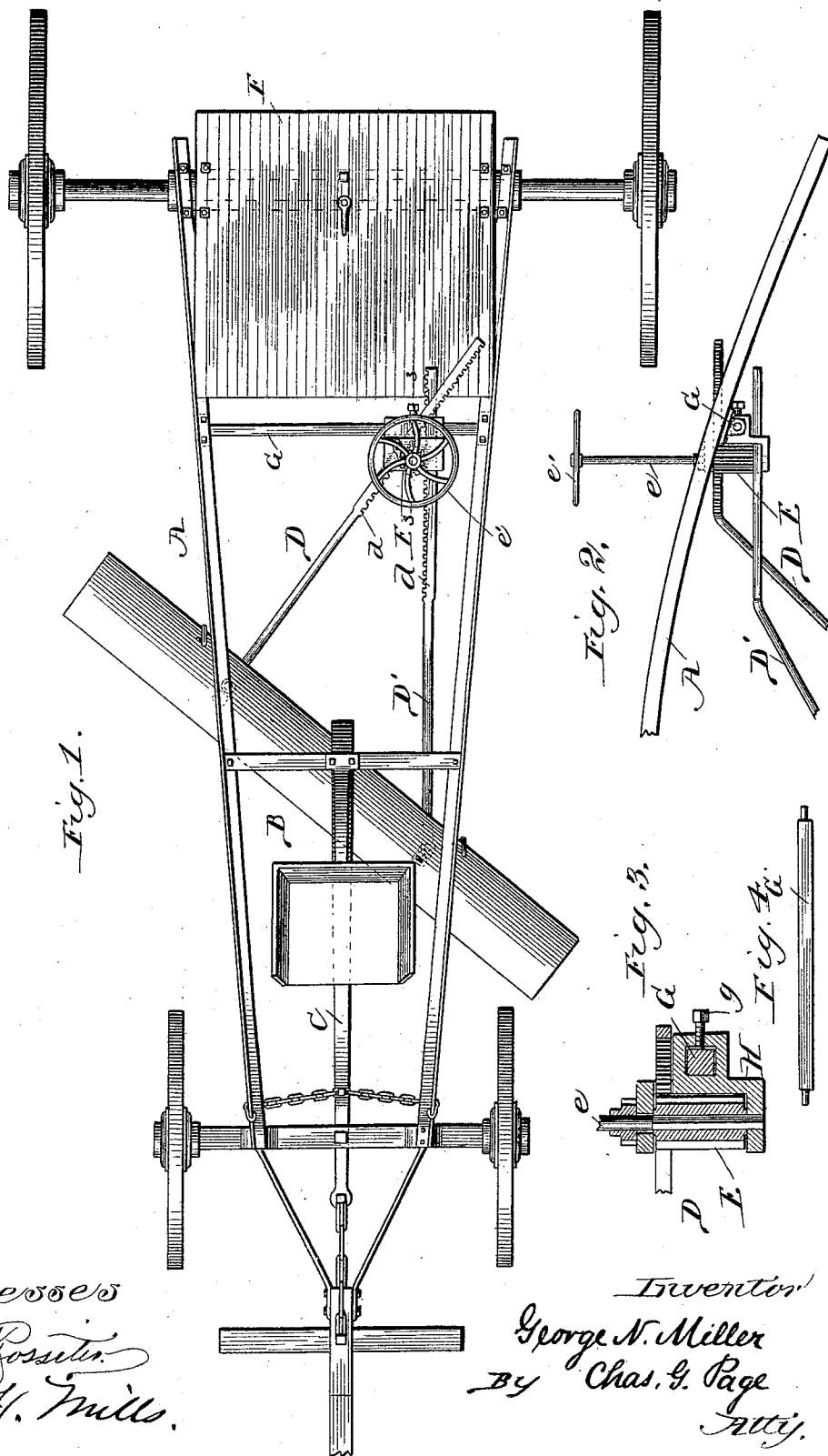


(No Model.)

G. N. MILLER.
ROAD SCRAPER.

No. 404,793.

Patented June 4, 1889.



Witnesses
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UNITED STATES PATENT OFFICE.

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ROAD-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 404,793, dated June 4, 1889.

Application filed January 28, 1889. Serial No. 297,837. (No model.)

To all whom it may concern:

Be it known that I, GEORGE N. MILLER, of Ashton, in the county of Lee and State of Illinois, have invented a certain new and useful Improvement in Road-Scrapers, of which the following is a specification.

In a road-scraper characterized by my invention I provide in connection with a reversible scraper-blade a combined stay and reversing device comprising a couple of rods which are hinged to or pivotally connected with the scraper-blade and which are arranged to extend rearwardly from the scraper-blade and connect with a rotary adjusting-gear which engages toothed portions of the rods. The said adjusting-gear is rotative both ways and serves when turned about its axis to shift the rods, respectively, in opposite directions, so as to cause the scraper-blade to turn horizontally about a vertical axis midway of its length and in a direction determined by the direction of rotation on the part of the adjusting-gear. The adjusting-gear is also arranged upon a rocking bearing, whereby the rods may tilt in unison with the rise and fall of the scraper-blade without cramping or binding upon the adjusting-gear.

In the accompanying drawings, Figure 1 is a top plan view of so much of a road-scraper machine or road-scraper as is necessary to illustrate my invention, which is shown embodied in said machine. Fig. 2 mainly represents in elevation the gear for adjusting the combined stay and reversing rods, portions of said rods and a portion of the body-frame being also included in said figure. Fig. 3 represents, on a somewhat larger scale than the preceding figure, a section taken through Fig. 1 on line 3 3. Fig. 4 represents the rock-bar whereon the adjusting or reversing gear is supported.

In said drawings, A indicates the wheeled body-frame, and B the reversible scraper-blade. The scraper-blade is drawn by the draft-bar C and can be connected therewith either immediately or mediately through any known or suitable means—such as a circle, segment, or other device permitting the blade to be reversed—that is to say, to be turned horizontally about a vertical axis midway of

its length. The two rods D and D' for reversing the scraper-blade are arranged in rear of the same and can be hinged to or pivotally connected with the scraper-blade either directly by hinge or pivotal joints on the back of the blade or by joints on any suitable blade-holding support. The rods D and D' (which I may term the "reversing-rods") are subject to and operated by reversing-gear common to both and arranged so that when operated the rods will be shifted longitudinally in opposite directions, respectively. As a matter of principle various arrangements of synchronously-operating reversing gearing could be employed for simultaneously shifting the reversing-rods, respectively. As a preferred and simple construction, however, the reversing-rods converge toward a reversibly rotative cog or gear E, which engages toothed portions of the reversing-rods. Said rods are in engagement with said gear, respectively, at opposite sides of the latter, so that when the gear is turned about its axis the rods will be moved longitudinally in opposite directions, respectively. The rearward convergence of the rods also permits them to brace the blade more effectively than if they extended back from the blade substantially in parallel lines. The gear E is fixed upon an upright spindle e, that is provided with a hand-wheel e' and arranged whereby the hand-wheel can be conveniently operated by an attendant standing on the rear platform F.

In order to permit reversing-rods D and D' to tilt in unison with the rise and fall of the scraper-blade and at the same time prevent their toothed portions from cramping or binding the teeth of the gear E, said gear is arranged upon a rock-shaft G, that extends across the body-frame of the machine and is journaled in suitable bearing of said body-frame. As a means for mounting the reversing-gear E upon said rock-shaft, the spindle e of the gear is arranged upon a bearing H, which is held upon the rock-shaft G, and as a preferred arrangement said bearing H is adjustably held upon the rock-shaft in any suitable way—as, for example, by a set-screw g, by which arrangement the said bearing can be shifted toward either end of the rock-

shaft in accordance with the general position of the scraper-blade. Thus, for example, when the scraper-blade is reversed from its position shown in Fig. 1 the bearing H can be shifted toward the opposite end of the rock-shaft. The gear E is made of such length as to permit the toothed portions of the reversing-rods to engage it without danger of the rods interfering with one another, and the bearing H can be provided with guides or rests for the reversing-rods, as illustrated in Figs. 2 and 3. In said drawings I have omitted means for raising and lowering the scraper-blade, since any suitable means can be employed for such purposes.

What I claim as my invention is—

1. The combination, substantially as hereinafore set forth, of the scraper-blade and a reversing device consisting of a couple of longitudinally-movable reversing-rods, and a reversing device common to both rods and adapted for shifting the rods longitudinally in opposite directions.

2. The combination, substantially as hereinafore set forth, with the scraper-blade, of the two reversing-rods and the reversing-gear common to both rods, for the purpose described.

3. The combination, substantially as hereinafore described, with the scraper-blade, of the reversing-rods and a gear common to both rods and supported upon a rocking bearing.

4. The combination, substantially as hereinafore set forth, with the scraper-blade, of the reversing-rods and the reversing-gear common to both rods and adjustable transversely to the line of progression.

5. The combination, substantially as hereinafore set forth, with the scraper-blade, of the reversing-rods connected therewith, and the reversing-gear common to both rods and mounted upon a rocking bearing which is adjustable transversely to the line of progression.

6. The combination, substantially as hereinafore set forth, with the scraper-blade, of the reversing-rods D and D', the reversing-gear common to both rods, the bearing H, carrying the reversing-gear, and the rocking shaft upon which said bearing is adjustably secured.

GEORGE N. MILLER.

Witnesses:

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