No. 661,094. Patented Nov. 6, 1900.

W. P. WARREN.

WHEEL SCRAPER.

(Application filed Apr. 16, 1900.

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

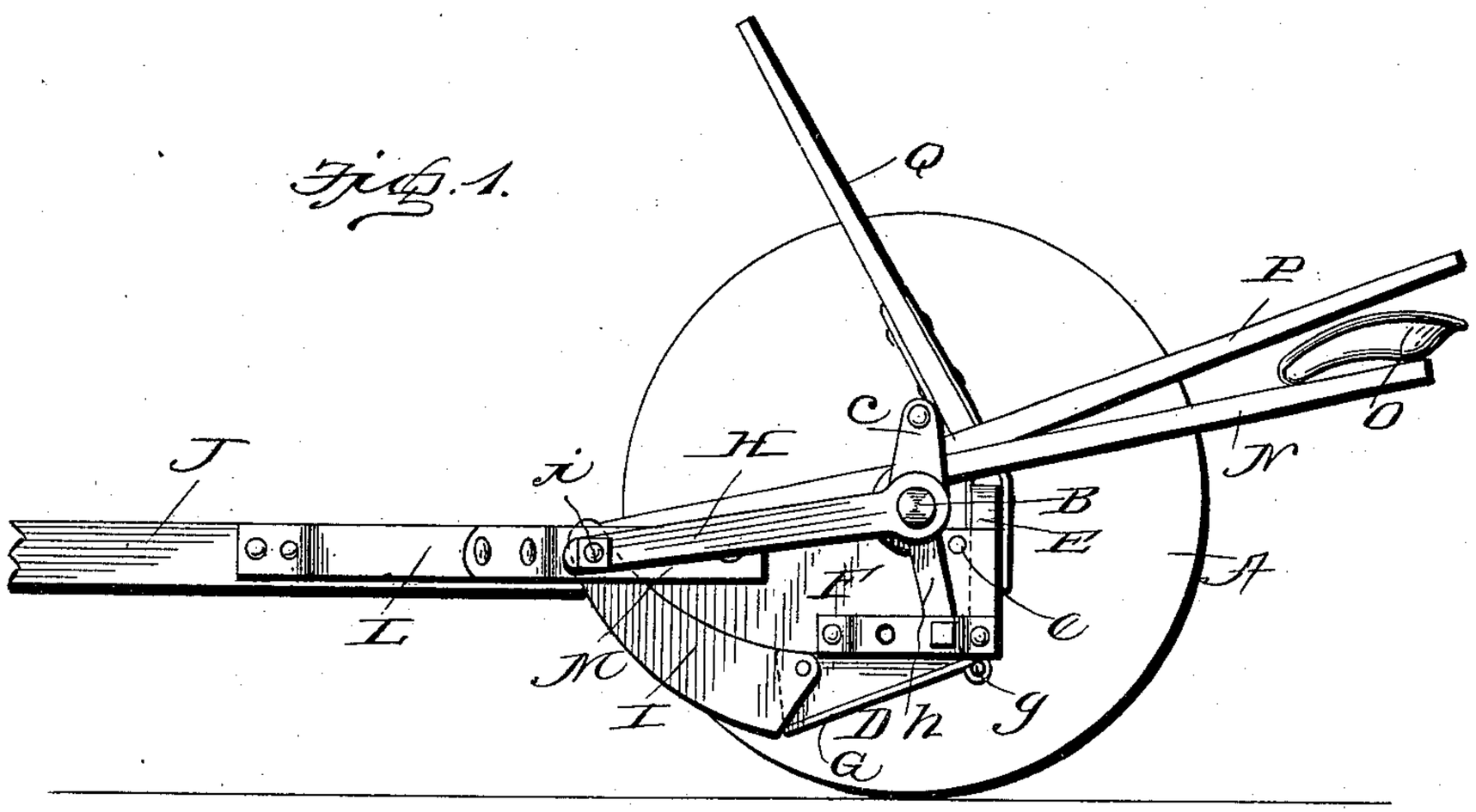

Fig. 2.

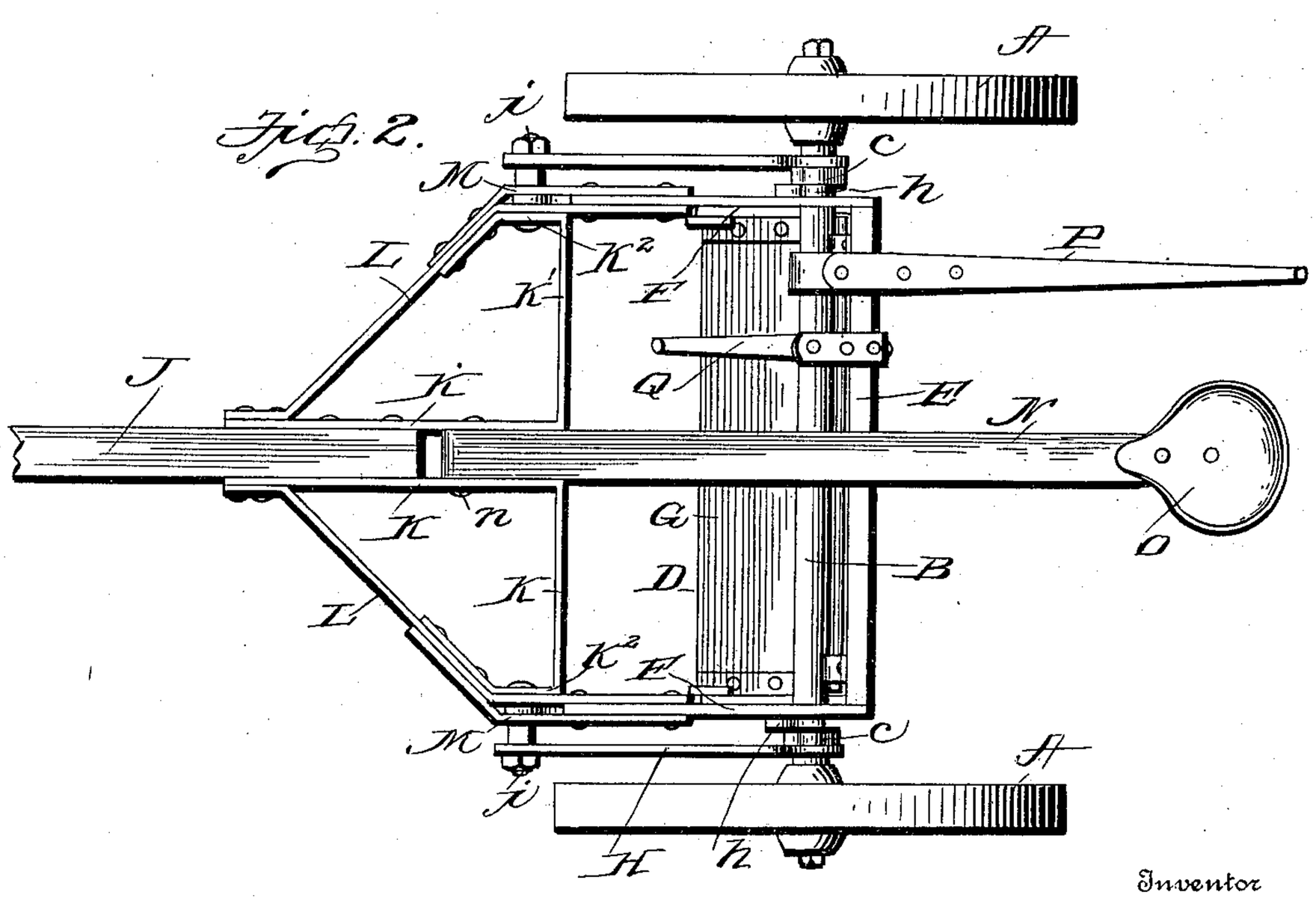

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Fig. 3.

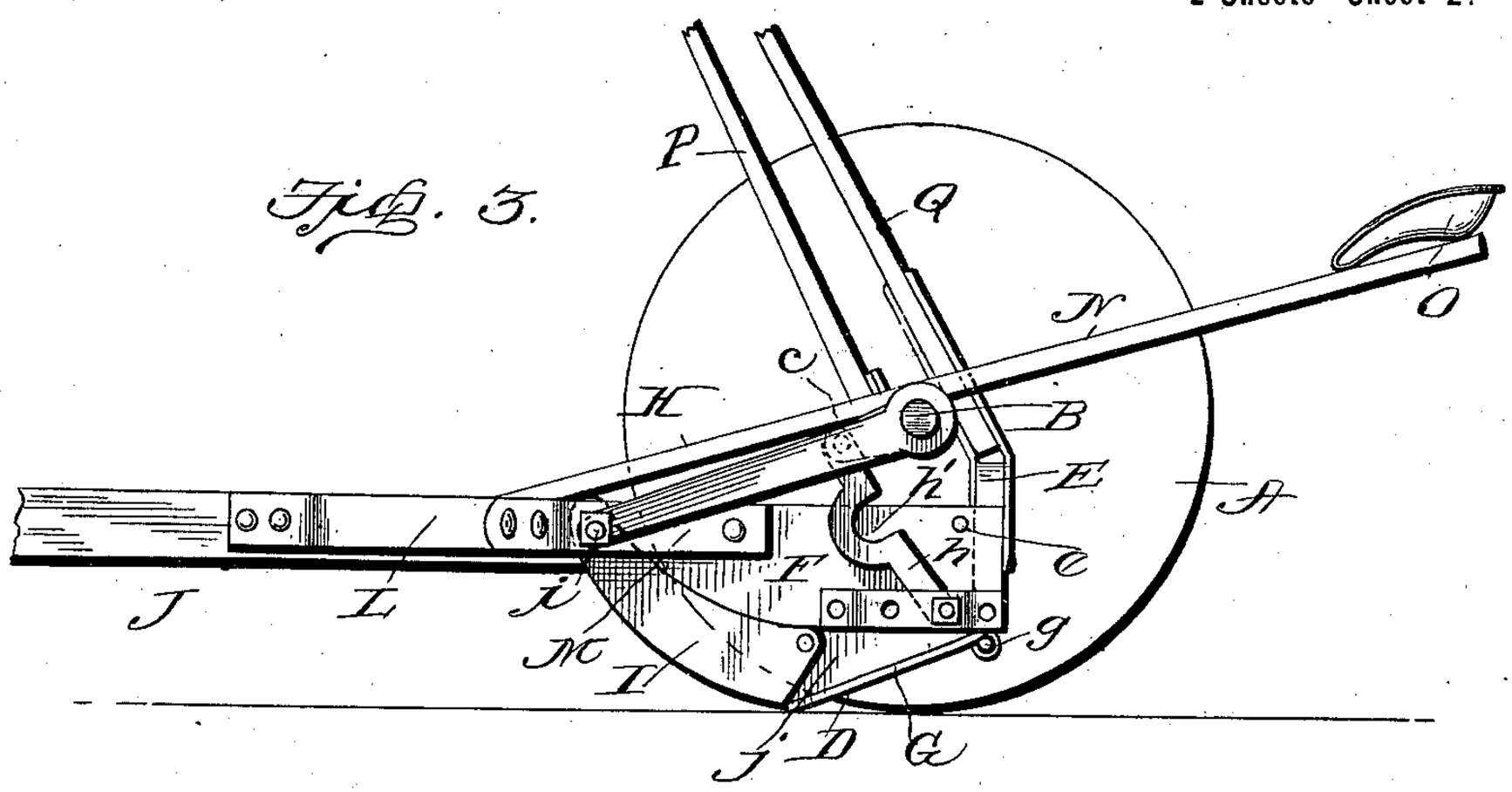


Fig. 4.

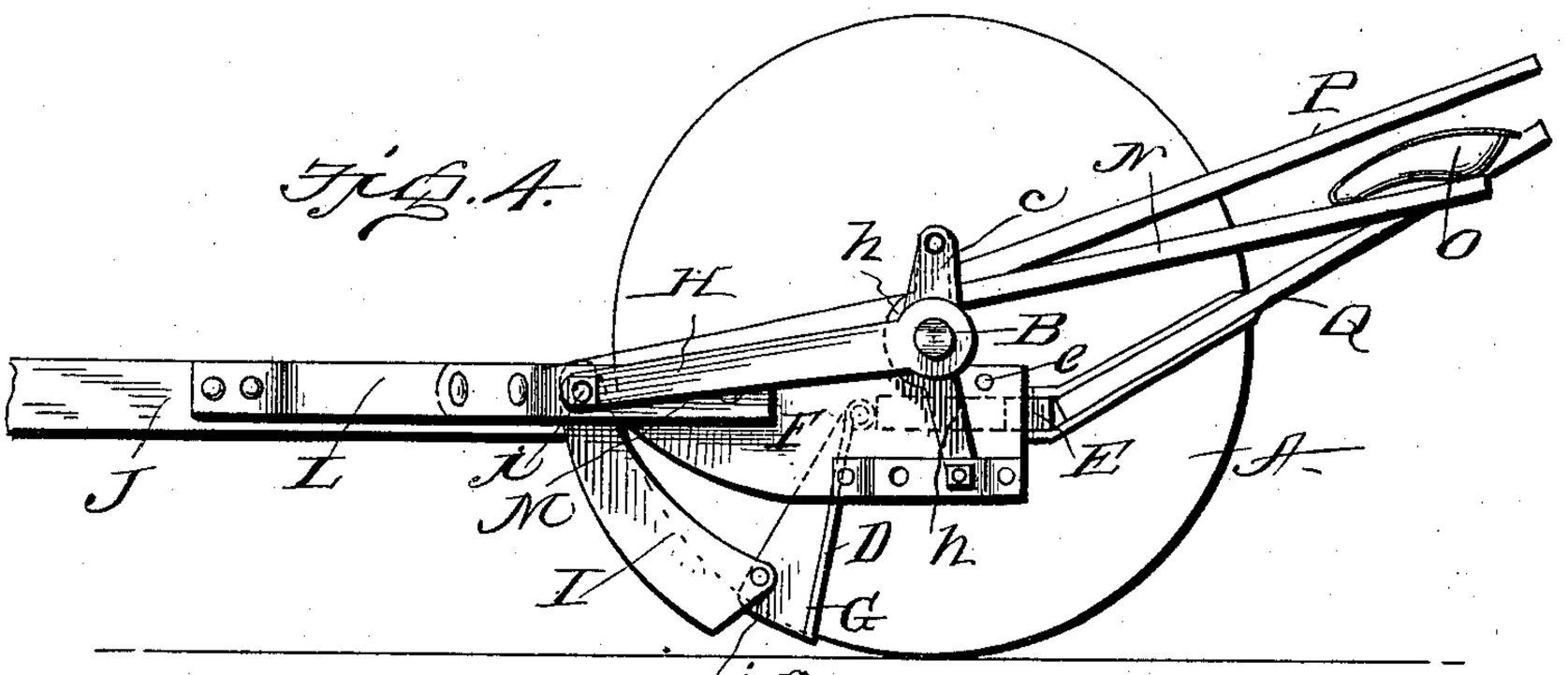
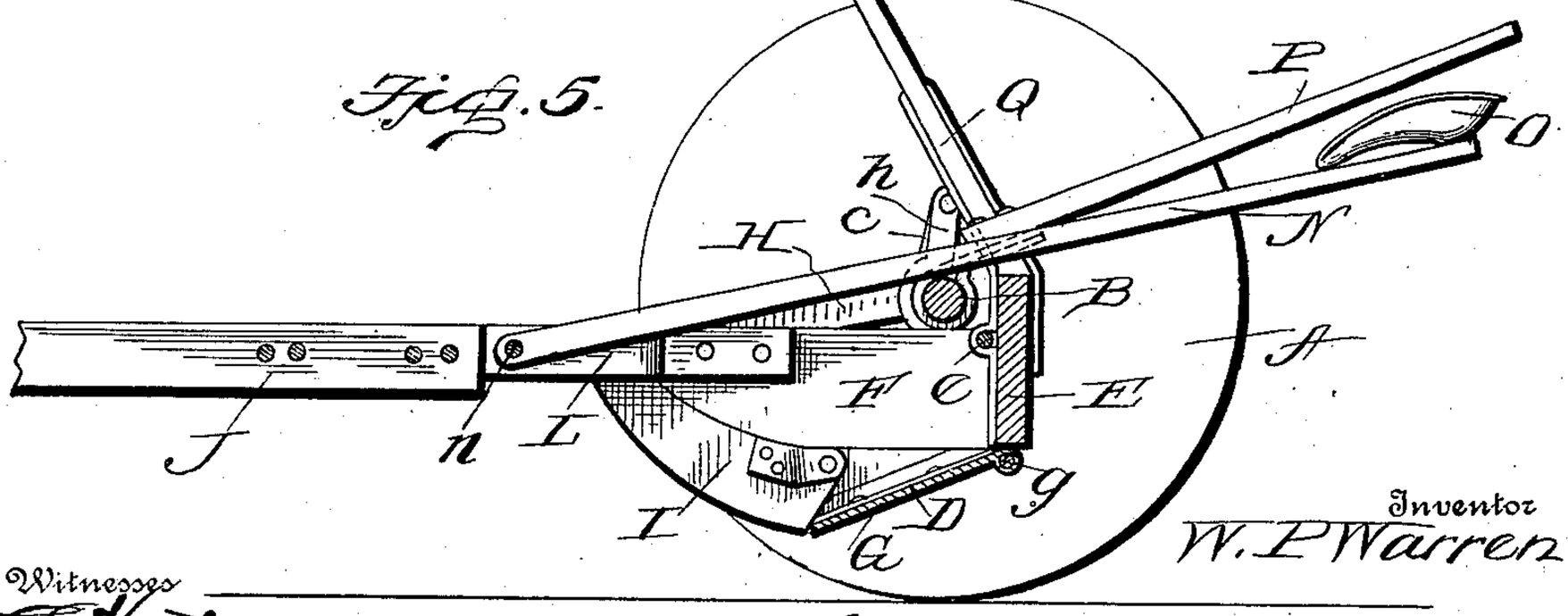


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM P. WARREN, OF BAKER, ILLINOIS.

WHEEL-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 661,094, dated November 6, 1900.

Application filed April 16, 1900. Serial No. 13,166. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. WARREN, a citizen of the United States, residing at Baker, county of La Salle, and State of Illinois, have invented a new and useful Dumping Wheeled Scraper, of which the following is a specification.

My invention relates to improvements in wheeled dumping-scrapers, and has for its objects to generally simplify and improve the construction of scrapers of this character and to provide simple and effective adjusting mechanism for raising and lowering the scoops for transportation and use and for dumping the same to discharge the load.

The invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of the scraper with one of the wheels removed, showing the scoop raised to a carrying position. Fig. 2 is a top plan view of the same. Fig. 3 is a view similar to Fig. 1, showing the parts lowered to a working position. Fig. 4 is a similar view showing the scoop dumped, and Fig. 5 is a section through the scoop looking toward one of the carrying-wheels.

Like reference characters denote corresponding parts throughout the several views.

A in the drawings represents the carrying-wheels mounted upon the journals or spindle portions of a transverse axle B, provided at its ends with crank-arms *c*. From this axle is suspended the scoop D, which consists of the back or dumping-board E, the sides F, to which the back is hinged or pivoted at *e*, and the scraper-blade G, hinged or pivoted at its rear edge to the lower edge of the back to form the bottom of the scoop, as at *g*, so as to swing or tilt in a vertical plane. The front edge of the scraper when made of metal is beveled in the ordinary way to form a scraping or cutting edge and when made of wood is shod, as usual, with a metallic digger or scraper. The scoop is suspended from the axle by means of links *h*, pivoted at their lower ends to the sides F and at their upper ends to the crank-arms *c*, and by means of pivoted arms H, mounted at their inner ends upon the axle and at their outer ends upon pivot pins or bolts *i*. The links *h* are provided about midway of their lengths with recesses or notches *h'* to engage the axle when raised to their highest position to assist the crank-arms to hold the scoop supported.

The scraper G is formed or provided at its ends with right-angular projections *j*, to which are pivoted the lower rear ends of segment-shaped suspending-arms I, which are pivoted at their upper front ends upon the pins or bolts *i* and serve to support and reinforce the front portion of the scraper and to swing the same when the adjusting mechanism hereinafter described is operated.

At the front of the scraper is arranged a draft-frame, to which the tongue or pole J is attached, said frame consisting of two substantially triangular side portions composed of metallic plates, bars, or straps K and L, the plates K being arranged to receive the end of the tongue between them and having lateral extensions K' at the rear, which have their free ends K^2 bent forwardly and secured to the bolts *i* and thence inwardly and diagonally and secured to the plates L and to the forward ends of braces M, projecting from the sides F of the scoop. The plates L are secured at their front ends to the plates K and thence project rearwardly and outwardly at a diagonal angle, their rear ends being bent to extend parallel with the braces M and being secured upon the inner faces of the sides F of the scoop. The plates K and L and braces M are united by the bolts *i*, which serve also as pivots for the front ends of the arms H and I, whereby a strong and durable form of frame is provided. By this construction the plates K form a socket, in which the rear end of the tongue is fitted and secured and in which the forward end of a seat beam or bar N may be held. This beam is pivotally mounted upon a pivot pin or bolt *n*, passed through the said plates K, and at its rear end carries a seat O. The beam normally rests upon the axle B, by which it is supported when in use, and projects a desired distance to the rear of the scoop.

The scoop is raised to a carrying position and lowered to a working position by means of a lever P, secured to the axle B. By throwing this lever to the rear the crank-

arms *c* are elevated to a vertical position, as shown in Fig. 1, and draw upon the links *h* to raise the scoop bodily above the surface of the ground. When the scoop is thus raised, the segmental portions *h'* of the links *h* partly surround and engage the axle, and the links are thereby connected to the axle and assist the crank-arms *c* to sustain the weight of the scoop. Upon throwing the lever forward the crank-arms are moved forward to a horizontal position, thus causing the links *h* to swing outward and downward and to lower the scoop to the working position. (Shown in Fig. 3.) The pivoted arms I also move in, thus adjusting the scoop to accommodate for the change in position of the scoop, as will be clearly understood. To dump the scraper, a lever Q, rigidly secured to the back E, is provided. Upon throwing this lever to the rear the back E swings on its hinge or pivot to a horizontal position and forces the rear edge of the scraper G upward and forward, thus causing said scraper to assume a vertical position and to dump the load, as shown in Fig. 4. By throwing the lever Q forward the parts are then restored to the normal position shown in other figures. It will thus be seen that an exceedingly simple adjusting mechanism is provided.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a wheeled scraper, the combination of an axle provided with cranks, a scoop or scraper, links connecting the cranks and scraper and provided with portions to engage the axle and assist the cranks to support the scoop in elevated position, and a raising and lowering lever connected to the axle, substantially as set forth.

2. In a wheeled scraper, the combination of an axle provided with cranks, a draft-frame, suspending-arms pivoted to the draft-frame, a scoop or scraper suspended at the front from said arms, links connecting the sides of the scoop to said cranks, and a raising and lowering lever connected to the axle, substantially as set forth.

3. In a wheeled scraper, the combination of an axle provided with cranks, a scoop suspended from the cranks and having a hinged or pivoted dumping-board and a scraper hinged or pivoted to said dumping-board, and a dumping-lever for operating said dumping-board to raise the scraper, substantially as set forth.

4. In a wheeled scraper, the combination of an axle provided with cranks, a scoop comprising sides, a dumping-board or back hinged or pivoted to said sides, and a scraper hinged or pivoted at the rear to said dumping-board, links connecting the sides of the scoop to the cranks, a draft-frame, suspending-arms pivotally connecting the front portion of the scraper to the draft-frame, and a dumping-lever connected to the dumping-board, substantially as set forth.

5. In a wheeled scraper, the combination of an axle provided with cranks, a scoop suspended from said cranks, a draft-frame, operating means for the scoop, and a seat beam or bar pivoted to the draft-frame and resting on the axle, substantially as set forth.

6. In a wheeled scraper, the combination of an axle provided with cranks, a draft-frame carrying a draft appliance, a scoop comprising sides having a back or dumping-board hinged or pivoted thereto and a scraper hinged or pivoted at the rear to said dumping-board, links pivotally connecting the scoop to the cranks, suspending-arms pivotally connecting the scraper to the draft-frame, pivoted arms connecting the axle and draft-frame, a lever connected to the axle for raising and lowering the scoop, and a second lever connected to the dumping-board for dumping the scraper, substantially as set forth.

7. In a wheeled scraper, the combination of an axle provided with cranks, a scoop pivotally suspended from said cranks and having a hinged or pivoted back or dumping-board and a scraper hinged or pivoted thereto, and means for raising and lowering the scoop and for operating said dumping-board, substantially as set forth.

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