(No Model.)

R. H. EDDY.

CARPET SWEEPER.

No. 433,723. Patented Aug. 5, 1890.

Fig. 1.

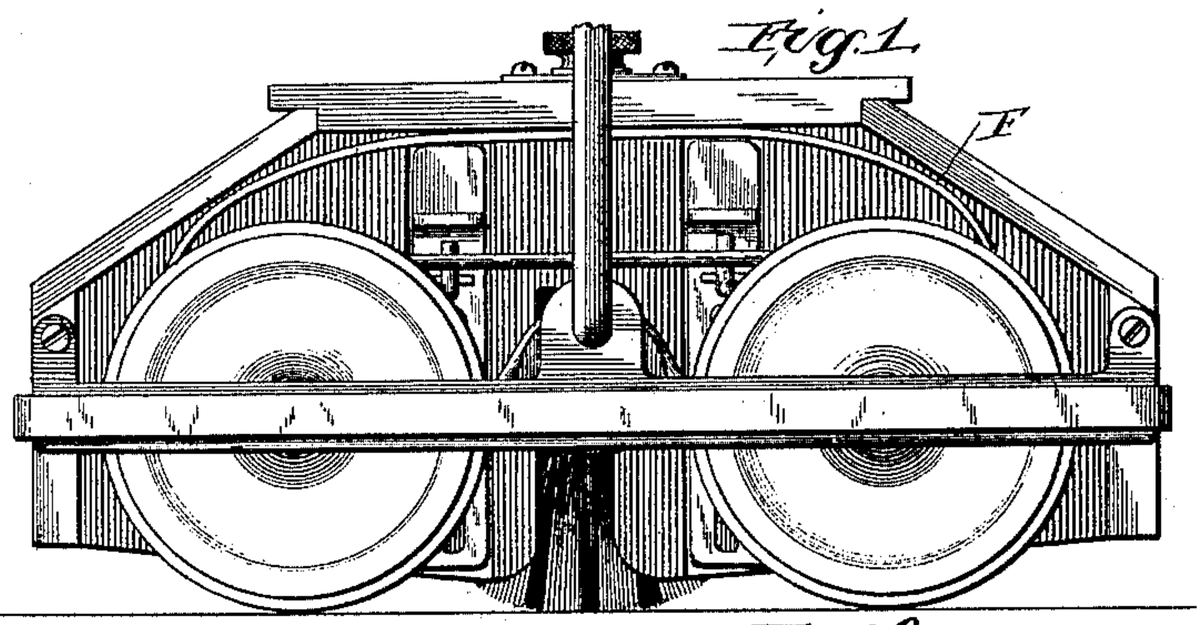


Fig. 2.

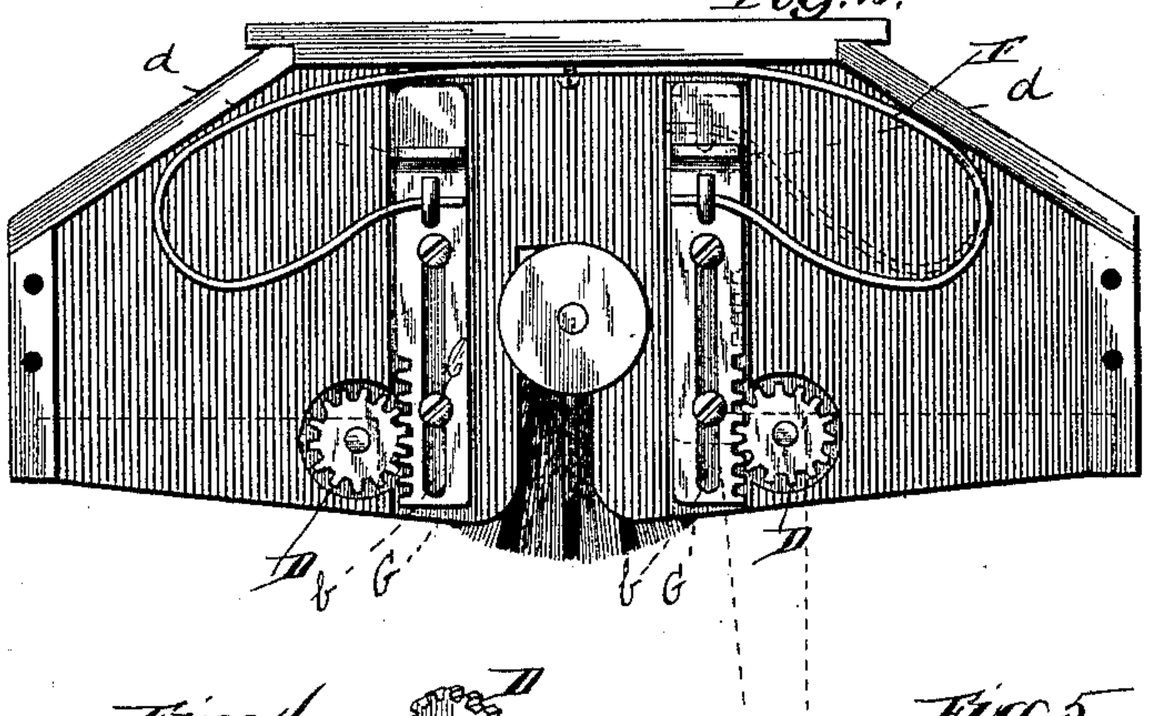


Fig. 4.

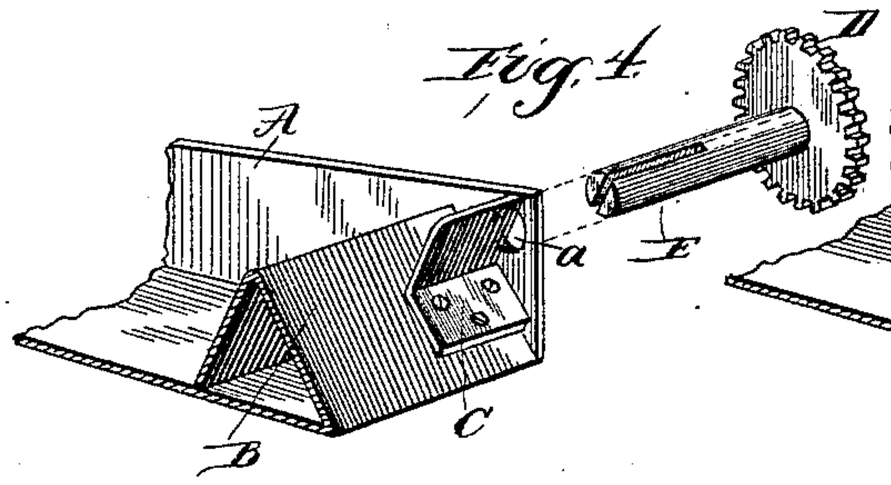


Fig. 5.

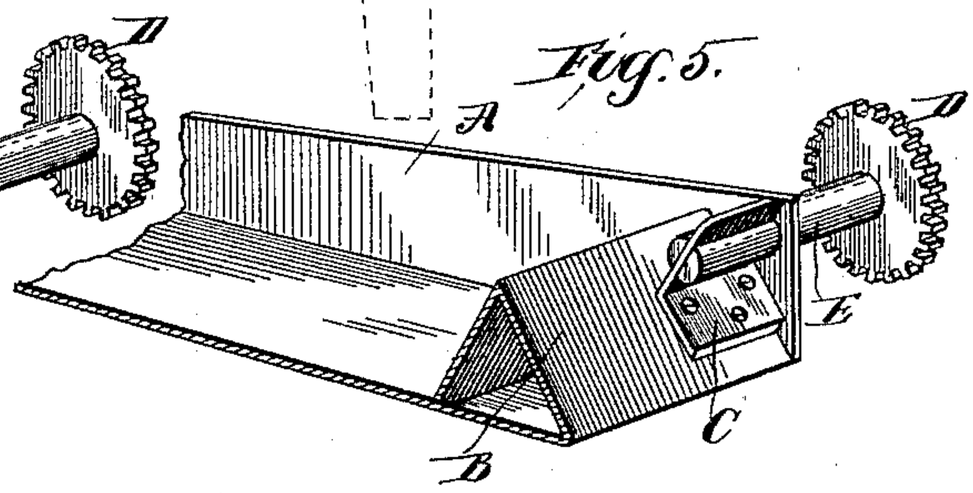
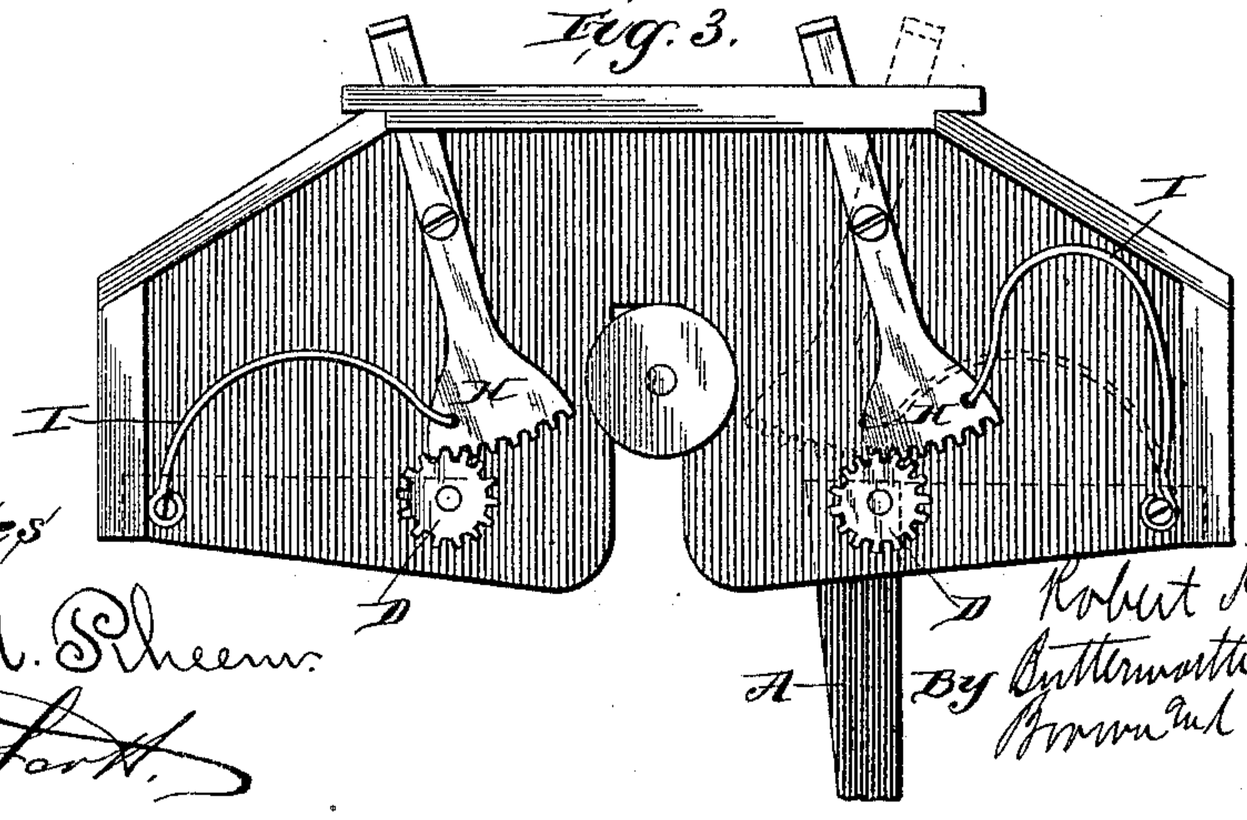


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT H. EDDY, OF CHICAGO, ILLINOIS.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 433,723, dated August 5, 1890.

Application filed May 22, 1890. Serial No. 352,763. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. EDDY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Carpet-Sweepers, of which the following is a specification.

The object of my invention is to improve the operation, or, rather, the manner of manipulating, dust-pans and carpet-sweepers; and the invention consists in certain features of construction, which will be hereinafter described, and then pointed out in the claims.

In the drawings like letters refer to the same parts in the several figures, in which—

Figure 1 is an end elevation of the carpet-sweeper complete. Fig. 2 is an end view of the carpet-sweeper, with the wheels and guard-bar detached. Fig. 3 is an end view of a modification of construction shown in Fig. 2. Figs. 4 and 5 are detailed views of portions of the dust-pan and pinion, with slotted shaft designed to be applied thereto.

The general construction of the carpet-sweeper illustrated and upon which I have engrafted my improvements, is of a common and well-known form, and will therefore not be particularly described herein.

The first feature which I will describe is the construction providing for ready manual manipulation of the dust-pans. The dust-pans A A are preferably made of sheet metal, and are of oblong shape, as is usual, but have at one end of each the material of which their bottoms are composed turned over, so as to erect upon such bottoms ledges of pyramidal shape. These pyramidal ledges I designate by the letter B, and they are for the purpose of strengthening the ends of the dust-pan at the points at which the gear-wheels for operating the same are to be connected therewith. Upon the outer sides of these pyramidal ledges are secured angular lugs C C, one leaf of each of which lugs rests upon the sides of the pyramidal ledges, and the other leaf of the same projects obliquely upward, with its edge adjacent to the rear flange of the dust-pan and across the centers of holes *a a*, which latter are formed in the corners of the said rear flange of the dust-pans.

Gear-wheels D D are mounted upon short shafts E E and secured to the frame of the carpet-sweeper by passing such shafts through proper holes in the frame. These short shafts have slots cut through them for a portion of their lengths, and these slots are inclined to correspond to the inclination of the upright leaves of the lugs before mentioned.

From the above description it is obvious that the gears are placed upon the outside of the frame of the carpet-sweeper and the short shafts project through such frame through the holes *a a* and around the vertical leaves of the lugs, so as to engage the same.

In Fig. 2 I have shown a single bow-spring secured to one end of the frame of the carpet-sweeper at about the center of the spring. The two free ends of the bow-spring rest upon lugs or keepers formed on sliding rack-bars G G, which latter are guided by suitable slot-and-pin-connections vertically on the frame. The slot I designate by the letter *b*, and letter C′ is employed to mark the pin. The teeth of the rack-bars mesh with the teeth of the gears, before described, and finger-pieces *d d* are preferably attached near the upper ends of said bars, whereby they may be readily manipulated. The bow-spring I mark by the letter F.

The dust-pans are suitably pivoted in the frame of the sweeper, and are normally held in a horizontal position within said frame by the pressure of the free ends of the bow-spring, inasmuch as such spring forces both of the sliding rack-bars to their lowest position and consequently causes them to turn the gear-wheels with which they mesh in the opposite direction and the dust-pans in the same direction, for the reason that they are secured to the shafts of the gear-wheel. By lifting the rack-bars to their highest position the reverse operation takes place, and the dust-pans are caused to assume a vertical position and thus empty their contents. It is obvious that the particular gearing and mechanism for manipulating the dust-pans may be varied to a considerable extent without departing from the spirit of my invention, and one modification which I have found efficient is illustrated in Fig. 3 of the drawings.

According to the construction shown in Fig. 3, I contemplate employing a pair of segments H H for meshing with and operating

the gears D D, before referred to. These segments have long narrow extensions, which project upward sufficiently to be within reach of the hand of the operator, and each segment is pivoted upon the outside of the frame at about the center of its arm or extension. Suitable springs I I are arranged to bear upon these segments and hold them normally in such position that the dust-pans will be forced into horizontal positions within the frame.

The manner of securing the gears to the dust-pans may obviously also be varied without departing from my principle; but the construction shown is the one which I prefer at present.

I have omitted to state that an important advantage flowing from the detachable connection between the gear-wheel and the dust-pans is that such gears may be temporarily removed while the sweeper is upon the shelves of the stores or other place not suggesting immediate use, and thus mischievous or curious persons will be prevented from manipulating the mechanism and thereby breaking or deranging the same. The facility with which the gearing may be removed or replaced makes this feature valuable in this connection.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a carpet-sweeper, the combination of dust-pans pivoted in the frame of said sweeper and having their pivots extend through the frame, with mechanism upon the outside of such frame connected with said pivots for manipulating the same and thereby operating the dust-pan, substantially as shown and described.

2. The combination, in a carpet-sweeper, of dust-pans pivoted therein, with gear-wheels detachably connected therewith, and mechanism for manipulating such gear-wheel from the outside of the frame of the sweeper, substantially as shown and described.

3. In a carpet-sweeper, the combination of pivoted dust-pans with gear-wheels detachably clutched to the same, and mechanism for manually manipulating the dust-pans in one direction, and devices for automatically restoring them to their normal position, substantially as shown and described.

4. In a carpet-sweeper, the combination of pivoted dust-pans with gear-wheels detachably clutched to the same, sliding rack-bars meshing with such gear-wheels, provided with finger-pieces for manipulating the same, and a bow-spring secured to the frame of the sweeper at its center and having its free ends bearing upon lugs on the rack-bars, substantially as and for the purpose set forth.

5. In a carpet-sweeper, the combination of one or more pivoted dust-pans having their ends provided with angular ledges bearing lugs with projecting inclined flanges, with gear-wheels having short shafts with slotted ends for engaging the edges of the inclined flanges, and mechanism for engaging and operating such gear-wheels, substantially as and for the purpose set forth.

6. In a carpet-sweeper, the combination of pivoted dust-pans having their bottoms upturned to form pyramidal or angular ledges, and lugs with projecting inclined flanges secured to such ledges, with gears having short shafts suitably slotted to engage the inclined flanges, sliding rack-bars provided with finger-pieces, and a bow-spring centrally secured to the frame of the sweeper and having its free ends bearing upon the rack-bars, substantially as shown and described.

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