

UNITED STATES PATENT OFFICE.

MARLOW F. PERRY, OF WEST ONEONTA, NEW YORK.

ROAD GRADER AND DITCHER.

SPECIFICATION forming part of Letters Patent No. 395,451, dated January 1, 1889.

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To all whom it may concern:

Be it known that I, MARLOW F. PERRY, of West Oneonta, in the county of Otsego and State of New York, have invented a new and Improved Road Grader and Ditcher, of which the following is a full, clear, and exact description.

My invention relates to an improvement in road graders and ditchers, and has for its object to provide a machine of simple and durable construction, which will be light of draft, and which may be also conveniently carried along the road without operating upon the same.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is a plan view of the machine. Fig. 2 is a side elevation of the same, and Fig. 3 is a section on line *xx* of Fig. 1.

In carrying out the invention the body of the machine is triangular, consisting of two side beams, 10, united at the forward end in any suitable or approved manner and braced at the rear by a transverse beam, 11, as best illustrated in Fig. 1. To the outer face of the several beams 10, at or near the bottom, a metal plate, 12, is secured, which plates extend below the base of the frame and act in the capacity of knives or scraper-blades.

The two blades 12 are united at the front of the machine to form an essentially-sharp vertical cutting-edge. A draft-beam, 13, pivoted on a pin, 13^a, is projected through an opening, 14, formed in one side beam, 10, of the frame, which draft-bar 13 is pivoted and guided in its vertical movement by a bracket, 15, attached to the inner face of the opposite side beam, 10. Upon the draft-bar 13 any ordinary whiffletree may be secured.

Near the front of the frame a transverse rock-shaft, 16, is journaled, and in the said rock-shaft a downwardly-extending caster-wheel, 17, is pivoted, as best shown in Fig. 3. The rock-shaft 16 is manipulated through the medium of a lever, 18, extending rear-

wardly over and preferably beyond the rear cross-beam, 11, adapted to be engaged by a cleat or rack, 19, as best shown in Figs. 2 and 3. When the lever 18 is in engagement with the rack 19, the caster-wheel 17 extends below the blades 12 to an engagement with the ground, whereby the frame of the machine is elevated, as shown in Figs. 2 and 3. When, however, the lever is released from the cleat 19, the blades 12 are brought in contact with the ground and in position for work.

Within the frame, at or near its rear end, the forwardly-swinging vertical levers 20 are pivoted, the lower extremities of said levers being curved rearwardly and provided with a wheel, 21. The right-hand lever is pivoted to the inner side of the right-hand beam, 10, and is adapted to reciprocate in a bracket, 22, which bracket is provided with a series of teeth upon the inner face, whereby the lever 20 may be adjusted as desired—that is, the wheel 21 may be brought in contact with or elevated from the ground, as occasion may demand. The left-hand lever, 20, is pivoted at the top between diagonal bars or beams 23, attached, respectively, to the side beams, 10, and rear beams, 11, near the junction of the two, as illustrated in Fig. 1. If desired, both levers 20 may be so pivoted.

A platform, 24, is secured centrally and diagonally of the frame, the ends of the said platform being attached to one of the side beams, 10, and the cross-beam 11. Upon the platform 24 the driver's seat 25 is attached, the said seat being adapted to extend, preferably, a distance rearward over and beyond the rear cross-beam, 11. This position of the seat enables the driver to readily manipulate either of the levers 20 or the lever 18.

When the device is at work upon the road, the wheels 21 and the caster-wheel 17 are drawn up from the ground, enabling the blades 12 to come in contact with the latter. When the work of grading or ditching has been completed, the levers 20 are carried to the rear, causing the wheels 21 to rest upon the ground, and the lever 18 is carried downward to an engagement with the cleat 19. Thus the machine is supported, as shown in Figs. 2 and 3, upon three wheels, and may be transported any desired distance.

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

1. The combination, with the triangular scraper, of the transverse rock-shaft 16, pivoted between the converging ends of the side bars, a caster-wheel, 17, having its shank depending from the said shaft, a vertically-movable lever connected at its forward extremity to the said rock-shaft for rocking it, and means for locking the said lever, the parallel vertical forwardly-swinging levers 20, pivoted at or near their lower rearwardly-curved ends within the rear end of the frame, and provided with wheels at their lower ends, substantially as set forth.

2. The combination, with a triangular frame, cutting or scraping blades secured to the base of the same, and a draft-beam pivoted in the forward end of the frame parallel with one side beam, of a rock-shaft journaled in the forward portion of the frame, a caster-wheel pivoted in said rock-shaft, a horizontal lever attached to the rock-shaft, vertical levers secured to the inner side of the frame at the

rear, wheels pivoted in the lower end of said vertical levers, and means, substantially as shown and described, for retaining the said levers in a predetermined position, as and for the purpose specified.

3. The combination, with a triangular frame, cutting or scraping blades attached to the face of the frame, a draft-bar pivoted to the frame parallel with one side beam, a rock-shaft journaled in the forward end of the said frame, and a caster pivoted in said rock-shaft, of vertical levers pivoted to the inner sides of the frame at the rear, wheels secured to the lower extremity of said vertical levers, racks inclosing the upper portion of the said levers, a horizontal lever attached to the rock-shaft, and a cleat secured to the rear of the frame adapted to engage the said horizontal lever, all combined to operate in the manner set forth.

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Witnesses:

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