

E. COULON.

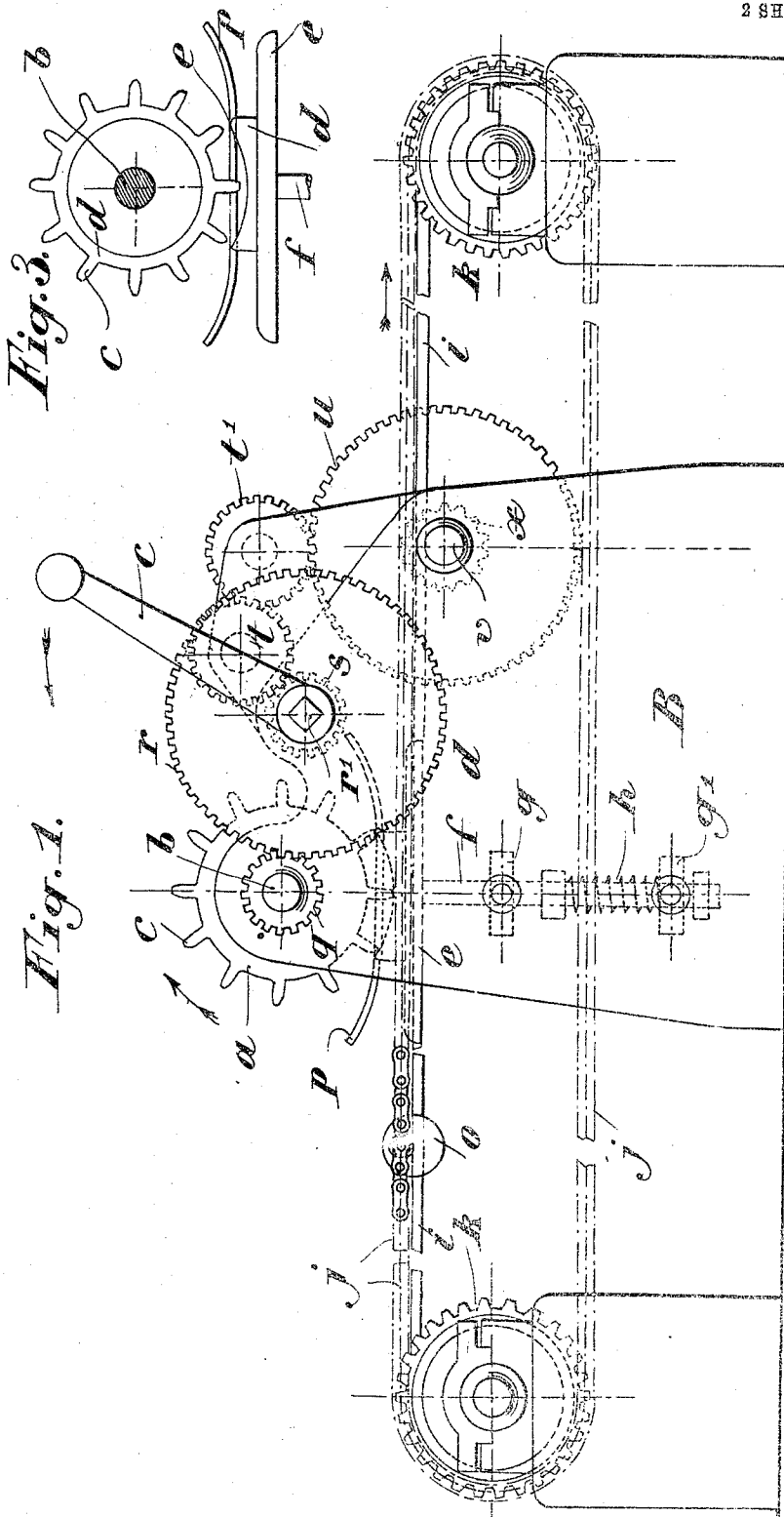
MACHINE FOR REMOVING WOOD FROM RAMIE STALKS IN THE GREEN STATE.

APPLICATION FILED SEPT. 16, 1912.

1,054,752.

Patented Mar. 4, 1913.

2 SHEETS-SHEET 1.



Witnesses:

Gertrude M. Hulet

S. Kraus.

Inventor:

per Emory Coulon
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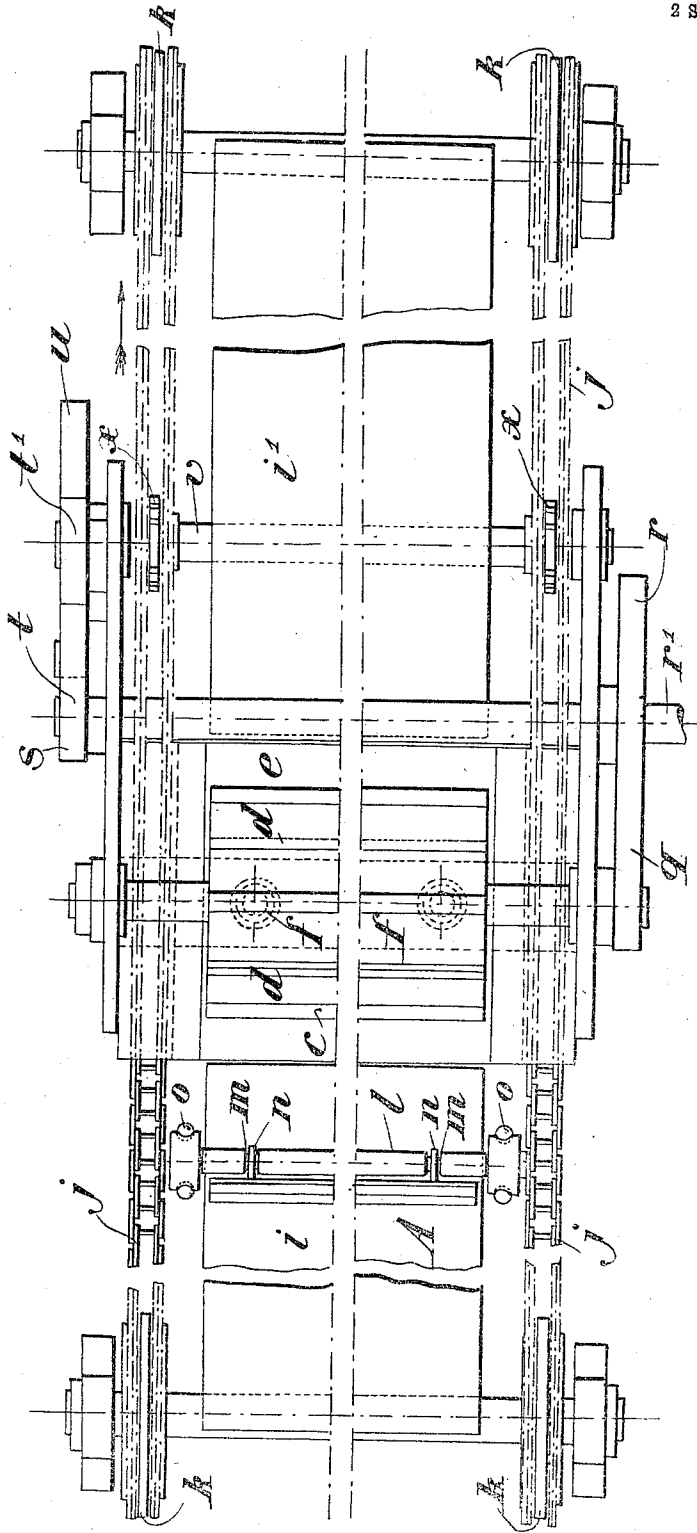
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2 SHEETS—SHEET 2.

Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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MACHINE FOR REMOVING WOOD FROM RAMIE-STALKS IN THE GREEN STATE.

1,054,752.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed September 16, 1912. Serial No. 720,645.

To all whom it may concern:

Be it known that I, EMERY COULON, a subject of the King of Belgium, residing at Blaton, in the Kingdom of Belgium, have
5 invented certain new and useful Improvements in Machines for Removing the Wood from Ramie-Stalks in the Green State, of which the following is a specification.

The present invention relates to machines
10 for removing the ligneous portion of ramie stalks in the green state in order to separate the fibrous part which is subsequently intended to be converted into harl, into which machines the green stalks fixed in
15 grippers are passed by feed chains between a curvilinear anvil and a winged beater drum.

The machines of this type must be provided with a device permitting the free passage of the grippers between the anvil and the beater drum and with this object it has already been proposed to arrange the anvil above the beater drum and to provide it with a spring-controlled rod mounted in a
20 support in which it can be displaced longitudinally in order to separate the anvil from the beater drum by means of a bent lever, one arm of which is located in the path of the grippers by which it is lifted when they
25 pass beneath it and releases a retaining member which enables the anvil to rise. In these machines the chains which feed the ramie stalks pass on a level with the arms of the anvil and the stalks are only subjected to the action of the beaters of the drum which is frequently insufficient to detach the wood from the fiber. Furthermore
30 the complication and the fragility of the mechanism for lifting the anvil constitutes a grave defect because the machines are intended to be employed on or near ramie plantations where repairs are difficult and it is necessary that they should act at a high
35 speed in order to render their use remunerative.

The present invention has for its object a simple and strong device which obviates this defect and which consists broadly in providing the grippers at their two ends
40 with members intended to be introduced between a part integral with the anvil and parts integral with the framework of the machine so as to separate the anvil from the drum during the passage of the grippers. The anvil is arranged beneath the
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drum and normally it emerges above the level of the conveyer chains and is depressed below their level when the grippers pass in such a manner that during the operation of the drum the stalks must first of all ascend
50 upon the anvil and then again descend therefrom which facilitates the detachment of the fiber and upon the passage of the grippers they pass beneath the drum at a sufficient interval to render it certain that
55 they will not be struck by the beaters of this drum.

A machine embodying the invention is illustrated by way of example in the accompanying drawing, in which:

Figure 1 is a side elevation thereof. Fig. 2 is a plan and Fig. 3 is a detail view of the drum and the anvil.

In these figures *a* is the drum mounted on a shaft *b* and provided with wings or
60 beaters *c*. *d* is the anvil integral with a plate *e* mounted on rods *f* sliding in guides *g* and *g'*. Springs *h* normally press the anvil *d* against the beaters *c*. On a level with the plate *e* there are arranged in front
65 of and behind it tables *i* and *i'* on each side of which the conveyer chains *j* run. These chains are driven by pinions *k* and are connected at intervals by rods *l* provided with two grooves *m* intended for the reception of
70 the hooks *n* of the grippers *A* in which the ramie stalks from which the wood is to be removed are fixed. Upon each of the rods *l* eccentric cams or rollers *o* are journaled on either side of the table *i*; their periphery
75 can be provided with casters or balls *o'*.

The plate *e* extends beyond the anvil *d* on either side thereof into the path of the rollers *o* and above the edges of the plate *e*
80 guides *p* are fixed to the framework of the machines parallel with the plate but their extremities are raised in such a manner as to present inclined surfaces.

Upon the shaft *b* of the drum *a* there is keyed a toothed pinion *q* in mesh with a
85 wheel *r* mounted on a shaft *r'* which carries a handle *C* or a driving pulley and also a pinion *s* which by means of the pinions *t* *t'* transmits its movement to a wheel *u*
90 keyed upon a shaft *v* journaled in the framework *B* of the machine; this shaft *v* carries pinions *x* which drive the chains *j*.

The operation of the machine is as follows: The green ramie stalks carried by grippers *A* engaged on one of the rods *l* are
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carried toward the anvil *d* and the drum *a* by the chains *j*. When the grippers reach the plate *e* the rollers *o* pass between the lateral edges of this plate and the guides *p* depressing the plate and the anvil sufficiently to allow the grippers to pass between the latter and the beaters of the drum *a* without these beaters being able to come into contact with them. As soon as the rollers *o* and the grippers *A* have passed beyond the rear edge of the plate *e* the latter and the anvil *d* are lifted by the springs *h* and the ramie stalks are pressed against the beaters of the drum which rotates in a direction opposite to that of the displacement of the chains *j*. As the anvil emerges above the level of the chains the ramie stalks displaced by the latter are first of all bent and pressed against the front edge of the anvil and after they have been acted upon by the beaters of the drum they are again bent and pressed against the rear edge of the anvil before being deposited upon the table *i'*. The stalks are thus acted upon on their two faces in succession as they would be by three beater drums arranged one after the other and acting alternately upon the under and upper sides of the stalks. When they reach the table *i'* the fibers of the stalks are entirely detached from their wood which becomes separated without any subsequent beating being necessary.

What I claim and desire to secure by Letters Patent of the United States is:—

1. A machine for removing the wood from ramie stalks in the green state, comprising in combination rods supporting the anvil, guides integral with the framework of the machine for these rods, springs coöperating with the rods in order to hold the anvil normally above the level of the conveyer chains and means for depressing the anvil beneath

the level of the conveyer chains during the passage of the grippers carrying the stalks between the anvil and the beater drum.

2. A machine for removing the wood from ramie stalks in the green state comprising in combination rods supporting the anvil, guides integral with the framework of the machine for these rods, springs coöperating with the rods in order to hold the anvil normally above the level of the conveyer chains, a plate integral with the anvil extending on each side thereof and cams fixed to the conveyer chains on either side of the grippers carrying the stalks so that they penetrate between the plate and the guides of the framework in order to depress the anvil during the passage of the grippers carrying the stalks between the anvil and the beater drum.

3. A machine for removing the wood from ramie stalks in the green state, comprising in combination spring supports for holding the anvil normally above the level of the conveyer chains, a plate integral with the anvil extending on either side thereof, guides integral with the framework of the machine for limiting the lifting of the plate and of the anvil and cams fixed to the outer sides of the conveyer chains opposite the grippers carrying the stalks adapted to penetrate between the guides of the framework and the plate so as to depress the latter and the anvil when the grippers carrying the stalks pass between the anvil and the beater drum.

In testimony whereof I affix my signature in presence of two witnesses.

EMERY COULON.

Witnesses:

LÉON PIÉRARD,
CHAS. ROY NASMITH.