F. KAMMERER.
Carpet-Sweeper.

No. 207,040. Patented Aug. 13, 1878.

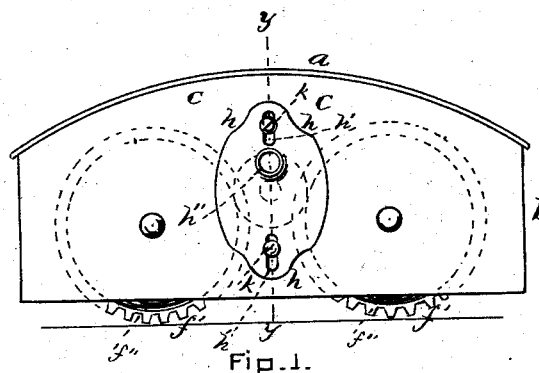

Fig. 1.

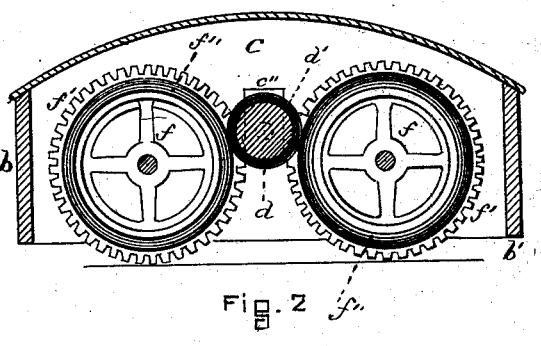

Fig. 2

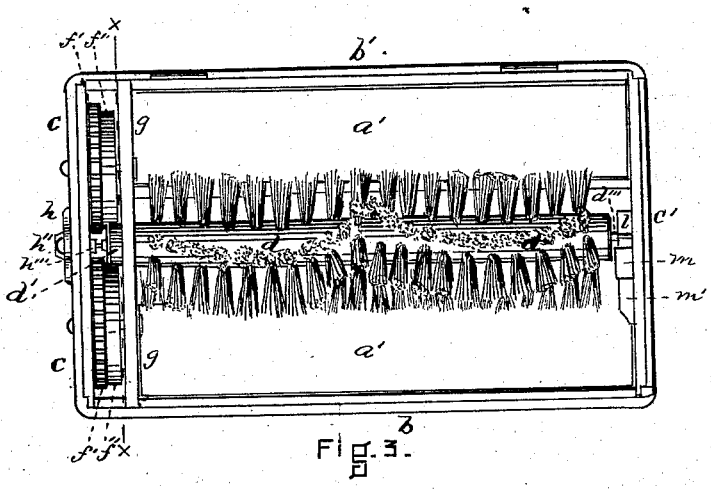

Fig. 3.

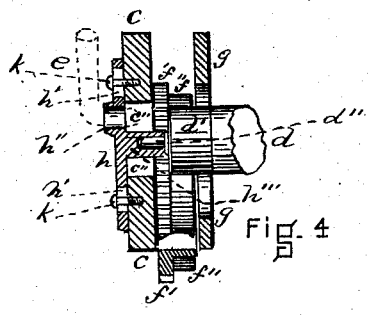

Fig. 4

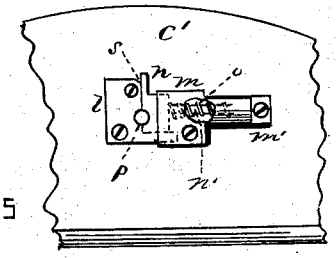

Fig. 5

WITNESSES

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# UNITED STATES PATENT OFFICE.

FREDERICK KAMMERER, OF SOMERVILLE, MASSACHUSETTS.

## IMPROVEMENT IN CARPET-SWEEPERS.

Specification forming part of Letters Patent No. **207,040**, dated August 13, 1878; application filed May 3, 1878.

*To all whom it may concern:*

Be it known that I, FREDERICK KAMMERER, of Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Carpet-Sweepers, of which the following is a specification:

My invention relates to the means below described for releasing the spindle and removing the brush-shaft.

In the accompanying drawings, Figure 1 is an elevation of one end of my carpet-sweeper. Fig. 2 is a vertical cross-section upon line *x x*, Fig. 3. Fig. 3 is a plan of the sweeper with the lid removed. Fig. 4 is a vertical section upon line *y y*, Fig. 1. A portion of a driving-wheel, shown in elevation in this figure, is broken out, and the lower edge shown in section, the better to illustrate the position of the rubber band thereon. Fig. 5 is an inside view of the end board opposite the end board shown in Fig. 1, exhibiting a device for bearing, securing, and releasing the spindle entering the same.

Similar letters of reference indicate like parts.

*a* represents the lid; *a' a'*, the trays or receptacles for the deposit of the dirt; *b b'*, the two sides; *c c'*, the end boards; *d*, the brush-shaft; and *e*, (in broken lines, Fig. 4,) the bail, all constructed substantially as usual.

*d'* is a rubber band around one end of the brush-shaft, and capable of being moved or reversed as it shows signs of wear, and *d'' d'''* are the spindles projecting from opposite ends thereof.

*f f* are the sustaining and driving wheels. Each of these wheels is provided with teeth or cogs *f'* upon one side of its periphery, and a rubber band, *f''*, upon the other side. The teeth and the band are side by side. The latter lies against and engages the rubber band *d'* upon the brush-shaft, while the former rests upon the floor. Thus it will be seen that the teeth *f'* upon the wheels *f* actuate the wheels, while the rubber bands *f''* actuate the brush-shaft *d* by engaging the rubber band *d'* upon its end, lying between the two wheels *f*. This method of making the wheels is considered better than making them with teeth solely, or with rubber bands alone, as it prevents the rubber from undue wear by employing it solely to actuate the brush-shaft, while the more durable teeth alone come in contact with the floor.

*g* is the partition between the wheels *f* and the main portion of the box.

*h* is a plate, secured to the outside of the end board, *c*, by means of the screws *k k*, passing through the vertical slots *h' h'*. These screws are not driven in far enough to prevent the free vertical movement of the plate *h* by means of the slots *h'*. *h''* is a socket in which the end of the bail *e* rests. *h'''* is a socket projecting inward through the large opening *c''* in the end board, *c*, and forming the bearing for the spindle *d''*, projecting from the brush-shaft.

It will be seen that when the sweeper is in use the bail *e*, resting in the socket *h''* in the plate *h*, presses the rubber-banded end *d'* of the brush-shaft down upon the rubber bands *f''* upon the wheels *f* by means of the spindle *d''* and bearing *h'''*, thus causing the brush-shaft to turn without any possibility of slipping, while, when not in use, the pressure is relieved, the slots *h'* and the opening *c''* being long enough to allow of sufficiently ample play.

At the opposite end of the brush-shaft *d*, attached to the inside of the end board, *c'*, is a device for holding the spindle *d'''*, projecting from the brush-shaft. This consists of a plate, *l*, secured to said end board, and the metallic box *m*, extending into the tube-shaped portion *m'*. A small projecting portion of the plate *l* enters this box *m*. A bolt, *n*, terminating in a rod, *n'*, which lies in the tube *m'*, projects from the box *m*, and is forced against the plate *l* by means of the spiral spring *o* around said rod *n'*. A hole, *p*, for the admission of the spindle *d'''*, is made in the plate *l* and bolt *n*, all as shown in Fig. 5 of the drawing. To place the spindle in the hole or bearing *p*, press it down between the plate *l* and bolt *n* at the point *s*. To remove it press back the spring-bolt *n* with the thumb or finger.

The improvements above described render the carpet-sweeper very durable, easily removable, and thorough in its work.

Having thus fully described my improvement, I do not claim the plate *h*, provided with the slots *h*, and sockets *h''* and *h'''*; but

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

The combination of the plate *l*, box *m m'*, spring-bolt *n n'*, provided with the spring *o*, and end board, *c'*, said plate *l* and bolt *n* being provided with the hole *p* as a bearing for the spindle *d'''*, all substantially as and for the purposes above described.

FREDERICK KAMMERER.

Witnesses:

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B. W. WILLIAMS.