

No. 637,712.

Patented Nov. 21, 1899.

C. E. DAMERELL.

ROAD SCRAPER.

(Application filed Feb. 18, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

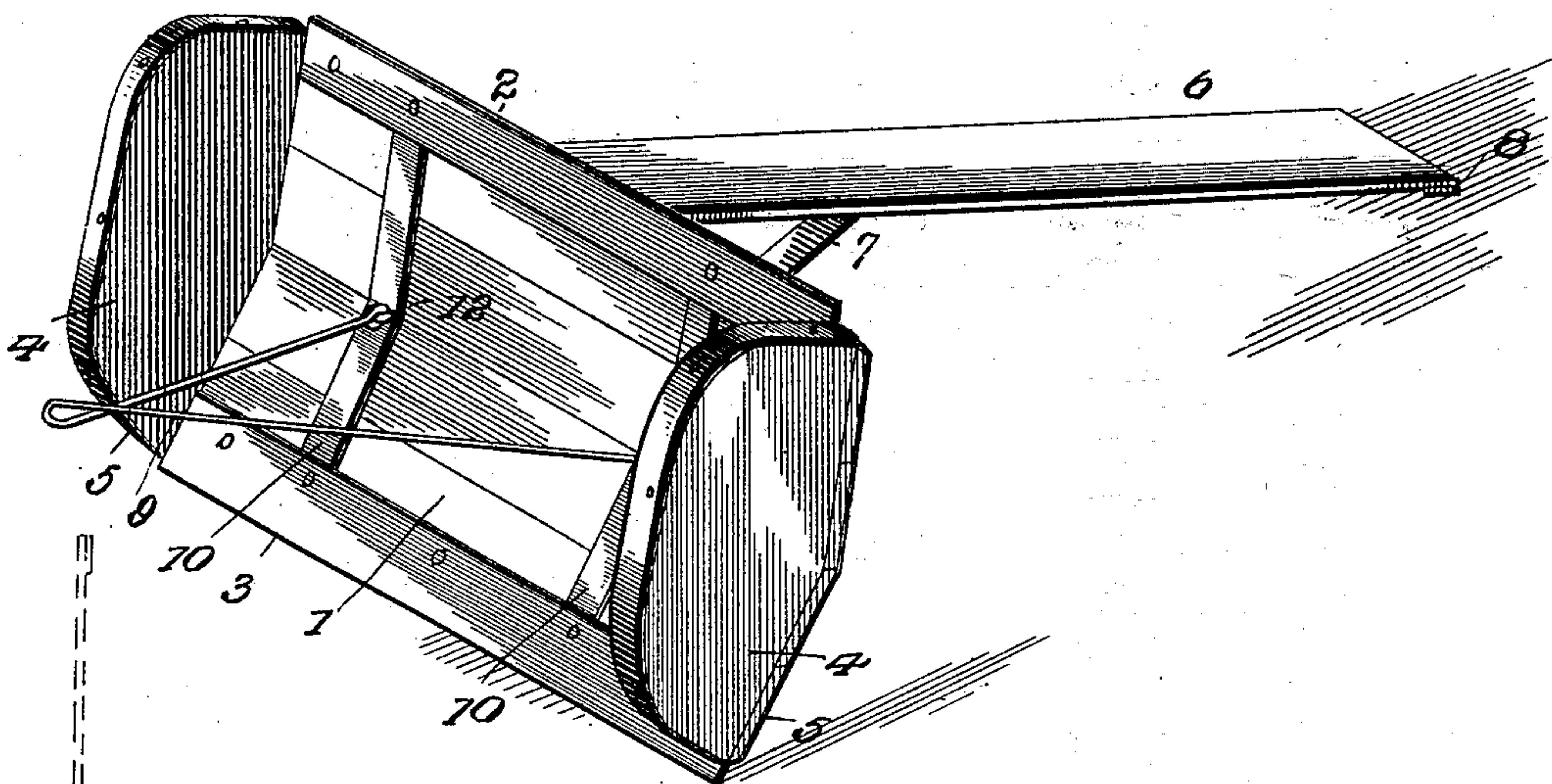
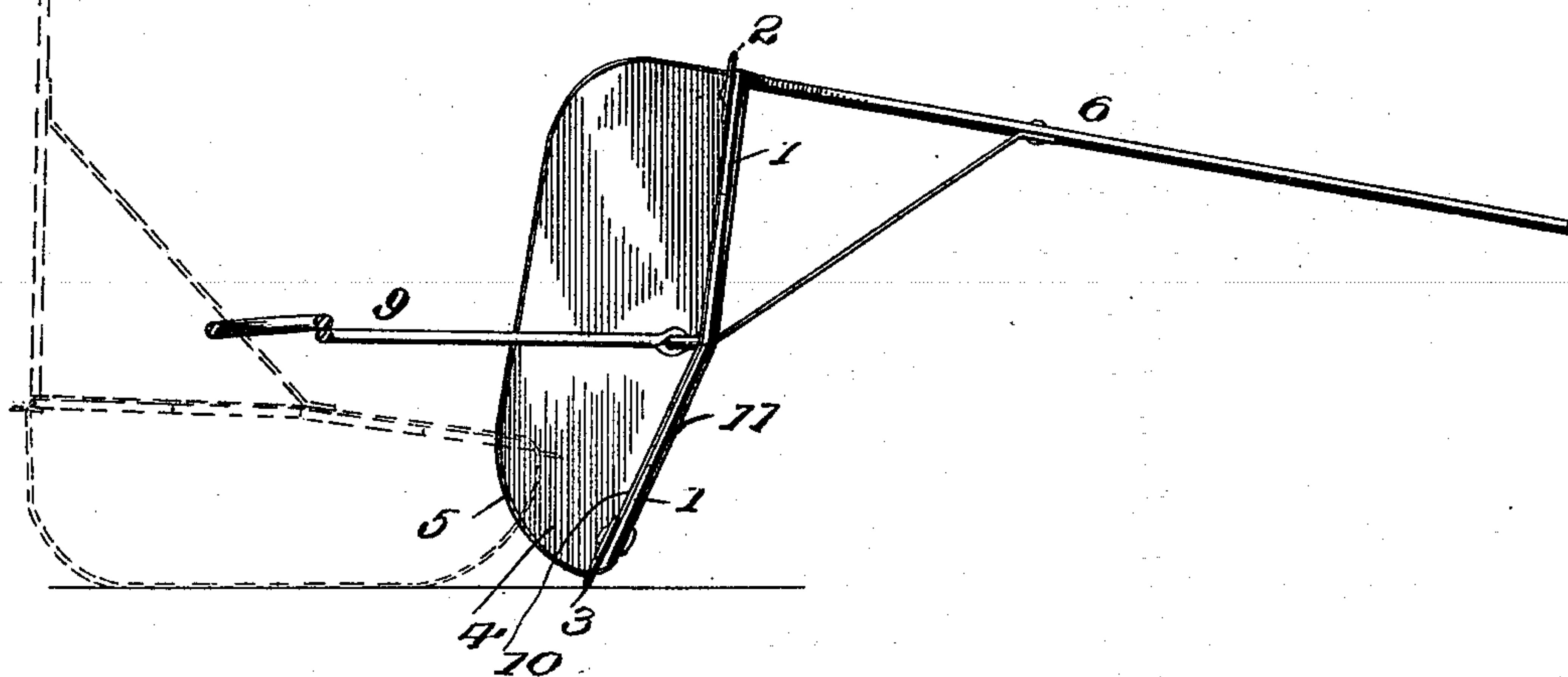


Fig. 2.



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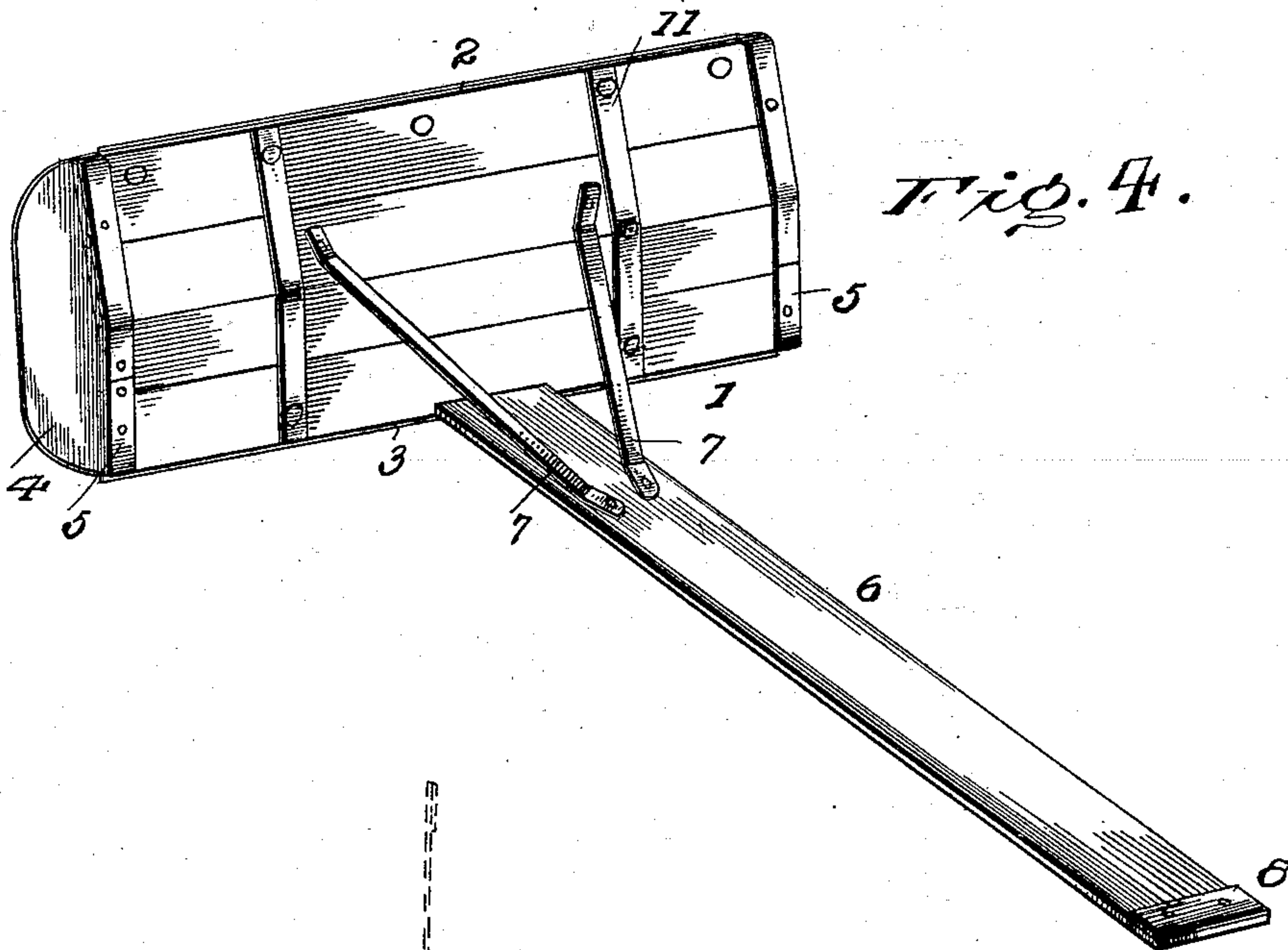


Fig. 4.

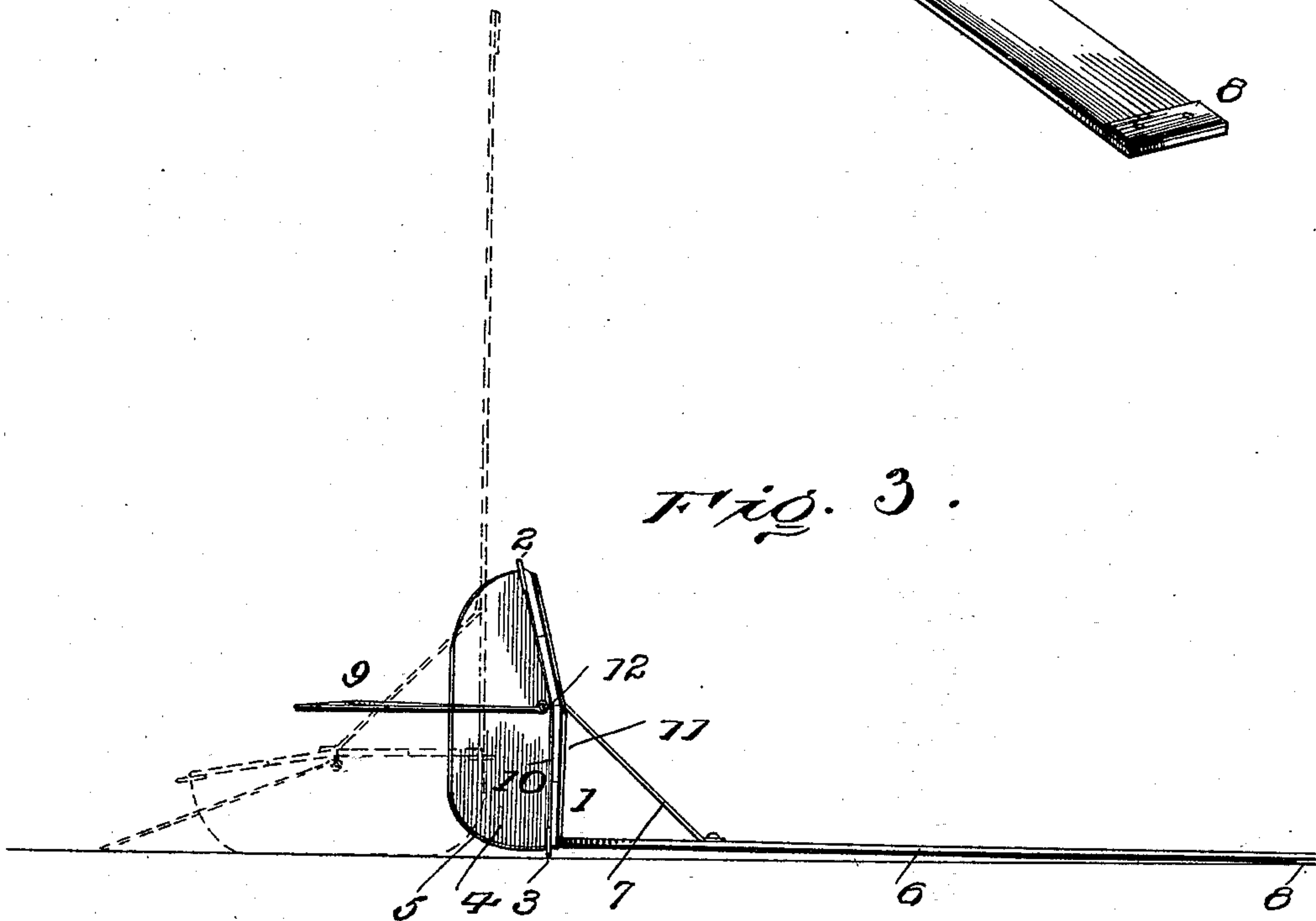


Fig. 3.

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# UNITED STATES PATENT OFFICE.

CHARLES E. DAMERELL, OF BENSON, MISSOURI.

## ROAD-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 637,712, dated November 21, 1899.

Application filed February 18, 1899. Serial No. 705,991. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. DAMERELL, a citizen of the United States, residing at Benson, in the county of Linn and State of Missouri, have invented certain new and useful Improvements in Road-Scrapers; 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.

The basis of this invention is a scraper for leveling and grading roads. The device, in common with like implements, embodies in its structural organization a plate which is dragged over the road or surface to be graded and a foot or tail board for controlling the position of the plate and adapted to have pressure applied thereto for holding the machine to its work. Inasmuch as the soil varies in character in different locations, being stiff in some sections and light and loamy in other places, the scraper is specially designed to meet the different kinds of land, so as to be drawn thereover, with the plate either about at right angles to the surface of the road or sloping with reference to the said surface, according as required. The device is a rigid structure, and the different positions thereof are obtained by reversing the implement.

A further purpose of the invention is to lighten the draft to an appreciable degree and to facilitate the handling of the implement. These results are attained by having the scraper of light and compact construction and composed of the fewest number of parts possible.

Further objects and advantages are contemplated and will appear in the course of the following description, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a road-scraper specially designed for effecting the ends of this invention. Fig. 2 is a side elevation, the near runner or side piece being removed, showing the scraper in position for operating upon stiff land, the dotted lines illustrating the device turned so as to free it from accumulated earth. Fig. 3 is a view similar to Fig. 2, showing the implement reversed for operation upon light and loamy soil. Fig. 4 is a rear perspective view of the scraper.

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

The body of the scraper consists of a plate 1 of desired length and width, the longitudinal edges being straight and parallel. This plate may be an integral structure or composed of a series of elements placed with their longitudinal edges abutting, as illustrated. In the preferable construction the plate is composed of a series of wooden slats and is deflected on a line parallel with and intermediate of its longitudinal edges. Metallic strips or blades 2 and 3 are applied to the longitudinal edge portions of the plate and sustain the wear when the implement is drawn over the road or surface to be graded. Side pieces 4 are secured to the ends of the plate 1 and constitute runners and also serve to prevent the earth gathered by the plate from escaping over the ends thereof. These side pieces are of a length corresponding to the distance between the longitudinal edges of the plate, and their terminal portions are rounded and serve as rocker-bearings for the implement to turn upon when thrown from an operative position, so as to free the plate from the earth gathered in advance thereof. The plate 1 is secured to the rear edges of the side pieces 4, and strap-irons 5 encompass the side pieces and the end portions of the plate 1 and serve to secure the parts against separation when subjected to abnormal strain. These strap-irons also reinforce the side pieces 4 and receive the wear incident to the implement sliding upon the runners.

The foot or tail board 6 is rigidly attached to the edge portion of the plate 1 and extends therefrom about at right angles and is strengthened by braces 7, which are attached at their lower ends to the plate 1 about at an intermediate point. This tail-board determines the relative position of the plate with reference to the surface of the road over which the implement is moving. When the implement is placed with the tail-board uppermost at its forward end, the plate inclines and the device is best adapted for operation upon stiff soil. In this disposition of the implement the tail-board inclines rearwardly and downwardly and its outer end



trails upon the surface. A wear-plate 8 is applied to the bottom side of the rear end portion of the tail-board and sustains the wear when the implement is in service.

5 When the implement is placed with the tail-board lowermost, the plate 1 occupies a position about at right angles to the surface of the road, whereby the scraper is best adapted for operating upon loose and light soil. In  
10 either position of the implement the device can be turned so as to free it from the earth gathered in front of the plate 1, as clearly indicated by the dotted lines in Figs. 2 and 3.

The draft attachment 9, to which the animal is hitched, is of bail shape and is connected to the plate 1 about medially thereof. Strap-irons 10 are applied to the face of the plate 1, and corresponding strap-irons 11 are applied to the rear side of the said plate.  
20 These strap-irons are in coincident relation and are secured together and to the plate by rivets or other fastenings passing through corresponding openings in the parts connected thereby. The eyebolts 12 or like means for  
25 coupling the draft attachment to the implement pass through registering openings of the plate and the front and rear strap-irons, and the latter serve to distribute the strain throughout the extent of the plate, thereby  
30 decreasing the chances for crippling the implement when striking a stone, root, or like unyielding obstruction.

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

35 1. A reversible road-scraper constructed for operation upon stiff or light soil provided with the foot or tail board adapting the said scraper to be held in either a sloping or a right-angular position with reference to the  
40 surface by means of the foot or tail board, substantially as set forth.

2. In a reversible road-scraper, the combination with the plate having relatively upper and lower scraping edges, of a tail-board rigidly connected to the plate and located about  
45 in the plane of an edge thereof and adapted to hold the scraper in either a sloping or right-angular position with reference to the surface, substantially as set forth.

3. In a reversible road-scraper, a plate provided with relatively upper and lower scraping edges, and having a tail-board about in the plane of one of its edges, and side pieces applied to the face of the plate at the ends thereof and of a length corresponding to the  
55 distance between the scraping edges of said plate, said side pieces constituting runners and having their end portions made rounding to provide rocker-bearings, substantially as described. 60

4. The herein-described reversible road-scraper comprising a plate deflected on a medial line and having relatively upper and lower scraping edges, side pieces secured to the end portions of the plate and of a length  
65 corresponding to the distance between the said scraping edges and having their end portions rounding to provide rocker-bearings, a draft attachment applied at a medial point to said plate, and a tail-board rigidly attached  
70 to an edge portion of the plate and adapted to hold said plate in either a sloping or in a right-angular position with reference to the surface being graded, substantially as specified. 75

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

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Witnesses:

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