

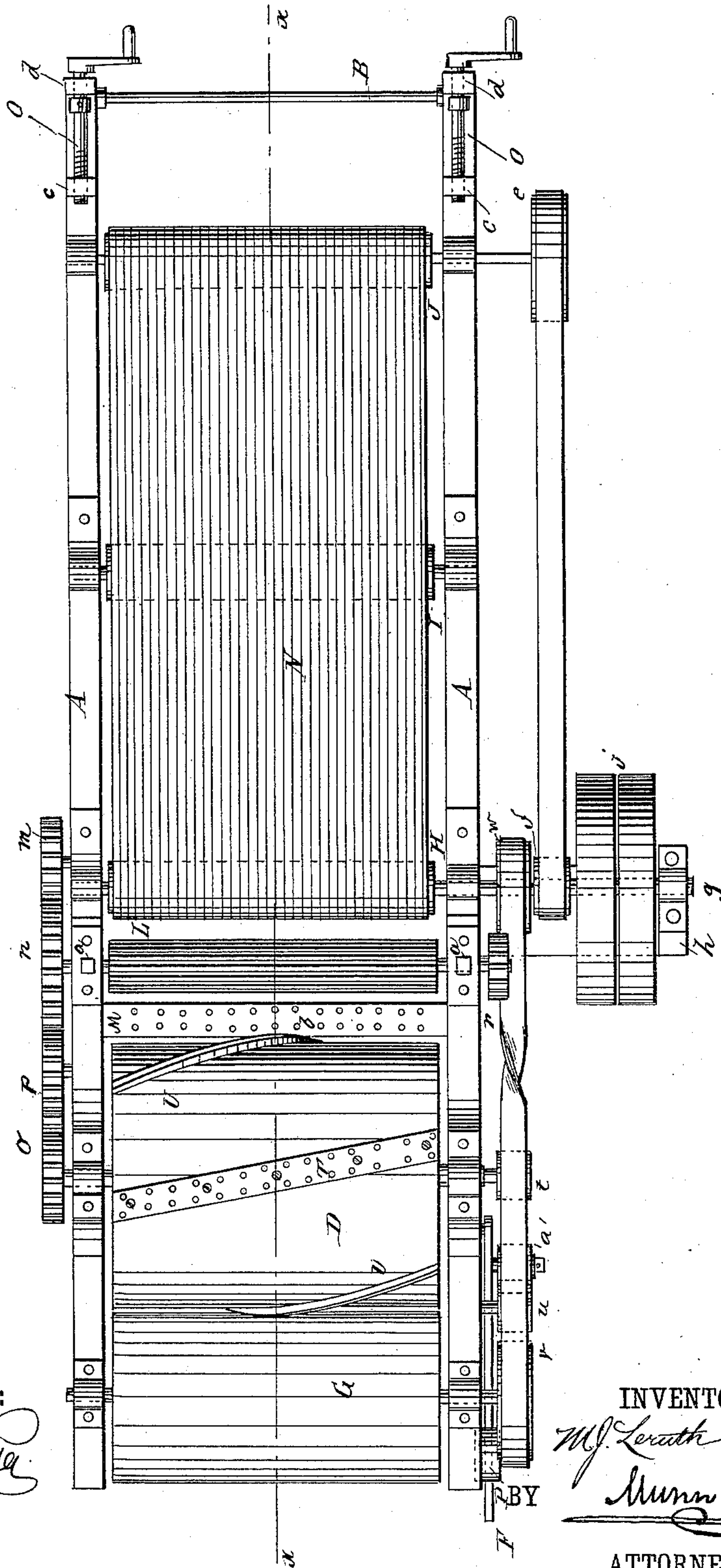
(No Model.)

3 Sheets—Sheet. 1.

M. J. LERUTH.  
DECORTICATOR FOR RAMIE, &c.

No. 409,847.

Patented Aug. 27, 1889.



WITNESSES:

Chas. Wier  
C. Sedgwick

INVENTOR:

*M. J. Lerath*  
*Munn & Co*

ATTORNEYS.

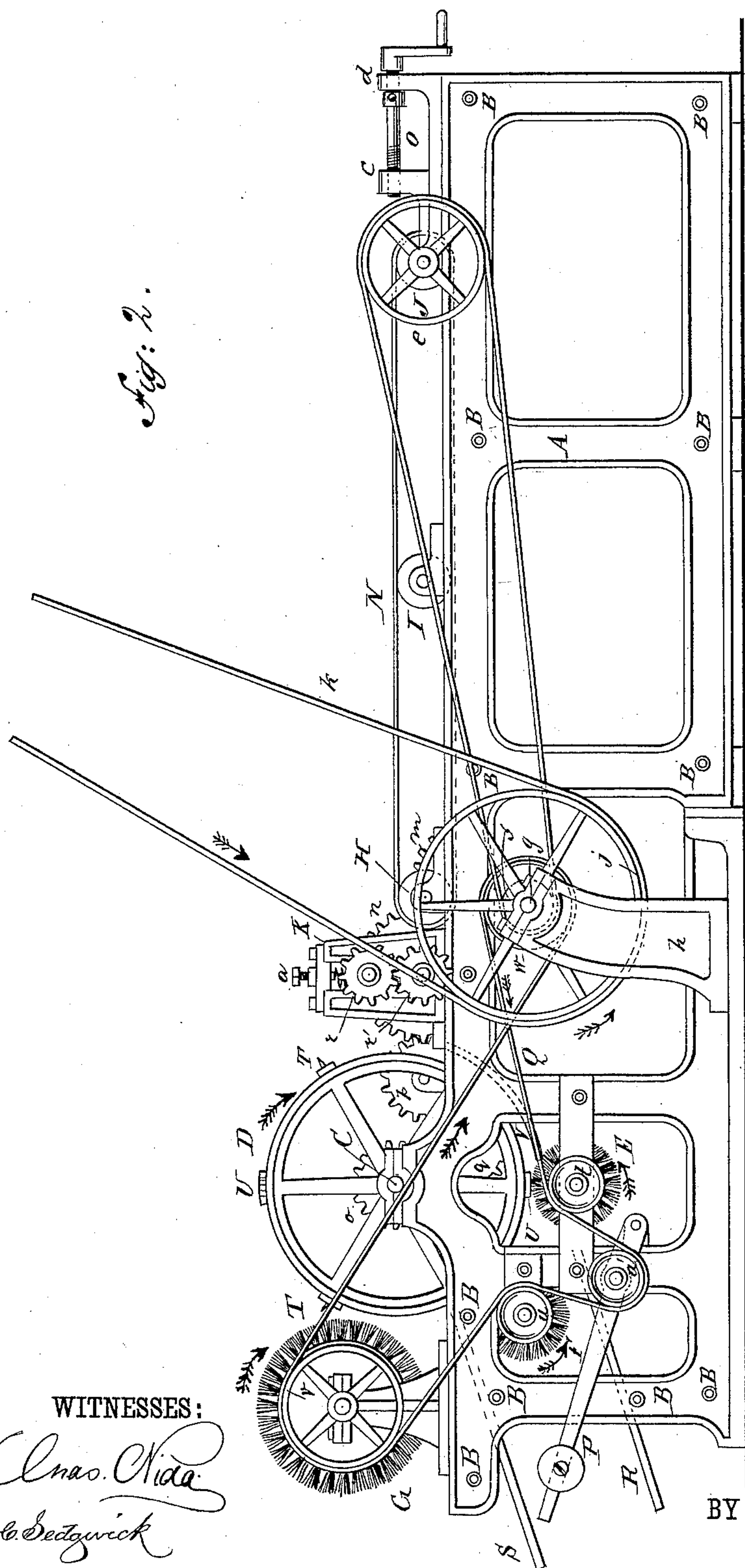
(No Model.)

3 Sheets—Sheet 2.

M. J. LERUTH.  
DECORTICATOR FOR RAMIE, &c.

No. 409,847.

Patented Aug. 27, 1889.



WITNESSES:

Chas. Wida  
C. Sedgwick

INVENTOR:

*W. J. Leruth*  
*Munn & Co*  

---

**ATTORNEYS.**

BY

ATTORNEYS.

(No Model.)

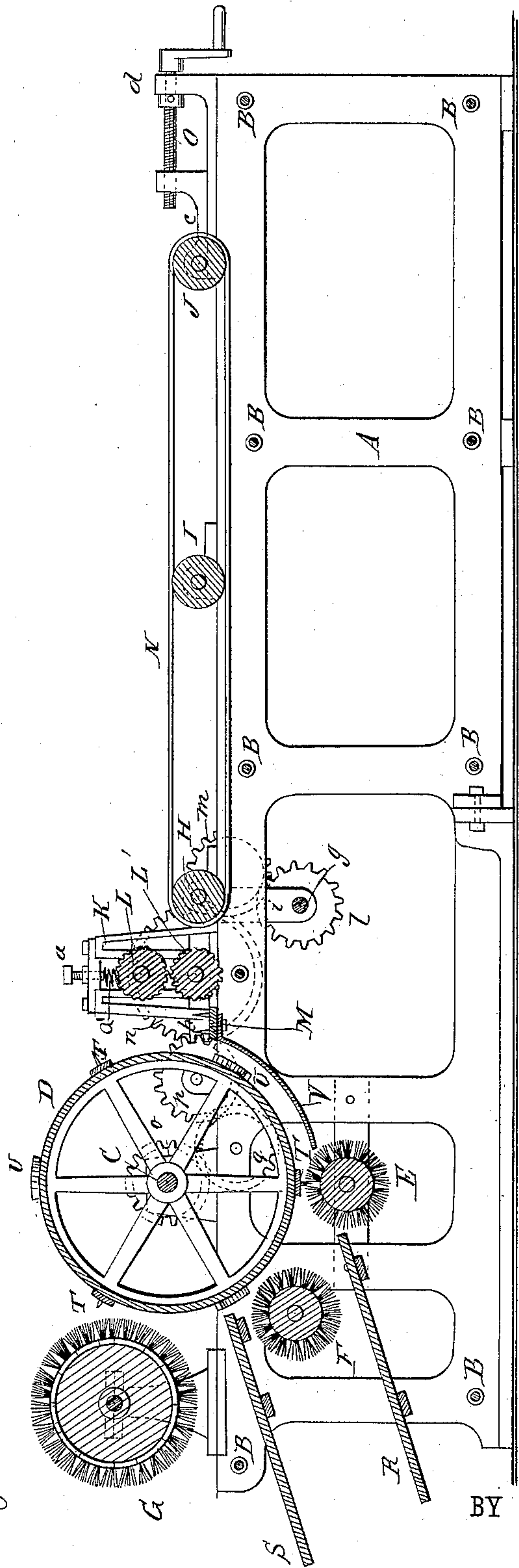
3 Sheets—Sheet 3.

M. J. LERUTH.  
DECORTICATOR FOR RAMIE, &c.

No. 409,847.

Patented Aug. 27, 1889.

*Fig. 3.*



WITNESSES:

*Chas. Viola*  
*C. Bedgwick*

INVENTOR:

*M. J. Leruth*  
*Munn & Co.*

BY

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

MICHEL JOSEPH LERUTH, OF NEW ORLEANS, LOUISIANA, ASSIGNOR TO HIMSELF, LEONARD SEWELL, AND WILLIAM BLAKE, OF SAME PLACE.

## DECORTICATOR FOR RAMIE, &c.

SPECIFICATION forming part of Letters Patent No. 409,847, dated August 27, 1889.

Application filed January 31, 1888. Serial No. 262,483. (No model.)

*To all whom it may concern:*

Be it known that I, MICHEL JOSEPH LERUTH, of New Orleans, in the parish of Orleans and State of Louisiana, have invented  
5 a new and Improved Decorticator for Ramie, &c., of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a plan view of my improved decorticator. Fig. 2 is a side elevation of the  
10 same, and Fig. 3 is a longitudinal section taken on line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts in all the views.

15 The object of my invention is to construct a simple and efficient machine for decorticating in large quantities dry fibrous plants, such as ramie, &c.

My invention consists in the combination of  
20 pressing and decorticating cylinders, brushes for cleaning the cylinders and the fiber, and an automatic feeding arrangement by which the raw material is continuously supplied to the decorticating apparatus.

25 In the main frame, (or in standards thereon,) formed of the side pieces A and cross-bars B, are journaled the main shaft C of the decorticating-cylinder, the brushes E F G, and the rollers H I J. In upwardly-projecting frames  
30 K, attached to the side pieces of the main frame near the decorticating-cylinder D, are placed the boxes of the fluted rollers L L'. The lower roller L' is supported in a fixed position; but the shaft of the upper roller L  
35 turns in movable boxes, which are forced downward by screws *a* and springs *a'*.

Between the crushing-rollers L L' and the cylinder D is placed a bar M, carrying a series of steel points *b*, upon which the crushed fiber  
40 is discharged from the crushing-rollers L L' to be operated upon by the cylinder D in the manner presently to be described. The endless apron N passes around the rollers H J and over the supporting-roller I. The roller  
45 J is journaled in movable boxes *c*, which are adjusted by screws O, journaled in brackets *d*, formed on the forward end of the side pieces A of the frame. The shaft of the roller J is provided with a pulley *e*, which receives  
50 its motion from a pulley *f* on the driving-

shaft *g*. The driving-shaft *g* is supported by a standard *h* upon one side of the machine and by a hanger *i*, attached to the opposite side of the machine-frame. The shaft *g* is provided with a pulley *j*, which takes motion  
55 by a belt *k* from any suitable source of power. Upon the end of the shaft *g* opposite that carrying the pulley *j* is secured a spur-wheel *l*, which engages an intermediate spur-wheel *m*, meshing into the spur-wheel *n*, secured to the  
60 journal of the roller L', and the shaft C of the cylinder D is provided with a spur-wheel *o*, which receives motion from the spur-wheel *n* through the intermediate wheels *p q*. The shafts of the fluted rollers L L' are provided  
65 with spur-wheels *r r'*, which cause the said rollers to turn in opposite directions with a positive motion. The shaft of the brush E is provided with a pulley *t*, and the shaft of the brush F is provided with a pulley *u*. The  
70 shaft of the brush G is provided with a pulley *v*, and upon the shaft *g* is placed a pulley *w*. A weighted lever P is pivoted to the side of the frame below the pulleys and carries a pulley *a'* below and between the pulleys *t u*.  
75 A belt Q extends around the pulley *w*, is crossed and extends upward over the pulley *v*, downward over the pulley *u* and under the pulley *a'*, and then upward over the pulley *t* to the top of the pulley *w*. By this arrangement  
80 of the belt the brush G is made to revolve on its axis in the same direction as the cylinder D revolves on its axis, and the brushes F E are made to revolve on their axes in a direction  
85 opposite to that of the cylinder D on its axis.

Below the brush F is arranged a table R for receiving the material removed from the cylinder D by the said brush, and above the  
90 table R is arranged a table S for receiving the material removed by the brush G. The cylinder D is provided with rows of teeth T and with beater-ribs U, which are arranged spirally, the series of teeth alternating with the beater-ribs around the periphery of the cylinder.  
95

The stalks to be treated are laid upon the apron N and carried forward to the fluted crushing-rollers L L', which crush them and deliver them in a crushed state to the steel  
100



points *b*, and the crushed fibers are drawn between the points by the action of the teeth *T* and the beaters *U*, carried by the cylinder *D*. The fiber passes under the cylinder *D*, is carried forward by the teeth and beaters on the said cylinder, and is brushed by the rotary brush *E*, which revolves with a greater peripheral speed than cylinder *D* and removes the greater portion of the dust adhering to the fiber. It is further treated in a similar manner by the brush *F* and the dust removed by the brushes *E F* delivered to the table *R*. The cleaned fiber is carried upward by the cylinder *D* until it reaches the brush *G*, when the fiber is removed by the action of the said brush *G*, assisted by the natural tendency of the fiber to spring toward it, and delivered to the table *S* in a thoroughly-cleaned condition. The brushes *E F* not only clean the fiber, but assist in retaining it on the cylinder until it is removed therefrom by the brush *G*. The fiber is held against the cylinder *D* by the teeth *b* and the concave *V*, leading from the said teeth to the first cleaning-brush *E*. The stalks thus treated are seven feet in length or longer, and the machine is so constructed that the front ends of the stalks will reach the brush *G* before the rear ends are disconnected from the points *b*. These points *b* do not hold the stalks so firmly as to prevent the cylinder from drawing them therethrough, but serve to retard the passage of the stalks, so that they will be thoroughly treated throughout their entire lengths, as above described. The front ends of the bent fiber, after being carried above table *S*, will naturally project toward the brush *G*, and this tendency is assisted by the centrifugal action of the cylinder *D*, and the brush *G* will therefore effect-

ually prevent the cylinder *D* from carrying the fiber around with it and deliver it to the table *S*, as before stated.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a decorticating-machine, the combination of a pair of fluted rollers adapted to crush the stalks and stems, a series of points arranged to receive the crushed fiber, a decorticating-cylinder provided with series of teeth and beater-ribs, rotary brushes for cleaning the fiber as it is carried forward by the cylinder, a brush for removing the cleaned fiber from the decorticating-cylinder, and means for imparting motion to the rollers, cylinder, and brushes, substantially as specified.

2. In a decorticating-machine, the combination, with the cylinder *D*, provided with teeth *T* and ribs *U*, of the teeth *b*, adapted to hold the crushed fiber while it is acted on by the said cylinder *D*, the concave *V*, and the cleaning-brushes *E F*, substantially as specified.

3. The combination, in a decorticating-machine, of the endless apron *N*, the fixed rolls *H I*, the adjustable roll *J*, the fluted crushing-rolls *L L'*, the roll *L* being adjustable, means for adjusting said rolls *J* and *L*, the cylinder *D*, provided with teeth *T* and ribs *U*, the concave *V*, the cleaning-brushes *E F*, the brush *G*, and means for imparting motion to the said apron and rolls, substantially as described.

MICHEL JOSEPH LERUTH.

Witnesses:

H. NEUGASS,  
W. L. MORALES.