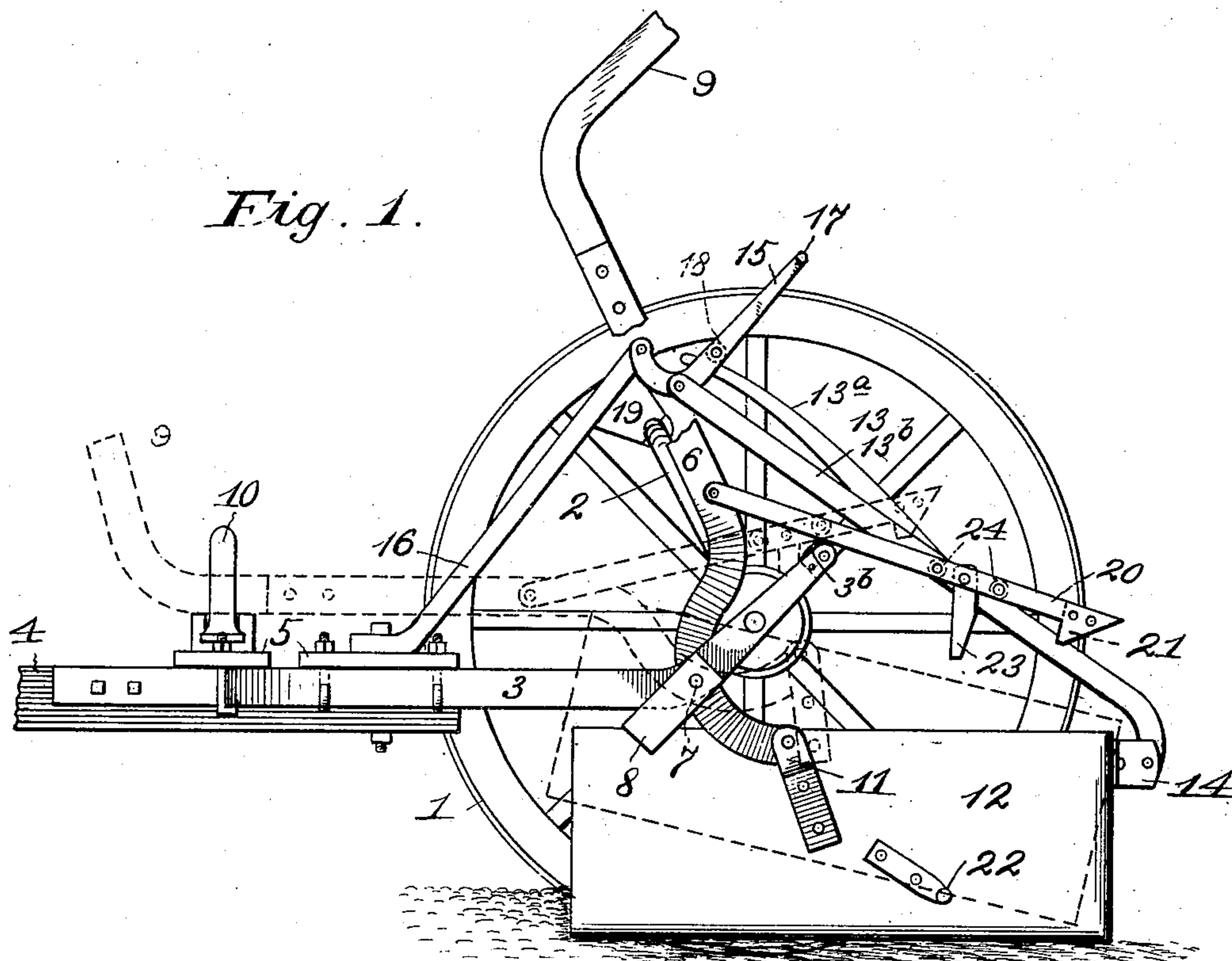
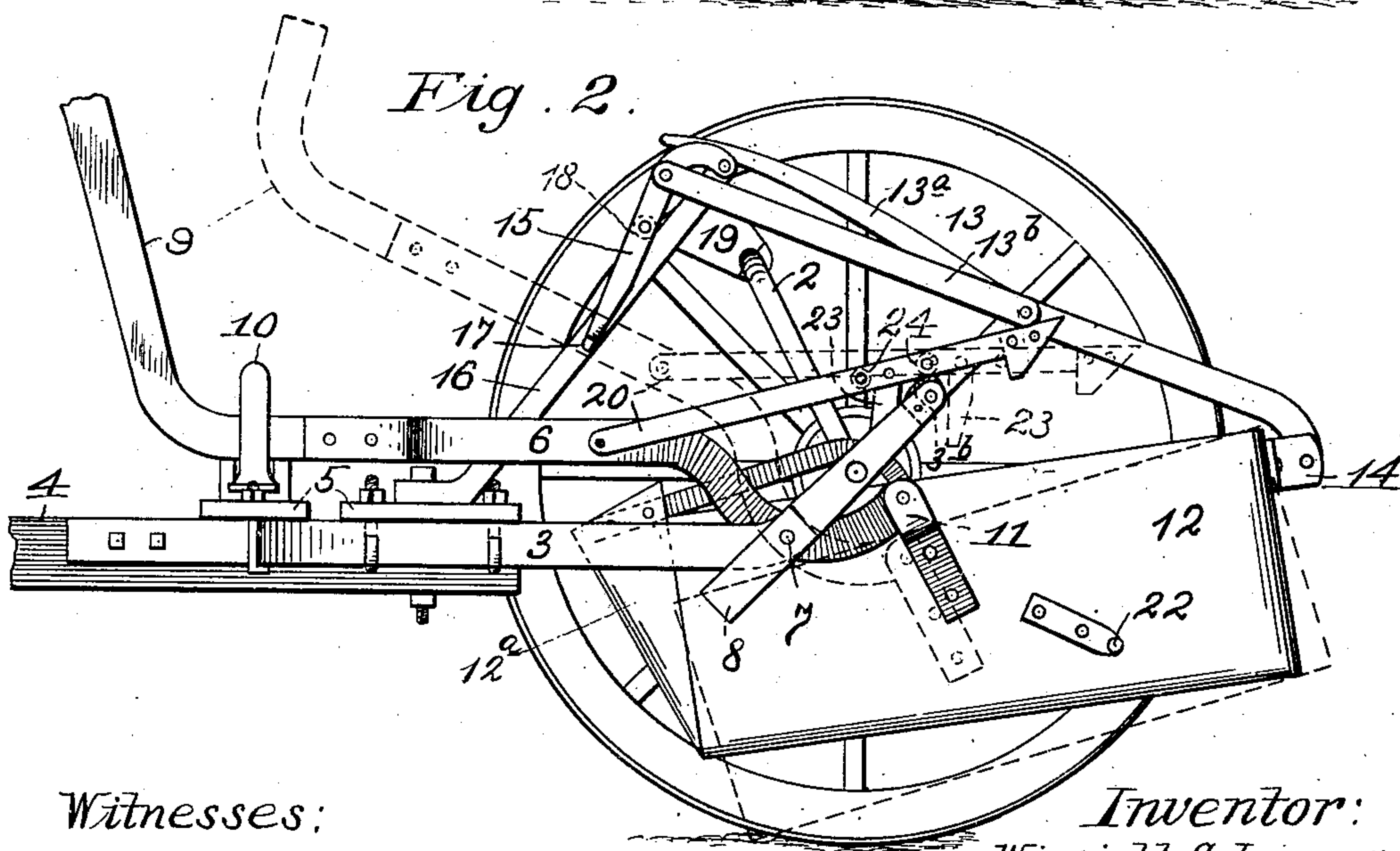


W. S. LIVENGOOD.
WHEELED SCRAPER.

APPLICATION FILED MAR. 7, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.*Fig. 2.*

Witnesses:

W. A. Lingle.

S. A. Wickey

Inventor:

Winfield S. Livengood

By F. G. Fischer
att'y.

W. S. LIVENGOOD.
WHEELED SCRAPER.

APPLICATION FILED MAR. 7, 1903.

NO MODEL.

2 SHEETS—SHEET 2.

Fig. 3.

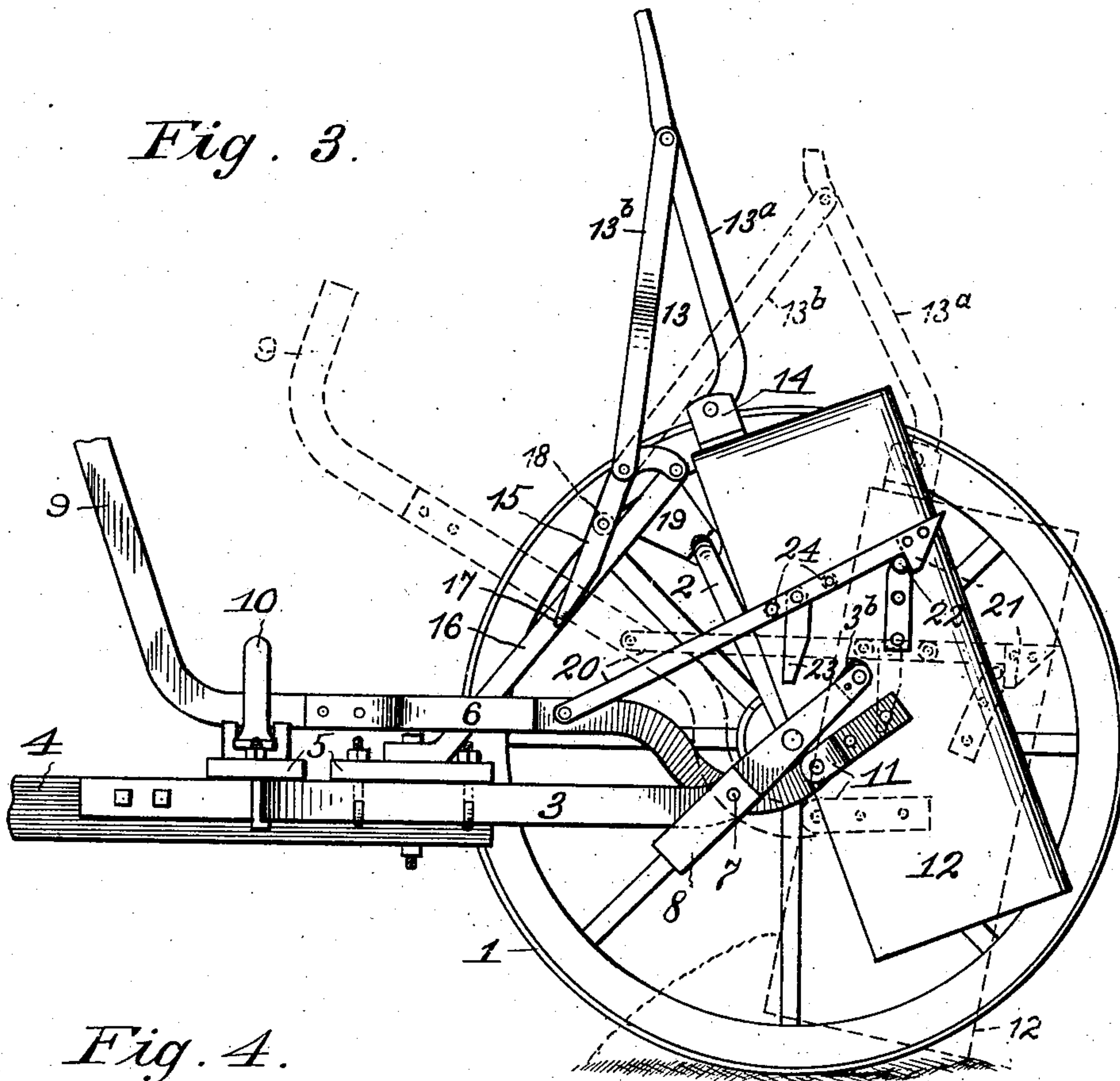
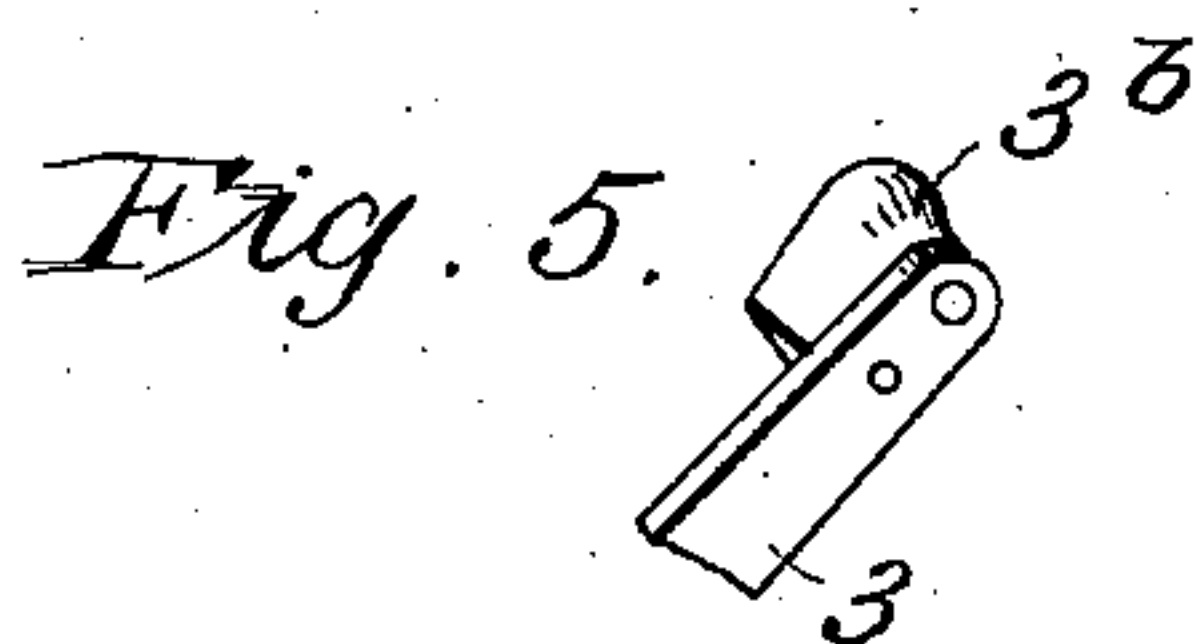
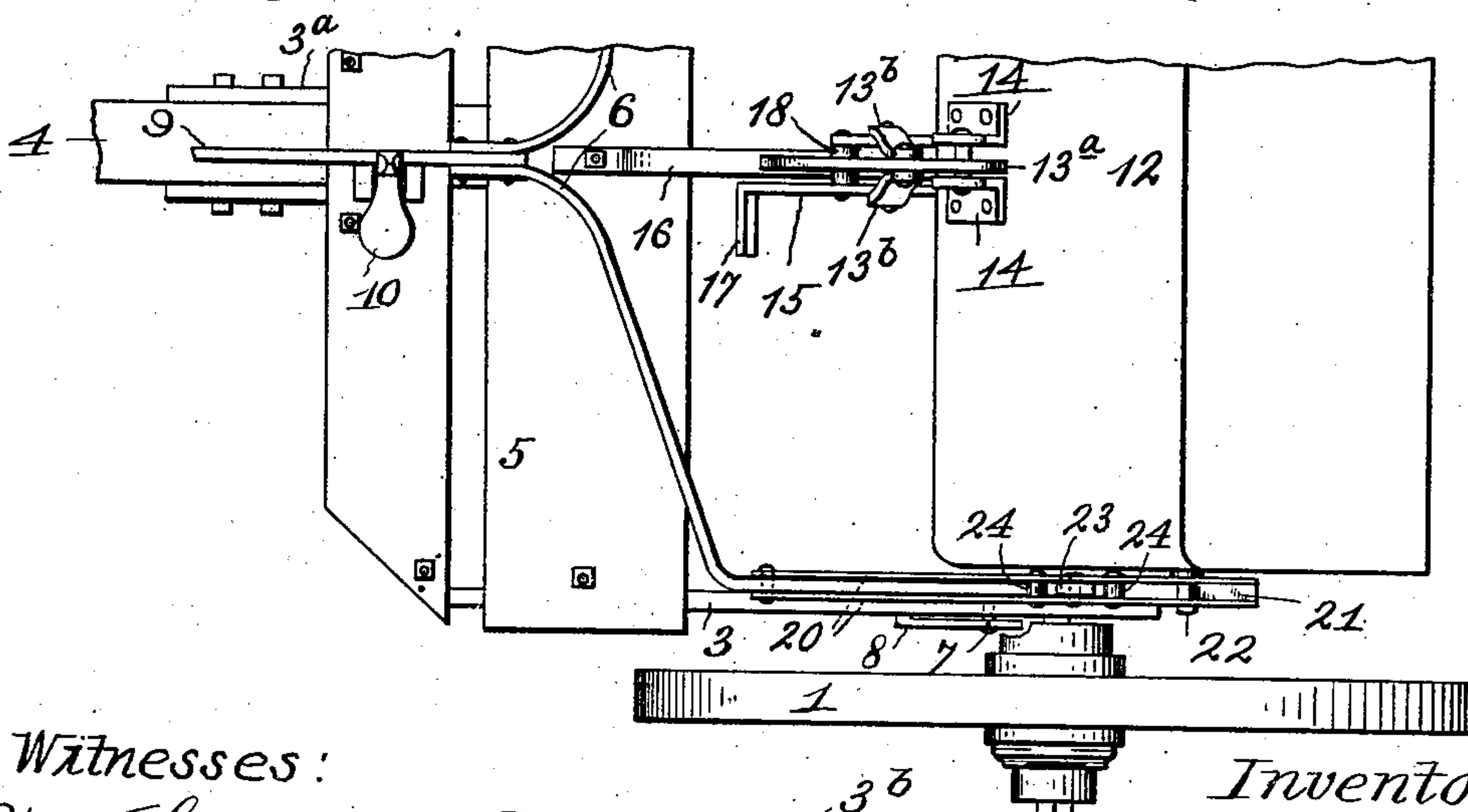


Fig. 4.



Witnesses:
W. C. Lingle.
J. A. Hickey.

Inventor:
Winfield S. Livengood
By F. G. Fischer
Att'y.

UNITED STATES PATENT OFFICE.

WINFIELD S. LIVENGOOD, OF KANSAS CITY, MISSOURI, ASSIGNOR TO SMITH & SONS MANUFACTURING COMPANY, OF KANSAS CITY, MISSOURI.

WHEELED SCRAPER.

SPECIFICATION forming part of Letters Patent No. 742,336, dated October 27, 1903.

Application filed March 7, 1903. Serial No. 146,657. (No model.)

To all whom it may concern:

Be it known that I, WINFIELD S. LIVENGOOD, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Wheeled Scrapers, of which the following is a specification.

My invention relates to improvements in wheeled scrapers; and my object is to arrange the scraper in such a manner that the loading and dumping operations will be under the complete control of the driver.

A further object is to suspend the pan in such a way that it will assume a substantially horizontal position when loading, and thus cut through the loose soil without much tendency of its front end digging into the hard soil, and thus unnecessarily increasing the work of the team.

Another object is to effect the dumping of the load by the team, so that the services of an extra man for performing this work may be dispensed with.

With the above objects in view the invention may be said to consist in the novel arrangement and construction of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, which illustrate the invention, Figure 1 represents the scraper in position for loading. Fig. 2 shows it in a loaded position ready for the dump. Fig. 3 shows the position of the pan after the load has been dumped. Fig. 4 is a broken plan view of the same. Fig. 5 is a detail perspective view of the inclined guide and the cam adapted to cooperate therewith.

In constructing the scraper I employ carrying-wheels 1, mounted upon the opposite ends of an arched axle 2, provided with draft-bars 3 3^a, which are bolted at their forward ends to a tongue 4 and carry the usual platform 5, upon which the driver stands. The rear end of draft-bar 3 extends upwardly from the axle at an angle of about forty-five degrees and is provided at its inner side with an inclined guide 3^b for a purpose hereinafter described.

6 designates a bail fulcrumed at 7 to the rear portions of the draft-bars and stirrups 8 and is provided with a hand-lever 9, adapted to be held down by a latch 10 in the usual

manner. The rear ends of the bail are pivotally secured to ears 11, riveted to the opposite sides of the scraper-pan 12, the rear portion of which latter is normally supported by a folding brace 13, consisting of three sections 13^a 13^b, the former of which is pivotally secured at its lower end between jaws 14, secured to the rear end of the pan, while the latter are pivotally secured at their opposite ends to the middle portion of section 13^a and a locking-lever 15. Said lever is pivotally secured to the upper end of a brace 16 and is provided with a crank-handle 17 and a roller 18, which latter is adapted to engage the free end of section 13^a to prevent brace 13 from folding when the pan is in the positions shown by Figs. 1 and 2. Brace 16 is secured at its opposite ends to platform 5 and a block 19 for the purpose of supporting the axle, to the upper central portion of which the block is secured.

20 designates a pair of arms pivotally secured at their forward ends to the bail and terminating at their rear ends in hooks 21, adapted to automatically engage an arm 22, secured to the side of the pan, and are provided with a pivotally-secured depending cam 23, the movement of which is limited by stops 24, secured between the arms on opposite sides of said cam, the forward stop being slightly closer to the cam than its companion.

When the pan is loading, it is held in a substantially horizontal position by hand-lever 9 and folding brace 13, and after receiving the load the latter is shifted to the rear of the pan by depressing the hand-lever 9 until it is engaged by latch 10. The rear end of the pan is then elevated and locked in the position shown in Fig. 2 by grasping handle 17 and drawing the locking-lever forward and downward until roller 18 contacts with brace 16. When locked in this position, the dirt is retained in the pan by an end-gate 12^a. The scraper is then hauled to the dump, where its front end is depressed into contact with the ground, as shown in dotted lines, Fig. 2, by elevating the hand-lever, and as the team continues to draw the scraper forward the rear end of the pan will be elevated until arm 22 engages hooks 21, which prevent the pan from dropping back to a horizontal po-

sition after its load has been discharged. The pan may then be drawn up and locked in the position shown in Fig. 3 by depressing the hand-lever into engagement with latch 10, or it may be held in a lower perpendicular position to level off the pile of dirt which it has discharged by partly elevating said hand-lever, when the rear end of the pan will be held from dropping down by hooks 21 engaging arm 22. As the hand-lever is being depressed into engagement with the latch, cam 23 slides forward over the inclined guide 3^b without disengaging the hooks from arm 22; but when the hand-lever is elevated to almost the limit of its upward movement the cam is made to pass over the inclined guide in practically a vertical position by reason of its contacting with the forward stop 24, and in consequence it raises the hooks out of engagement with arm 22 and permits the pan to swing down to a horizontal position.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a wheeled scraper provided with a pan, a folding brace pivotally secured at one end to the pan, and a locking-lever to which the opposite end of the folding brace is secured and which is pivotally secured to a suitable portion of the machine and adapted to lock the pan in various positions.

2. In a wheeled scraper provided with a pan, a folding brace pivotally secured at one end to the pan, a locking-lever to which the opposite end of the folding brace is secured and which is pivotally secured to a suitable portion of the machine, and a roller secured to the locking-lever for the purpose of limiting the movement of the latter.

3. In a wheeled scraper provided with a pan, a folding brace secured at one end to the pan and consisting of a plurality of sections, a locking-lever to which the opposite end of the folding brace is secured and which is pivotally secured to a suitable portion of the machine, and means thereon for engaging the free end of one of the sections of the folding brace, substantially as described.

4. In a wheeled scraper provided with a pan and a hand-lever, a hook loosely secured to the hand-lever and adapted to hold the pan in an elevated position.

5. In a wheeled scraper provided with a pan, an arm secured to the latter, and a hook

suitably secured at one end to an adjustable part of the machine and adapted to engage the arm on the pan and support the latter in an elevated position.

6. In a wheeled scraper provided with a pan, a hook adjustably secured at one end to a suitable part of the machine and adapted to engage the pan with its opposite end when the pan is in an elevated position, a cam secured to the hook, and an inclined guide secured to a suitable portion of the machine and adapted to engage the cam and raise the hook out of engagement with the pan.

7. In a wheeled scraper provided with a pan, a hook adjustably secured at one end to a suitable part of the machine and adapted to engage the pan with its opposite end when the pan is in an elevated position, a depending cam pivotally secured to the hook, stops on the hook for limiting the movement of said cam, and an inclined guide secured to a suitable portion of the machine and adapted to engage the cam and raise the hook out of engagement with the pan.

8. In a wheeled scraper provided with a pan, a hand-lever, draft-bars, an extension on one of said draft-bars, a hook pivotally secured at one end to the hand-lever and adapted to engage the pan with its opposite end when the pan is in an elevated position, a depending cam pivotally secured to the hook, stops on the hook for limiting the movement of said cam, and an inclined guide secured to the upper terminal of the extension on the draft-bar; substantially as described.

9. In a wheeled scraper provided with a pan, a hook adjustably secured at one end to a suitable part of the machine and adapted to engage the pan with its opposite end when the pan is in an elevated position, and means for automatically disengaging the hook from the pan.

10. In a wheeled scraper provided with a pan, means for automatically engaging the pan when in an elevated position, and means for automatically disengaging the pan so it may swing down to a lower position.

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

WINFIELD S. LIVENGOD.

Witnesses:

J. W. BOLING,
F. G. FISCHER.