

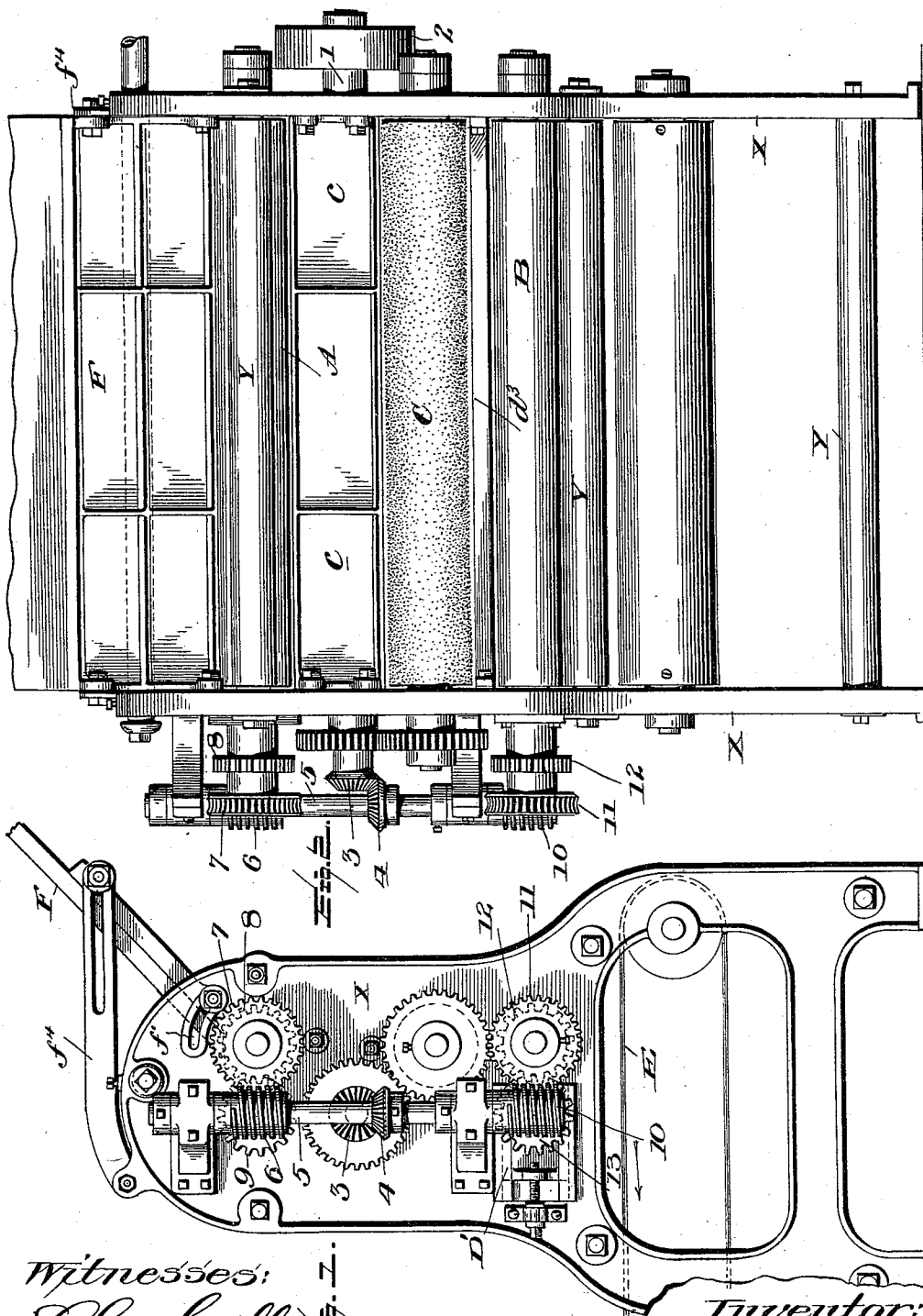
(No Model.)

2 Sheets—Sheet 1.

A. BONNET.
DECORTICATING MACHINE.

No. 579,734.

Patented Mar. 30, 1897.



Witnesses:
L. C. Mills
E. Williams

Inventor:
Adolphe Bonnet,
By *Marcellus Bailey*
his Atty.

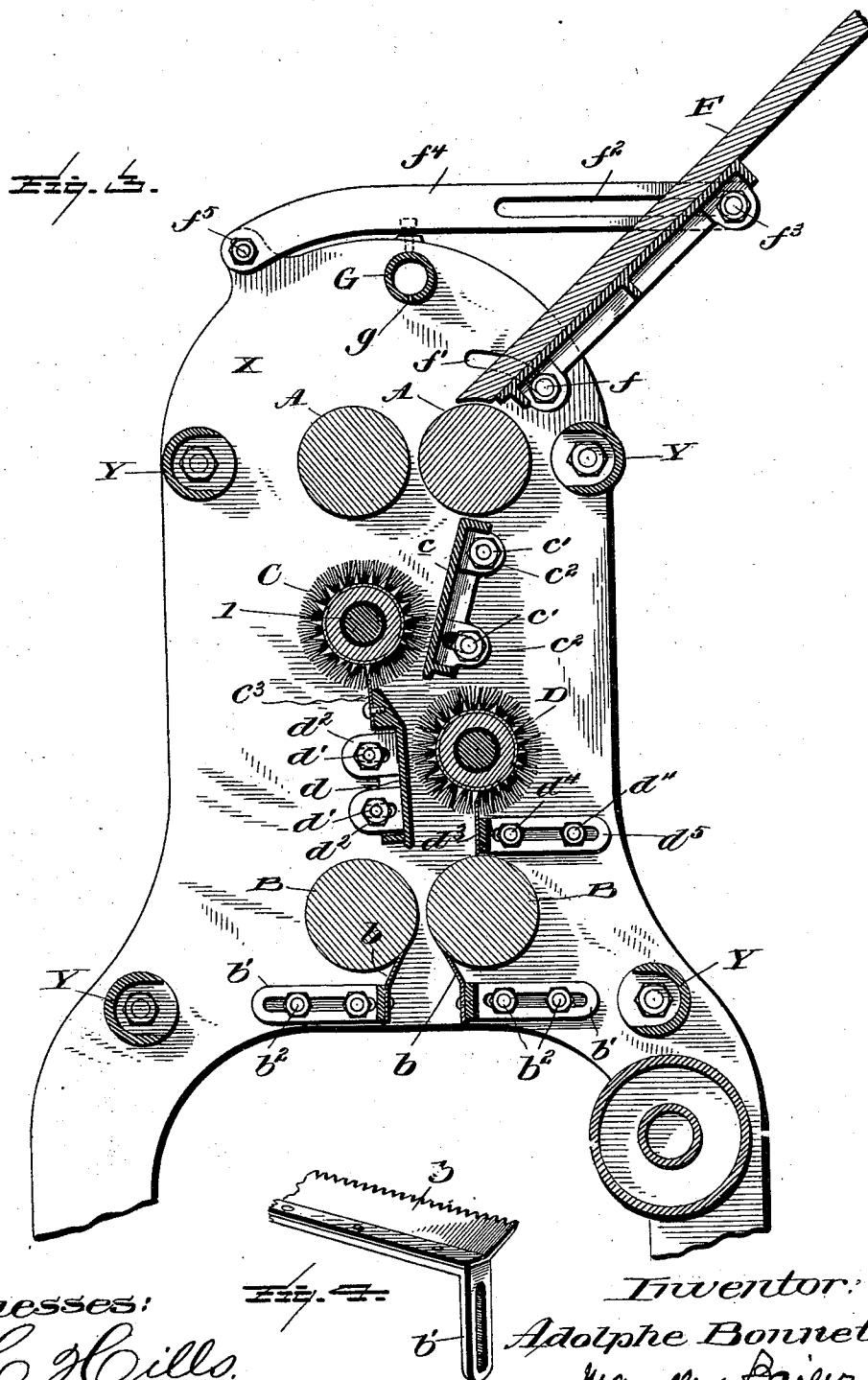
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DECORTICATING MACHINE.

No. 579,734.

Patented Mar. 30, 1897.



Witnesses:
L.C. Hills.
Will A. Sick

Inventor:
Adolphe Bonnet,
by Marshall Baker
his Atty.

UNITED STATES PATENT OFFICE.

ADOLPHE BONNET, OF HAVANA, CUBA, ASSIGNOR TO HERMAN G. HINSE,
OF JERSEY CITY, NEW JERSEY.

DECORTICATING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 579,734, dated March 30, 1897.

Application filed October 1, 1896. Serial No. 607,601. (No model.)

To all whom it may concern:

Be it known that I, ADOLPHE BONNET, a citizen of France, and a resident of Havana, Cuba, have invented certain new and useful
5 Improvements in Decortivating-Machines, of which the following is a specification.

In the machine for decortivating fibers which I have invented it has been my aim to combine simplicity with efficiency of operation.
10 tion.

The invention will first be described by reference to the accompanying drawings and will then be pointed out more specifically in the claims.

15 In the drawings, Figure 1 is a side elevation of a machine embodying my improvements in their preferred form. Fig. 2 is a front elevation, and Fig. 3 is a transverse vertical section, of the same. Fig. 4 is a view of a portion
20 of one of the wipers or scrapers for the bottom pair of rolls.

The frame of the machine consists of the side pieces X, connected by suitable cross stay-rods and bolts Y. In the frame are supported the upper pair of crushing-rolls A and the lower pair of crushing-rolls B, between
25 which are located the brushes C D, which clean the stock on its way from the upper to the lower pair of crushing-rolls, all of these
30 parts being power-driven.

The brush C is on the driving-shaft 1 of the machine, which may be actuated in any suitable way, whether by hand or by power. In this instance it takes power by having its
35 pulley 2 belted to some suitable prime mover. Shaft 1 has on the end opposite to pulley 2 a bevel-pinion 3, which meshes with a bevel-pinion 4 on the upright shaft 5, supported in suitable bracket-bearings on the side of the
40 machine-frame. At its upper end it has a worm 6, gearing with a worm-wheel 7 on the axle of one of the pair of upper crushing-rolls A, this roll being geared to its fellow roll by toothed wheels 8 9, and at its lower
45 end it has a worm 10, meshing with a worm-wheel 11 on the axle of one of the lower pair of crushing-rolls B, which is geared to its fellow roll by toothed wheels 12 13. The rolls B are adjustable to and from one another, for
50 which purpose one of them is supported at its ends in adjustable bearings B' of ordinary or

suitable construction, one of which is shown in Fig. 1. In practice the rolls A of the upper pair will be similarly adjustable to and from one another.

The brushes are so placed and arranged
55 that the ribbon or stalk as it passes from the upper to the lower pair or set of crushing-rolls is brushed alternately on opposite sides, as will be understood by reference to Fig. 3. 60
It passes just between the brush C and the guide-plate *c*, and thence between the brush D and the guide-plate *d*. These guide-plates extend the width of the machine and are adjustably secured to the sides of the same, so
65 that they may be set at a greater or less distance from their respective brushes. They thus not only support the stalk or ribbon while it is being brushed, but they serve both as guides and by their adjustability as a
70 means for regulating the size of the throat or passage between each brush and its guide-plate. The adjustment in this case is effected by means of set-bolts *c' d'*, which pass through
75 slotted ears *c²* and *d²* into the frame of the machine. Combs or the like are provided for keeping the brushes clean. One of these—the one for brush D—is shown at *d³* as secured at its ends to the sides of the machine
80 by bolts *d⁴*, passing through longitudinally-slotted arms *d⁵*, attached to the comb, whereby the comb may be adjusted. The comb *c³* for the upper brush C is represented as secured to the upper end of the guide-plate *d*.
85 The combs may be otherwise arranged and mounted, if desired. Brush D is driven from shaft 1 by suitable gearing.

I remark here that more than two brushes may be employed, but in such case each brush will have its guide-plate, and they should follow one another in the order hereinbefore indicated, so that the ribbon shall be brushed alternately on opposite sides. The brushes C D are shown as provided with bristles of
90 any proper material, but they are typical of any known or suitable form and construction of brush.

Each of the lower crushing-rolls B is provided with a wiper or scraper *b*, set below the roll, with its acting edge in contact with the
100 roll. It is desirable that these scrapers or wipers should be adjustable with reference

to their rolls, and for this purpose each one of them is provided at its ends with longitudinally-slotted arms b' , through which pass the bolts b^2 , by which it is secured to the frame, as seen in Fig. 3.

Beneath the last pair of crushing-rolls is located a conveyer (typified by the endless traveling power-driven apron E, Fig. 1) for transferring the product to any desired point. The wipers or scrapers b not only keep the surfaces of rolls B clean, but they also form a throat for the guidance of the stalks or ribbons from said rolls to the conveyer.

Above the upper pair of crushing-rolls A is the inclined feed-table F, adjustably mounted so that its inclination, as well as the proximity of its lower end to the throat between the two rolls, can be regulated. The table at its lower edge overhangs one of the rolls and at this edge is secured to the frame by a bolt-and-slot connection $f f'$, the slot, which in this instance is in the frame of the machine, is curved in the arc of a circle struck from the axis of the roll as a center, so that, while the table may be moved to and from the throat between the rolls, its lower edge will always be at the same distance from the periphery of the roll which it overhangs. To permit this movement of the table at the lower edge, it is secured above at each end by a slot-and-bolt connection $f^2 f^3$ to an arm f^4 , hinged or pivoted at f^5 to the machine-frame. By this arrangement the inclination of the table as a whole, as well as the proximity of its lower edge to the throat between the rolls A, can be varied at pleasure.

A pipe G (in communication with a source of supply of water or other liquid) extends from side to side of the machine directly over the throat between the rolls, and on its under side is perforated or slotted, as at g , Fig. 3, to furnish a supply of liquid to the stalks before as well as during the crushing operation.

Assuming the parts of the machine to be properly adjusted, the operation is as follows: The stalks are fed from the feed-table F to the upper pair of rolls A, during their passage between which they are crushed and flattened and brought in proper condition to enable the brushes to readily remove the refuse without breaking or injuring the ribbons. From these rolls they pass successively between the brush C and its guide-table c and the brush D and its guide-table d , whereby the material is brushed and cleaned from opposite sides alternately, in this way being most effectively

cleaned and stripped of refuse without injury to the ribbons. From the last brush the ribbons or stalks pass to and between the lower pair of crushing-rolls B, which should be adjusted to apply sufficient pressure to thoroughly break the woody part of the stalk and loosen it from the fiber, and thence they pass to the conveyer, by which they are removed to some convenient point, after which the fiber is freed from the remaining refuse.

Having now described my improvements and the best way now known to me of carrying the same into effect, what I claim as new, and desire to secure by Letters Patent, is as follows:

1. In combination with the upper or initial set of crushing or flattening rolls, the feed-table having a bolt and curved-slot connection at its lower edge with the machine-frame, and arms hinged or pivoted to said frame and attached by a bolt-and-slot connection to the upper edge of said feed-table, substantially as and for the purposes hereinbefore set forth.

2. The combination of the top and bottom sets of crushing-rolls A and B; the brush C placed under one of the rolls A of the top pair, and on one side of the path of travel of the stock; the guide-plate c extending from a point under the other roll A down opposite to and facing the brush and thence down nearly to the brush D next below, and adjustably mounted in the frame of the machine so that it may be bodily adjusted to and from the brush C to vary the size of the throat or passage between them; the brush D located on the same side of the path of travel with the guide-plate c and below said guide-plate; the guide-plate d extending from a point under brush C down opposite to and facing brush D, and thence down nearly to one of the crushing-rolls B of the bottom pair, and adjustably mounted in the frame of the machine so that it may be bodily adjusted to and from its brush D to vary the size of the throat or passage between them; and means for holding said guide-plates in their adjusted position, all substantially as hereinbefore shown and set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ADOLPHE BONNET.

Witnesses:

ALFRED STOVEKEN,
HENRY HINSE.