

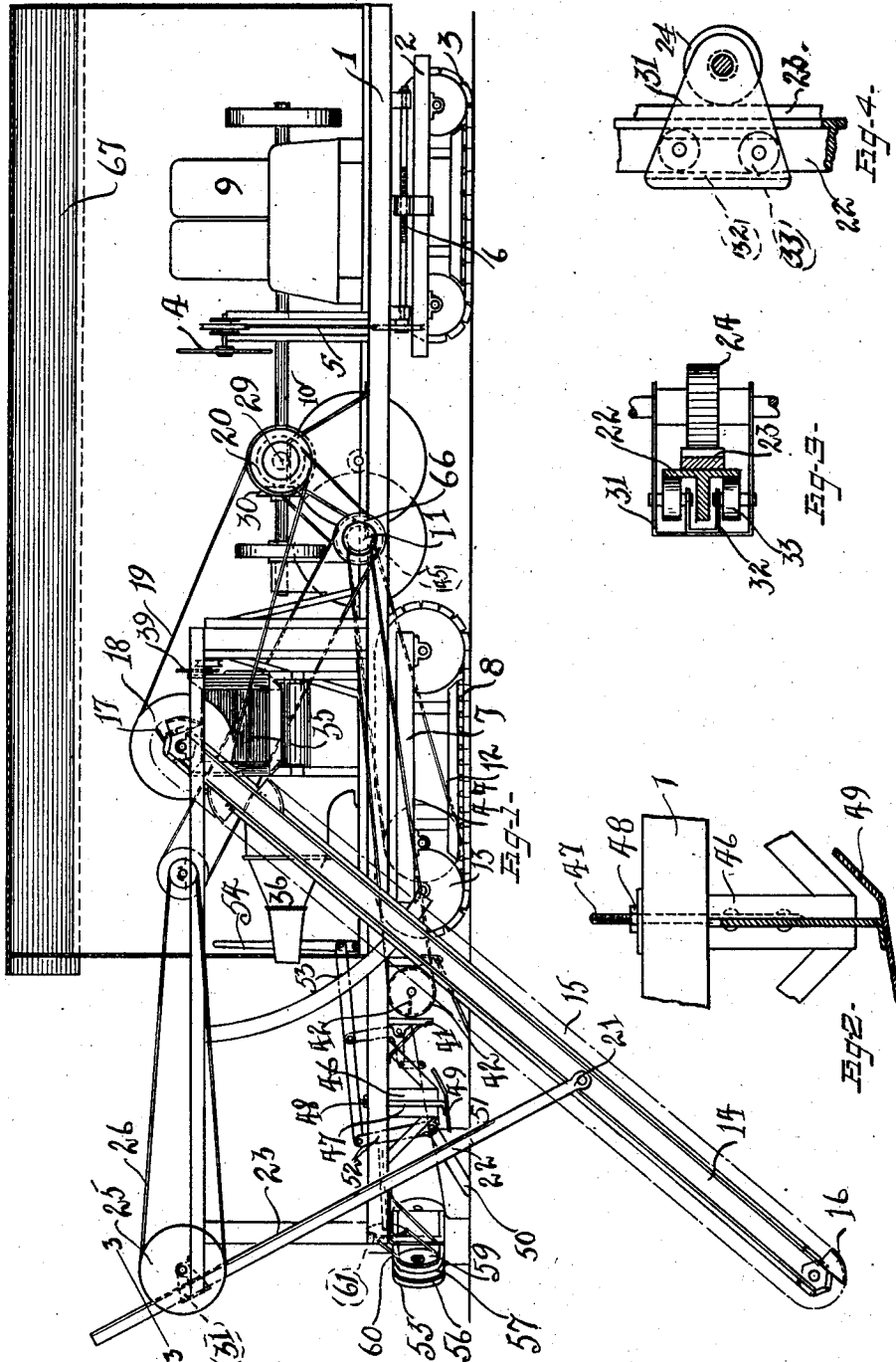
L. B. LINCOLN.
PEAT PLANT.

APPLICATION FILED JUNE 3, 1910.

Patented Dec. 12, 1911.

3 SHEETS-SHEET 1.

1,011,453.



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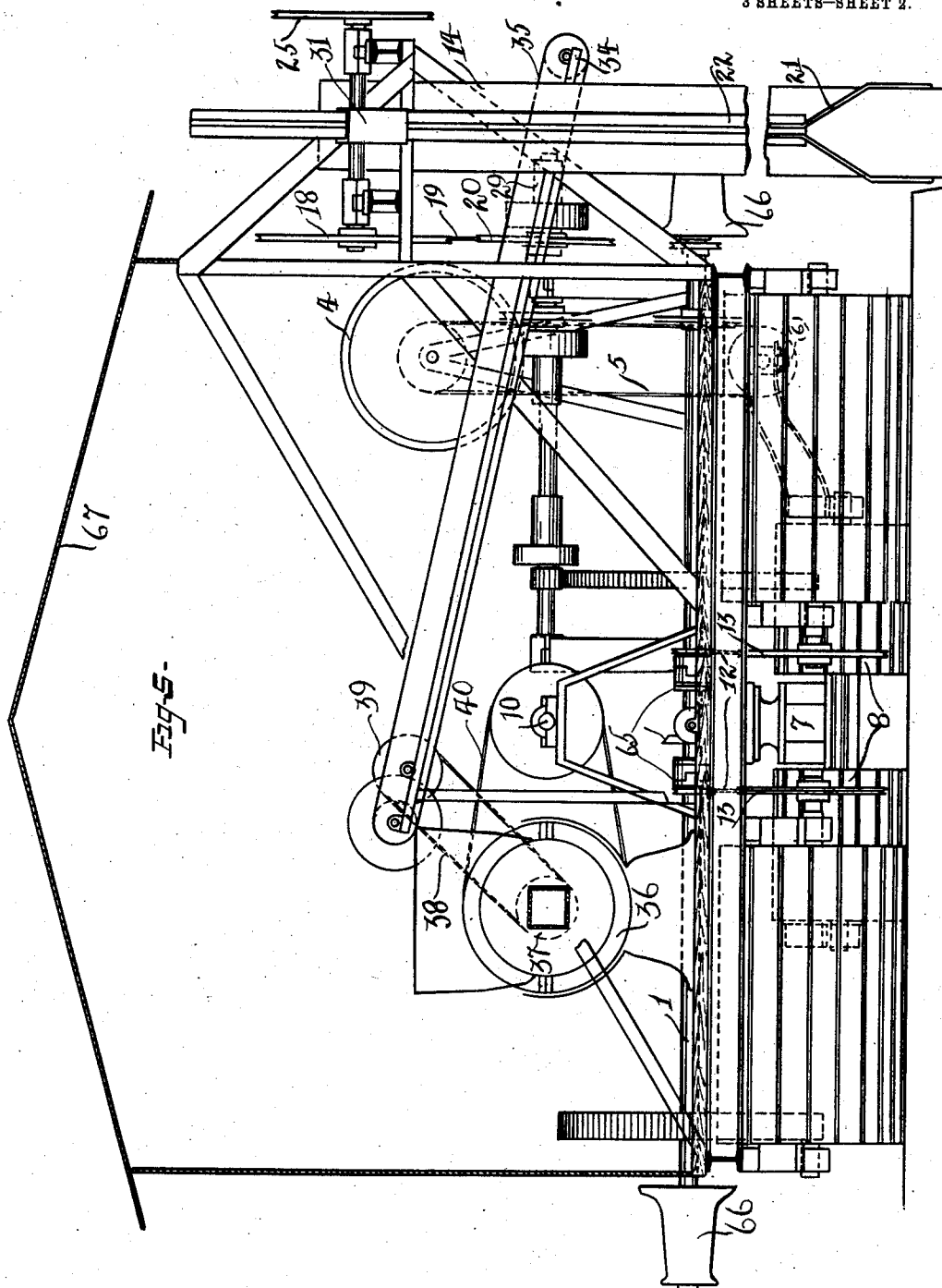


Fig. 5-

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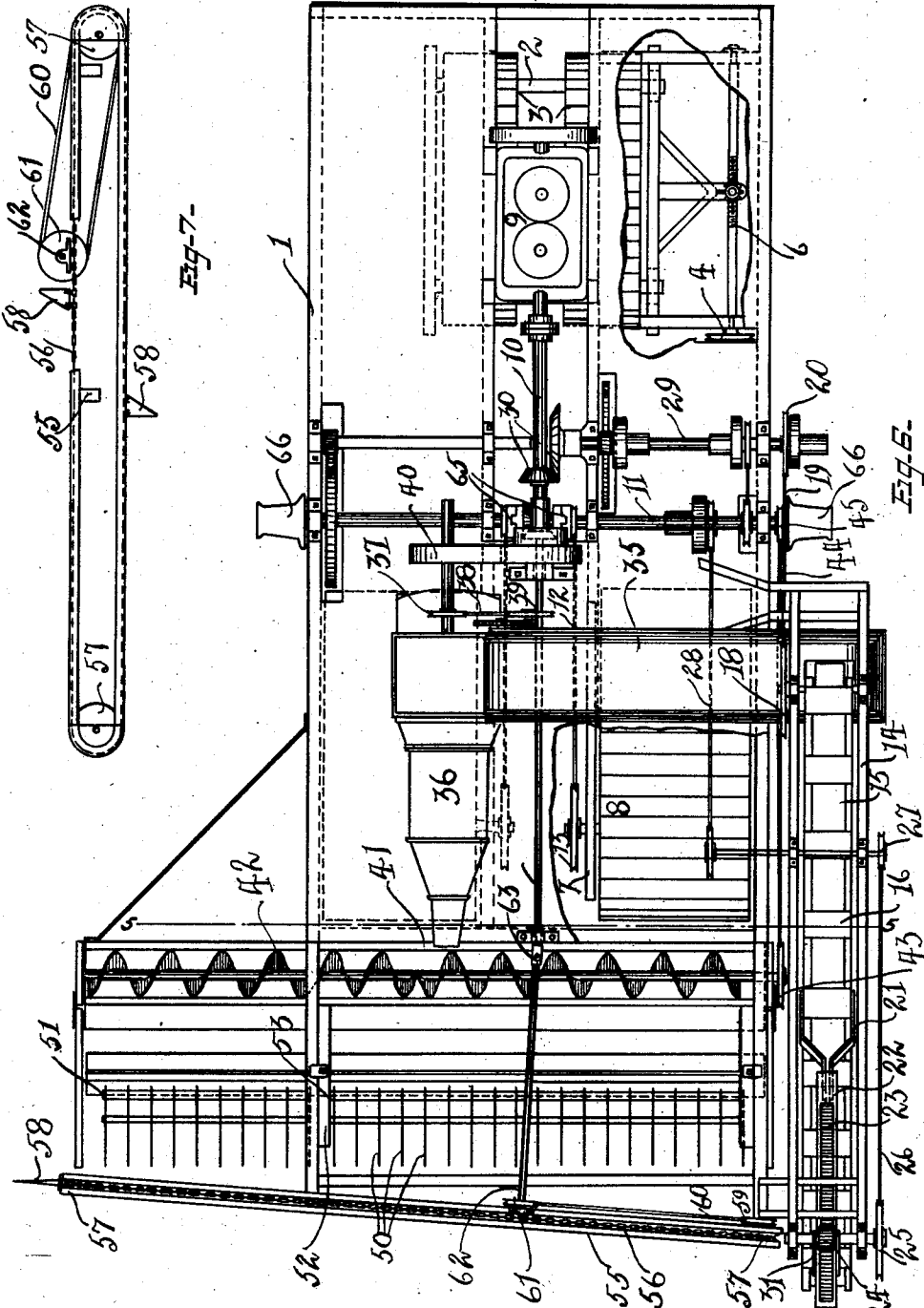
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UNITED STATES PATENT OFFICE.

LEO BUNSEL LINCOLN, OF CHICAGO, ILLINOIS, ASSIGNOR TO PEAT INDUSTRIES,
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PEAT PLANT.

1,011,453.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed June 3, 1910. Serial No. 564,892.

To all whom it may concern:

Be it known that I, LEO BUNSEL LINCOLN, a citizen of the United States, residing at Chicago, in the county of Cook, in the State of Illinois, have invented certain new and useful Improvements in Peat Plants, of which the following is a specification.

My invention relates to peat plants.

The object of my invention is to provide a complete, movable plant, with means for propelling it, or permitting it to be propelled, over a bog, and in the same complete combination of elements to provide means for excavating the peat, macerating the peat, spreading it in a layer of uniform thickness, and, as the machine is propelled, cutting the spread peat into uniform blocks.

A further object is to provide means for adjusting the depth of the excavating element and for adjusting the position of the spreading element to vary the thickness of the peat as it is spread.

A further object is to provide a transverse cutting element the line of movement of which will always be at right angles to the line of movement of the complete machine as it is propelled across the bog.

A further object is to provide means for clearing the excavating element of all of the peat adhering thereto.

My invention consists of the construction, combination and arrangement of parts, as herein illustrated, described and claimed.

In the accompanying drawings, forming part of this application, I have illustrated a form of embodiment of my invention, showing a characteristic form of each element embodied in the combination, either of which may be varied to some other form without affecting the combination, in which drawings similar reference characters designate corresponding parts and in which:

Figure 1 is a side elevation; Fig. 2 is a fragmentary detail in side elevation and vertical section of the spreading device and its adjustment; Fig. 3 is a fragmentary detail in horizontal section, taken approximately on line 3—3 of Fig. 1, showing the excavator adjustment; Fig. 4 is a fragmentary detail in side elevation of the excavator adjustment; Fig. 5 is a vertical section taken approximately on line 5—5 of Fig. 6, showing the parts of the machine in front of the line in rear elevation; Fig. 6 is a plan view, partly broken away; and, Fig. 7 is a frag-

mentary detail of the transverse cutting element.

In peat treating plants heretofore used, it has been the practice to excavate the peat, transport it to a fixed macerating plant, and after the macerating operation to fix the form of the finished product by various compressing and molding operations and machines.

The general object of this invention is to provide a simple, portable machine, on one support, in which all of these operations may be carried on as the machine is propelled over the bog; and, to provide a machine which may be constructed and sold as a complete portable plant. In the construction of each element, I have illustrated simply a characteristic form, and do not specifically claim as new a particular form of motive element, nor a particular form of wheeled support, nor a particular form of excavator element, nor a particular form of macerating or conveying means.

Referring to the drawings, 1 designates a supporting platform, carrying all of the hereinafter described elements. The front end of the platform 1 is supported by a pivotally connected, steering truck 2, carrying a pair of movable aprons 3. The bog over which the machine is to be operated being very soft and wet it is necessary to have a large surface on which the weight of the machine is supported. The front truck may be moved on its pivotal connection with the platform by means of the hand wheel 4 and steering means 5 and 6, so that the machine may be guided in any desired direction.

The rear end of the platform 1 is supported by a truck 7, which is used as a driving means to propel the machine. The rear truck 7 carries movable aprons 8. An engine of any suitable form and construction is mounted on the front of the platform 1 and provided with a main shaft 10. A counter shaft 11 is driven by the main shaft 10 and in turn drives a belt or plurality of belts 12, running over a pulley or pulleys 13 on the rear truck for the purpose of moving the aprons 8 and thus propelling the machine.

A frame 14, at one side of the machine, has its upper end pivoted to a convenient fixed part, and supports a movable belt 15. Buckets 16 are fixed to the belt 15, and a member 17 is fixed in the line of movement

of the buckets 16, so that they are cleaned perfectly at the upper end of the excavating element. A pulley 18 drives the belt 15 and is driven by a belt 19 running over a pulley 20 on a shaft 29, driven from the main shaft 10.

In order to regulate the depth of the cut of the excavator and to elevate the same for the purpose of turning and moving the machine, a yoke 21 is pivoted to the lower end of the frame 14. A T-beam 22 is secured to the yoke 21 and has its upper end provided with a rack 23 disposed in mesh with a gear 24, supported at any convenient point on the machine. The gear 24 is operated by a pulley 25, a belt 26 and a pulley 27, all operated by a belt 28 from the counter shaft 11.

The shaft 29 above mentioned may be conveniently driven by means of bevel gears 30, as best shown in Fig. 6.

To afford a support for the excavator beam adjusting means, a yoke 31 has its ends secured to the shaft of the gear 24 and has seated therein a channel iron member 32 supporting friction rolls 33. The T-beam 22 bears on the rolls on one side while its rack 23 meshes with the gear 24 as best shown in Figs. 3 and 4 of the drawings. A cross conveyer extends upward and transversely from the excavator, and comprises a frame 34 and a belt 35. The upper and inner end of this conveyer extends to a point over the hopper of a common form of macerator 36. As best shown in Fig. 5, the cross conveyer may be run by means of a pulley 37, a belt 38 and a pulley 39 on the conveyer, while the macerator is operated by means of a belt 40, run from the main shaft 10.

After leaving the macerator, 36, the material operated on falls into an open, transverse box 41, containing a revolving conveyer 42, which serves to transfer the material across the machine in even quantities. The rotary conveyer 42 may be operated by means of a pulley 43, belt 44, and pulley 45 on the shaft 11, which is driven from the main shaft 10. As the material operated on falls in the path of the machine from the conveyer box 41, it is further spread and reduced to a uniform thickness by means of a spreader located beneath the machine. This spreader consists of a support 46 on the platform 1, a plurality of screws 47 working through the support, nuts 48 and a transverse plate or spreader 49. The aprons 3 and 8 having formed a smooth bed in their travel, the material operated on is spread and reduced to even thickness.

After being operated on as described the material, spread in the path of the machine, is cut into longitudinal strips by means of cutting knives 50 (see Fig. 1) at the rear of and underneath the platform 1. These

knives 50 are mounted on a support or shaft 51, to which is connected a lever 52. The lever 52 is operated by a rod 53 and lever 54, to regulate the depth of the cut and to elevate the knives from the path of the machine when it is desired to turn or transport the same without its performing all of its functions.

After the material operated on has been spread and cut into longitudinal strips, it is further cut transversely to form blocks of uniform size by means of the following device: A frame 55 is disposed transversely of and at less than a right angle to the platform 1. An endless belt 56 is movably disposed on the frame on sprocket wheels 57. Carried by the belt 57 are cutting knives 58 which cut the longitudinal strips of material into blocks. The angle of the frame 55 and the number of knives 58 are proportioned to the speed of the machine so that the blocks are cut square, or at right angles to the machine. As shown in Figs. 1 and 6, the belt 56 may be driven by a pulley 59, a belt 60 and a pulley 61, from a shaft 62 having a knuckle joint 63, and run from the main shaft 10.

It will be understood that where the elements belt and pulley have been used a chain and sprocket wheel may be substituted and that any other arrangement from driving engine to transmission gearing may be substituted. Suitable clutches, as 65 may be used on the transmission shafts so that any desired element may be run independent of any other element if desired. Drums 66 are provided on convenient projecting shafts to provide means for pulling out logs and moving the machine should it become stalled. In this case a rope is placed around the drums and attached to the log or to a fixed object. The entire mechanism on the platform 1 is covered by a housing 67.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In an apparatus of the class described, a carriage, means for moving the carriage, a cutter movable transversely relative to the carriage at an acute angle to the direction of movement of the carriage, and means for moving said cutter at such a speed as to produce a movement of the cutter relative to the surface over which the carriage is traveling at right angles to the direction of travel of the carriage.

2. In an apparatus of the class described, a carriage, means for moving the carriage, spreading means for distributing peat over the surface across which the carriage is traveling, a leveling device depending from the carriage in rear of said spreading means for smoothing and compacting the peat into a uniform layer, and means in rear of said leveling device for automatically cutting

said layer into blocks as the carriage advances.

3. In an apparatus of the character described, a carriage, supporting and propelling means for the carriage arranged to level the surface over which the carriage is traveling, spreading means on the carriage arranged to distribute peat over the leveled surface in rear of the carriage, a device arranged in rear of said spreading means for smoothing and compacting the peat into a uniform layer, and means for automatically cutting said layer into blocks as the carriage advances.

4. In an apparatus of the character de-

scribed, a carriage, means for moving the carriage, means for automatically excavating and macerating peat as the carriage advances, means for spreading and compacting the peat into a uniform layer in rear of the carriage, and means for automatically cutting said layer into blocks as the carriage advances.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

LEO BUNSEL LINCOLN.

Witnesses:

J. D. MOFFET,

L. O. COUSINS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."