W. M. LEWIS.

POTATO BUG CATCHER.

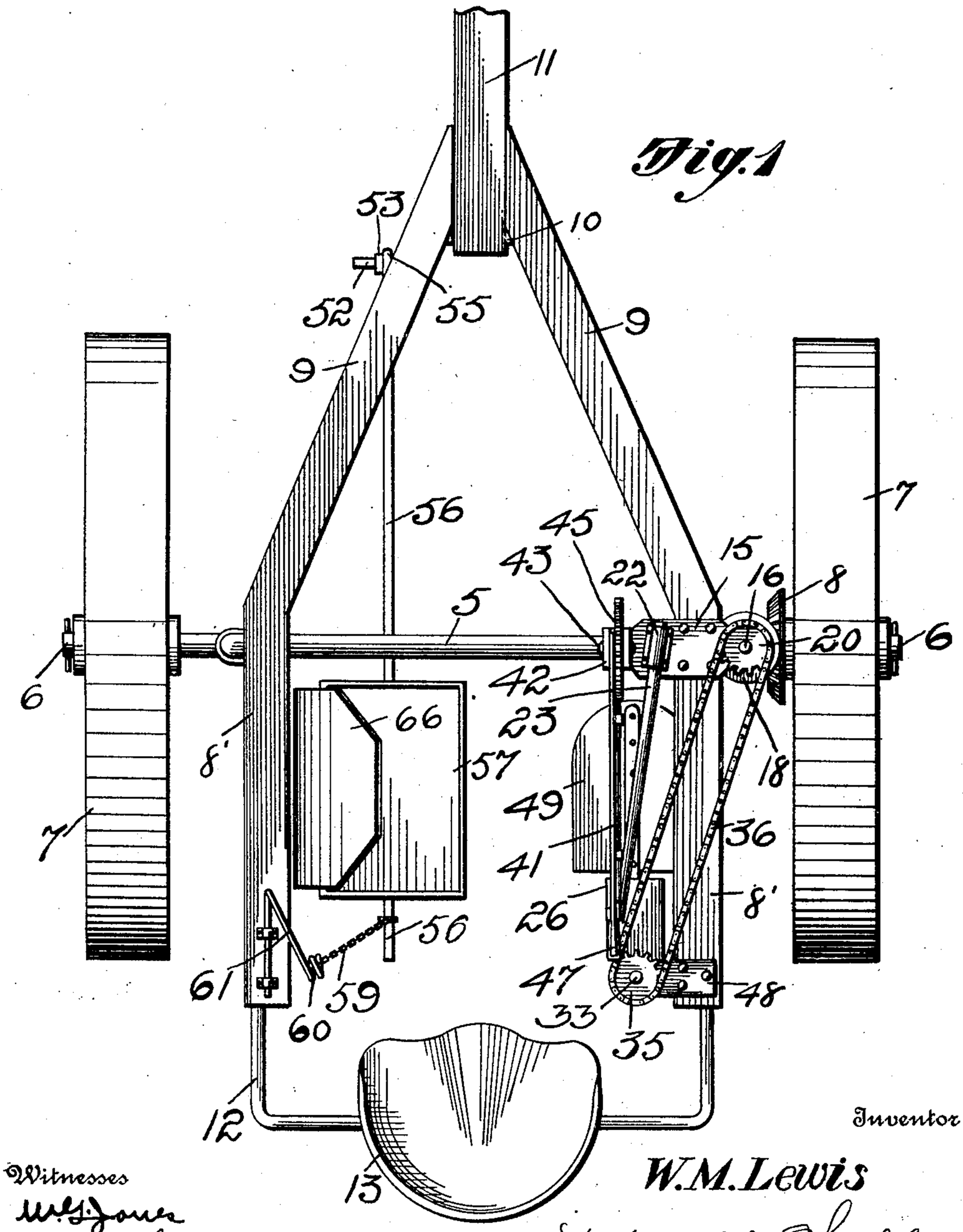
APPLICATION FILED NOV. 15, 1909.

999,172.

Patented July 25, 1911.

3 SHEETS—SHEET 1.

Fig. 1



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3 SHEETS—SHEET 2.

Fig. 2

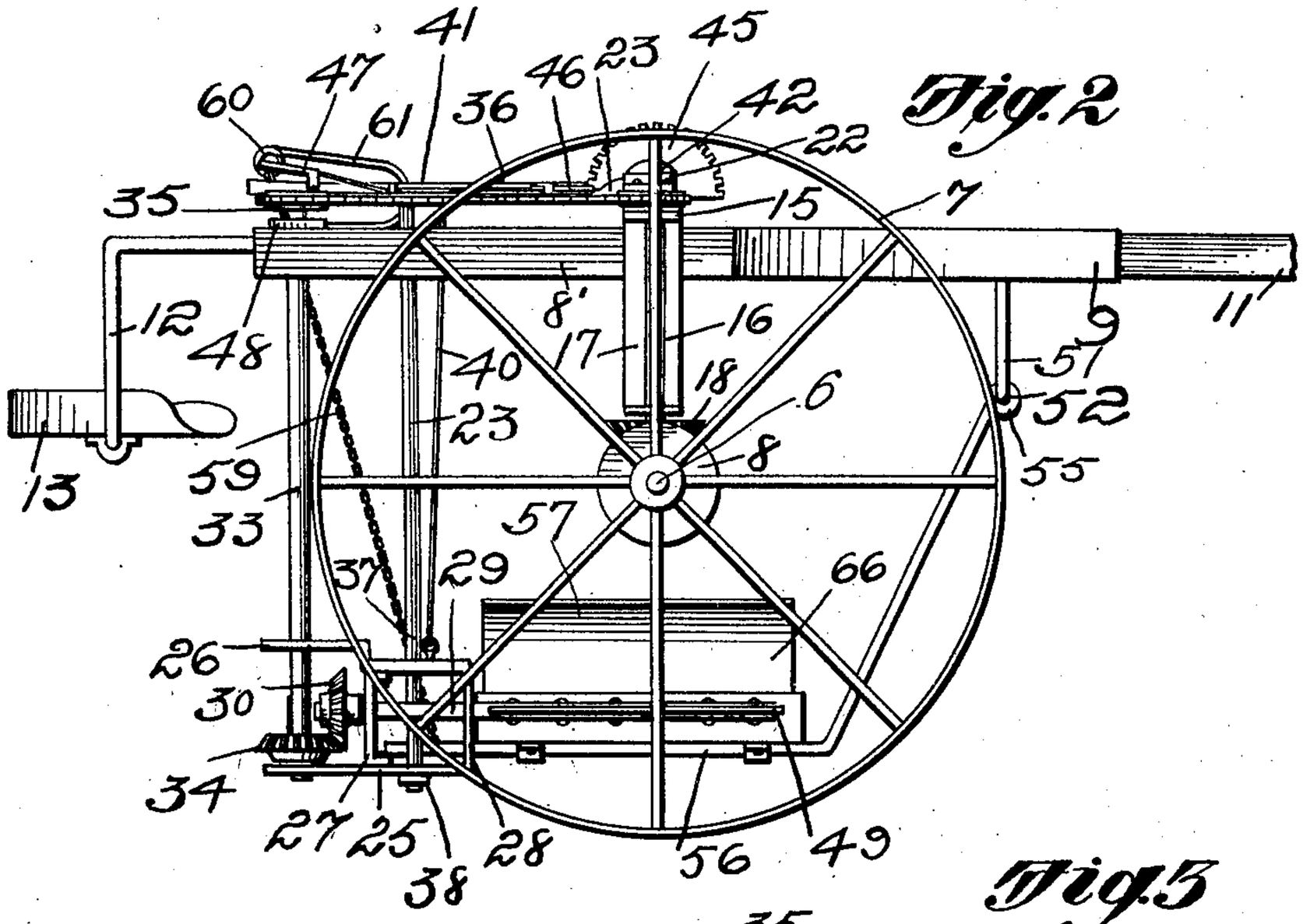
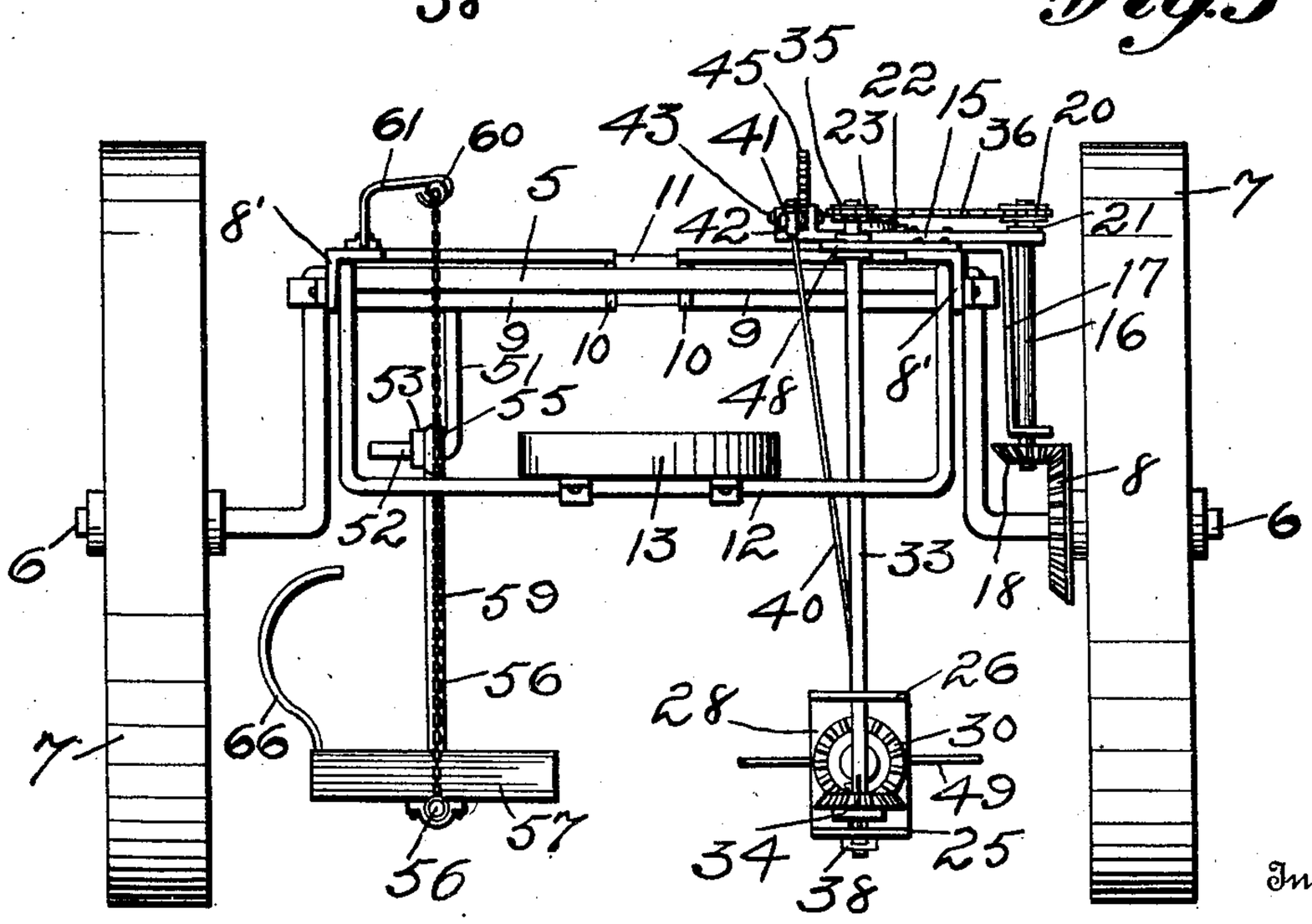


Fig. 3



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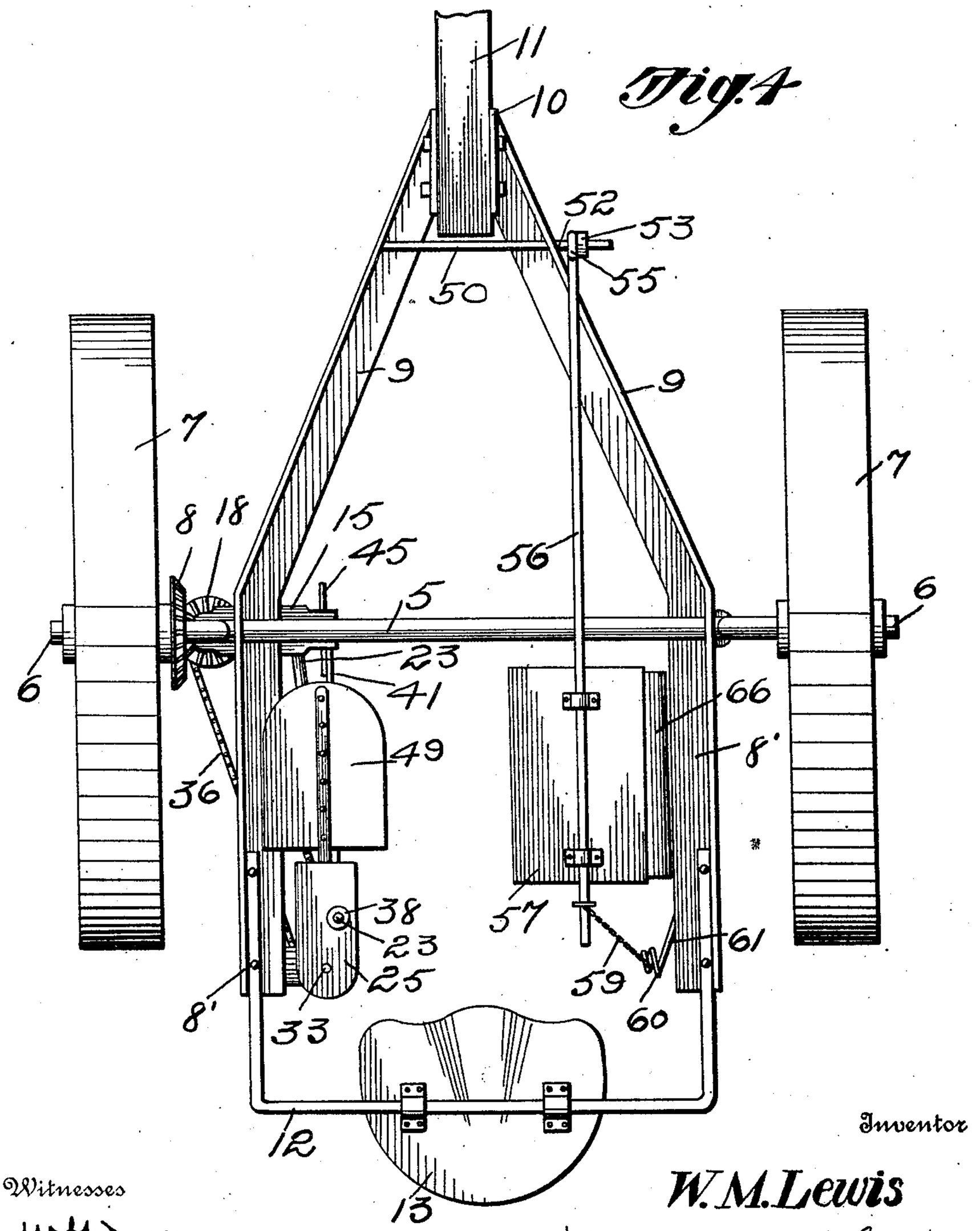
3 SHEETS—SHEET 3.

Fig. 4



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UNITED STATES PATENT OFFICE.

WILLIAM M. LEWIS, OF NEW HARTFORD, IOWA.

POTATO-BUG CATCHER.

999,172. Specification of Letters Patent. Patented July 25, 1911.

Application filed November 15, 1909. Serial No. 528,214.

To all whom it may concern:

Be it known that I, WILLIAM M. LEWIS, a citizen of the United States, residing at New Hartford, in the county of Butler and State of Iowa, have invented certain new and useful Improvements in Potato-Bug Catchers, of which the following is a specification.

This invention has relation to certain new and useful improvements in potato bug catchers.

The object of my invention is to provide a light, simply constructed positively operating machine arranged to be drawn through a potato patch or field, and provided with a beater by means of which such bugs as may be feeding upon the vines will be beaten into a suitable receptacle.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described and particularly pointed out in the appended claim, it being understood that changes in the specific structure shown and described may be made within the scope of the claim without departing from the spirit of the invention.

In the drawings forming a part of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 shows a top view of a machine embodying my invention, Fig. 2 shows a side view, Fig. 3 shows a rear end view, Fig. 4 shows a bottom view.

In carrying out the aim of my invention, I employ a crank axle 5 upon the spindles 6 of which are carried the supporting wheels 7. One of these supporting wheels is provided with a driving gear 8. Secured to this crank axle 5 are two similar frame members preferably made of angle iron comprising the horizontally and parallel held rear portions 8′ and the forward obliquely held end portions 9, these end portions being united and provided with the flanges 10 between which is secured the tongue 11. The draft animals are secured to this tongue 11. Connecting the parallel portions 8′ of these frame members is the preferably iron bar 12 which serves as a support for the driver's seat 13. Secured to one of the frame members is a supporting plate 15 having a bearing opening within which is held the vertically disposed driving shaft 16 which at its lower end is revolubly held within the bracket 17, this bracket also being carried by the supporting plate 15. Secured to the lower end of this drive shaft 16 is the driven gear 18 in mesh with the drive gear 8, while at the upper end of this driving shaft is secured the chain sprocket 20, below which is secured the supporting collar 21 to properly hold this driving shaft.

Securely fixed to the supporting plate 15 by means of the ear plate 22, is the guide bar 23 bent in the form of a right angle, and slidably held upon this guide bar 23 is a frame comprising the two parallel held members 25 and 26. These members are strengthened by means of the brace bar 27 containing a bearing while the rear portion 28 of this frame is also provided with a bearing, and held within these bearings is the pinion shaft 29 which at its rear end carries the pinion 30 held against the transverse member 27 as shown. This frame freely slides upon the vertical portion of the guide bar.

Vertically held within bearings located within the ends of the frame members 25 and 26, is the driven shaft 33, which at its lower end carries a pinion 34 suitably secured thereto and meshing with the pinion 30, while at the upper end is secured the chain sprocket 35. Connecting the chain sprockets 20 and 35, is the chain 36.

Secured to the lower end of the guide bar 23 is the stop collar 38 limiting the downward movement of the slidably held frame as disclosed. Secured to the upper portion of the frame member 26 is the eye 37 within which is hooked the lower end of the supporting rod 40, the upper end of which is pivotally secured to the adjusting lever 41.

Secured to one end of the supporting plate 15 is the upstanding ear 42 carrying the pin 43 and pivotally held upon this pin 43 is the adjusting lever 41. The pin 43 also passes through the rack segment 45, the adjusting lever 41 being provided with the pawl 46 working in connection with this rack segment, this pawl being operated by the latch 47 as is usual in devices of this class. By means of this lever 41, the frame carrying the pinions 34 and 30 may be raised or lowered, the pinion 34 being splined to and sliding upon the shaft 33. Extending from the frame member carrying the supporting plate 15 is the ear 48 within which is journaled the upper end of the driven shaft 33, which is held against vertical motion by collars, as shown.

Secured to the forward end of the shaft 29 is the beater 49, located at the forward end of the slidably held frame.

Secured to the forward end of the frame is a hanger in the form of a bar comprising the horizontal portion 50, the vertical portion 51 and ending in the crank 52 provided with a collar 53. Pivotally held upon this crank portion 52 is the forward bent end 55 of the supporting rod 56 which carries the receptacle 57. This bar 56 is pivotally held upon the crank 52. Secured to the rear end of this bar 56 is the chain 59 which at its upper end is arranged to engage the hooked end 60 of the spring bracket 61 secured to the frame as disclosed. By this means the receptacle is yieldingly suspended, in such a manner that the same may be raised or lowered by means of the chain, the links of which are adjustably engaged within the hook 60. Extending upward from the receptacle 57 is the curved shield 66, and the beater 49 is arranged to revolve proximal to this receptacle 57.

The operation of my device is very simple. As the machine is dragged through the field, the driving gear 8 is rotated, resulting in the driven shaft 16 being rotated, and this shaft in turn by means of the chain sprocket 20 actuates the chain 36 and thereby the connected driven shaft 33. The pinion 34 of the shaft 33 being in mesh with the pinion 30 upon the beater shaft 29 rotates the beater 49. As shown in the rear view, there is a considerable space between the receptacle 57 and the carrying frame 25. As the beater 49 rotates, it strikes the potato vines and beats the potato bugs and beetles against the shield 66 and into the receptacle 57, which may contain a suitable liquid calculated to kill the beetles dropping into the receptacle.

The machine is simple and comparatively inexpensive in construction, and both durable and efficient in operation.

What is claimed is:

A machine for destroying potato bugs comprising a wheeled frame, a driving gear on one of the wheels of the frame, a vertical shaft mounted on the frame adjacent said wheel, a gear mounted on the lower end of said shaft and meshing with the first named gear, a sprocket wheel on the upper end of said vertical shaft, a sliding frame mounted in the wheeled frame, a vertical shaft journaled in said sliding frame, a sprocket wheel on the upper end of said shaft, a chain passing around said sprocket wheels, a horizontally disposed beater shaft journaled in said sliding frame, a gear on the lower end of the second named vertical shaft, a gear on one end of said beater shaft and meshing with the last named gear, a guide bar for said sliding frame, an adjustably held bar to support the sliding bar, a receptacle supported on the frame, and a curved shield extending upwardly from said receptacle.

In testimony whereof I affix my signature, in presence of two witnesses.

WILLIAM M. LEWIS.

Witnesses:
H. B. BIGSBY,
M. G. FARNSWORTH.