2 Sheets—Sheet 1.

J. B. LYONS.

Peat Machine.

No. 100,302. Patented March 1, 1870.

Fig. 1.

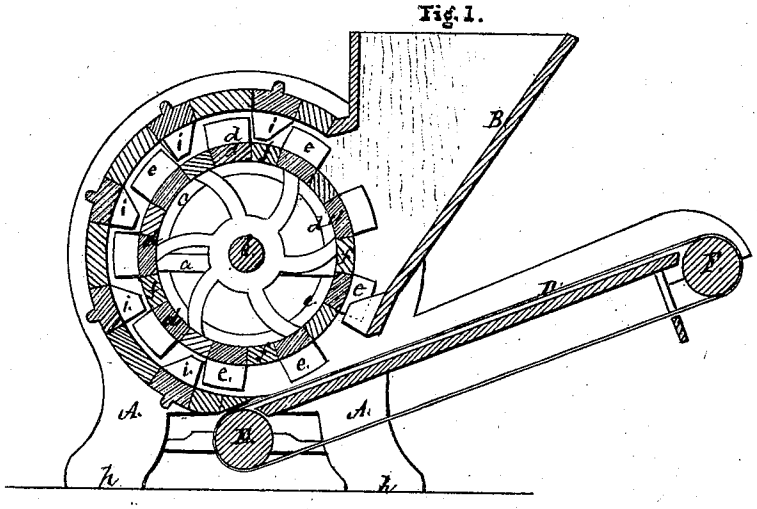


Fig. 2.

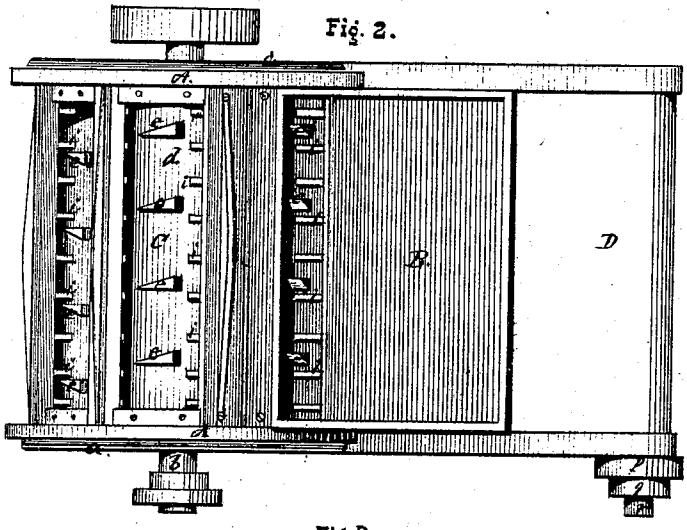
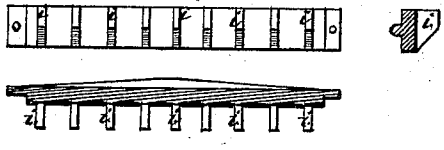


Fig. 3.



Witnesses.

Chas. H. Poole

J. B. Woodruff

Inventor.

James B. Lyons

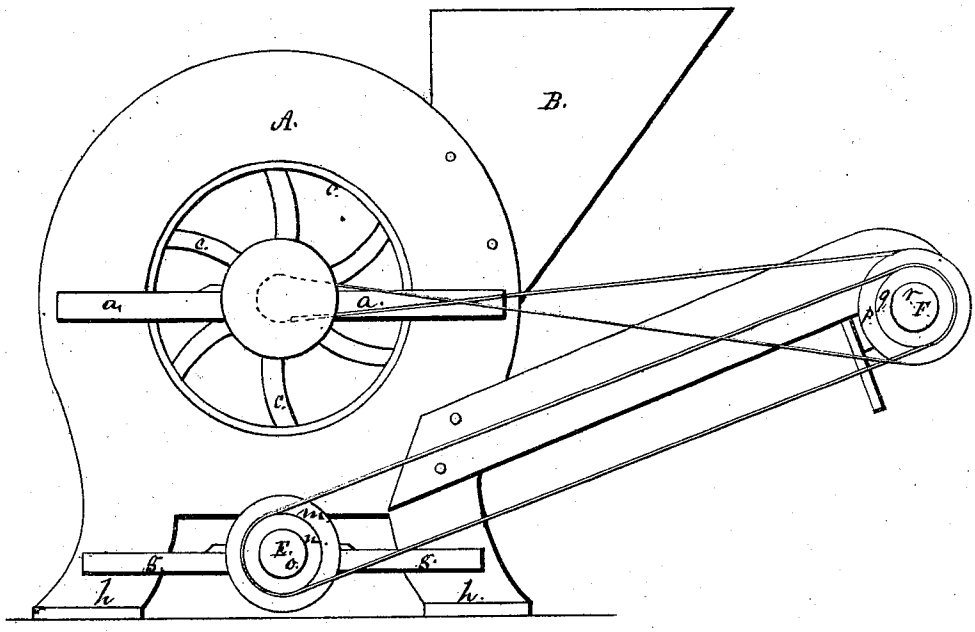
2 Sheets—Sheet 2.

J. B. LYONS

Peat Machine.

No. 100,302. Patented March 1, 1870.

Fig. 4.



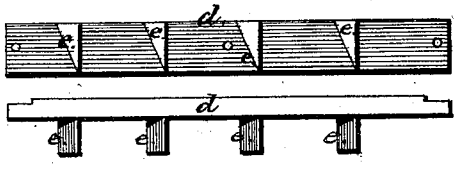
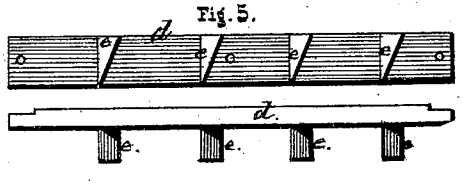


Fig. 5.



Witnesses.

Chas. H. Poole

J. B. Woodruff

Inventor.

James B. Lyons

United States Patent Office.

JAMES B. LYONS, OF MILTON, CONNECTICUT.

Letters Patent No. 100,302, *dated March* 1, 1870.

IMPROVEMENT IN PEAT-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, JAMES B. LYONS, of Milton, in the county of Litchfield, and State of Connecticut, have invented certain new and useful Improvements in Peat-Mills and the Process of Manufacturing Peat Fuel; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1, Plate I, shows a section through a side elevation of my improved mill for grinding peat.

Figure 2 shows a top sectional view through the same, revealing the right and left angular blades, a portion of the top covering being removed.

Figure 3 shows three views of the staves with the cutting-blades, which are placed at intervals in the case surrounding the revolving cylinder.

Figure 4, Plate II, shows an exterior view of the mill.

Figure 5 shows the cylinder-staves, face and edge view, with the right and left angular blades.

The object of this part of my invention is the construction of a simple, cheap, and efficient mill, that will manipulate and destroy the fibers and cells, and run through a larger quantity of crude peat and prepare it for the drying process, with the least amount of power and manual labor.

My invention consists in the construction of the staves and the formation of the right and left angular blades, which are arranged in sections on the revolving cylinder, and also the staves and lugs in series, arranged to form a portion of the case or covering which surrounds the cylinder, and the endless apron as arranged under the hopper, so that it may be adjusted to different speeds, to convey the ground peat and deposit it in cars for conveying it to be spread on the drying-floors, which is a part of my improved process of manufacturing peat fuel.

To enable others to construct my single-cylinder mill or grinding apparatus for preparing crude peat in the best manner for drying by my new process on floors in the open air, I will proceed to describe it more in detail, referring to the drawings and letters marked thereon.

I make the mill of iron, the two ends A A being cast from one pattern.

The hopper B may also be cast whole or in plates and put together, and the ends A A secured to it, the hopper B being the width of the length of the covering and staves which form the cylindrical body of the machine.

Across the central portion of the circular part of the frame A A are bars *a a*, in which the journal-boxes are made for the shaft *b* of the revolving cylinder to run in, the cylinder being constructed with two or more flange-wheels *c c*, to which are secured the staves *d d*, they being cast to three patterns, the right curve to form the covering of the revolving cylinder, one of the patterns being plain, the other two being provided with angular cutting-blades *e e;* in one pattern, the angle of the blades inclines to the right, in the other the angle inclines to the left.

These two patterns with the plain staves *f f* are placed alternately, and secured to form the covering of the revolving cylinder.

The inclined bladles *e e e* move and keep the mass in rapid motion right and left as it is being manipulated in passing over the cylinder through the mill.

The cylindrical portion of the mill is covered with staves made from two patterns, one of them being a plain curve, the other having on its convex side a series of blades or lugs, *i i i i i*, projecting out sufficiently to come near the surface of the periphery of the revolving cylinder C, and being wide enough apart to admit of the right and left angular blades *e e* to pass between them.

The lugs *i i i* are inclined back from the side. The peat is brought against them, so that they will be cleared of the fibers of the peat by the action of the blades *e e* in the revolving cylinder C, so that no choking or clogging up of the machine will take place, no matter how fast the crude peat is fed in.

The cylinder revolves so as to carry the peat over the top, so that it is being operated on three-fourths of the distance of the circumference of the mill, and discharges it onto an endless apron, D, which extends under the machine and hopper, and out a sufficient distance to deposit it into cars for conveying to the drying-floors.

The endless apron or traveling-floor D for conveying off the ground peat is driven by a roller, E, which has its bearing on the bars *g g*, cast on to brace the feet *h h*.

The roller E is provided with a gang of pulleys, *m n o*, and a corresponding series of pulleys, *p q r*, on the roller F at the outer end of the apron D, and also another corresponding gang of pulleys on the outer end of the cylinder-shaft *b*, so that the motion and different rates of speed may be given to discharge the peat from the machine.

Some peat being more fibrous, requires more manipulation than other which is more thoroughly decomposed, and the grinding of it is entirely controlled by the rapidity with which it is discharged.

Having described my invention,

What I claim and desire to secure by Letters Patent is—

1. The staves *d d*, provided with right and left angular blades *e e e*, arranged in series to form a cylinder, for operating substantially in the manner and for the purposes herein specified.

2. The combination of the cylinder C, of the concave, formed of alternate smooth staves and staves provided with a series of lugs, *i i i*, so inclined backward as to prevent the fibers in the peat from clogging, when said parts are constructed and arranged as herein set forth.

JAMES B. LYONS.

Witnesses:

EDM. F. BROWN,

J. B. WOODRUFF.