H. BRADFORD.

Peat Machine.

No. 57,469. Patented Aug. 28, 1866.

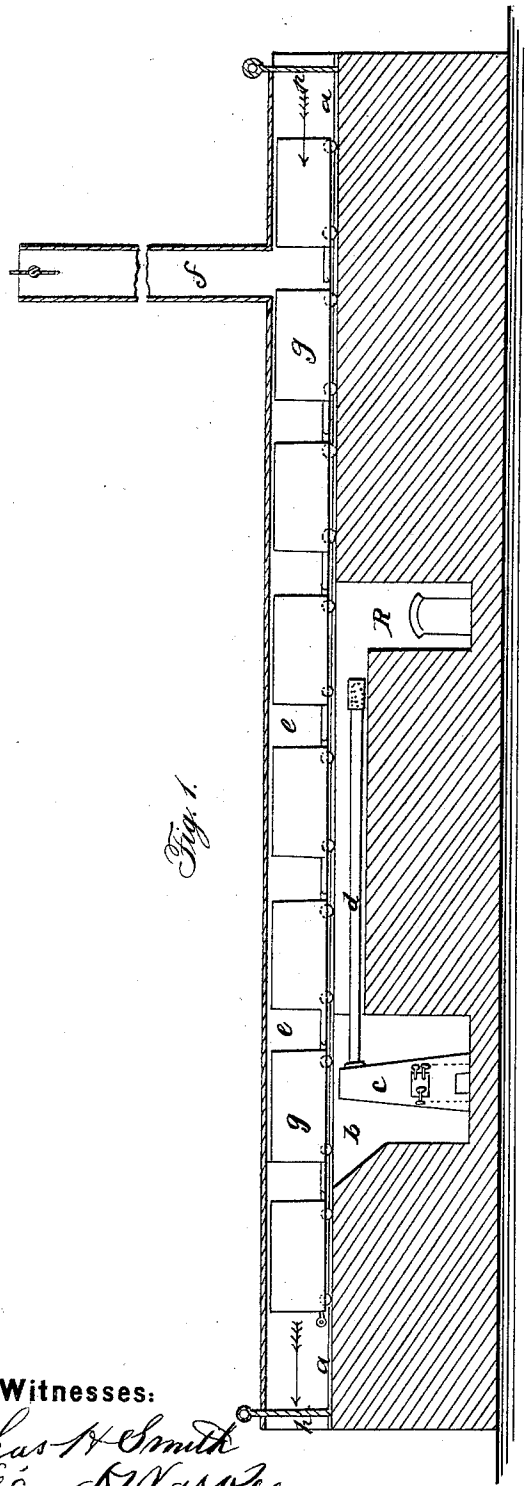


Fig. 1.

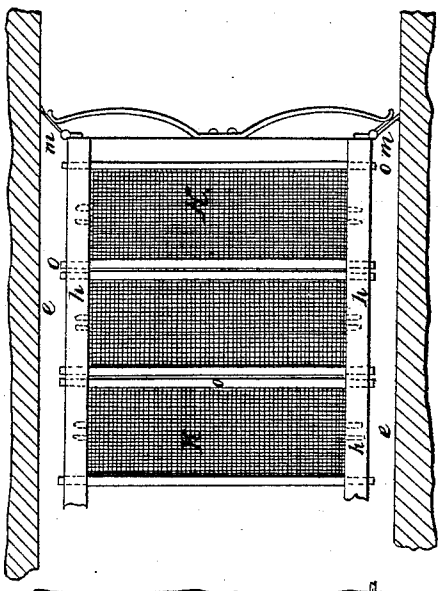


Fig. 3.

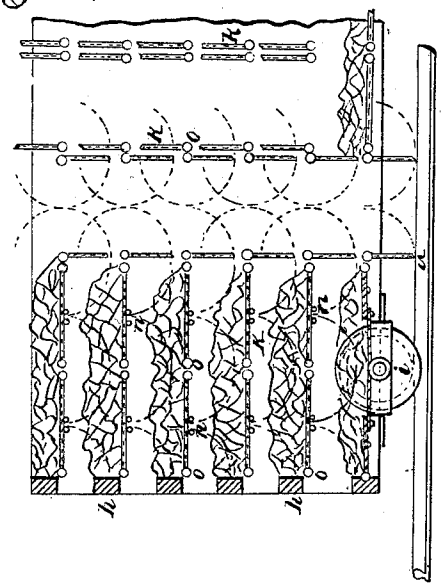


Fig. 2.

Witnesses:

Chas. H. Smith

Geo. B. Wasklee

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AM. PHOTO-LITHO. CO. N.Y. (OSBORNES PROCESS)

UNITED STATES PATENT OFFICE

HEZEKIAH BRADFORD, OF NEW YORK, N. Y.

IMPROVED APPARATUS FOR DRYING PEAT.

Specification forming part of Letters Patent No. **57,469**, dated August 28, 1866.

To all whom it may concern:

Be it known that I, HEZEKIAH BRADFORD, of the city and State of New York, have invented and made a certain new and useful Improvement in Apparatus for Preparing Peat; and I do hereby declare the following to be a full, clear, and exact description of my said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a longitudinal section of my apparatus. Fig. 2 is a partial section of one of the cars employed for holding the peat while being dried; and Fig. 3 is a partial plan of one of the cars.

Similar marks of reference denote the same parts.

The object of my invention is to gradually heat and dry peat, and avail of the heat in cooling off the dried peat to aid in drying that which has not been completely prepared.

My invention consists in a series of cars, each fitted to hold several layers of peat, with circulating air-spaces between the layers, said series of cars being fitted to enter a chamber and move gradually toward the fire through said chamber, which has an escape flue or pipe, and is heated by a suitable furnace located below the track on which the cars run, and some little distance from the end of the chamber at which the cars pass out, so that the peat, as it moves toward the furnace, is gradually heated and dried. A current of air passes in at the end where the cars go out, so as to move in the opposite direction to the cars and cool the peat ready for storage after it has passed the fire, and the same current of air, moving on through the peat, aids the fire in heating the same, and passes off with the vapors and products of combustion by a chimney or vertical flue. By this means the heat is made as efficient as possible in drying the peat.

In the drawings, *a* represents a railway laid upon brick-work or other suitable support, and formed with a chamber at *b* for the reception of any suitable furnace or heater, *c*, from which a pipe or flue, *d*, passes along below the track, terminating with a wire screen or other means for preventing sparks escaping into the chamber *e*, above the track *a*, employed in drying the peat. The products of combustion passing directly into the drying-chamber *e* prevent any loss of heat. Over the track *a* a chamber or tunnel is formed, of sheet metal or other suitable material, as shown at *e*. From near one end a chimney or escape-flue, *f*, rises, in which is a regulating-damper.

In order to produce a plenum of the heat in the chamber, the outlet to the flue or chimney may be placed at or near the bottom of the chamber, to prevent the heat passing off too quickly. The trunk *e* is to be made a little larger than the cars *g*, containing peat, that are entered at one end and pass through the trunk or chamber gradually in the direction of the arrows, in order that the peat may be dried by about the time it arrives over the furnace *c*, and be cooled by the air passing in at the exit end of the chamber *e*, and said cars may be moved along by any suitable means, and at a faster or slower speed, according to the time required in drying the peat.

Each car is made as a frame-work, *h*, upon wheels *i*, and provided with ranges of open-work platforms *k k* and with a closed metallic platform, *l*, at the bottom. These platforms are divided up into sections standing in vertical ranges, one section above the other. Each section is united to a cross-bar, *o*, which forms its axis at one edge, and the moving edges of these sections are sustained by pins or catches at *n*. Each vertical range of these sectional platforms is partially filled with peat in a loose condition, as it may have been dug, raked, or harrowed up, or after it may have been pressed into any suitable forms ready for drying, and the lower section is closed and filled, and then the next section, and so on, up to the top of the range, and then the next or contiguous range is filled in the same manner, until the car presents a series of layers of peat supported upon platforms.

After the peat has been dried by the action of the heat and the current of air passing through and between the layers, the peat is to be discharged by the withdrawal, successively, (commencing at the bottom,) of the pins or catches holding up the sections of the platforms, so that they fall and deliver the peat; and after the car has been emptied, it is to be prepared for the reception of the fresh damp peat by turning up these sections by a wrench

or other means applied to the projecting squared ends of the bars *o*, forming the axes of the sections of the platforms. These sections are to be turned so as to stand vertically over their axes previous to commencing to load each range.

All the sections of the platforms except the bottom ones may be made of wire screens or other suitable material, so as to furnish a perforated surface for the peat to rest upon. I prefer that the bottom sections be formed of sheet metal.

The cars are to be coupled together and moved along through the heated drying-chamber; and to prevent the current of air passing at the sides of the cars, and compel it to pass between the platforms of the car, I employ hinged and spring wings *m*, the outer edges of which come into contact with the interior of the trunk or tunnel.

At the ends of the trunk or tunnel slides or doors may be provided, as at *p*, the door at the entering end allowing a car to be introduced, after which said door should be tightly closed. The door at the delivery end allows the car-load of dried peat to be taken out. At this end the cold air is admitted, as aforesaid, and for that purpose perforations of any desired character may be made in the door or in the trunk, or the door may be opened or partially opened.

The air as it comes in at the exit end of the trunk cools the peat that has been dried, and the air passing on aids in heating and drying the peat as it is moved along.

The vapors contained in the air may condense in the apparatus or on the peat; but they aid in heating the same, and provision may be made for any water of condensation to be run off. By this means very little heat is lost, and the drying is effected with but little fuel.

Scrapers may be attached to the under side of the car, so as to scrape off any accumulation on the tracks. It would fall into space R, from which it may be removed.

I do not limit myself to the character of furnace or source of heat applied to this apparatus. Neither do I limit myself to the platforms of the cars being movable in all instances, as the peat may be passed in upon the platforms by shovels or otherwise, and removed in the same manner; and in this case the sides and ends of the cars may be left open, or partially so, to give facility for introducing and withdrawing the peat.

The cars may be of wood or metal.

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

1. A series of cars moved gradually through a heated chamber, and provided with ranges of platforms holding the peat to be dried and then cooled, or partially cooled, by the action of the air, substantially as set forth.

2. The cars for drying peat, formed of a series of sectional platforms, in the manner specified, to facilitate the reception and discharge of peat, substantially as set forth.

In witness whereof I have hereunto set my signature this 6th day of August, A. D. 1866.

HEZEKIAH BRADFORD.

Witnesses:

CHAS. H. SMITH,

GEO. D. WALKER.