

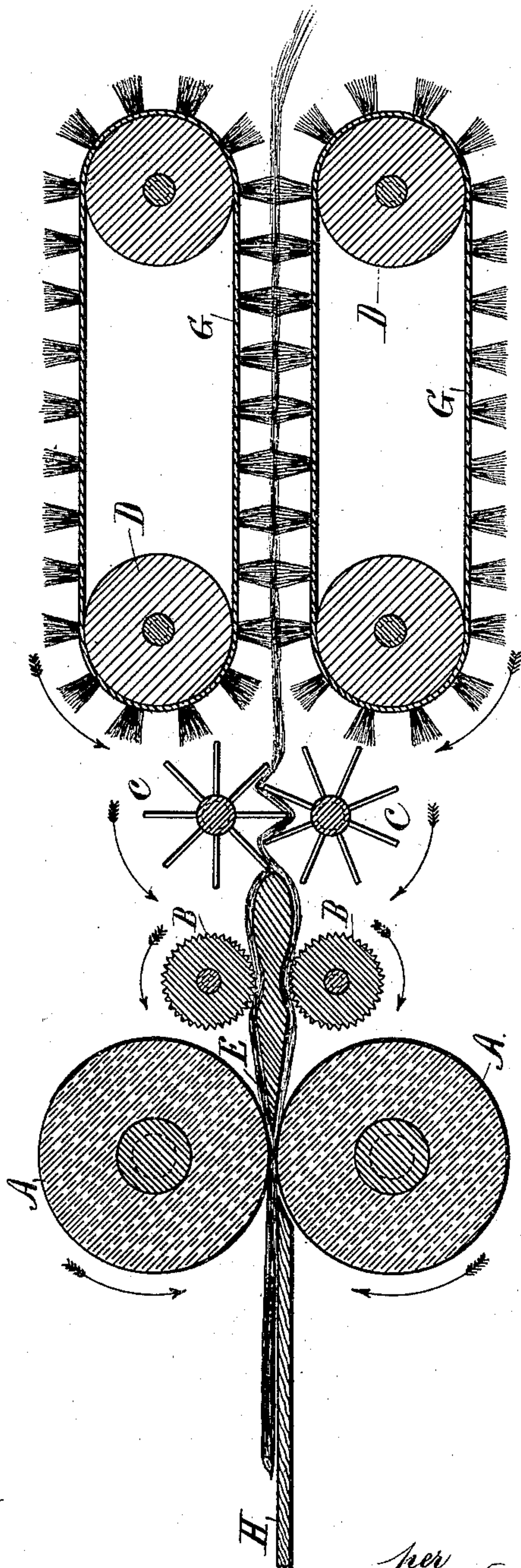
(No Model.)

A. ANGELL.

MACHINE FOR SEPARATING JUTE, RAMIE, &c., FROM THE STALK.

No. 358,827.

Patented Mar. 8, 1887.



Witnesses
Harold Terrell
Chas. H. Smith

Inventor
Albert Angell
per Lemuel W. Terrell
att'y.

UNITED STATES PATENT OFFICE.

ALBERT ANGELL, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO THE
AMERICAN JUTE AND FIBER COMPANY, OF NEW YORK.

MACHINE FOR SEPARATING JUTE, RAMIE, &c., FROM THE STALK.

SPECIFICATION forming part of Letters Patent No. 358,827, dated March 8, 1887.

Application filed March 12, 1886. Serial No. 194,960. (No model.)

To all whom it may concern:

Be it known that I, ALBERT ANGELL, of East Orange, in the county of Essex and State of New Jersey, have invented an Improvement in Machines for Separating Jute, &c., from the Stalk, of which the following is a specification.

In this improvement I make use of elastic feeding-rollers, which serve to pass the stalks of jute, ramie, or similar material along through the machine, and also to hold the stalks and fiber from being drawn through too rapidly by the cleaning portion of the mechanism, and I split the stalks longitudinally by a stationary knife, and loosen the bark and crack the woody fiber by pricker-rollers having longitudinal ribs or blades acting at opposite sides of the splitting-knife, and the fiber is then subjected to the action of beaters and brushes, to remove the bark and woody portions and leave the fiber in a condition for market.

In the drawing I have represented my improvement by a section longitudinally of the machine and transversely of the respective rollers.

The stalks of jute, ramie, or other fiber are to be laid upon the table or feed-board H, and they are passed in, butt-end first, between a pair of elastic feed-rollers, A A, and by them pressed against and split upon the stationary knife E, so that the woody interior of the plant is divided longitudinally, to give greater facility for the removal of the woody portion. At each side of this knife E are the rollers B, the surfaces of which are channeled longitudinally, leaving thin blades or pickers upon the surfaces of such rollers, for the twofold purpose of loosening and partially detaching the bark and for partially crushing and breaking the woody stock.

The beaters C C are composed of radial blades projecting from central shafts that are geared together and revolve in the direction indicated by the arrows, and the edges of these blades pass by each other, so that the stock and fibrous materials between the beaters are bent alternately in opposite directions, and the back edge of the knife E is also rounded, so that the beaters act against the fiber and stalks at these places to break up the woody portions thereof as the stalks pass along over the

back edge of such knife; and D D are cylinders around which pass endless belts of brushes G, the fiber being fed along through between these brushes, and the bark or other foreign matter is brushed off the fiber by such endless belts of brushes, and the fiber as delivered from these brushes is in a condition ready for market.

It will now be apparent that the beaters C perform two distinct operations. First, the woody portions of the plant are broken transversely by being bent in alternate opposite directions, and, second, the fiber is rubbed and stripped longitudinally to remove the bark and foreign matter, in consequence of the beaters traveling at a greater speed than the fiber as it is supplied by the feed-rollers; hence the fiber reaches the brushes G in nearly straight and comparatively clean condition, and these brushes complete the cleaning of the fiber, so that it is delivered in a condition adapted to market.

The means made use of for revolving the respective parts may be of any desired character. It is preferable to gear the respective pairs of rollers together, and to drive the rollers B and A at the same surface-speed, or nearly so. The beaters C should travel about ten times as fast as the feed-rollers, and the brushes should travel about twice as fast as the feed-rollers.

I claim as my invention—

1. The combination, with the feed-rollers A and splitting knife E, of the rollers B B, having roughened surfaces to act upon the fiber at each side of the knife E, the beaters C, formed of longitudinal blades interlocking, as specified, and acting upon the fiber as it passes away from the knife E, and the endless belts of brushes, substantially as set forth.

2. The combination, with the feed-rollers A and the knife E, for splitting the stalks, of the rollers B at the sides of the knife E and acting upon the split stalks to loosen the woody matter and bark from the fiber, substantially as set forth.

Signed by me this 26th day of February, A. D. 1886.

ALBERT ANGELL.

Witnesses:

J. G. EUSTIS,
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