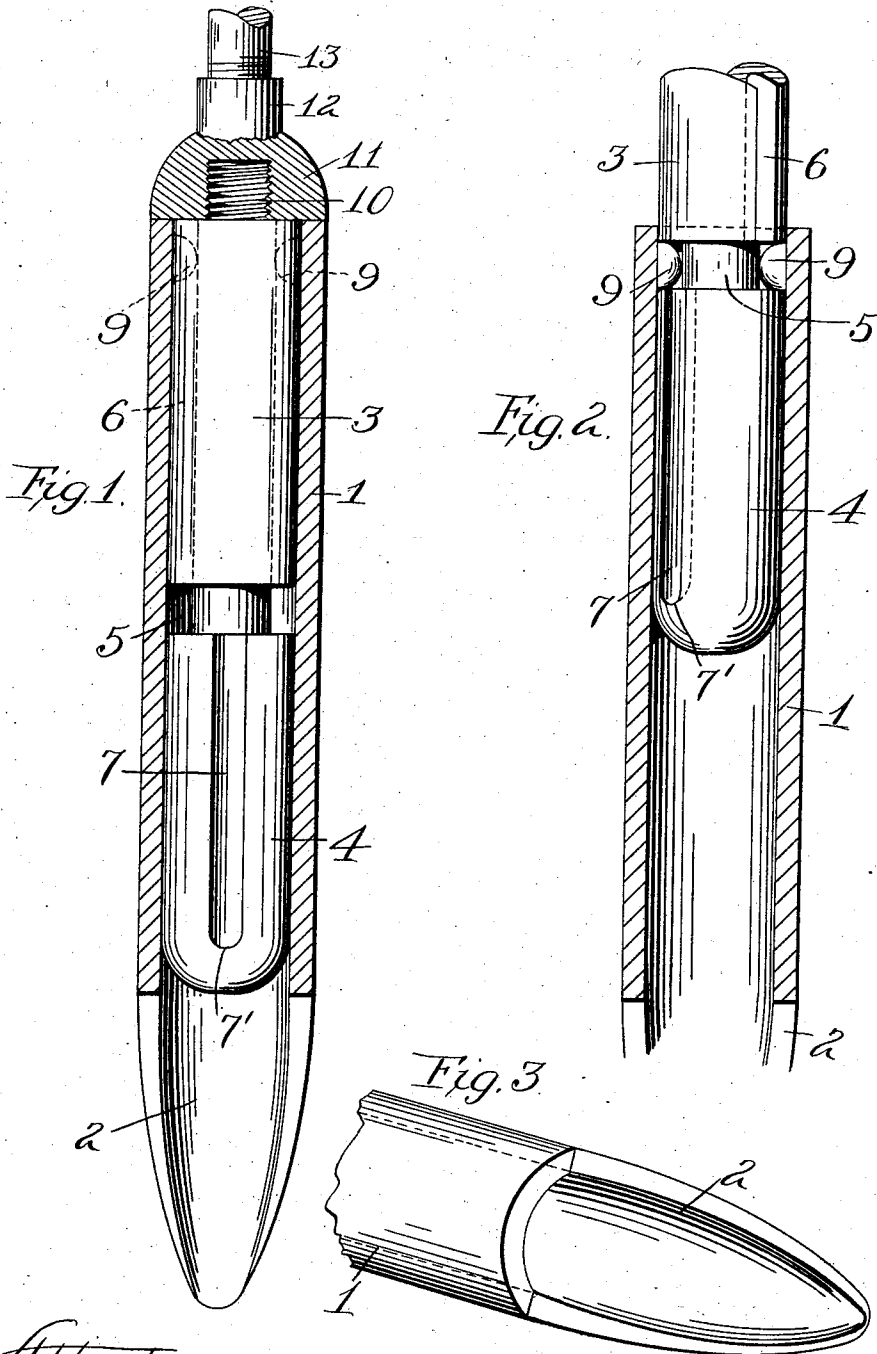


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 IMPLEMENT FOR OBTAINING SAMPLES FROM PEAT BOGS AND OTHER PURPOSES.
 APPLICATION FILED AUG. 28, 1911.

1,027,246.

Patented May 21, 1912.



Attest.
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UNITED STATES PATENT OFFICE.

BERNARD GRANVILLE, OF NEW YORK, N. Y., ASSIGNOR TO NATIONAL FIBRE PRODUCTS COMPANY, A CORPORATION OF DELAWARE.

IMPLEMENT FOR OBTAINING SAMPLES FROM PEAT BOGS AND OTHER PURPOSES.

1,027,246.

Specification of Letters Patent.

Patented May 21, 1912.

Application filed August 28, 1911. Serial No. 646,503.

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 Implements for Obtaining Samples from Peat Bogs and other Purposes, of which the following is a specification.

My invention relates to a device for taking samples from masses or bodies of material to judge as to its character, and particularly in connection with the use of peat, the instrument being adapted to be thrust into the bog to any desired depth and to be drawn therefrom, carrying the sample for examination so that the character of the material for different depths may be ascertained.

The invention consists in the features and combination and arrangement of parts hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a part sectional view and elevation of the device with the parts in one position, and Fig. 2 is a similar view with the parts in another position, and Fig. 3 is a perspective view of the outer shell.

In these drawings, 1 indicates an outer shell of tubular form, having upper and lower open ends with an extension 2 on one side of the shell reaching downwardly therefrom and adapted to act as a cutter for the material of which a sample is to be obtained. Within this hollow shell is located what may be termed a plunger portion composed of upper and lower parts 3, 4, of cylindrical form and adapted to have a sliding fit with the interior of the shell, these parts 3 and 4 being separated from each other by an annular groove or space 5, these upper and lower portions having the grooves marked respectively 6 and 7 in their sides, those of each section or portions being shown as located diametrically opposite to each other but not being limited to this relative arrangement. The grooves of the lower portion 4 are not in line with those of the upper portion and may be as shown, located a quarter turn therefrom. On the interior of the shell or outer casing lugs 9 are affixed or formed with the shell as may be desired, and these project inwardly and are adapted to enter the side grooves of the plunger portion as shown in Fig. 1. The inner plunger

portion has a screw threaded stem 10, which is engaged by a coupling member 11, and this has a screw threaded socket 12 to receive a rod or tube 13, which rod is made up of any desired number of sections screw threaded one to the other so that any desired length of rod may be obtained for thrusting the implement into the peat bog or other mass of material to the desired point or depth.

In using the implement it is first adjusted to position shown in Fig. 1 and thrust into the bog or body of material to the required depth, the inner plug is then raised to position shown in Fig. 2, so that the lug 9 will not be in line with the upper set of grooves, but will lie in the recess or annular groove 5 to contact with the upper wall of said annular groove. With the parts in this position it will be noticed that there is a receiving space below the lower end of the inner plunger and the lower end of the casing so that when the implement is thrust into the body or mass of material this material will enter and fill this space. If the bog or material at this point contains comparatively little moisture, and is of such consistency as will enable it to be retained within the outer casing, the implement can be drawn from the mass, and thus the plug or sample of material can be withdrawn from the bog, the frictional resistance between the plug and the wall of the casing being sufficient to retain the plug therein. If, however, the material contains a larger percentage of water, or is of semi-fluid consistency the plunger and casing being in the relation shown in Fig. 2, the operator by turning the plunger portion by means of the rod or handle will bring the groove 7 of the lower portion into line with the lugs 9 and then by drawing up upon the inner plunger a vacuum will be created within the casing sufficient to hold upwardly the fluid or semi-fluid plug of material, and this may then be removed from the bog or mass of material by withdrawing the implement therefrom. It will be noticed that the grooves 7 do not extend throughout the length of the lower plunger portion but have lower walls at 7' which act as stops to limit the upward movement of the inner plunger in relation to the casing. I do not limit myself to the details of construction described.

After the implement has been withdrawn

from the bog or other mass of material with the sample in the outer case, the outer case is adjusted so that the lugs 9 thereon will register with the grooves in the sides of the upper portion of the plunger and then upon thrusting the plunger farther into the casing the sample may be ejected into the spoon shaped end of the casing and thus prevented from falling on the ground.

It will be observed that the member 11 can be employed to perform the function of a hammer by striking on the casing 1 in order to force the tool into the material of the bog or other material enabling it to cut through roots or other obstructions or to penetrate material of considerable density.

I claim as my invention:—

1. In combination in an implement of the class described, a casing, a plunger within the casing, means for locking the plunger at a point intermediate of its length within said casing, and means for rotating the plunger to lock or release the same, said plunger being movable, when released, either upwardly or downwardly in relation to the casing, substantially as described.

2. In combination, a casing, a plunger portion movable in respect to the casing and within the same, said plunger portion being capable also of rotary movement in relation to the casing and means for locking the plunger and the casing together to move as one body, and means whereby the plunger may be retracted in relation to the casing by first rotating the plunger to unlock the same from said casing, substantially as described.

3. In combination in an implement of the class described, a casing, a plunger portion

movable within the same longitudinally and revolubly, a lug on the casing, a shoulder at an intermediate portion of the plunger to engage the said lug, and a groove in the plunger to register with the lug when the plunger has turned to allow said plunger to have retracting movement in respect to the casing, substantially as described.

4. In combination in an implement of the class described, a casing, a lug on the interior thereof, a plunger having upper and lower portions with a groove between them extending in a direction circumferentially of the plunger and upper and lower grooves in the upper and lower portions respectively of the plunger, said grooves communicating with the circumferential groove and being out of alinement in respect to each other, substantially as described.

5. In combination the casing, the inner plunger, a hammer portion connected with the plunger to drive the casing, a rod connected to the hammer portion and means of connection between the casing and the inner plunger consisting of a lug, and longitudinal and circumferential slots in which the lug works, substantially as described.

6. In combination with a casing, an inner plunger, means for adjustably connecting the same, and means for operating the casing, said casing having an extension on one side beyond its main portion, substantially as described.

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

BERNARD GRANVILLE.

Witnesses:

H. B. HITCHINGS,
D. J. STROHMEYER.