

No. 881,323.

J. H. LONG.

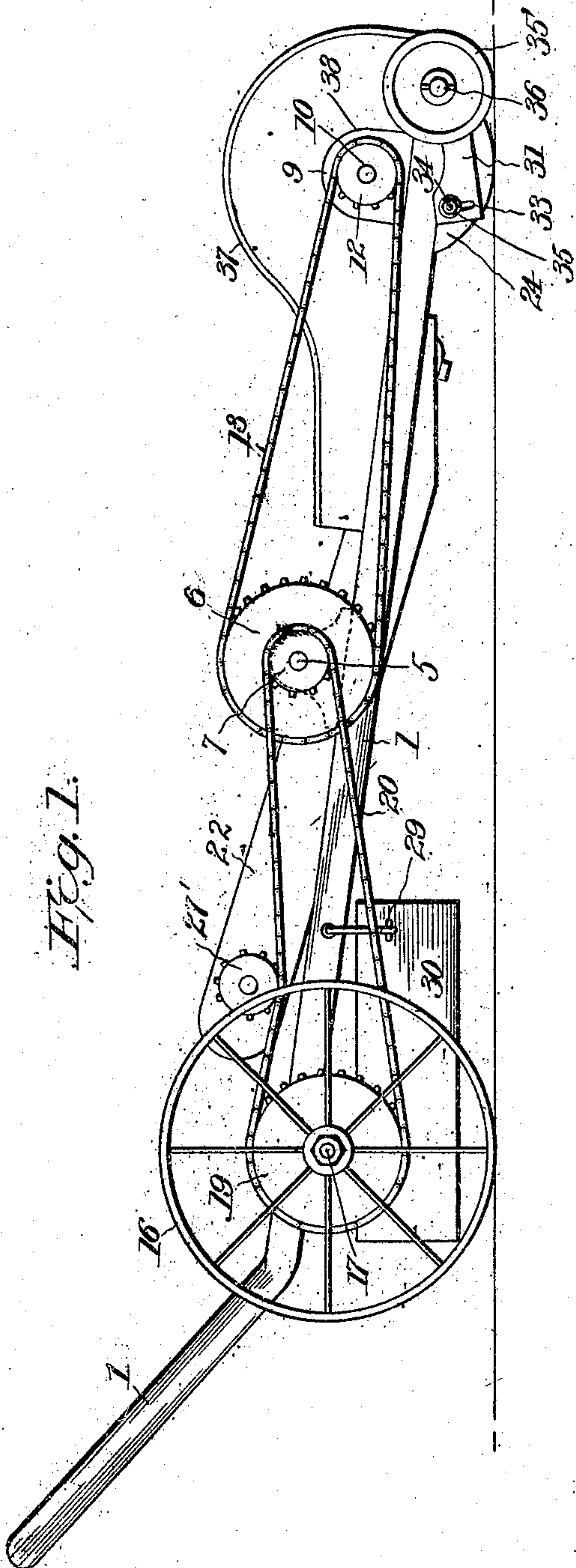
PATENTED MAR. 10, 1908.

STREET SWEEPER.

APPLICATION FILED MAY 15, 1907.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

C. M. Walker.
J. T. Walker.

Fig. 7.

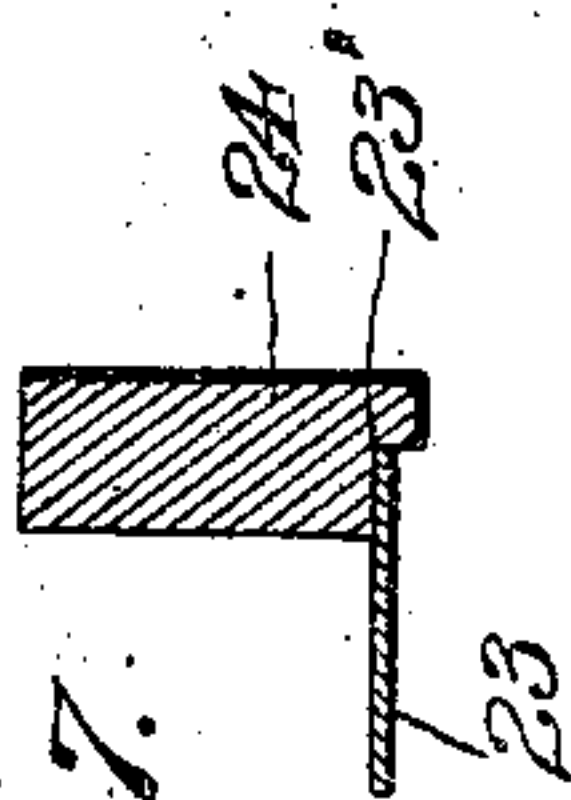
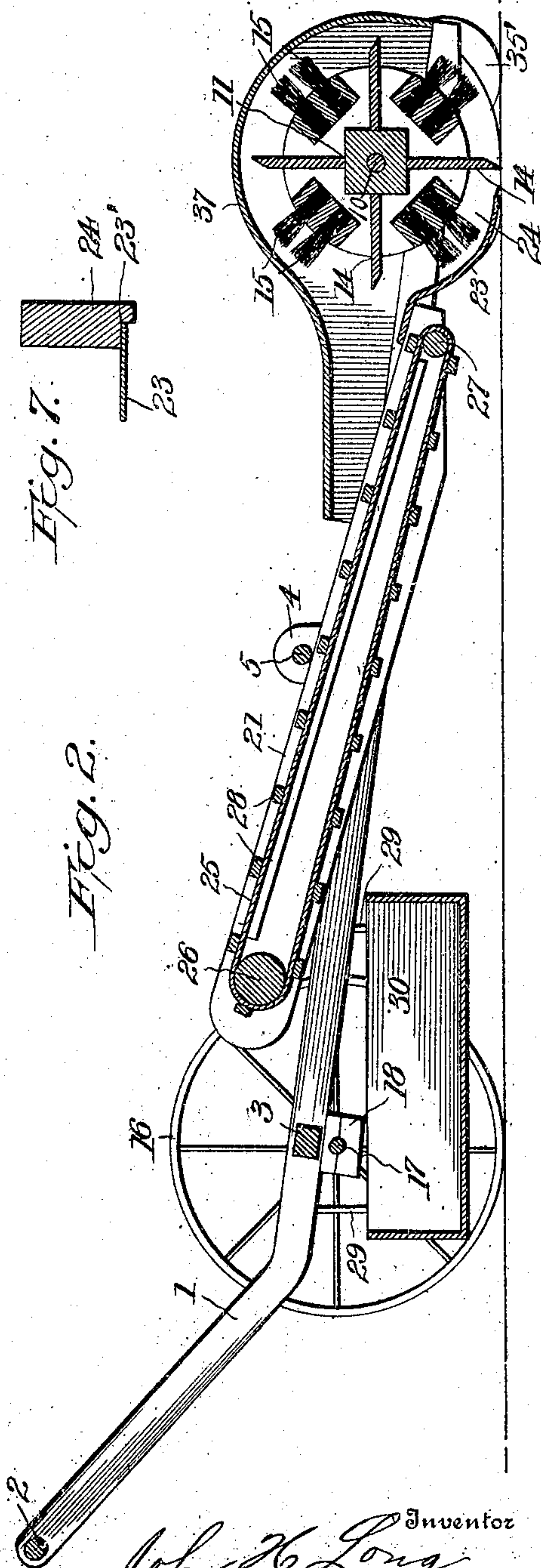


Fig. 2.



334

John H. Long
Inventor
Shemata & Brown
Attorneys

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2 SHEETS—SHEET 2.

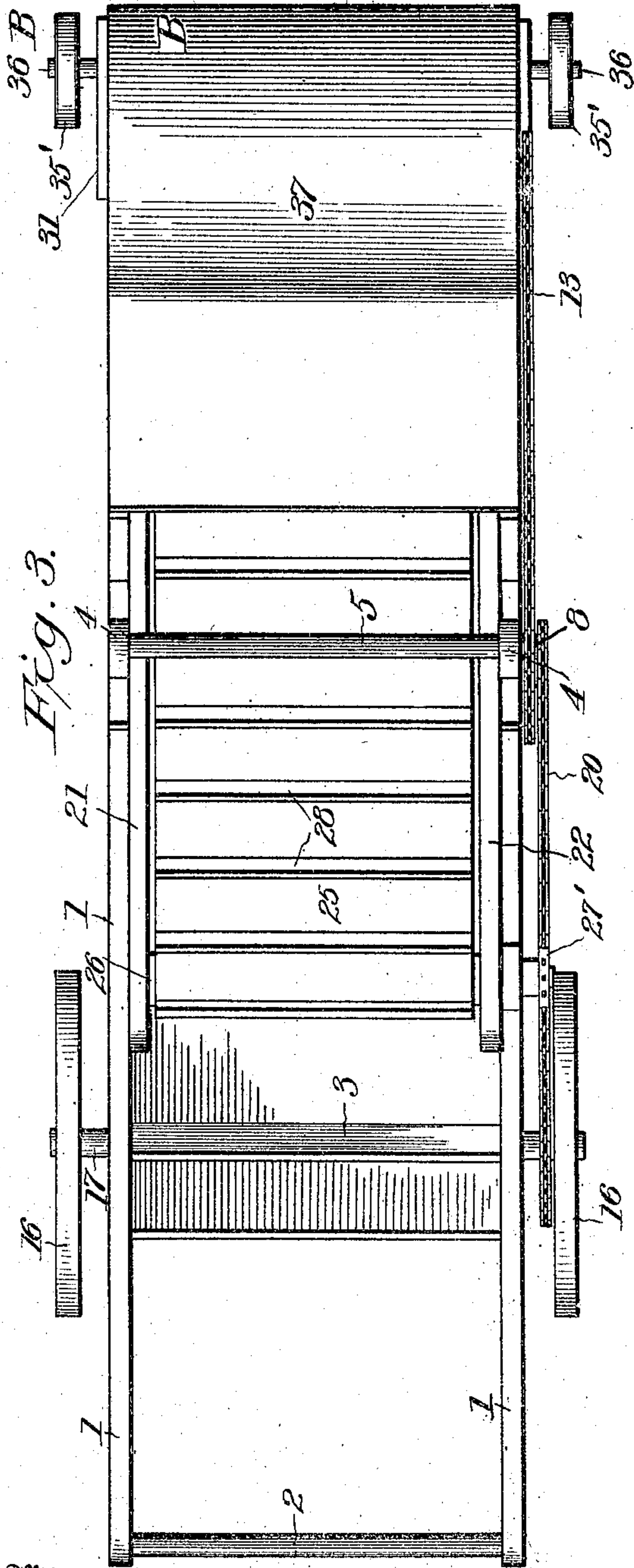


Fig. 3.

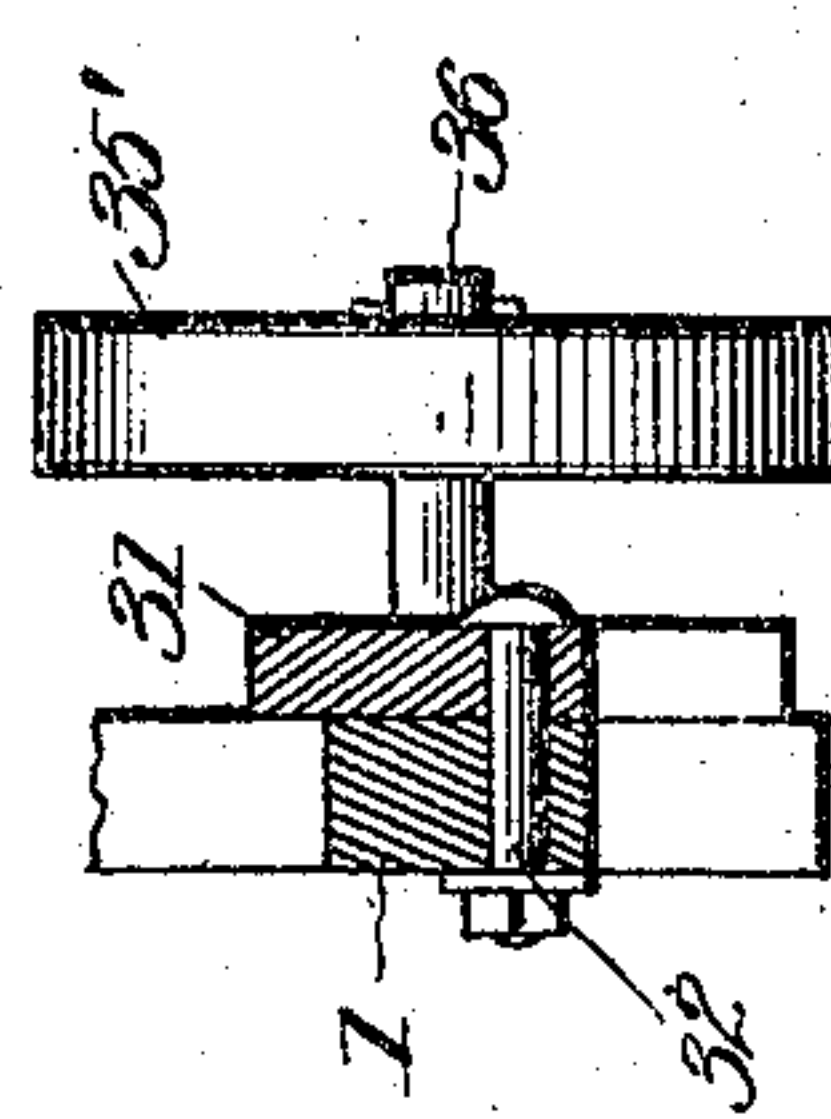


Fig. 5.

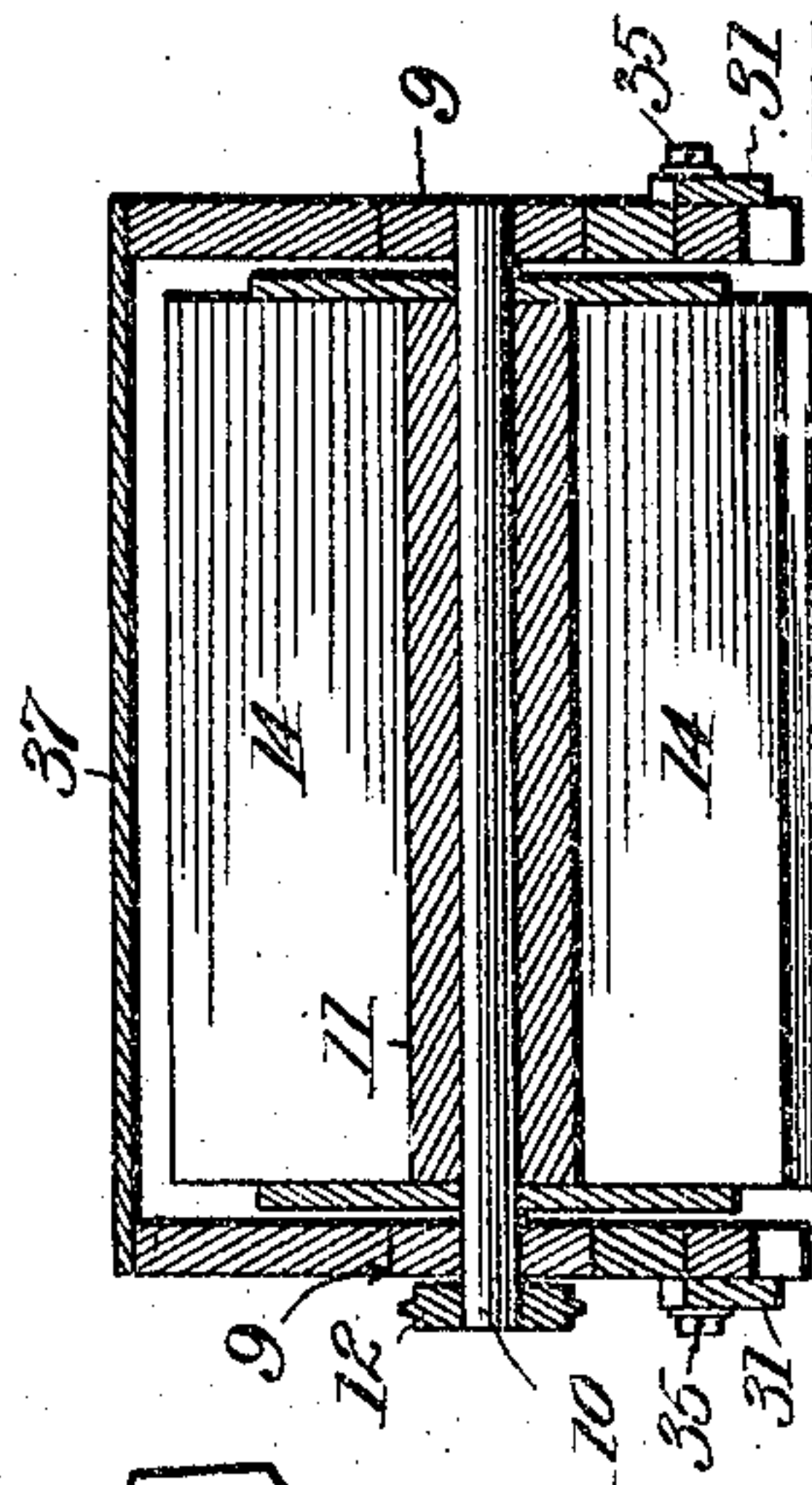


Fig. 4.

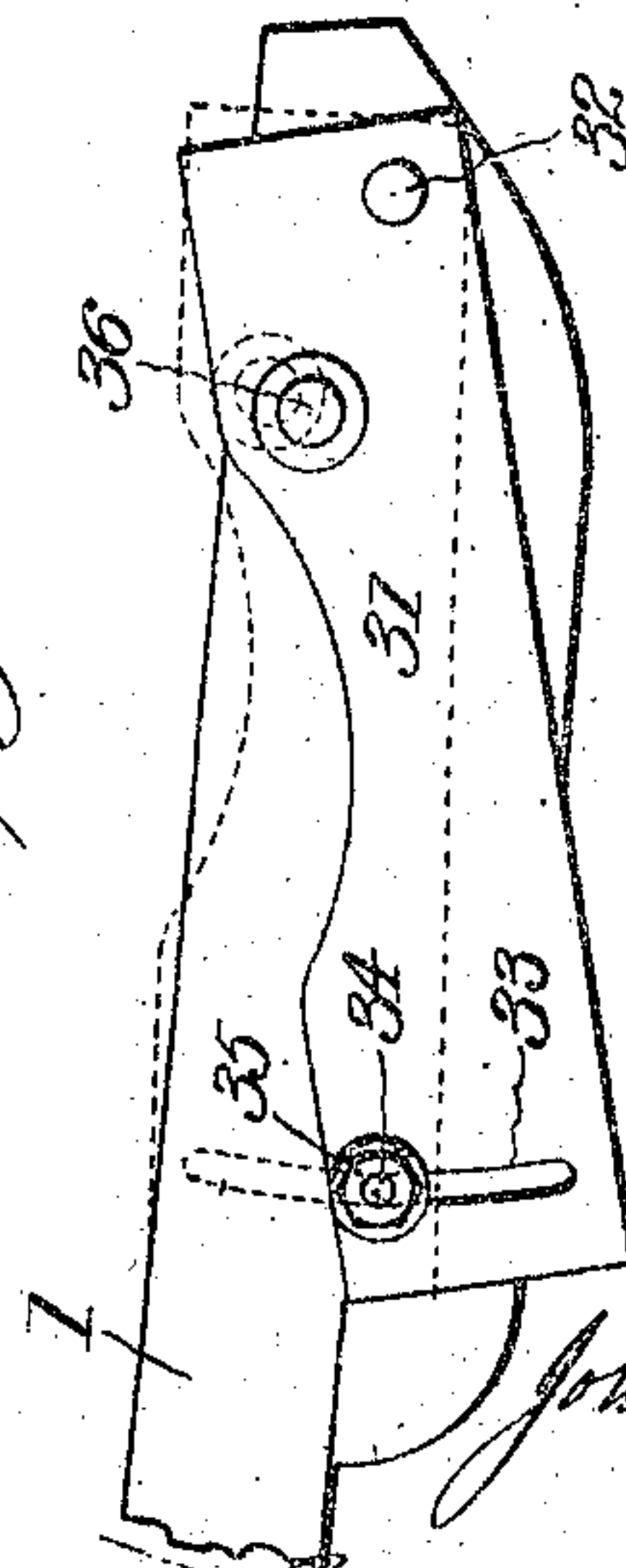


Fig. 6.

Witnesses

C. M. Walker.
J. T. Walker

334

Inventor
John H. Long
Shemata & Brown
Attorneys

UNITED STATES PATENT OFFICE.

JOHN H. LONG, OF NEW PHILADELPHIA, OHIO.

STREET-SWEEPER.

No. 881,323.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed May 15, 1907. Serial No. 373,804.

To all whom it may concern:

Be it known that I, JOHN H. LONG, a citizen of the United States, residing at New Philadelphia, in the county of Tuscarawas and State of Ohio, have invented certain new and useful Improvements in Street-Sweepers, of which the following is a specification.

This invention relates to street sweepers.

One object is to provide a machine for the cleaning of streets, roadways, and other places, embodying such characteristics that the dirt will be taken from the bed surface and elevated through the machine for deposit into a removable receptacle carried by the machine, and which latter may be readily and quickly detached from the machine for dumping purposes.

Another object resides in the provision of a machine of the nature stated embodying in its organization simplicity, inexpensiveness, durability and efficiency.

It is still further designed to provide a machine adapted to be operated by a person for the cleaning of streets, and its construction and arrangement is such that the work may be accomplished expeditiously at a minimum of cost, in that but one operator is necessary.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings and particularly pointed out in the appended claims, it being understood that changes may be made in the form, proportion, size and minor details without departing from the spirit or sacrificing any of the advantages thereof.

In the drawings:—Figure 1 is a side elevation of my invention. Fig. 2 is a longitudinal sectional view. Fig. 3 is a top plan view. Fig. 4 is a transverse sectional view through the sweeper head. Fig. 5 is a transverse view on the line B—B of Fig. 3. Fig. 6 is a detailed view of one of the bars on which the front wheels are mounted, and which are adjustable on the frame to raise or lower said wheels; Fig. 7 is a detail fragmentary view illustrating the connection of the guard 23 with the shoes 24.

Referring now more particularly to the accompanying drawings, the reference character 1 indicates the side bars of the frame of the machine connected at one end by the bar 2 and intermediate their ends by the brace 3. Mounted upon the side bars 1 intermediate their ends are the oppositely dis-

posed bearing boxes 4 in which boxes is journaled the counter-shaft 5 having one end projecting beyond one of the boxes and provided with a large sprocket wheel 6 and a smaller sprocket 7 spaced from the wheel 6 by a suitable spacing element 8.

Disposed upon the forward ends of the side bars 1 are the oppositely disposed boxes 9 in which is journaled the brush head shaft 10 carrying the brush head 11, one end of the brush head shaft 10 extending beyond one of the boxes and having one small sprocket wheel 12 fixedly secured thereto, and which is connected to the aforesaid large sprocket wheel 6 through the instrumentality of a chain 13, so that when the counter-shaft is rotated in a manner hereinafter explained the brush head will be likewise rotated. The brush head in the present instance may be of any desired construction and is provided with the scraper blades 14 arranged between alternate pairs of brush strips 15.

The reference character 16 indicates the driving wheels of the machine mounted upon the driving axle 17 mounted in any suitable manner in the bearing blocks 18 fixed beneath the aforesaid side bars 1. Arranged between one of the driving wheels and the corresponding side bar 1 is a sprocket wheel 19 connected to the aforesaid small gear wheel 7 through the instrumentality of a sprocket chain 20, whereby when the driving shaft is rotated the counter-shaft is obliged to rotate.

Mounted within the side bars 1 and directed downwardly with respect thereto are the side bars 21 and 22 of an elevator frame, the sides 21 and 22 at their lower ends being connected by a sheet metal guard 23, whose ends are secured in the grooves 23' in the under face of the shoes 24 at the forward end of the bars 1 as best shown in Fig. 7. This guard 23 coöperates with the brush head to cause the dirt to be thrown upon the endless conveyer 25 mounted upon the upper and lower shafts 26 and 27 of the conveyer frame. This endless conveyer is preferably strapped together in any suitable manner so that it may be quickly removed from the frame, and the upper shaft 26 carries a sprocket wheel 27' whose teeth are designed to engage in the aforesaid sprocket chain 20 so that as the driving shaft 17 is operated the endless apron or conveyer will travel continuously to receive the dirt lifted by the brush head or by said head and its scraper

bars and carried thereonto by way of the aforesaid guard 23, the slats 28 of the apron or conveyer preventing the dust and dirt from accidentally sliding backwards off the apron or conveyer. The groove 23' in the shoes 24 is shallow to permit the guard to lie close to the ground.

Detachably suspended from the side bars 1 by means of the hooks 29 is a dust or dirt collecting receptacle 30 designed to receive the matter carried up the apron or elevator. When desired this collecting receptacle may be readily detached from the machine for the purpose of depositing the dirt in any suitable place.

There are times when it might be desired to raise or lower the brush head, and for this purpose I secure upon each bar 1 at the forward end thereof a plate 31. Each plate is pivotally mounted at its forward end upon the corresponding side bar 1 by means of a suitable pivot 32 (see Fig. 5) and has its opposite end provided with a slot 33 designed to fit over the screw 34, with which latter coöperates a nut 35 designed to tighten the plate 31 in its different positions according to the raising or lowering of the front wheels 35' mounted upon the stub shaft 36 of the corresponding plate 31 and held thereon by means of a suitable key. Thus it will be understood that the front wheels of the device are not carried directly by the side bars 1, but that on the other hand they are carried by the plates 31, and by reason of the pivotal mounting of each of the latter at its forward end and the slot in its rear end, the brush head may be raised or lowered as may be desired. This is an essential feature of the invention in that there are times when it is necessary to have heavy pressure of the brush head upon the street, roadway, or other place.

The reference character 37 designates a dust guard adapted to prevent the raising of dust in the use of the machine. This guard has its sides notched, as at 38, to fit over the bearings 9 at the lower ends of the bars 1, and by reason of this engagement of the guard over the boxes the guard will not be come accidentally disengaged from the side

bearings of the machine, but may be readily removed, if desired.

What is claimed is:—

1. A street sweeper comprising a frame, a brush head carried by the frame, a driving shaft, a counter shaft, chain and sprocket connections between the drive shaft, the counter shaft and the brush head, a dirt collecting receptacle carried by the frame for coöperation with said conveyer, a plate pivotally secured upon each side of the frame at the forward end of the latter, each of said plates having a slot, means connected with the frame and working in the slot of each plate to adjust the latter, a stub shaft carried by each plate, and a wheel carried by each stub shaft.

2. A street sweeper comprising a frame, a brush head carried by the frame, a driving shaft, a counter shaft, chain and sprocket connections between the drive shaft, the counter shaft and the brush head, a dirt collecting receptacle carried by the frame for coöperation with said conveyer, a plate pivotally secured to each side of the frame at the forward end of the latter, a stub shaft carried by each plate, a wheel carried by each stub shaft, and means whereby each plate and the corresponding wheel may be shifted to adjust the frame toward and away from the ground.

3. A street sweeper comprising a wheeled frame, a brush head carried by the frame, a conveyer mounted in the frame, a collecting receptacle connected with the frame for coöperation with the conveyer, means for driving the conveyer, and a combined supporting and adjusting device for each of the front wheels of the machine, each of said devices including a pivoted member having a slot at one end, and means engaging the frame and working in each slot of each member, whereby the front wheels may be adjusted toward and away from the ground.

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

JOHN H. LONG.

Witnesses:

JOHN S. GRAHAM,
JOHN W. HILL.