J. RICE.

SCRAPER AND DITCHER.

No. 193,893. Patented Aug. 7, 1877.

Fig. 1.

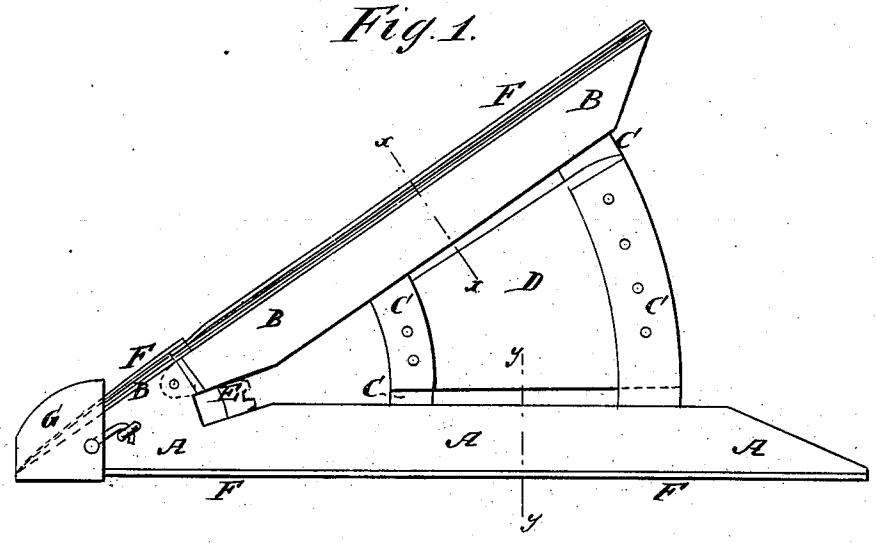


Fig. 2.

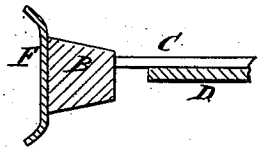
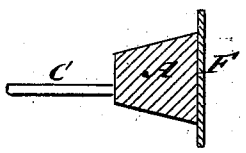


Fig. 3.



WITNESSES:

E. Wolff

J. H. Scarborough.

INVENTOR:

Joel Rice.

BY Munn & Co

ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOEL RICE, OF LIBERTY, MISSOURI.

IMPROVEMENT IN SCRAPER AND DITCHER.

Specification forming part of Letters Patent No. **193,893**, dated August 7, 1877; application filed June 18, 1877.

To all whom it may concern:

Be it known that I, JOEL RICE, of Liberty, in the county of Clay and State of Missouri, have invented a new and useful Improvement in Scraper and Ditcher, of which the following is a specification:

Figure 1 is a top view of my improved machine. Fig. 2 is a detail cross-section of the concaved side of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a detail cross-section of the straight side of the same, taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine for opening ditches, grading and repairing roads, grading yards, lawns, &c., and for various other uses where earth is to be moved short distances.

The invention consists in the construction and arrangement of parts, as hereinafter described and claimed.

The sides A and B of the ditcher are jointed together at one end, set at an angle to each other, and connected adjustably by means of curved overlapping arms C C, which are perforated to receive locking-pins. Said arms support a platform, D, upon which the driver is to stand or sit, when he desires to add his own weight to that of the scraper. To the bars A B, at their angle, is attached a notched bar, E, to which the draft is applied. The outer side of the side bar A is made straight, and is designed to rest against the land-side of the furrow opened by the plow which the scraper is following, and the outer side of the side bar B, that pushes back the dirt, is slightly concaved. The outer sides of the side bars A B are faced with metal plates F to prevent wear, the edges of which may project to cause the scraper to take a better hold upon the dirt. To the upper corner of the angle of the scraper is attached a small cap-block, G, to prevent the horses from being injured should they accidentally step back upon it.

The cap G should be so constructed that it may be attached to either corner of the angle, as may be required, and it is secured in place by a hook and eye, or other convenient fastening.

With this construction, the scraper may be used to throw the dirt to the right hand or to the left, as may be desired, or in following a right or left hand plow, or to throw the dirt to the same side while passing back and forth along the same furrow in opening a ditch, by using it with one or the other side upward, as may be required, to throw the dirt in the desired direction.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improvement in triangular scrapers, the bars A and B, pivoted together and provided, respectively, with flat and concave face-plates, which project above and below the parts A B, as shown and described, to adapt the scraper for use, as specified.

2. The combination of the detachable cap-block G with the upper corner of the angle of the scraper, substantially as herein shown and described.

JOEL RICE.

Witnesses:
JAS. D. OLDHAM,
JOHN CHRISMAN.