

No. 747,513.

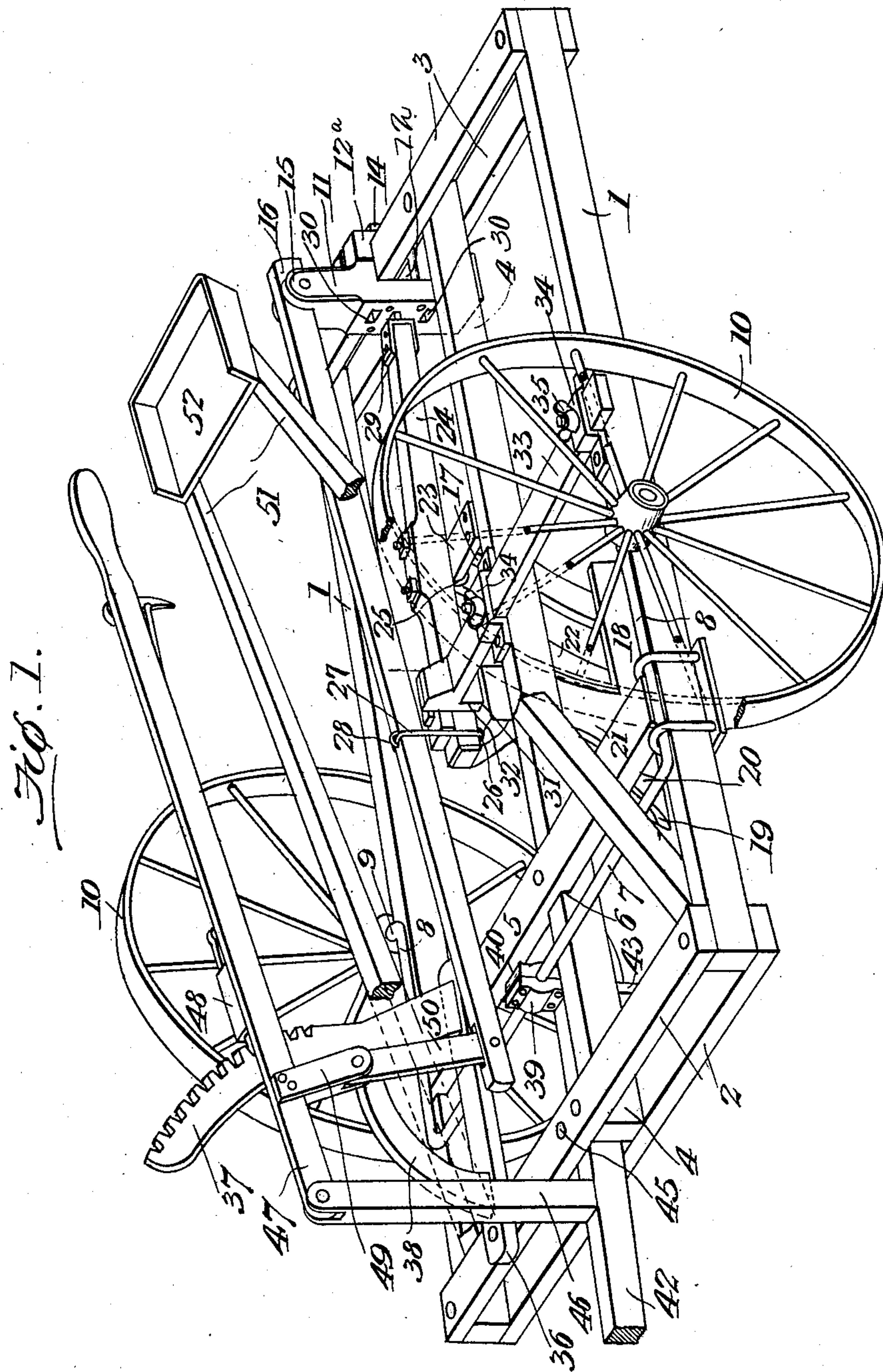
PATENTED DEC. 22, 1903.

P. P. TOWNSEND.  
WHEEL PLOW.

APPLICATION FILED SEPT. 16, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses  
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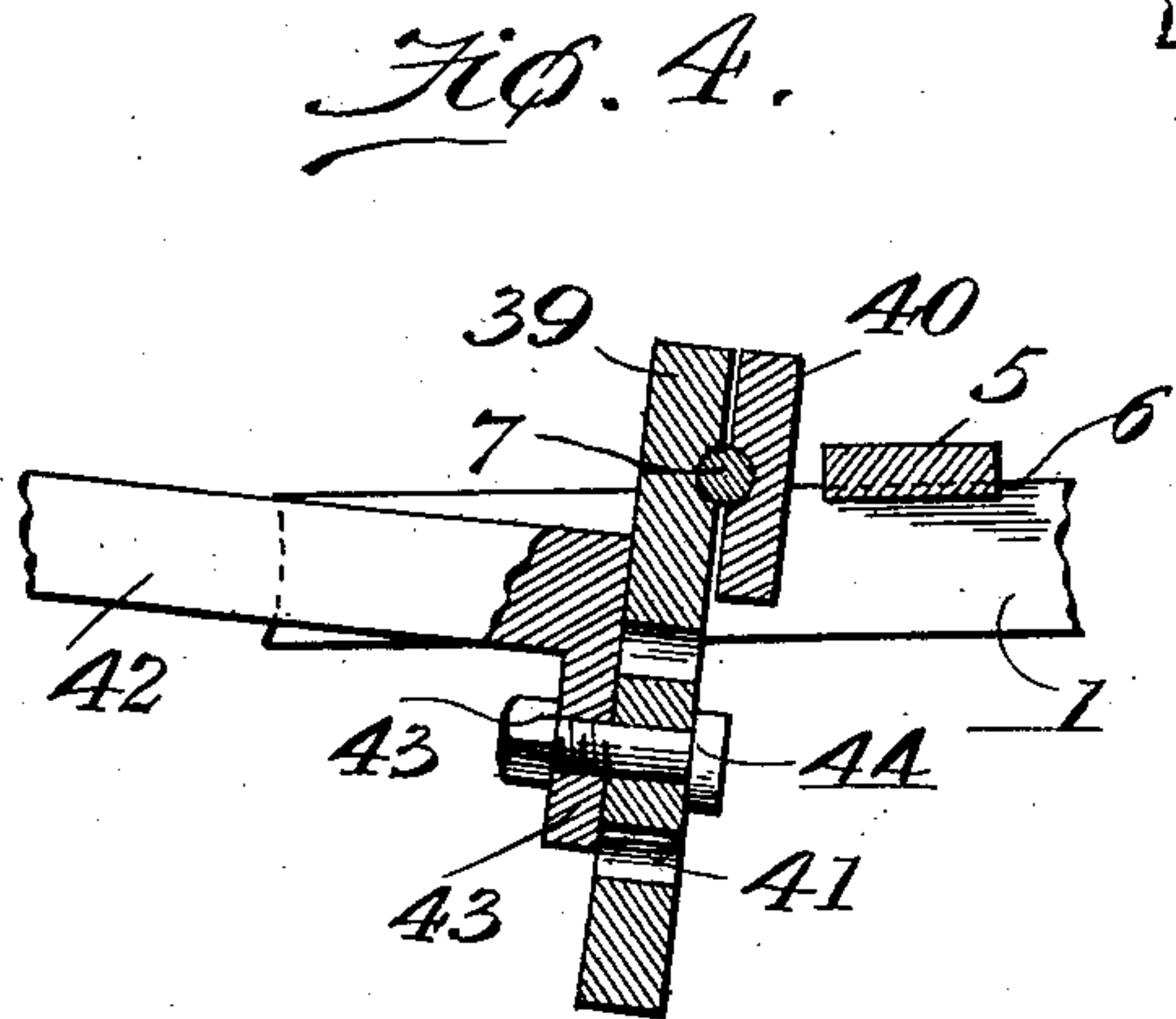
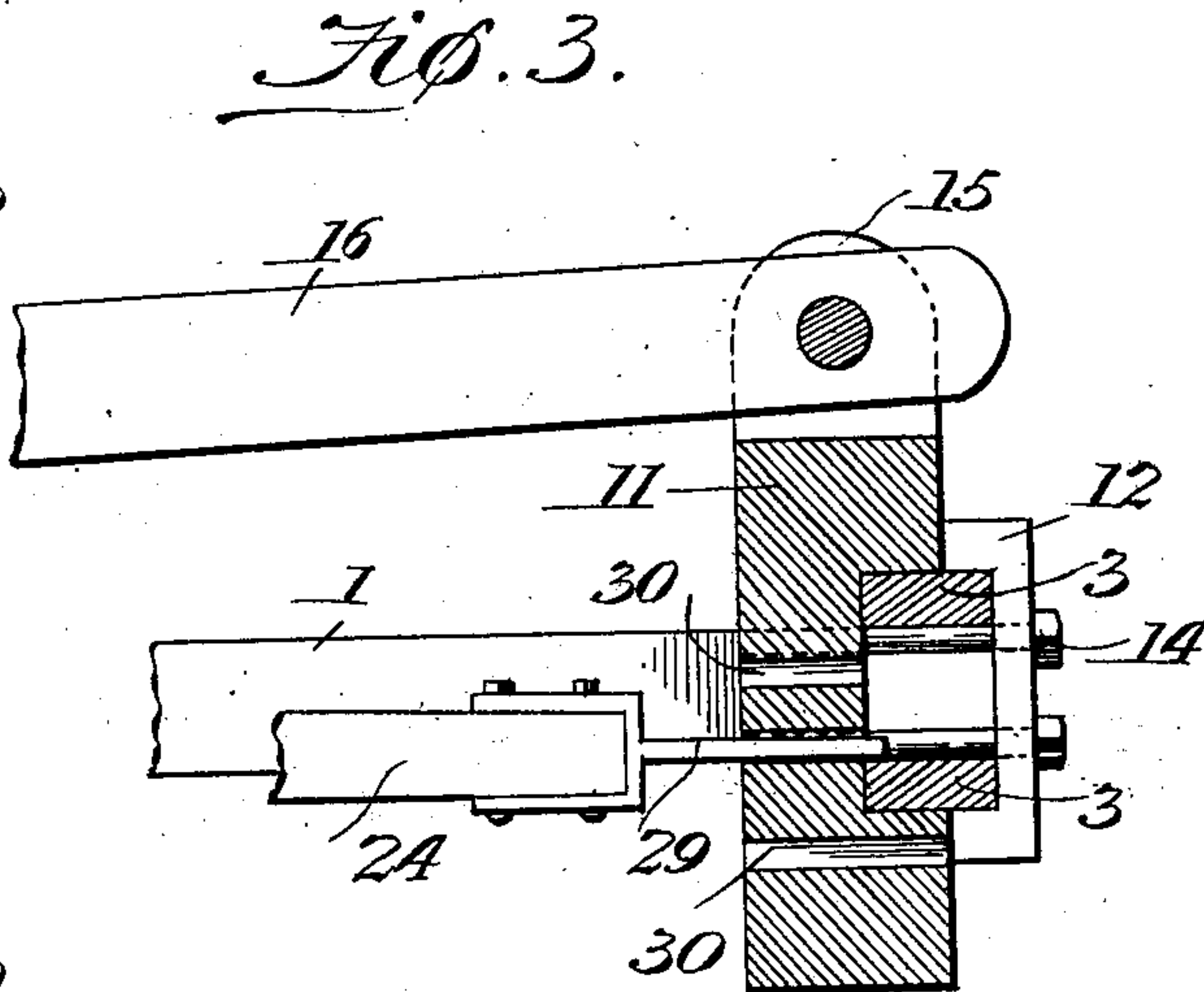
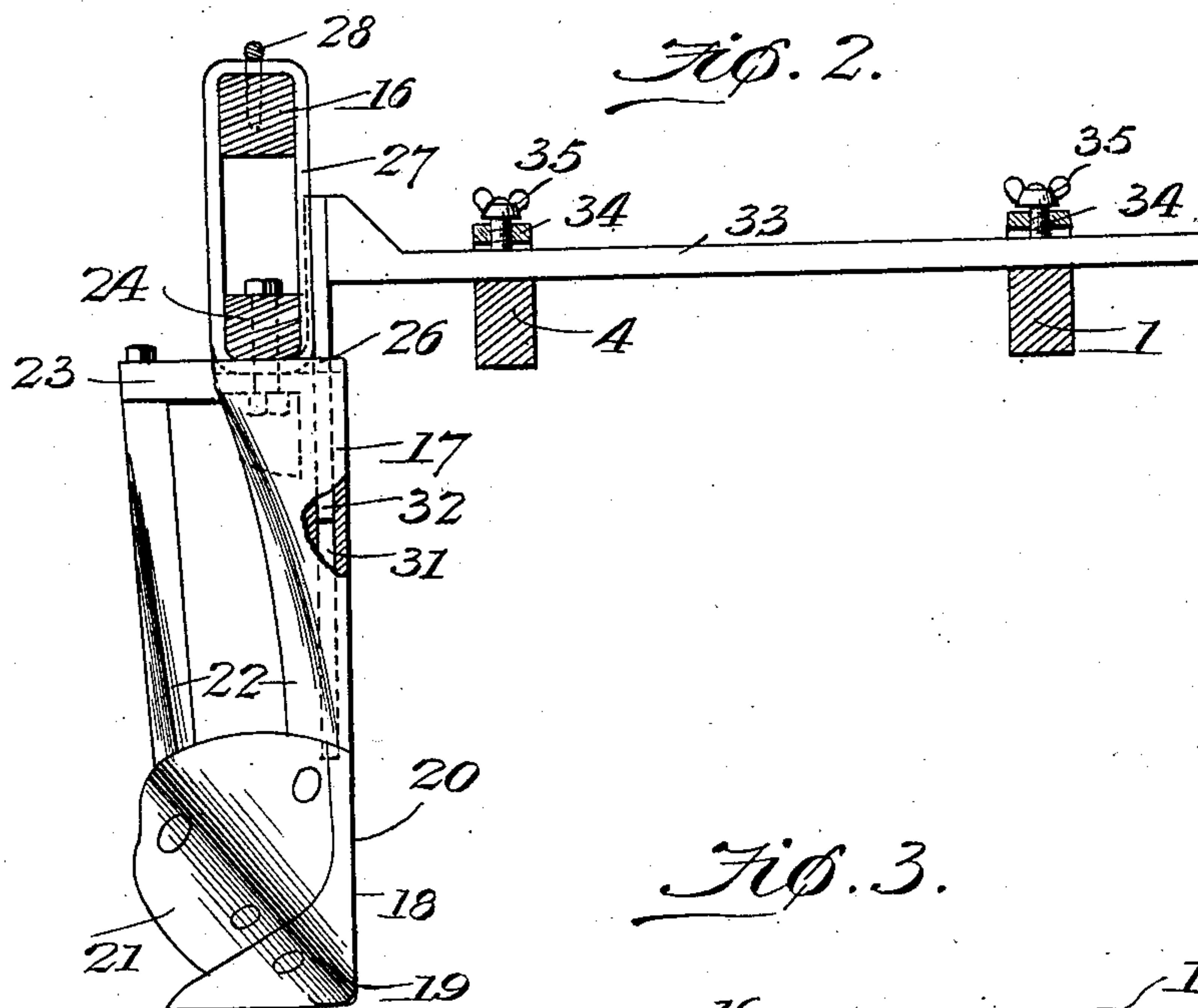
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# UNITED STATES PATENT OFFICE.

PRESTON P. TOWNSEND, OF WHITEBURG, MARYLAND.

## WHEEL-PLOW.

SPECIFICATION forming part of Letters Patent No. 747,513, dated December 22, 1903.

Application filed September 16, 1903. Serial No. 173,457. (No model.)

*To all whom it may concern:*

Be it known that I, PRESTON P. TOWNSEND, a citizen of the United States, residing at Whiteburg, in the county of Worcester and State of Maryland, have invented a new and useful Wheel-Plow, of which the following is a specification.

This invention relates to a wheel-plow; and it has for its object to provide a device of this class which shall possess superior advantages in point of simplicity, durability, ease of operation, and general efficiency.

With these ends in view my invention comprises a frame structure supported upon wheels and provided with a laterally-adjustable carrier which is connected adjustably with the beam extending rearwardly from the plow-standard, which is thereby pushed in a forward direction by the traction applied to the plow-frame.

The invention further comprises means whereby the plow may be raised from or set into the ground and retained securely at any position to which it may be adjusted.

The invention further consists in means for maintaining the plow in its proper position when adjusted laterally by means of the carrier.

The invention further consists in improved traction means applied to the frame structure and in other details of construction which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a wheel-plow constructed in accordance with the principles of my invention. Fig. 2 is a transverse sectional view taken vertically through the plow in front of the adjusting-slide. Fig. 3 is a sectional detail view taken longitudinally through the adjustable carrier and related parts. Fig. 4 is a sectional detail view taken through the axle and the traction means.

Corresponding parts in the several figures are indicated by similar numerals of reference.

The frame of my improved wheel-plow is composed, essentially, of side bars 1 1, connected at their front ends by cross-bars 2 2, secured to the upper and lower sides of said side bars. The rear ends of the latter are

connected by means of cross-bars 3 3, which likewise are placed against the upper and lower sides of the side bars of the frame. The latter is provided with a longitudinal brace-beam 4, the ends of which are made fast between the front and rear cross-bars 2 2 and 3 3, and the said longitudinal beam is reinforced by a cross-piece 5, which spaces the side pieces 1 1 and which is provided with a notch or recess 6 in its under side for the reception of the longitudinal brace-beam.

7 designates the axle, which is placed upon the upper part of the frame slightly in front of the cross-piece 5 and which is provided at its ends with rearwardly-extending cranks 8, which are supported upon the cross-pieces 1. The rear ends of the cranks 8 are bent outwardly to form the spindles 9, upon which the traction-wheels 10 are revolubly mounted.

11 designates a block which constitutes the plow-carrier and which is provided in its rear side with a recess 12, including the upper and lower rear cross-bars 3 of the frame. Clip-plates 12<sup>a</sup>, which are disposed against the rear edges of the rear cross-bars, are connected by means of bolts 14 with the carrier 11, said bolts extending through the space between the upper and lower cross-bars 3, upon which by loosening the said bolts the said carrier may be conveniently adjusted laterally in the space between the longitudinal brace-beam and the adjacent side bar 1 of the frame. The carrier 11 is provided with upwardly-extending lugs 15, between which is pivotally mounted a lever 16, which extends forwardly beyond the cross-bar 5.

17 designates the plow-standard, which carries at its lower end the landside 18 and point 19, which latter has the upwardly-extending colter or cutting edge 20. Between the point and the colter or cutting edge is thus formed a recess in which the moldboard 21 is firmly secured, said moldboard being also fitted to and connected with the standard 17. A pair of shanks 22 are connected at their lower ends, respectively, with the landside 18 and with the moldboard 21, and said shanks at their upper ends are connected by a cross-piece 23, which is disposed in about the same horizontal plane as the upper end of the standard 17.



24 designates a short beam, the front end of which is bolted to or otherwise connected with the upper end of the standard. Said beam is also connected with the cross-piece 23, connecting the upper ends of the shanks 22 by means of a clip 25. The upper end of the shank has a transverse groove 26, in which below the front end of the beam 24 is located a link 27, the upper end of which engages the upper side of the lever 16, which latter extends through the said link and is connected therewith by means, such as a staple 28, which will not interfere with the free vibration of said link. The rear end of the plow-beam has a bracket 29, constructed, preferably, of metal and adapted to engage any one of a plurality of perforations 30 in the front side of the carrier 11. The perforations 30 while of sufficient size to receive the bracket 29 will not admit the rear end of the plow-beam, upon which the said carrier thus exercises a pushing action in a forward direction when the machine is in operation.

The standard 17 of the plow is provided in its rear side with a vertical recess 31, extending to the top of said standard and adapted to receive a lip 32, extending downwardly from the slide 33, which is mounted in suitable keepers 34 in the upper sides of the longitudinal brace-beam 4 and upon one of the side bars of the frame. The keepers 34 may be provided with set-screws 35, whereby the slide 33 may be retained in any position to which it may be adjusted. This slide serves to hold the standard of the plow steady during the operation of the device by preventing lateral displacement thereof either to the right or to the left and also by bearing or pushing in a forward direction upon the said standard.

The upper front cross-bar 2 together with the transverse brace 5 of the frame support a plate 36, upon which is mounted a segment-rack 37, which is supported by a curved brace 38.

The traction device of my improved plow includes a clip consisting of two members 39 and 40, clamped upon the axle 7 by means of screws or bolts connecting the said members. The front member 39 is extended downwardly and has a plurality of perforations 41.

42 designates the tongue, which is provided at its rear end with a depending flange 43, having a perforation through which passes a bolt 44, which may be extended through any one of the perforations 41, thereby connecting the rear end of the tongue adjustably with the clip 39. The tongue extends between the front frame members 2 2, being loosely connected with the same by means of a vertical pin or bolt 45. The tongue 42 supports an upright 46, at the upper end of which is mounted an operating-lever 47, equipped with a spring-actuated lock-dog 48, engaging the segment-rack 37. The lever 47 has a downwardly-extending bracket 49,

which is connected by means of a pivoted link 50 with the front end of the rocking lever 16.

A pair of bars 51, secured to the inner sides of the side beams 1 1, near the front ends of the latter, support a seat 52, said seat-bars being in turn supported upon the cross-bars 5 of the frame.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my improved wheel-plow will be readily understood. The traction of the draft, as will be readily seen, is applied directly to the axle, which being firmly connected with the frame serves to move the latter in a forward direction upon the transporting-wheels. The carrier-block 11, supported upon the rear cross-bars of the frame, will thus push in a forward direction upon the rear end of the plow-beam, and the depending lip 32 of the slide-bar 33 by engaging the standard will serve not only to steady the latter, but also to assist in pushing it and the plow in a forward direction. This method of propelling the plow will have a distinct tendency to prevent the nose or point of the plow from starting in an upward direction, and by properly adjusting the rear ends of the beam with relation to the openings 30 in the block 11 the ends or point may be pointed slightly in a downward or upward direction or maintained in a perfectly level position, as may be desired. The rear end of the plow-beam may also be shifted from one to another of said openings when the plow is raised or lowered for the purpose of engaging the ground at a less or greater depth. When it shall be desired to elevate the plow from the ground, this may be easily accomplished by manipulating the lever 47, the lock-dog of said lever having been previously disengaged from the segment-rack 37. Owing to the extensive leverage, the operation of raising or lowering said plow may be effected with great facility, and in consequence thereof the plow is under the easy and perfect control of the driver. Lateral adjustment of the plow with relation to the draft may be readily effected by simply moving the carrier 11 and the slide 33 in either direction. The traction is likewise capable of adjustment by properly adjusting the clip 39 40 upon the axle.

I have in the foregoing described a simple and preferred construction of my improved wheel-plow, and I desire it to be understood that I do not necessarily limit myself to the precise structural details herein set forth, but reserve the right to any changes, alterations, and modifications which may be resorted to within the scope of my invention and without departing from the spirit or sacrificing the utility of the same.

Having thus described my invention, I claim—

1. In a wheel-plow, a frame, a laterally-slidable carrier upon the rear end of said



frame, a plow having a rearwardly-extending beam, and means for connecting the latter adjustably with openings in the carrier.

2. In a wheel-plow, a frame, a laterally-adjustable carrier at the rear end of said frame, said carrier having a plurality of openings arranged vertically, one above the other, a plow having a rearwardly-extending beam, a bracket extending rearwardly from said beam and adapted for adjustable engagement with the openings in the carrier, and auxiliary bracing, adjusting, and supporting means for said plow.

3. In a wheel-plow, a frame, a carrier laterally adjustable upon the rear end of said frame, a plow having a standard provided with a vertical recess, a slide having a depending lip engaging said recess, and a beam extending rearwardly from the plow and engaging the laterally-movable carrier.

4. In a wheel-plow, a frame, a plow having a standard provided with a vertical recess, shanks connected with said plow, a cross-piece connecting said shanks, a beam mounted upon said cross-piece and upon the upper side of the standard and extending rearwardly, means for connecting the rear end of said beam with the laterally-adjustable carrier, and a slide movable laterally upon the frame and having a lip engaging the recess in the plow-standard.

5. In a wheel-plow, a plow comprising a standard, a landside, a point having an upwardly-extending colter, a moldboard fitted in the recess between said point and colter and secured to the standard, shanks connected with and extending upwardly from the landside and the moldboard, a cross-piece connecting said shanks, and a beam mounted upon and extending rearwardly from said cross-piece and the standard, in combination with a frame having laterally-adjustable means engaging the rear end of the plow-beam and the standard to push the plow in a forward direction when traction is applied.

6. In a wheel-plow, a frame, a carrier laterally adjustable upon the rear end of said frame, said carrier being provided with upwardly-extending lugs, a plow having a standard and upwardly-extending shanks, a cross-piece connecting the latter, a rearwardly-

extending beam supported upon said cross-piece and upon the standard, a rocking lever pivoted between the lugs of the carrier, a link connecting said lever with the plow-beam, and means for adjusting and retaining said operating-lever.

7. In a wheel-plow, a rectangular frame having a longitudinal brace-beam, a cross-brace connecting the side beams of the frame and having a notch engaging the longitudinal brace-beam, an axle supported upon the frame in front of the cross-piece and having rearwardly-extending cranks provided with spindles for the supporting-wheels, a clip connected adjustably with the axle, a tongue having a depending rear flange connected adjustably with said clip, a carrier laterally adjustable upon the rear part of the frame, a plow having a rearward-extending beam connected adjustably with said carrier, a lever pivotally connected with the latter, a standard mounted upon the tongue, a hand-lever fulcrumed to said standard and having a downward-extending bracket, a regulating-lever connected pivotally with the carrier at the rear end of the frame, a link connecting said regulating-lever with the bracket depending from the hand-lever, means for retaining the latter at various points of adjustment, and a link connecting the hand-lever with the plow.

8. In a wheel-plow, a frame comprising side bars, pairs of cross-bars connecting the front and rear ends of said side bars, an axle mounted upon and connected with the frame, a clip connected adjustably with said axle, a tongue connected adjustably with said clip and having a standard, a carrier laterally adjustable upon the rear part of the frame, a plow connected with said carrier, and adjusting mechanism connected with said carrier and with the upright upon the tongue for effecting the vertical adjustment of the plow.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

PRESTON P. TOWNSEND.

Witnesses:

A. P. BANUS,

D. H. BRADFORD.