

W. VOLAND.
ROAD SCRAPER.
APPLICATION FILED FEB. 8, 1912.

1,037,375.

Patented Sept. 3, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

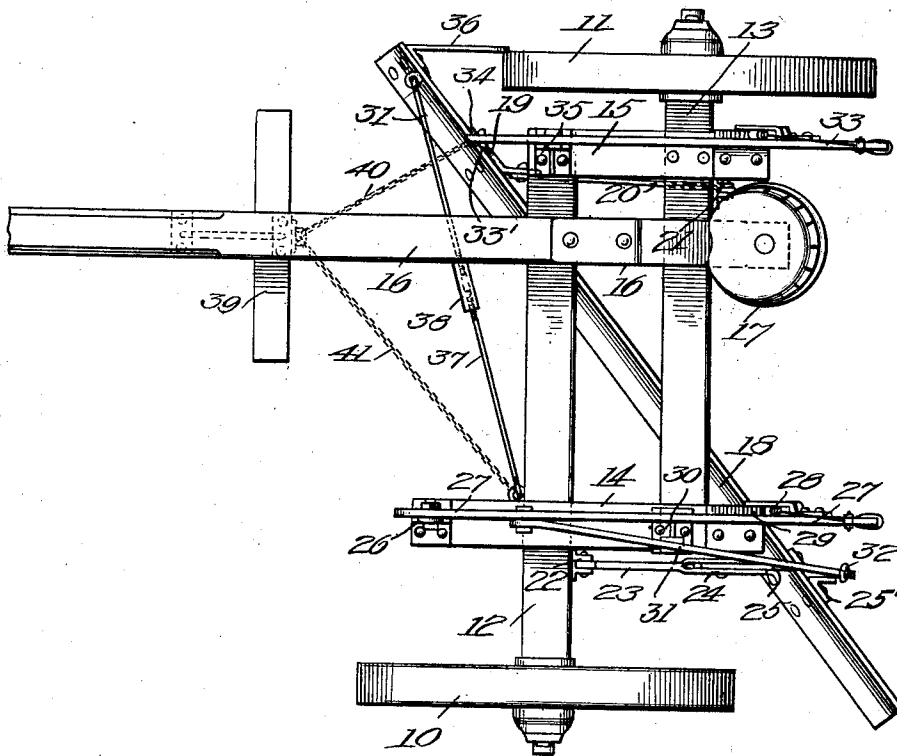
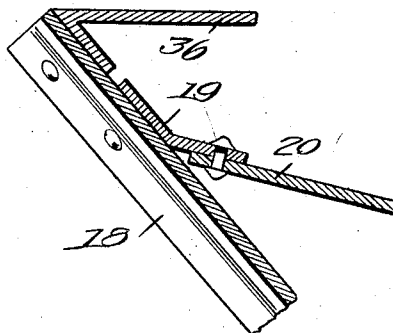


Fig. 4.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 2.

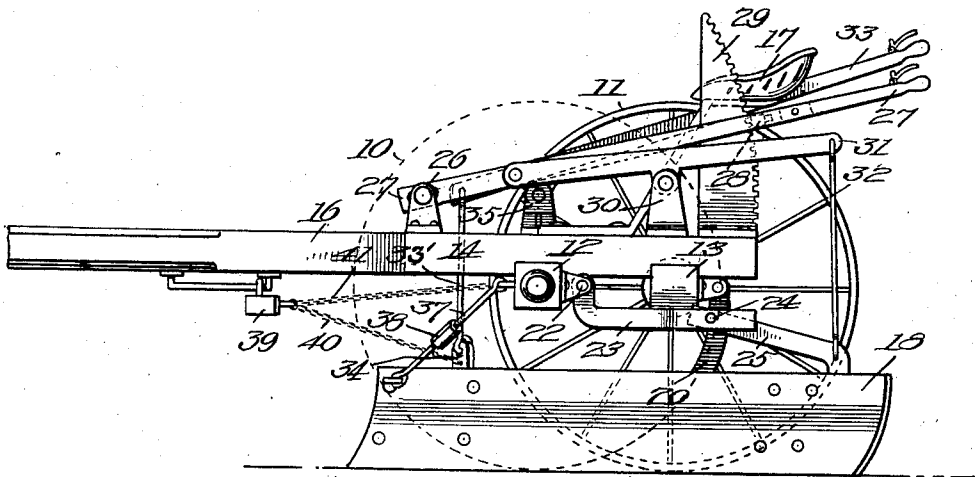
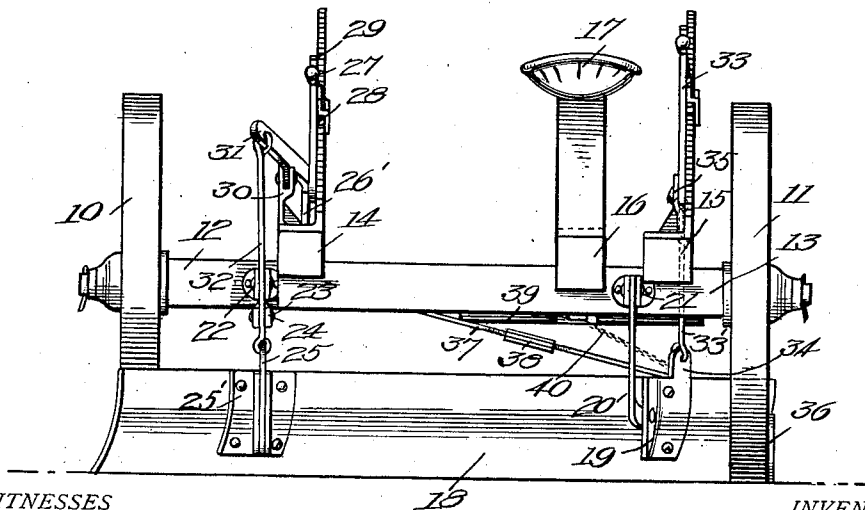


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM VOLAND, OF GARNET, WISCONSIN.

ROAD-SCRAPER.

1,037,375.

Specification of Letters Patent.

Patented Sept. 3, 1912.

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To all whom it may concern:

Be it known that I, WILLIAM VOLAND, a citizen of the United States, residing at Garnet, in the county of Fond du Lac and State of Wisconsin, have invented certain new and useful Improvements in Road-Scrapers, of which the following is a specification.

This invention relates to machines for scraping or grading roads, and its object is to provide novel and improved means for supporting the scraper blade, and also to provide a draft attachment whereby side draft or creeping is reduced to a minimum.

The invention also has for its aim to improve and simplify the general structure of the machine.

With the herein stated objects in view, the invention consists in a novel construction and arrangement of parts to be hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view of the machine. Fig. 2 is a side elevation thereof. Fig. 3 is a rear end view, and Fig. 4 is a horizontal section of the front end of the scraper-blade.

Referring specifically to the drawings, the machine is mounted on two wheels 10 and 11, respectively, the former being located slightly in advance of the latter. The wheels are mounted on independent axles, the axle 12 of the wheel 10 being located in front of the axle 13 of the wheel 11. The two axles are connected, adjacent to the wheels, by longitudinal beams 14 and 15 respectively, one of said beams being located on one side of the machine, and the other beam on the opposite side. A draft tongue 16 is connected to the two axles, said tongue extending across the top thereof and being secured thereto in any suitable manner. On the rear end of the tongue, above the axles, is mounted a seat 17 for the driver.

The scraper blade 18 extends obliquely to the line of draft of the machine, one end of the blade being located in front of the wheel 11 and the other end to the rear of the wheel 10.

On the back of the scraper blade 18, adjacent to the front end thereof, is fastened a bracket 19 to which is secured one end of a suspension link 20 which extends rearward and has its rear end extending upward in a curve behind the axle 13 to which

it is pivotally connected in any suitable manner, as indicated at 21, to swing in a vertical plane.

To the back of the axle 12, near the wheel 10, is pivotally secured in any suitable manner, as indicated at 22, to swing in a vertical plane, a link 23 which extends rearward and has pivotally connected to its free end, as indicated at 24, to swing in a vertical plane, one end of a link 25, which latter has its other end extending downward behind the scraper blade 18, near its rear end, and secured to a bracket 25' mounted thereon. The reason for making the suspension link of the rear end of the scraper blade in two pivotally connected sections will hereinafter appear.

The following means are provided for raising and lowering the scraper blade 18: On the front end of the beam 14 is mounted a bracket 26 to which is fulcrumed a hand-lever 27 which extends rearward and is provided with an ordinary spring latch 28 co-operating with a rack 29 to lock the lever. On the rear end of the beam 14 is mounted a bracket 30 on which is fulcrumed, intermediate its ends, a lever 31, having its forward end pivotally connected to the hand-lever 27. The rear end of the lever 31 carries a depending rod 32 which is connected to the link 25. These devices serve to raise and lower the rear end of the scraper-blade. When the hand-lever 27 is swung downward, the rear end of the lever 31 swings upward, thus lifting the rear end of the scraper blade, and upon swinging the hand-lever upward, the rear end of the lever 31 swings downward and lowers the rear end of the scraper-blade. In order that the front end of the scraper-blade may also be raised and lowered, there is provided a hand-lever 33, the forward end of which is connected by a depending rod 33' to an up-standing ear 34 on the bracket 18. The hand-lever 33 is fulcrumed on a bracket 35 mounted on the beam 15, and is provided with locking means similar to those of the hand-lever 31.

By the devices herein described either one or both ends of the scraper-blade 18 may be raised or lowered. The pivotal connection between the links 23 and 25 enables the front end of the scraper-blade to be raised or lowered without affecting its rear end.

The front end of the scraper-blade car-

ries a land-side share 36, and said end of the scraper-blade is also connected to the axle 12 by a diagonal brace rod 37, having a turn-buckle 38, said brace serving to prevent the scraper-blade from being pushed back against the wheel 11 when the machine is in operation.

The tongue 16 carries an evener-bar 39 which is connected at the center by a chain 40 to the ear 34. A chain 41 also connects the evener-bar with the axle 12 near its end carrying the wheel 10. It will be noted that the tongue is set off the longitudinal center line of the machine toward the wheel 11 and the front end of the scraper, which latter are on the land-side, thereby reducing side-draft or creeping when the machine is in operation, and by the chains 40 and 41 the draft is applied to the scraper-blade as well as to the front axle 12.

The machine can be easily controlled by the driver and it is efficient and reliable in operation, there being no complicated parts to get out of order.

I claim:

1. In a road-scraper, a pair of axles located one in front of the other, a wheel mounted on the outer end of each axle, longitudinal side beams carried by the axles,

an oblique scraper-blade, suspension means for the front end of the scraper-blade extending rearward therefrom and connected to the rear axle, suspension means for the rear end of the scraper-blade extending forward and connected to the front axle, hand-levers mounted on the side beams, and connections between said hand-levers and the respective ends of the scraper-blade for raising and lowering the same.

2. In a road-scraper, a wheeled frame having a pair of axles located one in front of the other, and a wheel mounted on the outer end of each axle, an oblique scraper-blade carried by the frame, a draft tongue connected to the frame off the longitudinal center thereof toward the forward end of the scraper-blade, an evener-bar, and connections between the evener-bar and the front axle and forward end of the scraper-blade.

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

WILLIAM VOLAND.

Witnesses:

WILLIAM BALTZ,
LISSETTA MORAN.

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