(Model.)

W. H CASTLE.

CARPET SWEEPER.

No. 277,229. Patented May 8, 1883.

Fig. 1.

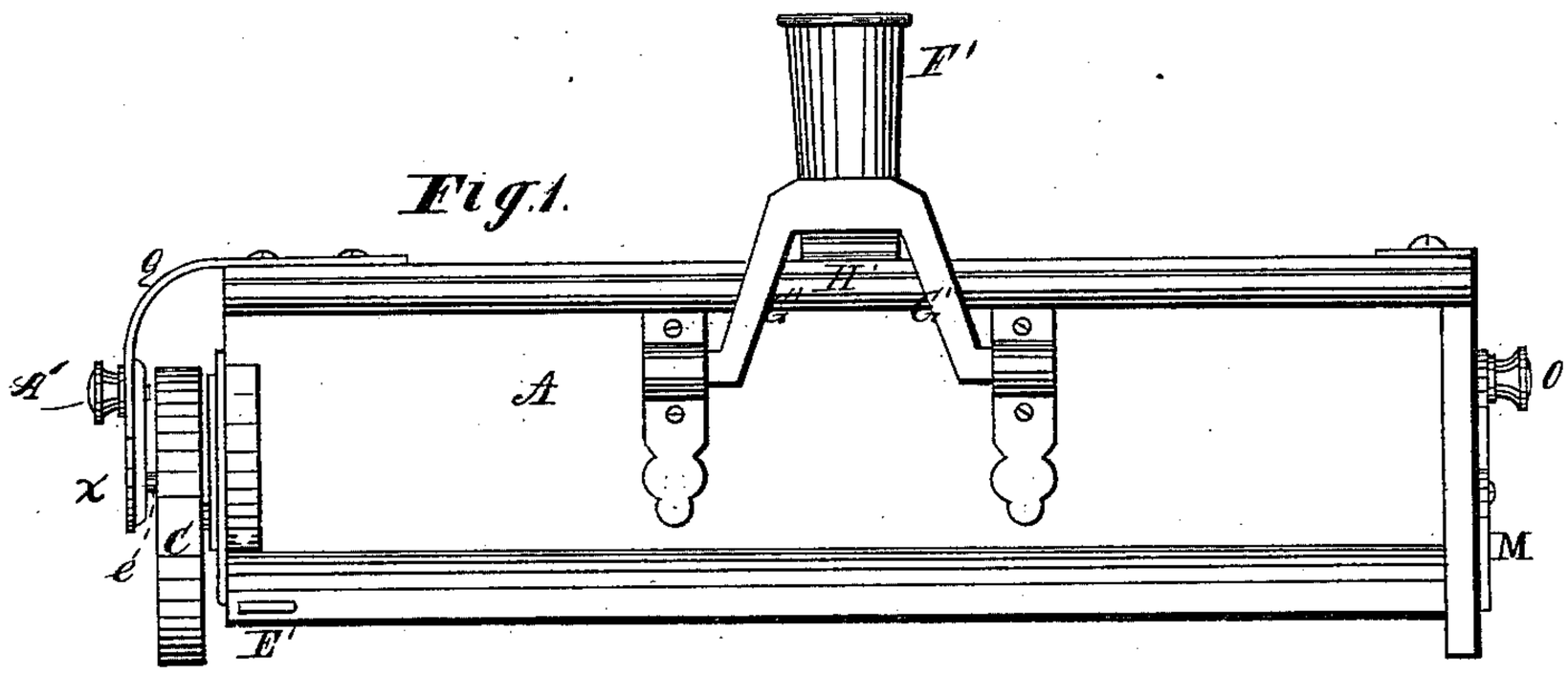


Fig. 2.

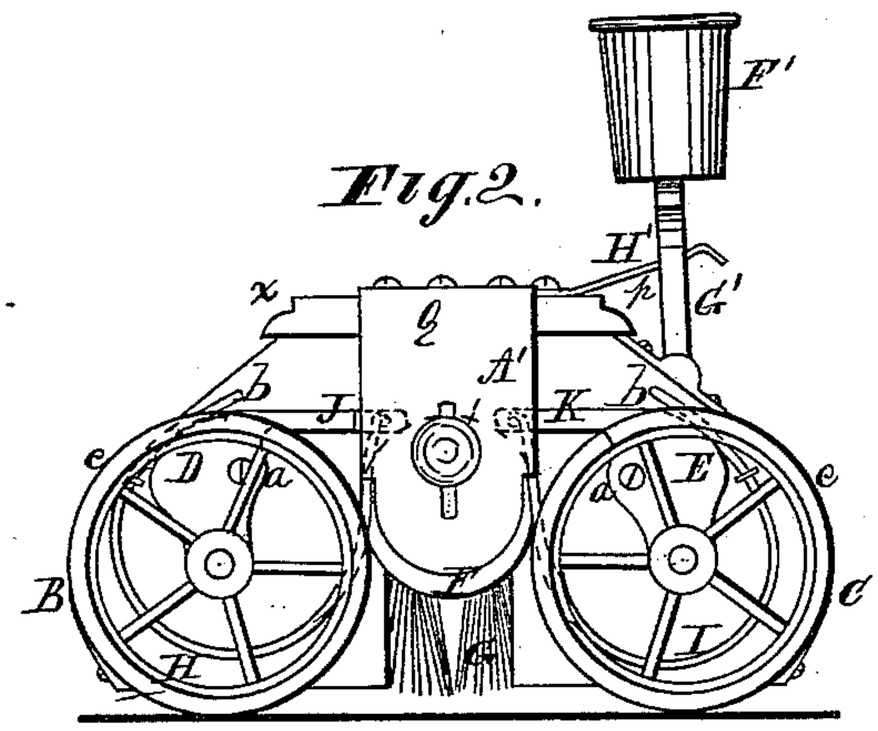


Fig. 3.

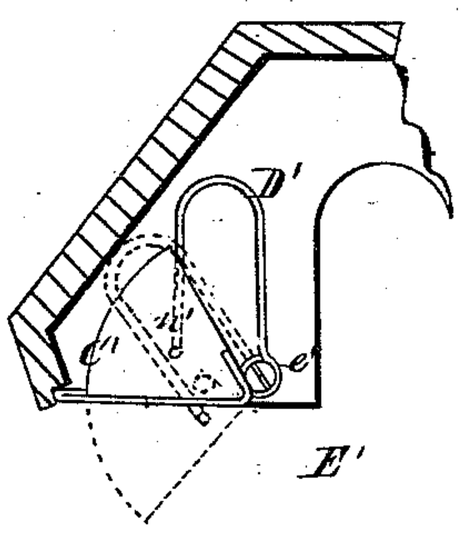


Fig. 4.

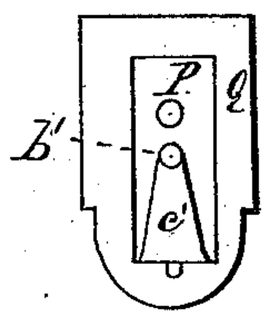


Fig 5

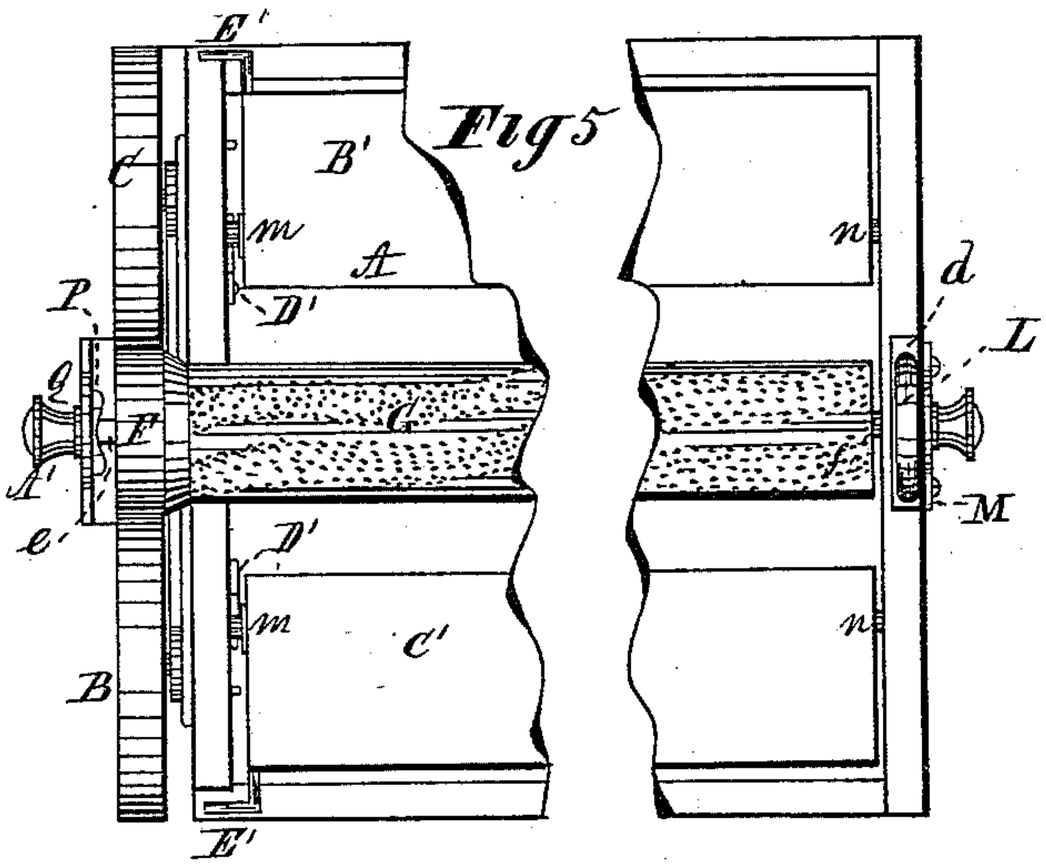
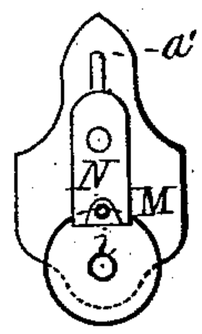


Fig. 6.



Witnesses.
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J. W. Burridge

Inventor.
W. H. Castle
W. H. Burridge Atty.

UNITED STATES PATENT OFFICE.

WILLIAM H. CASTLE, OF ASHTABULA, OHIO, ASSIGNOR TO THE ASHTABULA BOLT AND SHAFT COMPANY, OF SAME PLACE.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 277,229, dated May 8, 1883.

Application filed March 5, 1883. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CASTLE, of Ashtabula, in the county of Ashtabula and State of Ohio, have invented a certain new and Improved Carpet-Sweeper; and I do hereby declare that the following is a full, clear, and complete description thereof.

The following is a description of the construction of the carpet-sweeper above referred to, reference being had to the accompanying drawings for illustration, and making a part of this specification, in which—

Figure 1 represents a side view of the sweeper. Fig. 2 shows an end view. Figs. 3, 4, and 6 are detached sections. Fig. 5 is a view of the bottom of the sweeper.

Like letters of reference refer to like parts in the several views.

As shown in the drawings, A represents the body or box of the carpet-sweeper, which in its general structure is or may be like those in ordinary use.

The end *x* of the box is supported upon the wheels B and C, Fig. 2, which have their axial bearings, respectively, in the lower ends of the bell-cranks D and E, pivoted to the end of the box at *a a*, so that the wheels have no direct attachment to the box. By virtue of the wheels being attached to the arms of the bell-cranks they have a vibratory movement, so that they can approach each other for clamping between them the wheel F, and by frictional contact cause it to revolve for operating the brush G, to the shaft of which the wheel F is secured, as seen in Fig. 5.

The wheels B and C are kept in contact with the brush-wheel F by constant force of springs H and I, the ends *b b* of which are made fast in the end of the box, whereas the opposite ends are attached to the arms J and K of the bell-cranks in the intermediate portions stapled to the end *x* of the box. The resiliency of the springs forces upward the said arms J and K, thereby drawing inwardly the lower arms thereof, causing the two wheels to impinge upon the brush-wheel and continue them in contact therewith, as aforesaid, and for the purpose specified.

The two wheels B and C are provided with rubber tires or bands *c*, and for being attached to the end of the box by the bell-cranks they readily adapt themselves to any irregularity that may be in the face of the brush-wheel, which they could not do were they attached to the box on fixed axles in the ordinary way. The opposite end of the box is supported on a small wheel, L, Fig. 5, placed in a recess, *d*, made in the end of the box, so that the side of the wheel may be flush therewith, as shown in said Fig. 5. The wheel, being in the recess, is out of the way of the furniture while sweeping the floor. The wheel revolves on a shaft fixed in the hanger M, secured to the end of the box, as seen in the drawings. The shaft G of the brush revolves on pivotal points *e* and *f*, Figs. 1 and 5, having their bearings in adjustable steps, one of which is shown at N in Fig. 6, in which the pivotal point *f* is held in the seat *i*. Said step is secured by an adjusting-screw, O, Fig. 1, to the inner side of the hanger M. The screw passes through a slot, *a'*, in the hanger, thence into the step, which may be adjusted thereby for lowering the brush when it may have become worn too short to sweep clean. The pivotal point *e* of the shaft is in like manner held in an adjustable step, P, Figs. 4 and 5, secured to the inner side of a spring-hanger, Q, by means of a set-screw, A', movable in a slot, as shown in Fig. 2, for adjusting the brush for the purpose above specified.

As above said, the hanger Q is a spring, and is secured to the top of the box, as seen in Fig. 1. The object in having the hanger a spring is that by its resiliency it may crowd upon the end of the shaft of the brush and hold the pivotal points in the seats of their respective steps, and prevent them from rattling while the sweeper is being used.

It will be observed in Fig. 4, which represents an inside view of the spring, that the seat *b'* of the pivotal point *e* is had access to by a tapering groove, *c'*, which allows the pivotal point to be easily and readily inserted in its seat after the opposite pivotal point, *f*, is in place. The tapering groove serves as a guide to direct the point into its seat without special care and attention being given to it for that purpose.

B' and C', Fig. 5, are the dust-pans closing the bottom of the carpet sweeper or box on each side of the brush. Said pans are hinged in the ends of the box at the points *m* and *n*,

and are held tightly closed by the spring D′. Fig. 3 showing an inside view of the end of the box, to which one end of the spring is connected to the end of the pan at *n′*. The pivots *m n* are so arranged in relation to the pivot of the spring D′ in the cover that when the pan B′ is closed the spring D′ acts with a constant force to hold it in that position, and when said pan is open the spring-pivot has passed to the other side of the pan-pivot and the spring force there acts to hold the pan open. The broken lines in said figure indicate the position of the pans when open and the relation of the spring thereto.

E′ are finger-pieces attached to the pans, whereby they are sprung open to obtain access to the inside for discharging the sweepings.

F′ is a socket in which to insert a handle for using the sweeper. The socket, by the arms G′, is hinged to the side of the box, and is held in the position shown in the drawings by a spring, H′, one end of which is secured to the top of the box, whereas the free end projects forward to and between the arms G′. The arms are prevented from falling back upon the side of the box and bruising it by a suitable shoulder immediately in the rear of the said arms, and against which they rest, as seen in the drawings.

Practically the operation of the above-described carpet-sweeper is substantially like carpet-sweepers in ordinary use: it being simply pushed or drawn over the floor, the dust is gathered up by the brush into the box, from which it is discharged in the usual way.

The working of the sweeper is without noise. As the brush is driven by the rubber-banded wheels in frictional contact with the wheel of the brush and the shaft of the brush for being pressed upon endwise by the spring-hanger, there can be no rattling of the shaft in its bearings as they may wear loose in their seats.

No claim is herein made to the spring-hanger and its adjustable bearing, as such will be made the subject-matter of a separate application.

I am aware of the fact that pivoted dust-pans are common; also, that a single spring has been connected with both of said pans, but not to the frame, to hold them in either an open or closed position.

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

1. In a carpet-sweeper, and in combination with the pivoted pan B′, the spring secured at one end to the box and at the other to the pan, and adapted to lock said pan in its closed or open position, substantially as set forth.

2. The slotted hanger M, having a bearing for the axis of the brush-shaft, and a set-screw, jointly with a wheel, L, set in a recess in the casing or end of the box and journaled in said hanger, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. CASTLE.

Witnesses:
W. H. BURRIDGE,
J. H. BURRIDGE.