

S. F. LEACH.
CARPET-SWEEPER.

No. 183,179.

Patented Oct. 10, 1876.

Fig. 1.

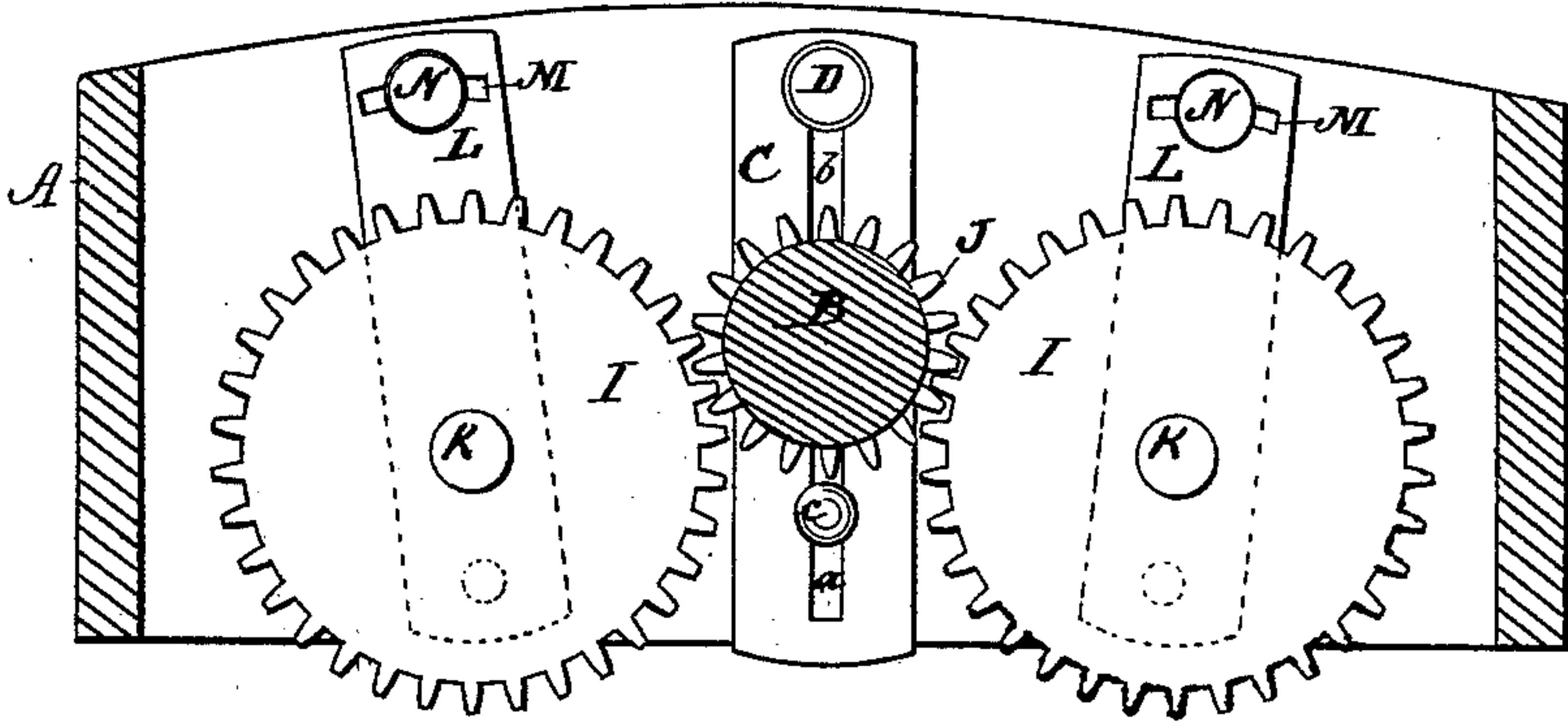
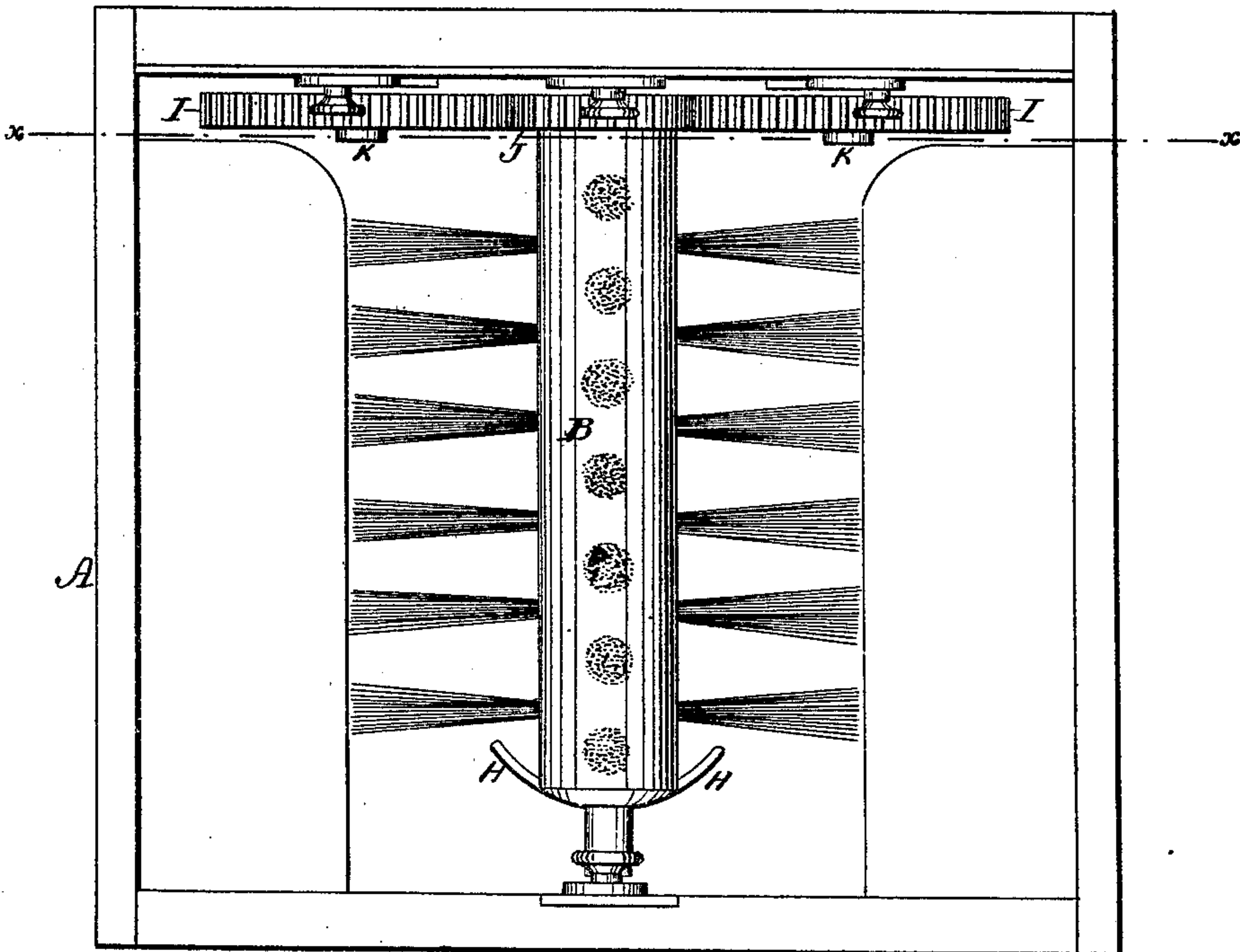


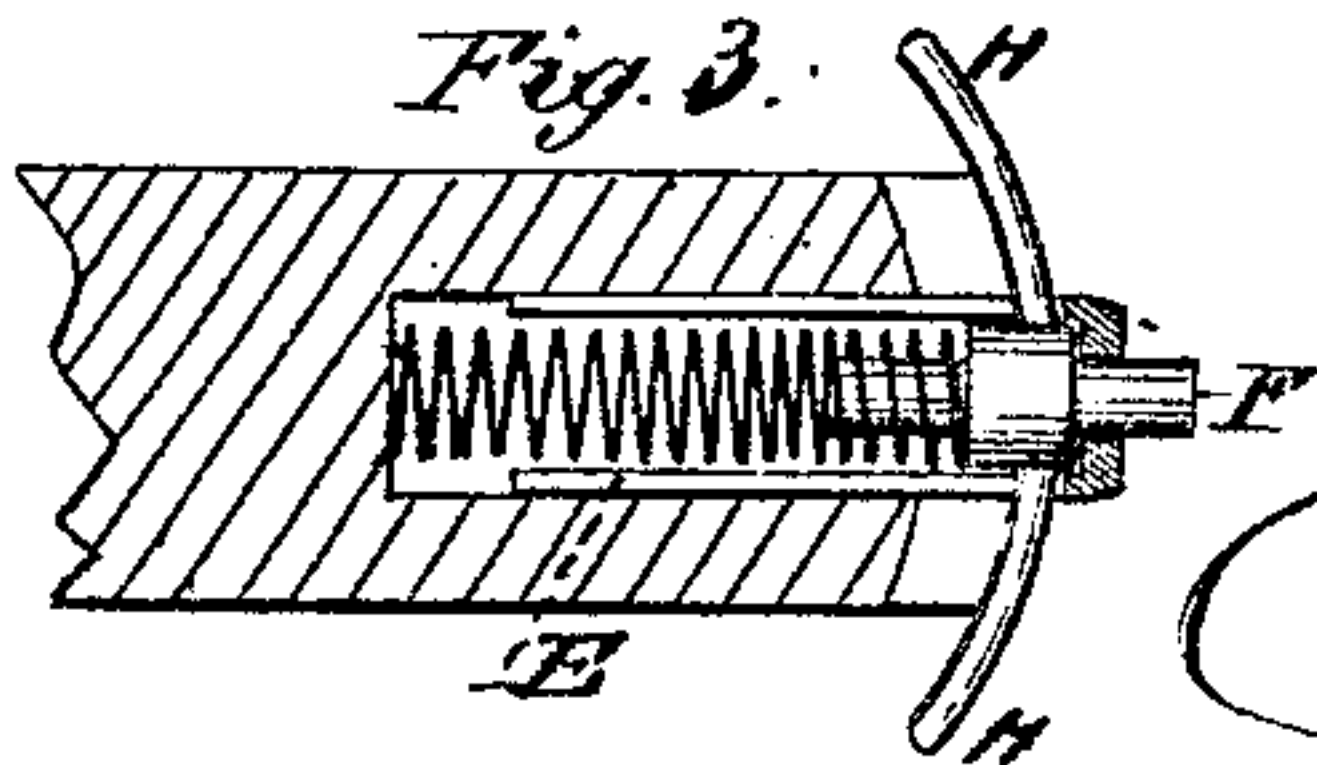
Fig. 2.



WITNESSES:

W. W. Hollingsworth
John C. Kemmon

Fig. 3.



INVENTOR:

S. F. Leach

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

SAMUEL F. LEACH, OF CHELSEA, MASSACHUSETTS.

IMPROVEMENT IN CARPET-SWEEPERS.

Specification forming part of Letters Patent No. **183,179**, dated October 10, 1876; application filed August 8, 1876.

To all whom it may concern:

Be it known that I, SAMUEL F. LEACH, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Carpet-Sweepers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a longitudinal vertical section; Fig. 2, a plan view; Fig. 3, a detail view of the spring-journal of the brush-cylinder.

The present invention has reference to that class of carpet-sweepers in which a rotary brush-cylinder is employed for performing the sweeping operation.

The invention consists in constructing the gear-wheels of a carpet-sweeper of leather, the same being rendered water-proof by coating or soaking it in a solution of gum-shellac and alcohol.

The frame or box A of the sweeper is of the usual construction, and has the ordinary dust or dirt receiving trays or receptacles at its ends. The brush-cylinder B is geared to rotate in contact with the floor, and has journals or gudgeons at its ends, which are fitted in vertically-adjustable bearing or supporting plates C, at the sides of the frame or box. The vertical adjustment of said plates C is permitted by means of slots *a b*, formed in the plates, said slots receiving, respectively, a stationary guide-pin, *c*, and a thumb or set screw, D. One end of the brush-cylinder is bored out to receive a cylindrical metallic socket-piece, N, which contains a movable gudgeon or journal, F, pressed forward and held in the bearing-plate by means of a spiral spring, G, encircling the stem of the journal within the socket. The gudgeon can be retracted, so as to release the cylinder from its bearing, by means of arms H on the gudgeon, which project through slots in the socket-

piece, and grooves in the end of the cylinder. The gear or spur wheels I bear on the floor, and turn in contact therewith in the ordinary manner, so as to impart a rotary movement to the brush-cylinder through the medium of the intermediate pinion J on the end of the brush-cylinder. The gear-wheels I are mounted on stationary journal pins or studs K, formed on bearing or supporting plates L, which are pivoted at their lower ends to the frame, and are provided at their upper ends with a curved slot, M, through which passes a thumb or set screw, N.

The object of the pivoted plates L is to enable the brush-cylinder to be adjusted vertically or dropped without changing the relative position of the three wheels. This adjustment of the plates L and attached gear-wheels can be performed by simply loosening the screws N, so as to loosen the plates. When the same have been spread or adjusted sufficiently, the screws are tightened up so as to retain the plates firmly in position.

The gear-wheels are preferably made of leather, which is treated with a solution of gum-shellac and alcohol, so as to render it water-proof, and to smooth and harden the surface of the leather, so that the gears will not bind or readily yield to pressure. Leather is better than wood or metal, because it is entirely noiseless, and will not tear the carpet, and it is also superior to rubber or rubber compound, inasmuch as it will always preserve its round or true shape, which is not the case with rubber wheels.

Having thus described my invention, what I claim as new is—

Carpet-sweeper gear-wheels made of leather, treated with a hardening and water-proofing substance, as and for the purpose set forth.

SAMUEL FREDERICK LEACH.

Witnesses:

HERBERT A. CHAPIN,
WM. B. H. DOWSE.