

SNOW MACHINE.

APPLICATION FILED JAN. 3, 1910.

962,917.

Patented June 28, 1910.

3 SHEETS—SHEET 1.

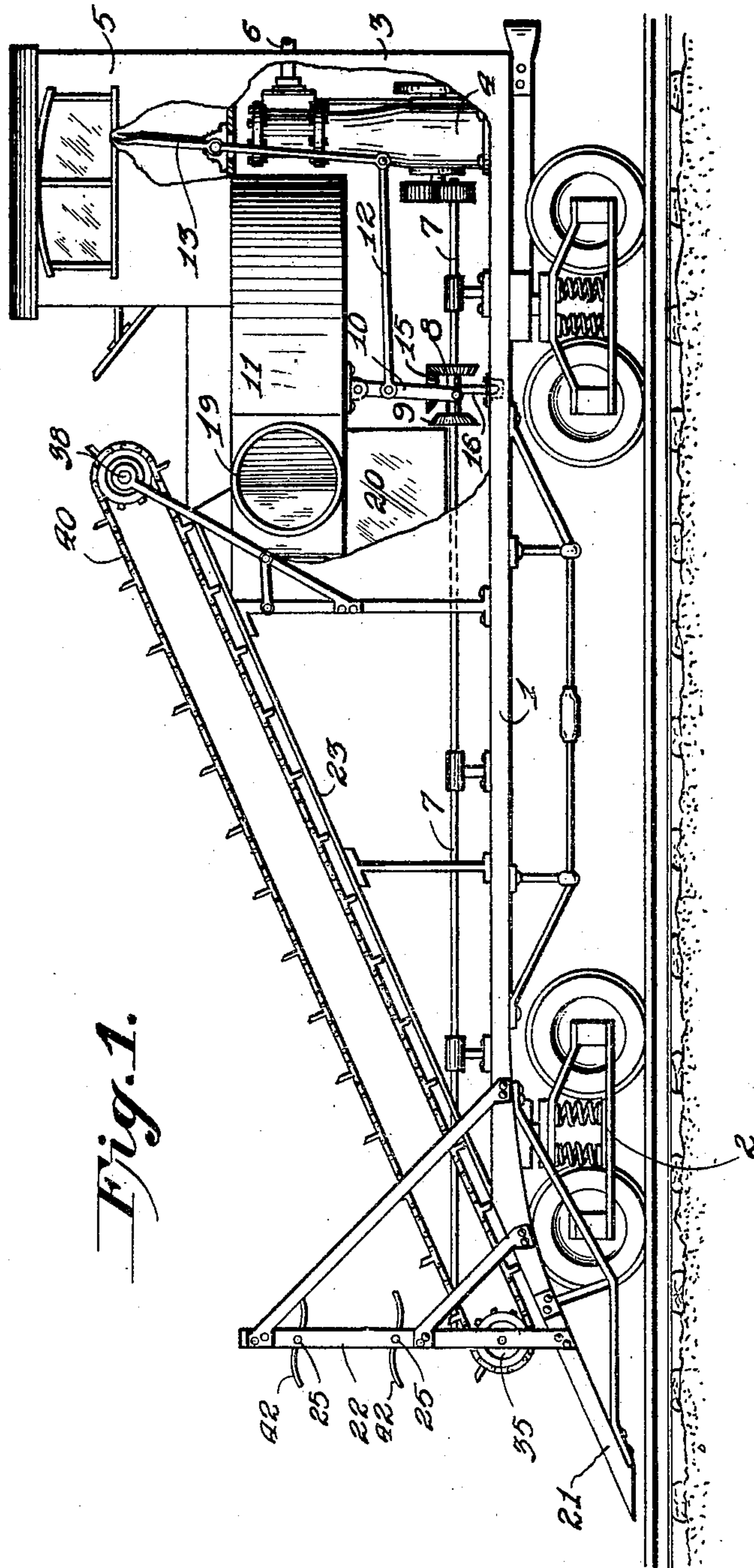


Fig. 1.

Christopher Reynolds

Witnesses

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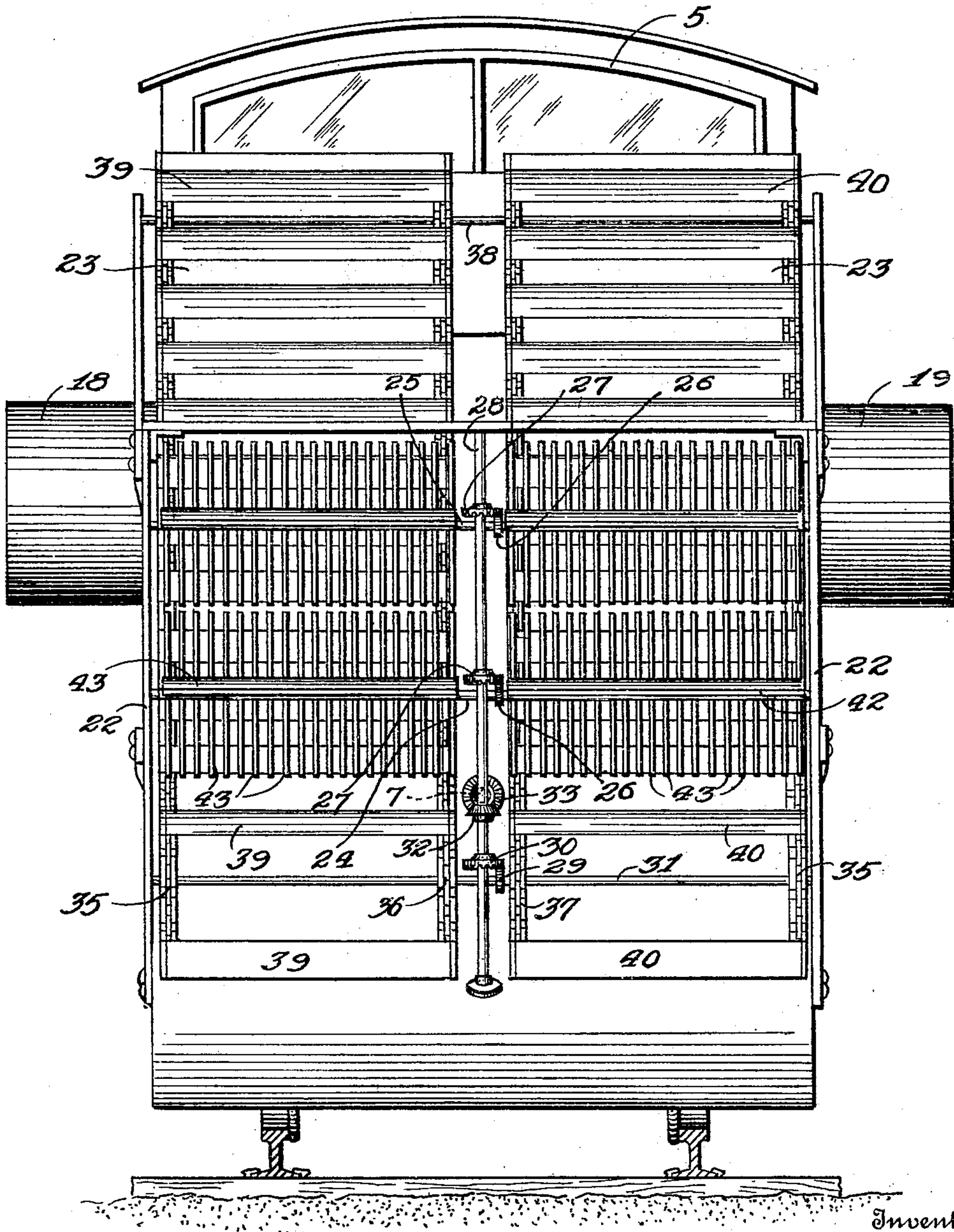
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3 SHEETS—SHEET 2.

Fig. 2.



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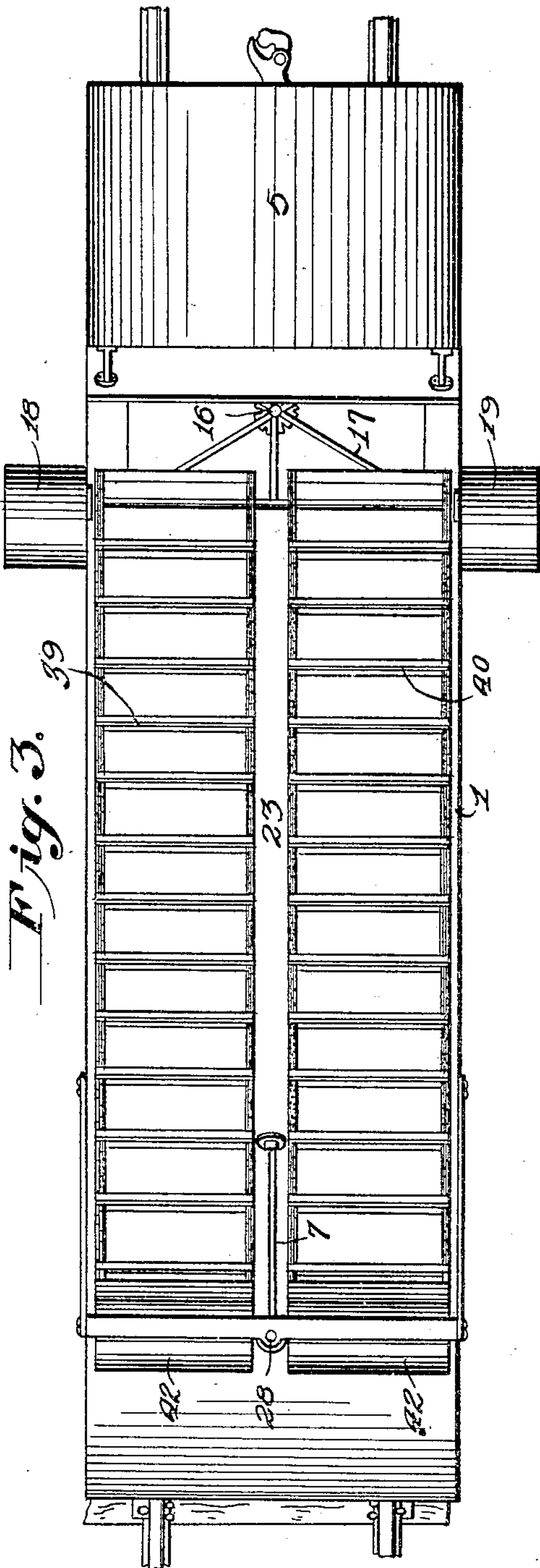


Fig. 3.

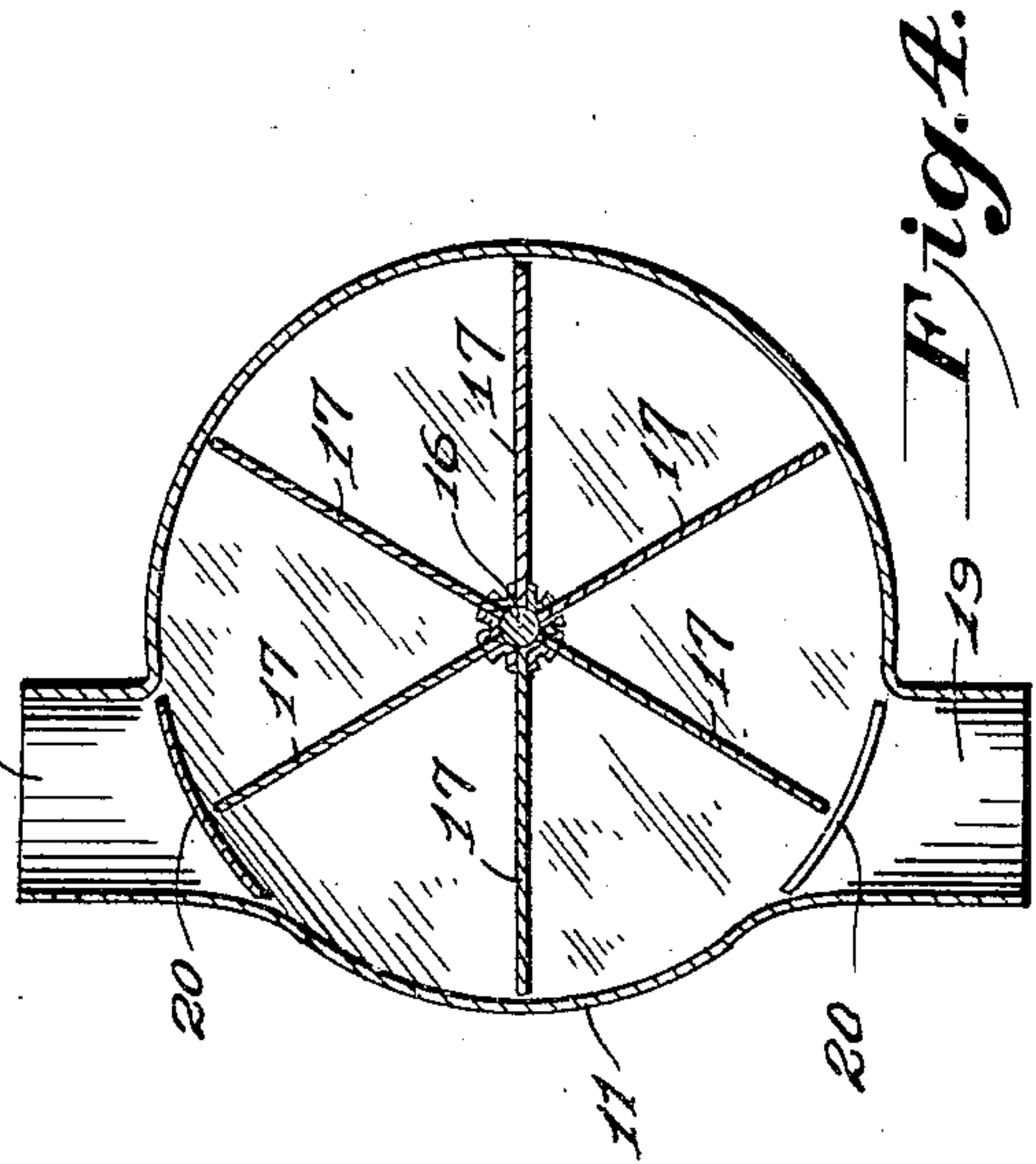


Fig. 4.

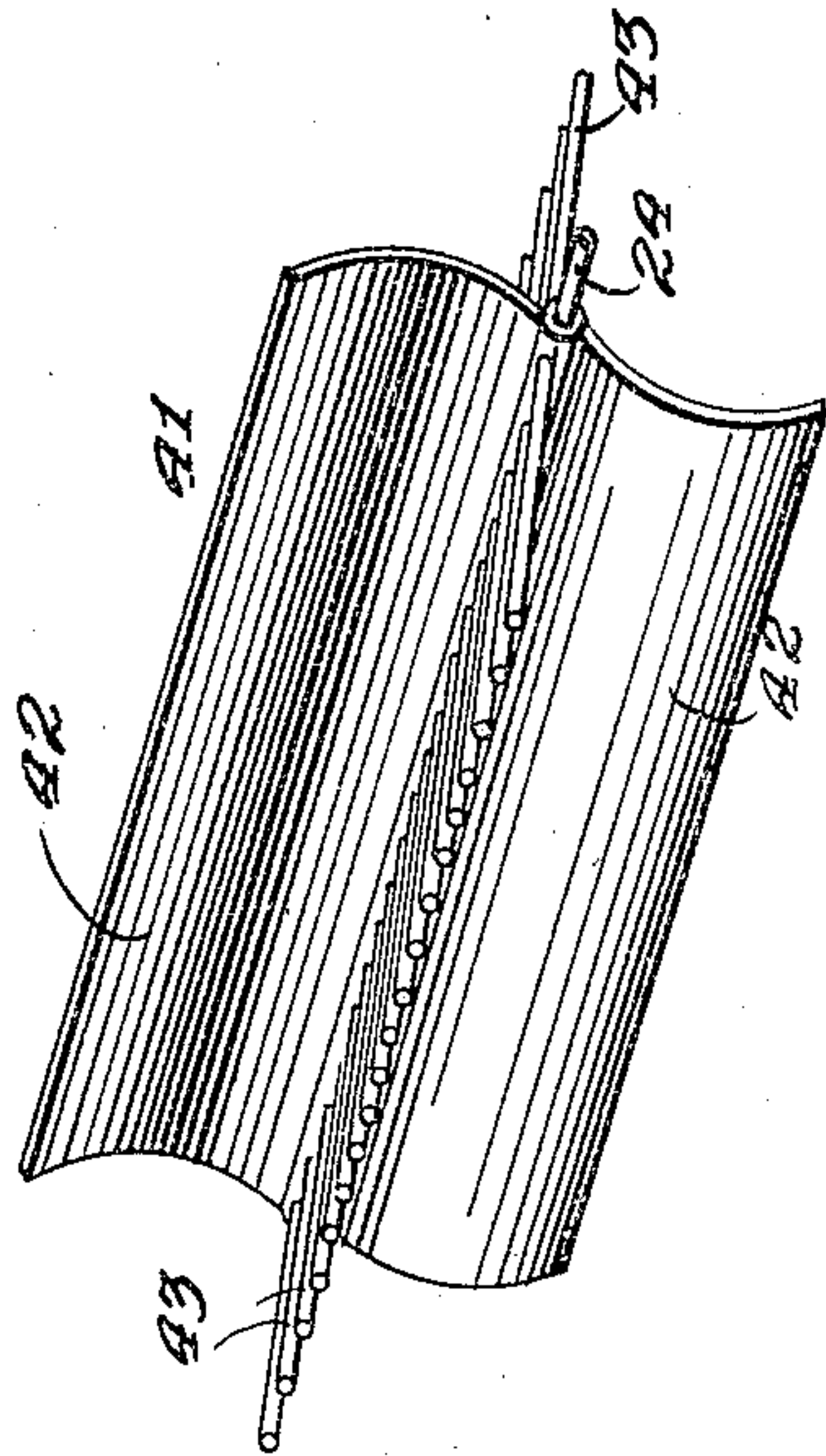


Fig. 5.

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UNITED STATES PATENT OFFICE.

CHRISTOPHER REYNOLDS, OF CARLOCK, ILLINOIS.

SNOW-MACHINE.

962,917.

Specification of Letters Patent. Patented June 28, 1910.

Application filed January 3, 1910. Serial No. 535,914.

To all whom it may concern:

Be it known that I, CHRISTOPHER REYNOLDS, a citizen of the United States of America, residing at Carlock, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Snow-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to the subject of removing snow and similar obstructions from railroad tracks, and the principal object of the same is to provide a machine of the type specified that is made in the form of a plow
15 which is forced into the snow or other piled obstruction, and by means of suitable pulverizing mechanism the snow is broken up into small particles and thrown on to endless conveyers which deliver the snow to a hopper from which the snow is discharged laterally away from the track.

In carrying out the object of the invention generally stated above it will be understood, of course, that the essential features thereof
25 are necessarily susceptible of changes in details and structural arrangements, one preferred and practical embodiment of which is shown in the accompanying drawings, wherein:—

30 Figure 1 is a view in side elevation of the improved snow removing machine, part of the same being broken away to expose the motive power of the snow handling mechanism. Fig. 2 is a view in front elevation
35 thereof. Fig. 3 is a top plan view. Fig. 4 is a horizontal sectional view of the hopper from which the snow is discharged. Fig. 5 is a detail perspective view of one of the pulverizers.

40 Referring to the accompanying drawings by numerals it will be seen that the improved snow removing machine is composed of a supporting platform 1 provided with forward and rear trucks 2, said trucks being
45 of the usual car truck type. At one end of the platform a casing 3 is mounted that incloses the engine or motor 4, and on top of said casing 3, a cab 5 is provided for the operator. The engine 4 has a pipe 6 projecting therefrom so that said engine may
50 be placed in communication with the source of motive power from the usual locomotive that pushes the snow machine. A power shaft 7 extends longitudinally of and parallel with the platform 1, said shaft being
55 operated by the engine 4 and having a pair

of bevel gears 8—9 splined thereon that may be actuated by a pendent lever 10 pivotally connected to the bottom of a hopper 11, said lever being pivotally connected to an operating lever 12 that is controlled by the hand lever 13 which extends into the cab 5 so that the operator in the cab may selectively throw gears 8 or 9 into mesh with a gear 15 fast on a fan shaft 16 that extends into the hopper 11 and has a fan 17 mounted thereon. The hopper is preferably annular and is substantially of the same diameter as the width of the platform 1, so that material may be discharged therefrom from either
60 one of the oppositely disposed lateral discharge outlets 18 and 19 which are preferably in the form of tubes that project well beyond the sides of the platform 1. At the junction of each discharge outlet and the
65 hopper 11 a slide 20 is provided which may be manually raised or lowered so that passage through said discharges may be controlled.

The forward end of the platform 1 terminates in a downwardly inclined plow 21, and intermediate its length the plow is provided with upstanding spaced apart vertical standards 22 which are adjacent the lower end of an incline frame 23 that is in the
80 same plane and practically a continuation of plow 21. The upper end of frame 23 terminates adjacent the inlet to hopper 11. Upper and lower horizontal shafts 24—25, are journaled in said standards 22, each
85 horizontal shaft being provided with a gear 26 that is held in mesh with a gear 27 on a centrally located vertically arranged shaft 28 projecting from the forward end of the platform 1, which is also equipped with a
90 lower gear 29 in mesh with a gear 30 fast on a horizontal shaft 31 journaled in the lower portion of said standards 22. Shaft 28 receives its power through the medium of an intermediate gear 32 fast thereon that is
95 in mesh with an end gear 33 fast on the end of shaft 7. Shaft 31 is equipped with end sprockets 34—35, and intermediate sprockets 36—37, sprockets 36—37 being on opposite sides of and adjacent shaft 28. At the
100 upper end of frame 23 a horizontal shaft 38 is suitably journaled, said shaft being equipped with four sprockets similar in all respects and which aline with the sprockets
105 34—35—36 and 37 of shaft 31 so that said sprockets of the upper and lower shafts
110 31—38 may be connected by the endless con-

veyer belts 39—40. Shafts 24 and 25 each have fast thereon pulverizing means, one of which is shown in detail in Fig. 5. Said pulverizers are referred to by the numeral 5 41 and are composed of solid wings 42 which may be suitably curved, and which are oppositely disposed. The other wings of said pulverizers are formed of a plurality of regularly spaced apart parallel bars 43 10 which project at right angles to the wings 42.

As will be understood from the foregoing the forward end of the machine is provided with a plurality of the pulverizers 41 said pulverizers being arranged in pairs, the 15 pairs being disposed on opposite sides of central shaft 28, and the members of each pair being arranged in superimposed relation. This arrangement of pulverizers provides two of the same for each conveyer 20 belt that is supported by the frame 23.

In operation it will be seen that when the plow 21 is forced into the snow or other obstruction, the pulverizers being rapidly rotated through the described gearing and 25 shaft, the bars 43 thereof will loosen or pulverize the snow and the wings 42 thereof will throw the loosened snow onto the conveyer belt so that the same is delivered to

the hopper 11 from which it is discharged by the pressure of fan 17 so that it will be 30 discharged through the outlets 18 or 19, or through both simultaneously, to deliver the snow away from the track. It will also be understood that the lever mechanism and splined gears 8—9 and the gear 15 are for 35 the purpose of altering the direction of rotation of fan 17 when necessary or desirable.

What I claim as my invention is:—

A machine of the character described comprising a platform, a plow at one end thereof, rotary pulverizers composed of solid 40 wings and spaced apart parallel bars that project at right angles to said solid wings, said pulverizers being vertically arranged and supported above said plow, endless conveyers supported in an inclined position 45 above said platform, a discharge hopper communicating with the upper end of said conveyers, and means for actuating said pulverizers and said conveyers. 50

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

CHRISTOPHER REYNOLDS.

Witnesses:

J. K. ESH,
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