

(No Model.)

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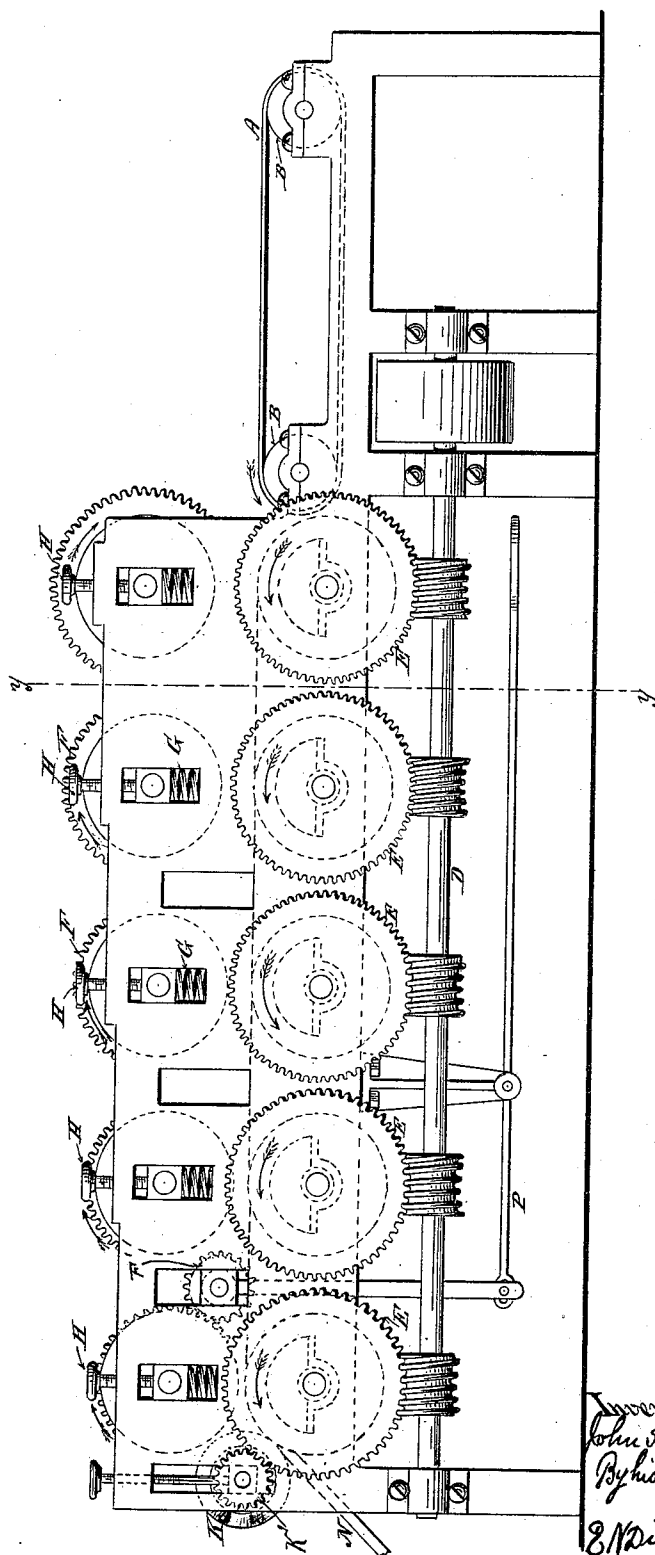
J. H. BROWN.

MACHINE FOR REMOVING THE FLESHY MATTER FROM VEGETABLE LEAVES.

No. 471,097.

Patented Mar. 22, 1892.

Fig. 1.



Witnesses:
O. L. Gardner
H. Contant

Inventor:
John H. Brown
By his Attorney
E. M. Dickerson

(No Model.)

5 Sheets—Sheet 2.

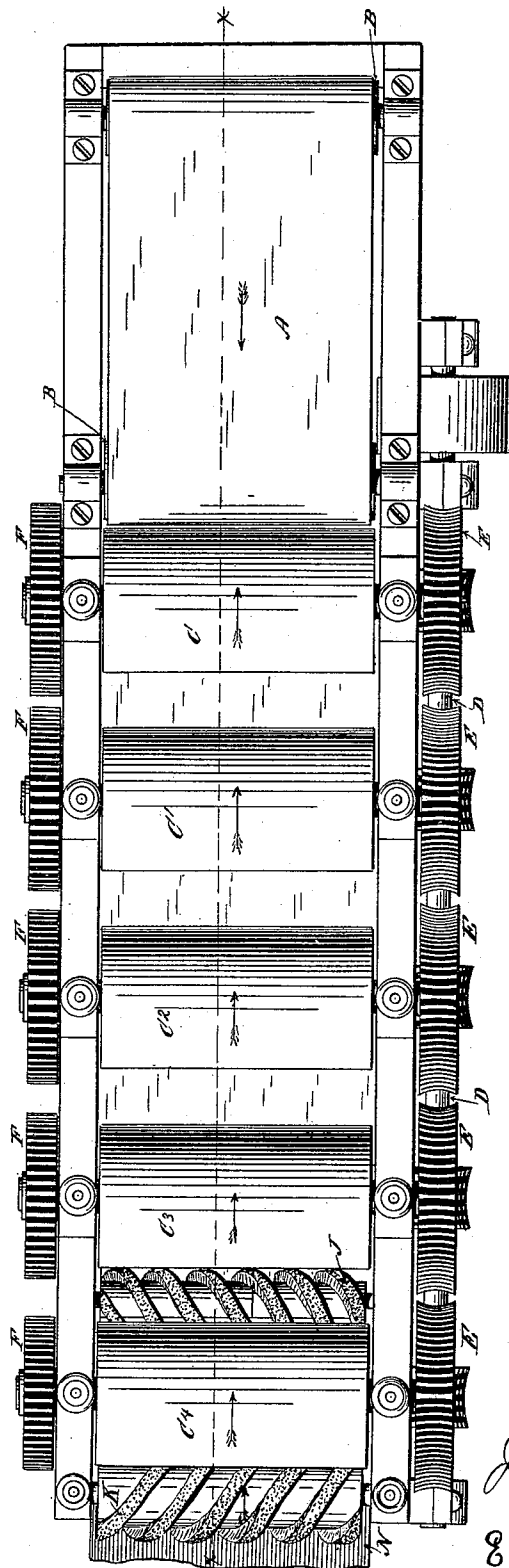
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Fig. 2.



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Inventor:
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(No Model.)

5 Sheets—Sheet 3.

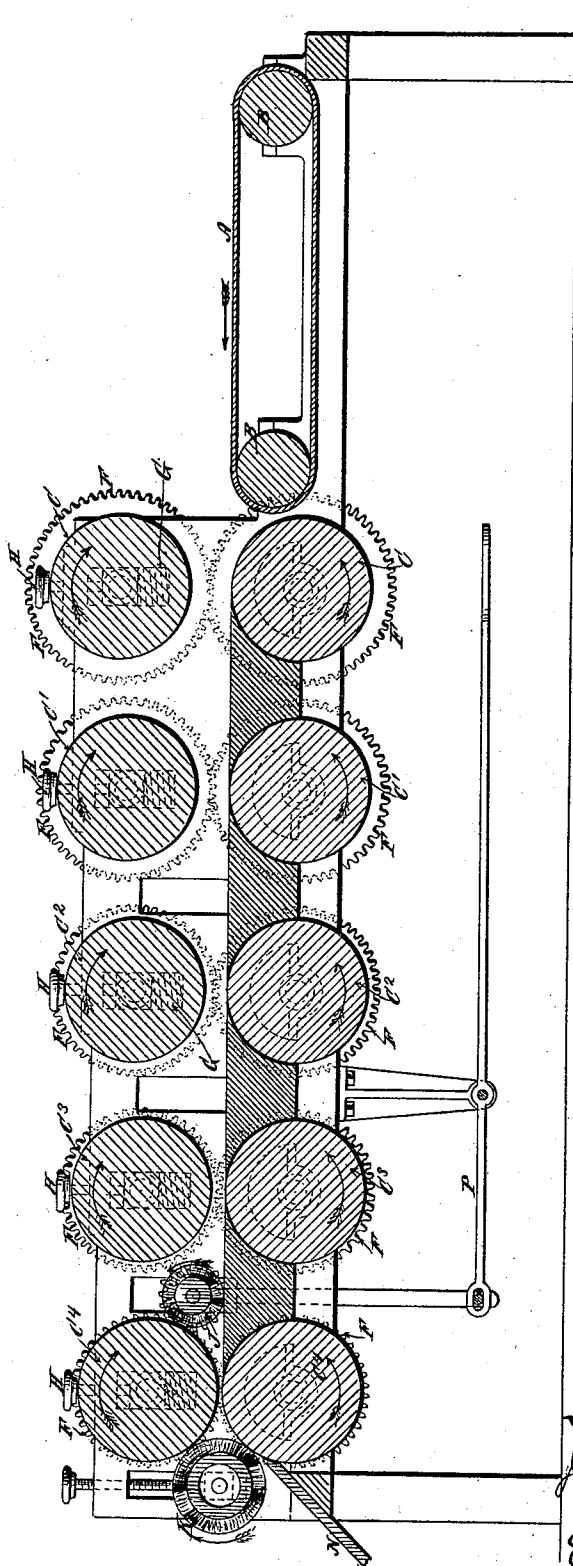
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Fig. 3.



Witnesses:
R. L. Gardner
H. Contant.

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(No Model.)

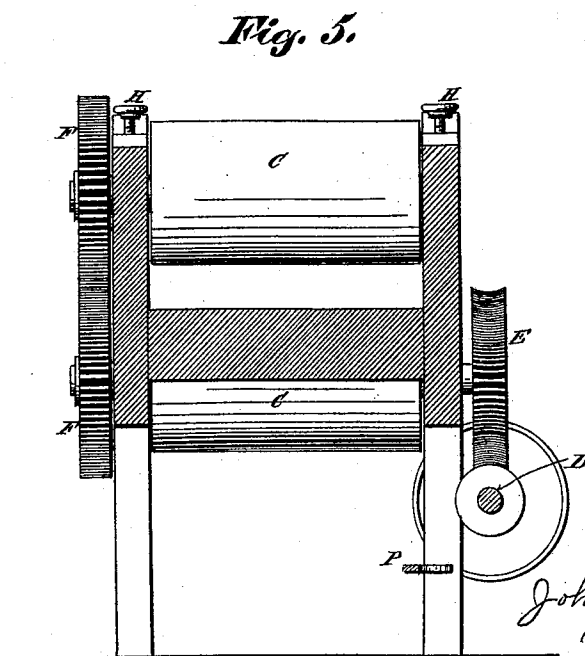
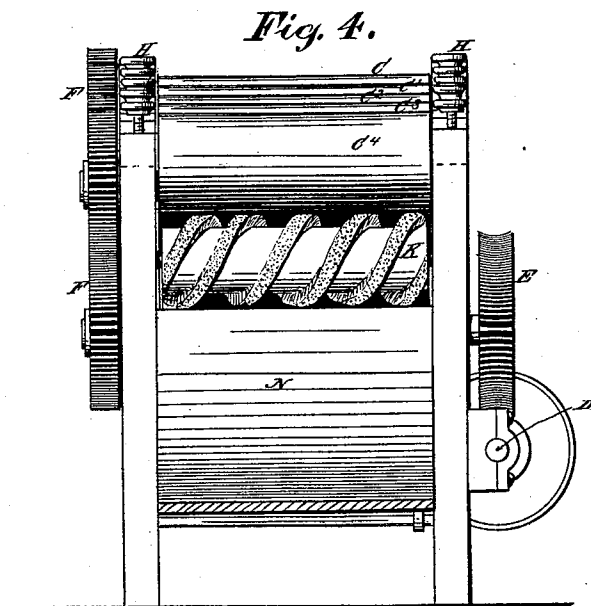
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(No Model.)

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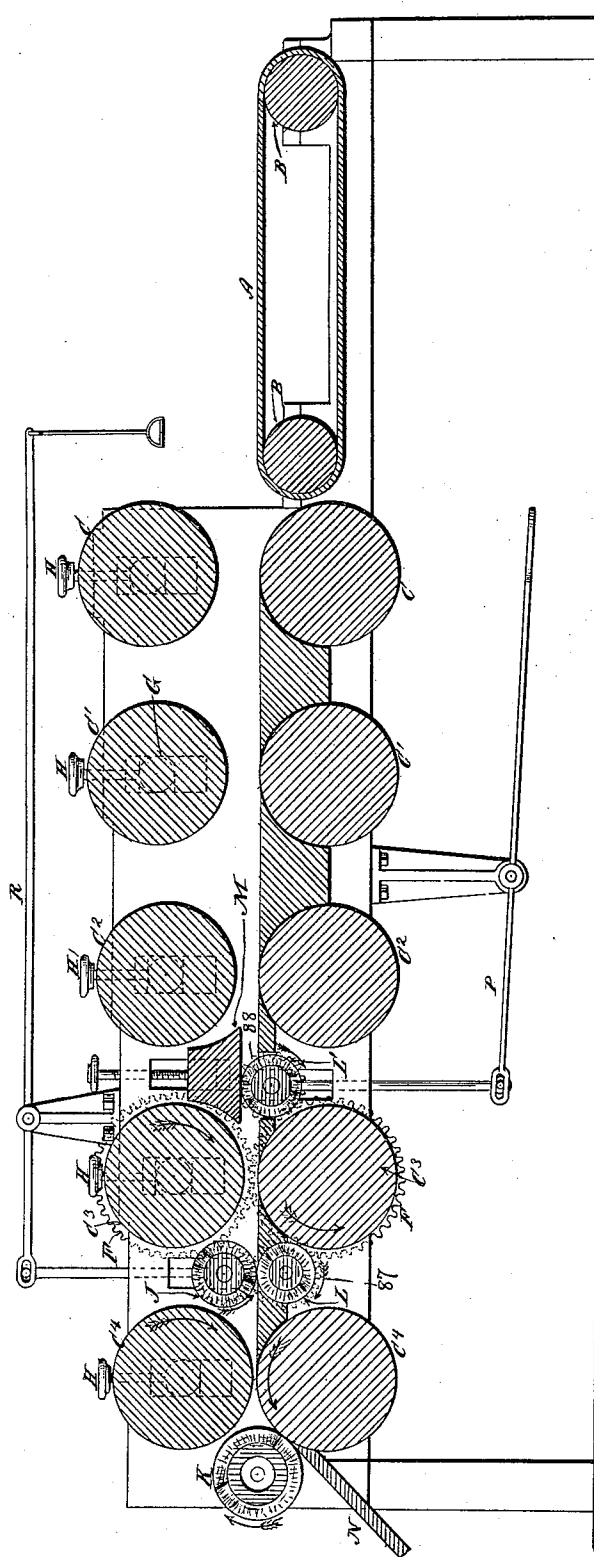
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Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

JOHN H. BROWN, OF NEW YORK, N. Y., ASSIGNOR TO THE AMERICAN FIBER ASSOCIATION, OF GEORGIA.

MACHINE FOR REMOVING THE FLESHY MATTER FROM VEGETABLE LEAVES.

SPECIFICATION forming part of Letters Patent No. 471,097, dated March 22, 1892.

Application filed July 27, 1889. Serial No. 318,815. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. BROWN, of the city, county, and State of New York, have invented a new and useful Improvement in Machines for Removing the Fleshy Matter from Vegetable Leaves, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

This invention relates to an improvement in apparatus by which a large proportion of the fleshy matter can be removed from leaves of plants, and is especially applicable to the removal of the fleshy matter from the leaves of Maguey, known as the "*Agave Americana*;" and it consists in a combination of crushing rollers and brushes, as will be readily understood from the accompanying drawings, in which—

Figure 1 represents a lateral elevation on the driving side of my mechanism; Fig. 2, a plan view; Fig. 3, a section through Fig. 2 on the line *xx*; Fig. 4, an end view of my apparatus at the delivery end; Fig. 5, a section through Fig. 1 on the line *yy*, looking toward the feeding-apron; and Fig. 6, the same section as Fig. 3, showing some of the parts removed and the position of the stripping-brushes.

A represents a feeding-apron, upon which the leaf to be stripped is fed. The apron may be supported upon rollers B B. The machine itself consists, as shown, of five pairs of crushing-rollers C C' C² C³ C⁴, which successively approach each other more closely, as clearly indicated in Fig. 3. These rollers are driven from the driving-shaft D, having worm-wheels gearing with gear-wheels E. Wheels F', upon the same shafts at the other side of the machine, in turn drive wheels F, attached to the upper rollers. The upper rollers are by preference made adjustable by boxes moving in slots, as in the ordinary wringing-machines, and may be provided with counterbalancing-springs G and screw-handles H. In front of the last pair of crushing-rollers C⁴ C⁴ the stripping-brushes J operate in the reverse direction, as indicated by the arrows, from the movement of the leaf. One or more of them may be put in operation, as desired—as, for instance, in front of each pair of crushing-rollers. Their structure is preferably as in-

dicated in Fig. 2, having spiral lines of bristles or scrapers surrounding the central cylinder. They are caused to revolve by gear-wheels F', meshing with the upper gear-wheels F, and are adjustable by the pedals P. The last brush K revolves in the same direction as the upper rollers, and in addition to its stripping function tends to feed the leaves down the platform N. This brush is driven by a pinion K', engaging with the gear-wheels of the last roller of the lower set of rollers, as shown in Fig. 1. Brushes may also be employed, operating beneath the leaf in its passage, as indicated in Fig. 6, where the brush L operates in conjunction with the brush J, and the brush L' operates in conjunction with the presser-surface M, made adjustable by a screw or screws, as shown.

The brushes L and L' may be driven by the gears 87 88 thereon, meshing with the gear F of the roller C³, which is located between them, or by any other suitable mechanism.

The upper brush J may be adjustable by levers R, as indicated in Fig. 6.

The operation can now be readily understood. Assuming the leaf of the Maguey plant to be the one desired to be stripped, it is fed upon the feeding-apron A and then gradually drawn between the rollers, which are adjusted to be successively nearer each other. In this way the leaf is continually drawn along and the fleshy matter is crushed out of it. The brushes J or L operate in conjunction to strip off the fleshy matter, as it is expressed, and a final brush K may aid in this operation and also in the feeding operation.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a machine for removing the pulp from fibrous material, with a succession of gradually-approaching pairs of rollers continuously driven to carry the material forward in the same direction, of a brush in front of one of said pairs of rollers revolving in the opposite direction to the movement of the material, substantially as described.

2. The combination, in a machine for removing the pulp from fibrous material, with a succession of gradually-approaching pairs

of rollers continuously driven to carry the material forward in the same direction, of a brush in front of the last pair of rollers revolving in the opposite direction to the movement of the material, and another brush at the end of the machine having its acting surface moving in the same direction as the travel of the material, substantially as described.

15 3. The combination, in a machine for removing the pulp from fibrous material, with a succession of gradually-approaching pairs of rollers continuously driven to carry the material forward in the same direction, of a brush in front of one of said pairs revolving in the opposite direction to that of the travel of the material through the machine, and a brush at the end of the machine revolving in the same direction as the travel of the material, substantially as described.

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4. The combination, in a machine for removing the pulp from fibrous leaves, of rollers $C^1 C^4$ and upper and lower brushes J L, located in front of them and whose effective surfaces move in the opposite direction from the movement of travel of the material through the machine, substantially as described.

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5. The combination, in a machine for removing the pulp from fibrous material, of rollers $C^3 C^8$ and brush J, having spirally-arranged brushing-surfaces, substantially as described.

30

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN H. BROWN.

Witnesses:

H. CAUTANT,
WM. A. POLLOCK.