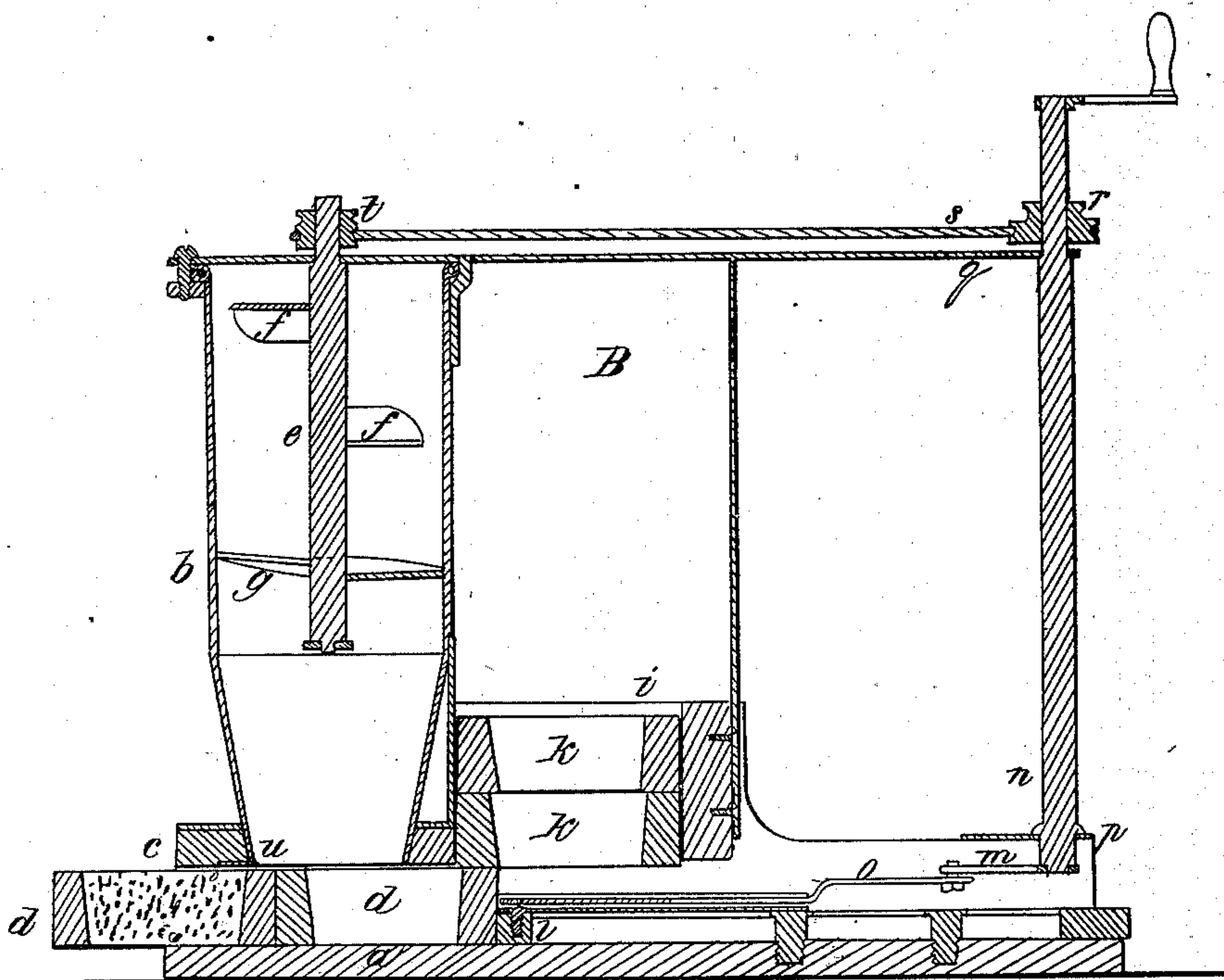
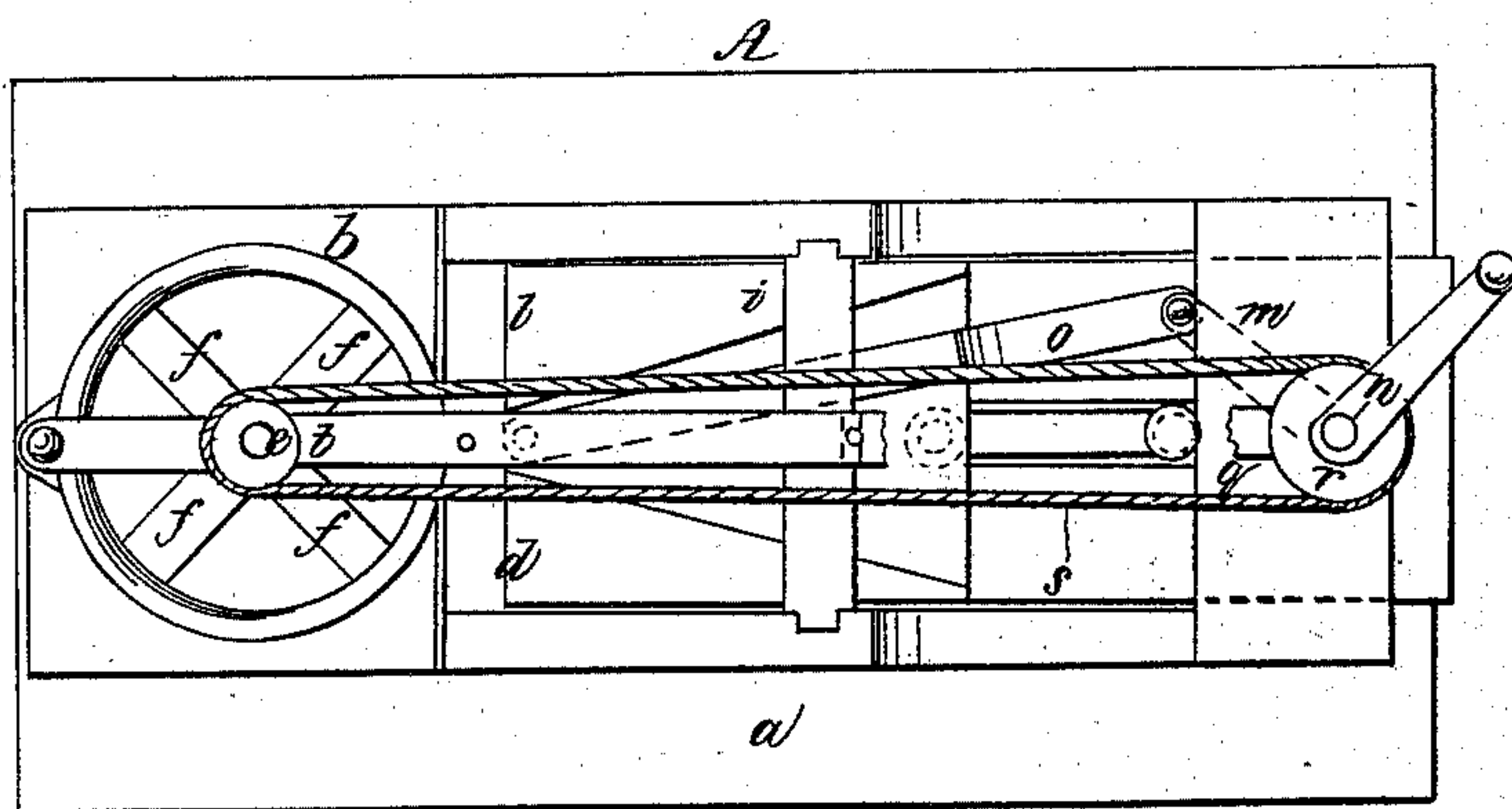


D. WELLINGTON.

Peat Machine.

No 61,965.

Patented Feb. 12, 1867.



Witnesses:  
S. B. Kidden  
W. H. Frothingham

Inventor:  
D. Wellington  
by  
Crosby Gould  
Attys



# United States Patent Office.

DARIUS WELLINGTON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO CORNELIUS WELLINGTON, OF THE SAME PLACE.

*Letters Patent No. 61,965, dated February 12, 1867.*

## IMPROVED PEAT MACHINE.

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, DARIUS WELLINGTON, of Boston, in the county of Suffolk, and Commonwealth of Massachusetts, have invented an Improvement in the Manufacture of Peat Fuel; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention, sufficient to enable those skilled in the art to practise it.

In the manufacture of peat, or the preparation from crude peat of a portable and condensed fuel, free from water, great difficulty is found in reducing the bog peat to a homogeneous consistency, and in effecting by pressure the reduction of its bulk, the first on account of the admixture of coarse undecomposed vegetable matter with the peat, and the other from the intimate commingling of peat and water, the peat generally being in so fluid a condition, that in producing pressure to remove the water the peat and water escape from the press together. After much experience and observation, it is my belief that it is not practical to wholly remove the water by direct pressure, or to remove the fibrous material therefrom, and that the best manner of preparing a fuel from peat is to thoroughly intermix and reduce it to a consistency in a mill, to then subject it to such pressure as it will bear without running, and to finally compress it into moulds, from which it may be removed in such portable shape that it will, by exposure to sun and air, soon be brought into good condition for fuel. It is to an arrangement of mechanism for effecting this preparation of fuel from peat that my invention relates; and the invention consists primarily in combining, with a mill containing rotary arms or knives for reducing the peat to a homogeneous condition, and a screw for effecting pressure upon the same, for feeding and pressing it into a mould placed beneath the mill, a reciprocating follower, so arranged with respect to a mould-box pit and the mill, that at each reciprocation of the follower the filled box is removed from beneath the mill, and is replaced by an empty one, the shaft which drives the follower also driving the mill mechanism, and the connections being such that the relative motion of the pressure-screw and the follower may be varied to produce such greater or less degree of pressure upon the peat during the time a mould-box is beneath the mill as the condition of the peat may require.

The drawing represents, at A and B respectively, a plan and a vertical longitudinal section of a machine embodying my invention. *a* denotes a bed, having erected at one end of it a vertical cylinder, *b*, which stands directly over a cell, *c*, made to receive a mould-box, *d*, the open or mould space of which corresponds with the opening from the lower end of the cylinder. A vertical shaft, *e*, (extending centrally into the cylinder, and rotating in suitable bearings,) carries at the upper part of the cylinder a series of radial knives or arms, *f*, and below these a wide-flanged screw or worm-wheel, *g*, so that when the shaft is rotated, (the mill being filled with peat,) the rotary knives at the top divide and reduce to a consistency the crude peat at the top, which, as it descends, is taken by the screw and fed down and pressed into the mould beneath it. Adjacent to the mill cylinder is a pit, *i*, for receiving and containing empty moulds *k*, the bottom of this pit being in the same plane with the bed-surface on which the mould rests beneath the mill. Sliding on the bottom of this pit, and between guide-walls on the side opposite to the mill, is a slide or follower, *l*, which is connected to and driven by the crank *m* of a driving-shaft, *n*, through a connecting-rod, *o*. The vertical driving-shaft *n* turns in a bearing-plate, *p*, at bottom, and in a bearing, *q*, at top, and has a pulley, *r*, which is connected by a band, *s*, to a pulley, *t*, on the mill-shaft. When the follower *l* is drawn back, its front end comes in line with the rear wall of the pit, and by gravity the series of moulds descend in the pit. As the follower then advances, it pushes the mould in front of it against the charged mould under the cylinder *b*, driving the charged mould out, and bringing the empty one into its place for filling. The follower next goes back, during which movement the rotation of the mill-shaft fills the empty mould. As the follower reaches the side of the pit, another empty mould descends, and so on, a filled mould being removed and an empty one brought to its place at each forward movement of the follower. The shaft *n* has a cone or series of pulleys, *r*, of varied diameter, (as the mill-shaft may also have,) so that by shifting the band from a small to a larger pulley on the shaft *n*, the number of revolutions of the mill-shaft to each revolution of the driving-shaft, (and its attendant reciprocation of the follower *l*,) may be increased to increase the pressure upon the peat entering the mould, as the condition of the peat may require. This arrangement of the parts renders the machine very simple, easily operated, and not liable to become deranged.

Under the cylinder *b* I make the bed for the mould, of slate, marble, or other stone, as I find that such material is not only very enduring, but affords a surface not liable to splinter, or to warp from moisture, and to cause the moulds to bind as they are moved into and from the mould-cell. For the more ready discharge of the peat from the moulds, I expand or flare the sides of each from the bottom, as seen at B, this shape retaining the peat in the mould as the mould is removed by hand to the place where the cakes are to be deposited, and the peat readily dropping from the mould when it is turned over. At the front side of the bottom of the cylinder *b* is a sharp or cutting edge or blade, *u*, which, as the mould is forced from its cell, severs the fibrous portions of the peat in the mould from their connections with the peat above.

I claim the combination of the cylinder *d*, and its reducing and pressing mechanism, the mould-cell *c*, and pit *i*, and the follower *l*, when the whole are constructed and arranged to operate together, substantially as shown and described.

I also claim so combining the driving-shaft *n*, by which the follower is directly operated, and the mill-shaft *e*, that the pressure upon the peat may be increased or diminished, relatively to each reciprocation of the follower, substantially as set forth.

Also, forming the bed of the mould-cell of stone, as and for the purpose set forth.

Also, combining with the cylinder *b* the cutting edge *u*, operating as set forth.

DARIUS WELLINGTON.

Witnesses:

FRANCIS GOULD,  
S. B. KIDDER.