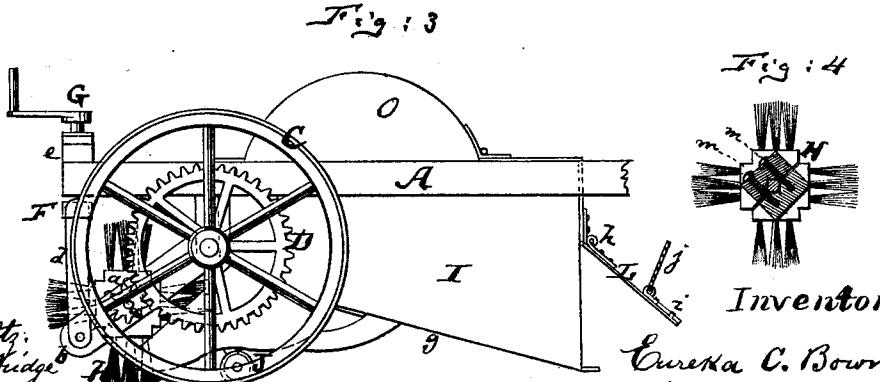
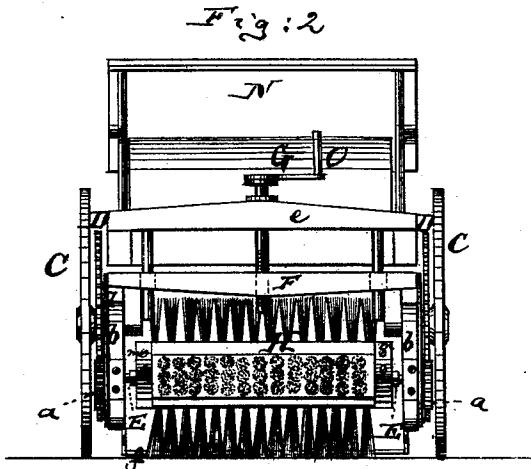
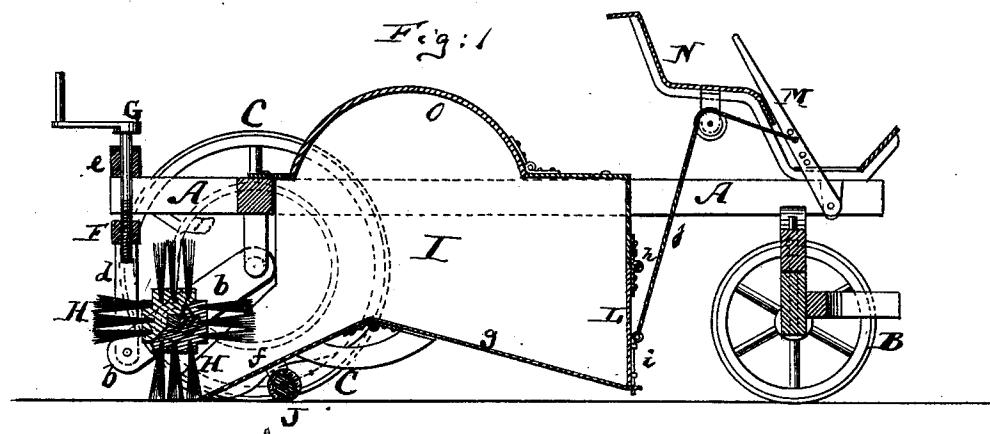


E. C. BOWNE.
Street-Sweeping Apparatus.

No. 222,447.

Patented Dec. 9, 1879.



Witnesses:

W. G. & Schuttz.

John C. Tunbridge

Inventor:

Eureka C. Bowne
by her attorney
John Dresen

UNITED STATES PATENT OFFICE.

EUREKA C. BOWNE, OF NEW YORK, N. Y.

IMPROVEMENT IN STREET-SWEEPING APPARATUS.

Specification forming part of Letters Patent No. 222,447, dated December 9, 1879; application filed July 7, 1879.

To all whom it may concern:

Be it known that I, EUREKA C. BOWNE, of New York, in the county and State of New York, have invented a new and Improved Street-Sweeping Apparatus, of which the following is a specification.

Figure 1 is a vertical longitudinal section of my improved street-sweeping apparatus. Fig. 2 is a rear elevation of the same; Fig. 3, a side view of same; Fig. 4, a section through one end of the rotary broom.

Similar letters of reference indicate corresponding parts in all the figures.

The object of this invention is to produce an apparatus for thoroughly sweeping a street without throwing dust and spattering dirt on the sidewalks or otherwise interfering with the proper use of the street.

The invention consists in a novel arrangement and combination of an independently-hinged incline, having a supporting-roller, with the rotary broom; in a novel construction of sectional and detachable broom, and in other combinations of parts, all as herein-after more fully described.

In the accompanying drawings, the letter A represents the frame of my improved street-sweeper. The same is supported on front wheels, B, and hind wheels, C, in the ordinary or suitable manner. The hind wheels, C, carry toothed wheels D D, that mesh into pinions *a* on the shaft E of the broom. This shaft E has its bearings in arms *b b*, that are pivoted to the axle of the hind wheels, C, so that no matter how far the arms *b* may be raised or lowered the distance of the pinions *a* from the center of the wheels C D will always remain the same.

The arms *b* extend backwardly from the axle of the wheels C, and are at their rear ends suspended by links *d d* from a vertically-movable cross-bar, F. This cross-bar is suspended from a stout screw, G, that has its bearings in a back bar, e, of the frame A. By turning this screw G, which has a suitable handle for the purpose, the broom may be more or less raised or lowered, and yet the pinion *a* will always remain in gear, as the arms *b* swing on the axis of the wheels D. As a broom wears smaller it can be conveniently lowered to reach contact with the street, and the broom may

also be lowered whenever, owing to the condition of the street, more power in sweeping is required.

The broom H is made of longitudinal sections, as shown in Fig. 4, so that it can be readily detached from and reapplied to its shaft. It is very desirable that the broom be made detachable, as this will permit the convenient use of different brooms, according to the different character of sweeping to be performed. The broom for sweeping snow may be different from that used for sweeping light dust, and different still from that used on slush and mud. When the broom is made in sections it is readily taken off its shaft by removing the connecting-screws *m*, and as readily replaced.

In front of the broom is suspended from the frame A a tank or receptacle, I, for the sweepings, which tank is in front closed by a vertical lid, L, and is entirely open in rear. The bottom of the tank is composed of two inclines, *f* and *g*, which meet at their elevated ends, as shown. The rearmost incline, *f*, is hinged at its front end, and carries at its lower side a gum-covered roller, J, which rolls on the surface of the street and prevents the lower end of the incline *f* from dragging. If a stone or other obstruction is met, the roller J will raise the incline over the same without injury. The broom, in revolving during the progress of the vehicle, throws the sweepings over and along the incline *f* into the tank I, where they are collected. When full the tank I is easily emptied by swinging the lid L forward. This lid is hinged at its upper end, as at *h*. Its lower end is, by a suitable bolt, *i*, (preferably a spring-bolt,) held locked to the tank. A cord or chain, *j*, connects the bolt *i* to a lever, M, which is placed near the driver's seat N, so that by swinging said lever the driver can readily unfasten the bolt and then swing the lid L forward, thereby opening the tank.

The contents of the tank will fall out along the incline *g*. If necessary, their discharge may be assisted by means of a suitable shovel, applied through the top of the tank. For this purpose the cover O of the tank is hinged or otherwise movable, so that it may be easily opened.

It will be perceived that by means of this machine a street may be effectively and easily

swept clean without throwing dust or otherwise causing inconvenience to those on the sidewalks or in other vehicles.

I claim—

1. In a street-sweeping machine, the combination of the rotary broom *H* with the independently-hinged incline *f* and supporting-roller *J*, said roller being applied directly to said hinged incline, supporting it and allowing it to vibrate independent of the position of the broom, substantially as herein shown and described.
2. The broom *H*, made in longitudinal sec-

tions, which are detachable from and clamped against the squared ends of its shaft *E*, and combined with the fasteners *m m*, substantially as herein shown and described.

3. The combination of the rotary broom *H*, hung in arms *b*, with the hinged incline *f*, having supporting-roller *J*, and with the tank *I*, for operation substantially as herein shown and described.

EUREKA C. BOWNE.

Witnesses:

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