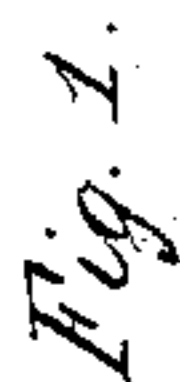


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Witnesses;
A. Steward
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Inventor;
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United States Patent Office.

FREDERICK POST, OF PLANO, ILLINOIS.

Letters Patent No. 78,999, dated June 16, 1868.

IMPROVED SCRAPER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, FREDERICK POST, of Plano, in the county of Kendall, and State of Illinois, have invented a new and improved Wheeled Dirt-Scraper; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and the letters of reference marked thereon.

Figure 1 shows a top view, and

Figure 2 a side view, with the scraper in different positions.

Parts lettered as follows:

- A, scraper.
- B, hind wheels.
- C, fore wheels.
- D, crank.
- E E, chains.
- F, spur-wheel.
- G, pinion.
- H, ratchet-wheel.
- I, pawl.
- J, foot-lever.
- K, spring.
- L, pivot.
- M M, rollers.
- N, bed-pieces.
- O, front cross-piece.
- S, rear cross-piece.
- P P P, rails.
- R, post.
- T, bolster.
- U, tongue.
- W, support for scraper.

I construct my improvement as follows: I make a frame, consisting of two pieces, in size, say, four by five inches, and eight feet in length, which I will call bed-pieces, and two pieces of same size, and, say, four feet in length, which I will call cross-pieces. These bed-pieces are shown by N N, the front cross-piece by O, and the rear cross-piece by S. These four pieces composing this frame may be connected at the corners by a mortise and tenon, or the pieces O and S may rest upon the top of the pieces N N, as shown in fig. 2, and be secured by bolts.

I now take three pieces, as shown by P P P, fig. 1, say four inches square, which I will call rails, one end of each of which I attach, by bolts or otherwise, to the cross-piece O, one being attached at each end directly over the bed-pieces N N, and one in the middle of said cross-piece. To hold these rails in position, I connect them together with another cross-piece near the other end, as shown in fig. 1, thus forming a second frame above the first, the cross-piece O, forming part of each frame.

The rear end of this upper frame I elevate, as shown in fig. 2, and support the same by two posts, one of which is shown at R, fig. 2, the other standing opposite, and not shown, the lower end of these posts resting upon the bed-pieces N N.

This frame I now mount upon four wheels, one end of the bed-pieces N N resting, as shown at T, fig. 2, upon and being secured to another cross-piece, which serves the purpose of what is, in an ordinary wagon, termed the bolster, and attach this bolster, by means of a king-bolt, to an axle-tree, which is supported by two wheels,

the bolster being of sufficient depth to elevate the bed-pieces N N above the tops of the wheels, to facilitate turning.

To this axle-tree I attach a tongue, in the same manner as upon an ordinary wagon, to which to attach a team. I also support the rear end of the bed-pieces N N upon an axle-tree, provided also with wheels, but of a larger size, say twice as large in diameter as those used for the front, but between these bed-pieces N N and the axle-tree, to elevate the rear end as high as the end which rests upon the bolster of the fore wheels, I insert a block or piece, of the shape as shown at W, which I allow to extend forward, underneath and fastened securely to the bed-pieces N N, a sufficient distance to form a bearing for the hinges of the scraper, as hereafter described.

I now make suitable bearings through the three pieces of the upper frame, marked P, near their rear end, and insert a shaft, upon one end of which I secure a spur-wheel, as shown at F, and the other end a ratchet-wheel, as shown at H. I also put upon this shaft, in the spaces between the rails, marked P, two rollers, as shown at M M, for purposes hereafter described. I now form suitable bearings through two of these rails, marked P, and insert another shaft, upon one end of which I place a pinion, as shown at G, and the other end a crank, as shown at D, the relative position of these two shafts being such as to allow the spur-wheel F and the pinion G to come together, and their cogs to match.

I now construct a pawl, as shown at I, to act upon the ratchet-wheel H, which pawl I secure to the post R by the pivot L, allowing the pawl to extend beyond the pivot, and form a foot-lever, as shown at J, and attach also, to the post R, the spring K, to act upon the pawl, and hold it in position.

I now erect at the rear end of the frame thus described, and convenient to the crank, D, and the foot-lever J, a seat, as shown at X.

I now construct a scraper, of any suitable material, and of a shape essentially the same as shown by the part marked A in figs. 1 and 2, with a cutting-edge in front, and of a size sufficient to receive earth enough to make a load for an ordinary team. This scraper I place beneath the bed-pieces N N, in front of the rear axle-tree, and secure it by means of bolts to the pieces for that purpose, marked W. I insert these bolts through holes in the sides of the scraper, in such a manner as to form hinges or pivots upon which the scraper may turn, and allow its front portion to be raised or lowered when desired. I now connect the front of this scraper with the rollers M M by means of two chains, as shown at E E.

The operation of my improvement is as follows: The driver, occupying the seat X, upon approaching the earth to be removed, adjusts the scraper to the position as shown in fig. 2, at A, the cutting-edge lowered a sufficient distance to come in contact with and cut its way beneath the surface of the earth, and as the scraper is drawn forward, the earth thus disconnected by the cutting-edge is forced back into the cavity in the scraper until a load is obtained, when the driver, seizing the crank, D, and turning the shaft and pinion G, which, connecting with the spur-wheel F, causes the shaft and pulleys M M to revolve, and winding the chains E E around those pulleys, and elevating the front of the scraper until it no longer comes in contact with the earth below, and causing it to assume a position as shown by red lines in fig. 2, in which position it is held by the pawl I and the ratchet-wheel H.

By this means the scraper is suspended beneath the frame, and the whole weight of the scraper and its contents supported by the wheels, when the load can be easily conveyed to its destination. To deposit the load, the driver turns the crank still further in the same direction, and by this means elevates the front of the scraper, as shown by blue lines in fig. 2, or until the load falls out at the rear end of the scraper.

Upon again arriving at the place where the load is taken, the driver presses his foot against the foot-lever J, with sufficient force to overcome the pressure of the spring K, and disconnect the pawl I from the ratchet-wheel H, and allow the chains E E to unwind from the rollers M M, and the scraper to resume its first position, and be in readiness to receive its load.

Now, in loading this scraper, the driver is enabled, by means of the leverage obtained by the crank, D, the spur-wheel F, and pinion G, to regulate easily, by raising or lowering the front of the scraper, the depth proper for it to cut, and adapt its depth to the hardness of the soil and the strength of the team.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the scraper A, chains E, rollers M, ratchet-wheel H, ratchet I, spur-wheel F, pinion G, and crank, D, all constructed substantially as described, and operating as specified.

FREDERICK POST.

Witnesses:

A. STEWARD,

A. N. BEEBE.