

W. W. Smith.

Snow-Sweeper for Streets.

N<sup>o</sup> 72928

Patented Dec. 31, 1867.

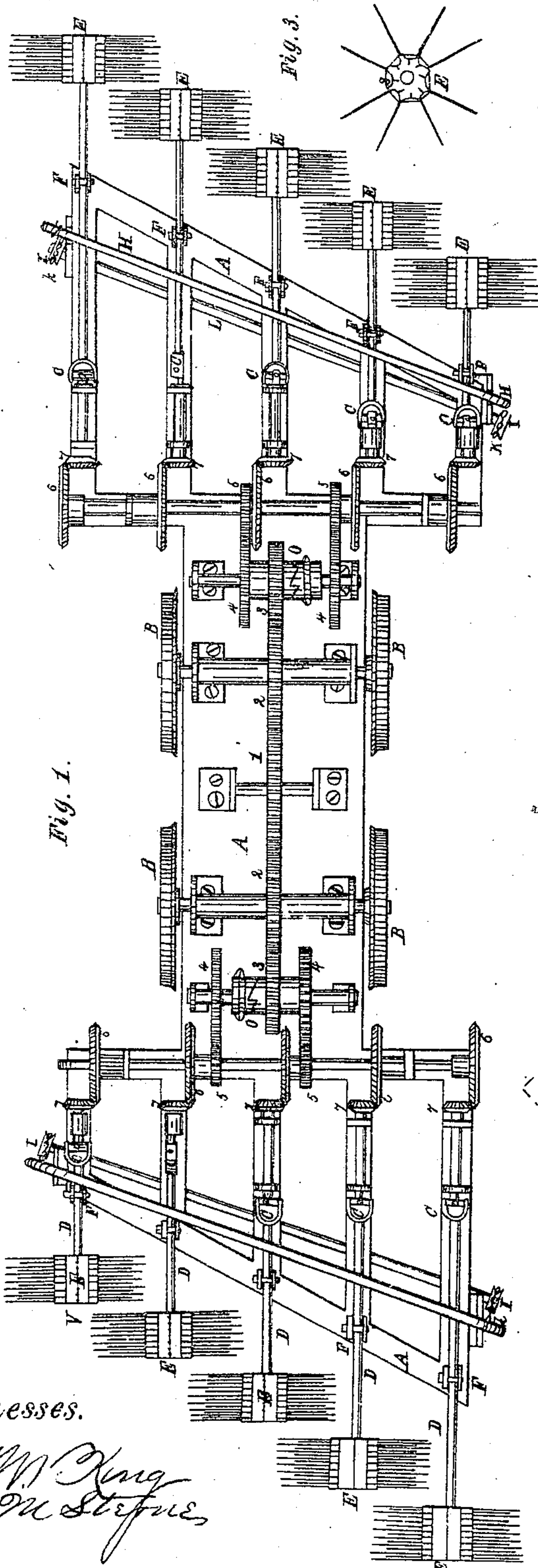


Fig. 1.

Fig. 3.

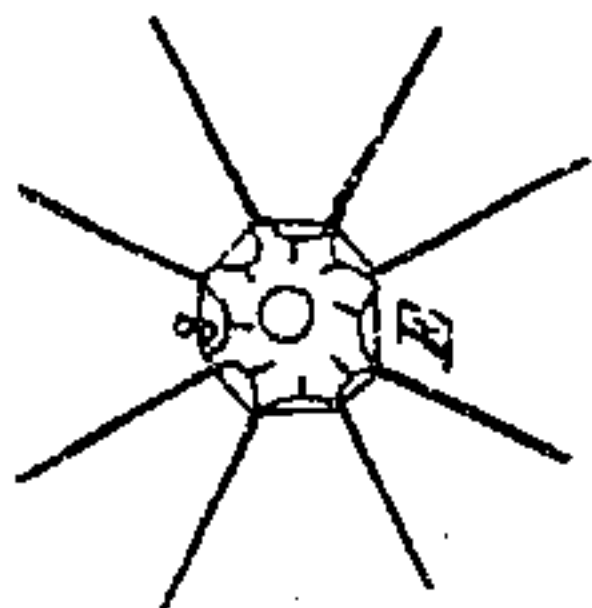


Fig. 4.

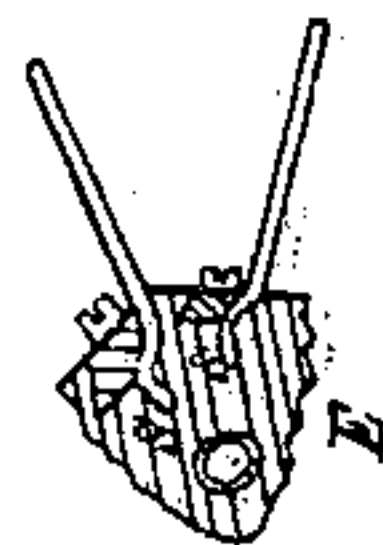
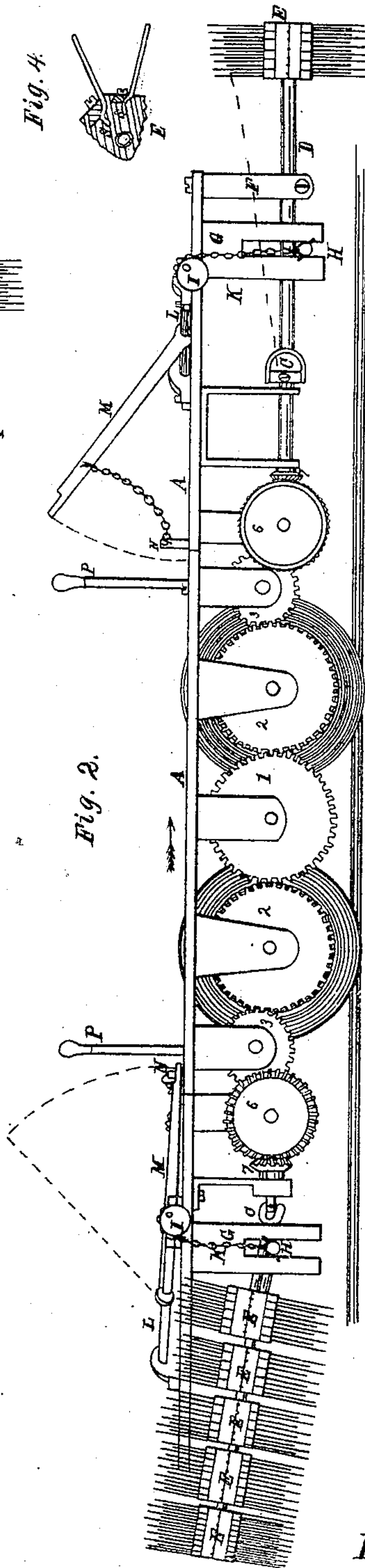


Fig. 2.



Witnesses.

S. M. King  
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Inventor.

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# United States Patent Office

WILLIAM W. SMITH, OF CHICAGO, ILLINOIS.

*Letters Patent No. 72,928, dated December 31, 1867.*

## IMPROVED SNOW-SWEEPER FOR STREETS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM W. SMITH, of Chicago, in the county of Cook, and State of Illinois, have invented a new and improved Machine for Sweeping Snow off the Streets and Railway-Tracks; and I do hereby declare that the following is a full and exact description thereof, reference being had to the letters and figures of reference marked upon the accompanying drawings, which form a part of this specification, in which—

Figure 1 represents a bottom plan view of my sweeping-machine, showing clearly its general manner of construction.

Figure 2 is a side view, with the driving-wheels upon the side nearest to view removed.

Figure 3 is an end view of one of the brushes used in the machine.

Figure 4 is a section of one of the brushes, taken at one of the points where the wire portion is inserted.

The nature of my invention consists in the arrangement of a series of circular brushes, revolving in a line at right angles to the street or railroad-track, upon which the whole machine is moved forward, and, by the action of said brushes, causes the snow to be removed from the track or street and deposited upon the side of the way; also, the peculiar combination of mechanical parts for communicating power to the brushes from the driving-wheels; also, the arrangement of levers and other devices for throwing the machinery in and out of gear.

To enable those skilled in the art to make and use my invention, I will describe its construction and operation.

A is the platform, to which I attach car-wheels, B, also, spur-gear, 1, 2, 3, 4, 5, and mitre-gears, 6 and 7, to which are connected, by means of the universal joint C and shaft D, the brushes E, which are arranged, as shown in fig. 1, upon either end of the platform A, and in a line parallel to the forward movement of said platform, and, being arranged in this way, each brush upon the left being in advance of each right-hand brush, in order that they may sweep every inch of ground, and not clash with each other. I arrange the brushes in this way to the number of five upon each end of the platform, which number may be increased or diminished when it is desirable to sweep a wider or narrower breadth of track. F F are yokes, through which shafts D are passed and rigidly confined, so far as lateral motion is concerned, but allowing the shafts D freedom to revolve, also to be elevated, as shown upon the left in fig. 2. G G are also yokes, through which rods H are passed, underneath the shafts D, and are connected to eccentrics, I, by chains, K. Eccentrics I are attached to shaft L, and are operated by levers M, as also shown upon the left in fig. 2. The lever M, being forced down and confined underneath catch N, which causes the thick side of the eccentric I to press against the chain K, and thereby cause the brushes E to assume and retain an elevated position, when it is desirable for them not to be in use, as, for instance, when the motion of the platform assigns their position to be at the rear end. Wheels 3 3 are loose upon their shafts, and are made to communicate power by means of the clutches O, which are thrown in and out of gear by means of the levers P. When the brushes upon the rear end of the platform are thrown out of gear and elevated, the power of the rear drive-wheels is transmitted to the front by means of the spur-wheel 1, and in this way the whole frictional power of the driving-wheels is utilized in all cases, whether the brushes are revolving from one only or from both ends of the platform. Brushes E may be constructed of any material capable of forming a stiff and substantial brush. I prefer spring-wire, and believe it to be the most suitable. I insert the wires into holes bored into the hub of the brush, and screw the cap S down upon them; as shown in fig. 4, and in this way prevent the possibility of their being thrown or drawn out while in use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The range of brushes E, mounted on shafts D, with universal joints C, in combination with the yokes F, all arranged and employed as and for the purposes specified.
2. The construction of the brushes E, by setting their wires in holes in the brush-heads, and securing them with caps S, applied as represented and described.
3. The lever M, chain K, eccentric I, and rod H, in combination, as and for the purposes specified.
4. The wheel 1, in combination with wheels 2 and 3 and clutch O, for the purpose of transmitting the power from one to the other series of brushes, as set forth.

WILLIAM W. SMITH.

Witnesses:

G. W. KING,

GEO. M. STERNE.