

W. PINN.

Improvement in Revolving Road-Scrapers.

No. 128,654.

Patented July 2, 1872.

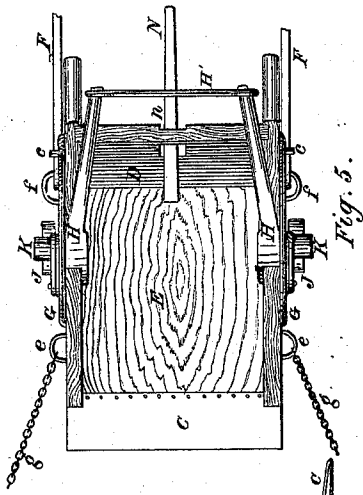


Fig. 5.

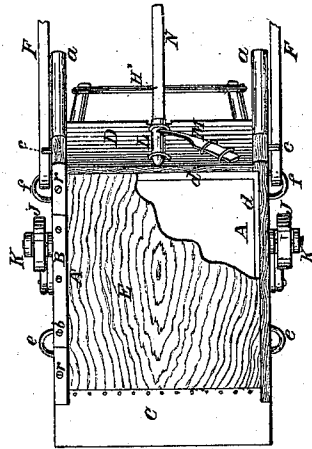


Fig. 6.

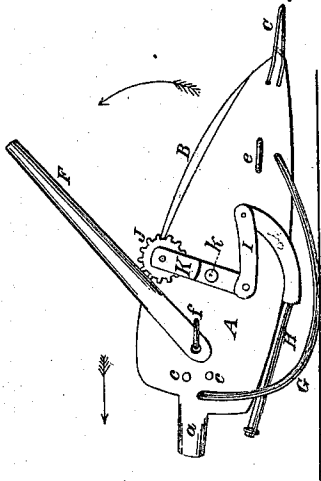


Fig. 3.

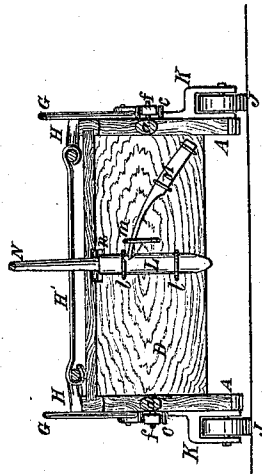


Fig. 4.

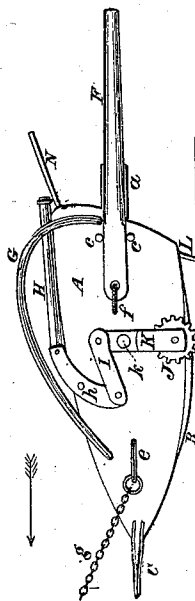


Fig. 1.

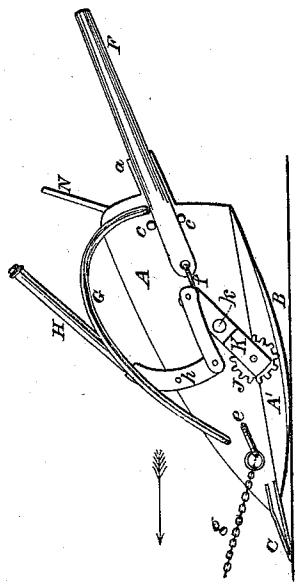


Fig. 2.

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Witnesses.

# UNITED STATES PATENT OFFICE.

WILLIAM PINN, OF MASSILLON, OHIO.

## IMPROVEMENT IN REVOLVING ROAD-SCRAPERS.

Specification forming part of Letters Patent No. 128,654, dated July 2, 1872.

### SPECIFICATION.

*To all whom it may concern:*

Be it known that I, WILLIAM PINN, of Massillon, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Revolving Scrapers; and that the following is a full, clear, and exact specification thereof, which will enable others skilled in the art to make and use the said invention.

My invention relates to an improved combination of levers and bearing-wheels with the scraper, for the purpose of facilitating its transportation after it has been filled with earth, or while it is being moved from place to place; also to an improved retarding device for preventing the scraper from running onto the horses' feet while being drawn down hill; also to an improved arrangement of pivoted handles, by which sufficient leverage is obtained to turn the scraper easily without the necessity of having a long draft attachment to allow of the scraper revolving to deliver its load, and to turn again into position for reloading; also to an improved combination of rockers or turning-runners with the scraper for the purpose of facilitating the turning thereof, and for protecting the bearing-lever mechanism while the scraper is being turned; also to an improved construction of the frame of the scraper for the purpose of facilitating the removal or repair of the bottom thereof when worn or broken; these several improvements making the scraper easier to handle and more satisfactory in its operation, and lessening the cost of keeping the same in repair.

In the accompanying drawing, Fig. 1 is a side elevation of a scraper embodying my invention as it appears while being transported. Fig. 2 is a side elevation of the same as it appears while loading. Fig. 3 is a side elevation of the same as it appears when overturned to deliver its load. Fig. 4 is a rear elevation of the same in the position shown in Fig. 1. Fig. 5 is a plan of the same in a similar position. Fig. 6 is an inverted plan, showing the manner of inserting the bottom.

A A are the side pieces of the frame, which are fastened to the back D at their rear ends, and which are connected at their front ends by the share C, which is made in a split or open form on its rear edge to receive the front end of the bottom E. The lower parts A' of

the side pieces A are made separate from the body of said pieces, as shown in Fig. 2, the line of separation running from the share C back to the lower rear corner of the side pieces, and on the inside of the pieces A. Along this line of separation, as well as along the lower inner line of the back D, is cut the rabbet *d d*, as shown in Fig. 6, where the corner of the bottom E is broken out to show said rabbet. The front of the bottom E is beveled off to fit into the share C, and its edges fit in the rabbet *d d*, where it is held by the pieces A', which are fastened by screws *rr*. The levers H H are connected at their rear ends by a cross-bar, H', and their front ends fork out and are bent down to fit over each side of the pieces A, to which they are pivoted by bolts *h*. The levers K K have the corrugated-faced bearing-wheels J J pivoted between their forked lower ends, and are pivoted to the pieces A by bolts *k*, and their upper ends are connected to the lower ends of the levers H H by links I, the relative positions and sizes of the several parts being such that when the levers H are brought down onto the pieces A the wheels J will stand below the pieces A, and thus serve as wheels to support and carry the scraper, as shown in Fig. 1, while, when said levers H are thrown up, as shown in Fig. 2, the wheels J will be raised up so as to clear the ground and not interfere with the working of the scraper while being filled. The iron bar L is arranged in staples *ll* on the back D, and is held up by a spring, M, fastened to said back, and working through an elongated staple, *m*, with its end in a notch in the bar L. A bar or lever, N, to be carried by the operator or driver, may be inserted in a hole, *n*, in the back D, and by pressing down on said lever the bar L can be forced down so as to cause its lower end to catch on the ground, as shown in Fig. 1, thus retarding the forward movement of the scraper as required. The short handles *a a* are formed on the side pieces A, and will answer for handling the scraper in light work, but for heavy work they do not give sufficient leverage for turning the scraper, and for this reason the pivoted handles F F are attached to the sides of the pieces A A by round-eyed staples *ff*, and rest between pins *c c* in said pieces A, thus giving the operator the advantage due to their length, and, at the same

time, allowing of their being thrown out side-wise when the scraper begins to tilt, in order to avoid having to turn the scraper over and around their ends, as evidently would be necessary were said handles bolted fast to the pieces A, as will be seen by examining Fig. 3, where the handles F are represented as being turned back, instead of being bolted fast to the side pieces.

The draft is applied to the scraper by the chains *g g*, which are held in the position indicated in Fig. 5 by a spreader-stick, in order to allow the scraper to turn between them, and which chains are attached by rings to the staples *e e* in the side pieces A. In order to raise the center of gravity of the scraper so that it will readily turn back to its working position after having been overturned to deliver its loads, the rockers G G are secured to the side pieces A, and extend down so as to protect the levers H, as shown in Figs. 1 and 3.

The ordinary plan of protecting the edges of the sides of a wooden scraper from wear is to bind said edges with tire or hoop-iron, which extends from the share C entirely around the sides and back to the share, but; as the wear is usually confined to a small space on the top and bottom of the sides, this plan involves the use of an unnecessary amount of iron, and does not concentrate the metal at the places where there is the most wear, and it is a tedious operation to take off such irons in order to weld in or on a new piece when they become worn; to obviate which objections I use a runner-strip, B, of considerable thickness at the center, where the greatest wear comes, and which is drawn out thin at the ends, and secured on the lower edges of the side pieces A, by countersunk screws *b b*, as shown in Figs. 2 and 5. This strip is readily removed and repaired when worn, and affords all the necessary protection to the sides, as the rockers G afford the requisite protection to their upper edges.

Having thus fully described the construction of my improved scraper, its operation will be readily seen. The operator holds the scraper by the handles *a a* or F F in the position shown in Fig. 2 while being filled, and when filled presses on the cross-bar H' to throw down the wheels J J to the position shown in Fig. 1, when the scraper can be easily drawn to any desired point where its load is to be delivered. To deliver the load the operator raises the

rear end of the scraper until the share C takes a firm hold in the ground, and the scraper continues to turn by reason of the draft of the team, when he throws the handles F out from between the pins *c c* and allows the scraper to overturn to the position shown in Fig. 3. The scraper then resting on the rockers G, and the draft being from the staples *e* in the direction indicated by straight arrows in Fig. 3, the scraper will continue to turn in the direction indicated by curved arrow until it again comes into the position shown in Fig. 1, when it can be drawn back and loaded as before.

Should the bottom E become worn or broken the operator has only to remove the screws *r r*, shown in Fig. 6, when the pieces A' can be taken off and the bottom removed and replaced, either in whole or in part, as required.

#### Claims.

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

1. The combination of the levers K K with bearing-wheels J J, links I I, levers H H, connected by cross-bar H' and scraper A A D, the several parts being arranged substantially as and for the purpose specified.

2. The sliding bar L and supporting spring M, arranged on the back D of the scraper A A D, substantially as and for the purpose specified.

3. The pivoted handles F F, secured by round-eyed staples *f f* to the scraper A A D, and resting, when in use, between the pins *c c* or their equivalents, substantially as and for the purpose specified.

4. The rockers G G, arranged on the upper part of the sides of the scraper A A D, substantially as and for the purpose specified.

5. The frame A A D, constructed with its side pieces in two parts, A A', and with a rabbet, *d d*, extending around the sides A A and back D thereof, and combined with a share, C, having an open or split back for the purpose of facilitating the removal and repair of the bottom E, substantially as is herein specified.

As evidence of the foregoing witness my hand this 16th day of December, A. D. 1871.

WILLIAM PINN.

Witnesses:

JOHN SHEPLEY,  
BENNET B. WARNER.