

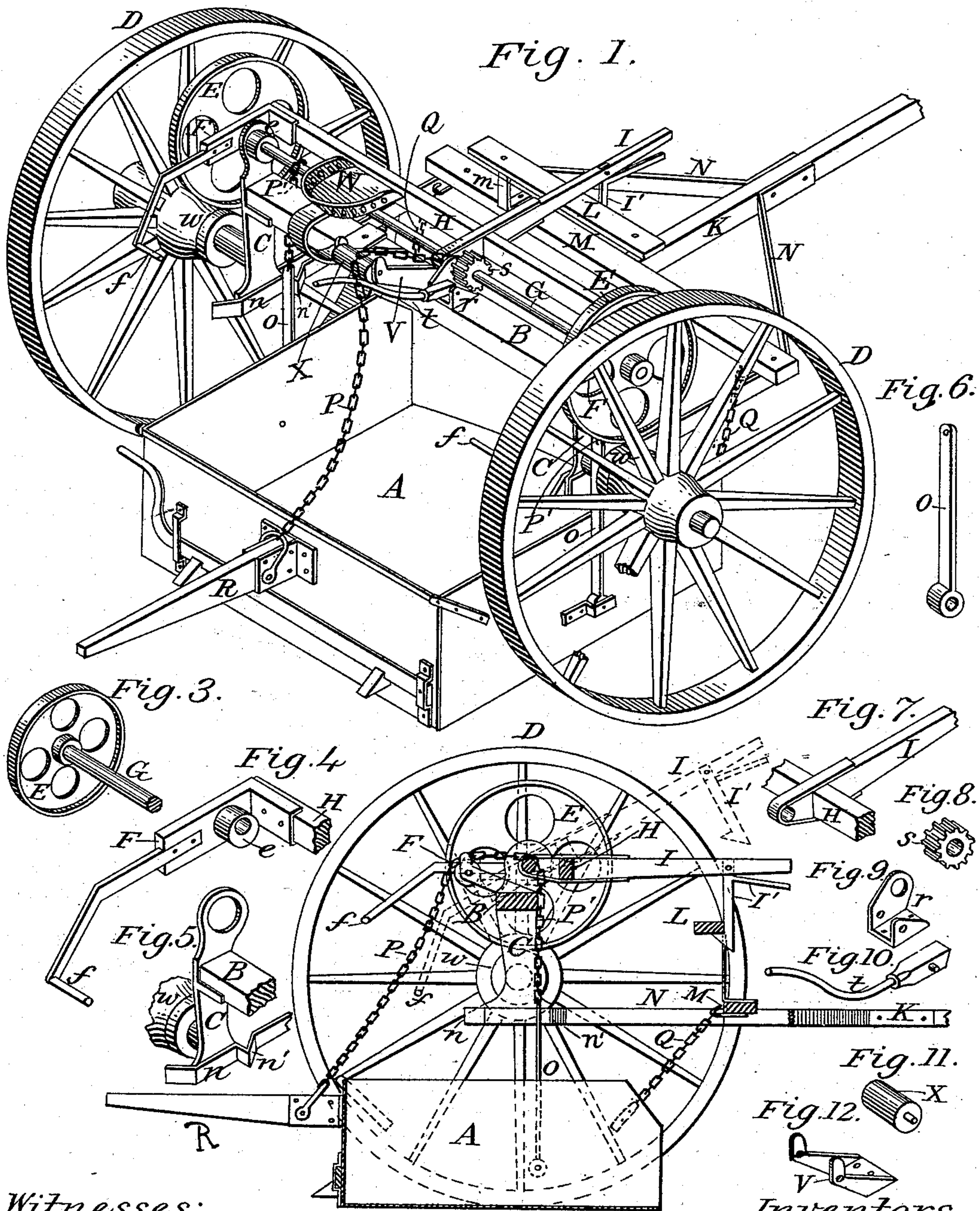
(No Model.)

J. STUBBS & F. JONAS.

WHEELED SCRAPER.

No. 268,054.

Patented Nov. 28, 1882.



Witnesses:

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Fig. 2.

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UNITED STATES PATENT OFFICE.

JESSE STUBBS AND FREDRICK JONAS, OF MOUNT PLEASANT, IOWA.

WHEELED SCRAPER.

SPECIFICATION forming part of Letters Patent No. 268,054, dated November 28, 1882.

Application filed August 18, 1881. (No model.)

To all whom it may concern:

Be it known that we, JESSE STUBBS and FREDRICK JONAS, citizens of the United States, residing at Mount Pleasant, in the county of Henry and State of Iowa, have invented a new and useful Improvement in Wheeled Scrapers of which the following is a specification.

Our invention relates to improvements in that class of wheeled dirt-scrapers which elevates the load of dirt, after the box is filled, for ease in transporting it to its destination.

The object of our invention is to provide a better means of raising the loaded box of a wheeled scraper and of lowering said box again for reloading than has hitherto been known.

Our invention consists in the mechanism hereinafter particularly described for raising, sustaining, and lowering the box of a wheeled scraper, which we will proceed to more fully describe by reference to the accompanying illustrative drawings embodying our invention, in which similar letters indicate like parts in the different figures.

Figure 1 is a perspective of the whole machine. Fig. 2 is a side elevation or sectional view, the other figures being illustrations of detached parts, of which Fig. 3 represents a friction wheel or pulley attached to one end of a winding shaft. Fig. 4 represents one eccentric thimble attached to its operating-arm and coupling-bar. Fig. 5 represents one upright supporting-iron as connected with a spindle of a wheel and with other attachments. Fig. 6 represents one pendent bar for supporting the scraper-box, and is adjustably pivoted to the sides of said box. The devices in Figs. 3, 4, 5, and 6 are arranged in pairs one on either side of the machine. Fig. 7 is part of an operating-lever, showing the manner of attaching it to the coupling-bar H, and showing also a receptacle for the shaft G. Fig. 8 is a ratchet-wheel, when in use to be made fast on the winding-shaft G near its middle. Fig. 9 is a fulcrum for a pawl, Fig. 10, which fulcrum is made to rest on the axle B. It is also provided with a receptacle in one of its sides designed as a rest for the winding-shaft G. Fig. 11 is a roller over which the rear supporting-chain, P, passes in the vertical adjustments of the scraper-box A, and Fig. 12 is a metallic

support for said roller X. It also rests on the axle B, and is provided with upwardly-projecting points at its apex for the purpose of preventing the chain P from running off over the ends of said roller.

The further arrangement and operation of the several parts are as follows:

Ordinary wheels, D, are used on ordinary spindles connected with and being a part of the supporting-irons C, Fig. 5, which arrangement or combination, however, we do not claim as new, being aware that similar elements have been used in other devices as attachments to and supports for wooden axles; but in our device the irons C extend above the axle B, so as to form supports also and bearings for the eccentrics *e*, arms F, and shaft G, with their respective attachments, thus holding said eccentrics at a proper distance from the hubs of the wheels D for the action of said eccentrics working in their bearings in said irons to properly adjust said shaft G so as to cause the friction-wheels E to bind against said hubs, and thereby operate the shaft G when required. The irons C also extend below the spindles, forming downward projections for attaching the draft-bars of the machine to them at that point. Said irons C are coupled together by means of the axle B. The eccentrics *e* on the operating-arms F are placed in the receptacles at the upper end of the irons C, as shown, and said arms fastened to a coupling-bar, H. The winding-shaft G, having the ratchet-wheel S fastened on it, is passed through the receptacle in the end of the lever I, through the fulcrum-iron *r*, Fig. 9, and through the eccentrics *e*. Then on each end of it is rigidly fastened the friction wheels or pulleys E. The fulcrum-iron *r* being placed in position and fastened to the axle B, the pawl *t*, Fig. 10, is pivoted in said fulcrum so that its point will catch in the teeth or cogs of the ratchet S, which serves as a check to prevent the shaft G from a backward turn while supporting the loaded box A.

To the upper ends of the pendants O are attached chains P, fastened to the shaft G. Another chain P is also fastened to said shaft G near its middle, and, passing over the roller X, is connected by means of a clevis to the lever R as a rear support to the box A. Said box A is raised to its desired height by means of the chains P' and P winding on the shaft G.

There are dirt-scrappers and other devices now in use having revolving shafts upon which chains wind as a means of elevating loads of dirt or other weighty bodies; but they are
 5 geared to drive-wheels by means of cog-gearing, which is objectionable in a wheeled dirt-scraper, owing to the rigidity caused by thus gearing with cog-wheels both drive-wheels to the same shaft, thereby necessitating one of
 10 said wheels to slide in turning the machine. Such gearing for driving said shafts is further objectionable, owing to the difficulty of throwing the cogged pinions in gear with the cogged gear-wheels as drivers, which has to
 15 be done each time a dirt-scraper so arranged raises its load, and is promptly detached again as soon as the load is elevated to its proper height. Such gearing is further objectionable for a dirt-handling machine, owing to dirt
 20 getting in between the cogs and causing them to cut or wear rapidly away; but the shaft *G* in our invention is turned in winding up or elevating the load by means of the friction wheels or pulleys *E*, which are made to press
 25 tightly against the hub-bands *w* of the wheels *D*, thus causing friction sufficient to operate them, thus avoiding unnecessary rigidity of gear, the difficulty in shifting the parts in and out of gear, and the rapid wear caused by the
 30 cutting of cogs. Said wheels *E* are adjusted by means of the eccentrics *e*, which by revolving around the shaft *G* and in the supporting-irons *C* diminish or increase, as desired, the distance between the shaft *G* and the hub-band *w*, thus producing the desired effect. Said eccentrics are operated by means
 35 of the lever *I* through its connections with the bar *H* and arms *F*. Said lever *I* being raised, as indicated by the dotted lines in Fig. 2, the eccentrics *e* are revolved, so as to place a thicker part above the shaft *G* than before, thus tightening the friction-wheels *E* against the bands *w*, while the load is being elevated to a proper height, when the edges of the box
 45 *A* strike the lateral projections *f* of the arms *F*, and thus reverse the movement of the eccentrics *e*, whereby the wheels *E* are freed from contact with said bands *w*. The box *A* is lowered for refilling by raising the handle
 50 of the pawl *t*, thus freeing it from the ratchet *S*, when the chains *P'* and *P* unwind from the shaft *G* by the gravity of the descending box. The lever *I* is held down, when desired, by means of a hook, *I'*, which catches under
 55 a foot-rest, *L*.

W is a driver's seat, which is mounted on the axle *B*. Draft-chains *Q* are attached to the forward end of the box sides and connected by means of hooks to the bar *M*,
 60 which chains are brought into requisition while filling the box. To prevent said box from swinging too far forward at any time, stops *n'* are provided on the bars *n*, so that the

pendants *O* swing directly in rear of them. Said bars *n* connect with or are an extension of the
 65 draft-bars *N*.

The scraper-box *A* is pivoted to the lower ends of the pendants *O*, so that it may be oscillated on the said pivots. It is also provided with a swinging tail-gate hinged to the
 70 upper rear corners of said box, so that it will open backward. Said tail-gate is provided with a lever, *R*, rigidly fastened to its rear side and projecting rearward, serving as a
 75 handle by which the attendant handles the said box while filling and in dumping, and by means of its being connected with the chain *P* it becomes the rear support to the said box. A latch-bar is also provided and pivoted at one
 80 end to the said tail-gate, which, when said tail-gate is shut, takes into catches projecting rearward from the box-bottom, thereby fastening the said tail-gate, which also gives rigidity to the lever *R*, thereby supporting the
 85 rear end of the box in an elevated position. The load of dirt is dumped by raising the said latch-bar out of the said catches, when by an excess of load being in rear of the box pivots its rear end descends by gravity and the
 90 chain *P*, being attached, as shown, to the lever *R*, causes the tail-gate to open backward and upward, so as to discharge its load in rear of the machine. Said tail-gate is again
 95 closed, and the rear end of the box raised simultaneously by a downward pressure on the outer end of the lever *R*, when the said latch-bar again automatically takes in the said catches, thereby holding it closed.

Having thus fully described our invention so as to enable others skilled in the art to understand the same, what we claim as new, and
 100 desire to secure by Letters Patent, is—

1. In combination with the winding-shaft *G* and the hub-bands *w* or their equivalents, the friction-wheels *E*, rigidly fastened to the
 105 ends of said shaft *G*, as its driving mechanism when pressed tightly against said hub-bands or their equivalents by the action of the eccentrics *e*, substantially as shown, and for the purpose specified. 110

2. In combination with the shaft *G* and the supporting-irons *C*, the eccentrics *e*, arms *F*, coupling-bar *H*, lever *I*, and hook *I'*, all substantially as shown, and for the purposes specified. 115

3. The supporting-irons *C*, shaped as herein shown, to afford bearings for eccentrics *e*, axle *B*, and pendants *O*, arranged respectively on opposite sides of a wheeled scraper, being
 120 coupled together by a wooden axle, substantially as shown, and for the purposes specified.

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