No. 706,535.

Patented Aug. 12, 1902.

A. DOBSON.

APPARATUS FOR HARVESTING PEAT.

(Application filed Nov. 21, 1901.)

(No Model.)

2 Sheets—Sheet 1.

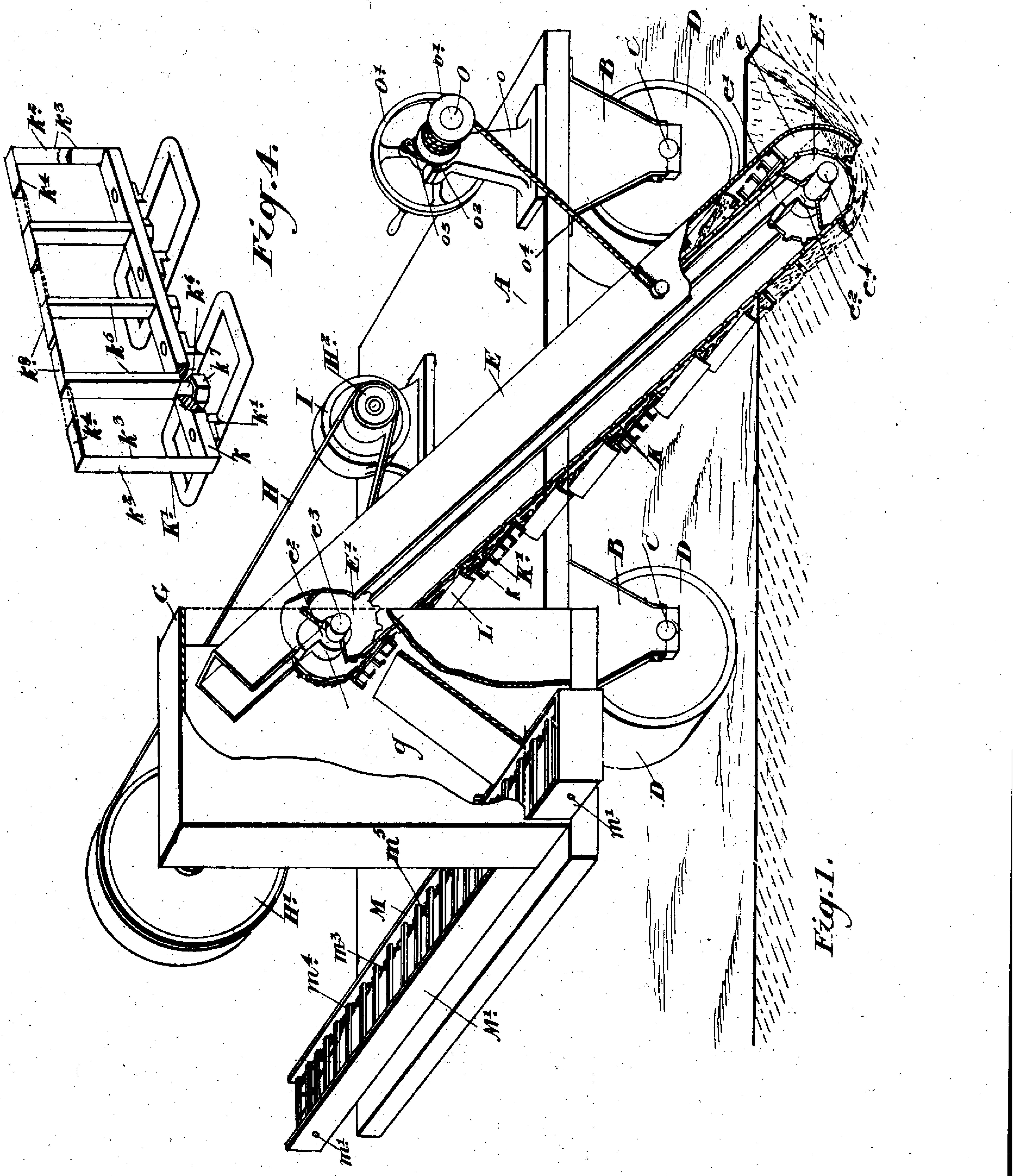

Fig. 4.

Fig. 1.

Witnesses.
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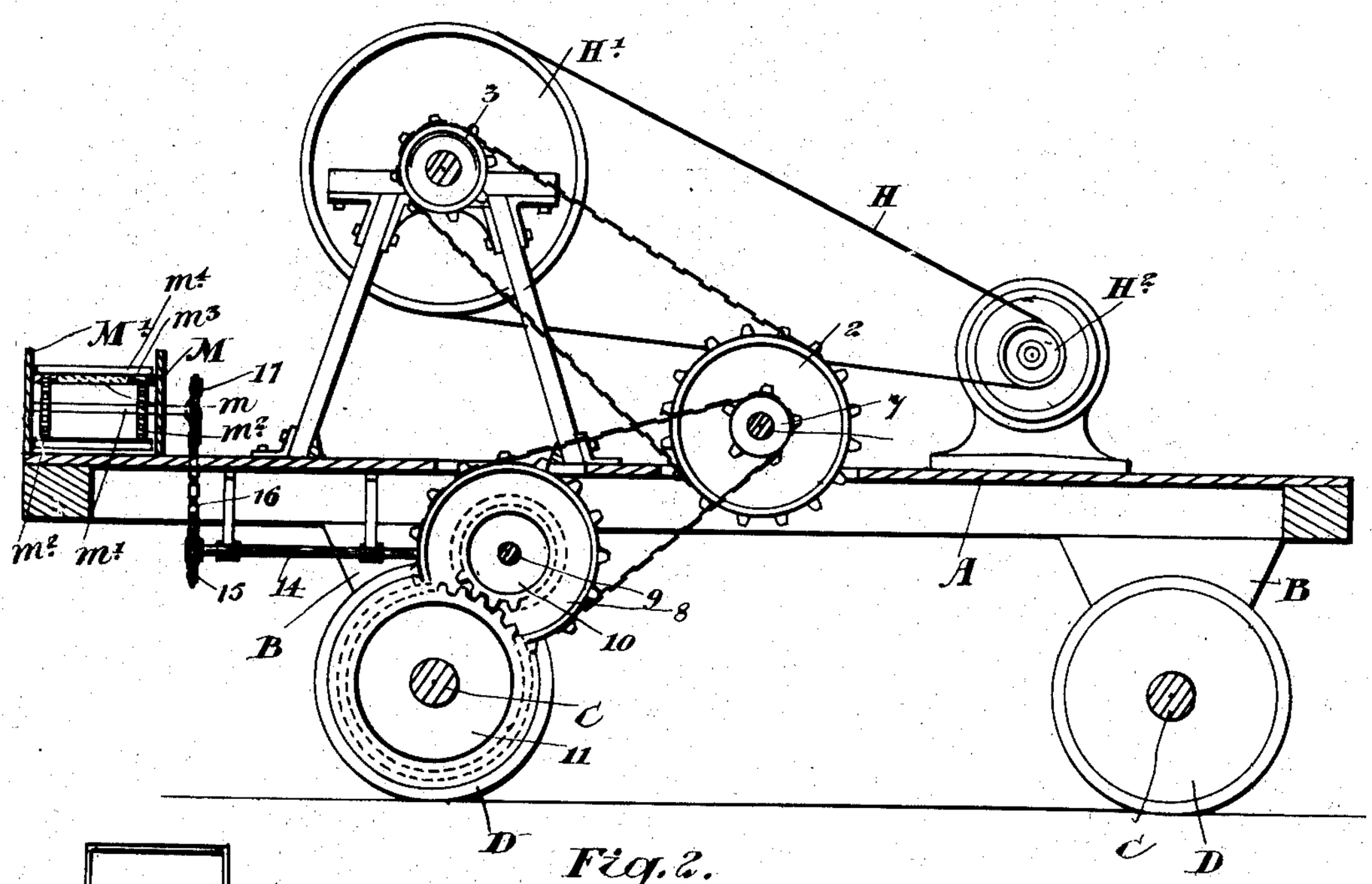

Fig. 2.

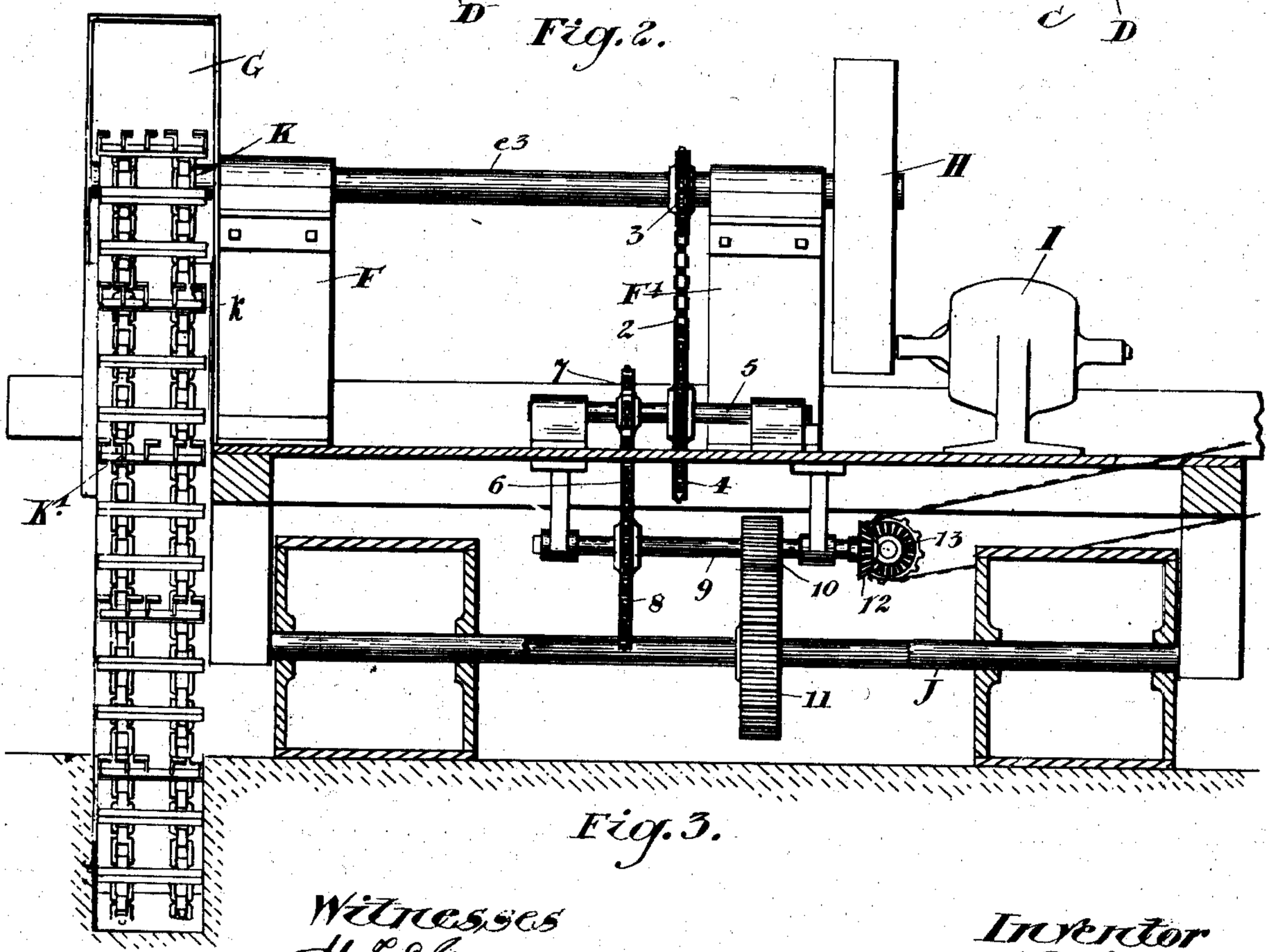

Fig. 3.

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UNITED STATES PATENT OFFICE.

ALEXANDER DOBSON, OF BEAVERTON, CANADA, ASSIGNOR TO PEAT MACHINERY SUPPLY COMPANY, LIMITED, OF TORONTO, CANADA, A CORPORATION OF CANADA.

APPARATUS FOR HARVESTING PEAT.

SPECIFICATION forming part of Letters Patent No. 706,535, dated August 12, 1902.

Application filed November 21, 1901. Serial No. 83,188. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER DOBSON, millwright, of the town of Beaverton, in the county of Beaverton, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Apparatus for Harvesting Peat, of which the following is a specification.

My invention relates to improvements in apparatus for harvesting peat; and the object of the invention is to economize in time and labor in the harvesting of peat and at the same time to so collect the peat that the different strata both at the top and bottom may be cut up into small particles, then thoroughly intermingled, and finally spread evenly over the surface of bog; and it consists, essentially, of a wagon or car and an endless cutting and elevating device supported at one side thereof and designed to be depressed below the surface of the bog, so as to cut the peat into thin slices, then convey it onto a discharge-board, whence it is conveyed by an endless conveyer over the far side of the wagon, the cutters and conveyers being driven by a suitable form of drive from one of the axles of the wagon or car and the conveyer being suitably swung and supported in the manner hereinafter more particularly explained.

Figure 1 is a perspective view of my peat-harvesting machine, showing portions broken away and in section to exhibit the construction and arrangement of my invention. Fig. 2 is a longitudinal section of the car. Fig. 3 is a cross-section of the car. Fig. 4 is a detail of the peat-cutting knives.

In the drawings like characters of reference indicate corresponding parts in each figure.

A is the platform of the wagon, such platform being provided at the bottom at each side with suitable bearings B B, in which are journaled the axles C C, upon which the wheels D D are secured. It will be noticed that the wheels D have broad peripheral surfaces in order that they may support the car without sinking into the surface of the bog.

E is a conveyer-box, which has a curved lower end e, central beam e', and suitable bearings e^2 at the top and bottom of such beam.

e^3 and e^4 are shafts suitably journaled in the bearings e^2 and carrying at their ends the sprocket-wheels E′, arranged in pairs, as shown, one on each side of the bearing. The upper shaft e^3, however, is also supported in suitable bearings F on the platform F F′ of the car, outside of the box G, into which the upper end of the conveyer-box extends. The shaft e^3 derives motion by means of a belt H, which connects the pulley H′ on the end of the shaft e^3 with the pulley H^2 on the end of the shaft of the motor I, which is also suitably supported on the axles of the car. The motor I, it will therefore be seen, serves to drive the endless conveyer, as will hereinafter appear, and also drives or propels the car, as the shaft e^3 is connected by the sprocket-chain 2, passing over a gear-wheel 3 on the shaft e^3, and sprocket-wheel 4 on the counter-shaft, such counter-shaft being connected by a sprocket-chain 6, which passes over the sprocket-wheel 7 on the counter-shaft to a sprocket-wheel 8 on the supplemental counter-shaft 9, which itself is provided with a gear-wheel 10, which meshes with the gear-wheel 11 on the axle J of the car.

K represents sprocket-chains supported upon the sprocket-wheels E′ E′.

K′ represents knives for slicing or cutting the peat, comprising the cross-bar k, secured to lugs k', formed on the links of the chain and provided with upturned L-shaped outer ends k^2. The ends k^2 are provided with cutting edges k^3 k^4. k^5 represents intermediate knives provided with a reduced end k^6, designed to pass through the bar k and to be secured therein by the bolts k^7. The knives k^5 are provided with cutting edges k^8. (See Fig. 4.)

L represents carriers or buckets secured at each end to the chains K. The carriers L are designed to convey the peat when cut up through the conveyer-box F, into the box G, onto the directing-board g.

M is the cross-conveyer. M′ is the casing thereof, provided with a central board m and end shafts m', provided with sprocket-gears m^2.

m^3 represents the conveyer-chains, and m^4 represents cross-bars suitably secured thereto at either end.

The cross-conveyer M is driven by means of the bevel-gear 12, secured to the cross-shaft 9 by the bevel-gear 13, secured on the shaft 14, provided at its opposite end with the sprocket-wheel 15, connected by a chain 16 to the sprocket-wheel 17 on the inner end of the outer shaft m'.

O is a shaft suitably journaled on the standards o, provided at its inner end with a hand-wheel O′ and at its outer end with a flanged drum o'.

o^2 is a ratchet-gear secured to the drum o'.

o^3 is a gravity-dog designed to mesh with the gear o^2.

o^4 is a rope secured at its lower end to the conveyer-box E and at its upper end to the drum o'. By this means the lower end of the conveyer may be raised or lowered to any desired depth, incline, or position and held therein, thereby cutting the peat to any desired depth.

It will be seen that as the knives k^2 and k^4, secured to the chain k, descend they cut or slice the peat, which is in different strata as to quality or density, and such peat is then carried up through the conveyer-box onto the cross-conveyer, whereby it is conveyed to the side of the wagon, thereby in its passage thoroughly intermingling it and spreading it upon the marsh.

On reference to Fig. 4 it will be noticed that the intermediate knives k^5 may be reversed into the position shown in dotted lines in this figure. By this means it will be understood that the portion that is left uncut by the knives may, if such knives are not cutting properly, be reversed, and thus present the opposite cutting edges of the knives.

The operation of my invention is very simple, and the peat cut successively by the series of knives as they descend slice up the peat layer upon layer, and the buckets following the knives carry such peat upwardly in such a manner that it is intermingled by the time it reaches the cross-conveyer. The depth at which the cut is made may be regulated by the hand-wheel o'. In entering the peat it will be seen that necessarily the cut is but of little depth; but as soon as it gets to the proper depth commensurate with the power necessary to drive the same such cutting-conveyers are then held securely, so that as the wagon moves along an even depth of cut is made.

It will be seen on reference to the drawings that the conveyer M is provided with a board m^5, over which the slats carry the peat. This board is cut away obliquely at the end overhanging the ground, as shown, for the purpose of allowing the peat to be gradually deposited over the side of the car—that is to say, not being all dumped in a heap, but spread to a more or less extent, and the different strata thus will be further intermingled.

What I claim as my invention is—

1. In an apparatus for harvesting peat, a wagon or car, a peat excavating and elevating device at one side thereof, a closed box or receptacle to receive said elevated peat and means for conveying the commingled peat from said box to the opposite side of the car, substantially as described.

2. In an apparatus for harvesting peat, a wagon or car, a peat excavating and elevating device at one side thereof, a closed box or receptacle to receive said elevated peat and an endless conveyer extending through the bottom of said box and to the opposite side of the car, substantially as described.

3. In an apparatus for harvesting peat, in combination a wagon or car, an inclined conveyer-box provided with a suitable bottom, chain conveyers having one side passing over such bottom, suitable sprockets and shafts for supporting the ends of the conveyers, suitable knives and elevating-buckets secured to the conveyer-chains, a depositing box at the upper end of the conveyer-box, and means for conveying the intermingled peat from such box over the far side of the wagon onto the surface of the bog as and for the purpose specified.

4. In an apparatus for harvesting peat, in combination a wagon or car, an inclined conveyer-box provided with a suitable bottom, chain conveyers having one side passing over such bottom, suitable sprockets and shafts for supporting the ends of the conveyers, suitable knives and elevating-buckets secured to the conveyer-chains, a depositing-box at the upper end of the conveyer-box, a directing-board located in the box, and the conveyer-box and endless conveyer-chains provided with cross-slats for conveying the intermingled peat from the conveyer-board over the far side of the wagon as and for the purpose specified.

5. In a device of the class described, the combination with the conveying means, of knives comprising a cross-bar, the intermediate L-shaped knives suitably held in the bar and provided with crosswise-extending top cutting edges and the side knives also L-shaped in form and provided with the side and cross cutting edges as and for the purpose specified.

6. In an apparatus for harvesting peat, the combination with the cross-conveyer extending over the side of the car, of the bottom board thereof also extending over the side of the car and obliquely cut away at the end overhanging the ground as shown and for the purpose specified.

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