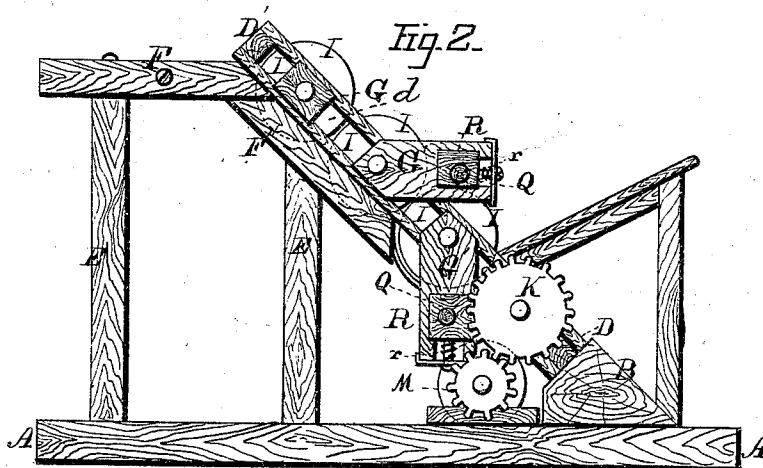
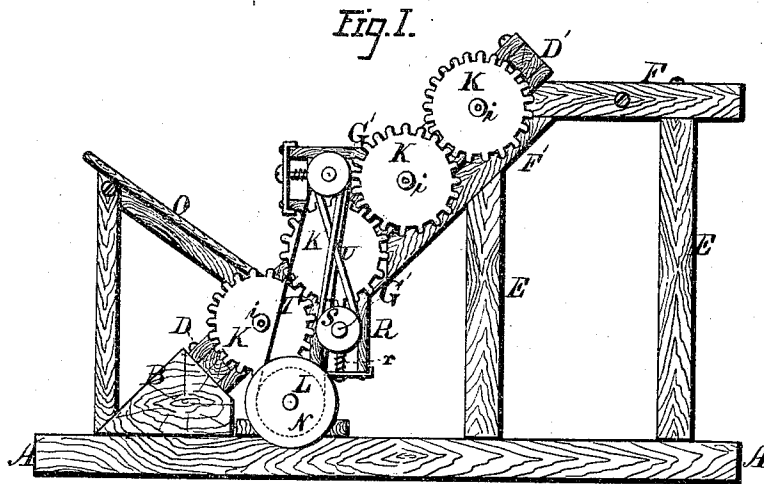


J. E. NEILL. URANIA U. NEILL, Adm'x.

Hemp Machines.

No. 143,179.

Patented September 23, 1873.



WITNESSES:

*Jas. E. Hutchinson
 John R. Young*

*Urania U. Neill, Administratrix
 By Prindle and Co., her Attorneys*

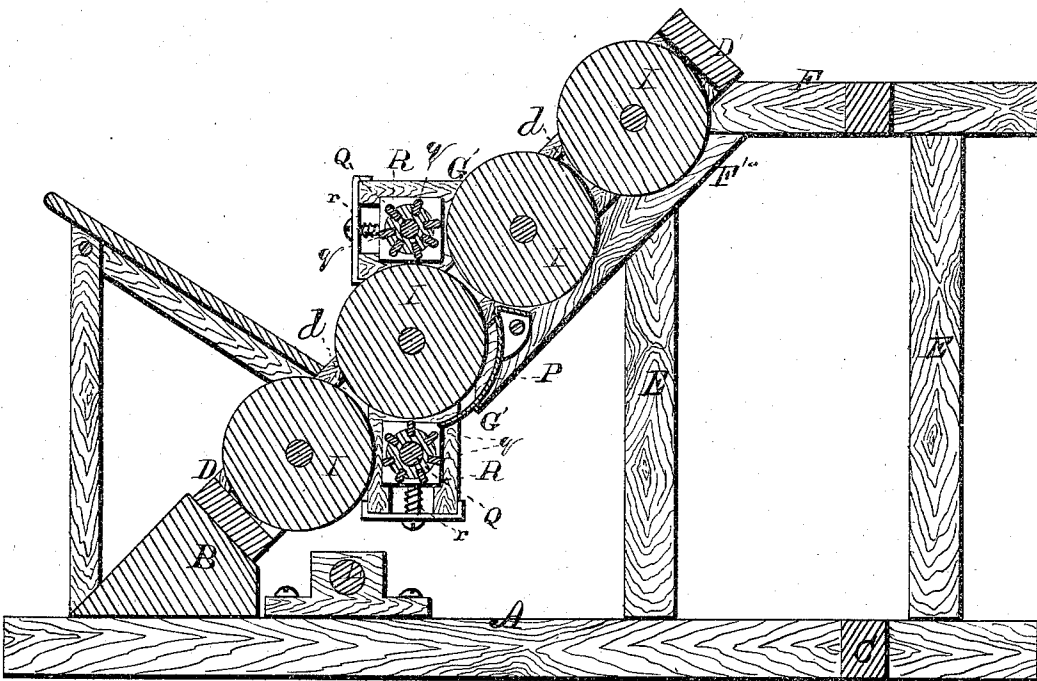
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Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

URANIA U. NEILL, OF KEY WEST, FLORIDA, ADMINISTRATRIX OF JOHN E. NEILL, DECEASED.

IMPROVEMENT IN HEMP-MACHINES.

Specification forming part of Letters Patent No. 143,179, dated September 23, 1873; application filed August 8, 1873.

To all whom it may concern:

Be it known that JOHN E. NEILL, late of New York, in the county of New York and in the State of New York, did invent certain new and useful Improvements in Machines for Removing Fibers of Manila-Hemp Leaf for the Production of Hemp, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making a part of this specification, in which—

Figures 1 and 2 are side elevations of the improved machine, and Fig. 3 is a vertical central section of the same upon a line extending from front to rear.

Letters of like name and kind refer to like parts in each of the figures.

The design of this invention is to facilitate the manipulation of hemp-leaf for the production of what is commercially known as manila or sisal hemp; to which end it consists, principally, in the combination and relative arrangement of the feed-rollers and scrapers, substantially as and for the purpose hereinafter specified. It consists, further, in the means employed for combining the feed and scraper rollers, substantially as and for the purpose hereinafter shown.

In the annexed drawings, A and A represent two sills, which are connected together in parallel lines by means of suitable cross-bars, B and C, so as to form a support or base for the machine. From the cross-bar B two bars, D, each provided with a central longitudinal slot, *d*, extend upward and rearward at an angle of about forty-five degrees, and are suitably supported by means of vertical posts E, which are secured to and extend upward from the sills A, and are connected together at their upper ends by the horizontal and inclined rails F and F', respectively, against the latter of which said bars are secured. Fitted to and sliding within the grooves *d* are four boxes, G and G', within each of which is journaled one end of a roller, I, said rollers having such length as to nearly fill the space between the bars D, while their united diameters nearly equal the space between the cross-bar B and a cross-bar, D', which extends between the upper ends of said

bars D. Upon the projecting ends of the journals *i* of the rollers I, at one side of the machine, are secured gear-wheels K, which mesh together, and, when one of said rollers is caused to rotate, impart such motion to the other rollers, and cause their contiguous peripheries to roll together or in the same direction. A shaft, L, suitably journaled beneath and in rear of the lower roller I, and provided with a pinion, M, which meshes with the gear-wheel K, and a belt-pulley, N, for receiving motion from suitable operating mechanism, enables said rollers to be rotated. A sloping table, O, secured upon the front side of the machine, at or just below the intersection of the first and second rollers I, enables the hemp-leaves to be fed into or between the latter, from whence, by means of suitable metal guides P, said leaves are caused to pass upward and then forward between the second and third rollers, and again rearward and upward between the latter and the fourth roller, during which passage the fibers of said leaves become "broken." In order that the epidermis, pulp, and other useless portions of the leaf may be removed, and the fibers left clean, a shaft, Q, is journaled in such position as to meet the leaves as they pass from between each pair of rollers, and upon its periphery is provided a number of radial longitudinal scrapers, *q*, which, when said shaft is rotated, come into contact with said leaves, and remove therefrom the worthless portions named. The scraper-rollers are pressed inward against the feed or breaking rollers by means of springs *r*, which bear upon the journal-boxes R of the former; but as said feed-rollers have an independent motion toward or from each other, so as to enable them to conform to the quantity of material passing between, it becomes necessary to so combine each scraper-roller with one of said feed-rollers as to cause them to maintain their relative positions. To accomplish such result, the journal-boxes G of two of the feed-rollers I are extended outward beyond the slotted bars D, and within such extended portions are placed the journal-boxes R of the scraper-rollers, by which arrangement said rollers move together in a line with the slots *d*, while in a line at a right angle to said

slots their positions are maintained. The scraper-rollers are provided with driving-pulleys S, and connected together and to or with the driving-shaft L by means of belts T and U, so as to cause the peripheries of said rollers to move in an opposite direction from their feed-rollers at the point at which said parts meet.

The device is now complete, and furnishes an efficient means for preparing the hemp fiber. Its construction is simple, so as to render the cost moderate, while at the same time all of its parts are durable.

Having thus fully set forth the nature and merits of this invention, what is claimed as new is—

1. The combination and relative arrangement of the feed-rollers I and scraper-rollers Q and q within the supporting-frame, substantially as and for the purpose specified.

2. The feed-rollers I and yielding scraper-rollers Q and q, combined by means of the united journal-boxes F' and E, in the manner and for the purpose substantially as shown.

In testimony whereof I have hereunto set my hand this 10th day of July, 1873.

URANIA U. NEILL,
Administratrix.

Witnesses:

W. C. MALONEY, Jr.,
G. BONNE PATTERSON.