

No. 685,657.

Patented Oct. 29, 1901.

W. J. WALKER & J. H. OSTEN.
ROAD SCRAPER AND GRADER.

(Application filed Jan. 10, 1901.)

(No Model.)

3 Sheets—Sheet 2.

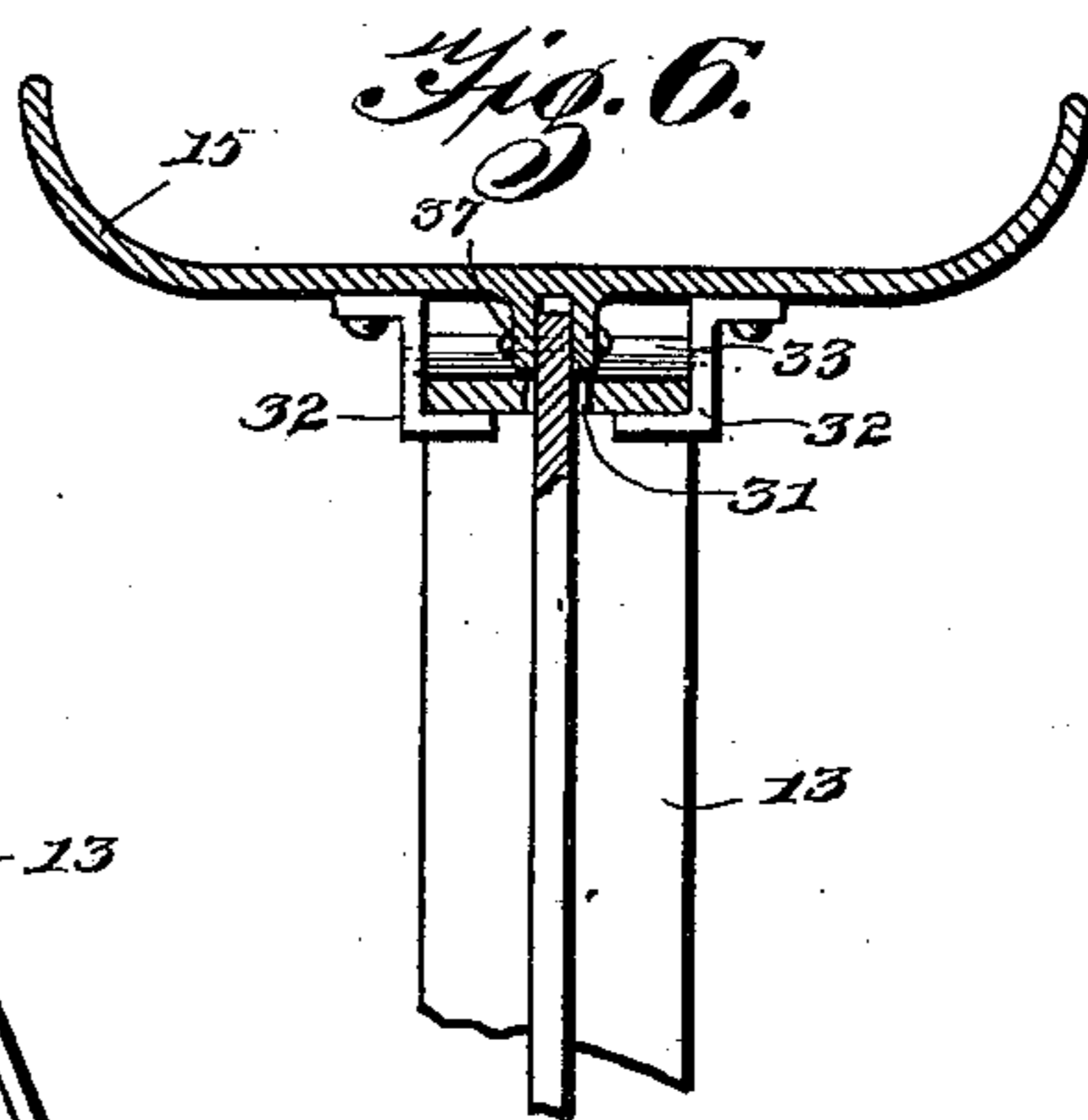
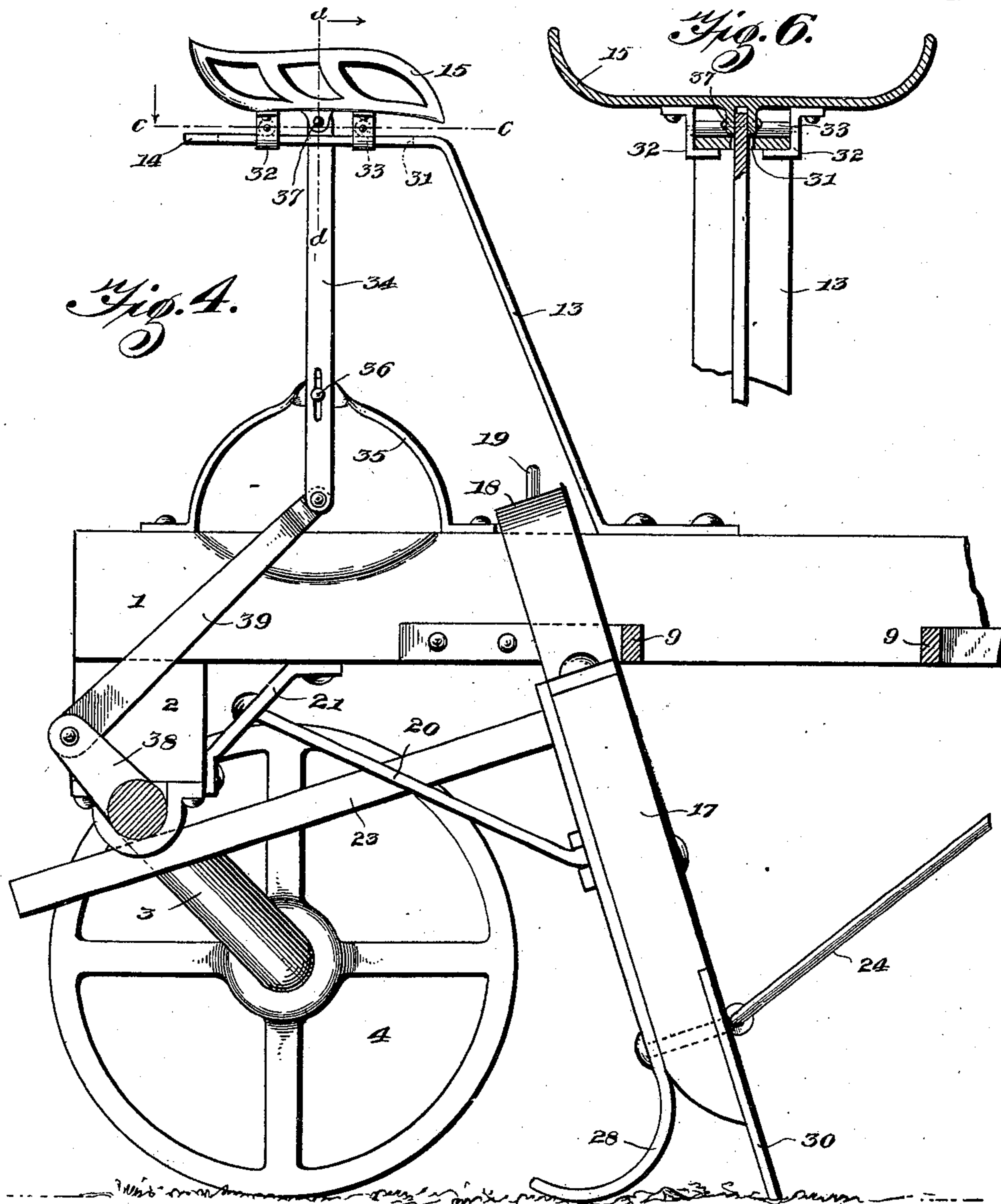


Fig. 4.

Fig. 6.

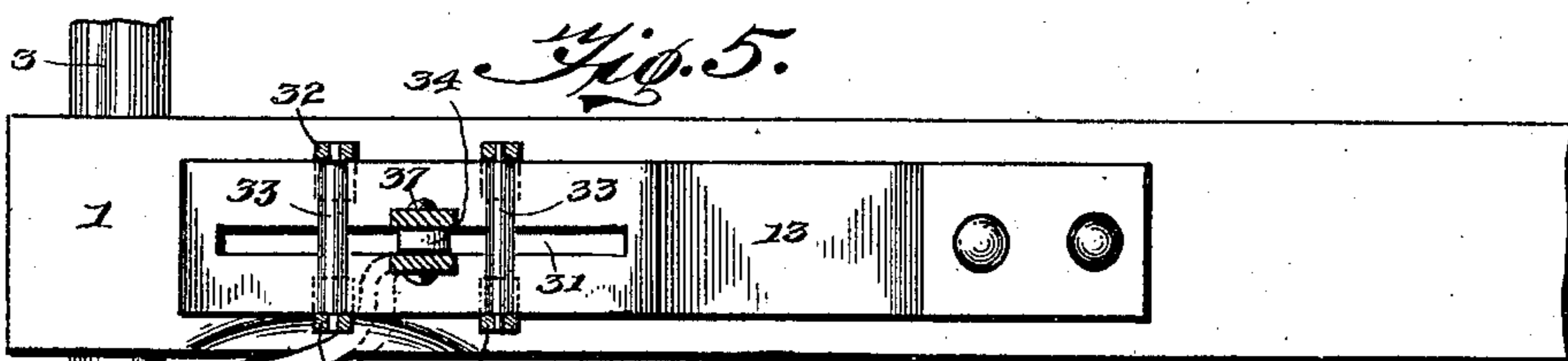


Fig. 5.

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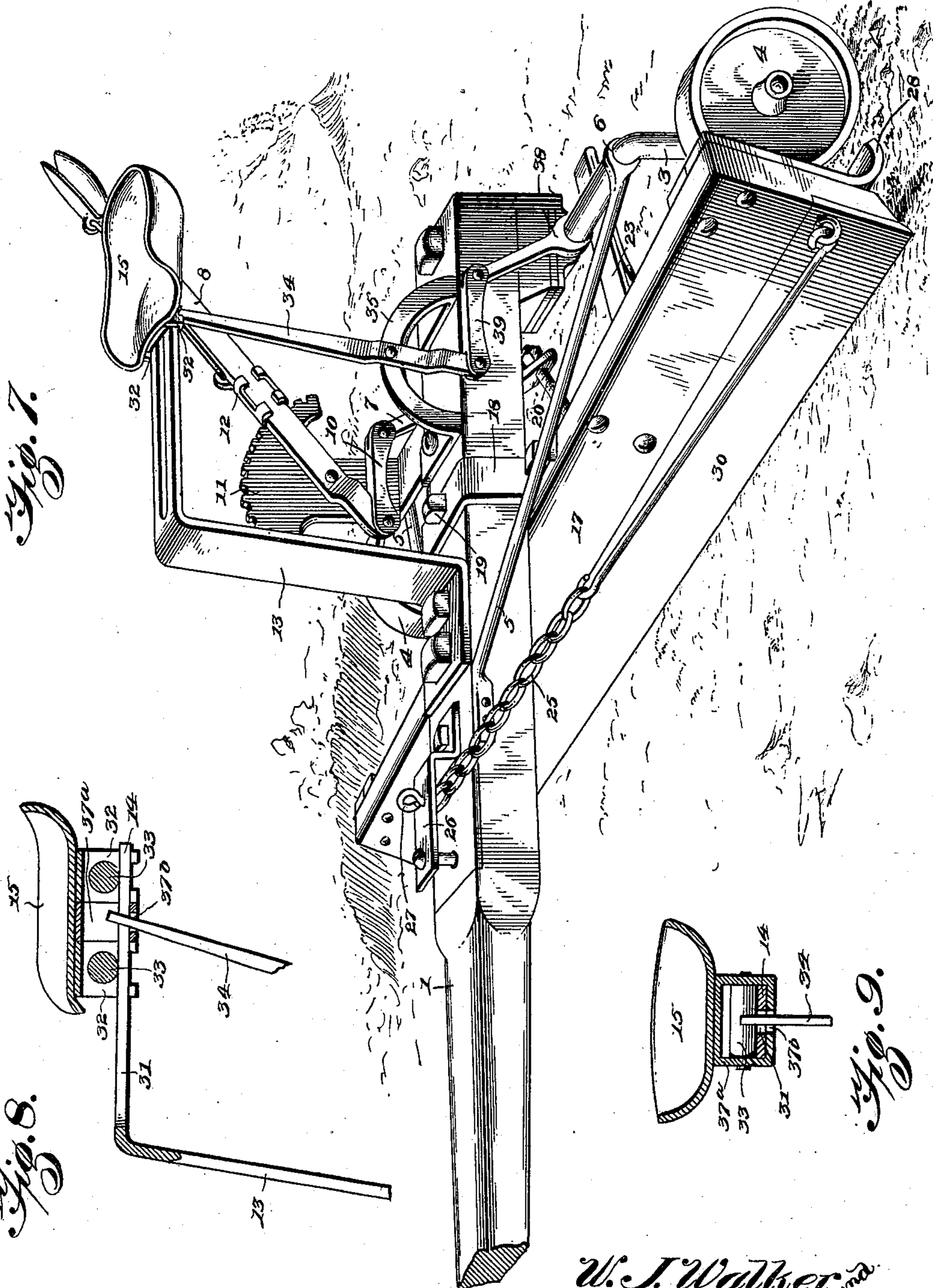
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UNITED STATES PATENT OFFICE.

WILLIAM J. WALKER AND JAMES H. OSTEN, OF WHITE CITY, KANSAS.

ROAD SCRAPER AND GRADER.

SPECIFICATION forming part of Letters Patent No. 685,657, dated October 29, 1901.

Application filed January 10, 1901. Serial No. 42,799. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM J. WALKER and JAMES H. OSTEN, citizens of the United States, residing at White City, in the county of Morris and State of Kansas, have invented a new and useful Road Scraper and Grader, of which the following is a specification.

Our invention is an improved road scraper and grader; and it consists in the peculiar construction and combination of devices herein-after fully set forth and claimed.

In the accompanying drawings, Figure 1 is a top plan view of a road scraper and grader constructed in accordance with our invention. Fig. 2 is a side elevation of the same. Fig. 3 is a detail sectional view of the same, taken on a plane indicated by the line *a a* of Fig. 1. Fig. 4 is a section taken on the line *b b* of Fig. 1. Fig. 5 is a detail view, partly in section, on the line *c c* of Fig. 4. Fig. 6 is a detail section on the line *d d* of Fig. 4. Fig. 7 is a perspective view of a modified form of our invention. Fig. 8 is a detail sectional view of the seat and its supporting-bar. Fig. 9 is a similar view of the same, taken on a plane at right angles to that of Fig. 8.

To the rear end of the tongue 1, on the under side thereof, is secured a block 2, in which is journaled the central portion of a cranked axle 3. The said axle has supporting-wheels 4, of suitable size, mounted on its spindles. Brace-bars 5 have their front ends bolted to opposite sides of the tongue 1 and diverge rearward therefrom and are provided at their rear ends with bearings 6 for the cranked axle 3. The said cranked axle is provided with an arm 7. A hand-lever 8 is fulcrumed to a bracket 9, that is bolted to the tongue 1, and projects laterally from one side thereof, and said lever is connected to the arm 7 of the cranked axle by a rod 10. Hence by operating the hand-lever the cranked axle may be partly turned in its bearings, so as to raise or lower the tongue. The bracket 9 is provided with a toothed segment 11, which is engaged by the usual spring-pressed dog 12 on the hand-lever 8, and thereby the latter may be secured in any desired position. On the tongue, near the rear end thereof, is bolted the seat-supporting bar 13, having the rearward-extending arm 14, which carries an adjustable seat 15.

The scraper 17 is provided on its upper side at its center with an arched bar or strap 18, which spans the tongue at a suitable distance from the rear end of the latter and is pivotally connected thereto by a bolt or pin 19. Thereby the scraper may be turned to any desired angle with relation to the line of draft. A link and brace rod 20 has its rear end secured to a keeper 21, which is bolted to the under side of the tongue and to the front side of the block 2. The front end of said link and brace rod is pivotally connected to the rear side of the scraper 17 at the center thereof, as at 22. Arms 23 extend rearward from the scraper 17 and are disposed under the central arched portion of the cranked axle and serve to prevent the scraper from rocking or moving unduly on its pivot 19. To the ends of the scraper are connected adjusting-rods 24, the ends of which are connected together by an adjusting-chain 25, which is secured between the upper side of the tongue and the lower side of a keeper 26 by means of a pin 27, which engages one of the links of said adjusting-chain. This construction and arrangement of devices admits of the scraper being secured in any desired position and at any angle with relation to the line of draft to enable the earth scraped thereby to be thrown in either direction required. On the rear side of the scraper, near the ends thereof, are secured vertically-adjustable shoes 28, the lower ends of which are curved rearwardly to form runners 29, that bear upon the soil, the function of these shoes, as will be understood, being to admit of the cutting-blade 30 of the scraper being set to operate at any desired depth in the soil. Since the scraper is pivotally connected to and supported by the tongue 1, and since the latter, as hereinbefore described, may be raised or lowered by adjusting the hand-lever, it follows that the scraper may be raised and lowered. When the scraper is raised, it clears the ground and the machine is inoperative. Hence earth may be readily scraped from one part of a road and filled into or discharged upon any portion thereof required.

The arm 14 of the seat-supporting bar is provided with a longitudinal slot 31. The seat is provided with depending lugs 32, which operate on opposite sides of and engage the

lower side of the arm 14 and carry antifriction-rollers 33, which travel on the said arm. Any other suitable means may, however, be employed to secure the said seat on said arm and permit the adjustment of said seat thereon, and we do not desire to limit ourselves in this particular.

A shifting lever 34 is fulcrumed on a support 35 on the rear portion of the tongue, as at 36, and has its upper end extended through the slot 31 and pivotally connected to the seat, as at 37. The axle 3 has a rock-arm 38, that is connected to the lower end of shifting lever 34 by a pitman 39.

From the foregoing it will be understood that when the scraper is lowered and at work the seat is automatically moved forward, thereby disposing the weight of the driver almost directly over the scraper, and that when the scraper is raised to inoperative position the seat is automatically shifted rearward on the arm 14 of the seat-supporting bar, thereby disposing the driver's weight over the wheels 4 and relieving the front end of the tongue of downward pressure, and hence correspondingly lightening the load on the necks of the draft-animals.

In the modified form of our invention shown in Figs. 7, 8, and 9 the shifting lever 34 has its upper end engaged with a suitable strap or loop 37^a, with which the seat 15 is provided and which passes around and travels on the supporting-arm of the seat-bar, the said loop or strap 37^a being provided with a slot 37^b, in which the upper end of said shifting lever plays.

Having thus described our invention, we claim—

1. In a wheeled scraper, the combination of a tongue, a cranked axle to which the same is connected, said axle having the supporting-wheels, a lever to adjust said axle and thereby raise and lower the tongue, a scraper

pivotally and flexibly connected to the tongue, and arms extending rearward from said scraper and bearing under said axle, for the purpose set forth, substantially as described.

2. The combination of the tongue, the cranked axle connected thereto and having supporting-wheels, a lever to turn said cranked axle and thereby raise and lower the tongue, and a scraper pivotally connected to the tongue and adapted to be adjusted as required, said scraper being provided with vertically-adjustable shoes for the purpose set forth, substantially as described.

3. In a wheeled scraper, the combination of a tongue, a cranked axle to which the same is connected said axle having the supporting-wheels, a lever to adjust said axle and thereby raise and lower the tongue, a scraper having an arched keeper on its upper side, spanning said tongue and pivotally connected thereto, and a link and brace rod having its rear end connected to the tongue and its front end pivotally connected to the rear side of the scraper, substantially as described.

4. The combination of the tongue or frame, a cranked axle mounted therein and having an operating-arm, a lever connected to the tongue or frame and connected to said arm and thereby adapted to turn said axle to raise and lower the tongue or frame, a scraper attached to said tongue or frame, a longitudinally-adjustable seat, and connections between said seat and said cranked axle, to automatically adjust said seat, for the purpose set forth, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM J. WALKER.
JAMES H. OSTEN.

Witnesses:

M. G. FREY,
H. O. WALKER.