

P. J. HIGGINS.
LOADING APPARATUS.

APPLICATION FILED AUG. 30, 1910. RENEWED NOV. 11, 1911.

1,012,133.

Patented Dec. 19, 1911.

3 SHEETS-SHEET 1

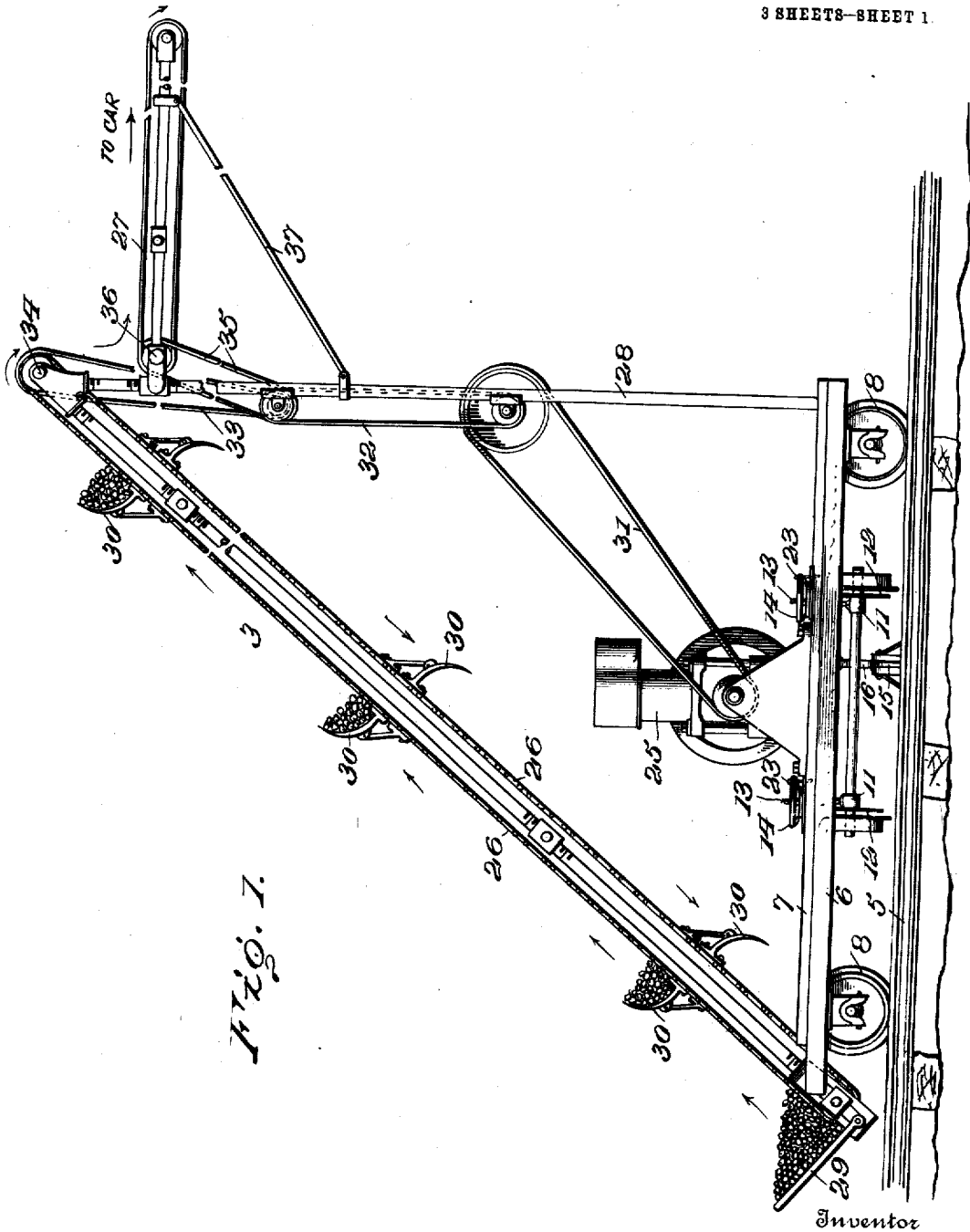


Fig. 1.

Witnesses

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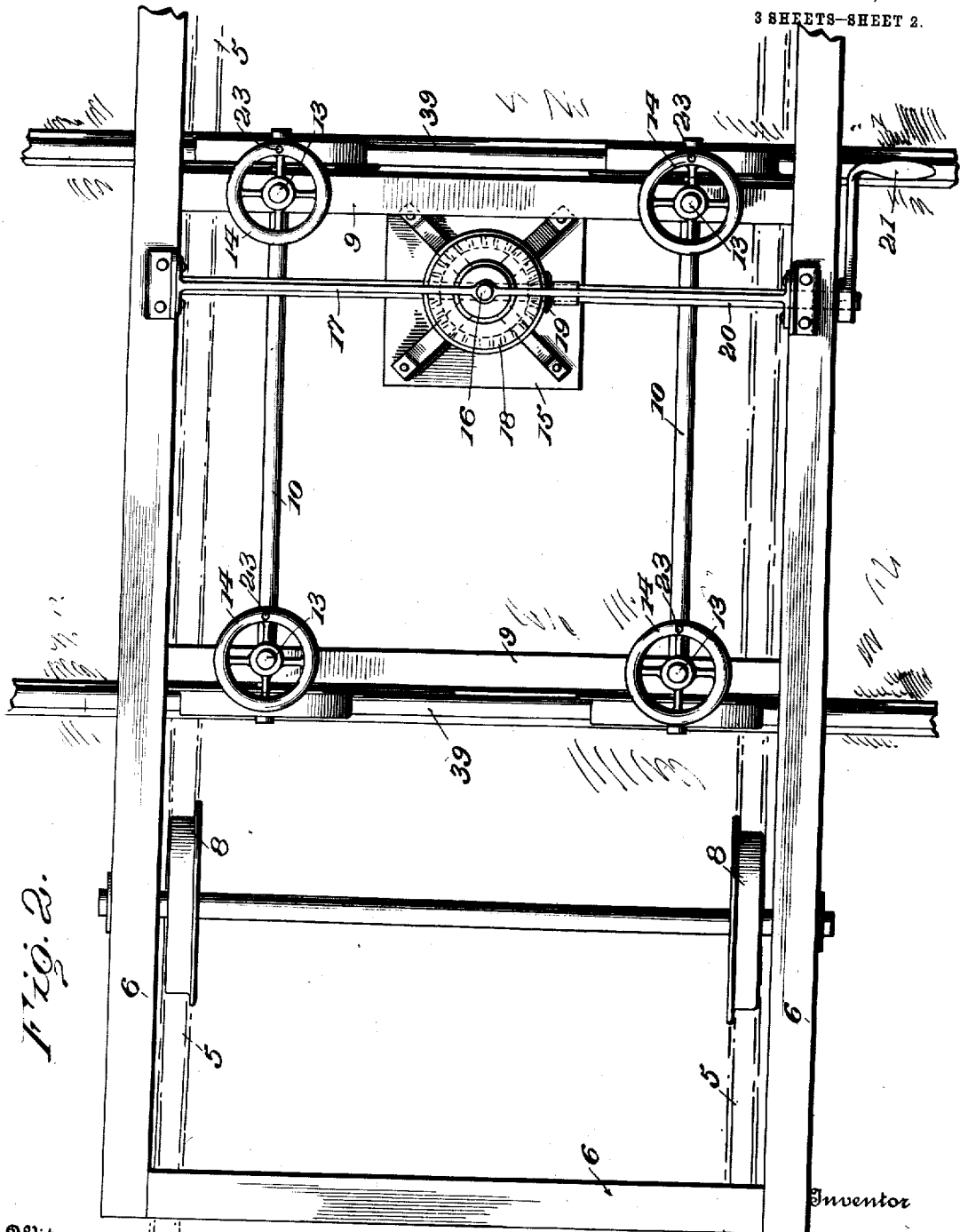


Fig. 2.

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3 SHEETS-SHEET 3.

Fig. 3.

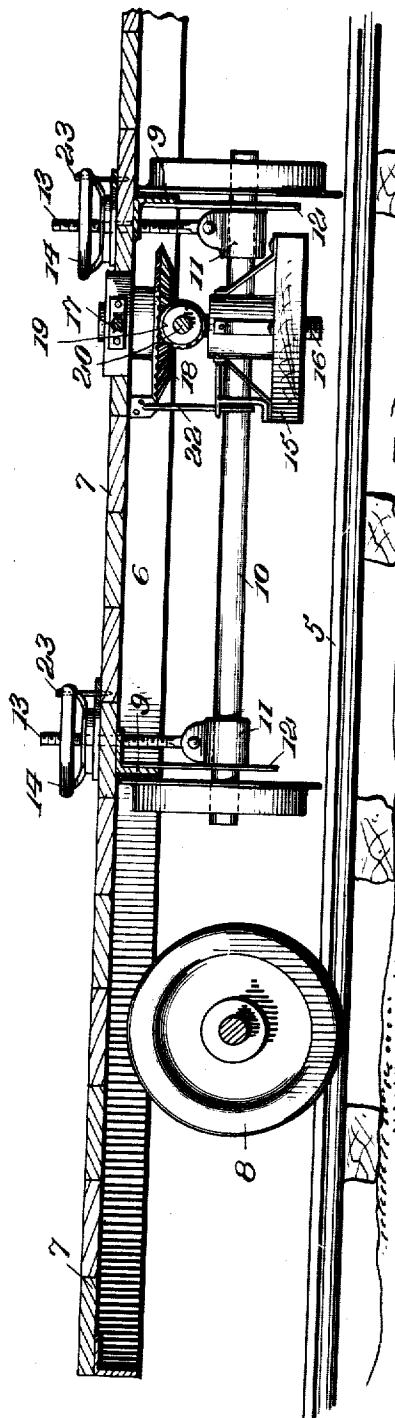
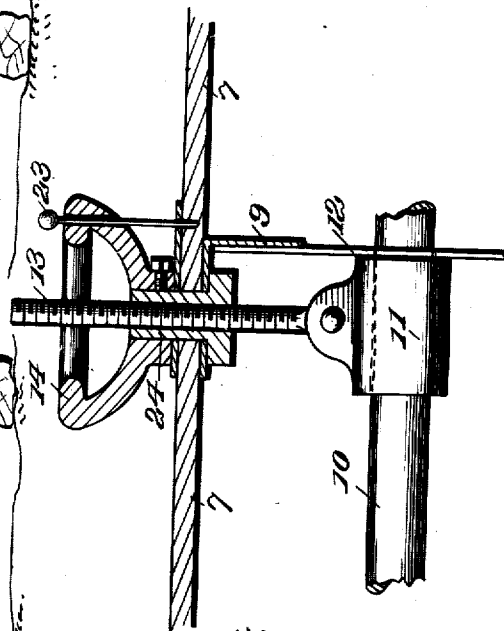


Fig. 4.



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UNITED STATES PATENT OFFICE.

PATRICK JOHN HIGGINS, OF HONOLULU, TERRITORY OF HAWAII.

LOADING APPARATUS.

1,012,133.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PATRICK JOHN HIGGINS, a citizen of the United States, residing at Honolulu, Oahu, Territory of Hawaii, have invented certain new and useful Improvements in Loading Apparatus, of which the following is a specification.

This invention relates to cane loaders and has for its object the construction of apparatus, for loading cane onto cars, which can be readily transported, easily shifted and operated by power.

To this end the invention consists in the structure of parts and in their combination for the specified purpose substantially as hereinafter fully described and claimed.

In the accompanying drawings which form a part of this specification Figure 1 represents in side elevation the improved cane loader upon a main line of track; Fig. 2 is a plan view of the flat car, which serves as a mount for the loader, the flooring of said car being removed; Fig. 3 is a transverse vertical section through the said car; and Fig. 4 is a detail in vertical section on an enlarged scale.

The improved loader is designed to be coupled to the cane train and run out into the field on the main line of track usually provided for this purpose, then swung from said main track onto a parallel portable siding whereon it may be moved from one car to another until all are loaded.

The rails of the main line of track are indicated at 5, the flat car frame at 6, its flooring at 7 and its two pairs of wheels at 8. Extending transversely of this car is a truck by which the car and its appurtenances may be moved along the parallel siding above referred to. Said truck has angle-bars 9 extending transversely of the flat car frame and forming the side beams of the truck and it has two pairs of wheels joined by axles 10, which extend longitudinally of the flat car. These axles 10 are journaled in boxes 11, which are mounted to move vertically in guides 12 attached and depending from the side-beams 9. Attached to each of the journal-boxes 11 is a screw 13 extending upwardly through the side-beams 9 and having on their upper ends above said beams nuts provided with hand-wheels 14, by which said journal-boxes may be raised or lowered and the truck wheels elevated or depressed as desired.

To shift the flat car from the main track it

is necessary to raise its wheels out of engagement with the rails of the main track. This might be done through the agency of the screws 11 and hand-wheels 14, but it is preferably done through the agency of a turntable carried by the flat car. This turntable has a pedestal 15, through the middle of which passes vertically a screw 16 supported at its upper end in the beam 17, which extends transversely across the frame of the flat car. The screw 16 may be rotated in any suitable manner for the purpose of raising and lowering the pedestal 15 as, for instance, by means of the bevel-gear 18 fixed thereto at the under side of the beam 17 and a bevel-pinion 19 on shaft 20 mounted in bearings on the under side of the flat car, as indicated in Fig. 3. This shaft 20 may be rotated as by means of a crank 21 applied to the outer end thereof, or it may obviously be rotated from the same power that drives the loader. To prevent the pedestal 15 from being rotated while being raised and lowered a pin as 22 depending from one of the cross-beams 9 may pass through a lug on the side of the pedestal, as indicated in Fig. 3. The hand-wheels 14 may also have means for holding them in fixed position such, for instance, as pins 23 passed therethrough and into the flat car. The hand-wheel nuts 14 may be constructed and mounted substantially as indicated in Fig. 4, wherein the nut has a shouldered sleeve 24 which passes up through the angle bar 9 and the floor of the car and has the hand-wheel hub fixed thereon.

The truck and appurtenances just described form the mount for the carrier portion of the cane loader and likewise for the operating power. Such power can, and preferably does, consist of a gasoline engine typified at 25. The carrier is mounted longitudinally of the car and consists of an endless chain elevator indicated at 26 and a delivery carrier indicated at 27. The carrier 26 has the receiving end fixed to the end of the flat car and the other end thereof fixed to a vertical standard 28 arising from the other end of said car. At the receiving end of the elevating carrier 26 is a cane holder 29 onto which the cane to be loaded is thrown. The endless carrier 26 is provided with hooks 30 at intervals and these hooks take the cane from the holder and carrying it up dump it onto the delivery carrier 27, which transmits it to the car of

the cane train over which the end of said delivery carrier may be located. The endless chains of carriers 26 and 27 may be operated in any suitable manner from the engine as, for instance, by means of belt 31, running from the engine to the drive shaft mounted on the standard 28, from which shaft a belt as 32 extends to a counter-shaft on said standard 28, and from this runs a belt as 33 to the upper shaft 34 of the endless carrier 26, while a belt as 35 runs from said counter-shaft to the inner shaft 36 of the delivery carrier 27. By means of a brace 37 the outer end of the delivery carrier may be raised or lowered as desired.

In the operation of the cane loader it is transferred from the main track to the desired siding, by rotating the crank 21 until the wheels of the loader car have cleared the track rails 5, when the whole loader may be turned at rightangles to the main track and then lowered onto a track at rightangles to the main track along which it is run until the free end of the delivery carrier 27 is over the middle of the main track; then rails 39 of a temporary siding are placed across the rails 38 parallel to the main track and under the wheels of the truck. Then by use of the turntable the loader is raised until its wheels clear the rails 38, when it may be pushed along the siding borne by the wheels of the truck. Cane is then brought from the field and delivered into the holder 29 and the carriers operated by the engine 25, deliver it onto the cars standing on the main track. When one car is filled the loader is pushed along the siding to the next car and there operated and so on until the train is loaded.

The invention claimed is:—

1. In a cane loading machine, the combination with a flat car, of a truck mounted transversely thereon and having its wheels vertically adjustable, and means for raising said car and truck bodily and for changing the position thereof in a horizontal plane.

2. In a cane loading machine, the combi-

nation with a flat car, of a truck mounted transversely thereof and having its wheels vertically adjustable, a turntable attached to the car, and means for raising the car and turning it about upon the turntable.

3. In a cane loading machine, the combination with a flat car, of a truck mounted transversely thereof and having its wheels vertically adjustable, a vertically mounted screw depending from the car, means for rotating the screw, and a vertically movable pedestal threaded through its axis and carried on said screw for the purpose set forth.

4. In a loader for cane, the combination with a flat car, of two sets of wheels mounted thereon and transversely thereof, vertically adjustable axle-boxes for said wheels, means for raising and lowering said boxes, and means carried by the car for raising and lowering it.

5. A loader for cane, consisting of a flat car carrying the loading mechanism and power for operating the same, a truck mounted transversely thereof, means for turning the car at rightangles to its main track, and means for supporting said car by said truck upon a supplemental track parallel to the main track.

6. A loader for cane, consisting of a flat car carrying the loading mechanism and power for operating the same, a truck mounted transversely thereof, means for turning the car at rightangles to its main track, means for supporting said car by said truck upon a supplemental track parallel to the main track, an inclined endless carrier mounted on the flat car, an endless delivery carrier projecting therefrom beyond the car, and an engine on the car for driving said carriers.

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

PATRICK JOHN HIGGINS.

Witnesses:

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LOUIS J. WARREN.