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METHOD OF STORING AND RECOVERING PEAT

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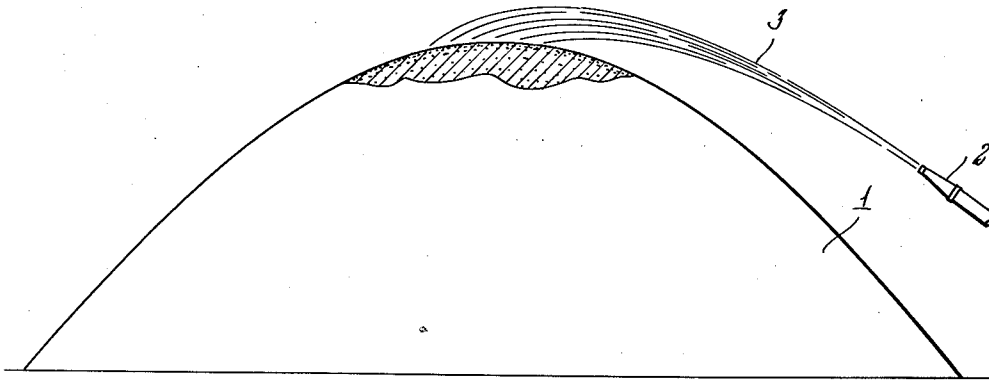


Fig. 1.

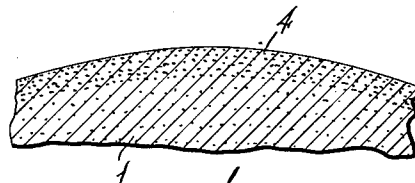


Fig. 2.

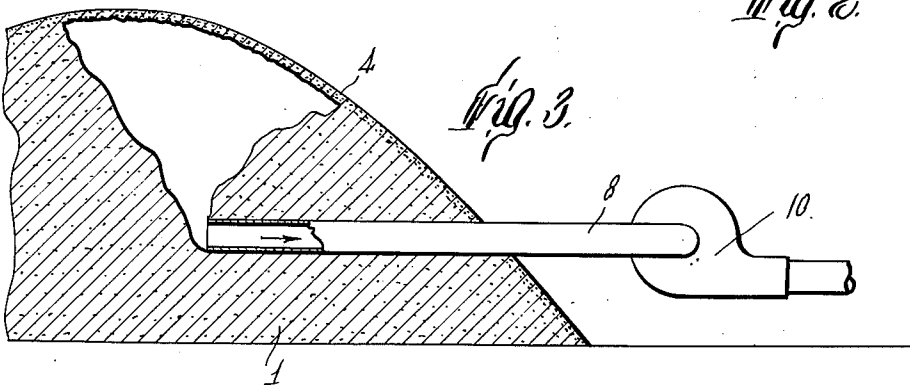


Fig. 3.

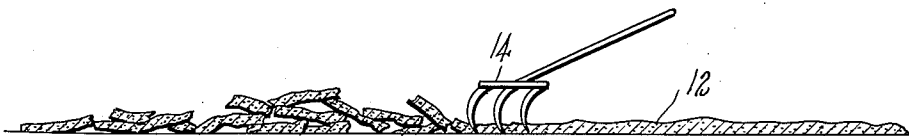


Fig. 4.

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METHOD OF STORING AND RECOVERING
PEAT

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3 Claims. (Cl. 214-152)

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This invention relates to the storing and recovering from storage of peat, such as a sphagnum moss or wood or sedge types of peat, and has for an object to provide a method by which the peat in condition for immediate marketing may be stored in an expeditious manner and at much less cost than by methods heretofore employed. This invention also includes the peat storage.

Heretofore it has been customary to cut out or scoop the wet peat in blocks which have been dried out in the air and sun for weeks or months, either on racks, or in piles or chimneys so constructed as to permit free circulation of air. When dried to marketable moisture percentage of about 25% to 35%, the blocks have been stored for protection against rain. In Germany and Holland the usual method is to make huge piles of the blocks with well matched walls on four sides and a more or less matched block roof of the same material. Rain or snow wets the outer leaves of blocks two to four blocks deep, and when the peat is required for marketing, the pile is opened and most of that inside of the wet outside layers may be milled and baled. In other parts of the world the dried blocks have been stored in open sided sheds. Both of these methods entail large labor cost, and when sheds are used, they have to be so extensive as to involve high building cost as well.

For a complete understanding of this invention, reference may be had to the accompanying somewhat diagrammatic drawings illustrating the steps of the method and in which

Figure 1 is a side elevation partly broken away of a mound or pile of dried comminuted peat showing its surface being sprayed.

Figure 2 is a fragmentary view to a larger scale showing a portion of the outer protective shell and the underlying material.

Figure 3 is a view illustrating the manner of removing material from the pile for marketing.

Figure 4 is a sectional view illustrating the manner in which the outer shell is broken up so that it may be conditioned for marketing.

The method of this invention is applied to peat in sufficiently dry and comminuted condition for immediate baling or otherwise packaging for commercial use and sale, regardless of the methods employed to reduce the peat to such condition, whether by reducing dried blocks of peat, or by removal from the peat deposit in relatively dry and in more or less comminuted condition, or by other convenient process.

In accordance with the method of this inven-

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tion the comminuted and dried peat is piled out of doors and usually directly on the ground, either in cone shaped piles or in windrows, such a pile 1 being shown in Figures 1 and 3. As soon as the pile or windrow is formed, it is sprayed with water, a hose nozzle 2 being illustrated in Figure 1 from which issues the jet of water 3 for spraying the pile or windrow. If desired there may be added to the water a small amount, say, 1% to 2% of a water-miscible oil. The spraying is sufficient to permeate the outer surface of the pile or windrow to a depth of say, two inches. This acts only as a rapidly forming protection against penetration of rain, but also as a binder against the action of wind. From time to time as the sun dries the surface and the pile settles noticeably, the spraying may be repeated until a definite crust 4 is found to have formed at its surface. This encrustation may be expedited, when desired, by rolling the surface. The piles thus formed and treated may be allowed to stand without further attention for extended periods, as, for example, over the winter, the peat within the pile up to within an inch or so of the crust 4 being unaffected by rain, snow, or wind, and remaining in condition for immediate packaging and marketing whenever desired. This material may be removed from the pile by introducing a pipe 8 (Figure 3) into the pile through the crust 4 and applying suction to its outer end as by the suction blower 10. As the interior of the pile is thus removed, the outer more or less damp or wet crust or shell 4 collapses into a more or less broken mass 12 as is shown in Figure 4, and this may then be broken up and sufficiently pulverized as by the use of a tooth harrow 14. This allows the sun and air to reach it and after a time to dry out to merchantable condition so that it may be packaged for shipment and use.

When a water-miscible oil is employed, the heavier the oil the less may be employed for equally good results. The oil has the effect of increasing the resistance of the pile to the entrance of water and strengthens the cohesiveness of the surface crust against the effect of wind and storms, though the use of water alone has been found to give satisfactory results. An oil found entirely satisfactory for the purpose is an emulsified oil put out by the Standard Oil Company of New Jersey under the name "Essotex." The imperviousness of the crust may also be enhanced by the use of very fine peat particles such as peat dust on the outer surface of the mound or windrow.

From the foregoing description of the method,

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it will be evident to those skilled in the art that various changes and modifications might be made without departing from the spirit or scope of the invention.

I claim:

1. The method of storing comminuted and commercially dry peat, which comprises piling the peat out of doors, intermittently sprinkling the exposed surface of the pile with water containing from about 1% to 2% of a water-miscible oil and allowing the surface to dry between the intermittent sprinklings repeated until the peat at said surface forms a protective crust over the remainder of the peat in the pile.

2. The method of storing and recovering comminuted and commercially dry peat, which comprises piling the peat out of doors, intermittently sprinkling the exposed surface of the pile with water and from 1% to 2% of a water-miscible oil and allowing the surface to dry between the intermittent sprinklings, repeated until the peat at said surface forms a protective crust over the remainder of the peat in the pile, and at the termination of the desired period of storage removing the peat from beneath the crust, and finally drying and pulverizing the dried crust.

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3. The method of preparing a substantially waterproof covering which comprises forming said covering of comminuted peat and intermittently sprinkling said covering with water containing 1% to 2% of a water-miscible oil and allowing the covering to dry between said intermittent sprinkling until a protective crust has been formed.

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