

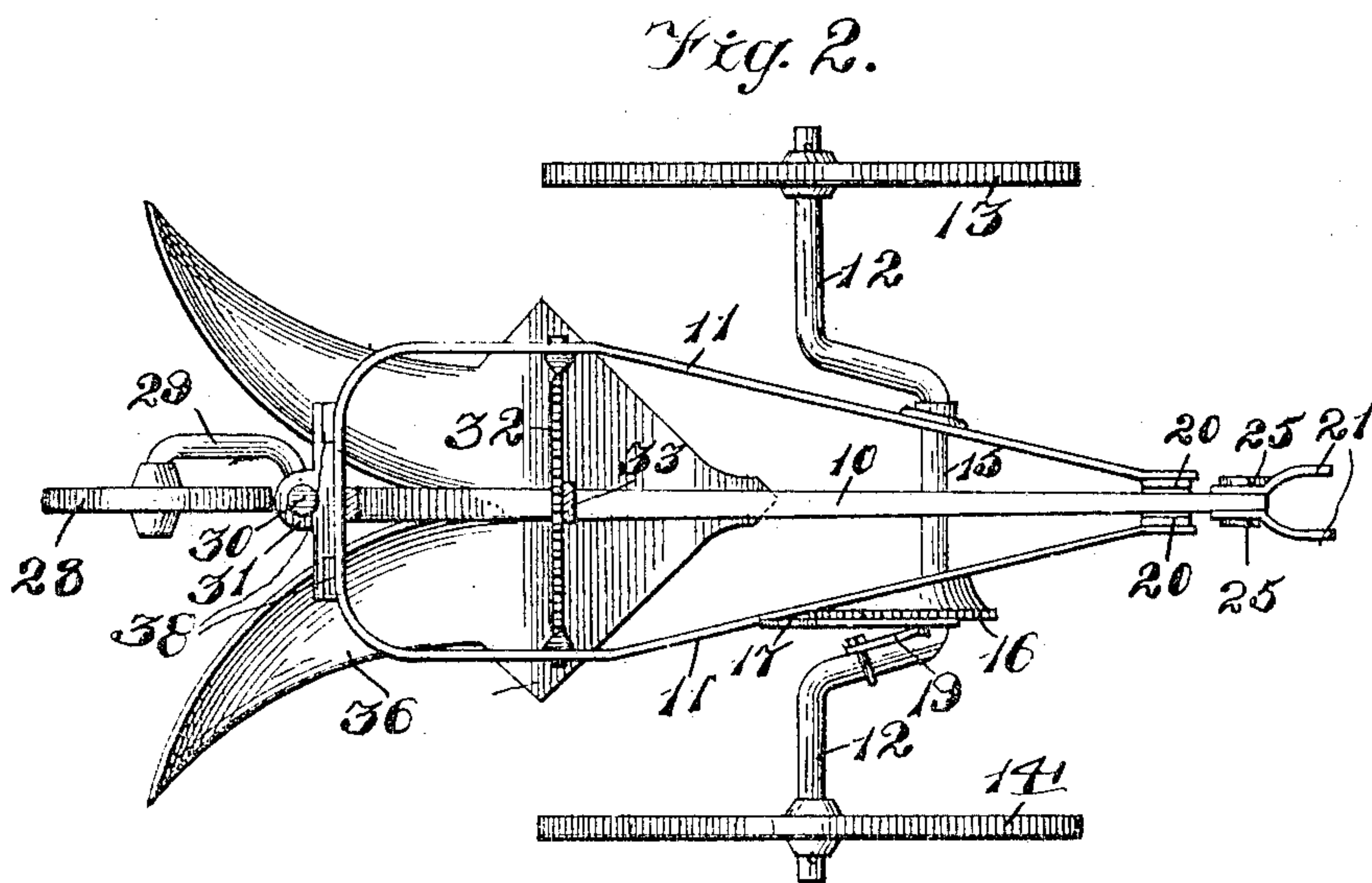
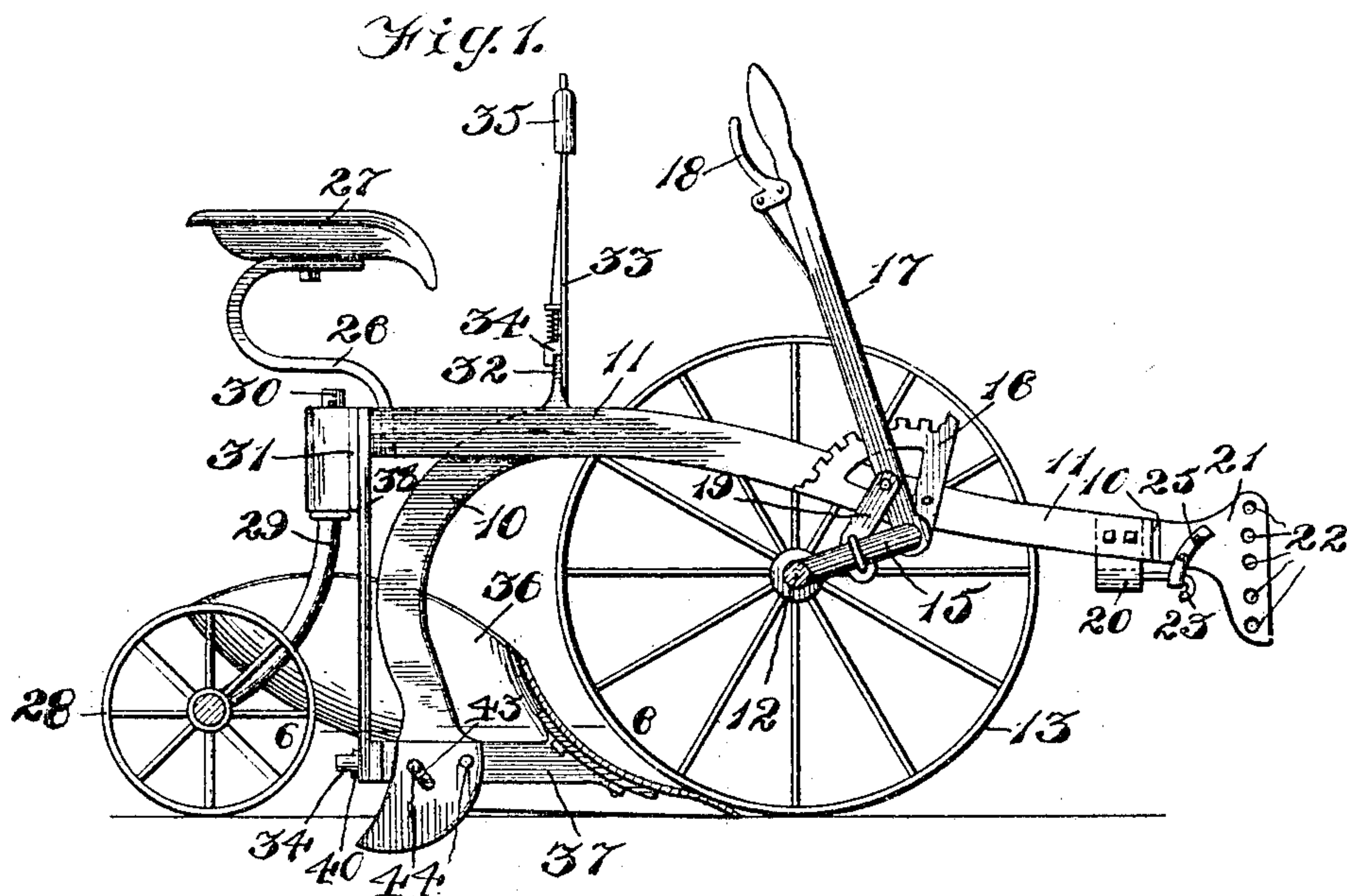
No. 799,258.

PATENTED SEPT. 12, 1905.

W. L. PAUL.  
SULKY PLOW.

APPLICATION FILED SEPT. 11, 1903.

2 SHEETS—SHEET 1.



Witnesses:  
G. V. Thomas.  
Robert H. Weir.

Inventor:  
William L. Paul,  
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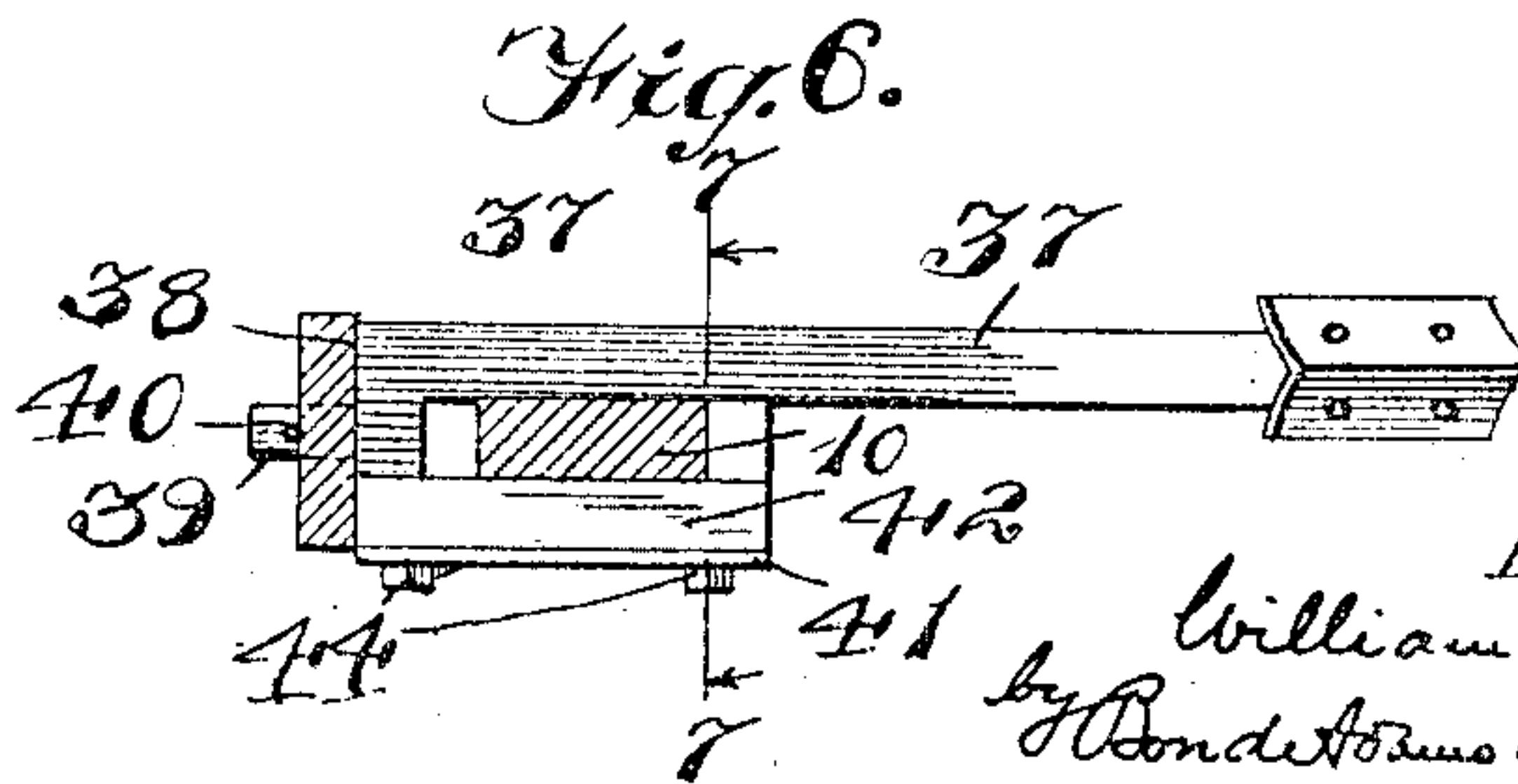
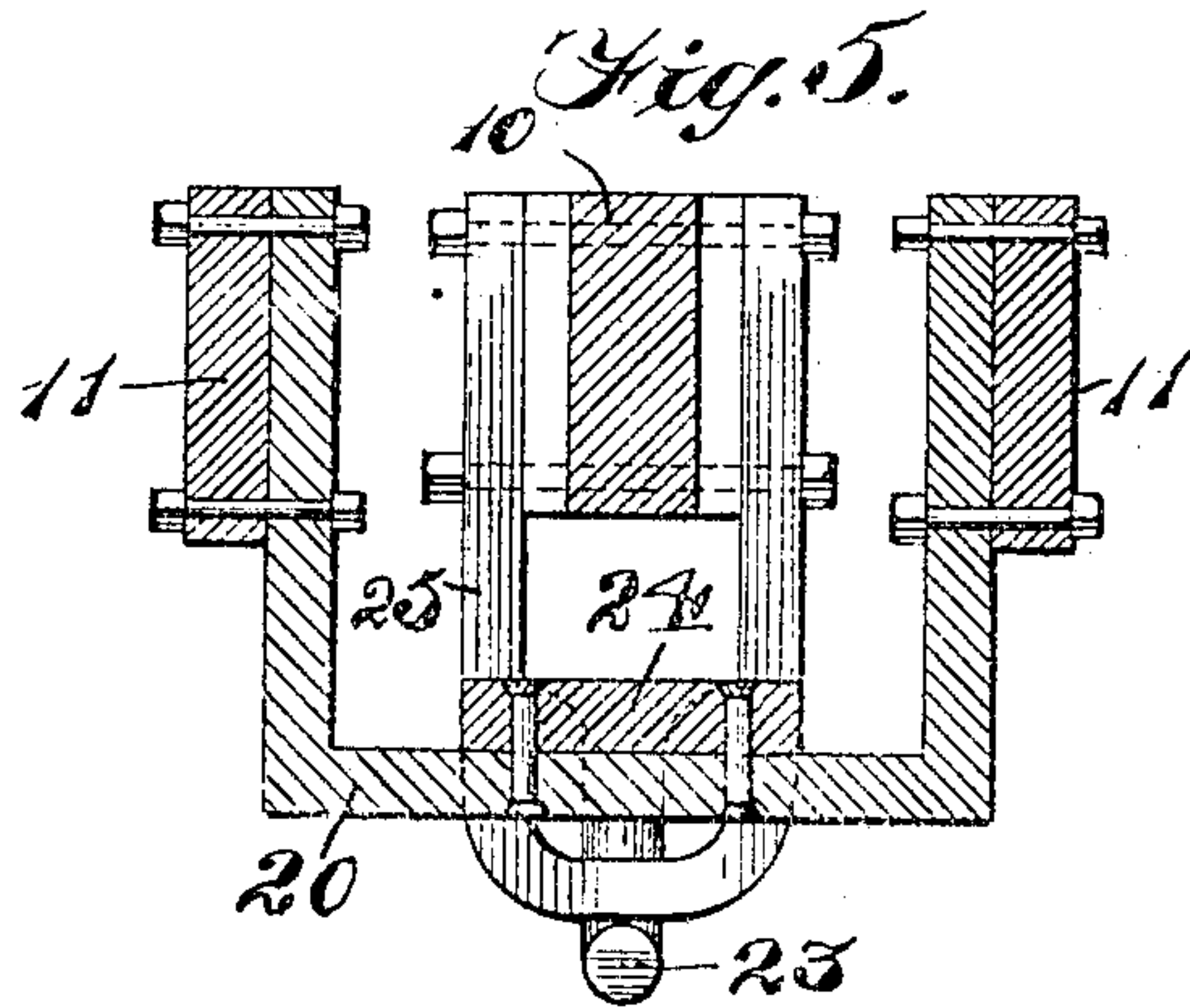
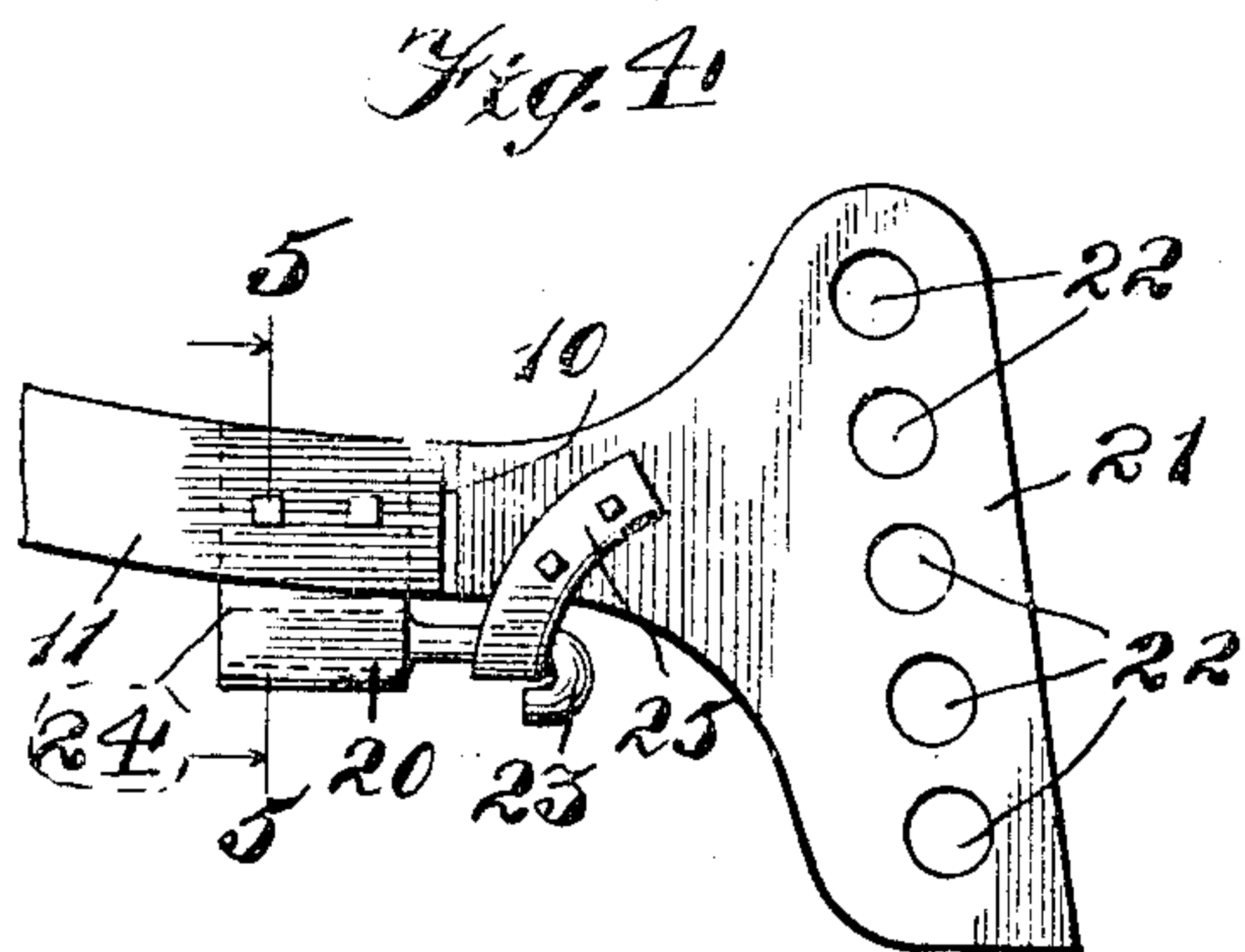
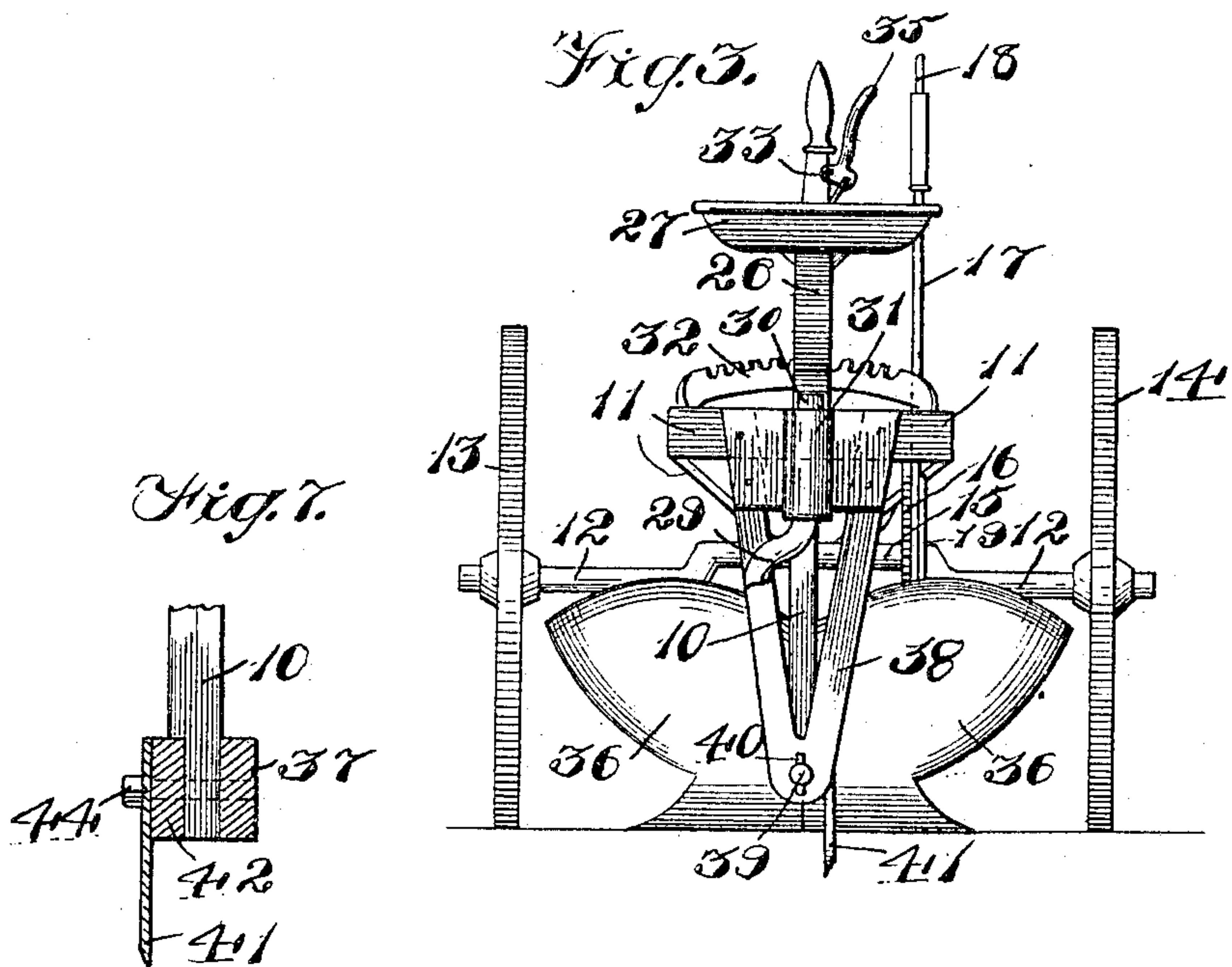
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

WILLIAM L. PAUL, OF BRADLEY, ILLINOIS, ASSIGNOR TO DAVID BRADLEY  
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OF ILLINOIS.

## SULKY-PLOW.

No. 799,258.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed September 11, 1903. Serial No. 172,763.

*To all whom it may concern:*

Be it known that I, WILLIAM L. PAUL, a citizen of the United States, residing at Bradley, in the county of Kankakee and State of Illinois, have invented certain new and useful Improvements in Sulky-Plows, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to sulky-plows.

10 The object of my invention is to provide an improved middle-breaker or lister which can be guided or leveled by the operator by means of suitable lever mechanism, so that the furrow-opener can be rocked from one side to the other, so as to shift the furrow-opener sidewise in the ground after the manner of a walking middle-breaker. In operating a walking middle-breaker the operator, walking behind the implement, can tilt or rock the furrow-opener in one direction or the other by manipulating the handles, and by my improvements I provide means whereby the operator from his seat may secure a similar result by manipulating an operating-lever.

25 In addition to the generic feature above set forth my invention comprises certain other improvements which are hereinafter specifically described.

30 In the accompanying drawings, Figure 1 is a side elevation, one wheel and part of the furrow-opener being removed. Fig. 2 is a plan view. Fig. 3 is a rear view, the caster-wheel being removed. Fig. 4 is an enlarged detail of the front end of the beam, illustrating the devices by which it is connected with the frame. Fig. 5 is an enlarged detail, being a cross-section on line 5 5 of Fig. 4. Fig. 6 is a horizontal section on line 6 6 of Fig. 1, and Fig. 7 is a vertical section on line 7 7 of Fig. 6.

40 Referring to the drawings, 10 indicates the beam of the plow, and 11 the frame thereof. As best shown in Fig. 2, the frame 11 is mounted at its forward end on an arched axle 12, carried on wheels 13 14. The frame is mounted on the arched portion of the axle, so that by rocking the axle the frame may be raised or lowered.

50 16 indicates a notched segment that is rigidly secured on the frame 11 at one side thereof, as shown in Fig. 2.

17 indicates an operating-lever for raising and lowering the frame, which lever is mounted upon the arched portion 15 of the axle 12 and is provided with the usual spring-operated

dog adapted to engage the notches of the segment 16 for locking the lever in different positions of adjustment. 18 indicates the usual hand-lever for adjusting said dog.

19 indicates a link connecting the lever 17 with the axle 12, so as to prevent the lever 17 from rocking independently of said axle. By operating the lever 17 the axle 12 may be rotated to a greater or less extent, thereby raising and lowering the forward portion of the beam, as hereinafter described.

As best shown in Fig. 2, the beam 10 lies within the sides of the frame 11, extending over the arch 15 of the axle and also over a U-shaped frame or hanger 20 at the forward portion of the frame and secured to the sides thereof, as best shown in Fig. 5. Preferably the beam 10 does not rest directly on the hanger 20, but bears upon the arch 15 of the axle. By thus supporting the forward portion of the beam loosely upon the arch 15 it is permitted to oscillate freely; but nevertheless it may be vertically adjusted by rocking the axle 12.

As shown in Figs. 1, 2, and 4, the forward portion of the beam 10 is extended vertically and is bifurcated to form a clevis 21, which is provided with a series of perforations 22 for the attachment of a draft device. The draft is applied to the frame 11 through the beam 10 by means of a hook 23, which extends forward and downward from a plate 24, fixedly secured to the hanger 20, as shown in Fig. 5. Said hook is engaged by a U-shaped bracket 25, the upper ends of which are secured to the opposite sides of the beam 10, its lower end being looped over the hook 23, as shown in Figs. 4 and 5. By this construction draft applied to the beam 10 is transmitted, through the hook 23 and hanger 20, to the sides of the frame 11.

26 indicates the usual seat-support, which carries the seat 27 and is secured to the frame 11 at the rear, as shown in Fig. 1.

28 indicates a caster-wheel mounted at the lower end of a standard 29, the opposite end of which is provided with a spindle 30, fitted in a suitable bearing 31 at the rear of the frame 11, as shown in Figs. 1 and 2. The caster-wheel 28 supports the rear of the frame, while the wheels 13 14 support the forward portion thereof.

32 indicates a segmental rack which extends transversely of the frame, to which its



ends are secured, said rack being located at the rear of the frame a short distance forward of the seat 27, as shown in Fig. 1.

33 indicates a lever, the lower end of which is fixedly secured to the rear portion of the beam 10 at a point adjacent to the rack 32. Said lever extends upward from the beam in position to be conveniently manipulated by the operator and is provided with a dog 34, adapted to engage the teeth of the rack 32 to lock the lever in different positions of adjustment.

35 indicates the usual hand-lever for operating the dog 34.

By rocking the lever 33 the beam 10 may be rocked in either direction independently of the frame 11.

36 indicates a furrow-opener which is in the form of a double-moldboard plow and is carried at the forward end of a bar 37, fixedly secured to the lower end of the beam 10, as best shown in Fig. 7. The rear end of the bar 37 is pivotally supported in the lower end of a hanger 38 by means of a pin 39, which projects from the end of said bar 37 into a suitable bearing in the lower end of the hanger 38, as best shown in Figs. 1 and 6. The pin 39 is prevented from becoming displaced by means of a cotter-pin 40, as best shown in Fig. 6. By this construction when the beam 10 is rocked as described the bar 37, with the furrow-opener, is correspondingly rocked, the pin 39 rotating in its bearing in the hanger 38. The furrow-opener may therefore be given an oscillatory movement in either direction at the pleasure of the operator, the effect being the same as when the operator swings a walking middle-breaker by means of the handles.

41 indicates a guiding-blade which is carried at one side of the bar 37, being secured to a block 42, firmly connected with the beam 10 and the bar 37, as shown in Figs. 6 and 7. To secure the adjustment of the blade 41, it is provided with a slot 43, through which one of the retaining-bolts 44 passes, as shown in Fig. 1. By manipulating the bolts 44 the blade 41 may be set higher or lower, as desired.

From the foregoing description it will be seen that the beam is so connected with the frame that the beam freely oscillates to one side or the other when the lever 33 is unlocked, turning about a longitudinal axis, but when the said lever is locked the beam cannot oscillate independently of the frame. Moreover, the oscillation of the beam is always entirely under the control of the operator. As far as I am aware no one has heretofore produced a practicable machine having these features, and the construction by which they are secured is broadly new. My invention therefore is not restricted to the specific details of the construction described except in so far as they are particularly claimed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. An agricultural implement, comprising a frame, a furrow-opener, a pivotal support therefor at the rear thereof and means for rocking said furrow-opener upon said pivotal support, substantially as described.

2. An agricultural implement, comprising a wheeled frame, a furrow-opener having a double moldboard, a pivotal support therefor at the rear thereof and means for rocking said furrow-opener upon said pivotal support, substantially as described.

3. An agricultural implement, comprising a wheeled frame, a furrow-opener and a pivotal support therefor at the rear thereof, substantially as described.

4. An agricultural implement, comprising a wheeled frame, a furrow-opener, a pivotal support therefor at the rear thereof, and means for rocking said furrow-opener, substantially as described.

5. An agricultural implement, comprising a wheeled frame, a furrow-opener, a pivotal support therefor at the rear thereof, and a lever for rocking said furrow-opener, substantially as described.

6. An agricultural implement, comprising a wheeled frame, a furrow-opener beam connected therewith and adapted to rock from side to side, a pivotal support therefor at the rear thereof and a furrow-opener connected to said beam, substantially as described.

7. An agricultural implement, comprising a wheeled frame, a furrow-opener beam connected therewith and adapted to rock from side to side, a pivotal support therefor at the rear thereof, a furrow-opener carried by said beam, and a lever for rocking said beam, substantially as described.

8. An agricultural implement, comprising a wheeled frame, a furrow-opener beam connected therewith and adapted to rock from side to side, a pivotal support therefor at the rear thereof, a furrow-opener connected to said beam, and means for attaching draft devices to said beam, substantially as described.

9. An agricultural implement, comprising a wheeled frame, a furrow-opener beam connected therewith and adapted to rock from side to side, a pivotal support therefor at the rear thereof, a furrow-opener connected to said beam, and a clevis carried by said beam, substantially as described.

10. An agricultural implement, comprising a wheeled frame, a beam, a furrow-opener carried by said beam, means pivotally supporting the rear portion of said beam so that it may rock about a longitudinal axis, and means loosely connecting the forward portion of said beam with said frame, substantially as described.

11. An agricultural implement, comprising a wheeled frame, a beam, a furrow-opener carried by said beam, means pivotally supporting



the rear portion of said beam so that it may rock about a longitudinal axis, means loosely connecting the forward portion of said beam with said frame, and means for connecting draft devices to said beam, substantially as described.

12. An agricultural implement, comprising an arched axle, wheels carried thereby, a frame connected with said axle, a beam, a longitudinally-arranged pivot for the rear portion of said beam, means supporting said pivot from said frame, and a furrow-opener carried by said beam in advance of said pivot, substantially as described.

13. An agricultural implement, comprising an arched axle, wheels carried thereby, a frame connected with said axle, a beam, a longitudinally-arranged pivot for the rear portion of said beam, means supporting said pivot from said frame, a furrow-opener carried by said beam in advance of said pivot, and means for rocking said beam, substantially as described.

14. An agricultural implement, comprising an arched axle, wheels carried thereby, a frame connected with said axle, a beam, a longitudinally-arranged pivot for the rear portion of

said beam, means supporting said pivot from said frame, a furrow-opener carried by said beam in advance of said pivot, and means for connecting draft devices to said beam, substantially as described.

15. An agricultural implement, comprising a wheeled frame, a beam, a longitudinally-arranged pivot for the rear portion of said beam, means supporting said pivot from said frame, a furrow-opener carried by said beam, and means for vertically adjusting the forward portion of said beam, substantially as described.

16. An agricultural implement, comprising a wheeled frame, a beam, means loosely connecting the forward portion of said beam with said frame, a depending bracket secured to the rear portion of said frame, means pivotally connecting the rear of the beam with said bracket whereby said beam may rock about a longitudinal axis, and a furrow-opener carried by said beam, substantially as described.

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Witnesses:

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