

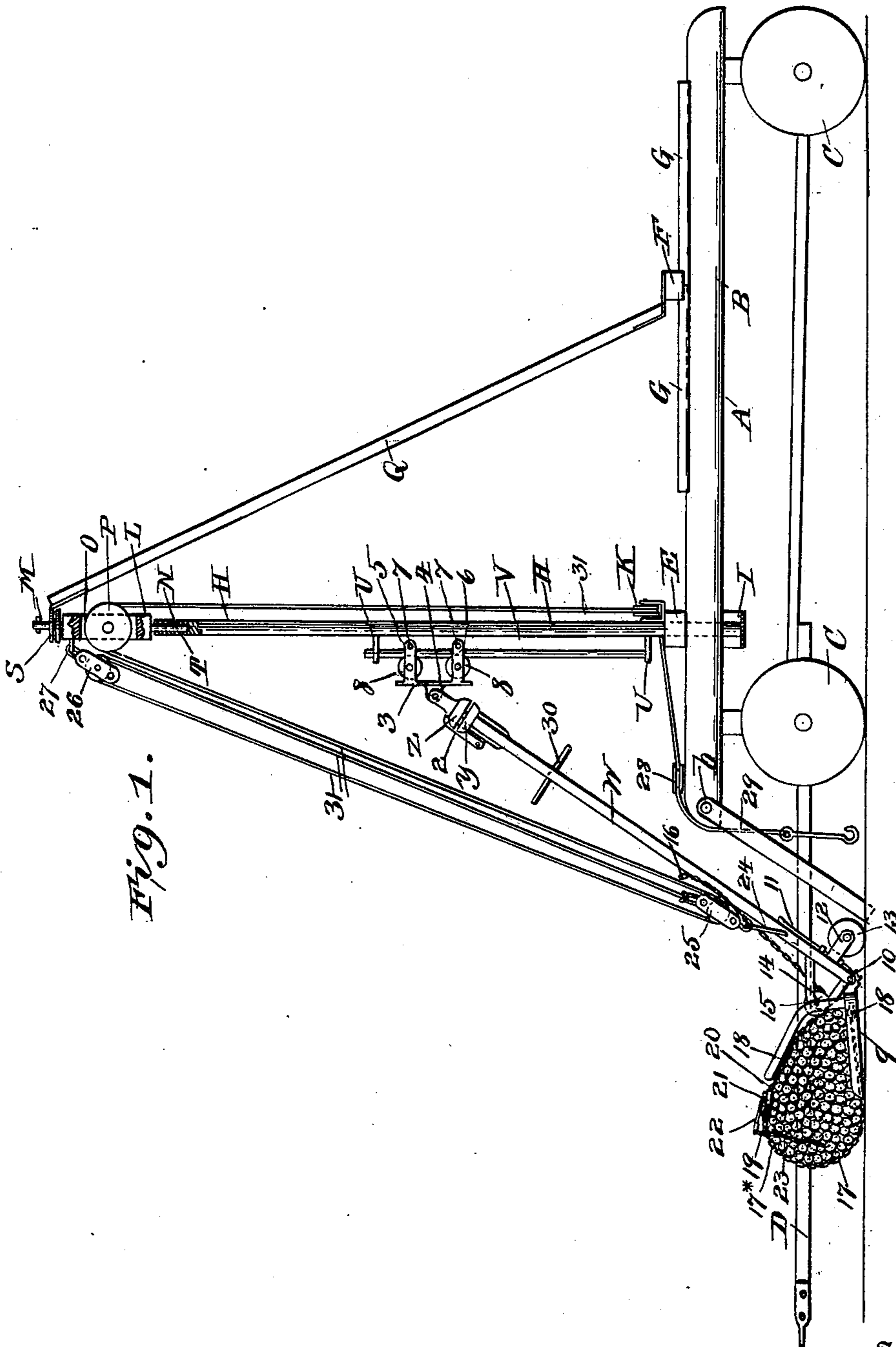
No. 675,157.

Patented May 28, 1901.

T. J. HOWARD.
SUGAR CANE LOADER.
(Application filed Feb. 13, 1901.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses
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per Nathan Bierford.
Attorney

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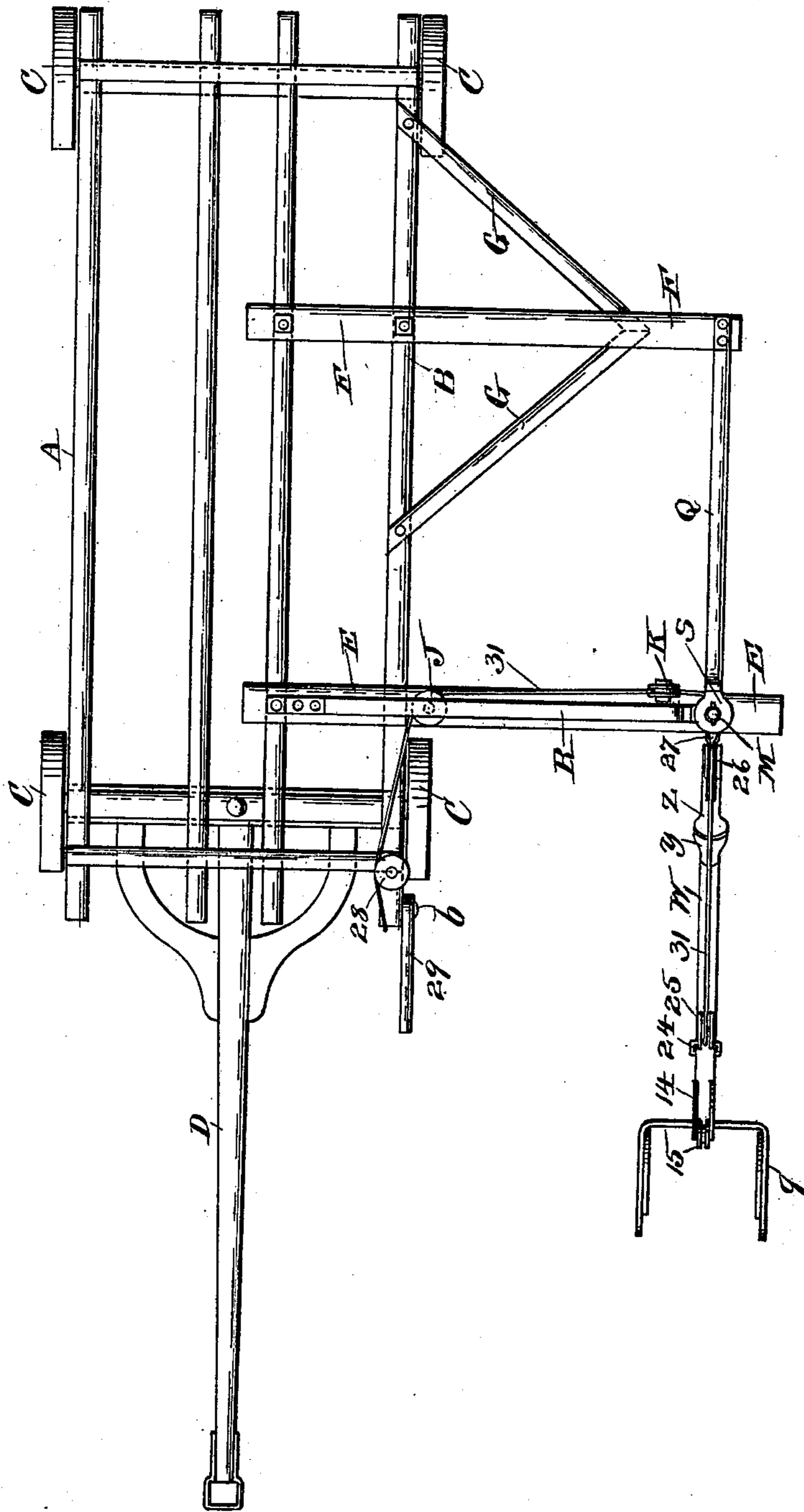
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Fig. 2.



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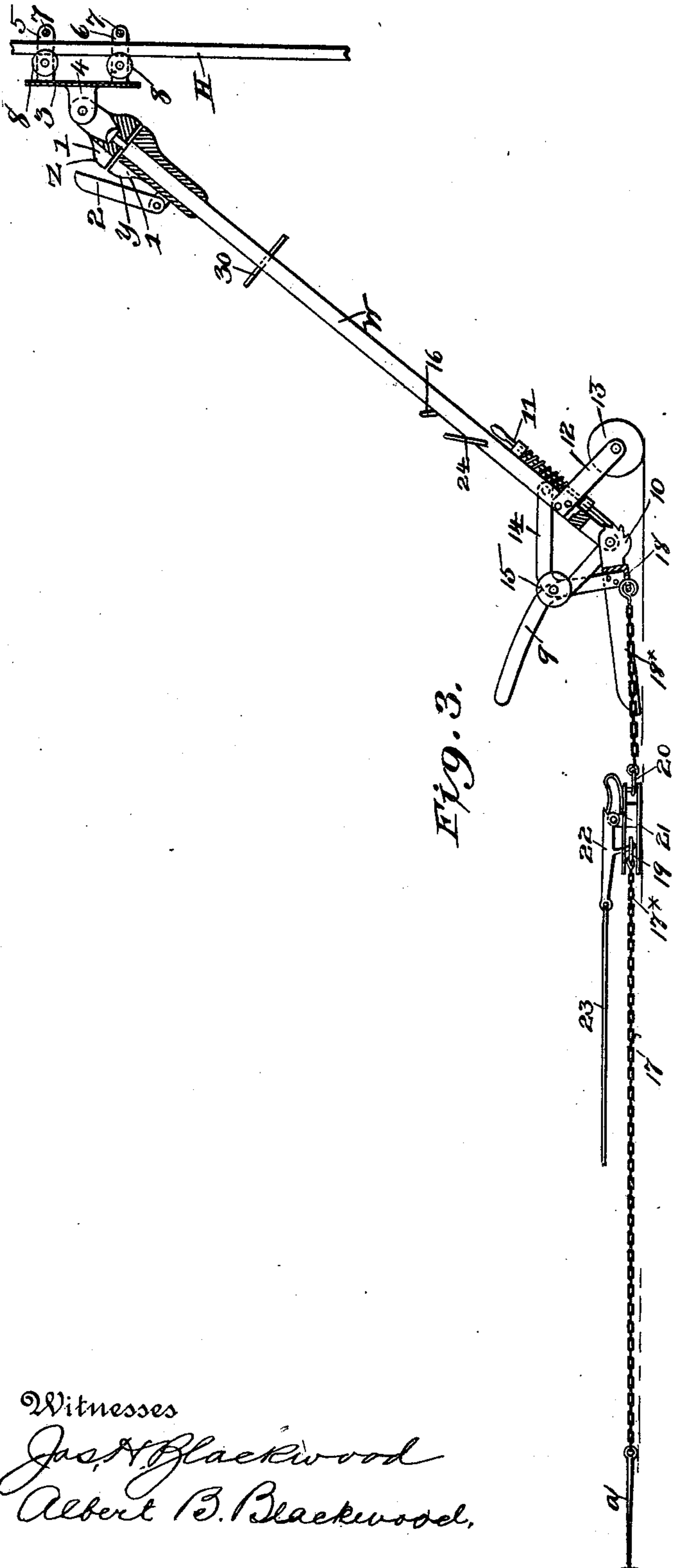


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

THOMAS J. HOWARD, OF ST. GABRIEL, LOUISIANA.

SUGAR-CANE LOADER.

SPECIFICATION forming part of Letters Patent No. 675,157, dated May 28, 1901.

Application filed February 13, 1901. Serial No. 47,136. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. HOWARD, a citizen of the United States of America, and a resident of St. Gabriel, parish of Iberville, State of Louisiana, have invented certain new and useful Improvements in Sugar-Cane Loaders, of which the following is a specification.

My invention relates to an improvement in sugar-cane loaders, and has for its object to provide a device which will facilitate the loading of wagons or other receptacles and which is simple and inexpensive in construction and easy to operate.

My invention consists in the features and combination of features, as hereinafter more fully described and claimed.

Referring to the drawings, Figure 1 is a side elevation, Fig. 2 a top plan view, and Fig. 3 a detail view, of the elevating-arm, chain, and chain-coupling; and Fig. 4, a detail view of the swivel-joint of the elevating-arm.

In the drawings, in which like characters of reference denote like parts throughout the several views, A represents a truck provided with a frame B, wheels C, and a tongue D. Two horizontal beams E and F are secured to the frame of the truck and project laterally therefrom.

G represents braces for the beam F. The beam E is provided near its outer end with a vertical standard or post H, which passes through the same, and its lower end is supported in a bracket I, attached to the under side of said beam.

J is a horizontally-disposed pulley, and K is a vertical pulley on the beam E.

L is a swiveled block having pivot-pins M and N at the opposite ends and an elongated slot O, in which a pulley P is mounted.

Q and R are braces or stays. The lower end of the brace Q is secured to the beam F, while the lower end of the brace R is secured to the beam E, and the upper end of each of said beams is provided with a ring or eye S. The pivot-pin M of the block L is supported in the rings S of the beams Q and R, and the pivot-pin N is supported in the socket T in the top of the standard H. Brackets U are secured to the standard H, and a vertical rod V is mounted therein.

W is an elevating-arm, the upper end pro-

vided with a swivel-joint comprising two members Y and Z, provided with slots 1, adapted to register with each other, and 2 is a latch pivoted to the member Y and adapted to engage the slots 1 and keep the member Y from turning on the member Z.

3 is a carriage provided with a frame 4, having two pairs of arms 5 and 6 projecting laterally therefrom, each provided with a cross-piece 7 and a grooved wheel 8. The grooved wheels of the carriage are adapted to travel up and down on the vertical rod V.

The lower end of the elevating-arm is provided with a pivoted fork 9, having a toothed rack 10 at the rear. 11 is a spring-controlled trip-lever adapted to engage the teeth of the said rack, and thereby afford means for adjusting and holding the fork in position to receive the sugar-cane during the operation of loading and to release the fork when it is desired to unload the same.

12 is a bracket depending from the under side of the arm W near its lower end and provided with a wheel 13, adapted to travel on the ground and guide and keep the fork 9 and the lower end of the arm W from coming in contact therewith.

14 is a bracket extending upwardly from the lower end of the arm W and provided with a pulley 15. A pin or lug 16 projects upwardly from the arm W.

17 is the chain for binding or holding the sugar-cane in the fork, one end of which is secured to the eye 18 of the fork and the opposite end adapted to pass under the pulley 15 and be secured to the pin 16. The free end of the chain is provided with a needle or rod *a* to facilitate the insertion of the chain under the pile of sugar-cane. At about its middle portion the said chain is divided into two parts 17* and 18*, provided with rings 19 and 20, respectively. 21 is a coupling for connecting said parts, one end fixed to the ring 20 and the opposite end having a spring-controlled latch or lever 22, with which said ring 19 engages, and 23 is a rope attached to the end of the lever 22, adapted to be pulled for the purpose of detaching the said lever from the ring 20 when it is desired to release the sugar-cane from said chain.

24 is a link pivoted to the elevating-arm

W. A pulley-block 25 is attached to the said link 24 and a pulley-block 26 to a staple 27 at the top of the swiveled block L.

28 is a horizontal pulley on the front end of the frame B.

29 is an arm pivoted at 6 to the frame B, the end of which is adapted to engage the ground and keep the truck from moving forward during the operation of loading.

30 is a handle for turning the arm W on its swivel-joint.

A rope or cable 31 is attached to the pulley-block 25 and then passes over the pulleys of pulley-blocks 25 and 26, thence over the pulleys P, K, J, and 28, and the end of said rope is provided with a hook, preferably adapted to be attached to the singletree of a harness and afford means for operating said rope, and thereby operate the sugar-cane loader, or it may be operated by any other suitable means.

I do not wish to be limited to the precise construction as herein shown and described, as the same may be varied somewhat without departing from the spirit of my invention.

Another standard, elevating-arm, fork, rope, &c., may be used on the opposite side of the truck when it is desired to load two wagons at the same time instead of one.

The operation is as follows: The sugar-cane loader is moved along in the field until it comes to a pile of cane. The arm 29 is then thrown downward and the end fixed firmly in the ground for the purpose of keeping the truck of the cane-loader from moving forward. Then the needle or rod *a* on the end of the chain 17 is inserted under a pile of sugar-cane and the chain brought up over the top of the pile and then passed under the pulley 15 and secured to the pin or lug 16. This will firmly bind the said sugar-cane in the fork 9. A horse or other motive power is then attached to the end of the rope or cable 31 and the same is operated until the elevating-arm W is raised to the proper height. The said arm is then swung laterally by hand or otherwise until the fork is directly above the wagon or other receptacle in which it is desired to deposit the cane. Then the trip-lever is disengaged from the rack 10, and the latch or lever 22 of the chain-coupling 21 is operated by pulling the rope 23, which operation will cause the fork 9 to fall downward, and the chain being uncoupled the cane will be deposited into the wagon or other receptacle. This operation is repeated until the wagon is loaded, when it is sent away and another wagon is substituted.

Having thus described my invention, what I claim is—

1. A cane-loader comprising a truck provided with a standard or post having brackets, a rod mounted therein, a carriage having wheels adapted to travel on said rod, and an elevating-arm pivoted to said carriage, substantially as described.

2. A cane-loader comprising a truck pro-

vided with a standard or post having brackets, a rod mounted therein, an elevating-arm provided with a swivel-joint, the upper portion of which is provided with a carriage having wheels adapted to engage and travel on said rod, and thereby provide means for raising and lowering the inner end of said elevating-arm, substantially as described.

3. A cane-loader comprising a truck provided with a laterally-extending beam, carrying a standard or post having brackets, a rod mounted at its opposite ends in said brackets, an elevating-arm, the inner end of which is provided with a carriage having wheels adapted to engage and travel on said rod, and the outer end of said elevating-arm provided with a hinged or pivoted fork, and means for adjusting the same, substantially as described.

4. A cane-loader comprising a truck provided with a laterally-extending beam carrying a standard or post having brackets, a rod mounted at its opposite ends in said brackets, an elevating-arm the inner end of which is provided with means to engage and travel on said rod, and the outer end of which is provided with a pivoted fork having a rack, and a trip-lever to engage said rack and hold said fork in different positions, substantially as described.

5. A cane-loader comprising a truck or support provided with a laterally-extending beam carrying a standard or post having brackets, a rod mounted at its opposite end in said brackets, an elevating-arm the inner end of which is provided with means to engage and travel on said rod, and the outer end provided with a wheel adapted to travel on the ground, a pulley, a pivoted fork having a rack, and a spring trip-lever to engage the teeth of said rack and hold said fork in different positions, substantially as described.

6. A cane-loader comprising a truck provided with a laterally-extending beam, carrying a standard or post having brackets, a rod mounted in said brackets, an elevating-arm provided at its inner end with means to engage and travel on said rod, and the outer end provided with a pivoted fork, means for securing the same in different positions, and a chain for retaining the sugar-cane in said fork, one end secured to said fork and the opposite end adapted to be attached to the said elevating-arm, substantially as shown and described.

7. A cane-loader comprising a truck provided with a standard or post, an elevating-arm connected thereto, a pivoted fork at the lower end of said arm, a chain one end secured to said fork and the opposite end adapted to be attached to the said elevating-arm, said chain provided with a coupling intermediate of its ends, and means of detaching the same, substantially as described.

8. A cane-loader comprising a truck provided with a standard, an elevating-arm connected thereto, a pivoted fork at the lower

end of said arm, a chain one end secured to said fork and the other end adapted to be attached to the said elevating-arm, said chain made in sections and provided with a coupling having a spring-latch, and means for operating said latch and disengaging one section of the chain from said coupling, substantially as described.

9. A cane-loader comprising a truck having a standard, and an elevating-arm provided with a fork, a chain provided with a needle or rod, one end of said chain attached to said fork and the opposite end adapted to be attached to the elevating-arm, substantially as described.

10. A cane-loader comprising a truck having a standard, and an elevating-arm connected therewith provided with a fork and a pulley at its outer end, a chain one end attached to said fork and the opposite end adapted to pass under said pulley and be secured to a pin or lug on the said elevating-arm, substantially as described.

11. A cane-loader comprising a truck provided with a standard or post having brackets, a rod mounted therein, an elevating-arm provided at one end with a carriage having arms arranged in pairs and embracing and extending beyond said standard or post, the ends of each pair connected together by a cross-piece, and wheels adapted to travel on said rod, substantially as described.

12. A cane-loader comprising a truck having a standard provided with a rod, an elevating-arm adapted to engage said rod, and provided with a swivel-joint comprising two sections provided with slots, and a latch adapted to engage said slots and prevent said arm from turning axially, substantially as described.

13. A cane-loader comprising a truck having laterally-extending beams, a standard rising from one of said beams having a swiveled block at the upper end provided with a slot having a wheel mounted therein, brackets attached to said standard carrying a rod, an elevating-arm having a fork at the outer

end, a carriage with wheels at the inner end adapted to engage and travel on said rod, and a rope or cable one end adapted to be connected to said elevating-arm and run over the wheel of the said swiveled block, and the opposite end of said rope connected to means for operating the same, substantially as described.

14. A cane-loader comprising a truck having a laterally-extending beam, a standard rising therefrom, an elevating-arm connected to said standard, and provided with a handle, a pivoted link, an adjustable fork, and means for raising and lowering and swinging said elevating-arm laterally, substantially as described.

15. A cane-loader comprising a truck provided with a laterally-extending beam, having pulleys, a standard or post rising from said beam, having a pivoted block with a wheel, and a pulley at the upper end, a vertical rod, an elevating-arm, adapted to slide on said rod and provided with an adjustable fork, and a pivoted link with a pulley, and a rope or cable one end fastened to the pulley on the said pivoted link and running over the pulley on the top of the standard, the wheel of the pivoted block, and the pulleys on said laterally-extending beam, and means for operating said rope, substantially as described.

16. A cane-loader comprising a truck provided with a standard or post having brackets, a rod the ends of which are mounted in said brackets, a carriage having wheels adapted to travel on said rod, an elevating-arm one end pivoted to said carriage and the opposite end provided with an adjustable hinged or pivoted fork, and means for adjusting the same, substantially as described.

Signed by me at Baton Rouge, Louisiana, this 26th day of January, 1901.

THOMAS J. HOWARD.

Witnesses:

LAUZIN J. AMISS,
A. GROUCHY, Jr.