No. 798,765. PATENTED SEPT. 5, 1905.

A. CROSSMAN.

CARPET SWEEPER.

APPLICATION FILED JULY 13, 1904.

2 SHEETS—SHEET 1.

Fig. 1

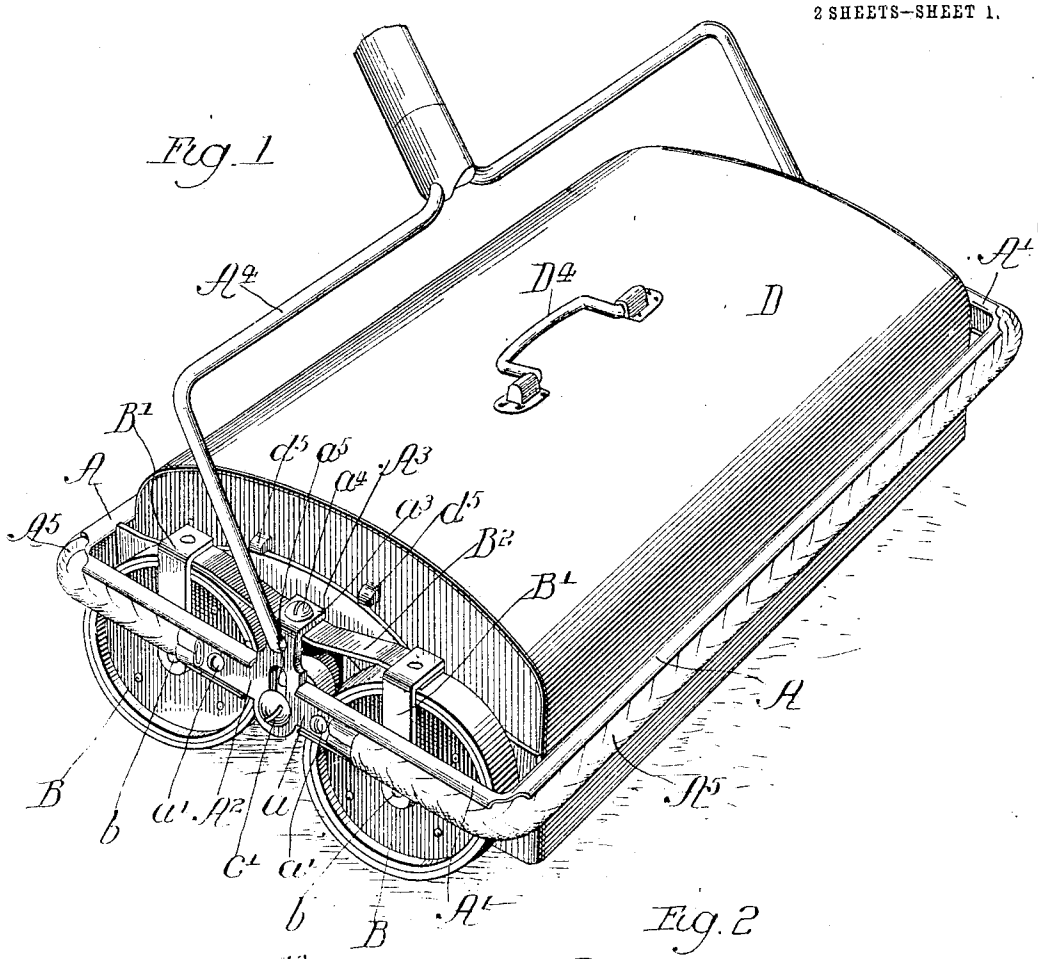
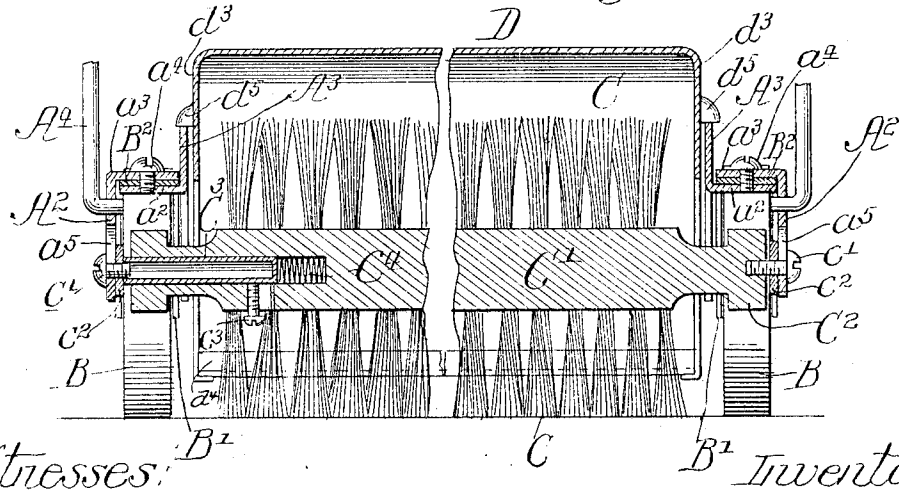


Fig. 2



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2 SHEETS—SHEET 2.

Fig. 3

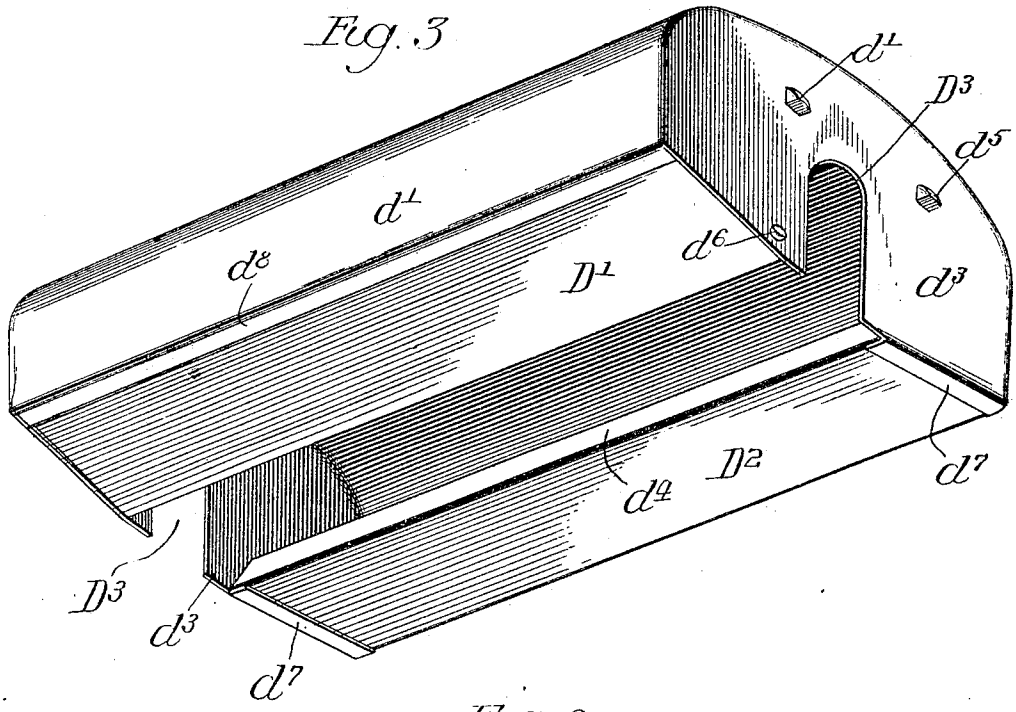


Fig. 4

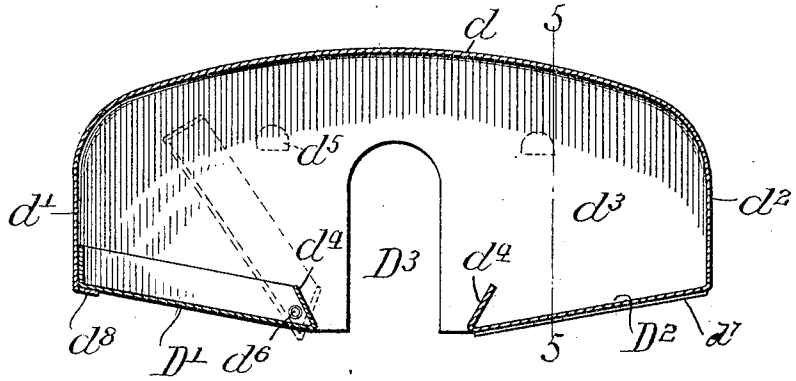
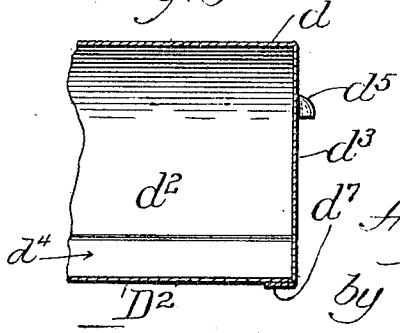


Fig. 5



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UNITED STATES PATENT OFFICE.

ABNER CROSSMAN, OF CHICAGO, ILLINOIS.

CARPET-SWEEPER.

No. 798,765. Specification of Letters Patent. Patented Sept. 5, 1905.

Application filed July 13, 1904. Serial No. 216,335.

To all whom it may concern:

Be it known that I, ABNER CROSSMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Carpet-Sweepers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in carpet-sweepers; and the invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

The improvements herein shown relate more specifically to a novel combination casing and sweepings-pans which are removably supported in the frame of the sweeper, the casing of which covers the brush and the pans of which receive the sweepings from the brush in the usual manner.

In the drawings, Figure 1 is perspective view of a carpet-sweeper made in accordance with my invention. Fig. 2 is a longitudinal vertical section thereof with parts broken away. Fig. 3 is a perspective view of the combined casing and sweepings-pans looking from beneath the same. Fig. 4 is a transverse section thereof. Fig. 5 is a vertical section taken on line 5 5 of Fig. 4.

The carpet-sweeper herein shown is similar in the general features of its construction to the carpet-sweeper shown in the United States Patent of Thomas I. Duffy, No. 743,838, granted November 10, 1903, in that it embraces a frame comprising rigidly-connected side and end members, in which is rotatively mounted the brush and which is provided with suitably-mounted supporting-wheels, and a casing removably seated in the frame and covering said brush.

According to the present invention a single casing is used, which carries the sweepings-pan for receiving the sweepings from the brush, whereby the pans are removable from the frame with the casing.

As shown in the drawings, A A designate the side members of the open frame, and A' A' the end members thereof. Said side and end members are shown as made of strips of metal, which are disposed vertically edgewise, and consist principally of two parts, each part embracing a straight portion constituting one of the side members and two end portions constituting parts of the end members of the frame. The adjacent ends of said end portions are joined by connecting-plates A^2, said plates having arms a, which overlap the extreme inner ends of the said end parts and are attached thereto by screws a'.

A^3 A^3 designate secondary end members located inside of and parallel with the end members A'. Said secondary end members extend between the side members A and are attached at their ends in any suitable manner to said side members.

A^4 designates a bail the hooked ends of which engage apertures in the connecting-plates A^2.

A^5 designates buffer-strips which are attached to the outer faces of the side and end members of the frame, said members being preferably grooved to hold said strips in place.

B B designate supporting-wheels which are provided with trunnions b, that are mounted in the lower ends of the arms of forks B'. The forks at each end of the frame are attached to the opposite ends of a generally horizontal leaf-spring B^2, attached centrally thereof to the frame. As herein shown, said springs B^2 are confined between upper and lower lugs a^2 a^3, the former of which extend laterally outwardly from the secondary end pieces A^3 and the latter of which extend laterally inwardly from the connecting-plates A^2 of said end members of the frame. Said springs are fastened between said lugs by means of clamping-screws a^4, as more clearly shown in Fig. 2.

C designates a rotative sweeping-brush extending between and mounted in the end members of said frame, and D designates as a whole a casing removably supported in said frame and covering said brush. The said casing fits inside of the end and side members of the frame. The core C' of said brush is provided at its ends with integral annular knobs or disks C^2, which fit between the wheels B and are adapted for peripheral contact therewith, whereby said wheels give rotative movement to said brush. The said core is provided at its ends with sockets which receive stationary studs c' c' on the end members of the frame. Said studs, as herein shown, extend inwardly through vertical slots a^5 in the connecting-plates A^2 of the end members of the frame for engagement with said brush-core

sockets, whereby they may be raised or lowered and thereby raise or lower the brush relatively to the frame. The studs are held in place, as herein shown, by having screw-threaded engagement with flat nuts c^2 on the inner sides of the connecting-plates A^2, which constitute lock or jam nuts for said studs.

In order to facilitate the assemblage of the brush in and its removal from the sweeper, the socket at one end of the core is formed in a short tube C^3, which is located in an axial opening in one end of the core and which is pressed outwardly beyond the core for engagement with its stud by means of a spring C^4, interposed between the inner end of the tube and the bottom of said axial opening. Said tube is provided with a pin c^3, which extends radially outwardly through a slot in the core and constitutes at once means for retracting the tube to release the brush and a stop for limiting the outward movement of said tube under the action of said spring.

Referring now to the construction of the combined casing and sweepings-pans, the same is shown more clearly in Figs. 3 to 5, inclusive, and is made as follows: The casing proper embraces a top wall d, front and rear side walls d' d^2, and end walls d^3 d^3. D' D^2 designate sweepings-pans, located at the lower side of the casing, one at each side thereof and extending from end to end of said casing. Said sweepings-pans are separated by a space permitting the brush to extend upwardly between the same when the casing is in place in the frame. Said sweepings-pans are inclined downwardly and inwardly from the bottom margins of the side walls and are provided at their inner sides with upwardly and outwardly extending oblique flanges d^4, which constitute the front walls of the sweepings-pans and over which the dust is swept into the pans in the usual manner. The top, end, and front and rear side walls, and the sweepings-pan D^2 are shown as made from a single piece of sheet metal by a suitable stamping and forming operation. The end walls of the casing are provided with downwardly-opening notches D^3, which receive the brush-core when the casing is in place. The side walls of the casing fit closely inside the side walls of the frame, while the end walls thereof fit closely inside the secondary end members A^3 of the frame. In order to limit the downward movement of the casing in the frame, the end walls of the casing are provided with stop-lugs d^5 d^5, which when the casing is in place rest on the upper margins of the secondary end members A^3 of the frame. The sweepings-pan D' is made separate from the casing and is pivoted at its inner side by means of pivot-studs d^6 to the end walls d^3 of the casing. Preferably the stationary sweepings-pan D^2 is supported at its ends by inwardly-turned flanges d^7 on the lower margins of the end walls of the casing. Said flanges also constitute dust-proof joints between the stationary sweepings-pan and the end walls of the casing.

The swinging sweepings-pan is provided with end and rear walls having the form of a shallow tray. The end walls fit closely against the inner faces of the end walls of the casing, and the rear wall fits against the inner face of the adjacent side wall d'. Said swinging sweepings-pan rests when in its normal lowermost position upon an inwardly-extending flange d^8 at the bottom margin of the walls d'. Said pan rests against said supporting-flange d^8 by its own weight, and additional fastening or locking means is not required to hold the same in place. It swings on its pivot-studs d^6 into the interior of the casing and toward the brush, as indicated in dotted lines in Fig. 4. When the sweepings-pans are to be dumped or emptied, the casing D is removed from the frame by grasping its handle D^4. The casing is then inverted or turned bottom side upwardly, so as to permit the sweepings to fall from the pans against the top wall d of the casing, which at this time constitutes the bottom of the casing. Thereafter the swinging sweepings-pan D' is swung into the casing toward the longitudinal center of the casing. The casing is then turned on the side thereof toward the swinging sweepings-pan and the sweepings discharged therefrom between the outer side of the swinging pan and the adjacent top and side walls of the casing. It will be seen, therefore, that the combined casing and sweepings-pans may be lifted from the frame and serve as a means to carry the sweepings to any suitable place for the disposal of the sweepings and that therefore the entire sweeper need not be lifted and carried away for this purpose.

I claim as my invention—

1. A casing comprising connected top, end, and front and rear side walls, and provided at its lower side with two sweepings-pans, one at each side of the longitudinal center of the casing, the casing and one of the pans being made from a single piece of sheet metal and the other sweepings-pan being hinged at its inner side to swing in the casing toward and from the longitudinal center of said casing.

2. A carpet-sweeper comprising a frame, supporting-wheels therefor, a rotative sweeping-brush mounted in said frame and a casing removably seated in the frame and inclosing the brush, said casing comprising connected top, end, and front and rear side walls, and provided at its lower side with two sweepings-pans one at each side of the brush, one of said pans being a fixed part of the casing and the other pan being a swinging pan.

3. A carpet-sweeper comprising a frame consisting of connected side and end members, supporting-wheels therefor, a rotative sweeping-brush mounted in said frame, a casing re-

movably seated in said frame and inclosing the brush and comprising connected top, end and front and rear side walls, the end walls of the casing being provided with downwardly-opening notches adapted to receive the brush-core and sweepings-pans on the lower part of said casing, one of which is a swinging pan.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 12th day of June, A. D. 1904.

ABNER CROSSMAN.

Witnesses:
WILLIAM L. HALL,
GEORGE RAYMOND WILKINS.