

D. C. BOYD.

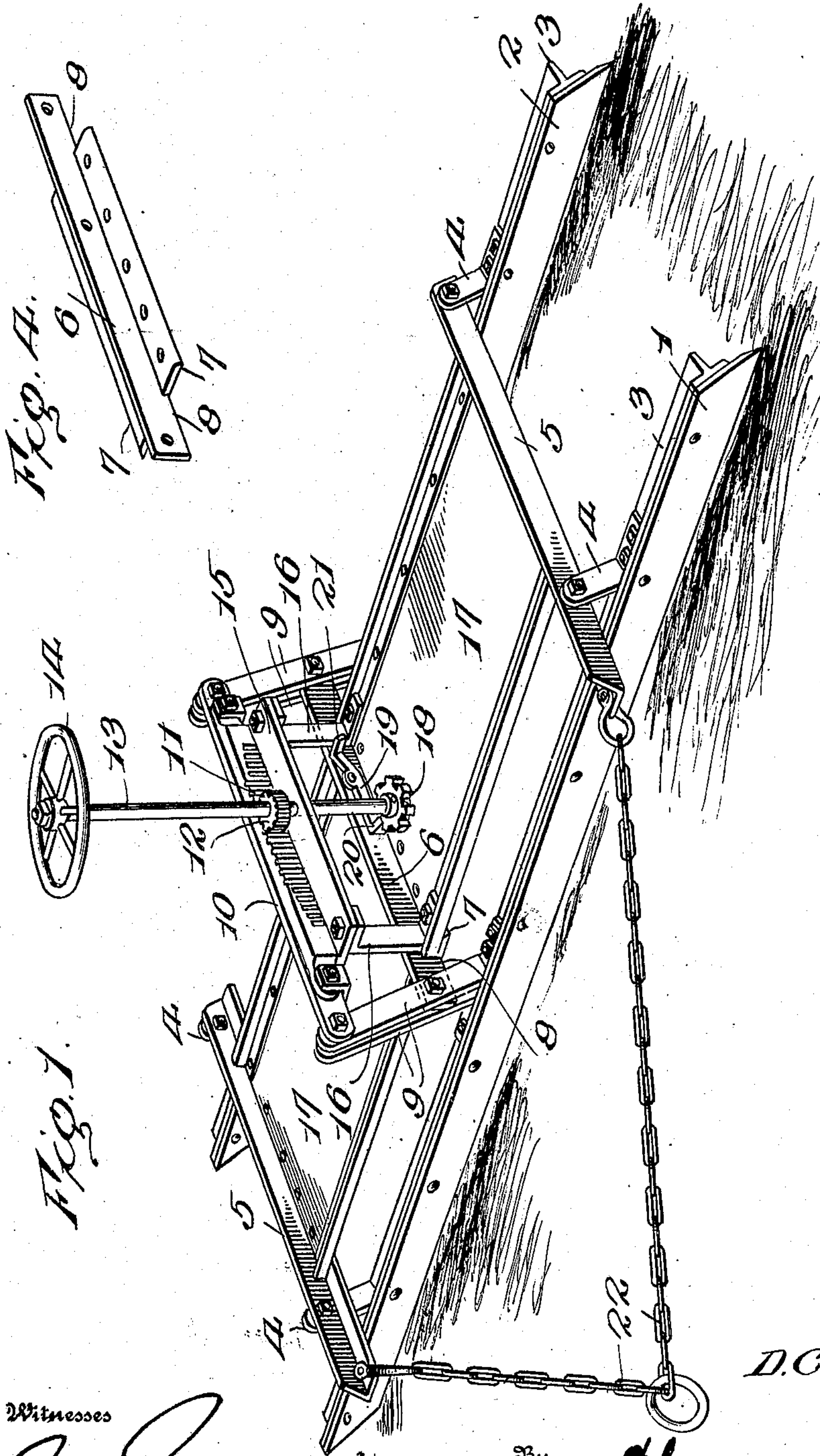
ROAD DRAG.

APPLICATION FILED JAN. 7, 1909.

Patented June 8, 1909.

2 SHEETS—SHEET 1.

924,311.



Inventor

D.C. Boyd

Witnesses

W. H. H. H. H.
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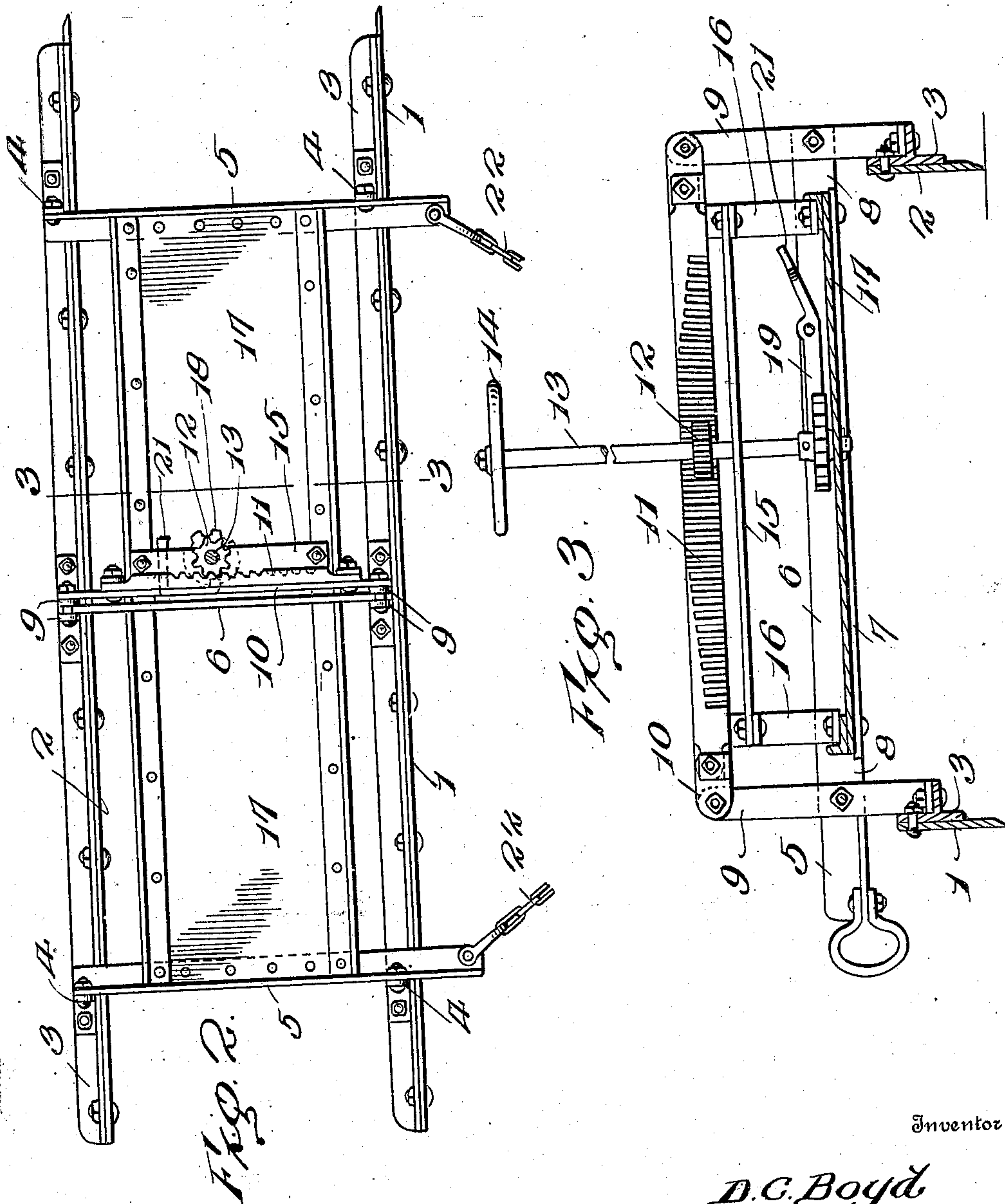
By

W. H. H. H. H. Attorneys

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UNITED STATES PATENT OFFICE.

DAVID C. BOYD, OF GALION, OHIO.

ROAD-DRAG.

No. 924,311.

Specification of Letters Patent.

Patented June 8, 1909.

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To all whom it may concern:

Be it known that I, DAVID C. BOYD, citizen of the United States, residing at Galion, in the county of Crawford and State of Ohio, have invented certain new and useful Improvements in Road-Drags, of which the following is a specification.

This invention comprehends certain new and useful improvements in road scrapers or leveling devices, and the invention has for its object an improved construction of devices of this character, embodying pivoted blades that may be tilted to different inclinations, as well as a novel and efficient mechanism for tilting the blades and for holding the same at the desired inclined positions.

With this and other objects in view, as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements, and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is a perspective view of my improved road drag or leveling device; Fig. 2 is a top plan view thereof; the actuating shaft or rod thereof being shown in section; Fig. 3 is a longitudinal sectional view on the line 3—3 of Fig. 2; and, Fig. 4 is a detail perspective view of the intermediate beam of the framework.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

In the present embodiment of the invention, my improved road leveler or drag comprises a forward blade 1 and a rear blade 2, the same being bolted or otherwise secured to the front sides of transversely extending T-bars 3. A plurality of angular brackets 4 are bolted or otherwise secured to the horizontally extending flanges of the T-bars 3, one pair of brackets for each bar, and the vertically extending portions of said angle brackets are pivotally connected by bolts or similar fastening devices to the longitudinally extending beams 5 of the framework of said apparatus. The said framework embodies, in addition to the longitudinally extending end beams 5, a single longitudinally extending intermediate beam 6 which is in the form of a T-bar, as clearly illustrated in

the drawings. The T-bar 6 has its base flanges 7 cut away at the ends to form end recesses 8, the vertical flange being left to constitute end tongues to which the vertically extending portions of the actuating arms 9 are pivotally connected, the said arms being arranged in two pairs front and rear, and the arms of the respective pairs embracing the tongue as shown. The horizontally extending portions of the arms 9 project in opposite directions and are bolted or otherwise secured to the angle bars 3 near the middle part of the latter. The upper ends of the front and rear pairs of arms 9 are connected together by a longitudinally extending bar 10. A rack 11 is secured in any desired way to the side of the connecting bar 10, and a spur pinion 12 meshes with said rack. The pinion 12 is secured to a vertically disposed operating rod 13 which is provided at its upper end with a hand wheel or other device by which it may be easily turned, and which is journaled intermediate of its ends in a shaft supporting bar 15. This shaft supporting bar 15 is secured at its ends to approximately U-shaped brackets 16, supported by and secured to the platform or framework of the device.

17 designates the platform of the device, the platform being made preferably in two sections at opposite sides of the single intermediate beam 6, and being formed of any desired material or any desired construction or design, and the lower end of the operating rod 13 may be journaled in one of the platform sections or on one of the base flanges of the T-bar 6.

From the foregoing description, in connection with the accompanying drawings, it is manifest that the blades 1 and 2 may be tilted to any desired inclination by turning the operating rod 13, which through the instrumentality of the pinion 12 and rack 11 will move the connecting bar 10 in one direction or the other to actuate the arms 9 and tilt the blades.

In order to hold the blades either vertical or in any desired inclination, the operating rod 13 carries at its lower end a detent wheel 18, and a detent or pawl 19 is pivotally mounted upon one side of the vertically extending flange of the T-bar 6, said detent being provided with an angularly disposed nose designed to drop into any of the notches of the detent wheel 18, it being understood that the forward engaging end of the pawl 19

overbalances the rear end so as to avoid the necessity of using springs. The rear end of the detent is laterally extended as indicated at 21 and is somewhat broadened to form a foot treadle, so that the operator may readily depress the rear end of the detent and disengage the front thereof from the detent wheel 18.

The draft chains 22 or similar devices for drawing my road leveler over the roads may be secured to the framework of the device in any desired way.

Having thus described the invention, what is claimed as new is:

1. A road drag, comprising a supporting framework, embodying a plurality of longitudinally extending beams, blades having pivotal connection between said beams, actuating arms connected to said blades and fulcrumed intermediate of their ends to one of the beams, a connecting bar pivotally secured to said actuating arms above the fulcrum points thereof, a rack carried by said connecting bar, a pinion meshing with said rack, and a vertically extending rod journaled on the framework, the pinion being carried by said rod.

2. A road drag, comprising a plurality of blades, a plurality of longitudinally extending beams, to the end ones of which said blades are pivotally connected, actuating arms connected to said blades, and fulcrumed intermediate of their ends to the intermediate beam, a connecting bar pivotally connected to the actuating arms above the fulcrum points thereof, a rack bar carried by the connecting bar, a vertically disposed operating rod, a supporting bar in which said

operating rod is journaled, and a pinion carried by said operating rod and meshing with said rack bar.

3. A road drag, comprising a supporting framework, blades pivotally connected to said framework, said framework embodying end beams, a single intermediate beam consisting of a T-bar, said T-bar having its base flanges cut away at the ends whereby to form end tongues, actuating arms operatively connected to the blades arranged in front and rear pairs embracing and pivotally connected to said end tongues, means connecting together the front and rear actuating arms at the upper ends thereof, and means for swinging said arms whereby to tilt the blades.

4. A road drag, comprising a supporting framework, blades pivotally connected to said framework, actuating arms fulcrumed on said framework, operatively connected to said blades, a connecting bar secured to the actuating arms, a rack carried by said connecting bar, a vertically disposed operating rod journaled on the framework, a pinion secured to said rod and meshing with said rack bar, a detent wheel secured to said rod and meshing with said rack bar and formed with notches, and a detent pivoted on the framework and formed at one end with a nose to engage the detent wheel, said detent being formed at its other end with a treadle.

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

DAVID C. BOYD. [L. s.]

Witnesses:

HENRY KNOTE,
MAE LOVETTE.