No. 656,074. Patented Aug. 14, 1900.

L. C. WOOD.

WAGON LOADING DEVICE.

(Application filed Dec. 5, 1899.)

(No Model.)

Fig. 1.

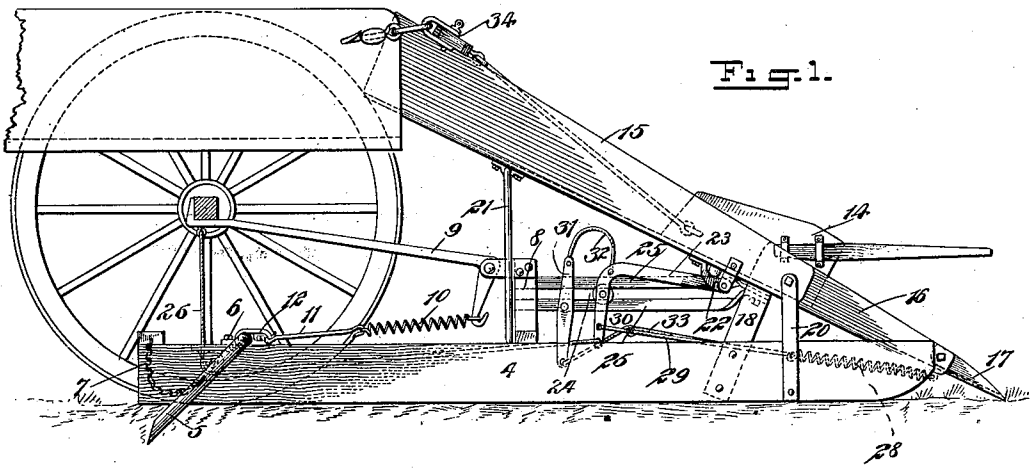


Fig. 2.

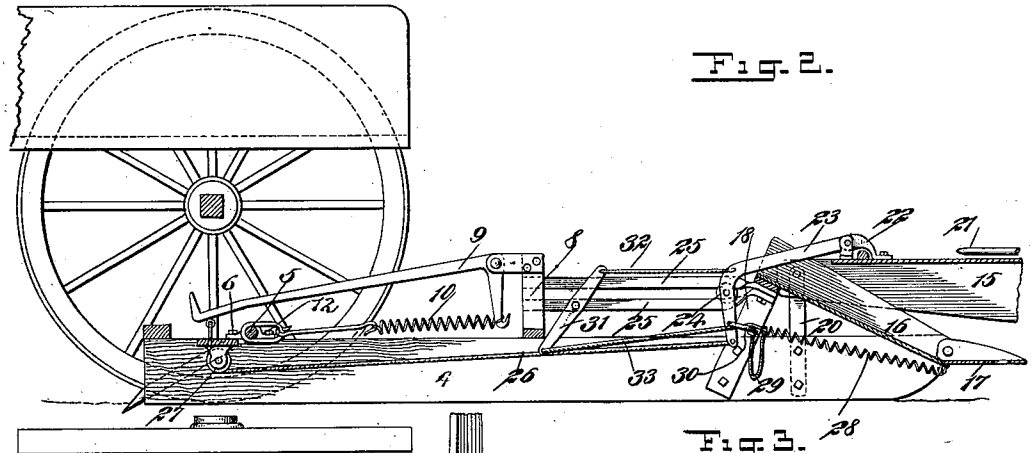
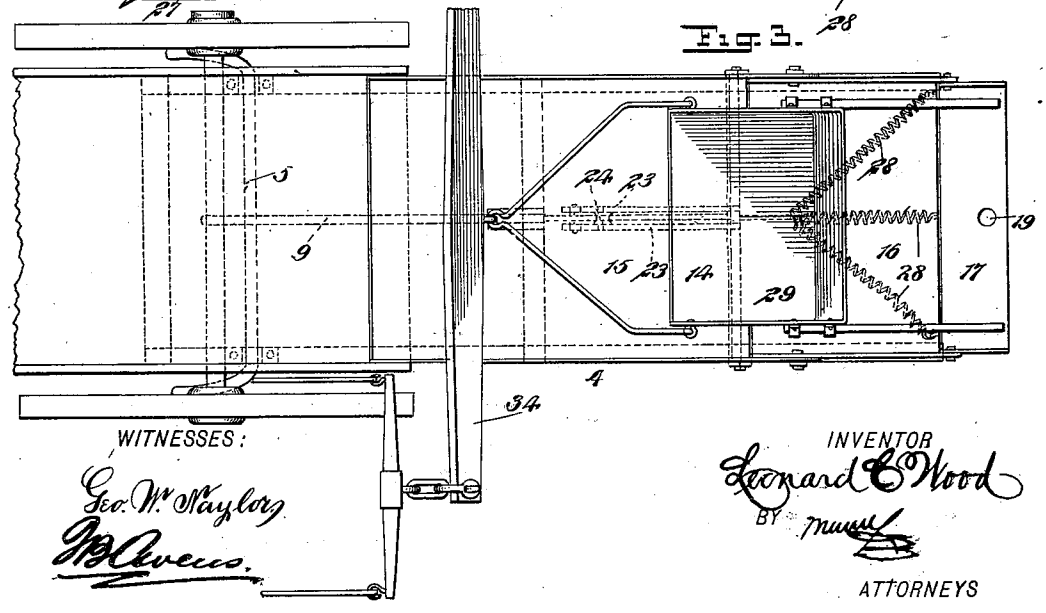


Fig. 3.



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WAGON-LOADING DEVICE.

SPECIFICATION forming part of Letters Patent No. 656,074, dated August 14, 1900.

Application filed December 5, 1899. Serial No. 739,297. (No model.)

To all whom it may concern:

Be it known that I, LEONARD CHESTEEN WOOD, a citizen of the United States, and a resident of Alden, in the county of Hardin and State of Iowa, have invented a new and Improved Wagon-Loading Device, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide means for loading wagons from scrapers, by which means the scrapers are lifted bodily into the wagon and dumped therein.

This specification is the disclosure of one form of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the apparatus in operative position. Fig. 2 is a sectional side elevation of the apparatus thrown into inoperative position, and Fig. 3 is a plan view of the invention in operative position.

The apparatus comprises a base or body 4 in the form of a sled provided with a U-shaped bar 5, the end portions of which are extended downward and curved outward and arranged to project down into the earth to anchor the body and also to guide the wagon-wheels as the wagon is moved into loading position. The middle of the bar 5 is mounted to rock in boxes 6, attached to the body, and chains 7 are arranged to limit the movement of the bar 5. Mounted on a standard 8, attached to the body 4, is an elbow-lever 9, with a long arm extending rearward and provided with a hook adapted to engage with the rear axle of the wagon, as indicated in Fig. 1, thus holding the wagon immovably over the body of the apparatus. The short arm of the lever 9 extends downward and has a retractile spring 10 connected therewith, such spring being connected by a rod 11 and link 12 with the horizontal portion of the bar 5. The spring 10 being retractile serves normally to throw the long arm of the lever 9 upward to the position shown in Fig. 1, thus holding the wagon in position over the apparatus.

A chute or inclined way by which the scraper (indicated at 14 in Figs. 1 and 3) is moved up to the body of the wagon is provided and formed in three sections 15, 16, and 17. The middle section 16 is rigidly mounted in the inclined position shown, its rear portion being supported by a bracket 18, rising from the base 4. The section 17 is at the outer end and is in the form of an apron pivotally mounted, so that it may be thrown down to the position shown in Fig. 1 or up to the position shown in Fig. 2, in which latter position it will not interfere with the body or sled-like portion 4. A hole 19 is formed in the section 17, so that devices may be attached to the section for drawing the apparatus from place to place. The section 15 of the chute or way, which section is the main or largest one, is mounted on the section 16 to swing between the positions shown in Figs. 1 and 2, the pivots of the section 15 being braced by arms 20, which project upward from the body 4. Legs 21 are hinged to the bottom of the section 15 and are adapted to bear on the parts when the parts are in the position shown in Fig. 1 to assist in supporting the section 15, and when the section 15 is thrown down, as shown in Fig. 2, the legs will lie on the bottom of the upturned portion of the section.

A bracket 22 is attached to the under side of the section 15, near its lower end, and to this bracket are pivoted two angle-bars 23, which are connected rigidly with each other to form practically a unitary structure. These angle-bars extend forwardly and downwardly and carry between them a roller 24, which slides between two track-bars 25, attached to and supported by the bracket 18 and standard 8. The angle-bars 23 straddle the track-bars 25, as shown, and as the section 15 is thrown forward and back the bars 23 are caused to move along the track-bars 25. To the lower ends of the bars 23 a cord 26 or the like is attached, the cord passing rearwardly around a pulley 27 on the body 4 and upward to connect with the long arm of the lever 9. When the section 15 is thrown forward to the inoperative position, (see Fig. 2,) the bars 23 are drawn in the same direction and the elbow-lever 9 is thrown down to release the axle of the wagon. When the section 15 is returned to the position shown in Fig. 1, the elbow-lever 9 by its spring 10 is permitted to return to the position in which it is engaged with the axle of the wagon.

To the front or lower portion of the section

16 of the chute are attached a number of retractile spiral springs 28, and these springs are connected through the medium of a cord 29 with links 30, attached to the lower ends of the angle-bars 23. The springs therefore tend to throw the angle-bars 23 forward, and thus assist in the work of throwing the section 15 of the chute from the position shown in Fig. 1 to that shown in Fig. 2. For the purpose of causing the springs 28 to act oppositely, and thus assist the movement of the section 15 in returning to the position shown in Fig. 1, a lever 31 is fulcrumed to the lower track-bar 25 and is connected at its upper end with a cord 32, which extends forwardly to the angle-bars 23. The lower end of the lever 31 has a cord 33 attached thereto, which extends forward through the links 30 and has connection with the springs 28 at the point of their juncture with each other, so that as the angle-bars 23 move forward with the section 15 of the chute the lever 31 is thrown to draw the cord 33 rearward, thus placing the springs 28 under tension. It will therefore be seen that the springs 28 are always under tension and that they act not only to assist in the raising of the member 15 of the chute, but to support the weight of the chute in the act of lowering the same.

In the use of the apparatus the body is placed on the ground and the wagon is driven over the apparatus to the position shown, it being understood that the chute-section 15 should first be thrown down, as in Fig. 2. The chute-section 15 is then thrown from the position shown in Fig. 2 to that shown in Fig. 1, which permits the elbow-lever 9 to rise and engage with the rear axle of the wagon. The scraper may now be drawn up the inclined chute or way to the body of the wagon, where it may be dumped by the driver, who should follow the scraper up the chute into the wagon. In Figs. 1 and 3 I have indicated at 34 the whiffletree and its gear by which the scraper is drawn, it being understood that the two horses which are attached to the whiffletree pass, respectively, at the sides of the wagon. When the wagon has been loaded, the section 15 of the chute is thrown forward to disengage it from the wagon, and the lever 9 is thereby drawn down to disengage it from the axle. Then the wagon may be moved away from the loading apparatus and a second wagon be driven into position.

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

1. A loading apparatus, comprising a body portion, a chute-section movably mounted thereon to engage and disengage the receptacle to be loaded, and means for engaging said receptacle to hold it stationary during the loading, such means having connection with the chute-section to be operated thereby.

2. In a loading apparatus, a body, a chute-section mounted to swing thereon, a spring-actuated lever mounted on the body to engage the receptacle to be loaded, to hold the receptacle during the loading, and a connection between the chute-section and the lever to move the lever away from the said receptacle to be loaded when the chute-section is thrown into inoperative position.

3. In a loading apparatus, a body, a chute-section mounted to swing thereon, means serving to engage the receptacle to be loaded to hold it during the loading, a spring actuating said means to throw it normally into said engagement, an angle-bar attached to the chute-section and moving in time therewith, and a connection between the angle-bar and the said means, whereby to move the means against the spring.

4. A loading apparatus, having a body portion, and a U-shaped bar mounted to rock thereon, the end portions of the bar being outwardly curved and extended downward below the body portion for the purposes described.

5. In a loading apparatus, the combination of a body portion, a chute-section mounted to swing thereon, a track-bar mounted on the body portion, an angle-bar pivotally attached to the chute-section and guided on the track-bar, and a spring attached to the angle-bar.

6. In a loading apparatus, the combination of a body portion, a chute-section mounted to swing thereon, a bar pivotally mounted on the chute-section and having guided movement on the body portion, the bar moving in time with the chute-section, and a spring having connection with the said bar.

7. In a loading apparatus, the combination of a body portion, a chute-section mounted to swing thereon, a bar attached to the chute-section and moving in time therewith, the bar having guided movement on the body portion, a lever mounted on the body portion, a flexible connection between the bar and lever, a retractile spring having connection with the bar, and a flexible connection between the lever and spring, such parts being arranged to operate as described.

8. In a loading apparatus, the combination of a swinging chute-section, a spring for assisting in actuating the same, and means establishing connection between the spring and the chute-section, such means comprising a sliding part, and a lever connected therewith and with the spring, which means maintain the spring continuously under tension.

9. In a loading apparatus, the combination of a body, a chute-section mounted to swing thereon, a bar having guided movement on the body and connection with the chute-section to move in time therewith, a lever having connection with the bar, and a spring having connection with the bar and with the lever, for the purpose described.

10. In a loading apparatus, the combination of a swinging chute-section, a spring, and means connecting the spring with the chute-

section and serving to maintain the spring continually under tension irrespective of the position of such chute-section.

11. In a loading apparatus, the combination of a movable chute-section, means for assisting in actuating the same, and an element connected with the chute-section and with said means, whereby to cause said means to act uniformly on the chute-section irrespective of the position thereof.

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