

No. 684,967.

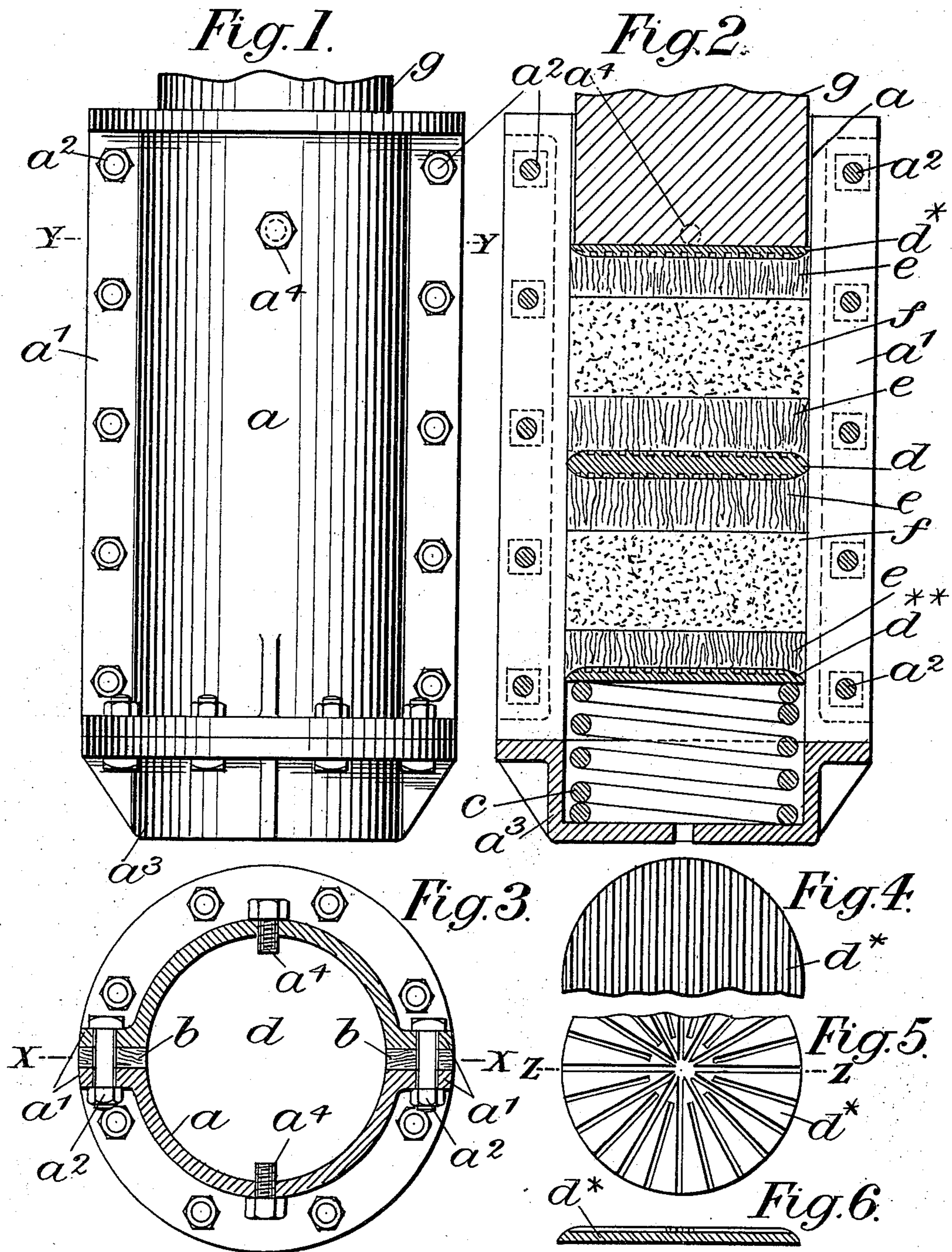
Patented Oct. 22, 1901.

J. WESTAWAY.

APPARATUS FOR COMPRESSING PEAT, PULP, &c., INTO BLOCKS.

(Application filed Apr. 9, 1901.)

(No Model.)



Witnesses:

Robt. C. Blake

Warwick Hy. Williams

Inventor:

James Westaway,  
by Henry H. Nish

Attorney

# UNITED STATES PATENT OFFICE.

JAMES WESTAWAY, OF LONDON, ENGLAND.

## APPARATUS FOR COMPRESSING PEAT, PULP, &c., INTO BLOCKS.

SPECIFICATION forming part of Letters Patent No. 684,967, dated October 22, 1901.

Application filed April 9, 1901. Serial No. 55,064. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES WESTAWAY, engineer, a subject of the King of Great Britain, residing at No. 6 Dowgate Hill, Cannon street, in the city of London, England, have invented certain new and useful Improvements in or Connected with Apparatus for Compressing Peat, Pulp, or other Material into Blocks or other Forms, of which the following is a specification.

My said invention relates to improvements in or connected with apparatus for compressing peat, pulp, or other material into blocks or other forms; and the primary object thereof is to improve the construction of the pressure-chamber of such apparatus for facilitating the escape of expressed fluid.

The following is a description of the present invention with reference to the accompanying drawings, in which—

Figure 1 is an elevation of a pressure-chamber constructed in accordance with the present invention. Fig. 2 is a vertical section thereof through the line X X of Fig. 3. Fig. 3 is a transverse section through the line Y Y of Fig. 1. Figs. 4 and 5 are detached views of grooved drainage-plates which are arranged between the central disks of wood and outside those disks of wood which constitute either end of the series; and Fig. 6 is a cross-section through the line Z Z, Fig. 5.

The same letters of reference indicate like parts in all the figures.

In carrying the invention into effect a cylindrical or tubular pressure-chamber *a* is employed, made up of two or more flanged sections connected together by bolts *a*<sup>2</sup> passing through the flanges *a*<sup>1</sup> and provided between the flanges with a packing *b*, of wood, cut with the grain on end, or of other suitable filtering material, and one end of this pressure-chamber is open, while the other end is, with the exception of one or more escape-orifices for fluid, closed, by preference, by means of a cap or cover *a*<sup>3</sup>, removably secured in position by any suitable means. Within the chamber and abutting against the cap *a*<sup>3</sup> a coiled spring *c* may be arranged, and beyond the spring *c* and bearing against the same is a disk or piston *d*<sup>\*\*</sup>, which tightly fits the cylinder *a* and is on its inner face provided with drainage-grooves. A closely-fitting disk *e*, of wood, cut with the grain on end, or of other suitable filtering material, is placed upon said

drainage-plate, and a quantity *f* of the material to be treated is then filled into the chamber. Another disk of wood or other filtering material *e* is placed thereon, and another drainage-plate *d* is placed on said disk, and the chamber *a* may be further charged in the same manner. A plunger *g*, actuated by hydraulic or other power, is now caused to act upon the last plate *d*<sup>\*</sup> of the grooved plate *d* and compress the material *f* against the action of the spring *c*, which becomes thereby compressed, the air or other fluid expressed therefrom passing away by the disks *e*, the grooves of the drainage-plates *d* *d*<sup>\*</sup> *d*<sup>\*\*</sup>, and the packing *b* between the flanges *a*. When the compression has been completed, the last one, *d*<sup>\*</sup>, of the drainage-plates may be fixed in its then position by means of set-screws *a*<sup>4</sup> or otherwise and the pressure afterward maintained by the compressed spring, leaving the plunger free to be employed upon another charge in a separate chamber.

To withdraw the charge, the cap *a*<sup>3</sup> is removed, when the whole contents of the chamber *a* may be forced out.

If desired, the spring *c* may be dispensed with and the first drainage-plate *d*<sup>\*\*</sup> made to take a bearing against the cap *a*<sup>3</sup>.

The grooves in the drainage-plates *d* *d*<sup>\*</sup> *d*<sup>\*\*</sup> may be made as shown at Fig. 4, or they may be arranged radially, as illustrated at Fig. 5. The periphery of each disk is, by preference, beveled, as shown at Fig. 6.

The end plates *d*<sup>\*</sup> *d*<sup>\*\*</sup> are only grooved on their inner faces, as shown at Fig. 2.

By the means hereinbefore described various materials may be effectually compressed and the contained fluid expressed therefrom, more especially as the pressure may be by the spring maintained for any desired period.

I claim—

In apparatus for compressing peat, pulp and other materials, the construction of the pressure-chamber of two or more flanged sections, the flanges of adjacent sections being bolted together with a layer of suitable filtering material between them, substantially as hereinbefore shown and described and for the purpose stated.

JAMES WESTAWAY.

Witnesses:

GEO. S. VAUGHAN,  
A. W. BARRAND.