G. HAISS.

WAGON LOADING APPARATUS.

APPLICATION FILED JUNE 10, 1914.

Patented Mar. 16, 1915.

3 SHEETS—SHEET 1.

1,132,338.

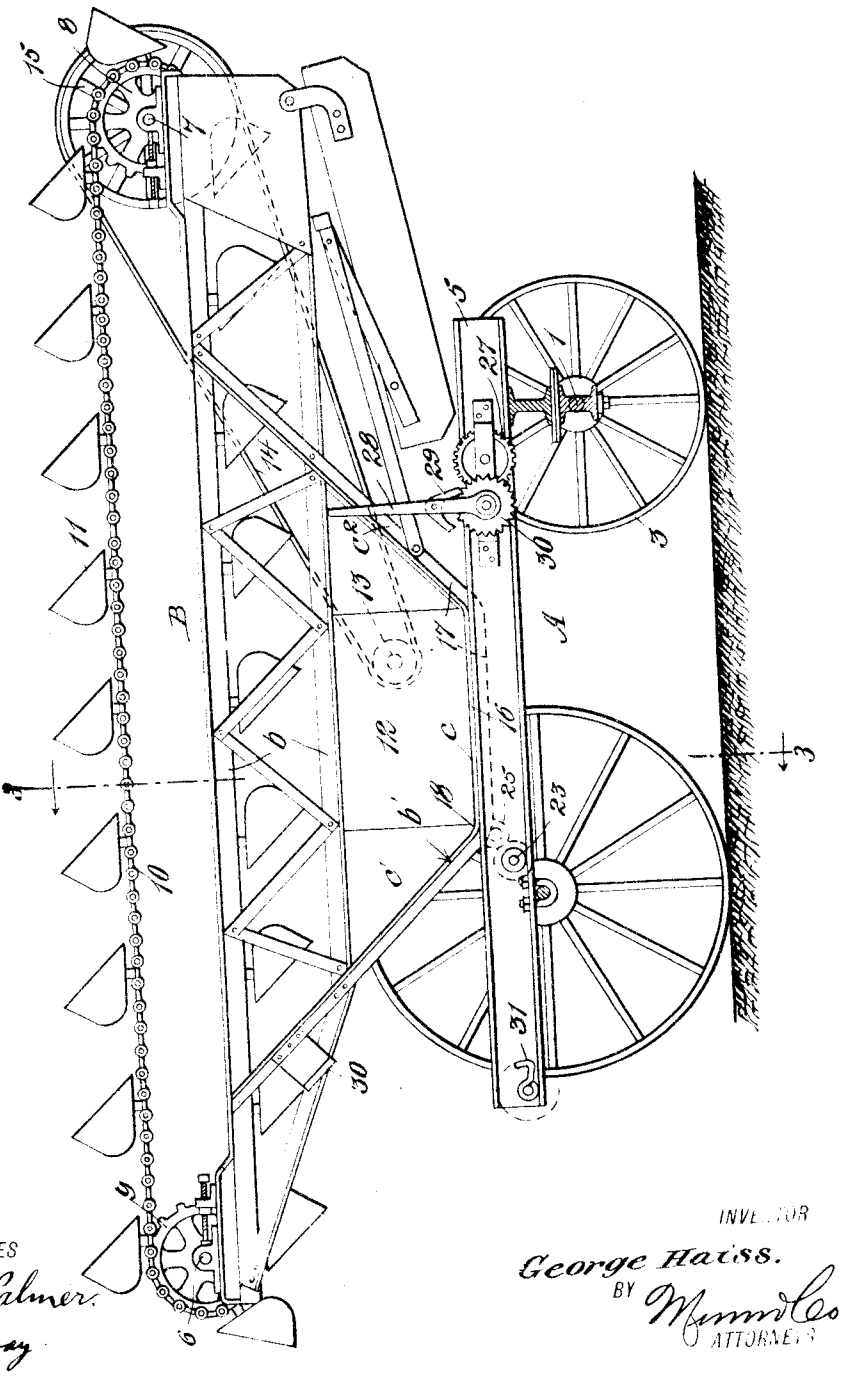


Fig. 1.

WITNESSES

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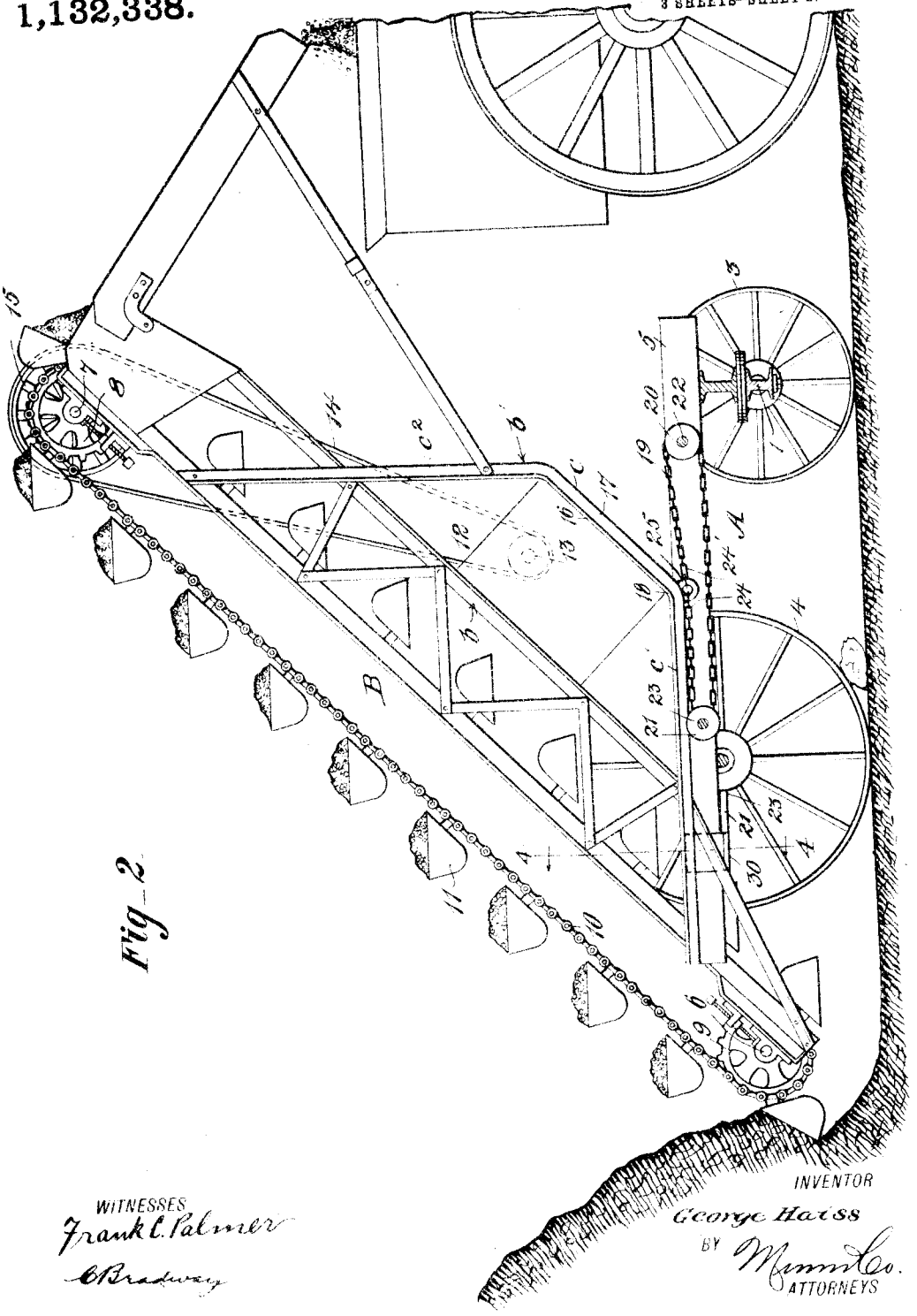


Fig. 2.

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3 SHEETS—SHEET 3.

Fig. 3

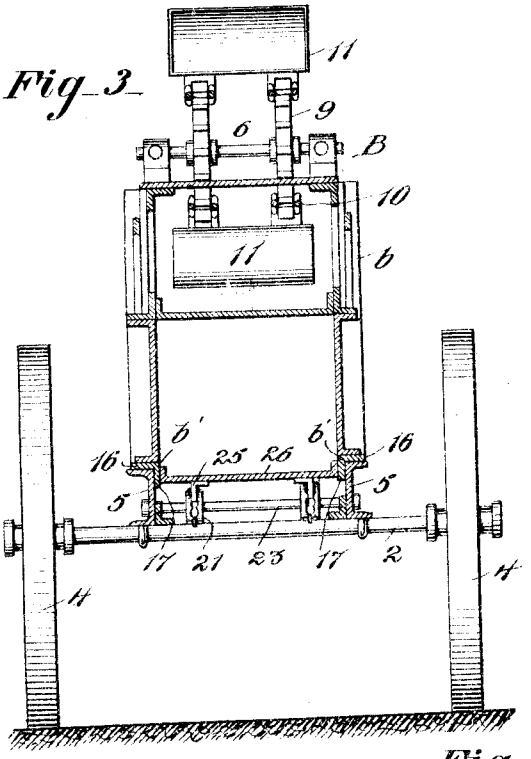


Fig. 4

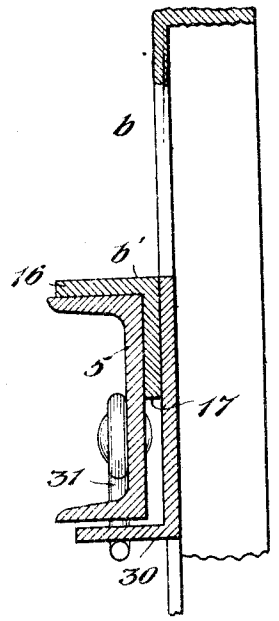
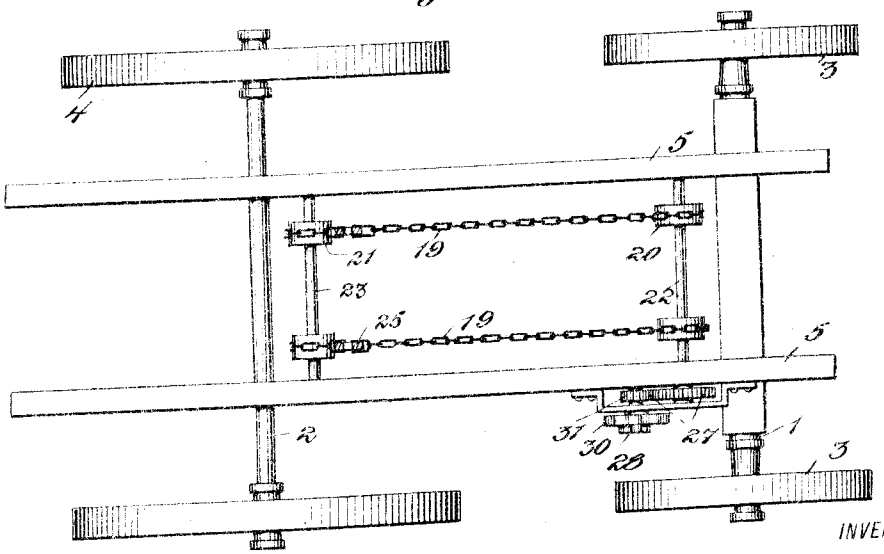


Fig. 5



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UNITED STATES PATENT OFFICE.

GEORGE HAISS, OF NEW YORK, N. Y.

WAGON-LOADING APPARATUS.

1,132,338. Specification of Letters Patent. Patented Mar. 16, 1915.

Application filed June 10, 1914. Serial No. 844,200.

To all whom it may concern:

Be it known that I, GEORGE HAISS, a citizen of the United States, and a resident of the city of New York, borough of the Bronx, county of Bronx, and State of New York, have invented a new and Improved Wagon-Loading Apparatus, of which the following is a full, clear, and exact description.

This invention relates to apparatus for facilitating the loading of wagons with material, or for the transference of material in a pile to another point, and it has to deal more especially with a wagon-loading machine of that type which is itself a vehicle capable of being transported from place to place.

The invention has for its general objects to improve and simplify the construction and operation of wagon-loading machines so as to be reliable and efficient in use, of durable and substantial design, and easily and conveniently adjusted from operative to inoperative condition.

Another object of the invention is the provision of a machine of the character referred to which embodies an endless conveyer-carrying frame which is movably mounted on a vehicle body in such a manner that the said frame can be shifted to a position for enabling the machine to be conveniently moved from place to place or to a position where it can be utilized for loading material from a pile into a wagon or the like, the machine also embodying means whereby the conveyer-carrying frame can be fed progressively toward the pile as the removal of the material from the latter proceeds.

With such objects in view, and others which will appear as the description proceeds, the invention comprises various novel features of construction and arrangement of parts which will be set forth with particularity in the following description and claims appended hereto.

In the accompanying drawings, which illustrate one embodiment of the invention, and wherein similar characters of reference indicate corresponding parts in all the views, Figure 1 is a side view of the apparatus with the conveyer-carrying frame let down to horizontal position so that the machine can be conveniently stored away out of use or moved from place to place; Fig. 2 is a side view of the machine with portions in section and showing the conveyer in operation of loading material from a pile into a wagon; Fig. 3 is a vertical section on the line 3—3, Fig. 1; Fig. 4 is an enlarged sectional view on the line 4—4, Fig. 2; Fig. 5 is a plan view of the machine body showing the means for feeding the conveyer-carrying frame.

Referring to the drawing, A designates the vehicle section of the machine and B the conveyer section. The section A comprises a body of suitable form that has front and rear axles 1 and 2 on which are wheels 3 and 4, respectively, and connected with the front of the section A may be any suitable draft appliance (not shown) for enabling the machine to be moved from place to place, either by horse, man, or mechanical power. Supported by the axles are two spaced parallel beams 5 which, in the present instance, are of channel iron, the top surfaces of which form tracks on which the conveyer section B is mounted.

The conveyer section B comprises a frame b of any suitable construction which has at its opposite ends shafts 6 and 7 that are provided with sprockets 8 and 9 around which pass endless conveyer chains 10, there being thereon, buckets or equivalent means 11. On the frame b is a suitable source of power inclosed within a casing 12, and power is transmitted from the shaft 13 through a chain, belt or the like 14, to the wheel 15 on the shaft 7.

On the sides of the frame b are runners b' which are made of angle-iron and have their horizontal flanges 16 so arranged as to bear on the upper surfaces of the tracks 5, while the vertical flanges 17 engage the inner faces of the tracks 5 like the flanges of a car wheel engaging track rails, and in this manner the conveyer section B is maintained on the vehicle section A and prevented from lateral displacement. The runners b' are formed into a central section c disposed parallel with the frame b and oppositely disposed terminal sections c' and c^2 which are oblique with respect to the central section. The sections c and c' form runners which engage the tracks or rails 5 when the conveyer section B is in operative or inoperative position, and the parts c^2 of the runners serve merely as braces between the rail-engaging portions of the runners and the frame b. When the central parts c of the runners b' are resting on the rails 5,

the machine is in inoperative position, as shown in Fig. 1, that is to say, the conveyer section B is disposed horizontally and the total height of the machine is materially diminished, so that it can be conveniently stored away in a shed or building or can be moved from place to place When, however, the parts c' of the runners bear on the rails the machine is set up for use, as shown in Fig. 2, so that material can be taken up by the buckets from a pile and delivered to a wagon, chute or the like. In shifting the conveyer section from one disposition to the other it rocks on the angles 18 of the runners and this change of position is done manually by taking hold of the rear end of the frame b, the center of gravity or balance being such that the operation is easily performed.

When the conveyer section is set up for use, as shown in Fig. 2, it is intended to be moved progressively to the rear toward the pile of material. For this purpose a suitable feeding mechanism is provided on the vehicle section A and connected with the conveyer section B. In the present instance the vehicle section A is provided with a pair of chains 19 which run over pulleys 20 and 21 mounted on the shafts 22 and 23, respectively, which shafts are journaled in the rail-forming channel irons 5. The ends 24 and 24′ of the chains are connected with gears or equivalent devices 25 fastened to a cross-piece 26 fastened to the runners b', as shown in Fig. 6. The front shaft 22 is adapted to be manually operated by a suitable gearing 27 which will transmit power in one direction or the other by oscillating a lever 28 which has a double-ended pawl 29 arranged to engage a ratchet wheel 30, which ratchet wheel is connected with a pinion 31 of the train of gears 27. It is obvious that by using one tooth of the pawl in connection with the ratchet wheel 30 and oscillating the lever 28, the conveyer-carrying section B will be moved in one direction on the rails 5, whereas, by using the other tooth of the pawl and oscillating the lever the conveyer-carrying section will be moved in the opposite direction. Thus, the conveyer can be moved progressively to the rear or to the pile of material without requiring the machine as a whole to be moved, but when the conveyer-carrying section B has been fed rearwardly as far as it will go, the said section will be returned to its forward position and the machine wheeled back toward the pile. A block or equivalent means may be placed under the wheels so as to resist the forward thrust as the machine operates, and when the machine is again properly positioned the loading operation is continued.

In order to prevent tilting of the conveyer-carrying section when it is in operation, the frame b is provided with a hold-down member 30 which is fastened to the part c' of one of the runners, or to any other suitable part of the frame structure of the section b', and this hold-down member is of L-shaped cross-section, as shown in Fig. 4, and is adapted to engage under the adjacent rail member 5 on the body of the vehicle section A. This holding-down member 30 slidably engages under the rail member 5 throughout the normal range of back and forth movement of the conveyer-carrying section B on the vehicle section A. A stop device in the form of a hook 31 is mounted on the rear end of the rail 5 that is engaged by the member 30, and this hook limits the backward movement of the section B by the member 30 engaging the hook. When the hook is thrown upwardly from the position shown in Fig. 4 to that shown in Fig. 1, the conveyer-carrying section can be moved backwardly far enough to disengage the member 30 from the rail 5, and then the section B can be tilted from the position shown in Fig. 2 to that shown in Fig. 1. After this is done the section B is moved forwardly, so that its center of gravity will approximate the middle of the vehicle section A.

From the foregoing description taken in connection with the accompanying drawings, the advantages of the construction and method of operation will be readily understood by those skilled in the art to which the invention appertains, and while I have described the apparatus which I now consider to be the best embodiment thereof, I desire to have it understood that the apparatus shown is merely illustrative, and that such changes may be made when desired as are within the scope of the appended claims.

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

1. A wagon loading machine of the class described, comprising a vehicle section including track rails, a conveyer-carrying section including runners slidably and tiltably mounted directly on the rails, and means for moving the conveyer-carrying section on the vehicle section.

2. A wagon-loading machine of the class described, comprising a vehicle section including a body, a conveyer-carrying section slidably mounted on the body and having two angularly-disposed portions arranged to engage the body respectively for supporting the conveyer-carrying section in operative and inoperative positions, and means for feeding the conveyer-carrying section with respect to the vehicle section.

3. A wagon-loading machine of the class described comprising a vehicle section including longitudinally-extending track rails, a

conveyer-carrying section having a pair of runners formed with angularly-disposed portions for engaging the rails and supporting the conveyer-carrying section in operative or inoperative position, and means on the vehicle section and connected with the said runners for moving the conveyer-carrying section backwardly and forwardly.

4. A wagon-loading machine comprising a vehicle section having rails, a conveyer section including a frame, runners connected with the frame and having angularly-disposed rail-engaging portions, whereby the conveyer-carrying section can be supported in operative or inoperative position, means on the conveyer-carrying section for engaging a track rail to hold the said section in operative position, and a releasable stop-carrying device on the vehicle section to normally engage the said means and limit the feeding movement of the conveyer section on the vehicle section.

5. A machine of the class described, comprising a vehicle section having track rails, a conveyer section including runners formed of angle-irons arranged with horizontal flanges engaging the tops of the track rails, and vertical flanges engaging the inner sides of the track rails, whereby the conveyer-carrying section is held against lateral displacement on the rails, and means for moving the conveyer-carrying section back and forth on the rails, said conveyer section being tiltable on the runners to different positions.

6. A machine of the class described, comprising a vehicle section having track rails, a conveyer section including runners formed of angle-irons arranged with horizontal flanges engaging the tops of the track rails, and vertical flanges engaging the inner sides of the track rails, whereby the conveyer-carrying section is held against lateral displacement on the rails, and means for moving the conveyer-carrying section back and forth on the rails, said runners having angularly-disposed portions adapted respectively to engage the rail sections and to permit a conveyer-carrying section to be tilted from operative to inoperative position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE HAISS.

Witnesses:
ALFRED W. HAISS,
G. E. HAISS.