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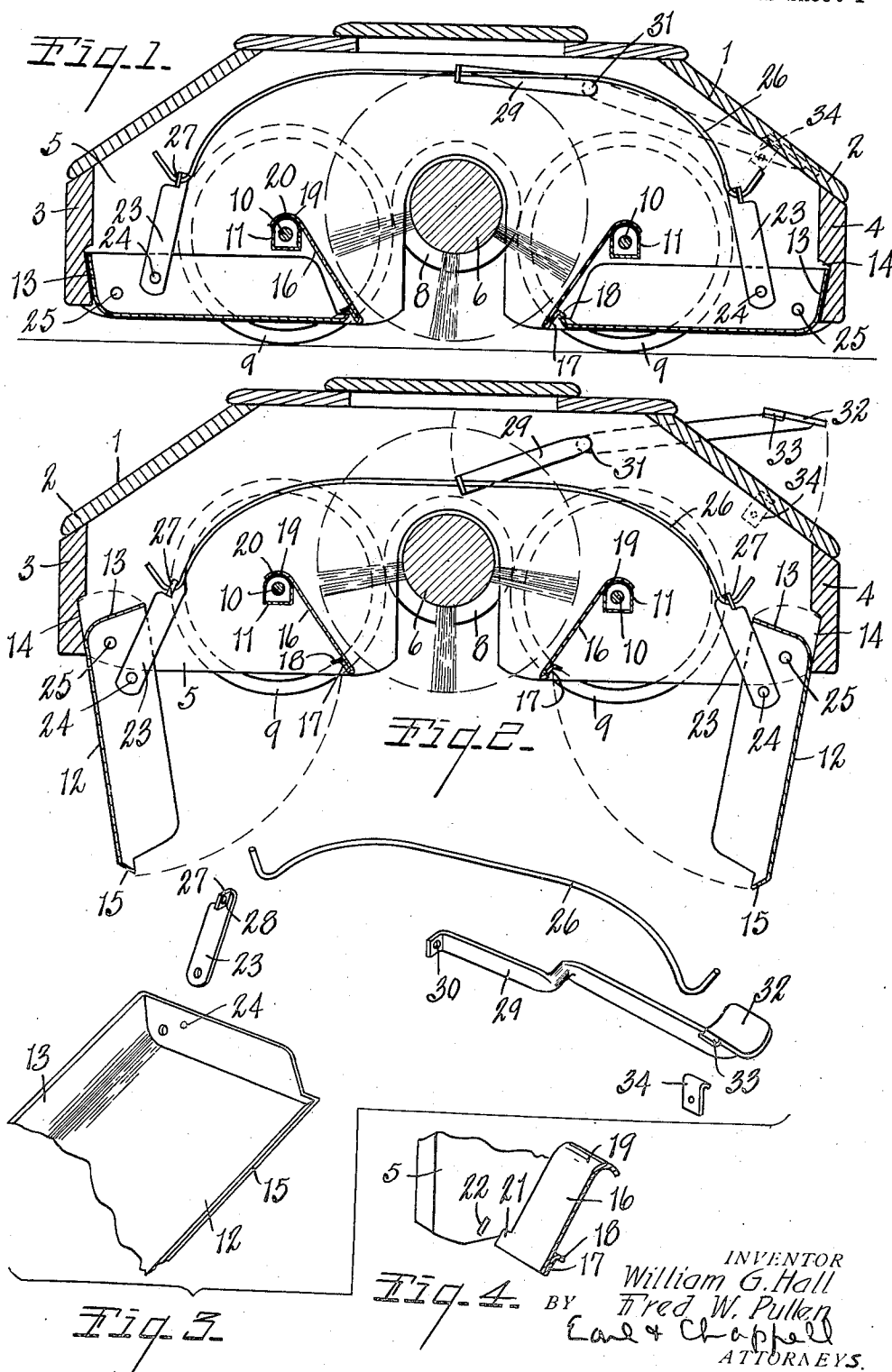
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CARPET SWEEPER

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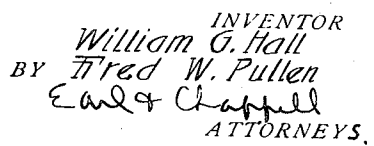
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UNITED STATES PATENT OFFICE

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CARPET SWEEPER

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2 Claims. (Cl. 15—41)

This invention relates to carpet sweepers and particularly to dust pans and dump mechanism therefor.

Heretofore in carpet sweepers having a casing with longitudinally-extending centrally-disposed rotary brush, it has been customary to have the pans pivoted adjacent the brush and extend from the brush across the bottom of the casing so that to dump the pans they were swung downwardly away from the side walls of the casing. This requires considerable space for dumping a carpet sweeper and makes for inconvenience at times.

The objects of this invention are:

First, to provide new and improved dust pans for carpet sweepers.

Second, to provide such dust pans disposed so that less space is required to receive litter dumped from the carpet sweeper than has been formerly the case.

Third, to provide such dust pans which are pivoted adjacent the bottom of the side walls of the casing and pivot downwardly from across the bottom of the casing,

Fourth, to provide such pans which effectively seal the bottom of the casing when it is closed and which may be easily dumped.

Other objects pertaining to details and economies of construction and operation will appear from the detailed description to follow. The invention is defined in the claims. Structures embodying the features of the invention are illustrated in the accompanying drawings, in which:

Fig. 1 is a sectional view through a carpet sweeper showing one form of the new and improved dust pans in closed position.

Fig. 2 is a view similar to Fig. 1 showing the pans in open position for dumping.

Fig. 3 is a view showing the parts of the pan locking and dumping mechanism in disassembled relation.

Fig. 4 is a detail view showing the manner of fastening the stops for the pans to the carpet sweeper case.

Fig. 5 is a detail view of a portion of a carpet sweeper showing a modified form of the invention.

Fig. 6 is a detail view showing the manner of attaching the stops to the casing in the form of the invention shown in Fig. 5.

Fig. 7 is a detail view of a portion of a carpet sweeper showing a still different form of the invention.

Fig. 8 is a detail view showing the manner

of fastening the stops to the carpet sweeper case in the form of invention shown in Fig. 7.

Fig. 9 is a view showing the form of dust pans employed in the form of invention shown in Fig. 7.

Fig. 10 is a detail view of a modified form of fastening the pan dumping and locking mechanism to the lever.

Fig. 11 is a view showing a modified form of pan dumping and locking mechanism.

The carpet sweeper 1 is of conventional form. It consists of the casing 2 having side walls 3 and 4 and end walls 5. A rotary brush 6 extends centrally and longitudinally in the case and its hub 8 is engaged by the rims of the floor wheels 9 which are mounted on axles 10 which are housed in tubes 11. The drive is conventional and need not be described in detail for purposes of describing the present invention.

At the bottom of the casing 2 are dust pans 12 which extend from the wide walls 3 and 4 across the bottom of the casing toward the brush 6. These dust pans are preferably formed of sheet metal and their outer edges 13 are turned up, as shown, to fit in internally rabbeted portions 14 in the side walls 3 and 4 when the pans are in closed position, thus sealing the pans against the casing to prevent the passage of litter between the outer edges of the pans and the pan casing. The inner edges 15 of the pans are turned upwardly to form lips to engage stops 16. The stops 16 are preferably formed of sheet metal and are rigidly fastened in place extending between the end walls 5 of the sweeper parallel to and adjacent the brush 6. At the lower ends the sheet metal of the stops is bent on a reverse fold 17 and a further reverse fold forms a lip 18 to receive the upwardly turned edge 15 of the pans 12. The stops 16 have an upwardly and outwardly sloping portion 19 which serves to guide litter to the pans. The stops serve to confine litter in the pans after it is brushed to the pans over the portions 19 by the brush 6. The upper edges of the stops 16 are welded to the tubes 11, as indicated at 20. The lower ends are formed with projecting members 21 which fit in apertures 22 in the casing to rigidly hold the stops.

The means for holding the pans in closed position consists of links 23 pivoted to the pans at points 24 which are spaced inwardly from the pivots 25 which pivot the pans to the casing adjacent their outer edges and adjacent the lower edges of the side walls 3 and 4 of the casing 2. Spring means 26 are connected to the

members 23 which have ears 27 turned at right angles and apertured at 28 to receive the ends of the wire spring means 26. A lever 29, apertured at 30 to receive the wire spring means 26, is pivoted on the case, as shown at 31. The lever has a finger engaging piece 32 and a latch member 33 adapted to engage the catch member 34 which is mounted on the side of the casing. To close the pans the lever is moved to the position shown in Fig. 1 and the latch member 33 is engaged with the catch 34. The spring member 26 holds the pans resiliently against their stop members 16 so that the sweeper may be used and so that the pans will not rattle or permit dust or litter to leak out of the carpet sweeper.

In Fig. 5 there is shown a slightly modified form of the invention. The pans 112 are pivoted adjacent the side walls 103, 104, on the pivot 125, as in the form of invention shown in Figs. 1 to 4. The dumping mechanism consists of the link 123 and the spring member 126 is the same. The tube 111 is the same as tube 11. The stop member 116 is different in that the portion 119 which guides litter to the dust pans from the brush is shorter. The stop member 116 consists of a piece of sheet metal having tubular portions 135 formed in the edges thereof through which rods 136 extend. These rods are inserted in apertures 137 in the end 105 of the casing to rigidly hold the stops. The inner edge 115 of the pan is formed with an arc, indicated at 138, to fit the curve of the tubular portions 135 of the stop 116.

In Figs. 7 to 9 there is shown a different form of stop 216, which has a shorter litter guiding portion 219 and has a tube 235 with a rod 236 therein at the upper end to engage in an aperture 237. At the lower end a projection 221 is provided to fit in the aperture 222 in the end wall 205 of the casing.

The dust pan 212 is of different construction. At its inner edge is the up-turned lip 215 corresponding to the lip 15 of pan 12 in the form of invention shown in Figs. 1 to 4. This engages in a recess 218 in the stop 216. At the outer edge 213 of pan 212 is a piano hinge construction consisting of tubes 238 and 239 and the pintle 240. This construction is a highly desirable construction because the piano hinge offers a highly satisfactory closure when the pans are closed to prevent dust or litter passing between the outer edge 213 of the pan and the wall of the casing, and there is no opportunity for dirt or litter to become lodged back of the pan when the pan is in closed position.

In the form of invention shown in Figs. 1 to 4, the lever 29 is apertured at 30 to receive the wire spring member 26. In Fig. 10 there is shown a different form of construction. The wire 316 is provided with a bend 341 which anchors a plate 342 provided with tubular portions 343 centrally of the member 316. A key hole type of slot 344 is provided for the plate to engage the flat member 345 on the end of lever 329.

In Fig. 11 there is shown a different form of closing means. Springs 416 are employed which at one end are pivotally inserted in apertures 424 in the pans 412. A cross member 446 pivotally receives the other end of the spring 416 at 447. A key hole type of slot 444 engages the flat projection 445 on lever 429.

This invention is of considerable practical importance because it makes possible the dumping of the carpet sweeper in materially less space than has heretofore been necessary. The construction is simple and will not easily get out of order.

The terms and expressions which have been herein employed are used as terms of description and not of limitation. There is no intention in the use of such terms and expressions of excluding any equivalents of the features shown and described. It is recognized that various modifications are possible within the scope of the invention claimed.

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

1. In a carpet sweeper having a casing with end and side walls and a rotary brush disposed centrally and longitudinally of the casing, the combination of a pair of dust pans extending from the bottom of the side walls of the casing toward the brush and pivotally connected adjacent their outer edges to said casing on an axis parallel to said brush, rigid stops to engage the dust pans when they are closed, and means for holding said pans against said stops when the carpet sweeper is in use but permitting said pans to swing downwardly away from the stops for dumping said pans, comprising links pivoted to said pans at points spaced inwardly from the pivotal connection of said pans, spring connections to said links, and a lever to raise said spring connections to place them under tension to hold the pans closed and means engageable by said lever to hold it in spring tensioning position.

2. In a carpet sweeper having a casing with end and side walls and a rotary brush disposed centrally and longitudinally of the casing, the combination of a pair of dust pans extending from the bottom of the side walls of the casing toward the brush and pivotally connected adjacent their outer edges to said casing on an axis parallel to said brush, rigid stops to engage the dust pans when they are closed, and means for holding said pans against said stops when the carpet sweeper is in use but permitting said pans to swing downwardly away from the stops for dumping said pans, comprising spring means pivoted to said pans at points spaced inwardly from the pivotal connections of said pans and a lever to raise said spring means to place it under tension to hold the pans closed and means engageable by said lever to hold it in spring tensioning position.

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