

(No Model.)

3 Sheets—Sheet 1.

C. H. SAWYER.
WHEELED SCRAPER.

No. 407,452.

Patented July 23, 1889.

Fig. 1

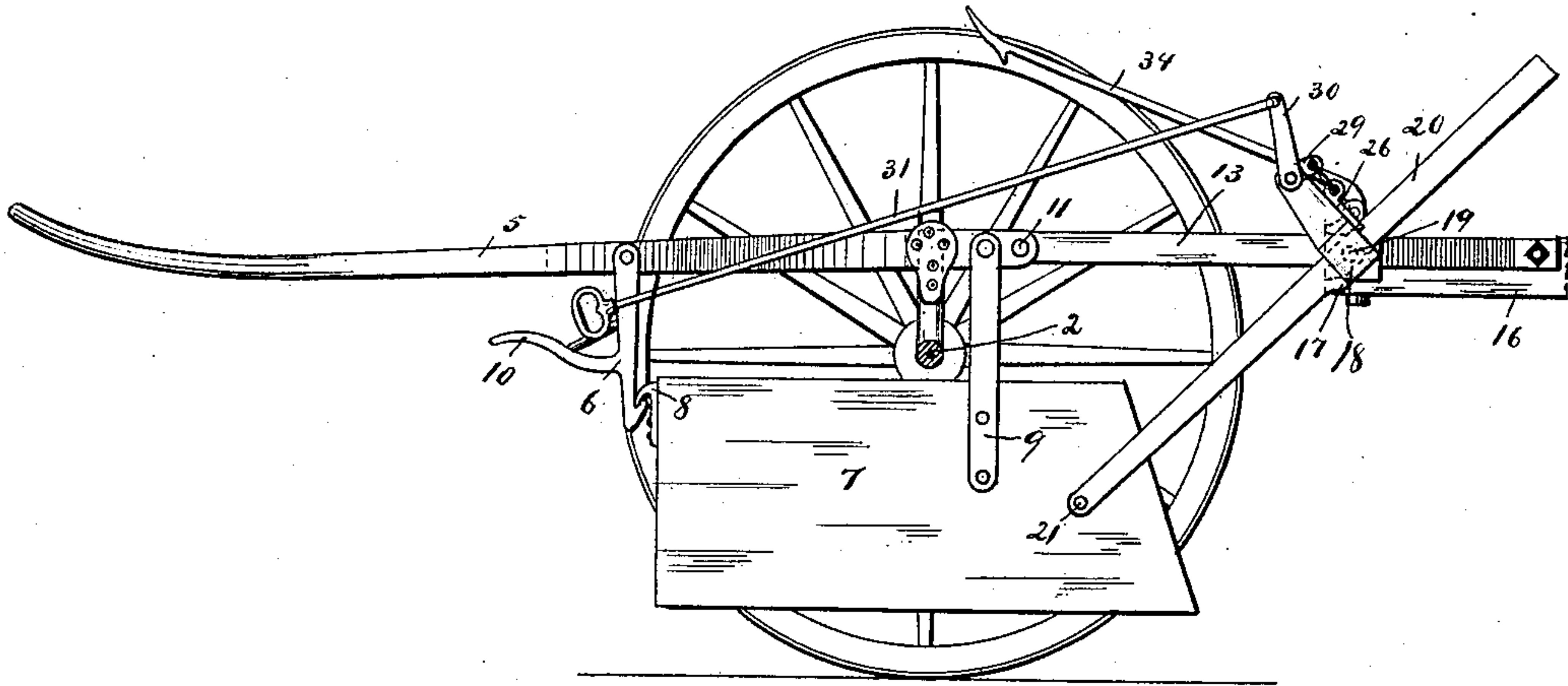
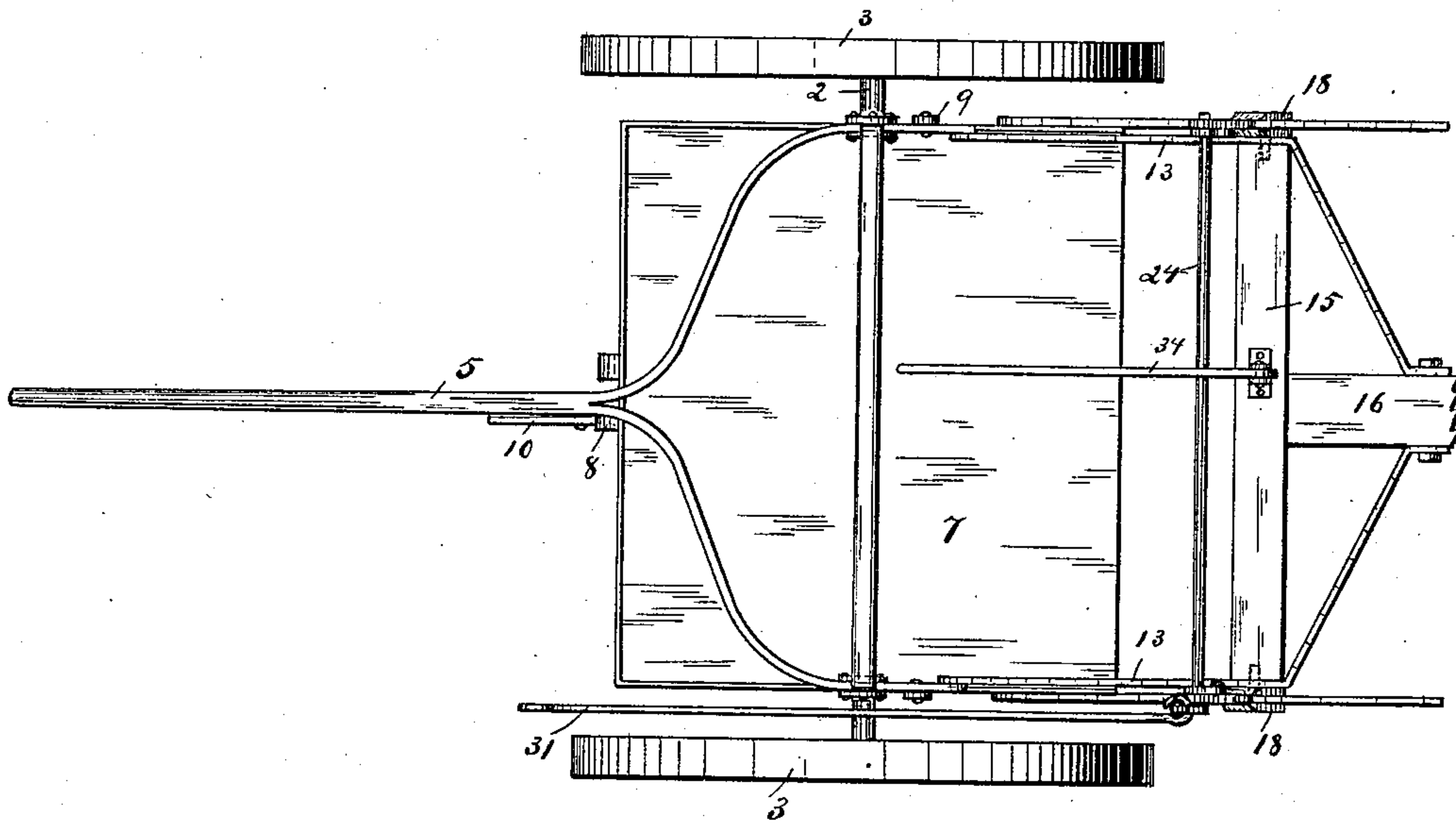


Fig. 2.



Witnesses

J. Jensen.
A. M. Gaskill

Inventor

Charles H Sawyer.

By his Attorneys
Paul, Sanford & Merwin.

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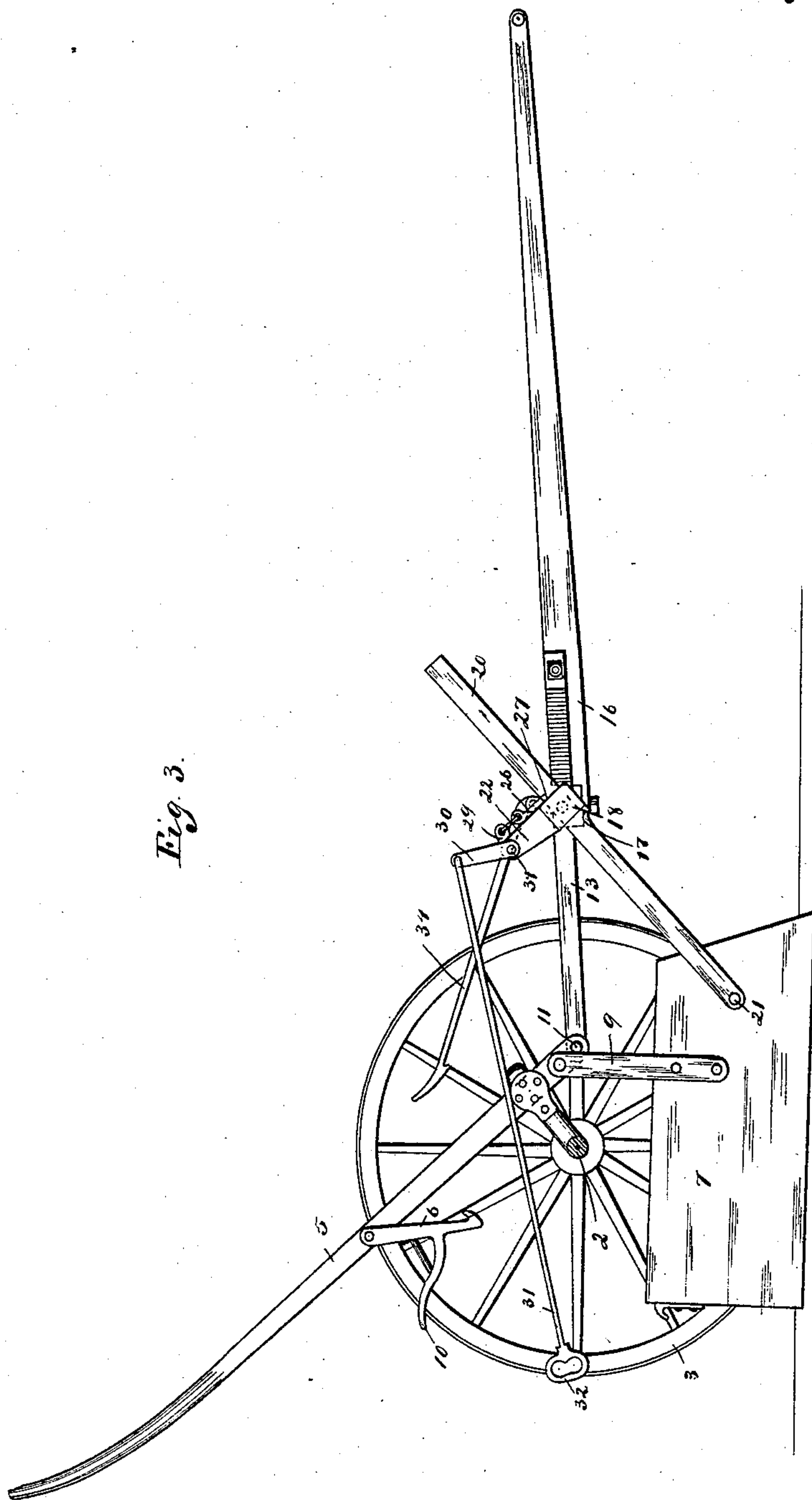


Fig. 3.

Witnesses

J. Jensen.

A. M. Gaskill

Inventor

Charles H. Sawyer.

By his Attorneys

Paul, Sanford + Merwin

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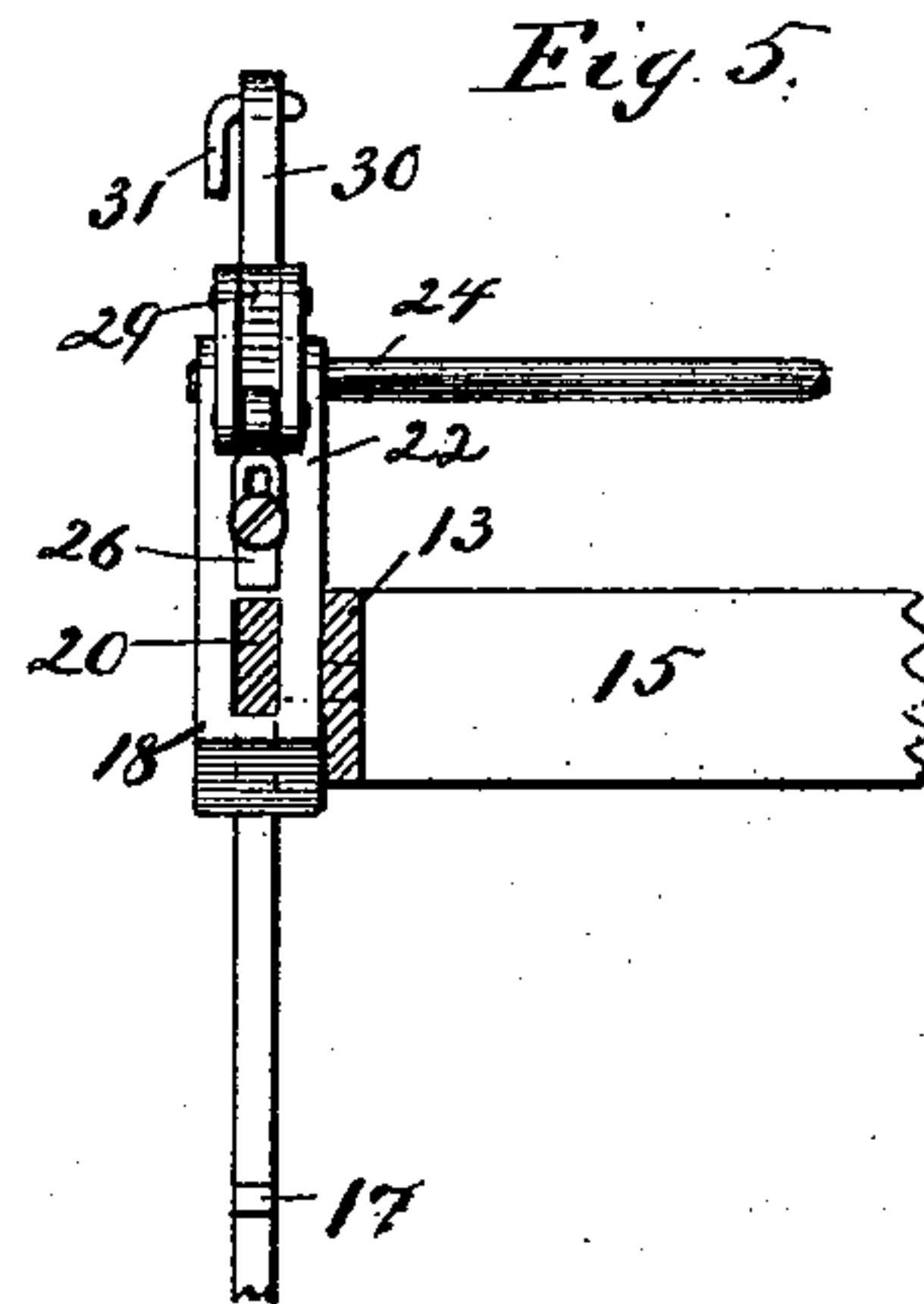
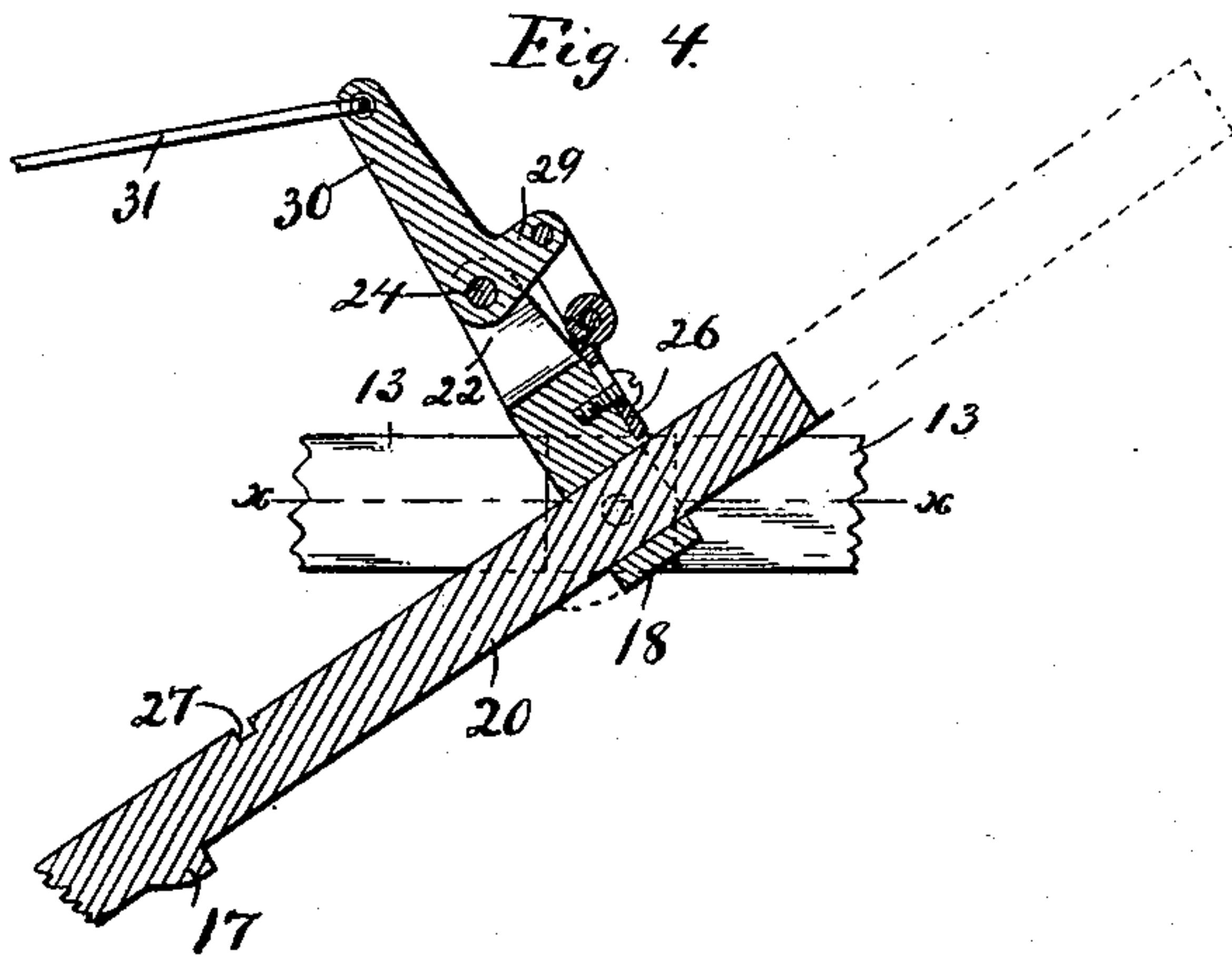
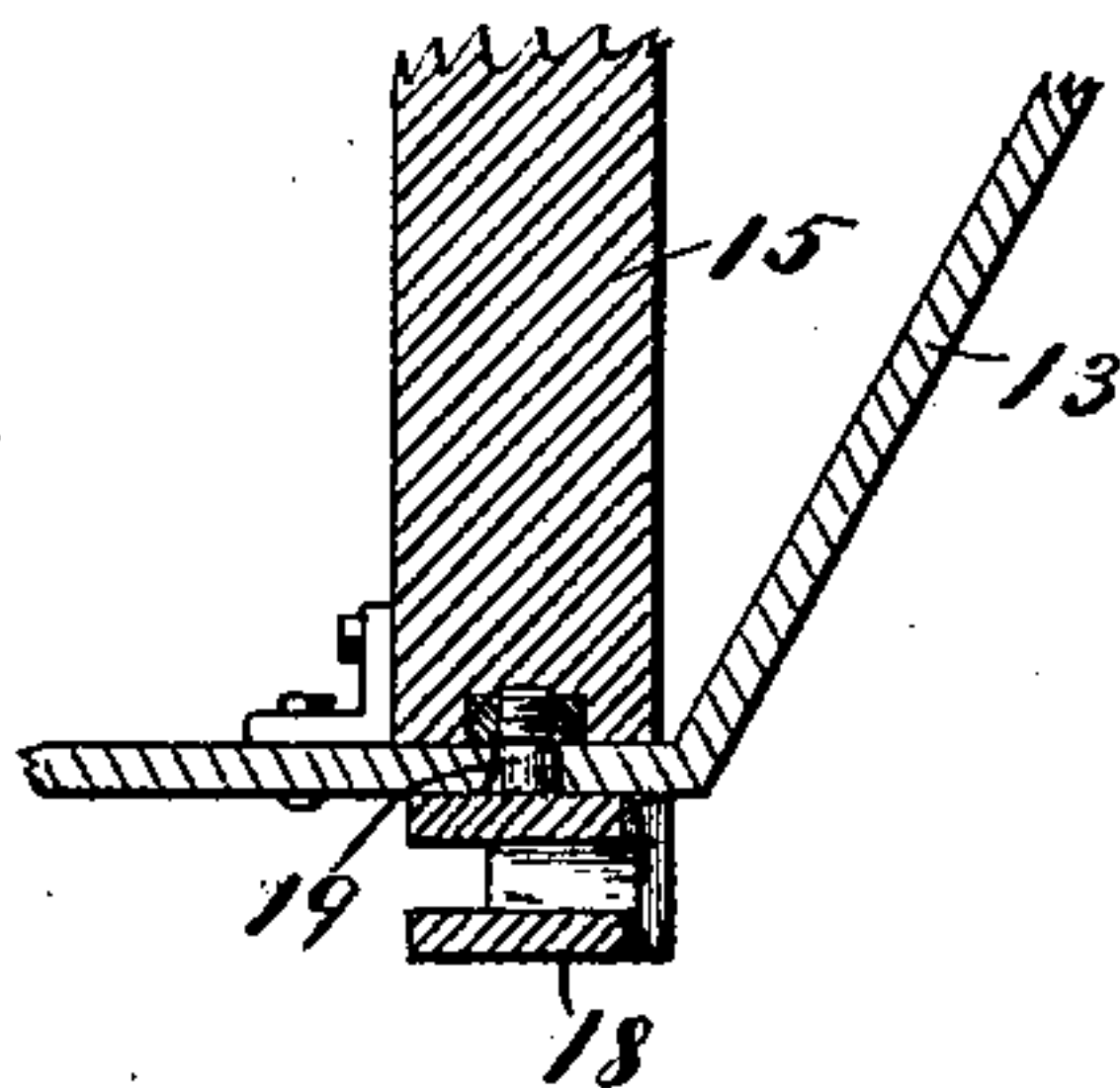


Fig. 6.



Witnesses

J. Jensen.
A. M. Gaskill

Inventor

Charles H. Sawyer.

By Paul Sanford & Merwin, Attys.

UNITED STATES PATENT OFFICE.

CHARLES H. SAWYER, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-HALF TO H. A. SMITH, OF SAME PLACE.

WHEELED SCRAPER.

SPECIFICATION forming part of Letters Patent No. 407,452, dated July 23, 1889.

Application filed May 1, 1888. Serial No. 272,418. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. SAWYER, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Wheeled Scrapers, of which the following is a specification.

This invention relates to improvements in the construction of wheeled scrapers; and it consists, generally, in the combination and arrangement hereinafter described, and particularly pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a side elevation and partial section of a wheeled scraper embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a side elevation with the outer wheel removed, showing the position of the pan and other parts of the machine when the pan is lowered. Figs. 4, 5, and 6 are details.

In the drawings, 2 represents a crank-axle, upon the ends of which are placed the supporting-wheels 3. A lever 5 is located at the rear of the pan. The front of this lever is forked and secured at either side of the machine to the offset of the axle, and by raising or lowering this lever the axle is partially revolved. A pan or scraper 7, constructed in the ordinary way, is suspended below the axle by links 9, securely fastened to the sides of the pan and pivotally attached to the lever 5 in front of the point where the said lever is secured to the axle. The lever 5 extends a given distance forward beyond the connection with the link 9, and is there attached by a pivot-pin 11 to the bars 13. These bars extend forward and are secured to the ends of the beam 15, and are then carried inward toward the center and secured to the tongue 16, forming a yoke or forked continuation of the said tongue to enable me to pivotally connect the tongue and the lever 5. The beam 15 extends across in front of the pan, and forms a support for the end of the tongue 16. A block 18 is fastened to the bar 13 by a pin 19, upon which the said block oscillates. This block is preferably rectangular in shape, and is provided with an opening through which the sliding bar 20 passes. The bars 20 are

attached to the pan near the front by a pivot 21, and extend upward on either side through the slots in the blocks 18, and extend above the said blocks a given distance. The blocks 18 are preferably provided with standards 22, the upper end of which forms bearings for the shaft 24. A latch 26 is secured upon the upper surface of each of the standards and engages a notch 27 in the sliding bar 20. An arm 29 is secured to the shaft 24, and is connected to the latch 26 by a suitable link. A lever 30 is also attached to the shaft 24, and is provided with a suitable rod 31 and handle 32, extending to the rear of the pan. By operating this lever or arm the shaft 24 is partially revolved, and the latches 26 are withdrawn from the notch in the sliding bar 20, which is then free to slide downward in the recess in the block 18 and allow the pan to be dumped. A catch 34 may be located upon the cross-beam 15, which receives the hook on the back end of the pan when the said pan is reversed and holds it in this position.

The lever 5 is preferably provided with a catch 6, which engages the hook 8 upon the back of the pan when the said pan is in its raised position and holds the pan and the lever securely together while being transported. This latch is provided with a suitable handle 10, by which it is released from the said hook when the pan is to be lowered.

The operation of the device is as follows: When the pan is in position for transportation, as shown in Fig. 1, it is supported upon the axle by the lever 5 through the connecting-links 9 and the catch 6. The forward end of the pan is securely held by the sliding bar 20 to the frame of the machine in order to lower the pan to the position to receive a load. The handle 5 is depressed sufficiently to allow the latch 6 to be released from the hook 8. When this is done, the lever is raised to the position shown in Fig. 3. The pan 7, being suspended from the lever 5 forward of the offset in the axle, will, by the partial revolution of the axle, effected by the raising of the lever 5, be lowered to any required point. The frame 13, forming a continuation of the tongue, being pivoted to the lever 5 in front of the suspension-links, will be depressed at the same time

that the pan is lowered, and the front or nose of the pan will be supported by the bar 20 secured thereto and to the tongue. The front end of the tongue is held at a given height by the neck-yoke of the beam, so that the depression of the tongue will all occur at the back end. The pivot 11, connecting the lever 5 and the bar 13, being in front of the said suspension-links, as the lever is operated this pivot 10
 10 total point will be drawn back toward the line of the suspension-link, thus shortening the distance between the said link and the pivoted block 18. This will compensate for the radial movement of the crank-axle and the angularity of the tongue and allow the bar 15
 20 to hold the pan in a substantially level position while being raised or lowered.

The sliding bar 20 is held securely to the pivoted block by the latch 26, and the draft 20
 on the tongue is transmitted to the pan through the said bar 20, so that the nose of the pan is firmly held to its work while the pan is being filled. When the pan is filled, the lever 5 is drawn downward, which partially 25
 25 revolves the axle and raises the pan to its former position. The catch 6 automatically engages the hook 8 on the pan, and the machine is ready to be conveyed to the point where the load is to be deposited. When it 30
 30 is desired to unload the pan, the rod 31 is drawn back, the shaft 24 partially revolves, the latches attached thereto are drawn out of the notches in the sliding bar 20, the lever 5 is now raised without being released from 35
 35 the back of the pan, the bars 20 are drawn through the blocks 18, and the pan is reversed. The bars 20 are preferably made of sufficient length to allow the pan to be thus reversed without drawing them entirely out of the slot 40
 40 in the blocks 18. Suitable lugs 17 are preferably provided upon the bars 20, which strike the block 18 and limit the upward movement of the bars. The catch 34 receives the back

of the pan and holds it in its reversed position as long as may be desired. 45

I claim as my invention—

1. In a wheeled scraper, the combination, with the wheels 3 and cranked axle 2, of the lever 5, secured to the axle, the pan 7, suspended from the lever in front of the axle, 50
 50 the frame or bars 13, forming a continuation of the tongue pivoted to the lever 5 in front of the suspension-links, and the bars 20, connecting the nose of the pan with the frame, substantially as described. 55

2. In a wheeled scraper, the combination, with the wheels and cranked axle, of the lever 5, secured to said axle, the pan suspended below said axle, the suspension-links 9, secured to said pan and pivoted to said 60
 60 lever in front of said axle, the bars 13, secured to the tongue and pivoted to the lever 5 at a point in front of said suspension-links, the bars 20, pivoted to the pan, and the blocks 18, pivotally secured to the frame and receiving 65
 65 the bars 20, substantially as described.

3. In a wheeled scraper, the combination, with the wheels, of the cranked axle, a lever secured to and operating said axle, the front end of said lever extending forward beyond 70
 70 the axle, a frame pivoted to the forward end of the lever and secured to the tongue, a pan or scraper suspended from the lever by suitable links supported upon the lever at a point between its forward end and the axle, 75
 75 and the bars 20, pivotally secured to the frame and to the nose of the pan and capable of being released from said frame when the pan is reversed, substantially as described.

In testimony whereof I have hereunto set 80
 80 my hand this 5th day of April, 1888.

CHARLES H. SAWYER.

In presence of—

R. H. SANFORD,

A. MAY GASKELL.