July 12, 1949. P. W. JOHNSON 2,475,619

DUSTPAN

Filed April 15, 1947

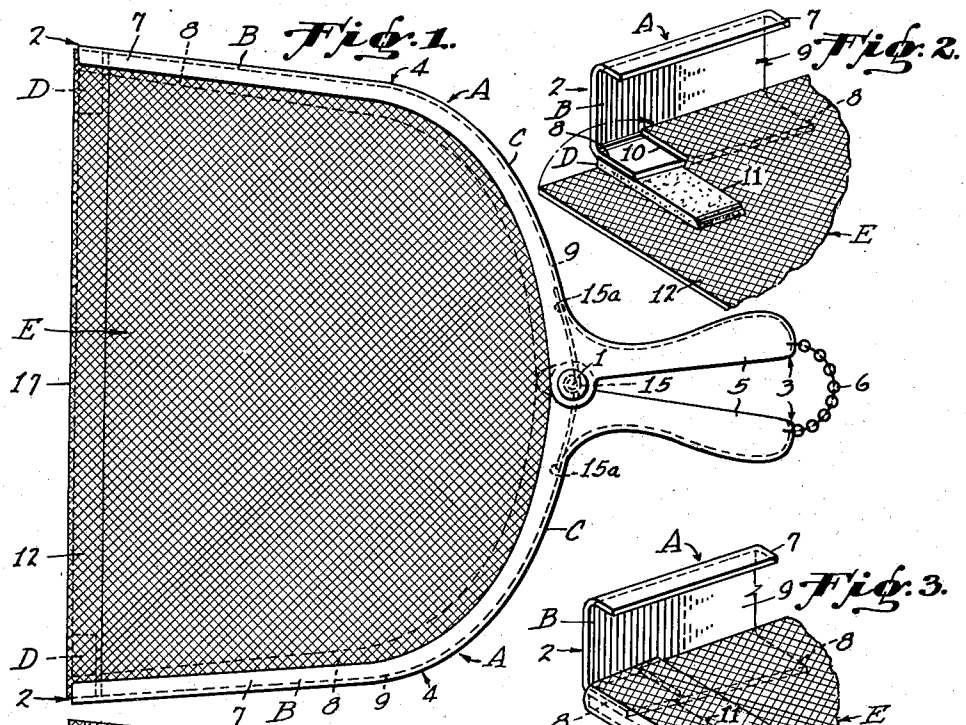


Fig. 1.

Fig. 2.

Fig. 3.

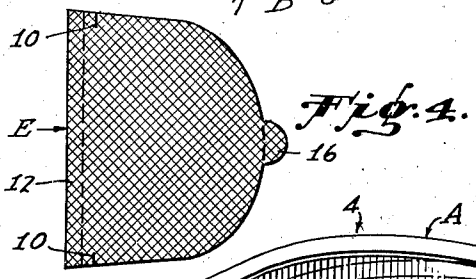


Fig. 4.

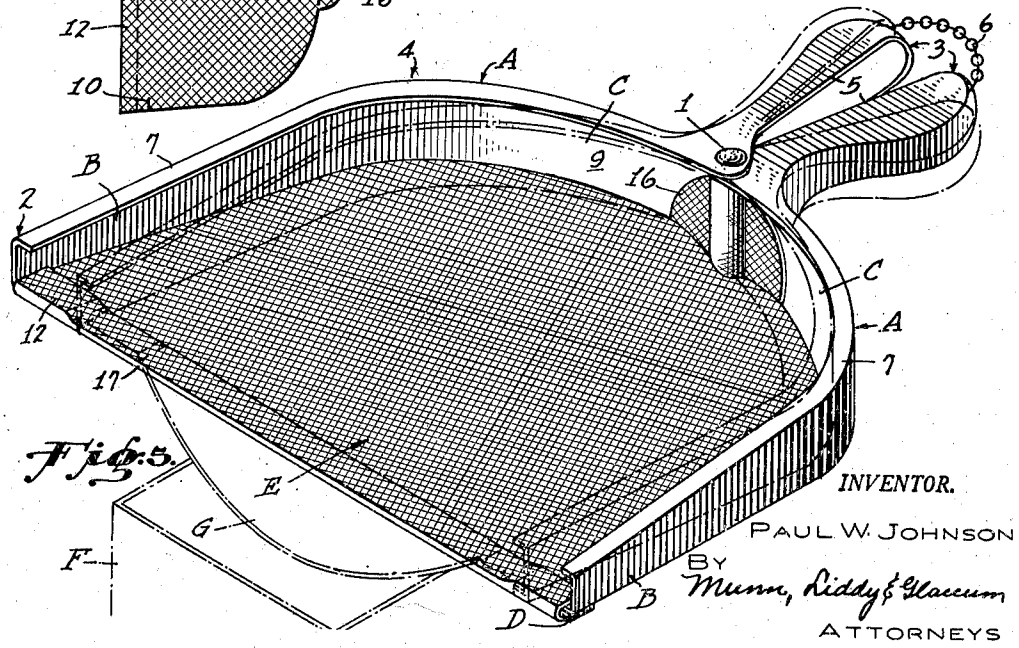


Fig. 5.

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DUSTPAN

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6 Claims. (Cl. 65—20)

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The present invention relates to improvements in dust pans; and it consists of the combinations, constructions and arrangement of parts hereinafter described and claimed.

In the ordinary metal type dust pan, as widely employed in homes and elsewhere, the lead edge thereof often become bent or warped. This is due to the dust pan being battered, or from general use, and greatly reduces the efficiency of the dust pan, since the lead edge no longer will make uninterrupted contact with the floor.

Accordingly, an object of my invention is to provide a dust pan having a sheet of tough fabric material forming the bottom thereof. A pair of frames are secured to the sheet in such a manner that the latter may be held taut during use of the dust pan, thereby maintaining the lead edge perfectly straight. This precludes sweepings from moving underneath the lead edge.

Moreover, the conventional metal dust pan, and even the plastic type, will scratch or mar the floor. This disadvantage is overcome in my dust pan, since the lead edge of the dust pan is fashioned from fabric.

In emptying sweepings from a metal dust pan, it is difficult to transfer them to bags or containers, especially when the latter are not as wide as the dust pan. A still further object of my invention, therefore, is to provide a dust pan in which the width of the dust pan may be reduced and the fabric bottom thereof given a chute-like shape. This arrangement will allow the sweepings to be placed into a bag or container with facility and ease.

Other objects and advantages will appear as the specification continues, and the novel features of my invention will be set forth in the appended claims.

For a better understanding of the invention, reference should be had to the accompanying drawing, forming part of this application, in which:

Figure 1 is a plan view of my dust pan;

Figure 2 is an isometric view of the upper left-hand corner of Figure 1, disclosing the fabric bottom prior to being folded back upon itself to form the lead edge of the dust pan;

Figure 3 is a view similar to Figure 2, and illustrating the fabric bottom after the forward portion thereof has been turned back upon itself;

Figure 4 is a view of the sheet of fabric material on a reduced scale; and

Figure 5 is an isometric view of the completed dust pan.

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While I have shown only the preferred form of my invention, it should be understood that various changes, or modifications, may be made within the scope of the annexed claims without departing from the spirit thereof.

Referring to the drawing in detail, I provide a pair of frames A, which are hinged together by a pin 1. This hinge pin is disposed between the leading or forward ends 2 and the trailing or rearward ends 3 of the frames. The forward sections 4 of the frames in front of the hinge pin are moveable toward and away from each other, while the rearward sections 5 thereof disposed in back of the pin constitute a pair of handles.

It will be obvious from the construction thus far described that the forward sections 4 are moveable away from each other when the handles 5 are pressed toward one another. A small chain 6 limits the separation of the handles, and may be used for hanging the dust pan on a hook or other support.

The frames A are channel-shaped in transverse section; and each include upper and lower flanges 7 and 8, respectively, which are interconnected by a web 9. The flanges 8 are wider than the flanges 7. The frames define side walls B and a back wall C for a dust pan. Resilient bumpers D are secured to the underneath sides of the lower flanges 8 and project toward one another from opposite sides of the dust pan.

The bottom of the dust pan is fashioned from a sheet of flexible material indicated generally at E. A piece of tough fabric may be used for this purpose. The marginal portions of the sheet of material is cemented or otherwise secured to the upper surfaces of the lower flanges 8.

Slits 10 are cut in the sheet in registry with the rear edges 11 of the bumpers D. The forward part 12 of the sheet is drawn beneath the bumpers, as shown in Figure 2, and then is folded back over the bumpers as disclosed in Figure 3. The folds thus provided at the lead edge of the dust pan bottom are cemented, or otherwise anchored together, as at 14 (see Figure 3). These folds reinforce the lead edge and enclose the bumpers D.

In Figure 1, I show a spring 15 that is coiled around the hinge pin. The arms 15a of the spring bear against the web 9 of the back wall C and urge the side wall B away from each other so as to obtain a slight outward lateral tension on the sides B. A tab 16 on the sheet is turned upwardly so as to conceal the spring (see Figure 5).

When the handles 5 are firmly grasped and pressed toward one another, the fabric bottom

provided by the sheet E will be drawn taut. Accordingly, the lead edge 17 will be held straight and can be placed flush against a floor. By slightly releasing the grip on the handles, the central part of the fabric bottom and the lead edge will drop downwardly. This will give the bottom of the dust pan a chute-like shape, which will facilitate transfer of sweepings into a bag or container F.

In the event that the operator desires to obtain a pronounced chute G., as illustrated in Figure 5, so as to transfer sweepings to a relatively small necked bag, the handles 5 may be pressed apart.

Having thus described the various parts of my dust pan, the use thereof may be summarized briefly as follows:

The operator grasps the handles 5 and presses them toward one another. This will move the side walls B of the dust pan outwardly and draw the fabric bottom E taut. Therefore, the lead edge 17 can be placed flat against a floor and dust or other matter swept over the lead edge into the dust pan.

Upon relaxing the grip on the handles 5, the central part of the fabric bottom and its lead edge will sag downwardly, forming a chute to facilitate discharge of the sweepings into a bag or container F. As previously pointed out, the operator can move the handles 5 apart still further to obtain a pronounced chute G. The lead edge 17 will not scratch and can be used on highly polished surfaces.

In smaller sizes, the pan would be suitable when brushing crumbs from tables. The dust pan also lends itself to wide use of color combinations. It is very light in weight as compared with all-metal dust pans. The frames A may be made of plastic or other suitable material.

I claim:

1. In a dust pan; a pair of frames hinged together between the forward and rearward ends thereof; the forward sections of the frames in front of the hinge defining side walls and a back wall for a dust pan; the hinge being arranged at the back wall of the dust pan; the rearward sections of the frames constituting a pair of handles extending rearwardly beyond the hinge; and a sheet of flexible material secured to the frames forwardly of the hinge and providing a bottom for the dust pan; the sides of the dust pan being swingable away from each other to make the sheet of material taut when the handles are pressed toward one another.

2. In a dust pan; a pair of frames hinged together between the forward and rearward ends thereof; the forward sections of the frames in front of the hinge defining side walls and a back wall for a dust pan; the hinge being arranged at the back wall of the dust pan; the rearward sections of the frames constituting a pair of handles extending rearwardly beyond the hinge; a sheet of flexible material secured to the frames forwardly of the hinge and providing a bottom for the dust pan; the sides of the dust pan being swingable away from each other to make the sheet of material taut when the handles are pressed toward one another; and yielding means urging the side walls apart.

3. In a dust pan; a pair of frames hinged together between the forward and rearward ends

thereof; the forward sections of the frames in front of the hinge defining side walls and a back wall for a dust pan; the hinge being arranged at the back wall of the dust pan; the rearward sections of the frames constituting a pair of handles extending rearwardly beyond the hinge; and a sheet of flexible material secured to the frames forwardly of the hinge and providing a bottom for the dust pan; the sides of the dust pan being swingable away from each other to make the sheet of material taut when the handles are pressed toward one another; the side walls being swingable toward one another to slacken the sheet of material and allow the latter to sag into a chute-like shape.

4. In a dust pan; a pair of frames hinged together; the frames defining side walls and a back wall for a dust pan; the frames being channel-shaped in transverse section; the channel of each frame including upper and lower flanges interconnected by a web; the flanges of one frame facing toward the flanges of the other frame; and a sheet of flexible material secured to the lower flanges of the channels and providing a bottom for the dust pan.

5. In a dust pan; a pair of frames hinged together; the frames defining side walls and a back wall for a dust pan; the frames being channel-shaped in transverse section; the channel of each frame including upper and lower flanges interconnected by a web; the flanges of one frame facing toward the flanges of the other frame; a resilient bumper anchored to the lower flange of each frame at the forward ends of the latter; the bumper on one frame extending toward the bumper on the other frame; and a sheet of flexible material secured to the lower flanges of the channels and providing a bottom for the dust pan; the section of the sheet of material at the leading edge of the dust pan being turned back upon itself and enclosing the bumpers; the layers of material defined by the turned back portion and the sheet itself being anchored together to provide a reinforced leading edge for the dust pan.

6. In a dust pan; a pair of frames hinged together; the frames defining side walls and a back wall for a dust pan; the hinge being arranged at the back wall of the dust pan; a spring disposed at the hinge for yieldingly urging the side walls away from each other; and a sheet of flexible material secured to the frames and providing a bottom for the dust pan; the sheet having a tab coacting with the back wall for concealing the spring.

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