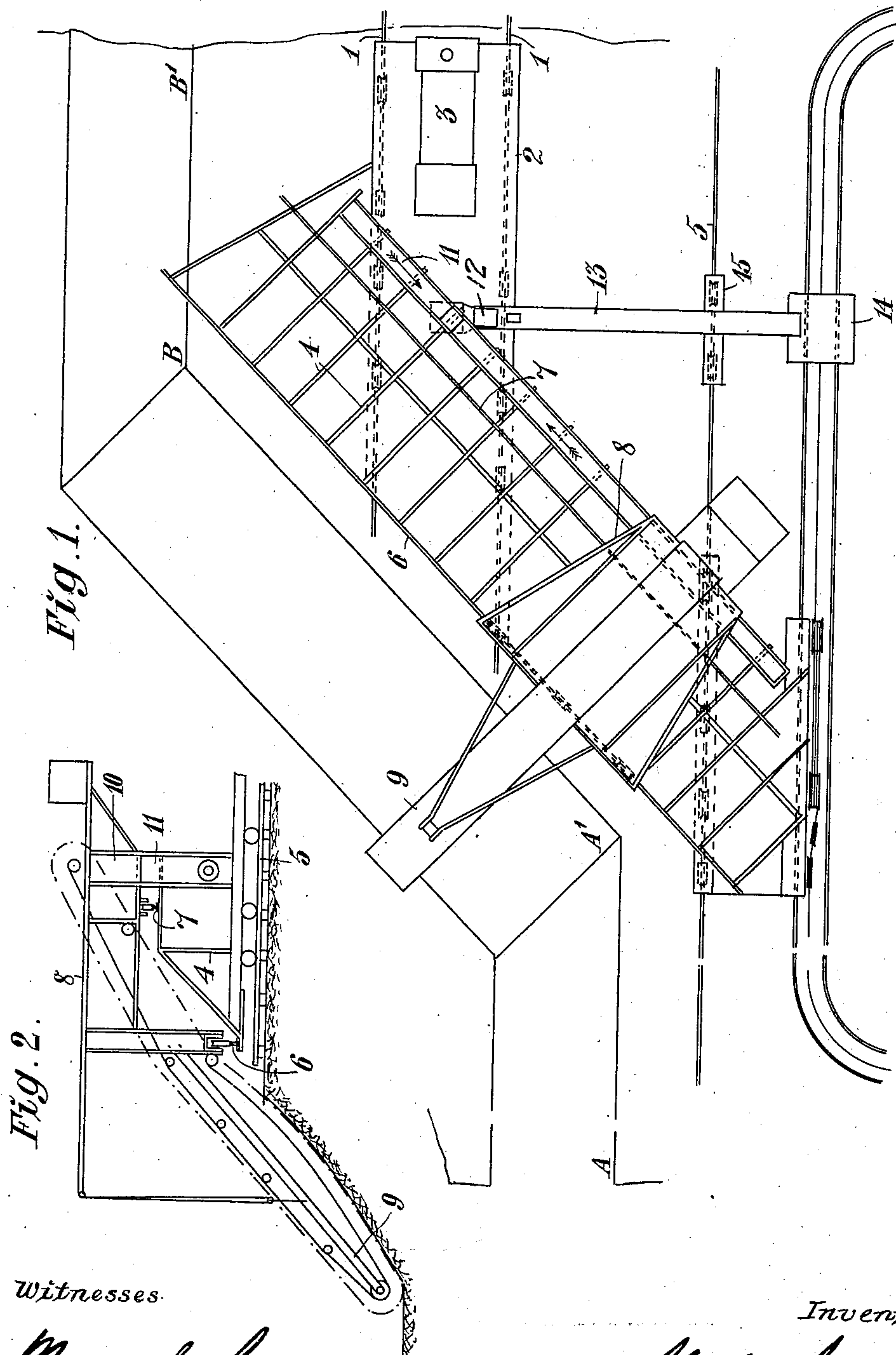


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EXCAVATING MACHINE FOR DIGGING AND CONVEYING PEAT.
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980,858.

Patented Jan. 3, 1911.



Witnesses.

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EXCAVATING-MACHINE FOR DIGGING AND CONVEYING PEAT.

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To all whom it may concern:

Be it known that I, ALEPH ANREP, a subject of the King of Sweden, residing at Helsingborg, in the district of Malmöhus, in the Kingdom of Sweden, have invented new and useful Improvements in Excavators or Machines for Digging and Conveying Peat, of which the following is a specification, reference being had to the drawing accompanying and forming a part hereof.

This invention relates to excavators or machines for digging and conveying peat.

The machines of this kind hitherto used generally move along the edge of the pit or excavation made in the soil, or they work with lateral diggers carried by the conveying trough at right angles to the direction of movement of the machine, said trough resting at one end on the bottom of the excavation and at the other end on the surface of the soil, at the edge of the said excavation. Under these conditions a reliable support is obtainable only in firm bogs, especially as the vertical wall often breaks down. For these reasons greater working depths than about 2 yards are not admitted. Moreover, the width of the excavation is limited to the span of the trough carrying the digging means. These older machines do not leave the desired output of peat per yard of longitudinal movement of the machine.

The object of the invention is to provide a machine adapted to effectively and rationally work any kind of peat-bog, whether firm or soft.

The invention consists, chiefly, in the combination of a car adapted to run on rails on the surface of the soil, and a digging device movable obliquely across the said car. Preferably, the digging device is carried by a traverser movable on rails extending obliquely across the car. If desired, the car may be provided with a conveying trough extending in the path of the traverser for taking up and conveying the peat delivered by the digging device through a hopper moving with the traverser above the said conveying trough, said trough leading to a suitable peat-working machine from which a gutter or conduit for the treated peat leads to the transport wagons running on an endless track.

The invention further comprises the con-

struction and combination of parts herein- 55 after more particularly set forth.

In the drawing, I have shown diagrammatically a combined machine for digging and conveying peat according to the invention. 60

Figure 1 is a plan view of the machine with conveyers and rails placed on the surface of the soil. Fig. 2 is a side-view of the excavator viewed in the longitudinal direction of the obliquely extending supporting 65 frame or structure.

The width of the excavation is represented by the perpendicular distance between the straight lines A A' and B B', the digging or working line extending obliquely 70 across the excavation, as indicated by the line A' B. Placed about half-way between the lines A A' and B B', i. e. at about the middle of the excavation, are the rails 1, 1 for the platform or motor car 2. Mounted 75 at one end of the car 2 is the driving motor 3. Placed at the part of the car adjacent to the line of working A' B is the traverser-supporting frame or structure 4 which may be formed by trestles and braces, as indicated in the drawing. The end of the said frame or structure remote from the excavation may be supported by a single rail 5 parallel to the rails 1, 1. Placed on the frame or structure 4, in the longitudinal di- 85 rection thereof, are rails 6 and 7 for the traverser 8 carrying the digging device 9.

It will be understood from the aforesaid that the traverser 8 with the digging device may be moved along the frame or structure 90 4 in one or the other direction while the digging device is operating and continually digging the peat from the bog. At each time the traverser with the digging device moves to the outer end of the frame or 95 structure 4 it digs the peat beyond the line B B' without the part of the soil outside the track 1 being exposed to the weight of the machine, i. e. in the case illustrated the soil is not loaded outside the part thereof lying 100 at about the middle of the excavation to be made or about half-way between the lines A A' and B B'.

The peat dug from the bog is delivered by the digging device 9 into the hopper 10 105 whence it drops into the conveying trough 11 in which it is fed forward by conveyers to the peat-working machine 12, for instance

a peat-compressing or peat-molding machine. The peat treated in the machine 12 is brought by a conveyer, for instance a gutter 13, to transport wagons 14 running 5 on an endless track. The peat-working machine 12 as well as the adjacent part of the transport gutter 13 are supported by the motor car 2 whereas the remote part of the said gutter 13 may be supported by the inner 10 rail 5 through the medium of a carriage 15 or the like running thereon.

All the parts of the machine (the digging device 9 as well as the peat-working machine 12 and the driving means for the car 15 2, the traverser 8, the gutter 13, and the transport wagons 14) may be driven from the motor 3 mounted on the car 2. It is, however, obvious that a separate motor, for instance an electric motor placed on the trav- 20 erser 8, may be used for driving the digging device. It is also obvious that the car 2 as well as the transport wagons may be moved by separate motors. The device for moving the car 2 in the longitudinal di- 25 rection of the excavation to be made is suitably placed on the car 2.

It will be seen that, according to this invention, the digging device does not move at the side of the peat-working machine, nor 30 does it move at right angles across the excavation, because in such case the machine would not have a sufficiently firm support when arriving at the outer edge of the excavation, particularly if the excavation has 35 a great depth, in which case it is more liable to yield at the said edge. This is avoided by causing the excavator to reciprocate in an oblique direction across the excavation, behind the conveying trough, which is placed 40 in a horizontal position above the peat-working machine and behind the motor car, all above the surface of the soil without any support in the excavation. Inasmuch as the outermost rail may be placed at a con- 45 siderable distance from the farther edge of the excavation without risk of earth-slip, it will be possible to move the traverser with the digging device all the way to the farthest end of the transverse frame or structure, 50 near the edge of the excavation without the load on the farthest part of the working place falling beyond the outermost longitudinal rail. By this means a firm mounting of the whole and a reliable working is 55 obtained enabling the digging of an excavation of a width of more than 10 yards. The digging proceeds reliably and uniformly, and according as the work proceeds the rails extending in the longitudinal direction

of the excavation may be shifted from the 60 obliquely extending line of working A' B to the other side of the machine.

I claim:

1. In a machine for digging and conveying peat, the combination of a car adapted 65 to run on rails on the surface of the soil, and a digging device entirely supported on the said car and adapted to reciprocate horizontally across the car in an oblique direction in relation to the direction of movement of the 70 same, substantially as and for the purpose set forth.

2. In a machine for digging and conveying peat, the combination of a car adapted to run on rails on the surface of the soil, rails 75 carried by the said car, said latter rails extending horizontally across the car in an oblique direction in relation to the direction of movement of the same, and a digging device adapted to reciprocate on the said 80 obliquely extending rails, across the said car, substantially as and for the purpose set forth.

3. In a machine for digging and conveying peat, the combination of a car adapted 85 to run on rails on the surface of the soil, rails carried by the said car, said latter rails extending horizontally across the car in an oblique direction in relation to the direction of movement of the same, a traverser 90 adapted to reciprocate on the said obliquely extending rails, across the said car, and a digging device carried by the said traverser, substantially as and for the purpose set forth. 95

4. In a plant for digging and conveying peat, the combination of rails extending on the surface of the soil, in the longitudinal direction of the excavation to be dug, a car movable on the said rails, obliquely extend- 100 ing rails carried by the said car, a traverser movable on the said obliquely extending rails, a digging device carried by the said traverser, a hopper carried by the said traverser for taking up the peat sup- 105 plied by the digging device, a conveying trough carried by the car, said trough extending below the said hopper, in the path thereof, a peat-working machine connected to the said trough, a gutter leading from the 110 said peat-working machine, wagons for taking up the peat from the said gutter, and an endless path for the said wagons, substantially as and for the purpose set forth.

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Witnesses:

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