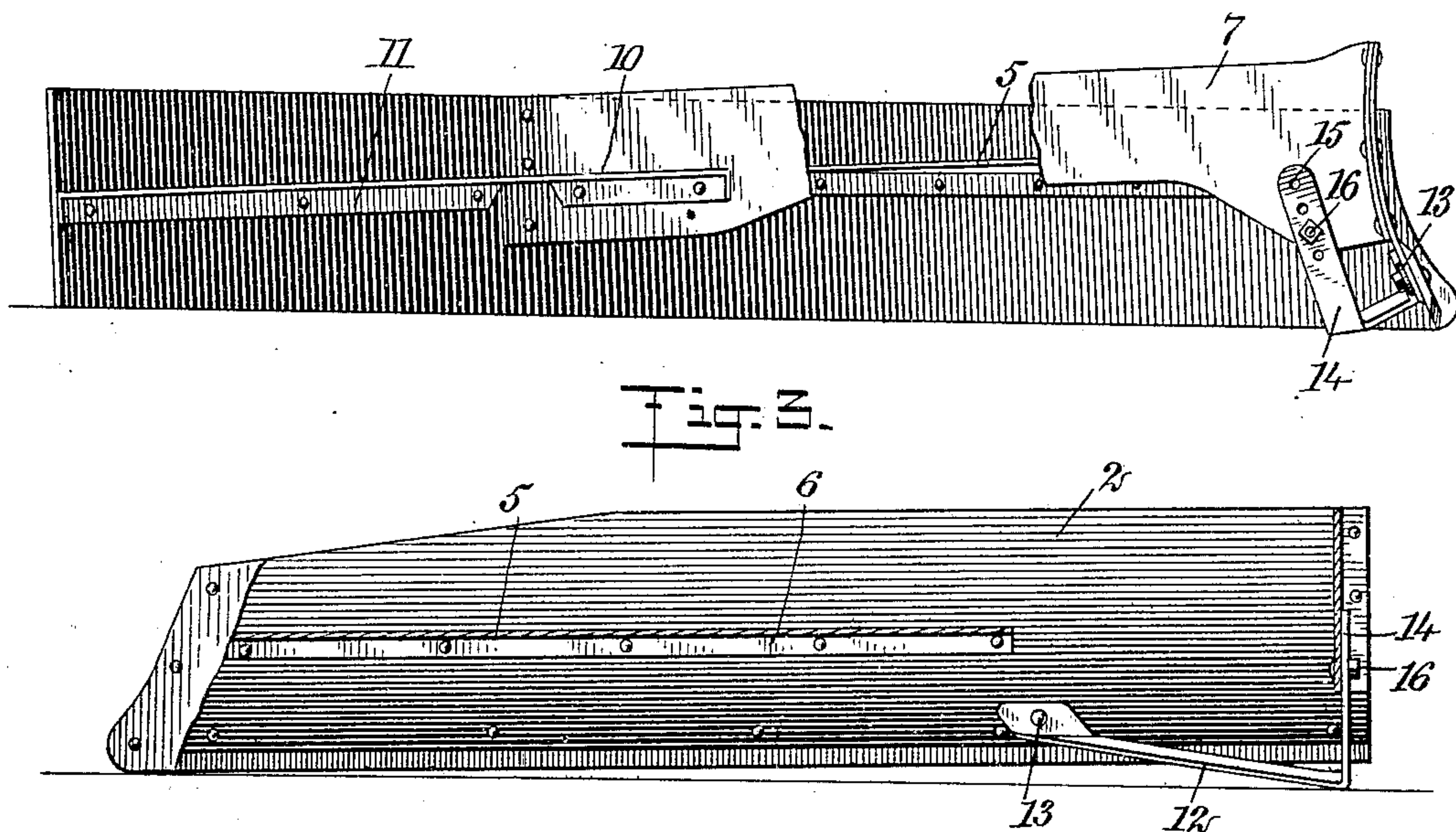
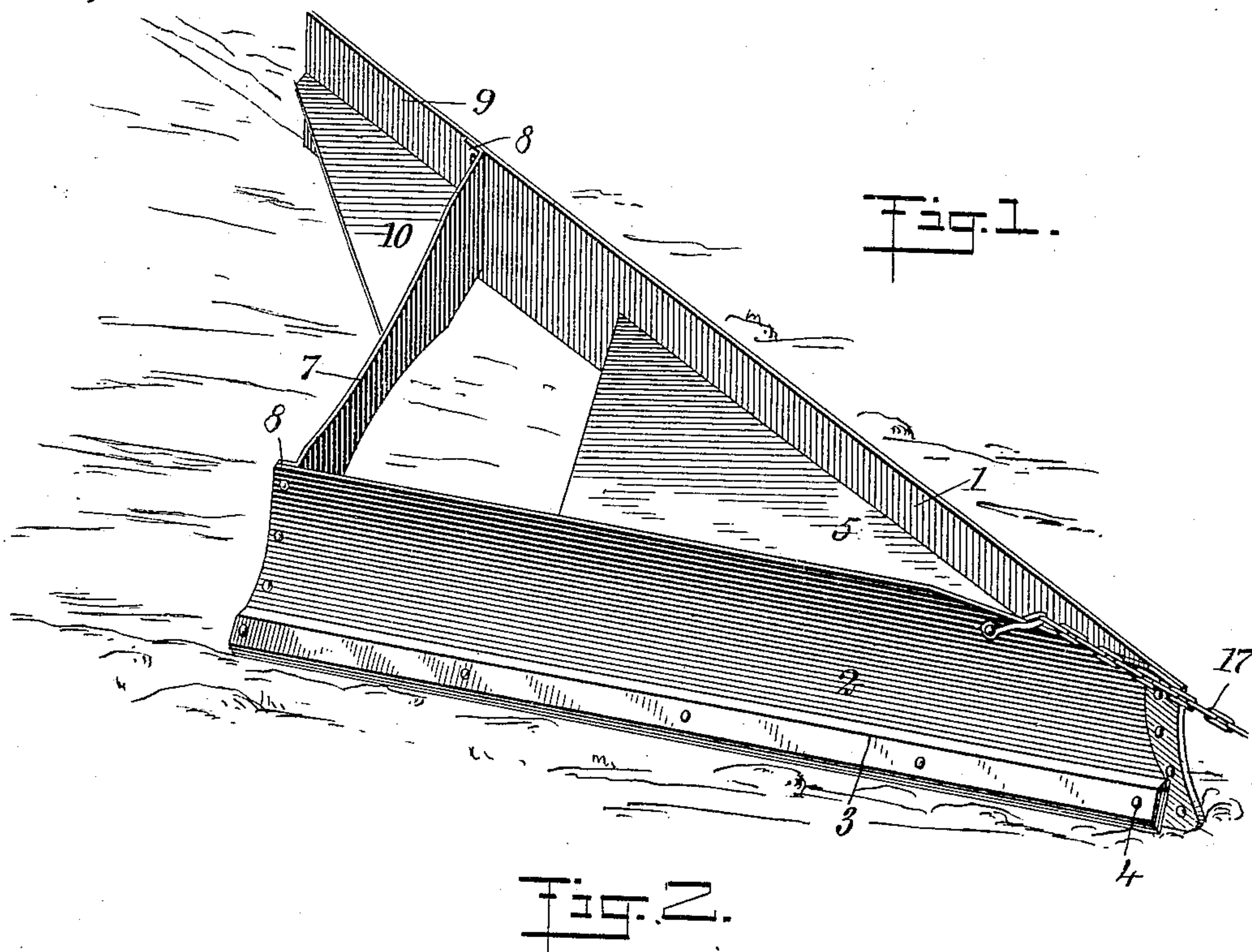


W. L. DAVIS.
GRADER OR DITCHING MACHINE.
APPLICATION FILED DEC. 3, 1908.

930,050.

Patented Aug. 3, 1909.



WITNESSES

[Signature]
[Signature]

INVENTOR
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ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM L. DAVIS, OF WABBASEKA, ARKANSAS.

GRADER OR DITCHING-MACHINE.

No. 930,050.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed December 3, 1908. Serial No. 465,771.

To all whom it may concern:

Be it known that I, WILLIAM L. DAVIS, a citizen of the United States, and a resident of Wabbaseka, in the county of Jefferson and State of Arkansas, have invented a new and Improved Grader or Ditching-Machine, of which the following is a full, clear, and exact description.

This invention relates to graders or ditching machines such as used in grading roads, or in breaking the ground for ditching.

In its general construction the invention comprises a pair of blades or boards which are disposed at an acute angle to each other, the arrangement being such that when the implement is advanced, one of these blades or boards presents itself in an inclined position so that its lower edge will operate as a scraper on the surface of the earth.

The object of the invention is to provide an improved construction for the lower edge of this scraping member, and further, to provide the device with a foot bracket by means of which the lower edge of the device may be raised so as to clear the surface of the earth when the device is to be moved from place to place without operating as a scraper. In other words, the bracket may hold the device in an inoperative position.

A further object of the invention is to improve the general structure of implements of this class.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective showing the device in operation; Fig. 2 is a rear view looking longitudinally of the scraping plate and showing the bracket as holding the implement in its inoperative position, in this view a portion of the rear brace plate is broken away; and Fig. 3 is a vertical section through the device and taken in a plane substantially parallel with the scraping board or plate.

Referring more particularly to the parts, 1 represents a guide board or guide plate which corresponds to the landside of a plow. This plate is disposed in a front and rear direction with respect to the direction of advance of a plow. At its forward end it is at-

tached by means of rivets to a scraping plate or mold board 2, and this plate extends rearwardly in an inclined position, as shown. This plate 2 is slightly dished, as shown in Fig. 1, so as to present its concave side outwardly. The lower edge of this plate or mold board 2 is provided with a removable knife or scraping blade 3, which consists of a stout bar of metal, the upper and lower edges of which are beveled, as shown. This bar is attached to the plate 2 by bolts 4, as indicated.

In the angle between the plates 1 and 2, a horizontal frame plate 5 is provided, the edges of which are provided with flanges 6 which are riveted to the plates 1 and 2, as shown. At the rear end of the mold board or plate 2, a transverse brace plate 7 is provided, and the ends of this plate are formed with flanges 8 which are riveted to the plates 1 and 2, as indicated. The rear portion of the guide plate 1 projects rearwardly with respect to the brace plate 7 so as to form a tailplate 9, and this tailplate is rendered more rigid by means of a horizontal knee plate 10, which is provided on its lower side with downwardly projecting flanges 11, which are riveted to the plates 1 and 7, as shown in Fig. 2.

Near the rear extremity of the mold board or plate 2, a foot bracket 12 is attached. The body of this bracket is inclined, as indicated, and pivotally attached by means of a single bolt or rivet 13, to the inner side of the plate 2, as shown in Fig. 3. At the rear extremity the bracket 12 is provided with an upwardly disposed extension or arm 14, and this arm is provided with a plurality of openings 15 which enable the foot bracket to be attached in different adjustable positions to the rear side of the brace plate by means of a suitable removable bolt 16.

At a suitable point near the forward end of the mold board 2, a draw chain 17 is connected, to which a suitable draft mechanism is attached for drawing the implement along. When the implement is in operation, heavy weights may be placed on the plate 5 and a driver may stand on this plate so as to increase the pressure of the device on the earth. In the same manner weights may be placed on the plate 10 near the rear of the implement, or if desired a man may stand on this plate.

As indicated in Fig. 2, the lower edge of

the brace plate 7 is elevated a considerable distance above the level of the earth, so that this plate does not participate in the scraping or grading operation. It should be understood that when the implement is inoperative, its lower edge acts as a cutter or runner, moving longitudinally through the earth, and this edge resists the tendency to turn the implement which is exerted by the pressure of the material which is scraped away by the lower edge of the mold board 2.

When the lower edge of the scraping bar 3 of the mold board becomes dull and worn, this bar may be attached in an inverted position so that its upper edge, which is also beveled, will come in contact with the surface of the earth. When the implement is in operation, the bracket 12 is attached in its most elevated position and in such a way that its lower extremity does not project below the lower edge of the scraping bar 3. The bracket then permits the scraper to apply itself to the work. When the implement is to be placed in an inoperative position so that it can be drawn along without operating as a scraper, the bracket 12 is attached in the manner indicated in Figs. 2 and 3, that is, its lower portion projects below the lower edge of the mold board 2. The rear end of the mold board is then supported on the bracket 12 out of contact with the earth, as indicated most clearly in Fig. 3. In connection with the adjustment of this bracket 12, attention is called to the pivot bolt or rivet 13 which permits the end of the bracket adjacent to the brace plate to be raised or lowered. It should also be understood that the bracket 12 is more or less resilient so that the arm 14 can adapt itself to the different adjusted positions of the bracket.

Attention is also called to the great rigidity of the structure which results from the use of the plates 5 and 10 arranged and attached as described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent,—

1. An implement of the class described, comprising a plate disposed in a front and rear direction and adapted to advance longitudinally through the earth, a mold board attached in an inclined position with respect to said plate, and a scraping bar removably attached to the lower edge of said mold board and adapted to be inverted so as to present either its upper or its lower edge to the surface of the earth.

2. An implement of the class described, having a main plate extending in a front and rear direction, a mold board attached to said main plate at the forward extremity thereof and disposed in an inclined position, and a scraping bar removably attached to the lower edge of said mold board, said scraping bar having beveled upper and lower edges enabling the same to be operated in an inverted position.

3. An implement of the class described, having a main plate extending in a front and rear direction, a mold board attached to the forward end of said main plate and disposed in an inclined position, a transverse brace plate connecting said main plate with said mold board, a bracket mounted pivotally and connecting said mold board with said brace plate, said bracket being normally disposed above the lower edge of said mold board, and means for securing said bracket so as to project below the lower edge of said mold board to maintain said mold board in raised position.

4. An implement of the class described, comprising a main plate extending in a front and rear direction, a mold board attached thereto and disposed in an inclined position, a brace plate connecting said main plate with said mold board, a bracket pivotally attached to said mold board, having an arm disposed adjacent to said brace plate, and means for attaching said arm to said brace plate in a different position.

5. An implement of the class described, comprising a main plate extending in a front and rear direction, a mold board attached thereto and disposed in an inclined position, a brace plate connecting said main plate with said mold board, a bracket pivotally attached to said mold board having an arm disposed adjacent to said brace plate, means for attaching said arm to said brace plate in a different position, a substantially horizontal plate mounted in an angle between said main plate and said mold board, said main plate projecting rearwardly of said brace plate, and a knee plate in the angle between the projecting end of said main plate and said brace plate.

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

WILLIAM L. DAVIS.

Witnesses:

J. A. CONNOR,
EDGAR BREWSTER.