

No. 641,030.

Patented Jan. 9, 1900.

G. W. MURRAY.

COMBINED ROAD BREAKER AND SCRAPER.

(Application filed Feb. 14, 1898. Renewed Dec. 12, 1899.)

(No Model.)

Fig. 1.

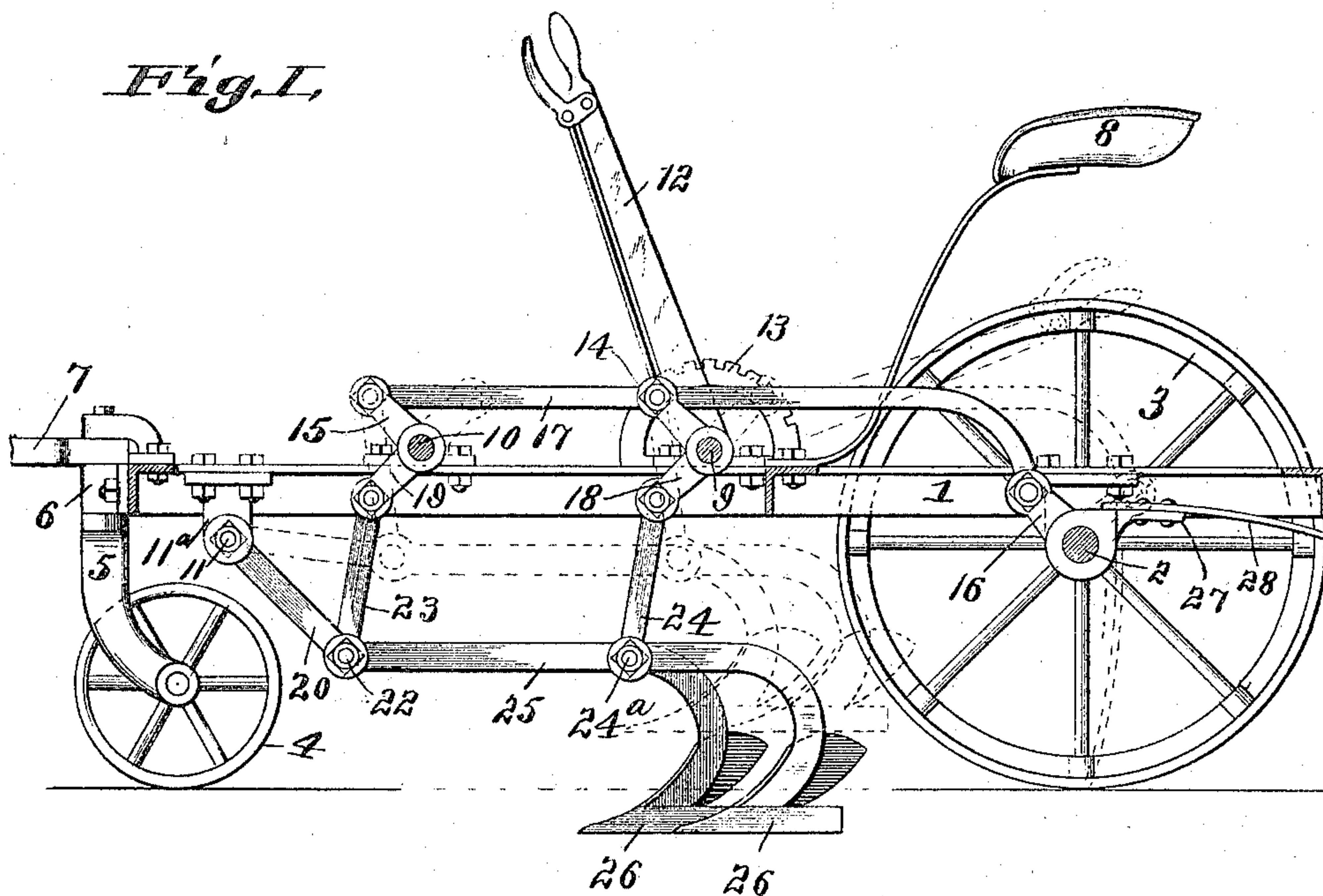
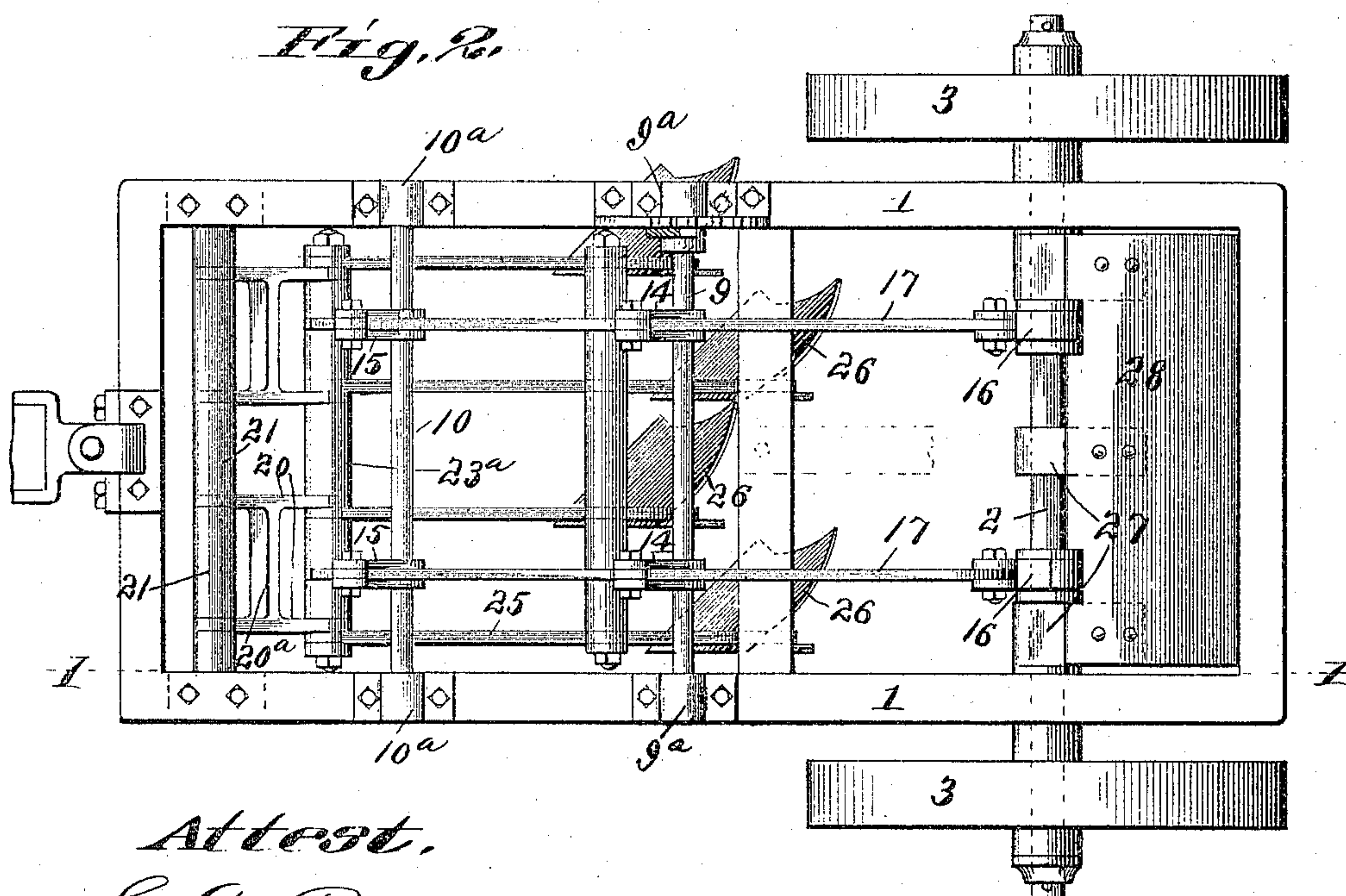


Fig. 2.



Attest.

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# UNITED STATES PATENT OFFICE.

GEORGE W. MURRAY, OF SUMTER, SOUTH CAROLINA.

## COMBINED ROAD BREAKER AND SCRAPER.

SPECIFICATION forming part of Letters Patent No. 641,030, dated January 9, 1900.

Application filed February 14, 1898. Renewed December 12, 1899. Serial No. 740,116. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. MURRAY, a citizen of the United States, residing at Sumter, in Sumter county, State of South Carolina, have invented a new and useful Improvement in a Combined Road Breaker and Scraper, of which the following is a full, clear, and exact description.

The object of this invention is to produce a light and handy road-working machine simple in construction, of low cost, and easily repaired.

Referring to the drawings, Figure 1 is a longitudinal vertical section. Fig. 2 is a top view or plan, the seat shown in Fig. 1 being removed to more clearly show the construction.

The machine consists of a frame 1, mounted on a shaft 2, which is secured to the under side of the frame 1. Wheels 3 are mounted on shaft 2, and the front end of the frame 1 is supported by a caster-wheel 4, mounted in a fork 5, which fork passes through a journal 6, secured to the front cross-bar of the frame 1, and a tongue 7 is secured to the upper end of the fork-shaft 5 and serves as the means for drawing and guiding the machine. A seat 8 of the ordinary kind employed in this class of machinery is mounted on a frame 1 in the usual manner. Across the frame 1 extends the rock-shaft 9, mounted in journals 9<sup>a</sup> on the upper side of the frame 1, and a couple of feet forward of the shaft 9 extends a similar rock-shaft 10, mounted in similar journals 10<sup>a</sup>, secured to the upper part of the frame 1. Still farther forward, but on the under side of the frame 1, extends a shaft 11, mounted in journals 11<sup>a</sup>. Secured to the shaft 9 is a hand-lever 12, provided with the usual ratchet 13 for maintaining it in any desired position. Between the journals 9<sup>a</sup> and secured to the shaft 9 extend in an upward direction a pair of cranks 14. From the shaft 10 and in line with the cranks 14 extend a similar pair of cranks 15, and from the rear shaft 2, on which the wheels 3 are mounted, there are placed in line with the cranks 14 and 15 two short cranks 16. The cranks 14, 15, and 16 are of the same length and are connected together and held parallel by a bar 17, which is pivoted to the outer end of each of the aforesaid cranks, the bar 17 being curved downwardly at the rear end in order to con-

nect with the crank 16. From the shafts 9 and 10 there extend in a direction perpendicular to the cranks 14 and 15 cranks 18 and 19, respectively, the said cranks 18 and 19 being about the same length as the cranks 14 and 15. From the shaft 11 there depends a series of bars 20, which are coupled together in pairs by braces 20<sup>a</sup>, the bars 20 being held in their respective lateral positions by sleeves 21, surrounding the shaft 11. Through the lower end of the bars 20 extends a shaft 22, which is connected to the cranks 19 by connecting-bars 23. Small sleeves 23<sup>a</sup>, surrounding the shaft 22, serve to hold the bars 20 in their proper position laterally and keeping the bars 23 in their proper place. From the cranks 18 there depend a pair of connecting-bars 24 similar and of the same length as the bars 23. These bars 24 support a shaft 24<sup>a</sup> at their lower extremity. From the shaft 22 there extend a series of horizontal beams 25, which connect with the shaft 24<sup>a</sup> and extend back of the same, being bent in a downward curve and terminate in the plowshares 26. From the cranks 16 there extend lugs 27, to which is secured a road-scraper 28.

The operation of this machine is as follows: The hand-lever 12 is drawn back toward the seat 8, raising the plowshares 26 until they just clear the ground. This is accomplished in the following manner: The hand-lever 12 rotates the shaft 9 in a rearward direction, raising the crank 18 and moving the crank 14 to a position near the vertical. The connecting-bar 17 moves the cranks 15 and 19 into parallel positions with the cranks 14 and 18. The cranks 18 and 19 through the rods 23 and 24 raise the beams 25 and so lift the plowshares 26 out of the ground. The crank 16 will be parallel to the crank 14, and the scraper 28, which is secured to and is inclined at an angle of about forty-five degrees to the crank 16, will then be slightly raised above the ground and freed from it. The machine is now ready to be driven to the place where the operation is to commence. The machine is brought in line and the hand-lever 12 is forced forward, bringing the plows 26 into the ground. The machine is thus used to break the earth. When it is desired to scrape the earth up into heaps to be removed by the shovels or wagons, the hand-lever 12 is



brought back into the position indicated by the dotted lines. This brings the scraper 28 into a vertical position. As the machine is driven forward the earth accumulates before 5 the scraper 28 until a sufficient amount is gathered together. The hand-lever 12 is then swung forward until the plowshares 26 are just about to touch the ground, which raises the scraper 28 high enough to pass over the heap 10 of dirt. The hand-lever 12 is then drawn back into the position indicated in the dotted lines and the operation repeated.

Having described my invention, I claim—

15 1. The combination in a combined road breaker and scraper of the frame 1, mounted on wheels 3, the plows 26 mounted on beams 25, the scraper 28 hinged to the shaft 2,

means for raising the plows 26 and means for oscillating the scraper 28, substantially as described. 20

2. The combination in a road breaker and scraper of the frame 1, mounted on wheels 3, the plows 26 suspended beneath the frame 1, and hinged thereto; the scraper 28, hinged to swing to the rear, and a hand-lever so arranged that the plows 26 may be depressed 25 and the scraper is raised by one movement of the hand-lever, and vice versa, substantially as described.

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Witnesses:

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E. G. NALLE.