

No. 612,632.

Patented Oct. 18, 1898.

F. M. PITMAN & W. T. MAXWELL.

STREET SWEEPER.

(Application filed July 3, 1897.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

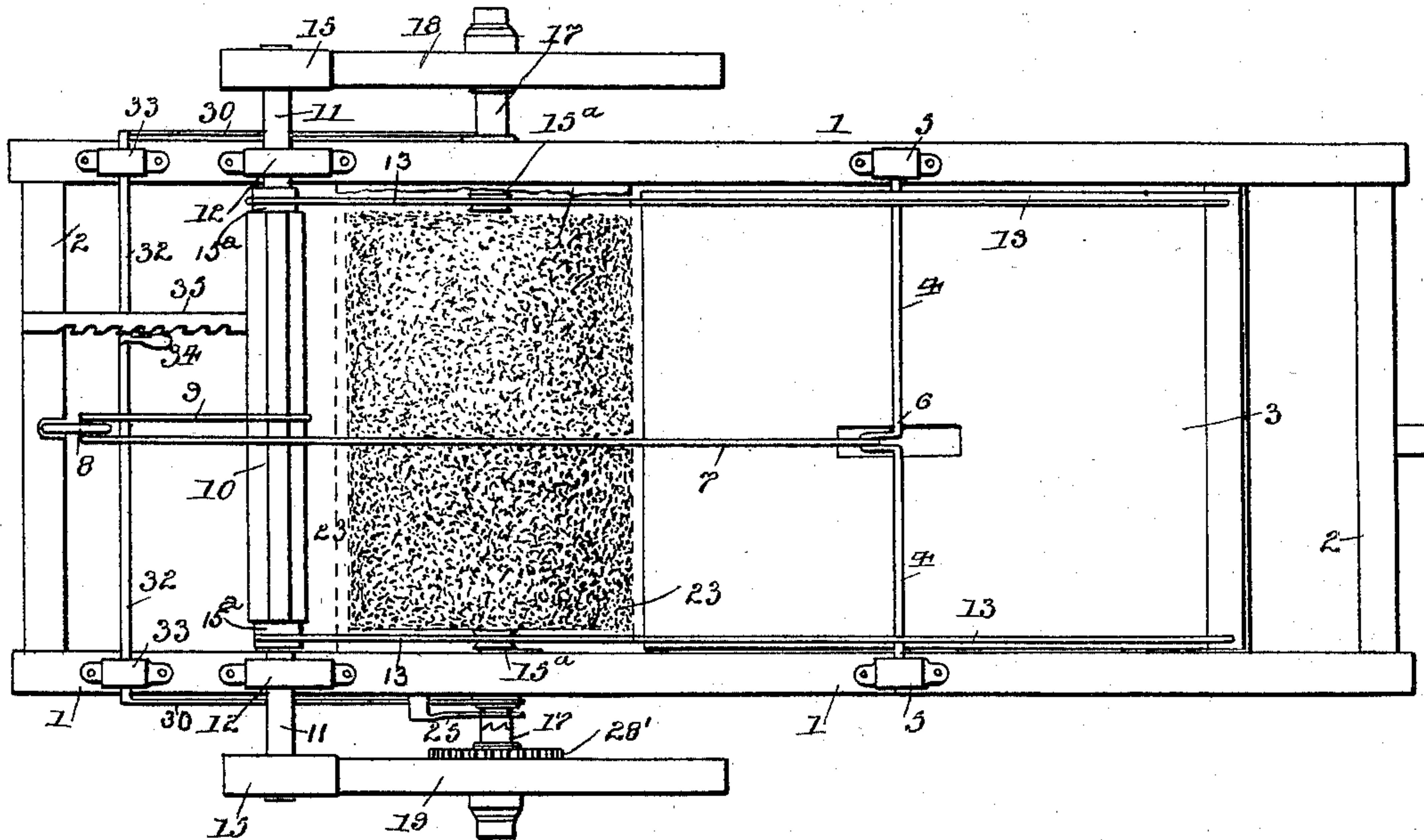
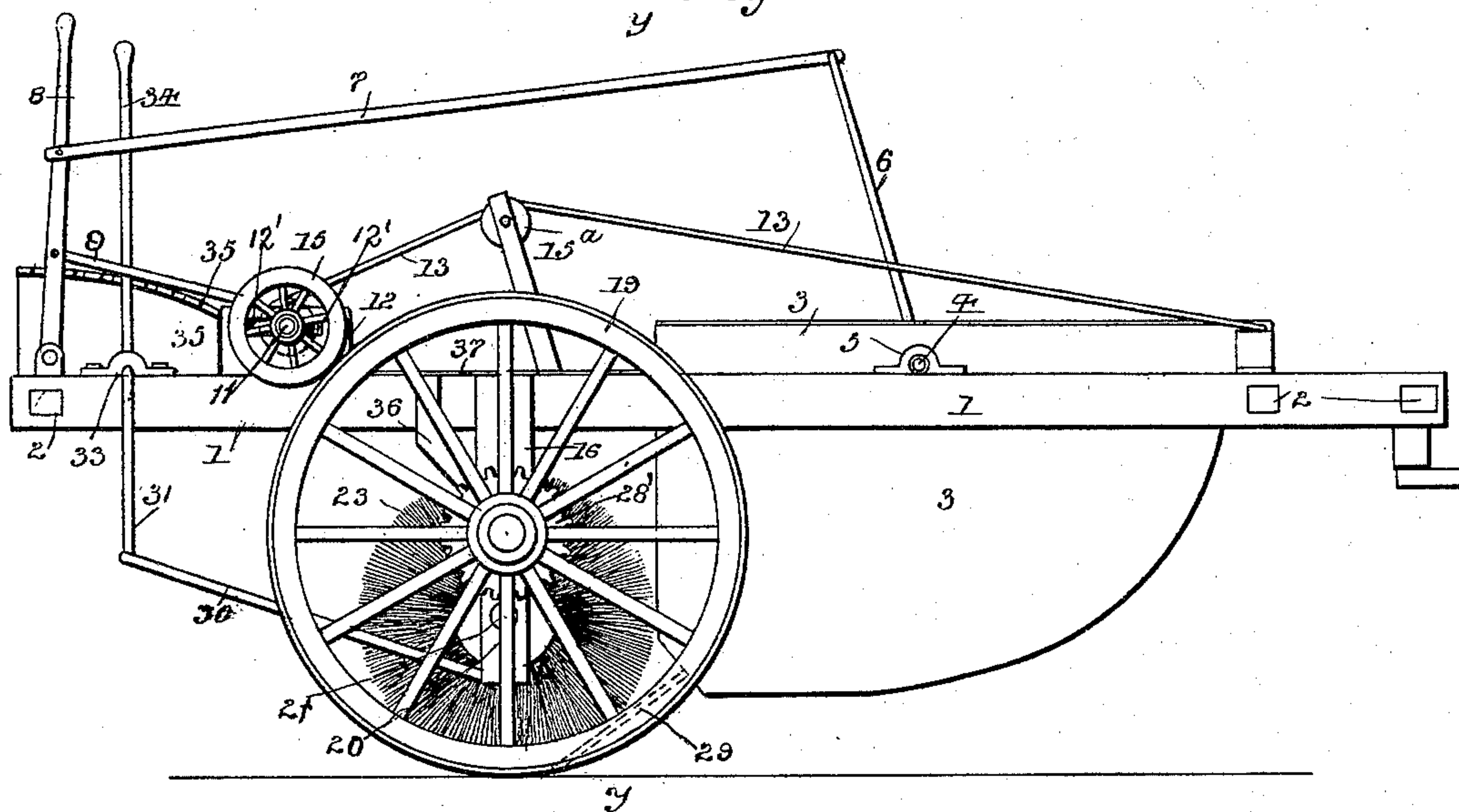


Fig. 2.



WITNESSES:

Geo. H. Byrne
Victor J. Evans

INVENTORS

F. M. Pitman & W. T. Maxwell

BY

John Weddellburn
ATTORNEY.

No. 612,632.

Patented Oct. 18, 1898.

F. M. PITMAN & W. T. MAXWELL.

STREET SWEEPER.

(Application filed July 3, 1897.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 3.

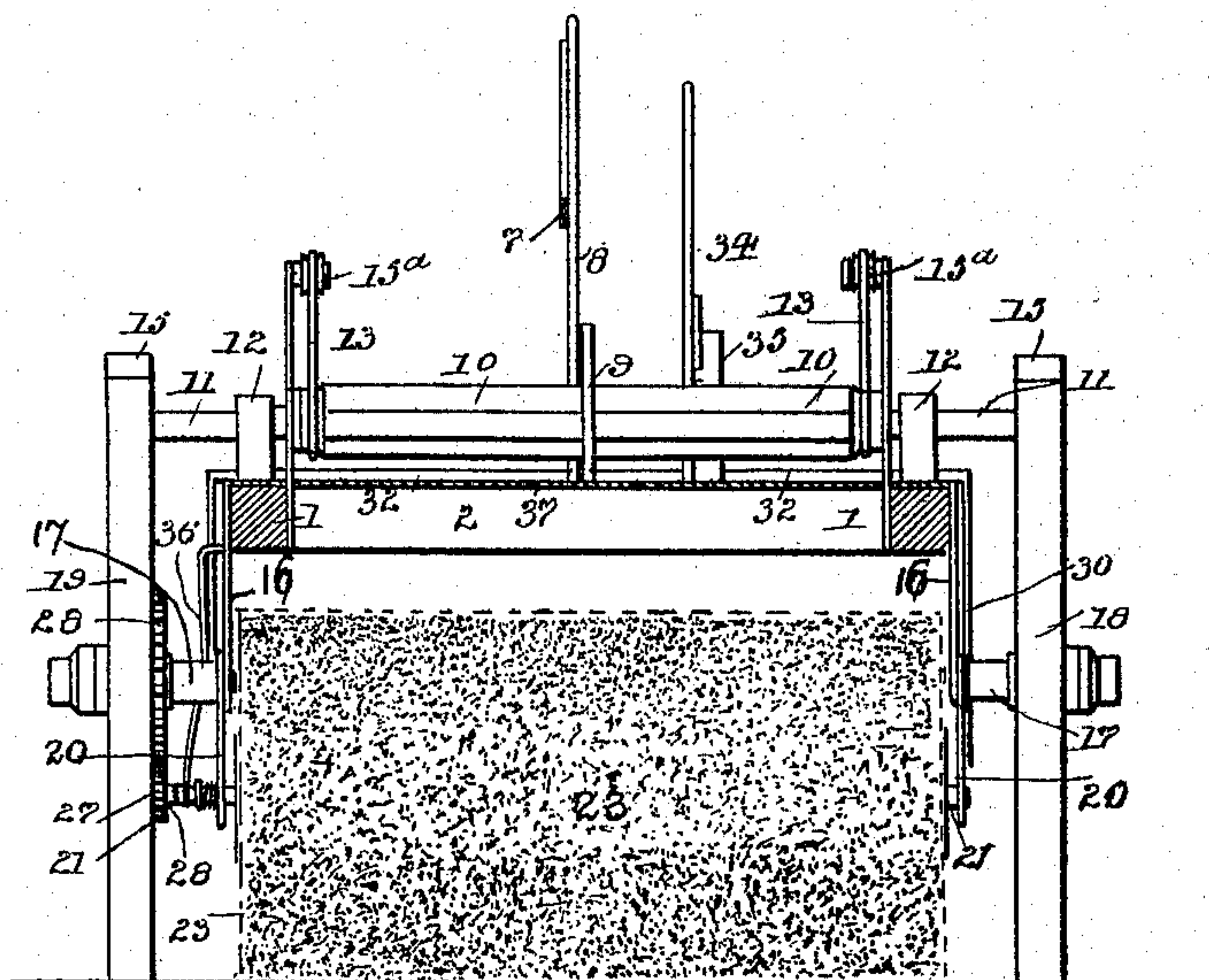
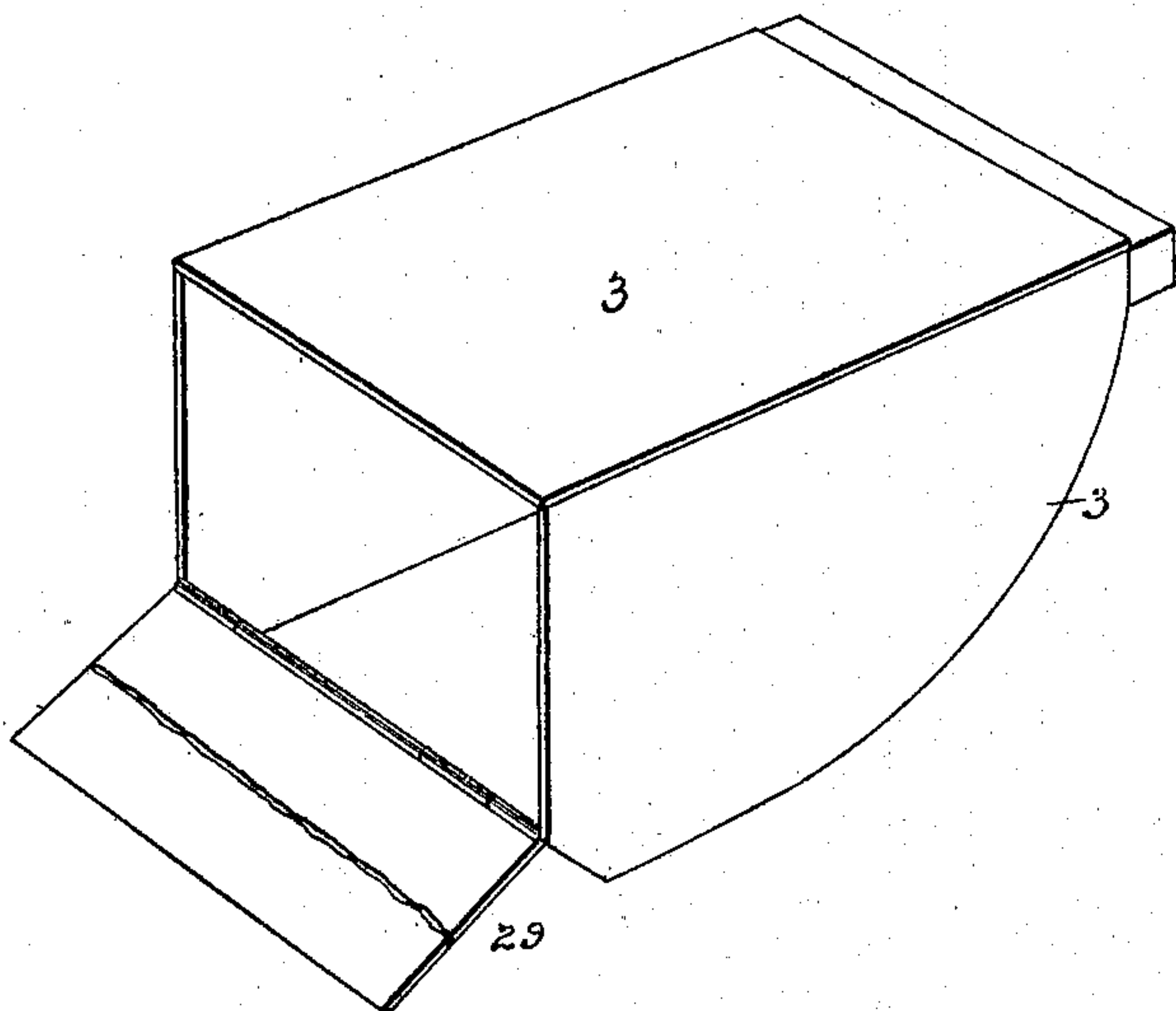


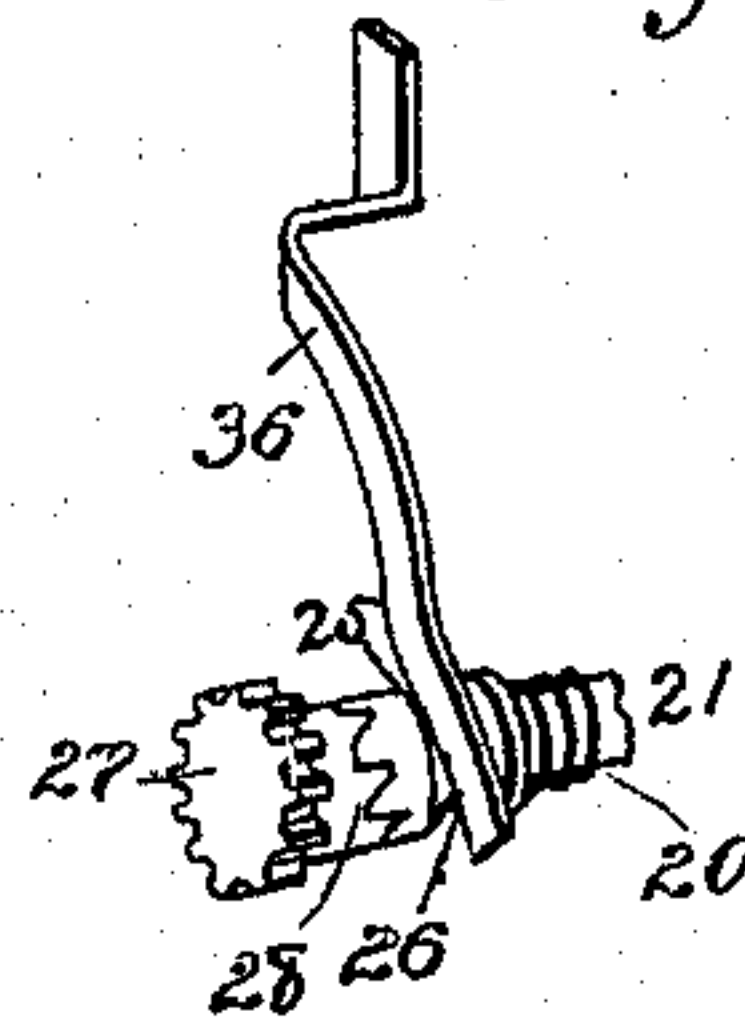
Fig. 4.



WITNESSES:

Geo. C. Byrne
Victor J. Evans

Fig. 5.



INVENTOR

F. M. Pitman & W. T. Maxwell

BY

John Wedderburn

ATTORNEY.

UNITED STATES PATENT OFFICE.

FRANCIS M. PITMAN AND WILLIAM T. MAXWELL, OF CUTLER, INDIANA.

STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 612,632, dated October 18, 1898.

Application filed July 3, 1897. Serial No. 643,481. (No model.)

To all whom it may concern:

Be it known that we, FRANCIS M. PITMAN and WILLIAM T. MAXWELL, of Cutler, in the county of Carroll and State of Indiana, have invented certain new and useful Improvements in Rotary Street-Sweepers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to street-sweepers; and it consists in the details of construction and arrangement, which will be fully herein-after described and claimed.

The object of the present invention is to provide a street-sweeping machine that can be controlled entirely by one operator and drawn by a comparatively small amount of draft-power, thereby materially reducing labor and expense of time in manipulating such machines, the parts being strong and durable and of such simplicity as to cheapen the cost of manufacture.

In the accompanying drawings, Figure 1 is a plan view of a street-sweeping machine embodying the invention. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse vertical section. Fig. 4 is a detail perspective view of the dumping-scoop. Fig. 5 is a similar view of a portion of the brush or broom shaft with the clutch mechanism thereon and the cam-arm for operating the same automatically.

Referring to the drawings, wherein similar numerals of reference are employed to indicate corresponding parts in the several views, the numeral 1 designates the side bars or sills of a frame connected by suitable cross-bars 2, arranged at proper intervals. In the front part of the machine a dumping-scoop 3 is secured to and held in position by means of the rod 4, provided with the crank or arm 6 at its center, and which rod has its ends to pass through opposite sides of the scoop 3 and which are then journaled in suitable boxes 5 upon the top of the frame 1. To the upper end of the crank or arm 6 is connected the rod 7, which extends backwardly to the lever 8, pivoted upon the rear end of the frame, and which lever is connected by a link 9 to the winding-drum 10. The arm or crank 6 extends upwardly a suitable distance and is

connected, by means of the rod 7, with the lever 8 for the purpose of releasing friction when the sweeping-receptacle is thrown back as it strikes the crank, thereby allowing the receptacle to return to its proper position ready to receive the sweepings again. As the machine is wholly covered over, it would be hard to see just when to release friction without the crank and the rod 7, connected therewith. The said winding-drum has stub-shafts 11, projecting from opposite ends thereof, slidably and rotatably mounted in journal-bearings 12, formed with slots 12' to receive the said stub-shafts. To the outer portions of the front end of the upper part of the said dumping-scoop wire ropes or chains 13 are connected and extend rearwardly and pass over sheaves or pulleys 15^a, located on opposite sides of the frame, and thence engage the winding-drum 10. On the outer end of the stub-shafts 11 are mounted suitable friction-wheels 15, which are keyed fast. At a suitable point on opposite sides of the frame hangers 16 depend and carry stub-axles 17, on which ground-wheels 18 and 19 are mounted. The said ground-wheels 18 and 19 operate the friction-wheels 15, and consequently the winding-drum or windlass 10, when the parts are arranged to produce a contact between the said friction-wheels 15 and the ground-wheels. This arrangement is attained by pressing the lever 8 forwardly toward the front of the machine and moving the winding-drum or windlass 10 in the same direction, thereby bringing the friction-wheels 15 in close contact with the ground-wheels 18 and 19, causing a revolution of the said winding-drum or windlass and winding thereon the ropes or chains 13 and elevating the front end of the scoop, so that the contents thereof may be dumped outwardly from the rear open end. After the said scoop has been relieved of its contents it will automatically fall back into its normal position through the medium of its weight, it being understood, of course, that the lever 8 will have been previously moved to release the friction-wheels 15 from contact with the ground-wheels 18 and 19.

Suspended from the stub-axles 17 are hangers 20, in which the opposite ends of the brush-shafts 21 have bearing. The said brush-shafts 21 are secured to a brush-cylinder, in

which is mounted a steel brush 23, having the form of the ordinary devices of this character. One brush-shaft 21 is extended outwardly a suitable distance and has mounted thereon a sliding spring-actuated clutch-collar 25, with an inner groove 26, and in advance of the said clutch-collar and on the end of the said shaft is a pinion 27, having an inner clutch-face 28 to interlock with the clutch-collar 25. The pinion 27 engages a gear-disk or analogous device 28', forming a part of the wheel 19 and located at the center of the latter. By this means the brush through its shafts is rotated to cause a sweeping action and drive the dirt upwardly into the dumping-scoop heretofore set forth, and to facilitate this operation the rear end of the lower part of the dumping-scoop is provided with a hinged apron 29, which trails over the surface, being swept close under the forward part of the brush when the latter is down in operative position. The hangers 20, supporting the brush and the mechanism heretofore set forth, are movable on the stub-axes 17, and attached to the lower parts thereof are links 30, which are movably connected at their rear ends to the depending ends 31 of a transversely-disposed rod 32, mounted upon and having movement in bearings 33 at the front end of the machine and continuous with an upwardly-extending arm 34, located adjacent to a toothed sector 35 to sustain a desired adjustment. Through the medium of this rod 32 and the links 30, attached thereto as set forth, the brush is adapted to be raised out of operative position, and when this elevation of the brush ensues the groove 26 on the clutch-collar 25 strikes against a curved cam-arm 36, depending from the adjacent side of the machine, which draws the clutch-sleeve 25 inwardly and disconnects it from the brush 28 and from the wheel 19, permitting the pinion 27 to run loose on the end of its shaft.

The machine as thus far described is exceptionally complete, and as the brush-broom operates the dirt is deposited in the scoop, which has the capacity of an ordinary cart-load, and after said scoop is filled the brush is elevated and the entire machine drawn to a suitable point, where the friction devices

are applied and the scoop operated to dump its contents.

It is obviously apparent that many minor changes in the details of construction might be made and substituted for those shown and described without in the least departing from the nature or spirit of the invention.

Having thus described the invention, what is claimed as new is—

1. In a street-sweeping machine, the frame supported upon suitable wheels, the pivotal rod 4 provided with a crank or arm at its center, and which is journaled in suitable boxes upon the frame, and a dumping-scoop suspended from the rod 4, combined with the connecting-rod 7, the operating-lever 8 pivoted upon the frame, the link 9 which extends from the lever to the drum, the drum journaled in slotted boxes so as to be movable back and forth, friction-wheels 15 upon its ends, and the cords, wires, or chains 13, connected at their front ends to the scoop, and having their rear ends connected to the drum, substantially as shown.

2. The frame, hangers 16 suspended therefrom, stub-axes 17 journaled in said hangers, hangers 20 suspended from said stub-axes, the brush provided with the shafts 21 which are journaled in the hangers 20, the spring-actuated clutch-collar 25 placed upon the brush-shafts, the pinion 27 provided with the clutch-face 28, and a wheel secured to the hub of the driving-wheel 19, the shaft 32, provided with a suitable handle for engaging and holding a segment, and depending ends; the rods 30 secured to said depending ends, and to the lower ends of the hangers 20, and the rod or arm 36 secured to the inner side of the frame, and having its lower end to engage with the clutch mechanism, substantially as described.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

FRANCIS M. PITMAN.
WILLIAM T. MAXWELL.

Witnesses:

JOHN M. LOGAN,
WILSON B. HINKLE.