(No Model.)

C. L. TRAVIS.

CARPET SWEEPING MACHINE.

No. 337,288. Patented Mar. 2, 1886.

Fig. 1.

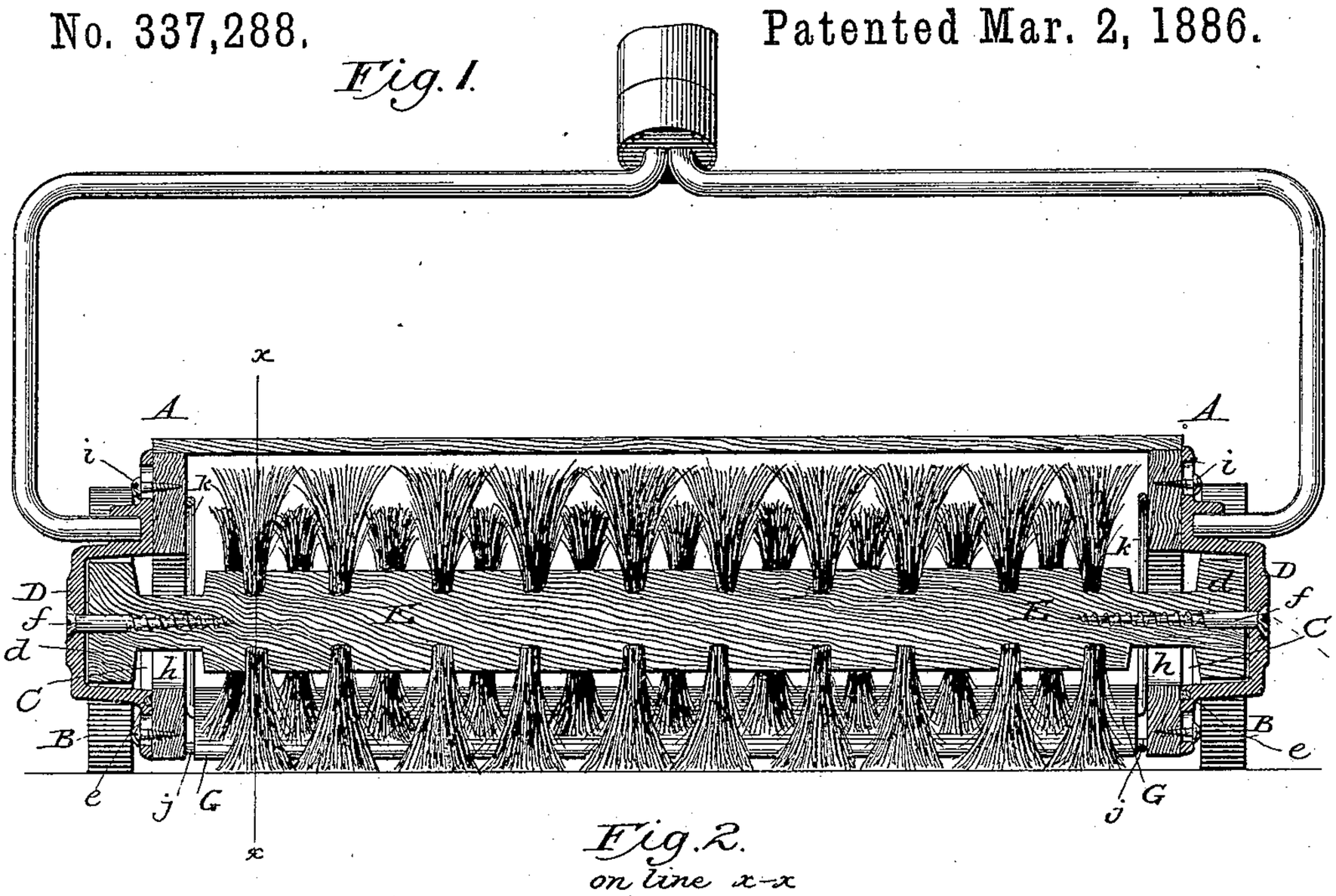


Fig. 2.
on line x-x

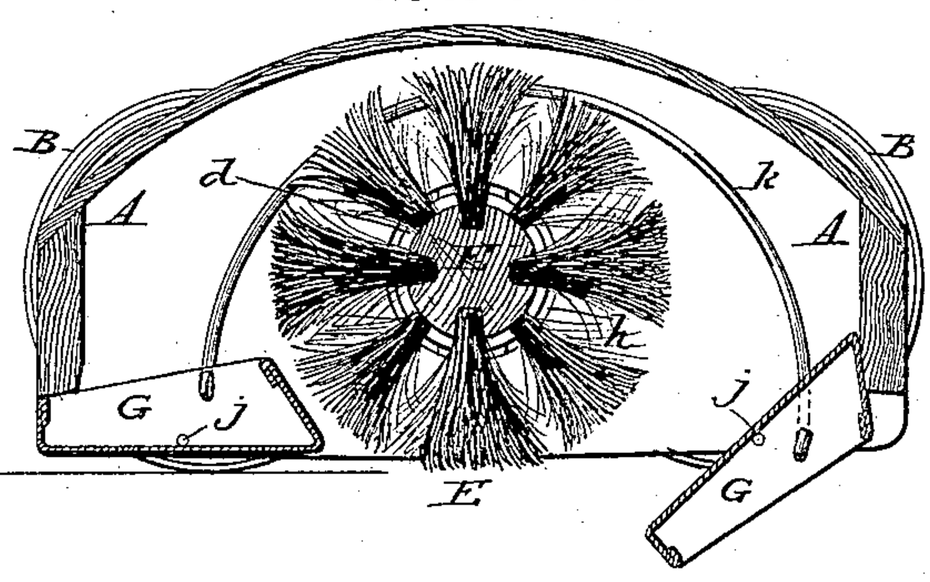


Fig. 4.

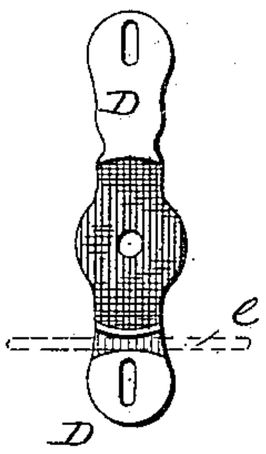
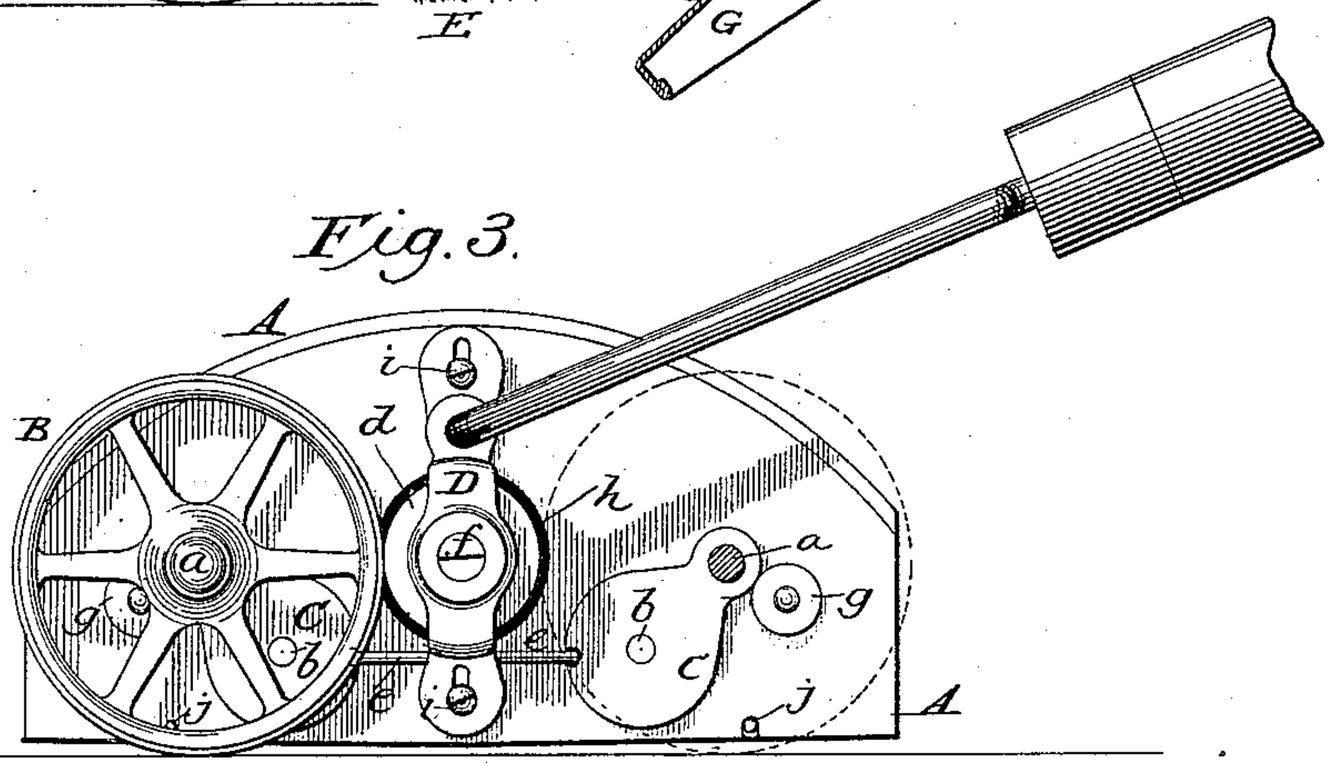


Fig. 3.



WITNESSES

Sidney P. Hollingsworth
W. H. Shipley

INVENTOR

C. L. Travis.
By Phil. T. Dodge.
Attorney

UNITED STATES PATENT OFFICE.

CHARLES L. TRAVIS, OF MINNEAPOLIS, MINNESOTA.

CARPET-SWEEPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 337,288, dated March 2, 1886.

Application filed February 28, 1885. Serial No. 157,355. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. TRAVIS, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain Improvements in Carpet-Sweeping Machines, of which the following is a specification.

This invention has reference to that class of sweepers in which a body carried on wheels contains a rotary brush and its receiving-pan adjacent thereto.

The invention consists in various improvements hereinafter detailed and claimed, and having reference to the manner of supporting and driving the brush and adjusting the wheels.

Figure 1 represents a longitudinal vertical section through the center of my machine. Fig. 2 is a cross-section of the same on the line *x x*, one of the dust-pans being shown in an open position. Fig. 3 is an end elevation of the machine with one of the main wheels removed in order to expose other parts to view. Fig. 4 is an inside face view of the plate D, showing the manner in which the equalizing bar or lever is mounted therein so that it may rise and fall at its ends.

Referring to the accompanying drawings, A represents the body of the machine, consisting of a substantially rectangular box open on the lower side only.

B B represent the four carrying-wheels, mounted two at each end of the machine, outside of the body, each wheel being carried on a journal, *a*, affixed rigidly to the distal end of an arm, C, the lower end of which is united by a pivot-screw, *b*, to the end of the body, so that the weight of the latter tends through the arm to draw the wheel inward toward the middle of the body against the driving-pulley *d* of the brush E, as in various machines heretofore patented to me.

In practice it is found that as the machine is moved to and fro over the carpet by means of the handle there is a tendency of the main wheels to move away alternately from the brush-pulley *d*. To avoid this difficulty, by causing each wheel to resist the backward movement of its companion, I adopt the construction shown in Figs. 3 and 4.

The two wheel-carrying arms at each end of the machine are connected by an equalizing bar or lever, *e*, which rocks or tips about a fulcrum at its middle, and the ends of which are seated in notches in the arms. This bar, which may be rigid, but which is preferably composed of elastic metal, serves to insure an equal action of the two wheels against opposite sides of the brush-pulley, the tendency of either wheel to rise out of its position being resisted by the companion wheel acting through the equalizing-bar.

The several parts are held in their proper operative positions to secure the above-described action of the equalizing-bar, owing to the fact that the wheels rest upon the floor, and that the body carrying the brush-roll is in turn carried by the wheels and held down by gravity and to some extent by the pressure of the operating-handle. It avoids entirely that tendency of the wheel which is for the time being in rear of the pulley to be forced away from the same as the machine is carried over the floor.

In the present instance I have represented the equalizing-bar as rocking in a seat or bearing in one of the brush-supporting plates D, as hereinafter more fully explained; but it may be mounted on a central pivot, if preferred.

In order to control the outward or backward movement of the main wheels, I provide the body with stops *g*, which consist, preferably, of leather, rubber, or equivalent soft washers attached by a central screw or nail.

Referring now to the brush E, it will be seen to consist of a cylindrical wooden body armed with bristles and fashioned into journals with the driving-pulleys *d* at the extremity.

The pulleys and their journals are constructed of wood, and form an integral portion of the body. This construction is advantageous, because of its extreme simplicity and cheapness, because a disconnection of the pulleys is impossible, and because the grain of the wood is presented in an advantageous position for frictional engagement with the driving-wheels, the surfaces of which latter are covered with rubber or other soft material, as usual.

Instead of supporting the brush in the usual manner within the body, I make the same of such length that its pulleys will be projected beyond the two ends of the body, which are provided, as shown in Fig. 1, with holes *h*, of

sufficient size to admit of the pulleys being inserted through the same from the inside.

In order to support the ends of the brush, I make use of bracket-plates D, applied to opposite ends of the body, and supporting pivot-screws *f*, which are inserted loosely through them into the ends of the brush. As shown in the drawings, each of these bracket-plates is adapted to span the opening in the end of the body and pass outward around the brush-pulley. The two ends of the plate are slotted vertically and secured to the body by screws *i*, this construction permitting the brush to be adjusted vertically.

The pivot-screws *f*, being inserted from the outside, may be tightened in such manner as to compensate for wear and prevent the slightest end play or shake of the brush. This adjustment is peculiarly advantageous when, as shown in the drawings, the necks or bearing portions of the screws are made of conical form, since it enables the brush to be operated at all times in a noiseless manner.

G G represent the two dust-receiving pans, located in the base of the body on opposite sides of the brush, and extending from end to end thereof. Each pan is pivoted at its two ends, as shown at *j*, in order that it may be reversed in the manner represented on the right hand in Fig. 2, to effect the discharge of its contents.

For the purpose of holding the pans in the closed and in the open positions, I connect them at one or at both ends by means of a curved wire spring, *k*, the ends of which are attached to the upper edges of the pan. The single spring thus applied serves to control both pans.

In my present machine the edges of the body are elevated or "cut back" in such manner as to admit of the pans, which are widened for the purpose, being extended outward below them, as represented in Fig. 2.

Having thus described my invention, what I claim is—

1. In a carpet-sweeper, the body provided with openings at its ends, in combination with the brush having its ends extending through said openings, with pulleys at the outside, the plates or brackets applied externally to the body, as described, and the journals sustaining the ends of the brush in the plates and securing the brush against vertical motion.

2. In combination with the intermediate brush-actuating pulley, the two traction-wheels, their movable supporting-arms, and the movable equalizing bar or lever sustained at its middle and connecting said arms, as described.

3. In combination with the body, the rotary brush, two wheels at one end of the body on opposite sides of the brush, the pivoted wheel-carrying arms, and the elastic equalizing-bar *e*, sustained by and movable upon a central support.

4. In a carpet-sweeper, the end plate, D, adapted, as described, to sustain the journal of the brush, and also provided with a seat or groove to receive the equalizing-bar.

In testimony whereof I hereunto set my hand, this 31st day of December, 1884, in the presence of two attesting witnesses.

CHARLES L. TRAVIS.

Witnesses:
A. H. MUNN,
F. HOOKER.