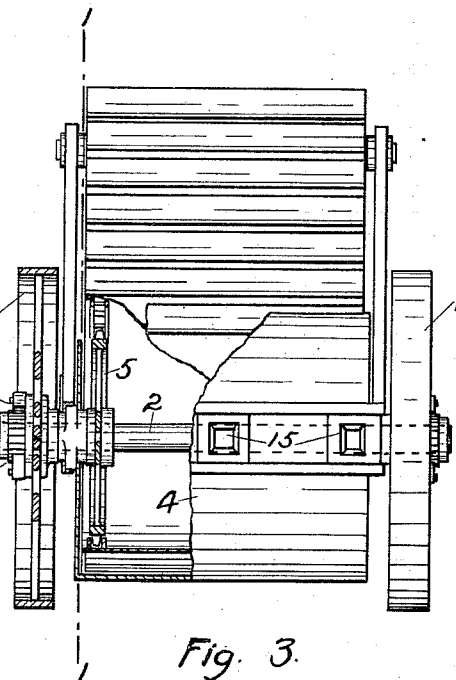
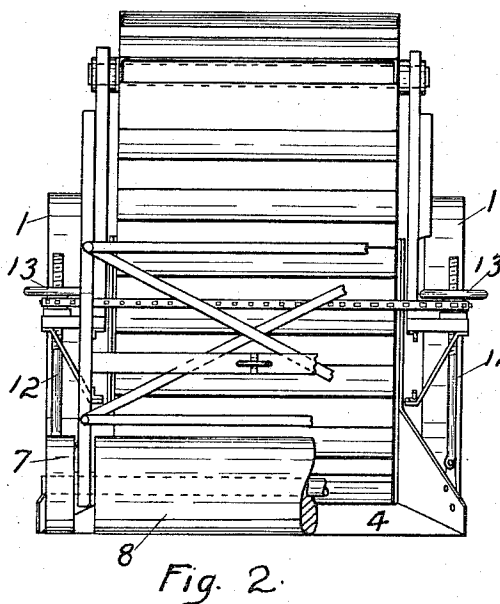
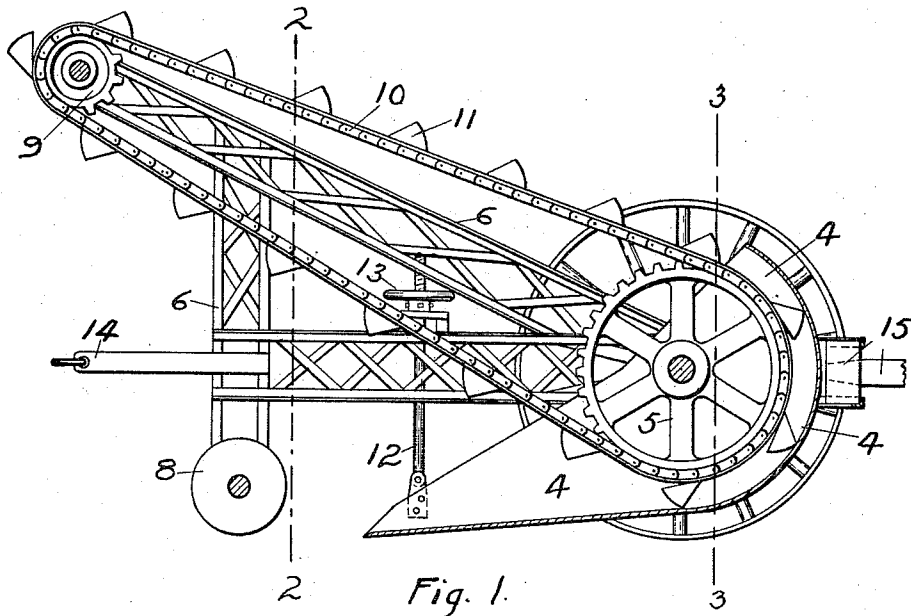


W. R. LITZENBERG.
DIRT LOADER.
APPLICATION FILED MAR. 17, 1911.

1,018,672.

Patented Feb. 27, 1912.



Witnesses.

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DIRT-LOADER.

1,018,672.

Specification of Letters Patent.

Patented Feb. 27, 1912.

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To all whom it may concern:

Be it known that I, WILLIAM R. LITZENBERG, a citizen of the United States, residing in the city of Portland, county of Multnomah, and State of Oregon, have invented certain new and useful Improvements in Dirt-Loaders, of which the following is a specification.

My invention relates to dirt loaders, and more particularly to a dirt loader of simplified and improved construction, adapted to be hitched to and moved along behind a wagon or other dirt hauling vehicle, over earth which has been loosened up, as with a plow or otherwise, for the purpose of scraping up the earth and transferring it into the wagon or other vehicle as they move along together.

Among the salient objects of my invention are,—to provide a simplified and comparatively inexpensive dirt loader of the character referred to which is self-operating as it is drawn or moved along behind a wagon or other vehicle for the purpose of scraping up the dirt and carrying it up into said wagon or vehicle; to provide such a dirt loader adapted to be hitched successively behind different wagons used in hauling away the dirt and drawn along therewith, in most cases, with the same horse power that is used to haul the wagon in which the dirt is carried away; to provide in such a loader a construction in which additional horses can be hitched behind said loader, if desired, as when it is desired to scrape up a larger quantity of earth and thus load the wagons in a much less time, said horses being hitched so as to walk forwardly behind the loader which they are pushing, or to which one or more horses can be hitched to move the loader from place to place; to provide in connection with such a loader a roller to precede the scraper for the purpose of mashing and leveling the dirt before the scraper moves under it, thereby making more uniform and effective the operation of the loader, and also serving to prevent large rocks or other objects from moving into the scraper and binding the elevator mechanism; and, in general, to provide an improved, simplified and practical dirt loader of the character referred to which can be used to load wagons or other dirt-hauling vehicles with the least amount of power and with the fewest possible men.

I am aware that loaders of various kinds

have been made, but all those with which I am familiar are very large, heavy machines requiring manual operation and much horse power to operate them.

My invention has for its principal object to produce a very simple, inexpensive and practical loader adapted to be drawn along behind a wagon and scrape up a layer of loose earth, leveled and rolled together, and carry it up into the wagon as it moves along over the dirt which has been previously plowed or loosened.

The invention will be readily understood from the following description, reference being had to the accompanying drawings, in which,—

Figure 1 is a side elevation of a loader embodying my invention; Fig. 2 is a front view of the same, from line 2—2 of Fig. 1, with parts broken away; and Fig. 3 is a rear view partly in section on line 3—3 of Fig. 1.

Referring now to the drawings, 1—1 designates a pair of traction wheels carrying a main or carrying axle 2, adapted to be locked to turn with the wheels by means of clutch mechanisms 3—3 as the machine or loader is moving forwardly, but adapted to remain stationary as the machine is drawn rearwardly, as when being moved from place to place. Carried by the main axle 2 is a scraper 4 having a large bowl-like portion extended around and upwardly above the axle, as indicated, said bowl-like portion being provided at its sides with suitable bearing supports upon said axle, whereby the axle supports the scraper and turns therein. Mounted upon the axle and turning therewith within the sides of the scraper are two large sprockets, as 5—5, although this might be a drum or other suitable driving member, not necessary here to be further illustrated. 6 designates a supporting frame, the rear ends of which are carried by the main axle 2, with suitable bearing supports between the outsides of the scraper and the wheels, while its forward end is carried upon smaller wheels, as 7—7 at the sides thereof, as indicated, with a roller 8 mounted therebetween to mash and level the dirt before it is picked up in the scraper, thereby causing the dirt to move into the scraper as a uniform layer and also serving to prevent rocks or large objects from getting into the scraper and clogging the elevator mechanism.

Mounted to move upon the inclined portion of the supporting frame 6, is an endless conveyer, as 10, provided with buckets, as 11. This conveyer is preferably made of a wide flexible belt-like member, turning over a drum, or as I have here illustrated, provided at its edges with sprocket chains adapted to move over the sprockets 5—5 upon the axle 2 and up over the smaller sprockets 9 upon the upper end of the supporting frame 6. The buckets 11 will be constructed of such material as will support the dirt between the sprockets 5—5 and be adapted to pick up the layer of dirt moving into the scraper and carry it around within the bowl-like portion of the scraper which is extended sufficiently high to insure the dirt being landed upon the inclined portion of the conveyer and carried up over the upper end of the frame and discharged into the wagon. The buckets are attached to the belt at the upper edge of the back thereof so that as the bucket turns around the upper end of the frame, the rear of the bucket is moved slightly forward, as indicated by the bucket in Fig. 1 which has just made the turn, whereby this movement operates to facilitate the discharge of the dirt therefrom.

In order to regulate the depth of earth to be picked up by the scraper, or the thickness of the layer to be picked up, I provide a pair of supporting arms, as 12—12, attached thereto and adapted to be raised and lowered by means of hand-screw wheels, as 13—13, whereby to determine the depth of earth to be picked up. Thus I am able to pick up a thin layer of earth and keep it moving continuously up into the wagon with the same horse power used to draw the wagon, or I can dip the point of the scraper down and pick up a thicker layer of earth and add an additional horse, or additional horses to the rear of the loader to assist in moving it along behind the wagon in a manner hereinafter referred to.

The scraper is flared outwardly at both sides, as seen in Fig. 2, whereby to scrape a width equal to the width of the entire loader and permit the wheels to run on a level surface, and whereby in scraping up a street to get it ready for paving, the scraper will scrape right up to the curb.

It is intended that the traction wheels shall be of such size and weight that as the machine is moved forwardly, its own weight will operate to drive the conveyer belt and continue the movement of the layer of earth into the scraper and up around the inside wall of the bowl-portion of the scraper and up the incline and over into the wagon, in a continuous manner.

In the rear of the loader, I provide attaching means for either a pair of shafts or a tongue, as at 15, whereby one or more

horses can be hitched to said loader to move and operate it from the rear, the animals being hitched to the free ends of the shafts or tongue so as to face the loader and push it before them as they move along behind the wagon being loaded, in a manner which will be well understood without further illustration or description.

I am aware that changes in the construction and arrangement here shown can be made without departing from the spirit of the invention and I do not, therefore, limit the invention to the showing here made for purposes of illustration.

I claim:

1. A dirt loader of the character referred to comprising carrier wheels with a carrier axle therebetween and adapted to turn therewith when moving forwardly, a scraper with bowl-like portion supported to said axle with its scraper portion extended forwardly thereof, a carrier frame, supported rearwardly upon said axle between the sides of said scraper and wheels and forwardly upon carrier wheels, an endless conveyer mounted to travel upon said carrier frame and dipping into said scraper, means upon said axle for driving said conveyer, and means for moving said loader along behind a wagon or other vehicle to be loaded.

2. A dirt loader comprising a pair of carrier wheels with axle therebetween and turning therewith when moving forwardly, a scraper with a bowl-like portion supported to said axle with its scraper portion extended forwardly of said axle, a carrier frame, supported rearwardly upon said axle between the sides of said scraper and said wheels and forwardly upon carrier wheels, a pair of adjusting supports from said frame to the forward portion of the scraper whereby to regulate the depth of earth picked up by said scraper, an endless conveyer mounted to travel upon said frame and dipping into the bowl portion of said scraper, and means for hitching to said loader whereby to move it along after the wagon to be loaded.

3. In a dirt loader, the combination of carrier wheels with axle therebetween and adapted to turn therewith, a scraper with bowl like portion supported to said axle with its scraper portion extended forwardly thereof, a frame, supported rearwardly upon said axle and having forward supporting legs; an endless conveyer mounted to travel upon said frame and dipping into said scraper, means upon said axle for driving said conveyer, a roller mounted between the forward supporting legs of said frame in front of said scraper, and means for hitching to said loader.

4. In combination with a dirt loader having a scraper and an elevator dipping into said scraper whereby to scrape up the dirt

and elevate it, a roller mounted in front of said scraper and extending across the mouth thereof whereby to mash and level the dirt before it is picked up by said scraper.

5 5. In a dirt loader, the combination with the scraper, elevator dipping thereinto and driving mechanism therefor, of means for regulating and holding the forward end of said scraper to regulate the depth of dirt
10 gathered, means for coupling said loader to the wagon to be loaded, and hitching means in the rear of said loader whereby horses hitched thereto will push it in front of them and behind the wagon being loaded.

15 6. A dirt loader of the character referred to comprising in combination, traction wheels with axle therebetween, means for locking said wheels to said axle, a scraper with bowl-like portion carried upon said
20 axle with the scraper portion extended forwardly of said traction wheels, a supporting

frame supported rearwardly upon said axle and forwardly with supporting legs and carrier wheels, a roller mounted to turn between said supporting legs in front of said
25 scraper, a traveling conveyer mounted to travel upon said frame and dipping into the scraper, supporting means between said frame and the scraper mouth and means for
30 adjusting and holding said scraper at various depths, means for coupling said loader to the wagon to be loaded, and hitching means rearwardly of said scraper whereby
35 to push said loader along behind the wagon to be loaded, substantially as shown and described.

Signed at Portland, Oregon, this 7th day of March, 1911.

WILLIAM R. LITZENBERG.

In presence of—

F. E. LITZENBERG,
W. A. BURKE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."