

(No Model.)

W. HAAS.

STREET SWEEPING MACHINE.

No. 378,002.

Patented Feb. 14, 1888.

Fig. 1.

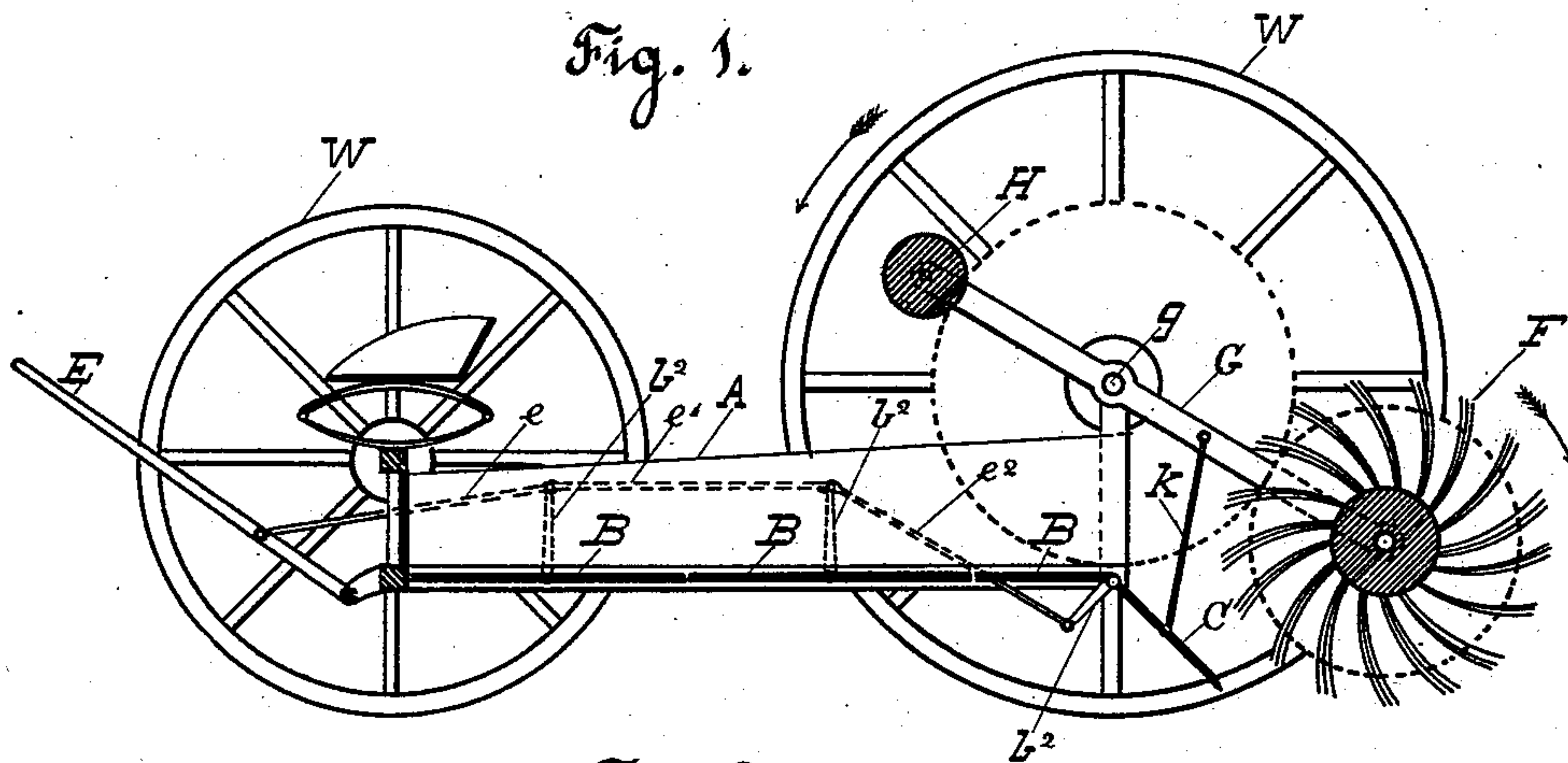


Fig. 2.

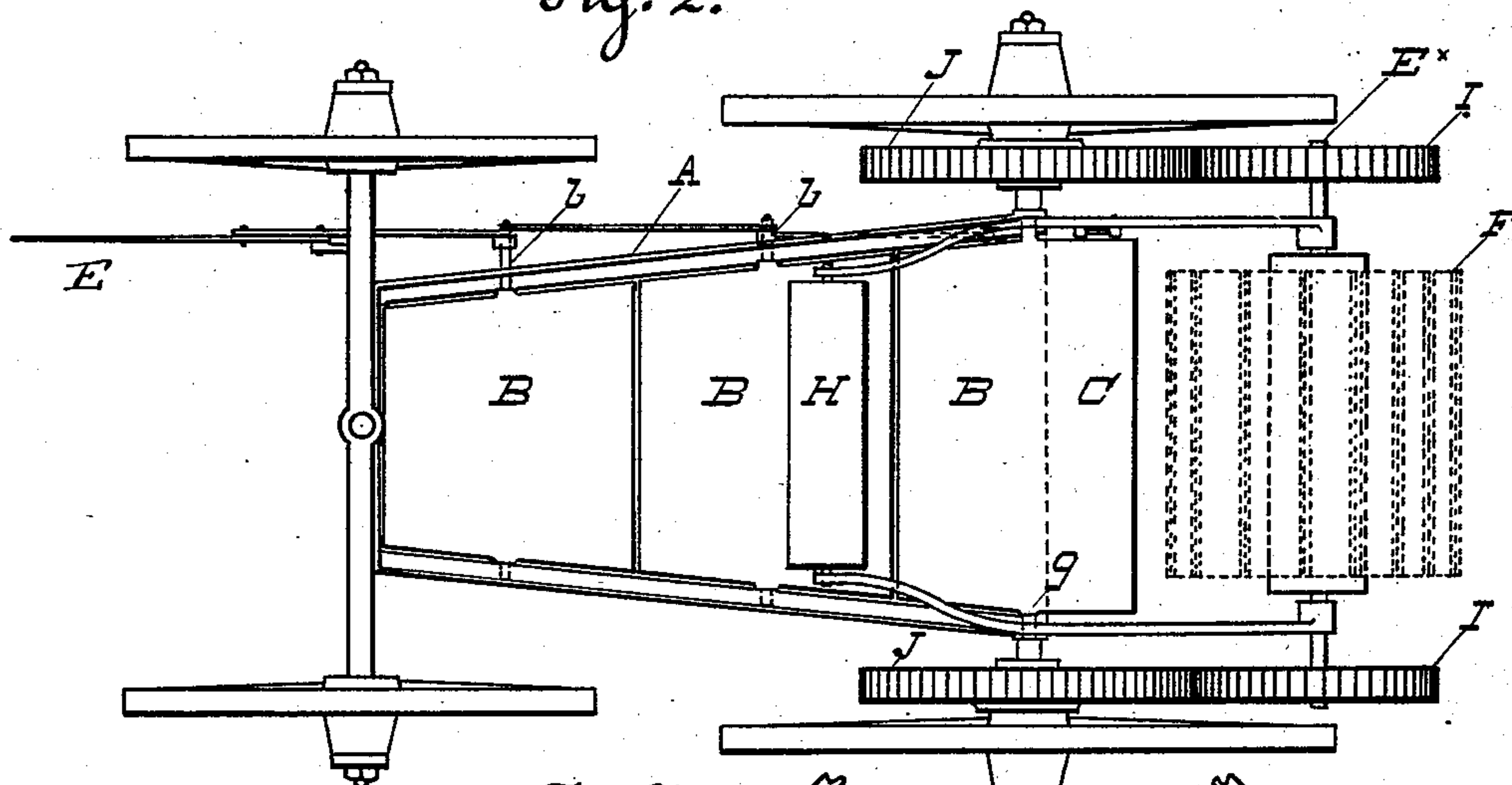
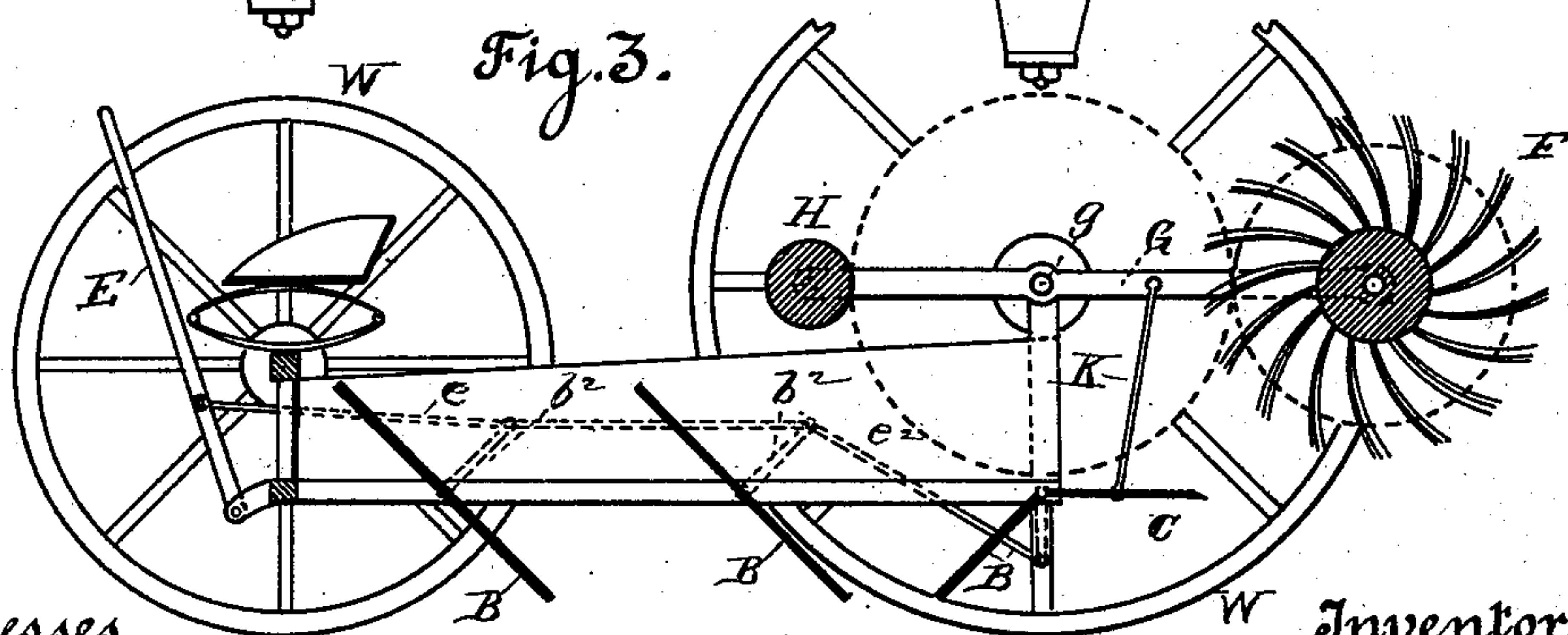


Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

WILLIAM HAAS, OF SAN FRANCISCO, CALIFORNIA.

## STREET-SWEEPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 378,002, dated February 14, 1888.

Application filed January 27, 1885. Renewed October 15, 1887. Serial No. 252,500. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HAAS, a citizen of the United States, residing at San Francisco, in the county of San Francisco, State of California, have made and invented certain new and useful Improvements in Street-Sweeping Machines, of which the following is a specification.

My improvements relate to machines for sweeping and gathering up the dirt and refuse of streets and roadways; and the same consist in certain improved constructions of box or receptacle with a self-discharging bottom, an apron, and a brushing or sweeping cylinder which is operated by gearing driven from the axle of the wagon, and is connected with the discharging-bottom in such manner as to be thrown into and out of action by the movement of the same device that controls the dumping apparatus.

Referring to the accompanying drawings by figures and letters, Figure 1 is a vertical section in elevation of my improved street-sweeper, the section being taken longitudinally through the middle of the box and the brush-cylinder. Fig. 2 is a plan or top view. Fig. 3 is a longitudinal section similar to Fig. 1, but showing the bottom of the receptacle in the position of discharge and the brush-cylinder raised.

The box A is open at the tail end and closed at the sides and front. It is mounted on four wheels, W W, and is suspended from the front axle and set upon a bent axle at the rear to bring the bottom at suitable distance from the ground.

B B are pivoted sections that form the bottom of the receptacle, and C is an apron, also pivoted or hinged to lift and drop, which forms the inclined apron to catch the sweepings from the brush and direct them upward into the receptacle. The rods *b b*, that constitute the pivots of these sections, extend beyond the box at one side and have each an arm or lever, *b<sup>2</sup>*. These levers are connected one to the other and the foremost one to a hand-lever, E, at the front of the vehicle, by links or connecting-rods *e e' e<sup>2</sup>*, in such manner that the movements of the lever-handle will bring the sections up into horizontal position and

line with one another to form a close bottom, as in Fig. 1, or will tilt them, as in Fig. 3. The last section of the bottom and the apron C move together, and are operated by the same lever, E.

A brush-cylinder, F, of any suitable construction, is mounted in a swinging frame, G, that is suspended at *g g* from the axle, and carries at the front a counter-weight, H, to balance the brush.

The shaft E<sup>x</sup> of the brush-cylinder has gear-wheels I I on the outer ends, which engage with drivers J J, secured to the traction-wheels. The motion of the brush-cylinder is therefore produced forward and upward to throw the dirt upon the inclined apron.

The swinging frame and the apron are connected together by the rod K, so that the brush is thrown down and up and into or out of action simultaneously with the movement of the apron and by the same operating-handle, E, at the front. By this construction it will be seen that when the machine has been carried to the desired place the operator, by simply pressing forward the lever E, will cause the apron and brush to rise and the pivoted bottom sections, B, to fall simultaneously and dump the load, and thereby throw the brush up out of operation. By reversing the movement of the lever E parts are all returned to their normal and operative position.

The sides of the box are tapering from the rear to the front, as shown in the plan, Fig. 2, and each tilting section is therefore wider at the discharge end than it is at the forward end. This facilitates the discharge of the dirt and prevents choking or clogging.

As thus constructed, my improved sweeper is capable of being driven and managed by one person.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a street-sweeper, the combination of the receptacle A, having its bottom formed of tilting sections B, the hinged apron C, the operating hand-lever E, levers *b*, and connections *e e' e<sup>2</sup>*, and the swinging frame G, carrying the brush-cylinder F and counter-balance H, and connected with the hinged apron by

the rod, as a means of moving the frame to bring the brush into and out of action.

2. In a street-sweeping machine, a receptacle, A, having tapering sides, a tilting bottom formed of pivoted sections B B, a hinged  
5 apron, and the lever E and connections  $e$   $e'$   $e^2$ , in combination therewith, substantially as herein described.

In witness whereof I have hereunto set my hand and seal.

WILLIAM HAAS. [L. S.]

Witnesses:

B. J. BURNS,  
J. HITCHIENS.