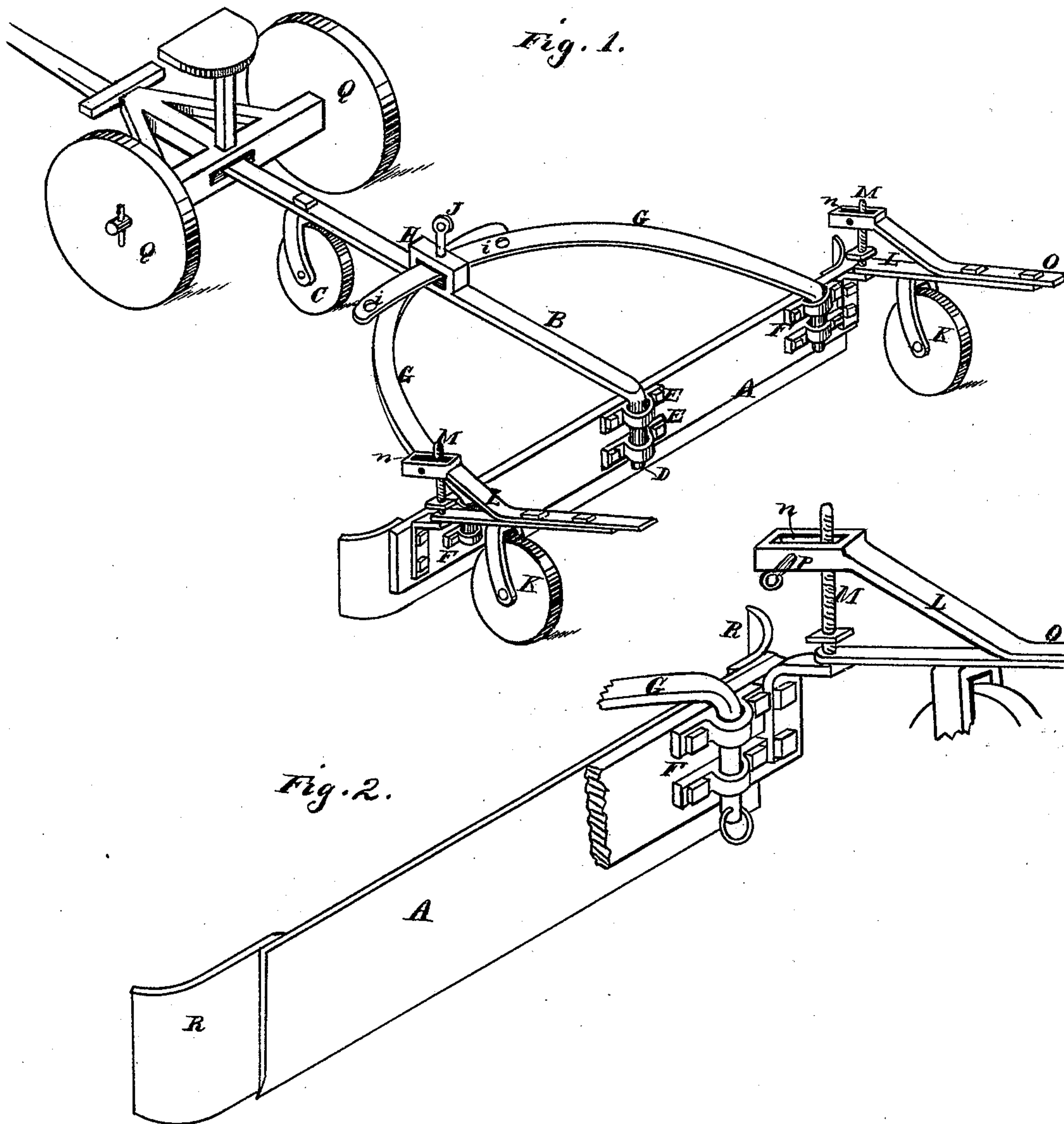


E. H. FARMER, C. REMINGTON & J. DIMOCK.

Scrapers.

No. 151,656.

Patented June 2, 1874.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD H. FARMER, CHARLES REMINGTON, AND JOSEPH DIMOCK,
OF GILROY, CALIFORNIA.

IMPROVEMENT IN SCRAPERS.

Specification forming part of Letters Patent No. **151,656**, dated June 2, 1874; application filed
April 17, 1874.

To all whom it may concern:

Be it known that we, EDWARD H. FARMER, CHARLES REMINGTON, and JOSEPH DIMOCK, of Gilroy, Santa Clara county, State of California, have invented a Grader and Ditcher; and we do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly apertains to make and use our said invention without further invention or experiment.

Our invention relates to an improvement in that class of machines which are designed to scrape up the earth, either for the purpose of grading and road-making, or for the purpose of making ditches or embankments; and it consists in the employment of a scraper, which is loosely connected by a central tongue in order to give it a central support, with a leading wheel or pair of wheels, and which may be set at any angle with this tongue by means of adjusting-arms, extending from the ends of this scraper to the tongue. Two steering and bearing wheels are so mounted as to follow loosely behind the scraper near each end, and they are operated by levers to guide it; or by a simple adjustment they may be made to lift it entirely from the ground, if desired.

Referring to the accompanying drawings for a more complete explanation of our invention, Figure 1 is a perspective view of our invention. Fig. 2 is an enlarged view of a part of the device.

A is the scraper, which is intended to stand in a vertical position, and is made of a length and height proportional to the power. We find it more economical to construct it of a size to be easily handled by a pair of horses, and to use as many as may be needed, rather than to employ a larger team and scraper. A tongue or beam, B, extends forward from the scraper, and has near its front end a caster-wheel, C. This tongue is bent at right angles or otherwise provided with a shaft, D, which is supported in boxes E on the back of the scraper in the center. Near each end of the scraper are other boxes, F, and the curved arms G G are fitted with a shaft to turn in these boxes similarly to the shaft D. The curved arms G cross each other and the cen-

tral beam B at the same point, sliding easily through a guide, H, upon the beam. The arms are perforated with holes *i i*, and a pin, J, can be passed through these holes, and one in the beam to hold the scraper firmly.

It will be manifest that the scraper can thus be turned and fastened so as to move at any desired angle with the beam B and line of draft, and thus it will throw up the earth upon one side or the other, as may be desired, to give the desired crown to a road-bed. This is assisted by carrying the end toward which the earth is to be carried to scrape less than the outside end. To effect this I employ two adjustable swivel or caster wheels, K K, mounted in frames L, which are fitted to swivel about vertical spindles M. These spindles are continuations of arms which are securely bolted to each end of the scraper. The upper part of each frame L is slotted, as shown at *n*, and by means of a lever, O, which extends out behind the frames, the end of the scraper can be lifted about the wheel as a fulcrum, and the lower part of the frame L, as shown.

If it be desired to travel from place to place without using the scraper, it will only be necessary to press down upon the end of the lever. This will lift up the end of the scraper, at the same time throwing the spindle M to the front of the slot N, where it may be retained by placing the pin P behind it. As the wheels K can swivel about it will be easy to move the scraper forward, sidewise, backward, and to turn it in any direction desired. The lever O serves to lift one or both ends partially or wholly from the ground to scrape on one or both sides, or not at all, as may be desired.

If preferred, a pair of wheels, Q Q, may be employed at the front of the beam B, which would then be bolted beneath their axle, and the team would be attached to a pole extending out in front.

When the scraper is to be employed to make ditches it will be necessary to secure the wings R R to each end of the scraper, which will, in this case be set so as to pull squarely.

As many of the ditches in this country are made of a shallow depth, and with sloping sides, it will be seen that it is only necessary to plow along the course of the proposed

ditch. The scraper is then drawn across the ditch transversely, carrying out the plowed and loose earth, which may be deposited at either side to form an embankment.

By this construction we are enabled to provide a scraper which is easily handled, one man to each lever being able to guide it, raise, or lower all or a part, as may be required, while, by means of the swiveling of the scraper about its central shaft D, and the holding-arms G, it will be seen that it can be instantly and easily adjusted to any desired angle.

I am aware that scrapers have heretofore been made having the ends of the scraper attached to the ends of a curved rod running through eyes on the end of the tongue, and adjustable in a line at right angles with the tongue; but in these instances there is no central support for the scraper.

Having thus described our invention, what we claim, and desire to secure by Letter Patent, is—

1. The scraper A, swiveled at the center to the tongue B, in combination with the swiv-

eled curved arms G G, staple H, and key J, all constructed and arranged as and for the purpose set forth.

2. In combination with the scraper A, the swiveling-wheels K K, mounted in the frame L, which is slotted at *n* and mounted upon the spindle M, so that the scraper can be elevated or depressed, or moved from side to side, substantially as and for the purpose herein described.

3. In combination with the scraper A, provided with swiveling and bracing arms, the swiveling, guiding, and elevating wheels K K, when the whole is constructed to operate substantially as and for the purpose herein described.

In witness whereof we hereunto set our hands and seals.

EDWARD H. FARMER. [L. S.]

CHARLES REMINGTON. [L. S.]

JOSEPH DIMOCK. [L. S.]

Witnesses:

GEORGE W. HOLLAWAY,

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