May 6, 1941. S. I. BERGER 2,240,683

CARPET SWEEPER

Filed June 8, 1938

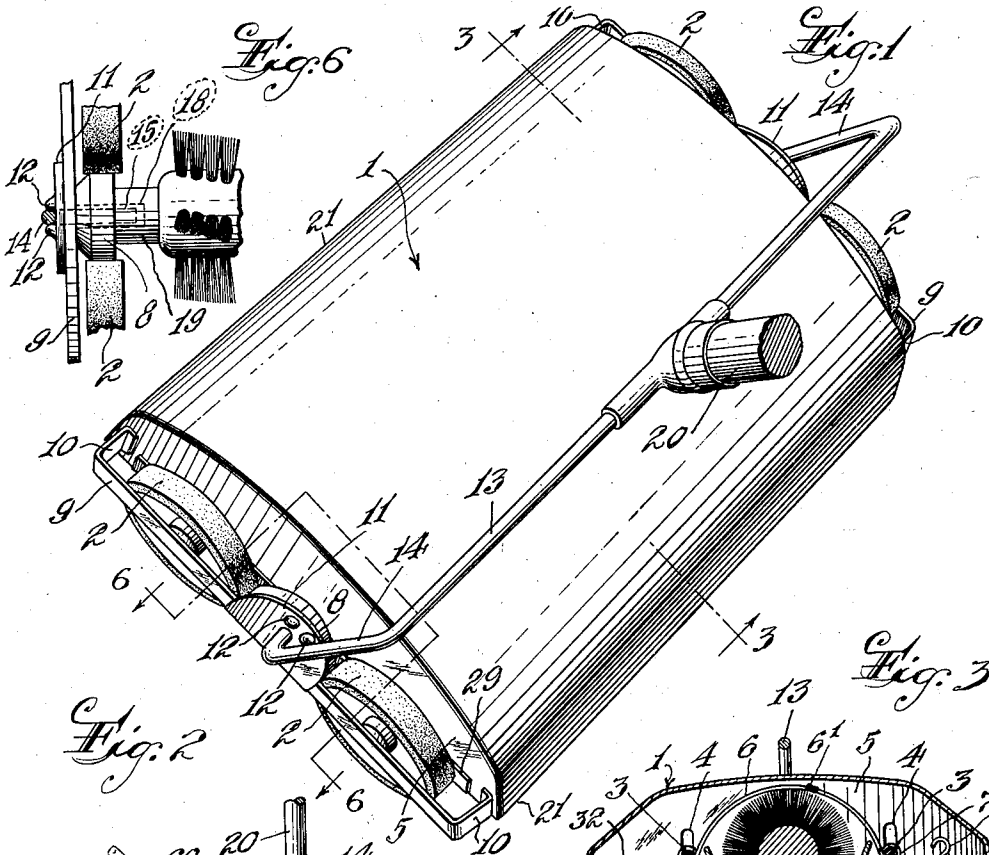


Fig. 1

Fig. 6

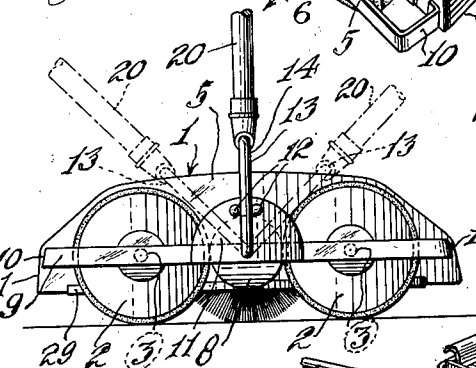


Fig. 2

Fig. 3

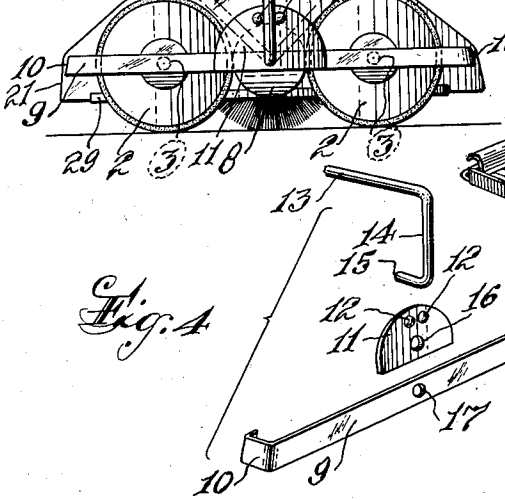


Fig. 4

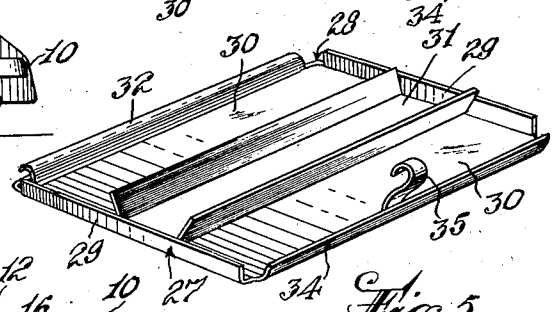


Fig. 5

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CARPET SWEEPER

Samuel I. Berger, Newark, N. J.

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1 Claim. (Cl. 15—41)

This invention relates to carpet sweepers and more particularly to novel features of construction for securing the handle bail to the sweeper in a manner, which will assure more positive action and greater stability in use.

It has heretofore been common to secure the handle bail to the sweeper body at a point adjacent the top of the sweeper casing, or to latch the same at that point, with the result that, on reversing the sweeper, the latter had a tendency to tilt and was relatively unstable in use. An object of my invention is to provide a carpet sweeper with means for securing the handle bail thereto at a point substantially below the top of the sweeper casing and to latch the same at that point, the bail being preferably secured to the brush pulley, providing greater stability in use.

A further object of my invention is to provide a carpet sweeper with longitudinal bars secured to and spaced from both longitudinal sides of the casing, said bars being provided with latch plates through which the handle bail passes and with which the handle bail is adapted to have latching engagement to secure the handle in positive operative position.

A further object of my invention is to provide the bars with latch plates having protuberances over which the handle bail may cam, the latch plates being secured to the bars intermediate the length thereof to yield slightly and then return to normal position, facilitating the latching, camming action.

A further object of my invention is to secure the handle bail to the brush pulley so that said parts will constitute a unit of positive action, the sweeper wheels being secured to the casing in a manner which will provide automatic adjustment of the wheels for positive action at all times, or in any other desired or convenient manner.

A further object of my invention is to provide a sweeper casing open at the bottom and having a debris pan unit which constitutes the bottom of the sweeper, pivotally and removably secured thereto in a novel manner.

In the accompanying drawing, in which is shown one of the various possible embodiments of the several features of the invention, and wherein like reference numerals indicate like parts:

Fig. 1 is a perspective view of a carpet sweeper embodying my invention,

Fig. 2 is a side elevational view thereof,

Fig. 3 is a longitudinal sectional view taken on line 3—3 of Fig. 1,

Fig. 4 is an exploded view of the bail, bar and latch plate used in carrying out my invention,

Fig. 5 is a perspective view of the debris pan used in carrying out my invention, and

Fig. 6 is a fragmentary cross sectional view taken on line 6—6 of Fig. 1.

The carpet sweeper of my invention comprises a casing 1 having wheels 2 secured thereto preferably in a manner which will provide automatic adjustment of the wheels for positive action at all times. One means for attaining this end is shown in Fig. 3, and consists in passing the axles 3 of the wheels 2 through elongated apertures 4 in the sides 5 of the casing. The axles 3 are journalled in the looped, free ends 7 of springs 6, the latter being secured, intermediate their length, at 6', to the sides 5 of the casing 1, thereby normally holding the wheels 2 in the lower ends of the apertures 4. The brush pulley 8 is secured to the sweeper casing intermediate the wheels 2 to be frictionally engaged thereby as illustrated in Fig. 6.

Longitudinal bars 9 are secured at their ends 10 to the sides 5 of the casing 1 in spaced relation, as shown in Fig. 1. Latch plates 11 having spaced protuberances 12 are secured to the bars 9 intermediate the length thereof by spot welding, by means of tabs or in any other desired or convenient manner.

The handle bail 13 is provided with side portions 14 having inturned ends 15 adapted to pass through apertures 16—17 in latch plates 11 and bars 9, respectively, and to snap into recesses 18 in the ends 19 of the brush pulley 8, thus removably securing the bail to the pulley and removably securing both parts to the casing. The bail is preferably made of relatively heavy spring metal so that its side portions 14 may be forced apart slightly and will automatically snap back when released, in initially inserting the bail ends 15 in the pulley recesses 18 or to remove the same therefrom.

The handle 20 is secured to the bail 13 in any desired or convenient manner. In the position shown in Fig. 2, the bail is latched intermediate the protuberances 12 of latches 11, when the sweeper is not in use. When it is desired to use the sweeper, the handle is pivoted to either of the operative positions indicated in dotted lines in Fig. 2 (one operative position being shown in Fig. 1 in full lines), the side portions 14 of the bail camming over the protuberances 12. As the latch plates 11 are secured to the bars 9 intermediate the length thereof, the plates 11 will yield slightly during the camming movement of

the bail and will then return to normal position, holding the bail in the operative position.

When the handle 20 is in the operative position, the motive force is imparted to the sweeper by the inturned ends 15 of the bail, at their low position in the sweeper, and in the direction of motion of the sweeper, serving to keep the sweeper in positive operative position.

The sweeper casing 1 is open at the bottom, the lower transverse ends of the sweeper casing being re-entrantly bent to provide transverse flanges 23—24, terminating in curled edges 25—26, respectively. A dust pan unit 27 is adapted to be pivotally secured to one transverse flange and removably secured to the other flange, to close the bottom of the sweeper. The unit 27 comprises a frame 28 having longitudinal flanges 29 to overlap the edges of the sides 5 of the sweeper casing when the unit 27 is positioned on the sweeper. The frame 28 is provided with trays 30 spaced to provide the opening 31 in which the brush 8 of the sweeper rotates when the unit 27 is positioned on the sweeper. One transverse edge of the unit 27 is provided with a beaded edge 32 adapted to be inserted over either of the curled edges 25—26 of the casing. The other transverse edge of the unit 27 is provided with a flange 34 adapted to be received within the other curled edge of the casing; adjacent flange 34 the unit 27 is provided with a spring finger 35 adapted to snap over the curled edge of the sweeper to removably secure the tray unit 27 thereto.

The dust pan unit 27 provides a highly convenient arrangement for collecting debris and discharging same in a hygienic fashion. The unit 27 may be readily removed from the sweeper and emptied into a garbage receptacle, obviating the us of intermediate dust bags, newspapers or the like, required in emptying other types of sweepers. Upon removal of the unit 27, access may be had to the brush and other parts of the sweeper for cleaning or replacement. The unit is easily re-attached to the casing by snapping the beaded edge 32 over curled edge 26 and spring finger 35 over the curled edge 25 of the sweeper, the flanged edge 34 being inserted within curled edge 25. Although my invention is especially applicable to carpet sweepers, its application to other types of sweeping devices within the scope of the appended claim shall be deemed to be within the scope and purview of my invention.

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

In a carpet sweeper having a casing and a handle bail, rigid longitudinal bars secured to the sides of said casing in spaced relation thereto, yieldable latch plates rigidly secured, at their lower ends, to said bars intermediate the length thereof, said bars and plates being provided with apertures to pivotally receive the handle bail, said plates being flat and being in the planes of said bars and being provided at their upper ends with spaced protuberances projecting beyond said planes, with which the bail is adapted to have camming engagement upon being rotated along said plates to the protuberances, the upper ends of the plates yielding slightly beyond said planes during the camming movement of the bail over the protuberances and returning to normal position in said planes after the bail has been moved past said protuberances.

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