

H. VON MORSEY-PICARD & E. VON VERSCHUER.
 PROCESS AND APPARATUS FOR DRYING PEAT BY AIR CURRENTS.
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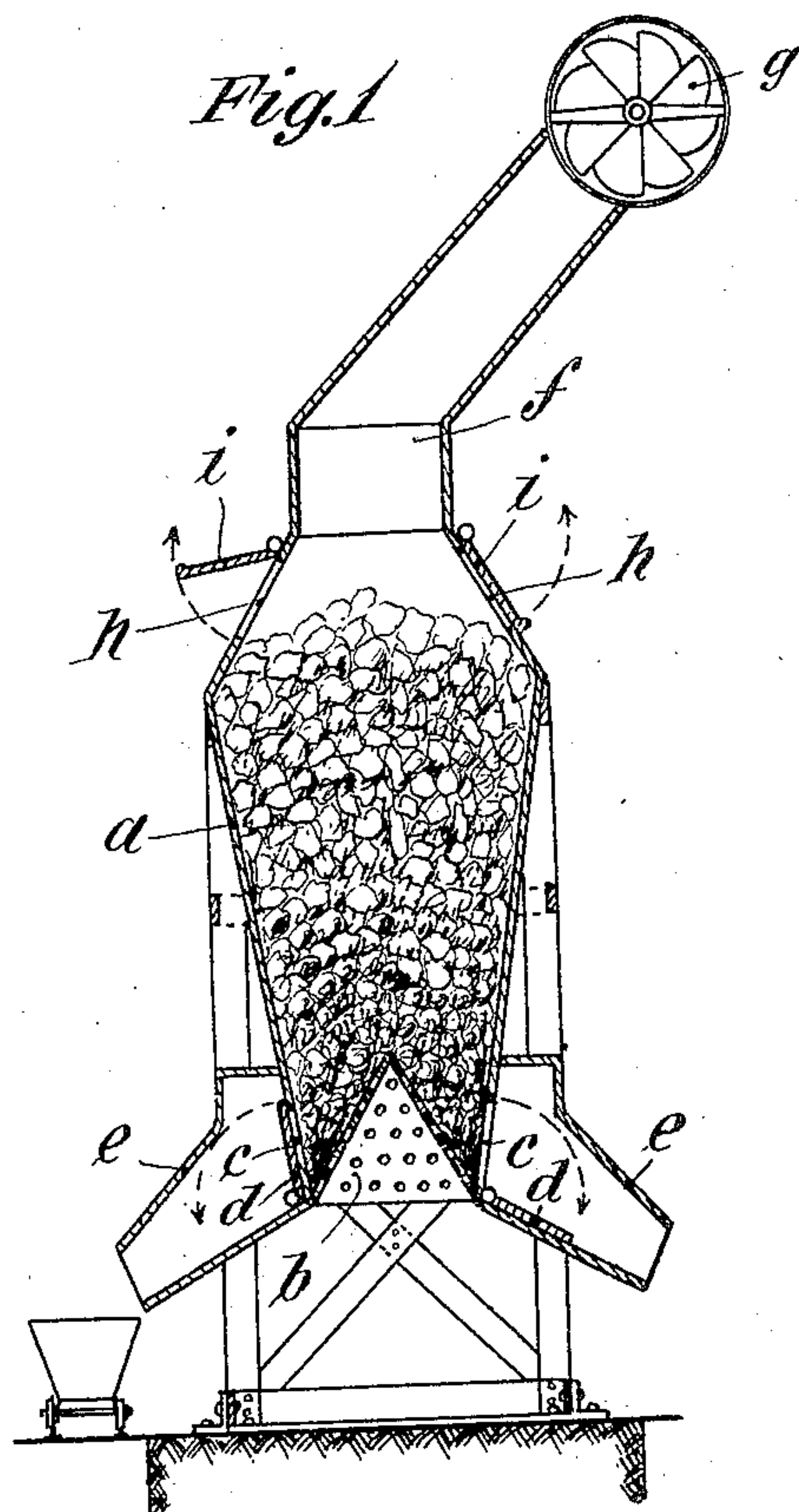
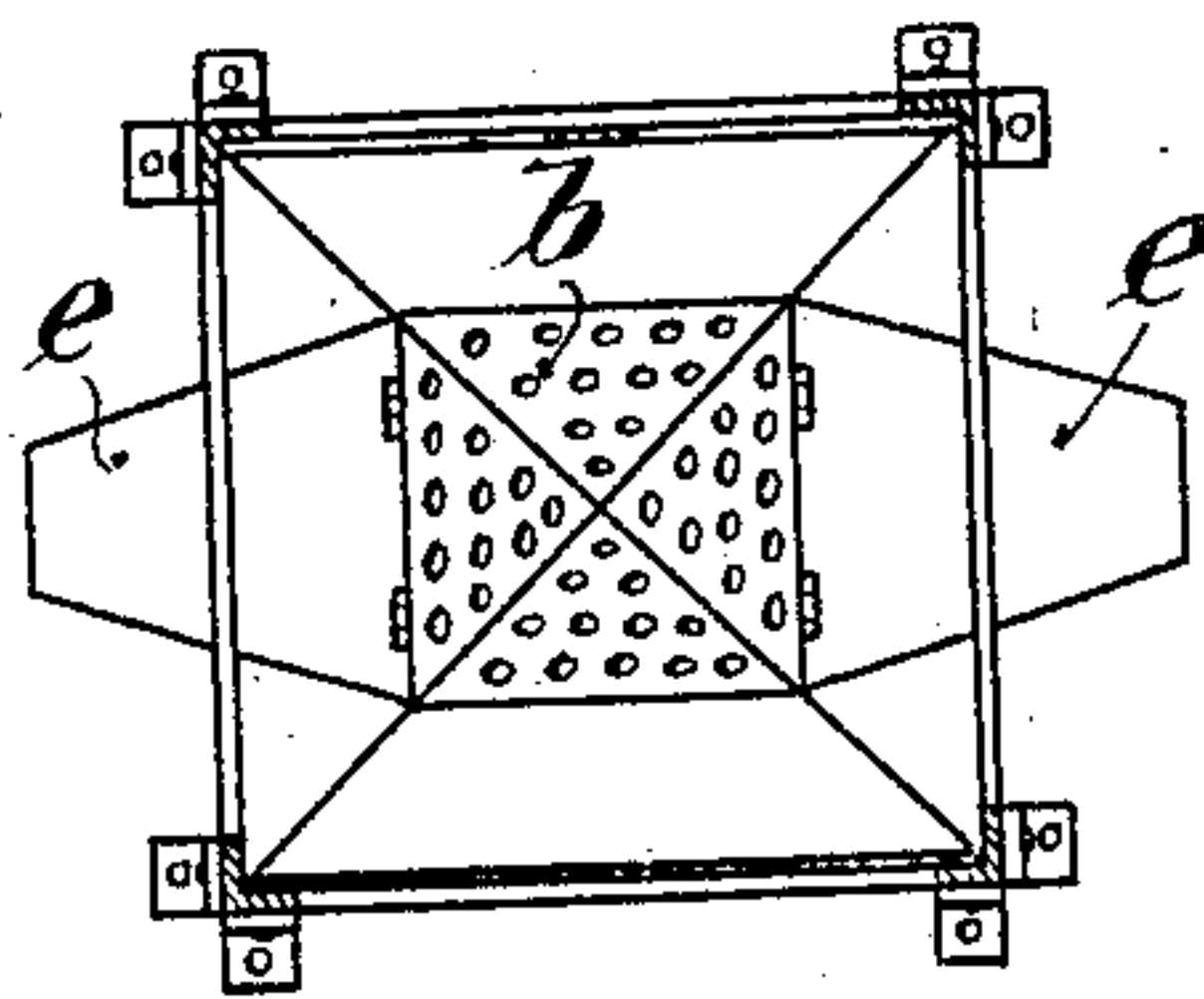


Fig. 2



Witnesses
J. H. Giesbauer

Inventors
 and Hans baron von Morsey-Picard
 Ernst baron von Verschuer.
A. B. Willson & Co.
 Attorneys

UNITED STATES PATENT OFFICE.

HANS VON MORSEY-PICARD AND ERNST VON VERSCHUER, OF CASSEL, GERMANY, ASSIGNORS
TO FRITZ HACKLANDER, OF CASSEL, GERMANY, AND WILLY SCHECK, OF ST. PAUL, MIN-
NESOTA.

PROCESS AND APPARATUS FOR DRYING PEAT BY AIR-CURRENTS.

No. 914,598.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed December 3, 1906. Serial No. 346,159.

To all whom it may concern:

Be it known that we, HANS BARON VON MORSEY-PICARD and ERNST BARON VON VERSCHUER, citizens of Germany, subjects of the King of Prussia and Emperor of Germany, both residing at Cassel, in the Kingdom of Prussia and Empire of Germany, have invented a new and useful Process and Apparatus for Drying Peat by Air-Currents, of which the following is a specification.

In the processes heretofore in use to render compressed peat combustible by air-drying, the cost for stacking it and unstacking it is very considerable. The drying process also requires too much time and depends very much on the moisture of the weather, by which it might even be entirely frustrated. It is known to hasten the stacking of the cakes of peat by giving them a hard outside; the known process is however not suited to render stacking for complete drying altogether unnecessary.

The object of this invention is to avoid the necessity of stacking the cakes of peat in the open air or in covered rooms. It is thereby important that the stock to be dried be exposed to a current of air, increasing gradually in force, so that at the beginning only a slight drying will be effected and which will be increased as the shrinking of the peat advances. It has been observed that it is not advantageous to intensely dry the peat from the first, as this forms a quickly hardening crust, which prevents the moisture contained in the interior from being dried out and so renders a sufficient drying of the material impossible.

This process is essentially as follows:—

The cakes of peat proceeding from the press are first exposed to a natural or artificially produced strong current of air for superficial hardening, whereupon the slightly hardened peat-cakes are dumped into towers tapering downward funnel-like, which are connected with means such as a high chimney, fan or the like for producing a strong natural or artificial current of air. From these towers which are suitably provided at the bottom with automatically closing discharging devices, the dried cakes of peat can be charged directly into conveying vessels which run under the discharge.

In the course of this process the dry peat drawn off below makes room for the par-

tially dried peat above, which will gradually follow downward. The towers being funnel-shaped and wider at the top than at the bottom and the entrance-openings for the drying air being arranged only at the lower end thereof, the current of air entering in the lower part of the shaft or tower and drawn off above will have the least intensity in the upper portion of the shaft where the peat to be dried is first dumped, while the peat as it hardens and shrinks sinks down and approaches a current of air increasing in force. This drying-air may also be heated if desired.

In the accompanying drawings an arrangement for carrying out the desired process is shown in which,—

Figure 1 represents a vertical section of the apparatus used for carrying out this process; and Fig. 2 represents a transverse section taken on the line 2—2 of Fig. 1 and looking in the direction of the arrow.

The shaft *a* in which the peat is placed, tapers downward and has at its upper end charging holes *h* closed by doors *i*. At its lower end said shaft is perforated sieve-like, as shown at *b* to permit the entrance of the drying air. This lower end is also provided with discharge orifices *c* closed by doors *d* through which the dried peat may be conveyed to chutes *e* which carries it into carts placed thereunder. The upper end of the funnel-shaped shaft *a* is connected with an air conduit *f*, which communicates with a suction fan *g*, which being set in motion, causes the current of air entering through orifices *b* to be drawn upward through the shaft.

Having described our invention, what we claim and desire to secure by Letters Patent of the United States is:—

1. A process for drying peat which has been previously hardened on the outside, which consists in subjecting peat to a current of air decreasing in velocity as it progresses, and advancing the peat in a direction contrary to the movement of the air current.

2. A process for drying cakes of peat consisting in advancing the cakes in one direction through a current of air decreasing in velocity in the opposite direction to that in which the cakes of peat are being advanced.

3. An apparatus for drying peat, com-

prising a shaft gradually tapering funnel-like from its upper to its lower end into which shaft the cakes of peat are adapted to be charged from above, said shaft having air inlets at the bottom thereof opening directly into the shaft, and an air outlet at the upper part thereof, and a discharge opening at the bottom of said shaft.

4. An apparatus for drying peat, comprising a receptacle tapering from its upper to its lower end and having an approximately cone-shaped reëtrant perforated bottom, said receptacle having discharge openings arranged in its side walls near the bottom thereof, and an air out-let at the top.

5. A process for drying peat which has been previously prepared to adapt it for better drying; consisting in advancing the cakes of peat in a current of air the velocity of which decreases in the direction contrary to the direction of movement of the cakes being dried.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

HANS VON MORSEY-PICARD.
ERNST VON VERSCHUER.

Witnesses:

ERNEST H. L. MUMMENHOFF,
OTTO W. HELLMRICH.