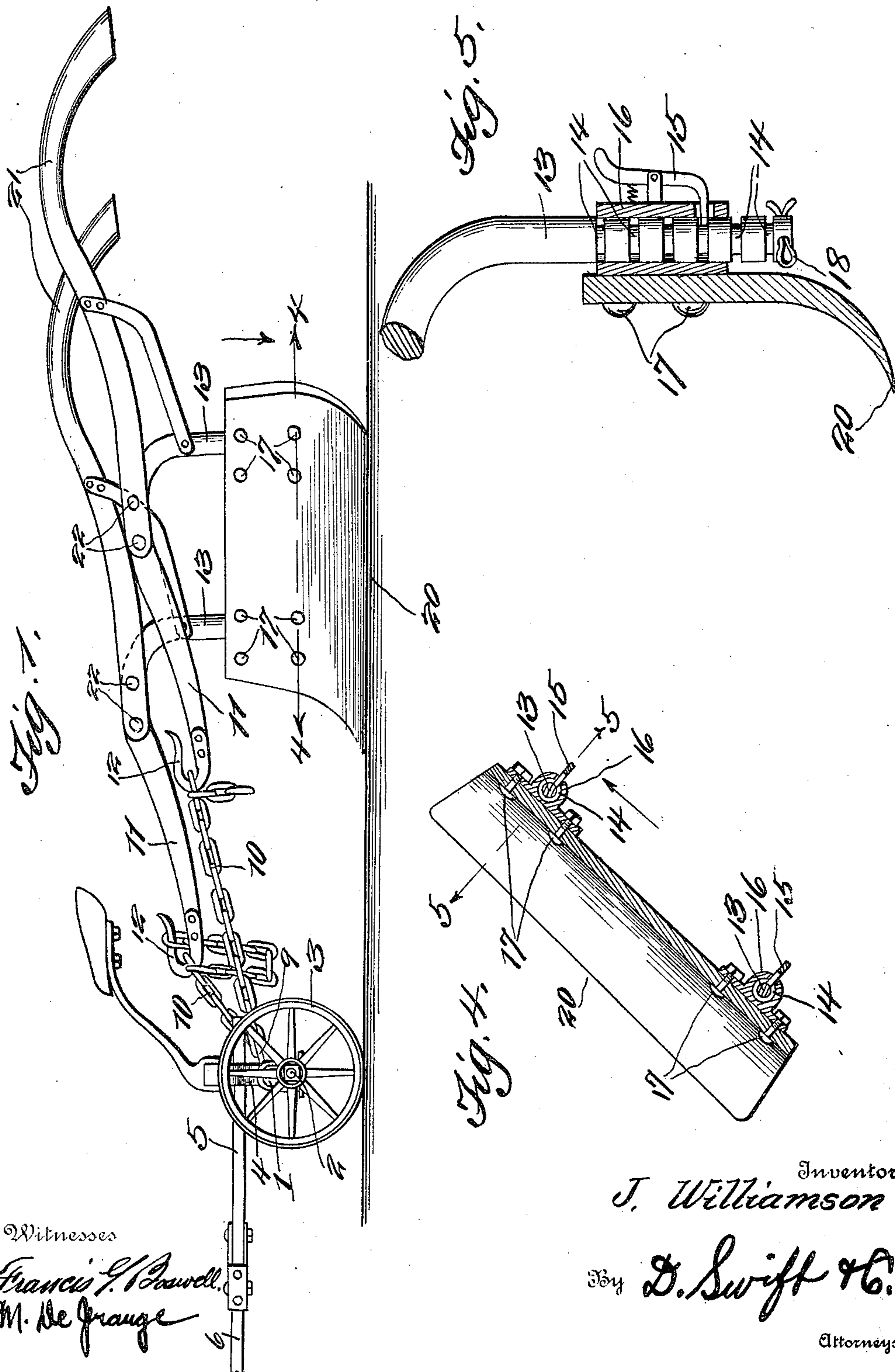


ROAD SCRAPER..

Patented May 30, 1911.

2 SHEETS—SHEET 1.

993,487.



Witnesses

Francis G. Russell.
M. De Grauge

Inventor
J. Williamson

By D. Swift & Co.

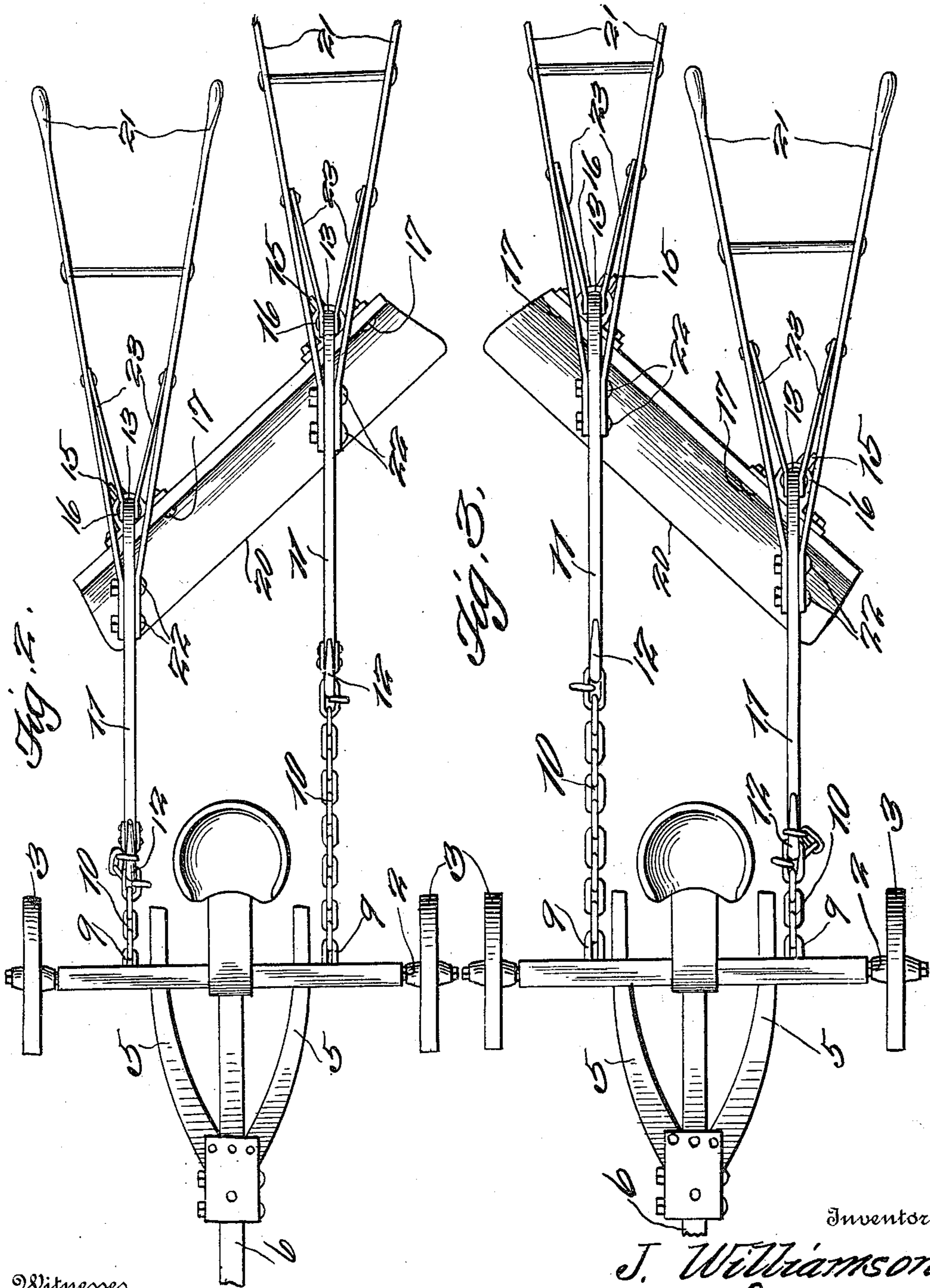
Attorneys

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JACOB WILLIAMSON, OF AVA, ILLINOIS.

ROAD-SCRAPER.

993,487.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed November 5, 1910. Serial No. 590,938.

To all whom it may concern:

Be it known that I, JACOB WILLIAMSON, a citizen of the United States, residing at Ava, in the county of Jackson and State of Illinois, have invented a new and useful Road-Scraper; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention belongs to the art of grading machines, and it particularly pertains to a road grader, in which there is involved various novel features of construction, and the object of which is to improve the general construction of such devices, and to provide a road grader so constructed as to be reversed.

A further object of the invention is to provide means whereby the mold board of the grader may be adjusted vertically, so that when the scraper becomes worn, the handles 21 of the grader may be adjusted vertically, so that the positions of the handles may remain uniform.

In the drawings, however, there is only disclosed one particular form of the invention, but in practical fields this form may require alterations, to which the applicant is entitled, provided the alterations are comprehended by the appended claims.

The invention comprises further features and combinations of parts, which will be hereinafter more fully set forth, shown in the drawings and claimed.

In the drawings:—Figure 1 is a side elevation of the road grading machine embodying the features of the invention. Fig. 2 is a top plan view of the machine, showing the scraper thereof arranged in a certain position. Fig. 3 is a view similar to Fig. 2, showing the scraper reversed in position. Fig. 4 is a sectional view transversely of Fig. 1 on line 4—4 thereof, showing the swivel action of the scraper. Fig. 5 is a sectional view on line 5—5 of Fig. 4, showing the manner in which the scraper may be adjusted vertically.

Attention is directed to the accompanying drawings, in which the preferred form of the invention is disclosed.

1 denotes a transversely disposed axle, upon the spindles 2 of which the wheels 3 are mounted, while 4 designates the usual form of bolster, between which and the beam, the hounds 5 are arranged. Fas-

tened between the hounds is the tongue 6, to which the usual form of doubletree including swingletrees is mounted, so that a team of horses may be connected thereto for pulling the grading machine along the road. Carried by the bolster is the usual form of seat for the driver.

The axle beam has projecting rearwardly therefrom a pair of eyes 9, to which the chains 10 are connected, there being a short one and a long one, as may be employed, but as illustrated the chains are of the same length, but the extremities of the beams 11 are arranged at different distances from the said beam, the said extremities being connected to the chains by virtue of clevis devices 12.

The beams 11 which support the scraper are extended rearwardly and downwardly forming approximately vertical portions 13, which are cylindrical in cross section and are provided with one or more annular grooves 14, which are designed to receive the tongues or noses of the elements 15. These elements 15 are carried by the tubular members 16, which are bolted or otherwise secured to and carried by the scraper, there being bolts and nuts 17 for anchoring the tubular members to the scraper. The lower extremity of the approximately vertical portions of the scraper beams receive cotter pins 18, for preventing the tubular members from leaving said vertical portions, in case the said elements are not in engagement with the said grooves. By the construction of the tubular members and the means for holding them in adjusted positions, the scraper may be arranged in different relations with regard to the vertical portions of the scraper beams, so that the handles 21 may, as a general rule, assume approximately uniform positions. For instance, in case the cutting edge 20 is worn considerably, the same may be again sharpened and then lowered, which will permit the handles to remain in uniform positions. Furthermore, by the construction of the tubular members, there is a slight flexibility permitted between the vertical portions of the scraper beams and the scraper, so that if the scraper happens to contact with an obstruction in the road, the scraper beams would not be thrown from their proper positions, the only movement exercised in this instance would be by the scraper itself. If it were not for this construction, the operator who would be steady-

ing the grading machine, by virtue of the handles 21 (which are connected to the scraper beams, as at 22, and braced by the beams 23) would not be wrenched, that is to say, his wrists and his forearms, or his hands. Furthermore, by this construction, the scraper is permitted to be reversed, as shown in Fig. 3. To reverse the scraper, the chains which connect the extremities of the scraper beams to the beam of the axle are disconnected, for instance, in Fig. 1, then the scraper beam, which is slightly to the rear, is placed in advance of the other, and the other one is moved rearwardly. In so doing, the scraper has a swivel or pivotal action with regard to the vertical portions of the scraper beams.

It is apparent from the foregoing, when applied to the accompanying drawings, that a novel form of road grading machine is devised, and one which will be exceedingly useful to farmers, and county and State authorities, for grading various dirt or macadamized roads or other roads.

The dimensions and proportions of the various parts may be as desired, and varied in different machines which include the same structure. Furthermore, the scraper may be made of any suitable material, such as wood or the like, for instance, oak, but it is to be manifest that at the present status of the case and the present time the scraper is to be made of steel with a hard cutting lower edge.

The invention having been set forth, what is claimed as new and useful is:—

1. In a road grading machine, a pair of scraper beams capable of being changed in position, one in advance of the other, and provided with downwardly extending cylindrical portions at their rear, a scraper con-

nected between the beams and provided with tubular members in which the downwardly extending portions of the beams are swiveled, in order to permit a swiveled action between the beams and the scraper when the beams are changed in position relative to one another.

2. In a road grading machine; a forward carriage; a pair of scraper beams capable of being changed in position, one in advance of the other, and provided with connecting means between them and the carriage, the connecting means being capable of being shortened or lengthened; a scraper connected between the beams and swiveled to them to allow a swiveled action when the beams are changed in position relative to one another.

3. In a road grading machine; a forward carriage; a pair of scraper beams capable of being changed in position, one in advance of the other, and provided with connecting chains, capable of being shortened or lengthened, between them and the carriage; the beams having rear downwardly extending cylindrical portions; a scraper connected between the beams, and provided with tubular members in which the downwardly extending cylindrical portions are swiveled, in order to permit a swiveled action between the beams and the scraper when the beams are changed in position relative to one another.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JACOB WILLIAMSON.

Witnesses:

B. H. GARDNER,
OTIS B. HATFIELD.