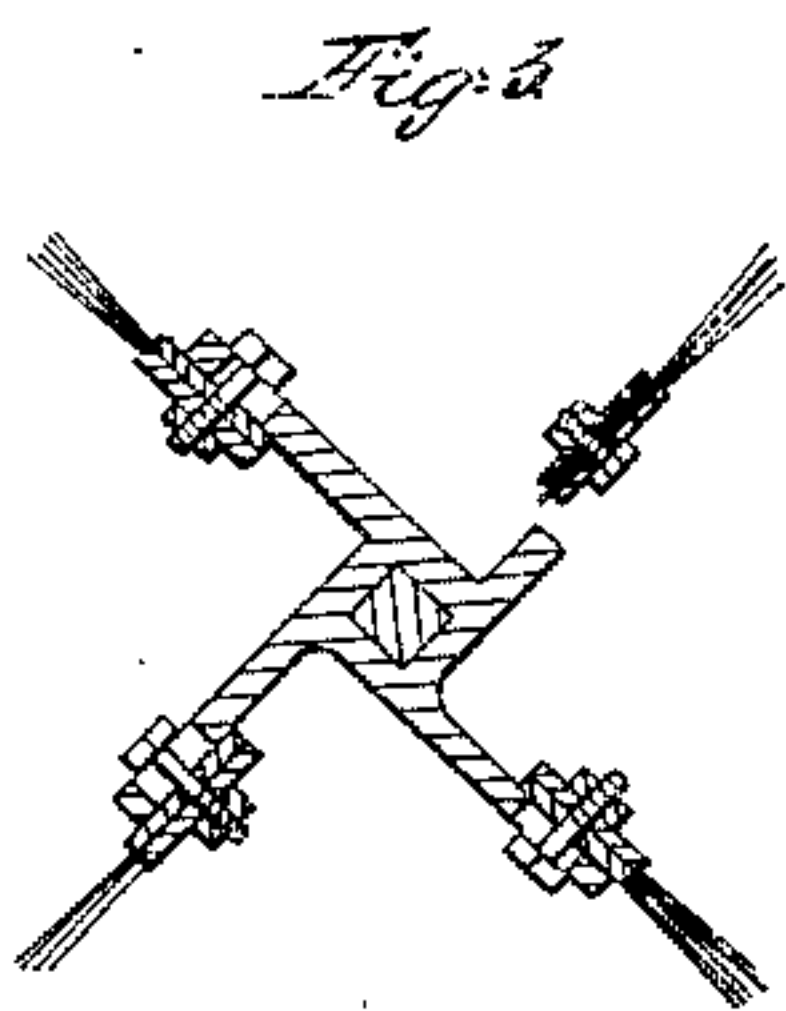
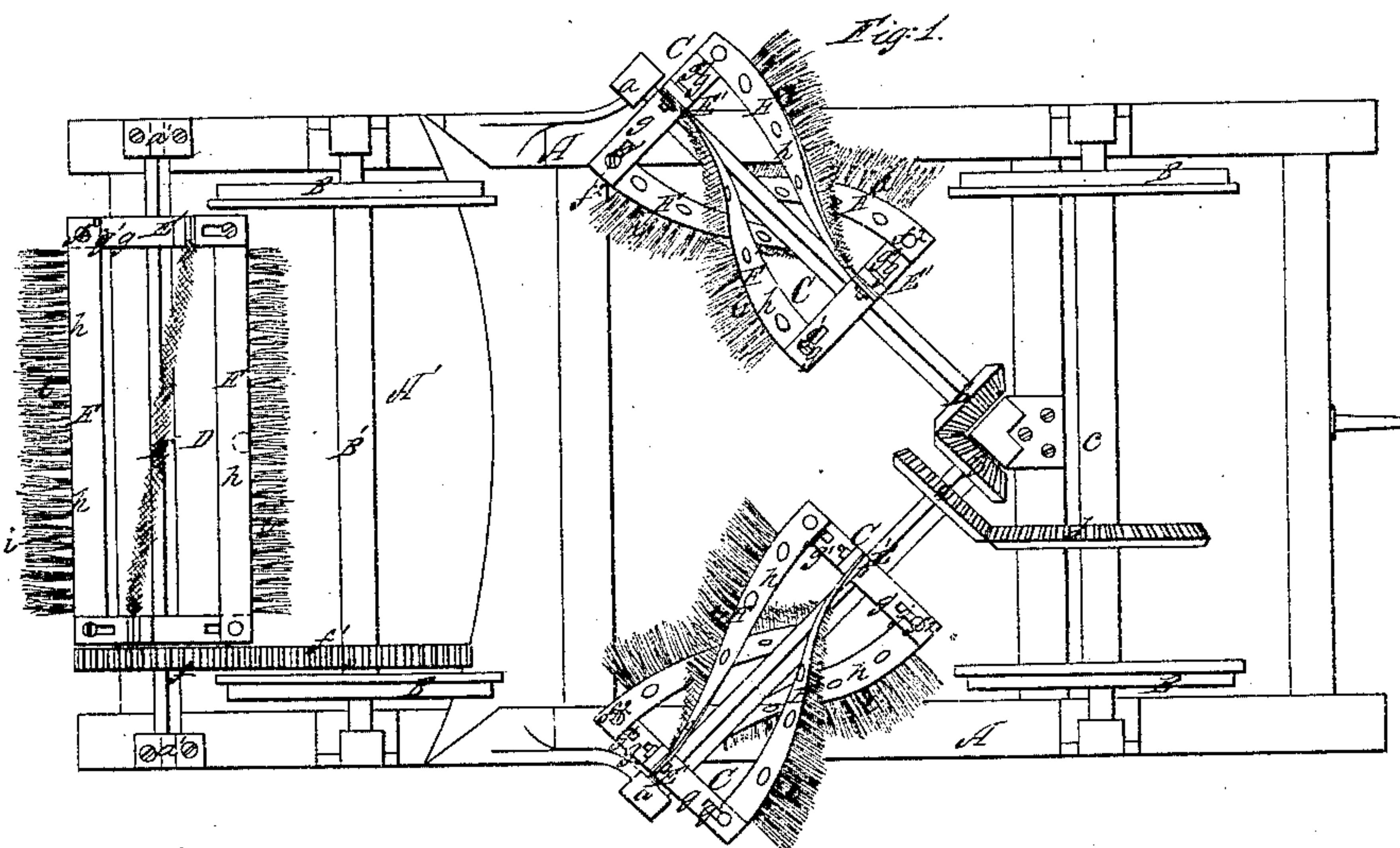
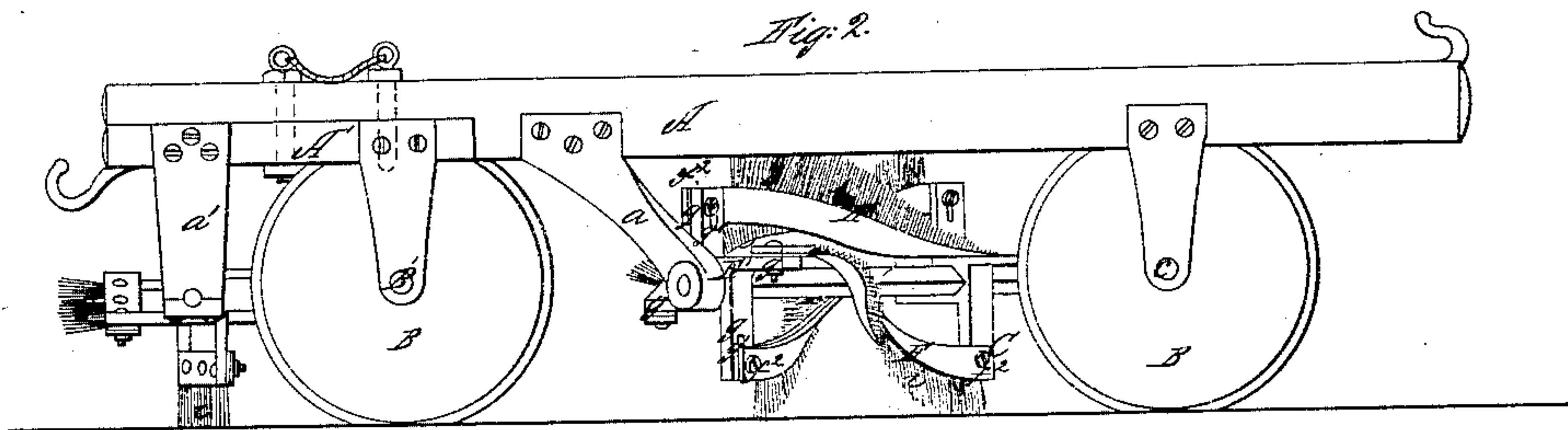


A. S. Jimmerson.

Street Sweeper.

N^o 61,205.

Patented Jan. 15, 1867.



Witnesses:

*M. Combs
L. W. Reed*

Inventor:
A. S. Jimmerson
Per his attorneys
Amos Combs & Co.

United States Patent Office.

ALLEN S. JIMMERSON, OF GREENPOINT, NEW YORK.

Letters Patent No. 61,205, dated January 15, 1867.

IMPROVED SWEEPING MACHINE.

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, ALLEN S. JIMMERSON, of Greenpoint, in the county of Kings, and State of New York, have invented certain new and useful improvements in Sweeping Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an inverted plan view of a sweeping machine constructed according to my invention.

Figure 2 is a side elevation of the same.

Figure 3 is a detached section representing a portion of the same.

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

This invention is designed for sweeping snow or dirt, as the case may be, from streets, railroad tracks, and other places, and it consists in a novel construction of the machine, whereby, when drawn with one end foremost, it will sweep the snow or dirt outward from the centre thereof, as required more especially in clearing tracks in winter, and when drawn with the other end foremost, it will sweep the said snow or dirt inward into a windrow, preparatory to its removal by any suitable means. The invention further consists in certain novel means whereby the most efficient operation of this feature of the invention is secured, and also in certain novel means whereby a more effective operation of the sweeping-brushes is obtained than in the sweeping machines heretofore devised. The invention further consists in a novel construction of the sweeping-brushes, whereby they may be readily adjusted to compensate for their wearing away, and are thus rendered capable of doing a much greater amount of work than those made in the usual manner.

To enable others to understand the construction and operation of my invention, I will proceed to describe it, with reference to the drawings.

The horizontal frame of the machine is shown at A, and is supported upon four wheels, B, the two wheels B, at one end of the frame A, being connected with a supplementary frame, A', which is pivoted underneath the said end of the frame A, by a vertical bolt, in such manner as to allow the machine to be easily turned around when desired. The frame A has attached to one end or the other, as the case may be, a draught-pole, or equivalent device, by which the machine may be drawn when in use. C indicates two rotary sweeping-brushes, situated obliquely or at an angle to each other underneath one end of the frame A, the axles or shafts of which work in suitable bearings formed in suitable hangers, *a*, extending downward from the aforesaid frame A. The axles of these two brushes C are connected at their inner ends by bevel gear-wheels *b b*; and one of the said axles is connected with the axle *c* of the adjacent pair of supporting-wheels B by gear-wheels *d* and *e*, so that, as the machine is drawn along, the rotation of the axle *c* communicates a rotary motion to the sweeping-brushes C. D represents another rotary sweeping-brush, which is situated transversely under that end of the frame A opposite to that at which are placed the brushes C, the said brush D being supported by suitable hangers, *a'*, and receiving a rotary movement from the axle B', of the adjacent supporting-wheels B, by means of spur-wheels *f f'*. The construction of each of the rotating sweeping-brushes is as follows: Fitted upon the central shaft or axle thereof, and near each end of the same, is a land or flange, E', which is constructed with four (more or less) radial arms, *g*, in each of which is formed a longitudinal transverse slot, *g'*. It is to these arms *g* that the sections F of the brush are attached, by means of bolts *f*², which are passed through the slots *g'* in the arms *g* in such manner that, by loosening the said bolts, the sections may be adjusted at a greater or less distance from the shaft or axle of the brush, as required more especially in adjusting the brushes to compensate for the wearing away of the same. The sections E are made of a twisted or spiral form, so that when secured in their places, as just set forth, they will wind spirally with reference to the aforesaid shaft or axle, or, in other words, be extended obliquely thereto, as represented more fully in fig. 1. Each of the sections F is formed of two strips or plates, *h*, of metal, bent or curved into the requisite spiral form, and placed side by side, with the rattan splints *i*, which constitute the brushing portion of the section, placed between them, the two plates or strips just mentioned being connected together by bolts in such manner that the aforesaid splints are tightly clamped or held in place thereby. The said splints are of such length that they may be moved outward when worn away by use, so as to compensate for such wearing away, by first loosening the bolts that hold the two plates together, so that by these means not only may the sections F be adjusted with reference to the shaft or axle of the brush, but the splints forming a part of each section may be adjusted with regard to that portion formed by

the metallic strips or plates *h* thereof. Furthermore, by having the sections arranged spirally in relation with the shaft of the brush, as hereinbefore set forth, only a portion of each section is brought in contact with the ground at any one time, and, as a consequence, the brushes are enabled to act more gradually upon the dirt or snow, as the case may be, and consequently to more effectually brush the same, outward or inward, as required, than would be the case if the sections of the brushes were arranged in a position parallel with the shaft or axles of the same. When the machine is drawn along with that end foremost at which the oblique sweeping-brushes *C* are situated, said oblique brushes, together with the transverse sweeping-brush *D*, are caused to revolve by the axles of the supporting-wheels *B*, through the agency of the gear-wheels, as hereinbefore described, in such manner that the oblique brushes *C* sweep the snow or dirt outward from the centre of the machine, or, in other words, towards the sides thereof, at the same time that any snow or dirt that may have escaped the action of the said oblique brushes will be caught up by the transverse brush *D*, and flung forward under the aforesaid brushes *C*, in order that it may be thrown outward by the subsequent revolutions of the same. When the machine is drawn along with the opposite end foremost, the transverse brush *D* should be removed from the machine, and, inasmuch as in this case the brushes *C* rotate in a direction opposite to that just described, the snow or dirt is swept inward, so that it is left in a windrow as the machine is drawn along, so that it may be easily gathered up and removed by any appropriate means. When the brushes become worn by use, the splints which compose the brushing portions thereof may be moved outward with reference to the clamping strips or plates *h*, as hereinbefore set forth, or, in lieu of this, the sections *F* may themselves be moved outward upon the arms *g*, as also hereinbefore explained, the portion worn from the brushes being compensated for by either of these means.

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

1. The combination of the transverse rotary brush *D*, with the two oblique rotary brushes *C*, arranged and operating substantially as herein set forth for the purpose specified.
2. The construction of the sections *F*, with the brushing splints *i* clamped between the two metallic strips or plates *h*, substantially as herein set forth for the purpose specified.

ALLEN S. JIMMERSON.

Witnesses:

JAMES A. TUTTLE,
THOMAS HOGAN.