UNITED STATES PATENT OFFICE.

ALBERT BETTELEY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN THE PREPARATION OF PEAT FOR FUEL.

Specification forming part of Letters Patent No. **51,004**, dated November 21, 1865.

To all whom it may concern:

Be it known that I, ALBERT BETTELEY, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in the Preparation of Peat Fuel; and I do hereby declare that the following is a description of my invention sufficient to enable those skilled in the art to practice it.

In the preparation of peat so as to fit it for fuel, the great difficulty encountered and to be overcome is the getting rid of the bulk of the water with which it is mixed without incurring a cost so great as to render the matter of no practical value. To make peat valuable as an article of fuel for general consumption it must be rendered dense and hard, which is effected by the grinding up or by the removal of the tubular fibrous matter contained in the natural peat and by thoroughly mixing or triturating the remainder. This is accomplished in various ways well known to those who have made a specialty of the preparation of peat. To get rid of the water the wet peat has been subjected to pressure, and has also been submitted to the action of the air and sun and to artificial heat, all of which are attended with difficulties which it is not necessary herein to set forth.

My invention consists in a process or series of operations, one being well known and hereinbefore referred to—viz., any mode or operation, or series of operations by which the peat is reduced to a pasty mass approaching homogeneity, and the other consisting in spreading the mass in a thin layer of from one to several inches in thickness over a smooth absorbent surface, such as soft-baked unglazed pottery or brick or plaster-of-paris. The effect of this process is as follows: By the trituration or grinding the cellular structure of the peat is broken up and destroyed, leaving the water free from confinement in cells, pores, or tubes, and in readiness to be taken up by the absorbent substances named or other equivalents therefor, having a fine porous nature, which will receive the moisture and carry it off by capillary attraction.

It is the under side of peat which fails to become dry when spread as a layer. The top side, hardening and drying under the influence of air or heat, crusts over and prevents escape of the moisture from below; but by placing the layer of prepared peat on an absorbent surface, as described, the bulk of the water passes off from both sides of the layer, which is very soon in condition in which it can be cut and handled, placing it either in ovens to have the balance of the water expelled by artificial heat or in stacks to be dried by the air and sunlight. The absorbent surface, after removal of the peat layer, being quickly dried by exposure to air and sunlight, soon becomes ready for reception of a new layer of peat.

I claim—

The combined operation in the process of preparing peat, substantially as described.

In witness whereof I have hereunto set my hand this 20th day of October, A. D. 1865.

ALBERT BETTELEY.

Witnesses:

J. B. CROSBY,

W. B. GLEASON