

W. H. GUNNELL.
STREET-SWEEPER.

Patented Jan. 30, 1877.

No. 186,724.

Fig. 1.

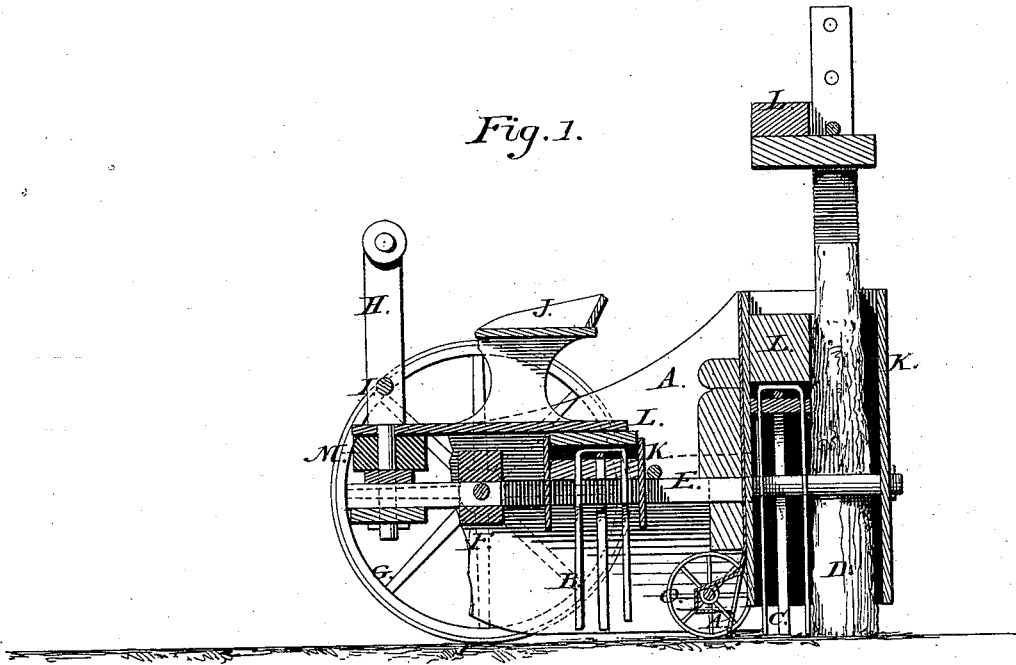
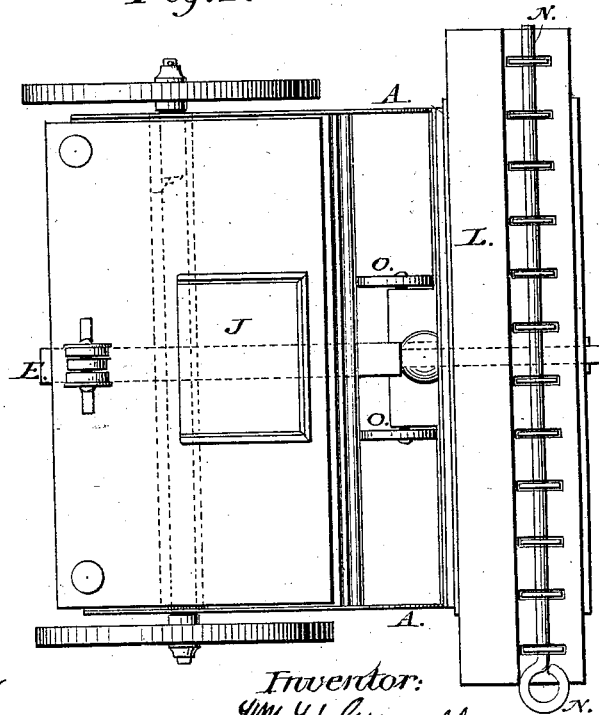


Fig. 2.



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A. O. Robinson

Inventor:
Wm. H. Gunnell
by his atty J. C. Stettin

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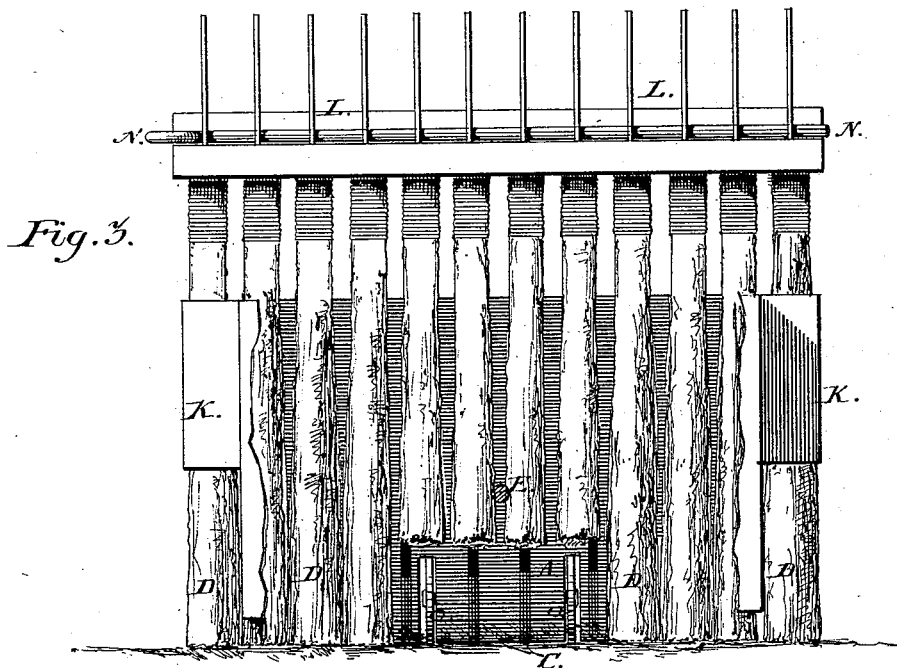
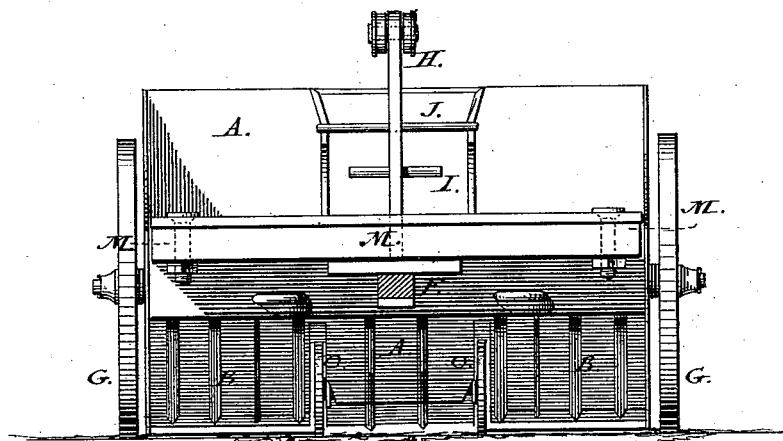


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM H. GUNNELL, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN STREET-SWEEPERS.

Specification forming part of Letters Patent No. 186,724, dated January 30, 1877; application filed January 2, 1877.

To all whom it may concern:

Be it known that I, WILLIAM H. GUNNELL, of Washington city and District of Columbia, have invented a new and useful Improvement in Street-Sweeping Machines, which improvement is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 is a vertical longitudinal section, centrally cut to show the relative portions of rakes, scraper, brooms, &c. Fig. 2 is a plan or top view. Fig. 3 is a rear elevation, showing the broom-sweepers. Fig. 4 is a front elevation of the machine.

The object of my invention is to furnish a cheap and durable machine with which streets, alleys, and particularly gutters, may be more thoroughly cleaned and swept than at present, at much less cost, and by one and the same operation.

In the drawing, A is the scraper, made of stout iron, secured to the axle, in a suitable manner, immediately inside of the wheels, and extends rearward, forming three sides of a square, the edge setting close to the ground; B, the first rake, made of iron or stout wire, and intended to loosen the dirt and rubbish in the street. This rake oscillates on beam or brace E, and is kept in place by a pin. C, the second rake, made of the same material as the first, the points to be nearer the ground, and immediately behind the scraper. The frame rests upon brace E, and fits tightly in box K, in front of the brooms. D, the brooms, which can be adjusted to suit the inequalities of the ground or gutters; E, beam running longitudinally through the machine, and, being secured to the axle and the rear of the broom-box, forms a brace for the entire machine. There is also an iron rod running transversely, to brace the scraper. F, axle; G, front wheels, being like an ordinary wagon-wheel; H, lever; I, foot-rest; J, driver's seat; K, box in which the frame of rake C and brooms are located; O, a pair of small iron truck-wheels, attached to the scraper in front of box K, and arranged so as to allow the scraper to graze the ground. L L L are weights placed on top of the rakes and brooms, to keep them in place; M, weight in front

of the axle, resting upon a washer, and secured to beam E. The driver's platform is secured to this weight and the transverse rod. Weight M is intended to counterbalance the machine. N, rod to adjust the brooms.

The brooms are made adjustable, and have long slender metal handles, with holes pierced through them, at equal distances apart, for the rod N to pass through, and are kept in place by the frame of rake C, which fits snugly against them.

When it is desired to sweep out gutters, the rod N is slipped out, and as many brooms as are desired are lowered by hand, and the rod replaced, to keep the whole in position.

The machine is so equally balanced (the axle being the fulcrum) by means of weight M that a small boy can easily work it, and, being light, can be drawn by one horse.

To prevent the rear end of the machine from tilting too much, the forward end of brace E strikes against the cross-piece of the shafts.

The operation and manner of working are extremely simple. As the machine proceeds the rake B, coming in contact with the dirt, loosens and scatters it, when scraper A takes hold and scrapes the most of it forward, leaving the second rake C and brooms D to finish the work. To pass over the accumulated pile the driver simply places his hand upon the lever H, and, leaning forward from his seat, his weight tilts the rear end of the machine, and when the brooms have passed over the accumulated matter he resumes his seat, which brings the machine into position to again rake, scrape, and sweep by one operation.

The driver can make as many piles as he desires—every few yards, if necessary—in a second.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of rakes B and C, scraper A, and brooms D, arranged and operating as and for the purpose set forth.

2. The adjustable brooms D, in combination with the rake C and box K, as and for the purpose set forth.

3. The weight M, arranged to balance the

machine, in combination with the rakes B and C, scraper A, and brooms D, as and for the purpose set forth and described.

4. A street-sweeper having a system of rakes, B and C, scraper A, adjustable brooms D, broom-box K, weights M and L, arranged in the order shown, for the purpose of raking, scraping, and brushing at one and the same

operation, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

WILLIAM H. GUNNELL.

Witnesses:

M. P. CALLAN,

JOS. S. STETTINIUS.