E. F. DOWNER & G. KAMPF.

Carpet-Sweepers.

No. 196,201. Patented Oct. 16, 1877.

Fig. 1.

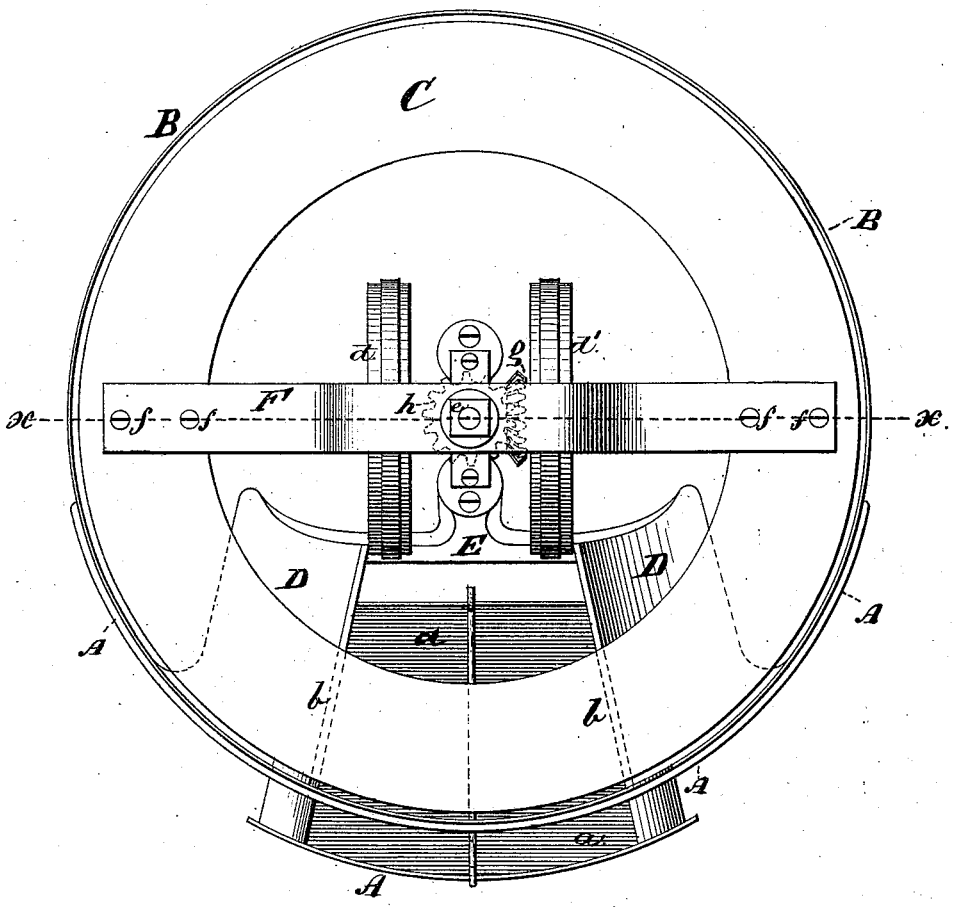
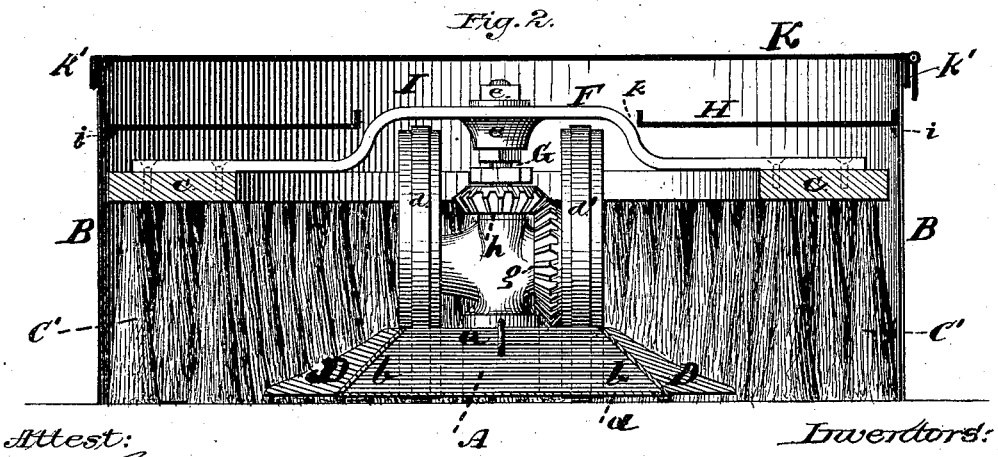


Fig. 2.



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UNITED STATES PATENT OFFICE.

EDWARD F. DOWNER AND GEORGE KAMPF, OF UTICA, NEW YORK.

IMPROVEMENT IN CARPET-SWEEPERS.

Specification forming part of Letters Patent No. **196,201**, dated October 16, 1877; application filed April 5, 1877.

To all whom it may concern:

Be it known that we, EDWARD F. DOWNER and GEORGE KAMPF, both of the city of Utica, in the county of Oneida and State of New York, have invented a new and useful Improvement in Sweeping-Machines, which said improvement is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 is a top view of our improved sweeping-machine, the top plate or cover having been removed; and Fig. 2 is a vertical section on the line *x x*, Fig. 1.

Our invention relates to machines for sweeping streets, carpets, bare floors, or any other plane or nearly plane surface of which sweeping is occasionally needed; and it consists in the combination of a rotary brush, operated by friction-wheels and intermediate mechanism, with scrapers suitably arranged, and with two pans or receptacles for receiving the dirt, substantially as hereinafter more fully described, and pointed out in the claims.

In the drawing, B is a sheet-metal cylinder, open at both ends, the open top being closed by a removable flanged cover, K. Riveted or otherwise secured to one side of this cylinder is a box or casting, (denoted by A,) having side walls *b b*, and open at the bottom, so as to form a receptacle for a removable dust-pan, *a*, the projecting part of the box or casting A forming a top or cover for the pan *a*.

Projecting inwardly from each of the sides *b b* of casting A are two slanting or beveled scrapers, D D, converging in a tongue, E, which projects forward to or past the center of cylinder B, and forms a rest or bearing for the operating mechanism hereinafter described.

The rotary brush C C′ consists of an annular disk, C, to the under side of which the brooms or brushes C′ are secured.

F is a diagonal cross-piece, secured upon the top of disk C by screws *f f*, and perforated in the middle to allow the shaft G to pass through. This shaft is firmly secured in the cross-brace F by jam-nuts *e e*, so that when shaft G is rotated the brace F and brush C C′ will rotate with it.

A rotating motion is given to the shaft by the friction-wheels *d d′*, one of which has a concentric bevel-wheel, *g*, secured upon its inner face, which meshes with a pinion, *h*, keyed upon shaft G. The wheels *d d′* are, preferably, provided with a rubber or leather circumferential band or tire, to increase friction with the surface on which the machine is to be used.

H is a removable diaphragm resting on shoulders *i i*, projecting from the interior of cylinder B, and having a longitudinal slot or opening, *k*. By this diaphragm a dust-chamber, I, is formed above the rotating brush, covered by the removable lid or cover K, the rim or flange *k′* of which projects down over and fits closely around the upper rim of the cylinder.

From the foregoing description the operation of our improved sweeping-machine will be readily understood.

The light dust which is raised by the revolutions of the brush will ascend up into the chamber I through the opening *k*, while that portion of the dust or dirt which adheres to the brushes will be deposited by the brush coming in contact with the scrapers D in the dust-pan *a*, which is inserted into the box or casting A, and projects forward in under the brush, as shown by the shaded lines marked *a* in Fig. 1.

The dirt may readily be emptied from the chamber I by removing the lid K and emptying it out, and from the box or pan *a* by withdrawing this from its box when it is full, and emptying it, after which it is again reinserted.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

1. The combination of the cylinder B, containing the rotating brush C C′ and its operating mechanism, with the casting A and removable dust-pan *a*, said casting having scrapers D D and tongue E, substantially as and for the purpose herein shown and specified.

2. The combination of the rotating circular brush C C′ with the cylinder B, slotted diaphragm H, and closely-fitting top cover K, whereby a dust-chamber, I, is formed above the brush, substantially as and for the purpose herein shown and specified.

E. F. DOWNER.
GEO. KAMPF.

Witnesses:
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S. A. BEARDSLEY.