

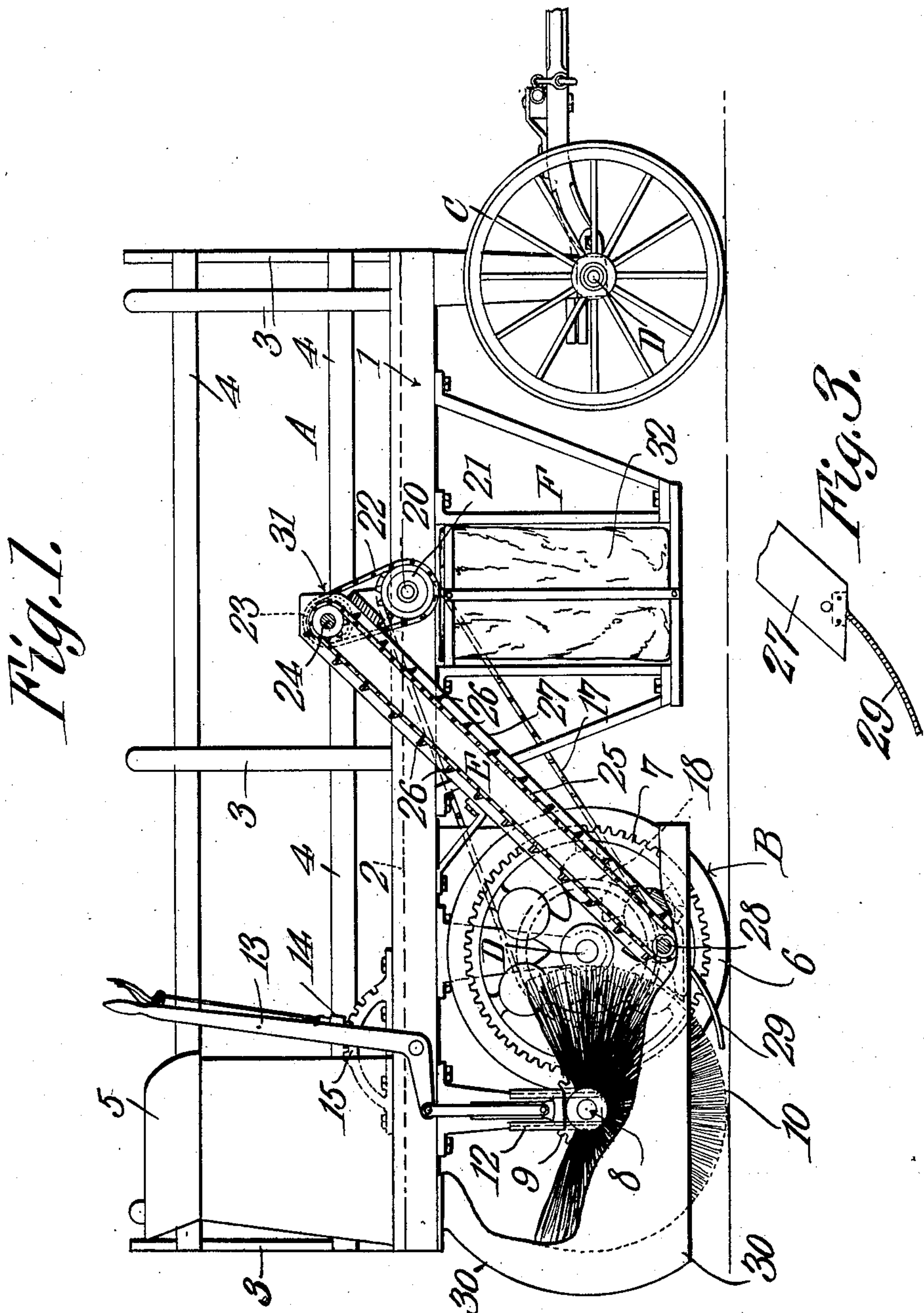
No. 862,224.

PATENTED AUG. 6, 1907.

J. WEILAND.  
MACHINE FOR SWEEPING GUTTERS.

APPLICATION FILED SEPT. 1, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

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INVENTOR.

By *C. A. Snow & Co.*  
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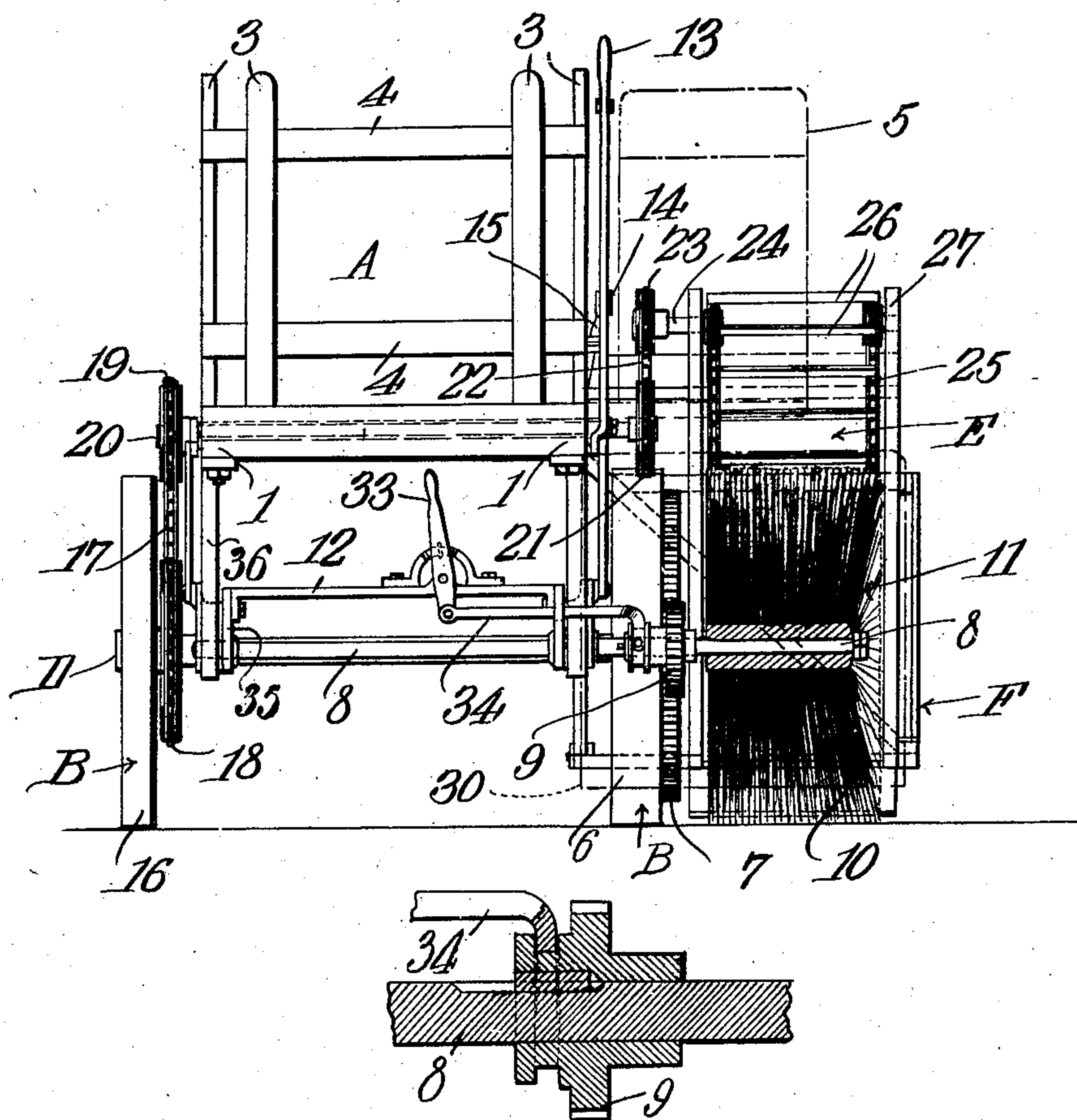
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2 SHEETS—SHEET 2.

*Fig. 2.*



*Fig. 4.*

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# UNITED STATES PATENT OFFICE.

JOSEPH WEILAND, OF ROCHESTER, NEW YORK.

## MACHINE FOR SWEEPING GUTTERS.

No. 862,224.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed September 1, 1906. Serial No. 333,001.

*To all whom it may concern:*

Be it known that I, JOSEPH WEILAND, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented a new and useful Machine for Sweeping Gutters, of which the following is a specification.

This invention relates to machines for sweeping gutters.

It is the object of the invention to improve and simplify the construction of such machines; furthermore, to increase their efficiency in operation and to decrease the expense attending their manufacture.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of the following claims without departing from the spirit of the invention or sacrificing any of its advantages.

In the accompanying drawings forming part of this specification: Figure 1 is a side elevation, partly broken away, of a gutter sweeping machine constructed in accordance with the invention; and Fig. 2 is a rear elevation, partly in section. Fig. 3 is a detail sectional view showing the attachment of the deflector to the elevator casing. Fig. 4 is a detail sectional view showing the means for throwing the brush into and out of gear.

Like reference numerals indicate corresponding parts in the different figures of the drawings.

The improved machine of the present invention comprises a body A, a pair of carrying wheels B, a pair of guiding wheels C, and shafts D.

The body A preferably consists of the sills 1 on which is mounted a floor 2 serving to support the uprights 3 with which are connected the rails 4 which serve to produce a suitable inclosure to receive a large number of bags filled with sweepings, as will hereinafter appear. A seat 5 for the driver of the machine preferably is mounted upon the rear end of the body A.

The carrying wheels B preferably are heavily weighted in any suitable manner so that they will each weigh about two hundred pounds and will thus have a firm contact with the ground so as to be adapted to operate the hereinafter described brush and elevator without slipping. The right-hand carrying wheel, designated particularly by 6, is provided on its outer side with a large annular gear element 7 which is disposed adjacent the periphery of said wheel. Located in rear of the carrying wheels B, close to the periphery thereof, is a brush shaft 8 on which is splined or feathered a gear wheel 9 located near the outer side of the carrying

wheel 6. The radius of the gear wheel 9 is slightly greater than the distance between the gear element 7 and the periphery of the carrying wheel 6, so that said gear wheel 9 is caused normally to mesh with the gear element 7 for the purpose of rotating the brush shaft 8. Rigidly mounted on the outer end of the brush shaft 8 is a gutter brush 10, the outer end of which is concaved as indicated at 11 so as to adapt the same to clean the corner of a gutter. The brush shaft 8 is suitably journaled in a vertically movable brush frame 12 which is adapted to be raised and lowered by means of a handle lever 13 fulcrumed upon the body A and disposed in proximity to the seat 5.

The handle lever 13 is adapted to be held in adjusted position by means of a latch mechanism 14 coöperating with a notched segment 15. It will be obvious that by operating the handle lever 13, the brush frame 12 will be raised and lowered to move the brush out of and into contact with the ground, during which movements the gear wheel 9 will readily move into and out of mesh with the gear element 7, the necessary interfitting of the gear teeth being permitted by the free rotation of the brush shaft 8.

In order that the work of the carrying wheels B may be evenly distributed, so that all the power necessary for operating the brush and the elevator shall not be supplied by one of said wheels, it is proposed to employ the left weighted carrying wheel 16 for actuating the dust elevator, so that the right carrying wheel 6 will be required to run only the brush, whereby any slipping of said wheels on the ground due to the amount of work required to be performed thereby will be prevented. The means for operating the dust elevator, indicated by E, from the carrying wheel 16 preferably consists of a sprocket chain 17 which at its lower end is engaged with a sprocket wheel 18 mounted upon the wheel 16 and at its upper end with a smaller sprocket wheel 19 mounted upon an intermediate shaft 20 journaled upon the body A and extending transversely thereacross. At its right end the intermediate shaft 20 is provided with a sprocket wheel 21 for operating a sprocket chain 22 which at its upper end is connected with a sprocket wheel 23 mounted upon the upper elevator shaft 24. The elevator chains 25, are provided with the conveying plates 26 adapted to traverse the inclined elevator casing 27, which is mounted at its lower end upon the lower elevator shaft 28. Connected with the lower end of the elevator casing 27 is a rearwardly extending curved deflector 29 which is disposed in advance of the gutter brush 10 so as to deflect the sweepings thereof upward into the lower end of the elevator casing. The deflector may be of any suitable construction and is secured to the lower wall of the casing as shown in the detail view, Fig. 3. The gutter brush 10 preferably is



surrounded by a wing or apron 30 adapted to prevent the escape of dust. The upper discharge end 31 of the elevator casing 27, is disposed above a bag holder F which depends from the body A so as to be in position 5 to hold a bag 32 in position to catch the sweepings. As soon as the bag 32 becomes filled, it is tied up and removed from the bag holder F to the floor 2 of the body A so as to permit an empty bag to be substituted therefor.

For the purpose of permitting the gutter brush 10 to 10 be thrown into and out of operation without raising or lowering the brush frame 12, a brush-controlling lever 33 is fulcrumed upon the brush frame 12. The lower end of the lever 33 is connected by means of a link 34 with the gear wheel 9 which is splined upon the brush 15 shaft 8. It will be obvious that by operating the brush-controlling lever 33, the gear wheel 9 will be moved longitudinally upon the brush shaft 8 so as to move into and out of mesh with the gear element 7 and thus throw the gutter brush 10 into and out of operation. 20 tion.

The brush frame is provided with slides 35 mounted upon hangers 36 which depend from the body of the machine, said slides which form rigid portions of the said brush frame, being secured at the desired vertical 25 adjustment with reference to the guides by means of the above described lever 13, pawl and rack 14 and 15.

By arranging the gutter sweeping machine of the present invention in such manner that the gutter brush 30 is operated by one of the heavily weighted carrying wheels B and the elevator E is operated by the other of said weighted carrying wheels, the entire device is balanced in a thoroughly effective manner so that the

draft is properly equalized and the machine is easily controlled and guided without the necessity of employing more than one draft animal. 35

The improved machine of this invention is strong, simple, durable and inexpensive in construction as well as thoroughly efficient in operation.

What is claimed is:

A machine for sweeping gutters comprising a body having a weighted carrying wheel provided on its outer side with a gear element, a brush shaft located in rear of said carrying wheel and having a gear wheel splined thereon, the radius of said gear wheel being slightly greater than the distance between said gear element and the periphery 40 of said carrying wheel, said gear wheel being in mesh with said gear element, a gutter brush mounted on said brush shaft on the outer side of said carrying wheel and having a concaved outer end, a vertically movable brush frame 45 connected with said brush shaft, a brush-controlling lever 50 fulcrumed on said brush frame and having a link connection with said splined gear wheel for throwing said gutter brush into and out of operation, a hand lever connected with said brush frame for raising and lowering the same, a second weighted carrying wheel connected 55 with said body, an intermediate shaft extending transversely across said body and having a sprocket connection with said second carrying wheel, an elevator disposed in front of said gutter brush, and a sprocket connection between said elevator and said intermediate shaft, substantially as described. 60

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOSEPH WEILAND.

Witnesses:

JOHN N. HACK,  
JOSEPH H. HACK.