it is necessary to unmat or loosen the fibers and to remove the foreign substances; and economy dictates the necessity of performing these operations without cutting or breaking the fibers.

The object of my invention is to unmat or loosen the fibers and remove the burs and other foreign substances without injuring the fibers.

In the accompanying drawings *a*, represents the frame, and *b*, an endless feed apron passing around the rollers *c*, *c*, one of which receives motion by a train of pinions *d*, from one of a pair of feed rollers *e*, *e*, which in turn receives motion from the shaft *f*, of the burring cylinder *g*, by bands and pulleys as represented in the drawings.

The wool as it is taken from the bales is put and spread on the feed apron *b*, and regularly presented to the bite of the feed rollers by which it is presented to the action of a picking cylinder *h*, armed with radial pins *i*, projecting from its periphery which catch the fibers of wool as presented by the feed rollers. These pins catch and draw out the fibers and thus unmat them; and when thus separated the fibers are carried down by these pins over an open grating or open concave formed of round bars or rods *j*, that extend across the machine arranged in the segment of a circle, with sufficient space between the rods for the escape of dirt and dust liberated from the fibers. And beyond the series of rods the concave is solid for a short distance as at *k*, the space

between the points of the pins *i*, and the solid part *k*, of the concave being much less than between the pins and the open part of the concave. The fibers after being carried over the solid part of the concave are thrown by centrifugal force over the upper edge of the said concave and are thus brought within the range of action of the burring cylinder *g*, and by it caught and carried down over another solid concave *l*. Some fibers however will be carried around beyond the reach of the burring cylinder by the pins on the picker cylinder already described, and these are caught by the pins *m*, on a second picking or transferring cylinder *n*, constructed like the one already described, and brought within the action of the teeth of the burring cylinder by which they are taken and operated upon precisely as if taken directly from the first picker cylinder.

The burring cylinder *g*, is provided on its circumference with a series of metal plates *o*, arranged longitudinally and at equal distances apart. The forward edge of each plate is cut into a series of small wedge formed teeth and immediately under the toothed edge of each plate the cylinder is grooved, as at *p*. The toothed edge of these plates projects slightly beyond the periphery of the cylinder to enable the teeth to catch the fibers of wool and draw them under into the grooves, but not sufficiently to enable the burs and other foreign substances to enter, and in consequence these foreign substances which are to be separated from the fibers will be held outside of the circumference of the burring cylinder.

Just below the burring cylinder there is a bar *q*, parallel with the axis of the cylinder and fitted between vertical ways *r*, *r*, so that by means of adjusting screws *s*, *s*, it can be moved toward or from the burring cylinder. If the bar is made of metal its upper edge must be beveled to present a sharp shear like edge to the rotation of the burring cylinder; or if made of wood it must be armed with a metal plate having a sharp edge of the same kind. This bar must be so adjusted, relatively to the line of action of the toothed edges of the plates on the burring cylinder, that the burs and other foreign substances attached to the fibers shall be scraped off by the edge of the bar as each plate in succession passes by the edge of the bar, leaving the fibers hanging

on the teeth. Two or more of such bars may be arranged in succession if desired.

Back of the burring cylinder there is a shaft *t*, with projecting arms *u*, to which
5 are attached wings *v*, made of two plates bolted together and to the arms, with a strip of leather or other equivalent substance interposed between the two plates and projecting beyond them. The edge of these
10 strips of leather are straight and nearly touch the periphery of the burring cylinder. This shaft of wings rotates in the reverse direction of the burring cylinder and at a greater velocity so that as each plate passes
15 around with the fibers of cleaned wool hanging on the teeth the strips of leather shall clear and discharge them from the teeth and throw them out at the rear of the machine.

20 Motion is to be imparted to the burring cylinder in the direction of the arrow by some suitable motor. And on the shaft of the burring cylinder there is a pulley *w*, which imparts motion by a band *x*, to the first
25 picker cylinder. And from the first picker

cylinder motion is imparted by a crossed band *y*, to the shaft of the rotating wings, and from the shaft of the rotating wings by another band *z*, to the shaft of the second picker cylinder.

30

Having thus described the purpose, construction and mode of operation of my said invention, what I claim as new and desire to secure by Letters Patent is—

1. The combination of the main picker 35 cylinder and the open and closed concave in combination with the burring cylinder arranged and operating substantially as described.

2. And I also claim, the burring cylinder 40 in combination with the adjustable burring bar or bars arranged and operating substantially as described for stripping the burs and other foreign substances on the fibers, as described.

ANDREW W. PUTNAM.

Witnesses:

WM. H. BISHOP,
ANDREW DE LACY.