(No Model.)

G. A. CANNOT.

MACHINE FOR CLEANING AND DECORTICATING PEAT.

No. 536,508. Patented Mar. 26, 1895.

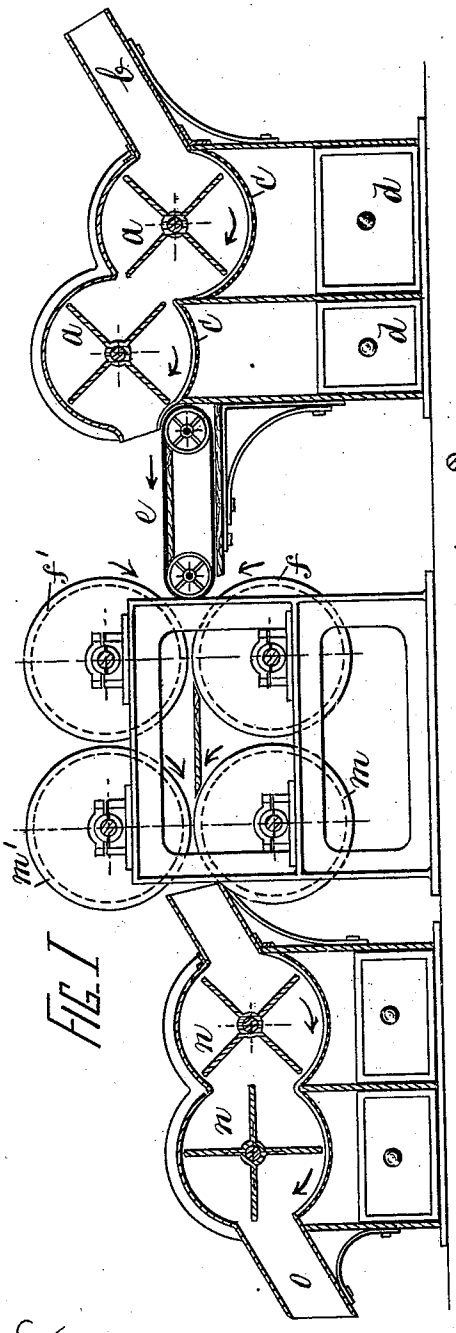

FIG. I

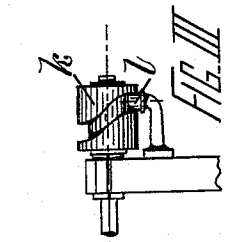

FIG. III

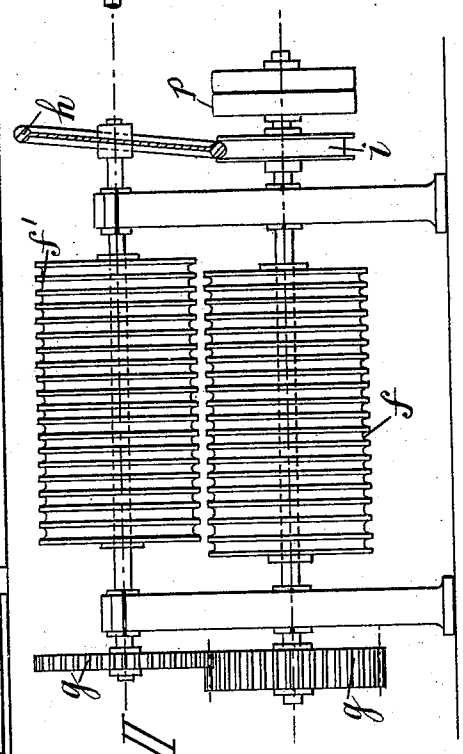

FIG. II

Witnesses:
J. C. Wilson
Percy C. Bowen.

Inventor:
Gustave A. Cannot,
By Whitman & Wilkinson,
Attorneys.

UNITED STATES PATENT OFFICE.

GUSTAVE ADOLPHE CANNOT, OF LONDON, ENGLAND.

MACHINE FOR CLEANING AND DECORTICATING PEAT.

SPECIFICATION forming part of Letters Patent No. 536,508, dated March 26, 1895.

Application filed May 7, 1894. Serial No. 510,392. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE ADOLPHE CANNOT, a subject of the Queen of Great Britain, residing at London, in the county of Middlesex, England, have invented an Improvement in Machines for Cleaning and Decorticating Peat or other Fiber, of which the following is a specification.

My invention relates to improvements in machinery for cleaning and decorticating or removing the outer husk or bark from fibrous materials such as fibrous peat, and the object of my improvement is to effect the cleaning and decorticating operations continuously, and without injuring the inner and valuable parts of the fiber. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure I is a side view of the entire machinery, and Fig. II is a front view of the decorticating cylinders. Fig III shows a slightly modified device for moving the decorticating cylinder endwise while revolving.

Similar letters refer to similar parts throughout the several views.

Supposing that my invention is to be applied to cleaning and decorticating fibrous peat I pass it through beating engines shown in Fig. I, in which the dust and dirt are removed from it by revolving beaters *a*, *a*, from the fibrous peat which is supplied to the machine at *b* and after passing through a screen or screens *c*, *c*, fall into receptacles *d*, *d*, whence they can be removed from time to time when necessary. From the beating engine described the fibrous peat partially cleaned is delivered to an endless traveling band *e* along which it passes and is delivered to the decorticating machine. This machine consists of two parallel cylinders *f*, *f'*, of considerable diameter one of which *f'* is arranged above the other *f* so that the fiber passes between them, and their axles, which revolve in bearings in suitable frames, are provided with toothed wheels *g*, *g'*, (Fig. II) by which they are geared together so that they revolve in opposite directions. The lower cylinder *f* is provided with a driving pulley *p* by which it can be set in revolution at the proper speed by steam or other convenient power.

The circumference of each cylinder is grooved with a large number of small circumferential grooves as shown in Fig. II, of square or somewhat rounded section, and the axle of the upper cylinder *f'* is so arranged that it is capable of moving endwise backward and forward in its bearings, and is provided with means by which it is caused to so move backward and forward when revolving. For instance (as shown in Fig. II) upon one end of its axle an inclined disk *h* may be fixed, the edge of which fits in a grooved pulley *i* fixed upon the axle of the lower cylinder *f* so that as the latter revolves the upper cylinder is made not only to revolve but also to move backward and forward in its bearings through a space dependent upon the amount of inclination of the inclined disk. A modified device for the same purpose is shown in Fig. III in which the axle of the cylinder *f* is provided with a cylinder *k* having a helical groove or cam path, which fits upon a stud or roller *l* fixed to the frame of the machine.

It is obvious that both cylinders may be made to move endwise simultaneously but in opposite directions by devices of a similar kind, such for instance as two cams similar to that shown in Fig. III, one cam set on the upper shaft and the other on the lower shaft, and the cam surfaces being so arranged that the two shafts are simultaneously moved longitudinally in opposite directions. One or both of the toothed wheels *g*, *g'*, by which the cylinders are geared together is of sufficient width to allow the reciprocating movement to take place without the wheels coming out of gear, as illustrated in Fig. II.

By the action of the cylinders described, the fibrous material is not only pressed and passed forward between them, but is squeezed and rolled sidewise so that its outer covering is effectually loosened and removed. After leaving the cylinders *f*, *f'*, the fibrous material is made to pass between two more cylinders *m*, *m'*, (Fig. I) similarly arranged and operated, and having grooves of the same or different size to those of the first pair of cylinders *f*, *f'*, and after leaving them it is passed to another beating engine at *n*, *n*, of the same kind as that first described by which the fragments of the outer covering which have been taken off as described, together with any further dust and dirt, are removed, and the fiber delivered at *o*.

The axles or shafts of the different beaters and cylinders may be driven by pulleys and belts or toothed wheels driven by steam or other power, and I have not shown all such driving gear in the figures as it will be of the well known kinds ordinarily used for similar purposes.

I am aware that prior to my invention, beaters such as those shown at *a*, *a*, *n*, *n*, have been used for cleaning fibrous material, and I do not claim such beaters as my invention, but

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

1. An apparatus for cleaning or decorticating peat fiber and other fiber which comprises the revolving beaters *a a* for beating the fibrous material, the screens *c c* beneath said beaters for carrying off the matter cleaned out, an endless apron for conveying the fiber from said beaters, and the grooved cylinders revolving in opposite directions, one of said cylinders having a longitudinal motion relative to the other, substantially as and for the purposes described.

2. An apparatus for cleaning or decorticating peat fiber and other fiber, which comprises the revolving beaters *a a* for beating the fibrous material, the screens *c c* beneath said beaters for carrying off the matter cleaned out, an endless apron for conveying the fiber from said beaters, the grooved cylinders revolving in opposite directions, one of said cylinders having a longitudinal motion relative to the other and the beaters *n n'* receiving the fibrous material from said grooved cylinders and further beating the same, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

GUSTAVE ADOLPHE CANNOT.

Witnesses:

HAROLD J. MOORE,

St. Michael's Alley, London, Notary's Clerk.

ARTHUR E. EDWARDS.