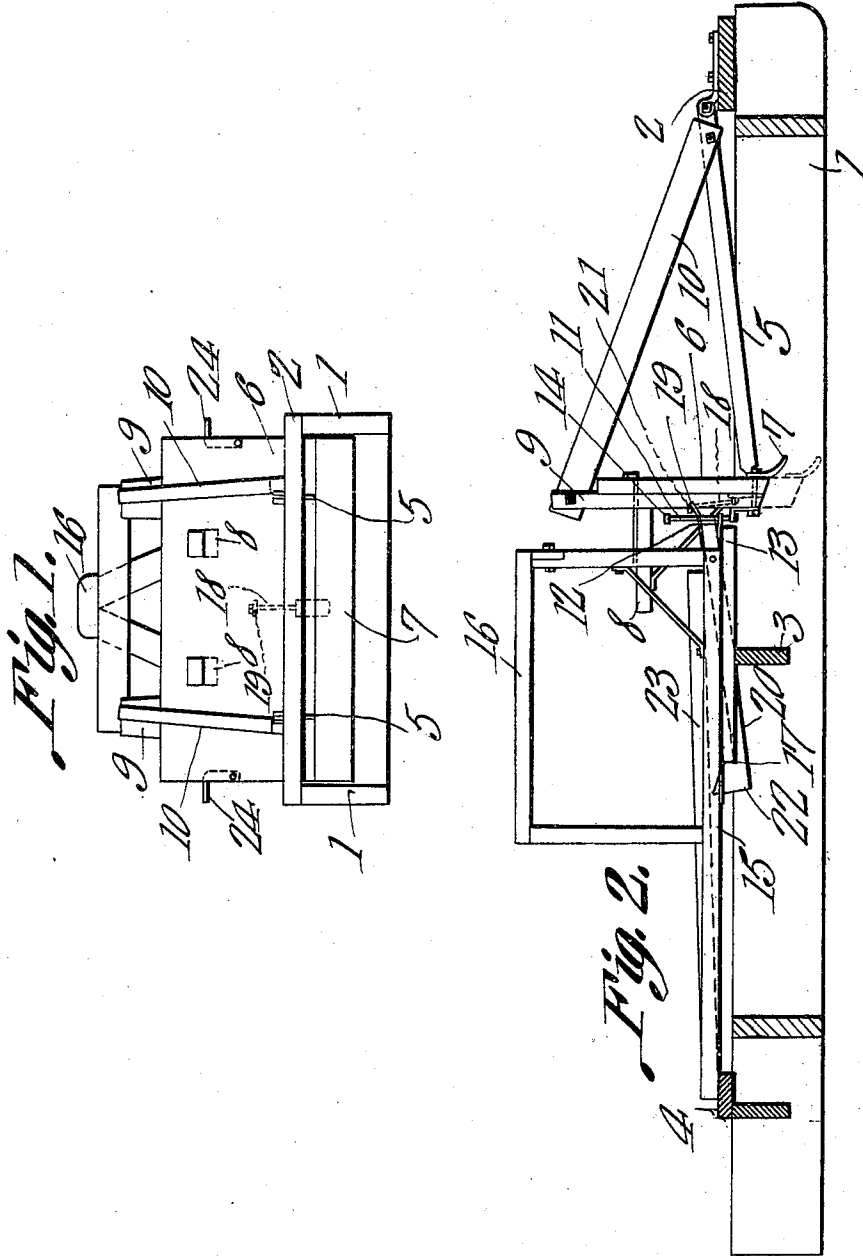


W. H. VIOLETT.
SCRAPER AND GRADER.
APPLICATION FILED JULY 5, 1910.

982,319.

Patented Jan. 24, 1911.

2 SHEETS—SHEET 1.



Witnesses

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William H. Violett,

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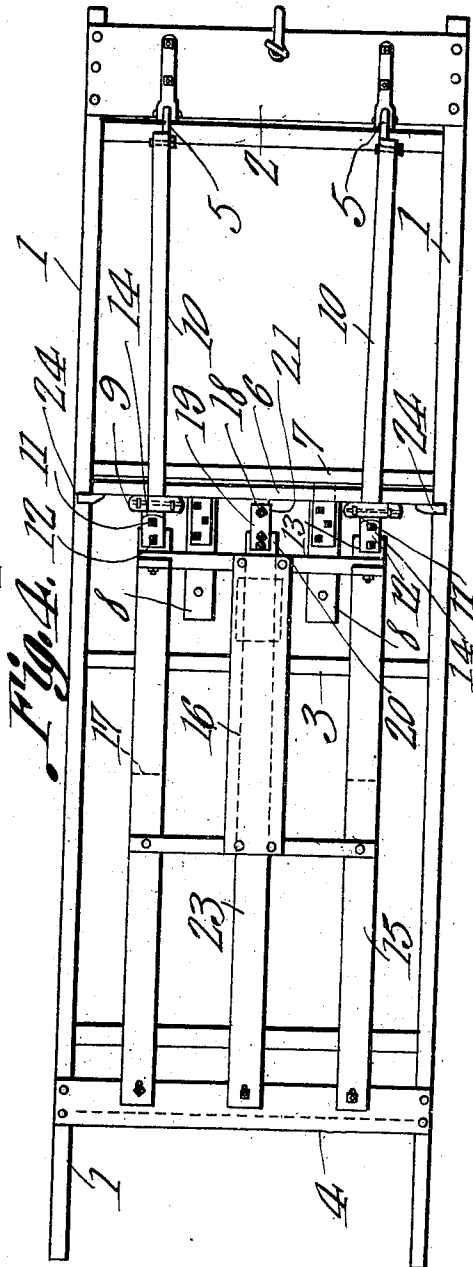
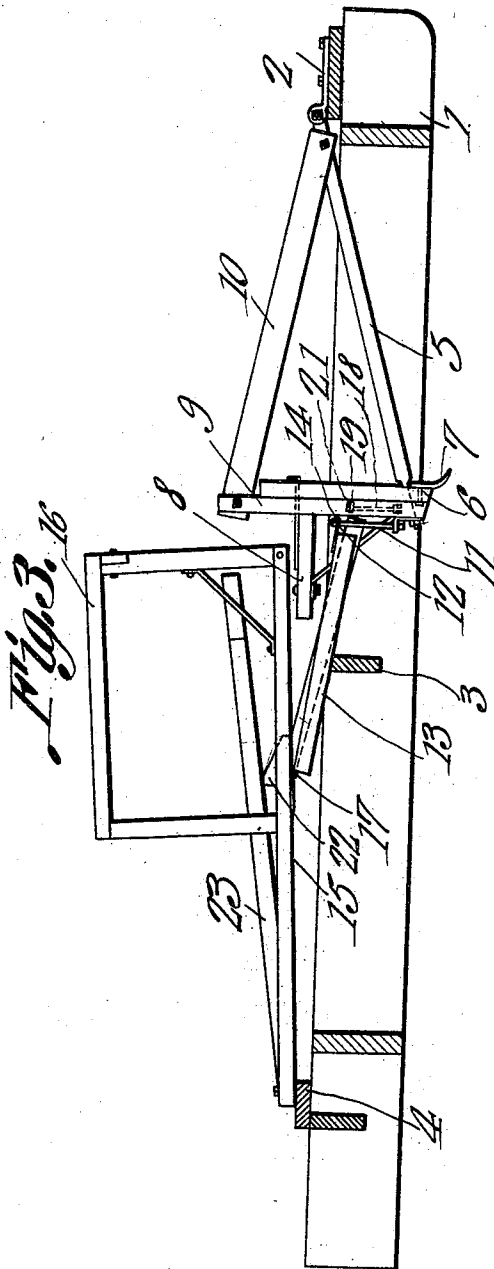
Attorneys

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UNITED STATES PATENT OFFICE.

WILLIAM H. VIOLETT, OF FRUITA, COLORADO.

SCRAPER AND GRADER.

982,319.

Specification of Letters Patent.

Patented Jan. 24, 1911.

Application filed July 5, 1910. Serial No. 570,476.

To all whom it may concern:

Be it known that I, WILLIAM H. VIOLETT, a citizen of the United States, residing at Fruita, in the county of Mesa and State of Colorado, have invented a new and useful Scraper and Grader, of which the following is a specification.

This invention relates to a scraper and grader and consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide a machine of simple structure especially adapted to be used upon arid lands for the purpose of leveling or grading the same to render the said lands in proper condition for irrigation purposes.

With this object in view the structure includes runners which are secured together in parallel relation by cross bars or pieces and a scraper frame is pivotally connected with one of the said cross bars or pieces. A scraper blade is carried by the said scraper frame. A seat frame is pivotally mounted upon the said runners and one of the cross bars and levers are pivotally connected to said seat frame and operate over one of the cross bars as a lever and are connected with the scraper frame. A treadle lever is pivotally connected with one of the cross bars and operates over a lever which in turn is fulcrumed upon one of the cross bars and is operatively connected at its forward end with the scraper frame.

In the accompanying drawings: Figure 1 is a front elevation of the scraper and grader. Fig. 2 is a longitudinal sectional view of the same showing the relative positions of the parts when the scraper blade is lifted to the furthest extent. Fig. 3 is a longitudinal sectional view of the same illustrating the relative positions of the parts when the scraper blade is lowered to the greatest extent. Fig. 4 is a top plan view of the scraper and grader.

The scraper and grader consists of the side runners 1 which are secured in parallel relation by means of cross bars or pieces 2, 3 and 4. A scraper frame is pivotally connected with the cross piece 2 and consists of pivoted arms 5 connected at their rear ends with a cross piece 6. A scraper blade 7 is fixed to the lower edge portion of the said cross piece 6 and pedals 8 are attached to the said cross piece 6 and are rearwardly disposed. Standards 9 are secured at the end

portions of the cross piece 6 and the upper ends of the said standards project above the upper edge of the said cross piece. Braces 10 are secured at their forward ends to the forward portions of the arms 5 and at their rear ends to the upper projecting portions of the standards 9.

Relatively long bolts 11 are secured at their lower ends to the lower portions of the standards 9 and the upper end portions of the said bolts are slidably received in plates 12 carried by levers 13 which are fulcrumed upon the cross piece 3. Nuts 14 are screw threaded upon the upper ends of the bolts 11 and serve as means for limiting the sliding movement of the said bolts in the plates 12 and vice versa. A seat frame 15 is pivoted at its rear end upon the cross piece 4 and a seat 16 is mounted upon the forward portion of the said frame. The rear ends of the levers 13 are hingedly connected with the forward portion of the seat frame 15 under the seat 16 at the point 17.

A relatively short bolt 18 is secured at its lower end to the intermediate portion of the cross piece 6 and the upper end portion of the said bolt 18 is slidably received by a plate 19 mounted upon the forward end of a lever 20 also fulcrumed upon the cross piece 3. A nut 21 is screw threaded upon the upper end of the bolt 18 and serves as means for limiting the sliding movement of the said bolt in the plate 19 and vice versa. An upwardly disposed block 22 is mounted upon the rear end of the lever 20. A lever 23 is pivoted at its rear end upon the cross piece 4 and the intermediate portion of the said lever rests upon the upper edge of the block 22 and the forward end of the said lever 23 is located directly under the seat 16 carried by the seat frame 15.

The parts of this scraper and grader are so assembled that an operative may by shifting his weight cause the scraper blade 7 to operate at a level with the lower edges of the runners 1 or at a point below the lower edges of the said runners or by shifting his weight the said scraper blade 7 may be carried to such an elevation above the lower edges of the runners as to entirely escape the soil. For instance if an operative sitting astride the seat 16 bears with his full weight upon the pedals 8 the rear end portions of the frame carrying the scraper blade 7 will be depressed and the parts will then assume the position as illustrated in Fig. 3 of the

drawing. In this position the scraper blade 7 is projected to the farthest extent below the lower edges of the runners 1 and the downward projection of the said scraper blade is limited by means of stops 24 which are carried by the cross piece 6 and which are adapted to come in contact with the upper edges of the runners 1.

Presuming that the parts are in position as last above described and it is desired that the lower edge of the scraper blade 7 shall be brought on a level with the lower edges of the runners 1 the operator relaxes the downward pressure upon the pedals 8 and permits his full weight to rest upon the seat 15. Thus the said seat and the seat frame 15 are swung down and inasmuch as the said seat frame is hingedly connected with the levers 13, the forward ends of the said levers will be swung in an upward direction which carry with them the bolt 11 and thus the cross piece 6 and the scraper blade 7 will be elevated and the said scraper blade will assume the position as illustrated in dotted lines in Fig. 2.

Presuming that the parts are in the position as last above described and it is desired that the scraper blade 7 shall be elevated to such an extent as to entirely clear the surface of the ground the operator bears down with his feet upon the forward end of the pedal lever 23 and thus the said lever depresses the block 22 and swings the lever 20 upon the cross piece 3 of the fulcrum and the cross piece 6 and the scraper blade 7 are elevated into the position illustrated in heavy lines in Fig. 2. When the scraper blade is moved to the position as illustrated in heavy lines in Fig. 2 the relatively long bolt 11 slides through the plate 12 and permits the movement on the part of the cross piece 6 and scraper blade 7 as indicated. Therefore it will be seen that in the assembly of the parts of the structure the leverage mechanisms are so combined that they may be operated to manipulate the scraper blade by the shifting of the weight of the body of the operator and therefore the hands and arms of the operator are free for the directing of draft animals or may be used for other purposes. As hereinbefore stated this scraper is especially adapted to be used upon arid lands for the purpose of putting them in proper condition for irrigation and as these lands are frequently rough and irregular of surface it is practically impossible to level them to the proper condition unless the leveling machine or implement is so constructed that it may be readily adjusted to properly meet the conditions of the surface of the soil.

Having described the invention what I

claim as new and desire to secure by Letters-Patent is:

1. A scraper and grader comprising side runners, a scraper frame pivotally connected with the runners, a scraper blade carried by said frame, a seat frame pivotally mounted upon the runners and carrying a seat, and a lever fulcrumed with relation to the runners and operatively connected with the seat frame and the scraper frame.

2. A scraper and grader comprising runners, a scraper frame pivotally connected with the runners, a scraper blade carried by the scraper frame, pedals carried by the scraper frame, a seat frame pivotally connected with the runners, a seat mounted upon the frame and located in a vertical plane between the said pedals, and a lever fulcrumed with relation to the runners, and operatively connected with seat frame and the scraper frame.

3. A scraper and grader comprising runners, a scraper frame pivotally connected with the runners, a scraper blade carried by the said frame, a seat frame pivotally connected with the runners, a seat mounted upon the frame, a lever fulcrumed with relation to the runners, and operatively connected with the seat frame and with the scraper frame, a second lever fulcrumed with relation to the runners and operatively connected with the scraper frame, and a pedal lever pivoted with relation to the runners and engaging the last mentioned lever at a point intermediate its ends, and the forward portion of the said pedal lever lying under the said seat.

4. A scraper and grader comprising runners, a scraper frame pivotally connected with the runners, a scraper blade carried by the scraper frame, rearwardly disposed pedals mounted upon the scraper frame, a seat frame pivoted with relation to the runners, levers fulcrumed with relation to the runners, and operatively connected with the seat frame and the scraper frame, a seat mounted upon the frame, and located between said pedals, a second lever operatively connected with the scraper frame, and pivoted with relation to the runners, a pedal lever pivoted at its ends with relation to the runners and at its intermediate portion engaging an end portion of the last said lever and having its forward end lying under the seat mounted upon the seat frame.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM H. VIOLETT.

Witnesses:

O. O. FELLOWS,
A. B. TIMMERMAN.