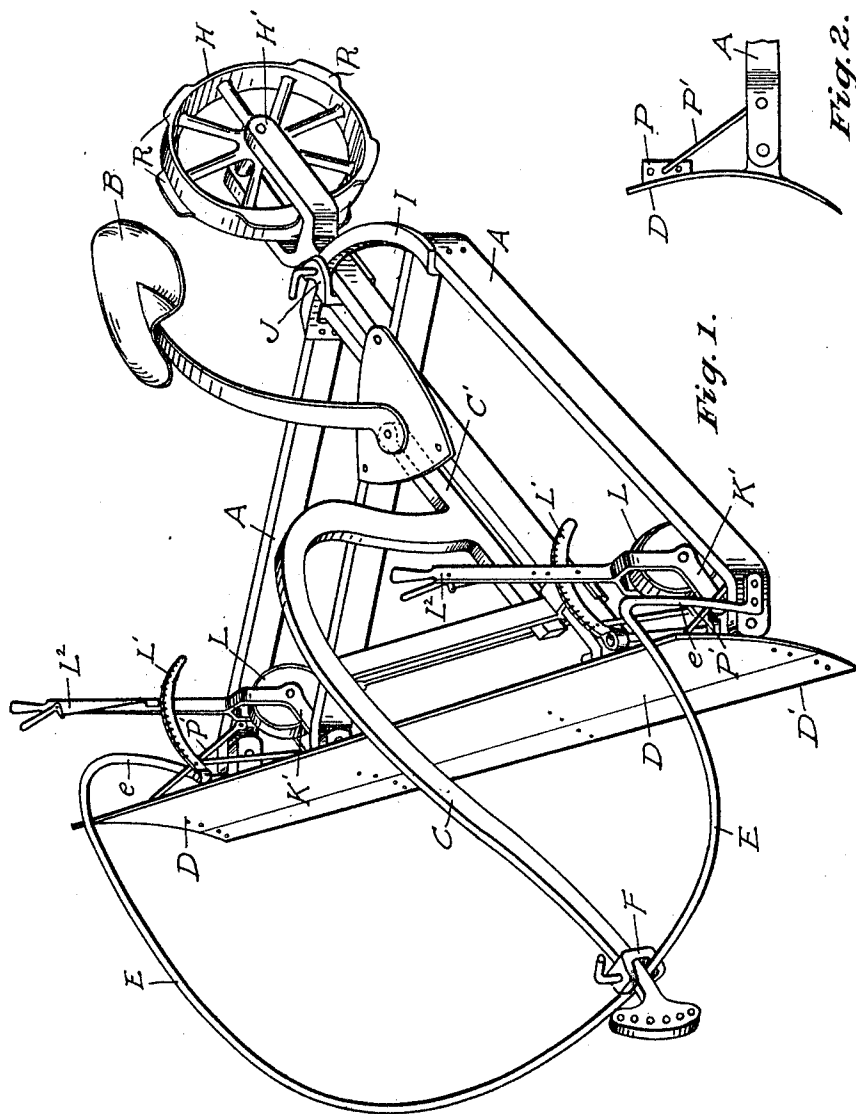


970,580.

Patented Sept. 20, 1910.

2 SHEETS—SHEET 1.



WITNESSES:

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E. O. Libbons

INVENTOR:

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Harmer, et al 15/656 } U.S.
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W. S. WALKER.
ROAD DRAG, GRADER, AND SCRAPER.
APPLICATION FILED FEB. 15, 1910.

970,580.

Patented Sept. 20, 1910.

2 SHEETS—SHEET 2.

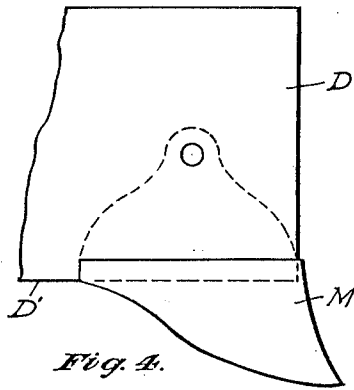


Fig. 4.

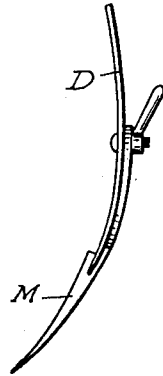


Fig. 5.

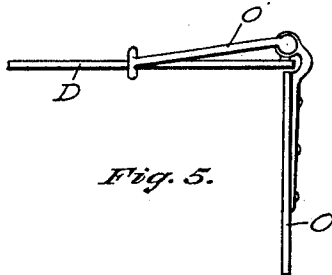


Fig. 6.

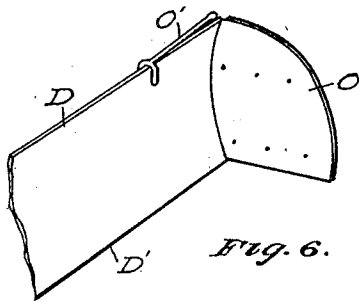


Fig. 7.

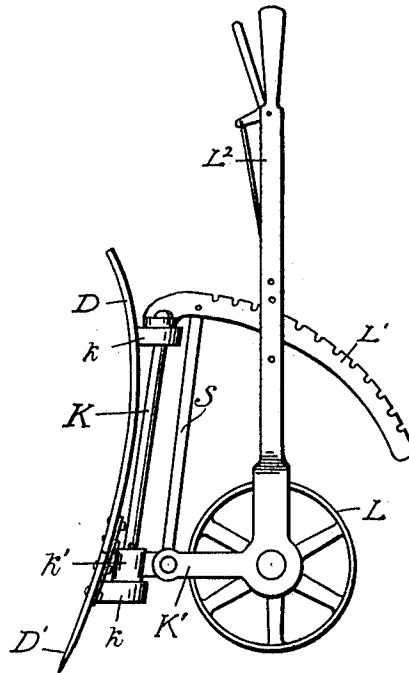


Fig. 8.

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UNITED STATES PATENT OFFICE.

WALTER S. WALKER, OF HELENA, MISSOURI.

ROAD DRAG, GRADER, AND SCRAPER.

970,580.

Specification of Letters Patent. Patented Sept. 20, 1910.

Application filed February 15, 1910. Serial No. 543,996.

To all whom it may concern:

Be it known that I, WALTER S. WALKER, a citizen of the United States, residing at Helena, in the county of Andrew and State of Missouri, have invented certain new and useful Improvements in a Combination Road Drag, Grader, and Short-Distance Scraper, of which the following is a specification.

10 The object of this invention is to provide a road drag that will also serve as a road grader and as a scraper for transferring dirt short distances in a highway, said combined device being an improvement on a road drag for which I was granted a patent by the United States Patent Office by Letters Patent No. 946,925, dated January 18, 1910.

I accomplish my object by the mechanism illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of the entire device; Fig. 2 is a side elevation of the frame and mold board and an adjusting rod; Fig. 3 is an end view of a ditching blade detachably connected with a mold board; Fig. 4 is a front view of Fig. 3; Fig. 5 is a top view of an attachable wing in position on a mold board; Fig. 6 is a perspective view of such wing as attached to a mold board, and Fig. 7 is an enlarged detail of an elevating wheel attached to the mold board.

Similar characters of reference indicate corresponding parts in the several figures of the drawings which form a part of this specification.

A A are land bars which also constitute a part of the frame of the device and B is an attached seat.

40 C is a goose neck and C' the beam thereof of the inner end of which is pivotally attached to the central frame work of the device.

45 D is a mold board and D' a shear thereto, both mold board and shear being cast of steel.

50 E is a semi-circular metal guide its ends forming goose shanks *e e* which are rigidly attached to the forward ends of the land bars. Said goose neck is provided with a clamp F by which it may be held stationary on said guide at any desired angle, as shown in Fig. 1.

55 H is a rudder wheel axled in a forked bar H', the handle of which bar is pivotally connected with the central frame work of the

drag. A segment of a curved iron plate I is riveted to said land bars and said rudder wheel is held in the desired position by said forked bar being clamped on said segment 60 by clamp J. The rudder wheel may thus hold the drag in any action in line with said goose neck beam. Duplicate elevating rods K K are carried pivotally on the back of the mold board by lugs *k k*. The lower 65 end of each rod is provided with a loosely fitting collar *k'* with which frame K' is pivotally connected. A wheel L is axled in said frame. A gage L' has connection with the top of said elevating rod and a lever 70 L², having connection with said frame, engages with said gage, thereby permitting the front portion of the machine to be elevated and held at any desired height. Ditching blades M M, as shown in Figs. 75 3 and 4, are connected detachably with the mold board and wings O O, as shown in Figs. 5 and 6, are detachably connected with the ends of the mold board to hold and carry dirt to holes in a highway, thus ob- 80 viating the use of a scraper for short distance purposes.

O' O' are levers to hold the wing in place when attached to the mold board. An angle iron P provided with holes is set rigid on 85 the inside of the mold board near each end and top of the board. A rod P' is pivotally fastened to each land bar its upper end bent at an angle to engage said holes and by which the mold board may be gaged to any 90 slope.

R R are flanges set alternately on opposite edges of the face of the rudder wheel to prevent the same sliding and S S are braces to hold the gage firmly in position. 95

What I claim and desire to secure by Letters Patent, is:—

1. In a device of the character described the combination with the frame and seat, the land bars, a mold board and shear, an adjustable goose neck and goose neck beam, of a semi-circular metal guide projecting over and forward of said mold board, the shanks thereof connecting with the forward bent ends of said land bars, a clamp by 100 which said goose neck may be held stationary at any given position on said guide, a forked bar pivotally connected at the handle end with the frame of the device, a rudder wheel axled in the forks of said bar, a segment of a plate attached over the space at 105 the rear of said land bars, a clamp to engage

the handle of said forked bars and said segment, duplicate elevating rods carried pivotally on the back of said mold board, a loosely fitting collar on the lower end of each rod, the wheel frames pivotally attached to said collars, runner wheels axled therein, gages carried on the elevating rods, levers carried on said frames engaging with said gages to elevate and hold the front of the machine at any desired elevation, angle irons rigid on the inside of the mold board, rods pivotally fastened to the land bars their upper ends bent to engage holes in said angle irons to hold the mold board at any slope, ditching blades detachably connected with said mold board and foldable wings detachably connected with the ends of the mold board for holding and carrying dirt without loss at the ends of the mold board for filling holes in highways, all substantially as shown and described.

2. In a device of the character described the combination with the land bars and mold board of a semi-circular metal guide the shanks thereof rigidly fastened to said land bars and projected vertically upward and the guide projected horizontally forward

over said mold board, substantially as shown and set forth.

3. In a combined road drag, grader and short distance scraper, the combination with the frame, a goose neck operated pivotally thereon, a mold board and shear, of a semi-circular guide projected over and forward of said mold board and a clamp to engage said goose neck and guide and hold said goose neck rigid on said guide at any desired point.

4. In a device of the kind described, a forked bar the handle of which is pivotally connected with the frame work of the machine, a rudder wheel axled in said forks, a segment of a metal plate riveted at each end to a land bar and a clamp to hold said forked bar in engagement with said segment to hold the rudder wheel at the desired angle.

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

WALTER S. WALKER.

Witnesses:

JOSEPH ANDRIAND,
MARIE MITCHELL.