B. GRANVILLE.

DISINTEGRATOR.

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1,046,290.

Patented Dec. 3, 1912.

Fig. 1.

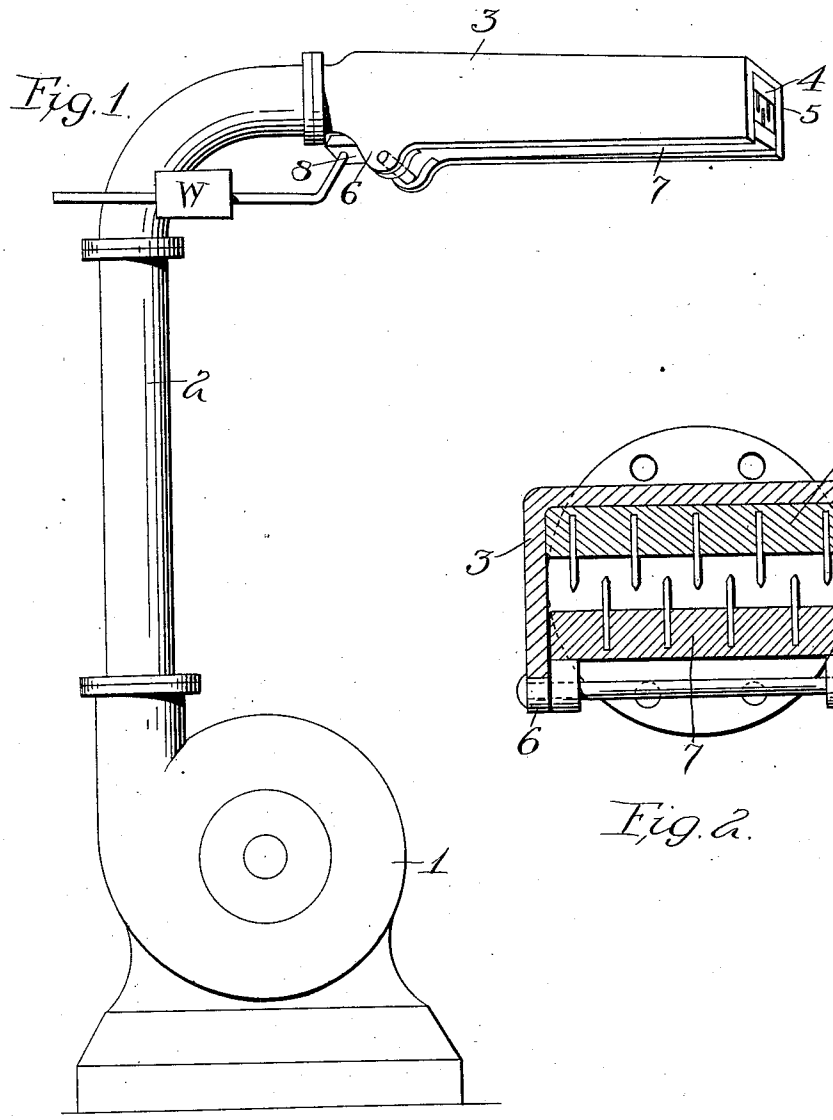

Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

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DISINTEGRATOR.

1,046,290. Specification of Letters Patent. Patented Dec. 3, 1912.

Application filed August 28, 1911. Serial No. 646,504.

To all whom it may concern:

Be it known that I, BERNARD GRANVILLE, a citizen of the United States, residing at New York, N. Y., have invented certain new and useful Improvements in Disintegrators, of which the following is a specification.

My invention relates to apparatus for use in connection with the manufacture of paper from peat, though I do not confine myself to this use, and it concerns particularly means for disintegrating the peat when mixed with water which is used for breaking up the peat bog.

In carrying out my process which is made the subject of an application for Letters Patent of the United States, filed by me January 28, 1911, #605,330, renewed February 8, 1912, #676,444, the mass of peat is broken up by a hydraulic stream and the peat held in suspension in this water is conveyed to a suitable receptacle, and further this water containing the peat in suspension is pumped and discharged through the disintegrator forming part of my present invention. This disintegrator in connection with the pump is shown in the accompanying drawings, in which,

Figure 1 is a side view of the pump and with the disintegrator attached, said disintegrator being shown in perspective. Fig. 2 is a cross sectional view of the disintegrator.

In these drawings, 1 indicates the pump for forcing the mixture of peat and water through a pipe 2 to the disintegrator 3, which comprises an inverted trough-like member having set therein a plate 4 provided with a number of projecting teeth 5 extending downwardly. This trough-like member has ears at 6, in which is pivotally mounted a plate 7, extending along the lower open side of the trough-like member to form a bottom therefor, and this plate which is counterbalanced by a weight W on a lever is provided with teeth which project upwardly and preferably between the teeth of the plate secured to the top of the trough. The pivot plate is held normally substantially parallel with the upper toothed plate and for this purpose it may have a weighted end at 8, or a spring may be used for this purpose. The mixture of water and peat forced by the pump passes through the pipe or conduit, and thence to the trough-like member from whence it issues between the lower tooth plate and the toothed plate secured to the trough, and in its passage between these teeth the peat particles are broken up and disintegrated to the desired degree, and upon leaving the trough the material passes to suitable machinery for subsequent treatment. The lower plate, as before indicated, has movement in relation to the upper plate, and when a lump of material reaches the disintegrator the lower plate will open in relation to the upper plate sufficiently to allow an onward passage of this portion of the material which would otherwise tend to clog the disintegrator, but in its passage from one set of teeth, or row of teeth to the next, it will be reduced and torn so that before reaching the end of the disintegrator it will have been broken up to the proper extent. The oscillating movement of the plate with its teeth will also aid in this chewing or breaking up effect.

One feature of my invention concerns the use of a disintegrator or disintegrating surface in connection with means for directing a column of water thereto under pressure, and as one means for carrying out this part of my invention I have shown a pump for producing the hydraulic stream, this pump may be of any suitable construction.

I claim as my invention:—

1. An apparatus for disintegrating peat comprising a chamber having teeth projecting from its wall inwardly, one side of said chamber being pivotally mounted and thereby rendered movable toward and from the other side, and a force pump for forcing water containing the peat fiber through the said chamber in a direction from the pivot toward the other end of the chamber, substantially as described.

2. An apparatus for disintegrating peat comprising a chamber having teeth projecting from its wall inwardly, one side of said chamber being movable toward and from

the other, and a force pump for forcing the water mixed with the peat fiber through the said chamber, substantially as described.

3. An apparatus for disintegrating peat, comprising a chamber having a fixed side and a side pivotally mounted and weighted to move toward the fixed side, said chamber having teeth projecting inwardly from its fixed and movable walls, substantially as described.

In testimony whereof, I affix my signature in presence of two witnesses.

BERNARD GRANVILLE.

Witnesses:
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