(No Model.) 2 Sheets—Sheet 1.

O. E. MOATS.

ROAD SCRAPER.

No. 404,794. Patented June 4, 1889.

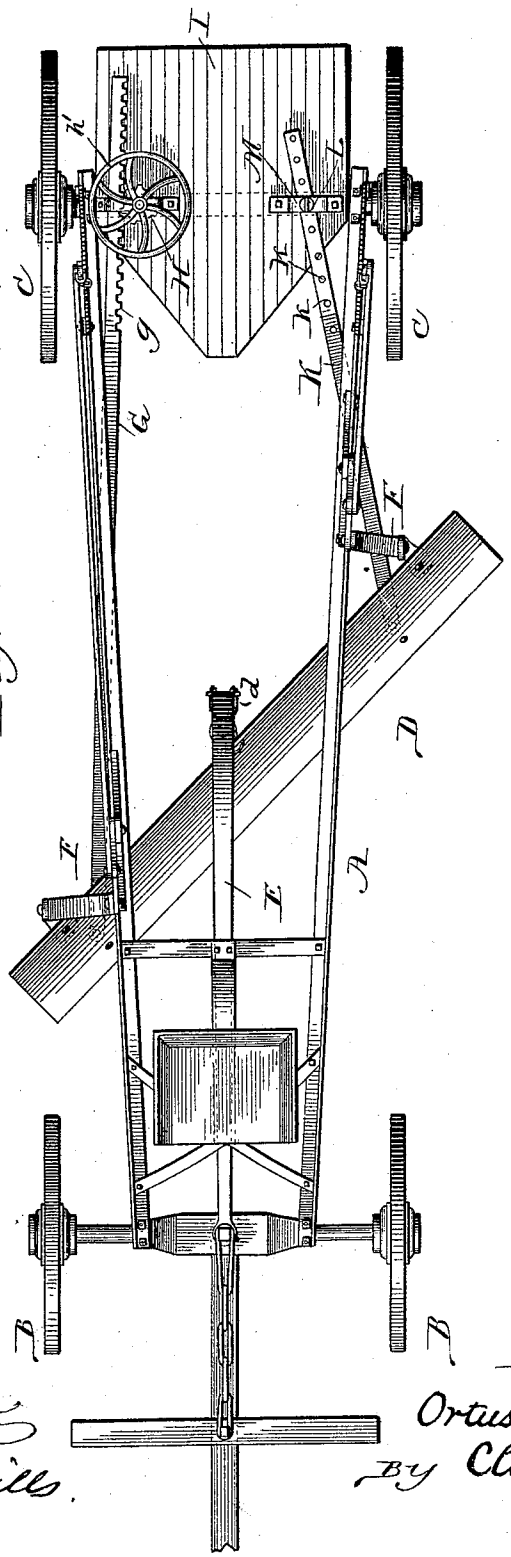

Fig. 1.

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F. L. Mills.

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(No Model.) 2 Sheets—Sheet 2.

O. E. MOATS.

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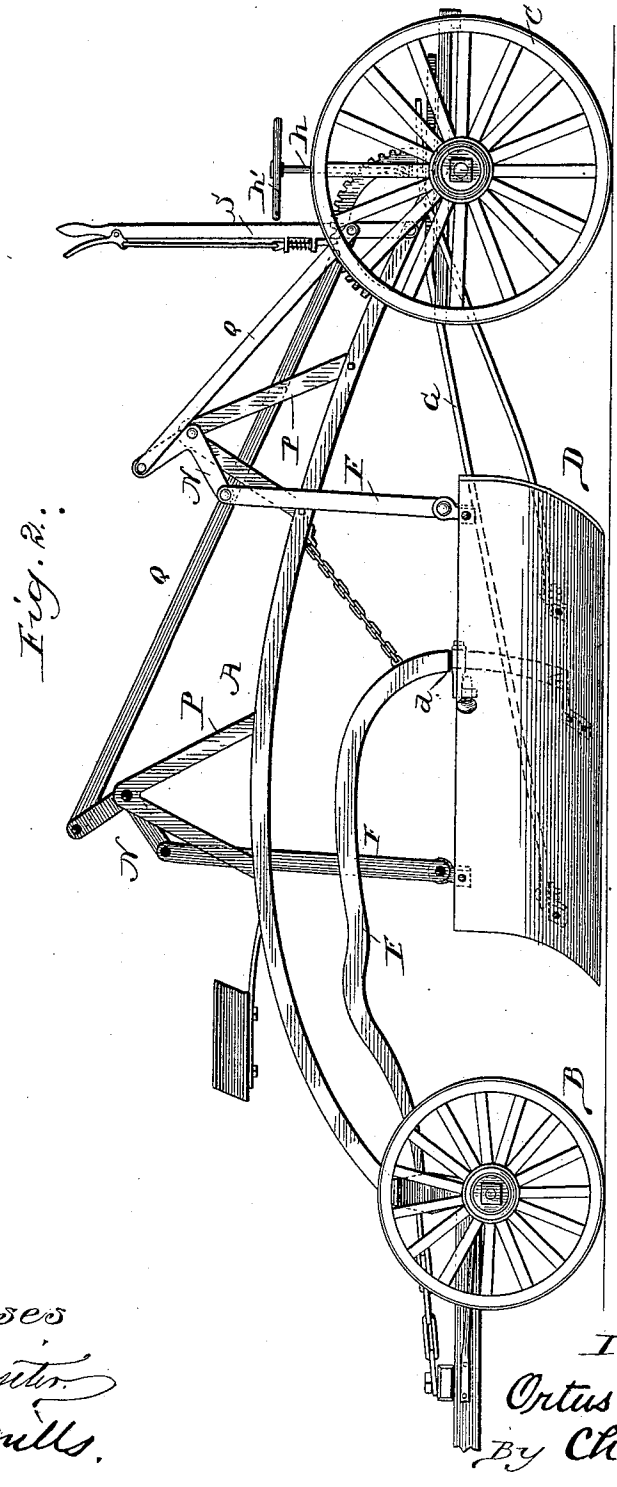

Fig. 2.

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UNITED STATES PATENT OFFICE.

ORTUS E. MOATS, OF CHICAGO, ILLINOIS, ASSIGNOR TO FREDERICK C. AUSTIN, OF SAME PLACE.

ROAD-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 404,794, dated June 4, 1889.

Application filed January 18, 1889. Serial No. 296,760. (No model.)

To all whom it may concern:

Be it known that I, ORTUS E. MOATS, of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Road-Scrapers, of which the following is a specification.

The object of my invention is to provide a comparatively simple and economical construction of wheeled road-scraper; to provide improved means whereby an attendant at the rear of the machine can readily change the horizontal angle of the scraper-blade—that is to say, turn the blade horizontally about a vertical line or axis midway of its length—and to provide certain improved details, as hereinafter set forth.

In the accompanying drawings, Figure 1 is a top plan view of a road-scraper embodying my invention. Fig. 2 represents the same in side elevation.

In said drawings, A indicates the body-frame, which is supported from the front wheels B and the rear wheel C in any suitable way. The scraper-blade D is arranged at the rear end of a draft-bar E, which latter is at its forward end pivotally connected with the body-frame or front axle through the medium of any suitable connection that will permit its rear portion to be raised and lowered and otherwise swung in accordance with any bodily movement the scraper-blade may be capable of or be desired to have.

The draft-bar is pivotally connected with the scraper-blade midway of the ends of the latter, as illustrated in dotted lines in Fig. 2, wherein the draft-bar is at a point above its lower rear end provided with a yoke or arm *d*, that is attached to the draft-bar and at one end provided with a pivot arranged to engage in an eye on the blade, while at its lower end the draft-bar is also pivotally connected with the blade in any suitable way, the drawing representing in dotted lines a bracket secured on the blade and provided with a stud or pivot, which engages in a socket in the lower end of the draft-bar.

The scraper-blade is suspended by hangers F, by which either end of the blade can be separately raised and lowered, or the blade be raised and lowered as a whole. To the scraper-blade, at a point adjacent to one end thereof, I hinge or pivot an adjusting-bar G, which extends to and connects at its rear-end portion with an adjusting device, by which it can be shifted longitudinally. The adjusting-bar is hinged to or otherwise flexibly connected with the scraper-blade, and is along its rear end portion provided with a line of rack-teeth *g*, arranged for engagement with a cog or gear H. Said gear H is arranged upon the hand-wheel shaft *h*, which said shaft is provided with a hand-wheel *h'* and arranged within convenient reach of an attendant, who may stand upon the rear platform I.

It is herein understood that any suitable means may be employed for locking the shaft *h* against rotation—such, for example, as a pawl or latch—and that such device need not be especially herein illustrated. A second adjusting-bar K is at its forward end pivotally attached to the scraper-blade and at its rear-end portion adjustably connected with the rear platform or body-frame of the machine in any suitable way—as, for example, the bar K can be provided with a series of holes or sockets *k*, in any one of which a locking-pin L may be engaged. The bar K is herein arranged to pass under a strap or keeper M, which is arranged upon the rear platform, and the locking-pin L is arranged to pass through said strap or keeper, whereby it may be held in place and at the same time be permitted to engage the bar K. The bars G and K, thus connected with the scraper-blade respectively at opposite sides of the longitudinal middle thereof, serve to back the scraper-blade and permit the horizontal swing or adjustment of the same about a vertical line midway of its ends, and by being extended rearwardly from the blade in lines nearly parallel with the lines of progression not only constitute abutments for the blade, but place them within convenient reach of an attendant on the rear platform. Thus, for example, the bar G can be given a longitudinal adjustment by operating the hand-wheel *h'*, and the locking-pin L may, during such adjustment, be permitted to remain in any one of the holes in the bar K, while on the other hand certain further adjustment of the blade can be ef-

fected by disengaging the locking-pin from the bar K and then operating the hand-wheel *h'*, whereby during the end movement of the bar G the bar K will be free to slide under the keeper M, it being understood that after the desired adjustment has been made the locking-pin can be again placed in engagement with the bar K.

The hangers F are herein suspended from bell-cranks N, which are pivoted upon stands P. Said stands P rise, respectively, from opposite sides of the body-frame and are arranged whereby one of said stands is somewhat in advance of the other. The bell-cranks N are operated by the rods or links Q, which latter are in turn operated by hand-levers S. The hangers F diverge outwardly from the sides of the machine, their said outward divergence being downwardly from their upper ends, in which way, by loosely pivoting the hangers at their upper ends, they may have sufficient lateral swing or play, in addition to the swing which they may have in planes coincident or substantially coincident with the line of progression of the machine.

The foregoing arrangement provides an exceedingly simple and economical construction of road-scraper, and for certain kinds of work will be found exceedingly effective, it being observed that it has been my aim in this construction to reduce as far as possible the number of parts employed.

What I claim as my invention is—

1. The combination, substantially as hereinbefore set forth, in a wheeled road-scraper, of the scraper-blade pivotally connected midway of its ends with a draft-bar, and a pair of adjusting-bars extending rearwardly from the scraper-blade and pivotally connected therewith at opposite sides of the pivotal connection between the scraper-blade and the draft-bar, said adjusting-bars being both adjustably held at the rear of the machine, for the purpose set forth.

2. The combination, substantially as hereinbefore set forth, with the scraper-blade arranged to swing or vibrate horizontally about a vertical line midway of its ends, of a pair of adjusting-bars extending rearwardly from the scraper-blade and connected therewith respectively at opposite sides of its longitudinal middle, one of said adjusting-bars being provided with a line of teeth, and a gear for operating said adjusting-bar, for the purpose described.

3. The combination of a draft-bar E, the scraper-blade D, pivotally connected with the draft-bar, the adjusting-bars G and K, the gear for adjusting one of said bars, and the device—such as set forth—for locking the other one of said bars, for the purpose described.

ORTUS E. MOATS.

Witnesses:
CHAS. G. PAGE,
ANNIE COATES.