No. 640,972. Patented Jan. 9, 1900.

A. T. STILSON.

DUST PAN.

(Application filed Oct. 12, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

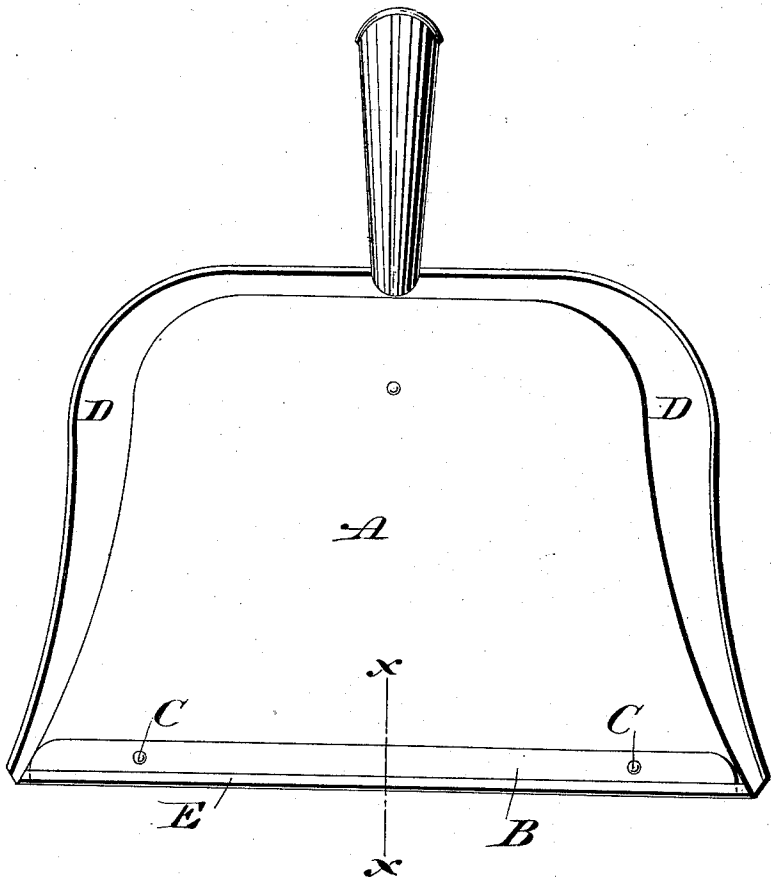
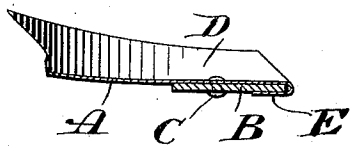


Fig. 2.



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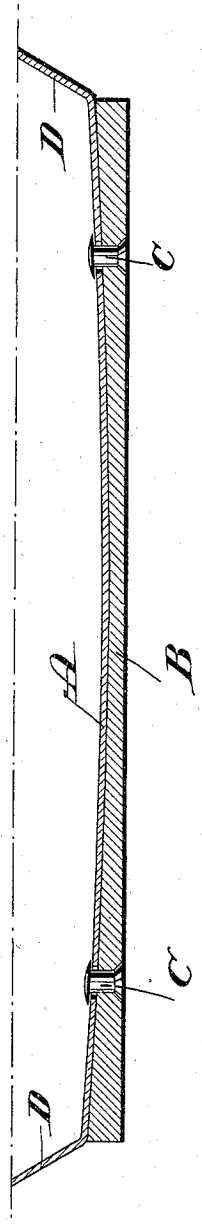
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(Application filed Oct. 12, 1899.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

ARTHUR T. STILSON, OF NEW YORK, N. Y., ASSIGNOR TO THE CENTRAL STAMPING COMPANY, OF NEW YORK.

DUST-PAN.

SPECIFICATION forming part of Letters Patent No. 640,972, dated January 9, 1900.

Application filed October 12, 1899. Serial No. 733,372. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR T. STILSON, a citizen of the United States, residing at New York city, New York county, New York, have invented certain new and useful Improvements in Dust-Pans, of which the following is a full, clear, and exact description.

My invention relates to dust-pans. My chief object is to improve the construction of a dust-pan by so reinforcing and strengthening its forward edge that it will not in ordinary use be given a permanent bend out of its proper shape. The construction also permits the front edge of the pan to readily adapt itself to irregularities in the floor against which it may be placed. These results I attain by a construction more durable and economical than other prior devices of a somewhat similar character intended to accomplish substantially the same end, but which prior devices do not attain such results to the same degree of satisfaction.

Referring to the drawings, Figure 1 is a view of the under side of a dust-pan embodying my invention. Fig. 2 is a relatively-enlarged sectional view on the line X X of a portion of the dust-pan shown in Fig. 1. Fig. 3 is a transverse cross-sectional view taken through the line of the rivets.

A is the bottom of a dust-pan, ordinarily formed of thin sheet metal, such as tin.

B is a strengthening-blade, preferably of steel, which is attached to the pan at its forward lower edge in the approved manner hereinafter described.

C C are rivets.

D are the sides of the pan, which are turned up and extend around the rear of the pan to prevent the contents from escaping, and also performing the function of rendering that portion of the bottom A immediately adjacent the bend more rigid, so that the lower edge of the dust-pan may be firmly placed against the floor. Since the body portion or bottom of the pan A is made of a light thin material, its central portion is too flexible to alone properly cause the central forward edge of the pan to bear firmly upon the floor. The strengthening-blade B therefore acts as a bridge to add to the strength of the pan centrally and to cause a uniform pressure of the forward edge upon the floor.

The forward or lower edge of the dust-pan is folded back underneath the pan, this fold being lettered E in the drawings. One edge of the blade B projects under and is partially enveloped by the fold E, and the presence of the blade within said fold E prevents the latter from becoming dented or permanently bent out of its proper shape, which denting or bending would impair its usefulness.

Instead of soldering or otherwise attaching the blade B throughout its length to the edge of the dust-pan, so as to be practically integral therewith, I preferably attach said blade at intervals by rivets C C or eyelets or the equivalent thereof. By gradually thinning the blade from its ends toward the center the bottom edge of the dust-pan is permitted to yield and thereby accommodate itself to irregularities in the floor. For an exaggerated illustration of this point, assuming the blade B were of such uniformly thick material throughout its length as to be incapable in bending upon being used in the ordinary way, upon placing the dust-pan upon a convexed floor-surface only the central portion of the lower edge of the dust-pan would contact therewith, while the ends would be so elevated as to prevent the gathering up of the dust and dirt. On the contrary, when the blade is of such a properly-graded thickness it will yield and adapt itself perfectly to the shape of the floor. This may be most advantageously accomplished by thinning the blade toward its central point; but it is obvious that satisfactory results may be attained without this intermediate thinning of the blade, provided there is sufficient spring in said blade to permit the lower edge of the pan to temporarily yield. By attaching the blade to the edge of the pan by means of rivets, instead of making it practically integral therewith by the use of solder, I am enabled to more effectively attain the desired ends, because it is well understood that two separate pieces of metal will bend more readily than one solid piece of metal of the combined thickness of the two separate pieces.

It may be desirable to make the rivet-holes

slightly larger than the diameter of the rivet, thus permitting upon bending a slight longitudinal movement of the strip independent of the edge of the pan, which movement, however, need not by any means be sufficiently great to appear to indicate that the reinforce is loosely attached. In fact, it should be so slight as to be practically imperceptible. That this independent movement is essential to this invention is not intended, since satisfactory results may be attained by fastening the reinforcing-strip B and the pan A so tightly together as to prevent the same.

In Fig. 3 I have shown in an exaggerated form the construction of the thinned blade and its means of connection to a dust-pan. It is obvious that the proportions are illustrative rather than definitive. In this figure the openings through which the eyelets or rivets C are passed are of such size as to permit slight independent longitudinal movement of the blade B relatively to the body of the pan A. In the drawings the enlarged opening is shown in the dust-pan rather than in the blade; but obviously this order may be reversed.

I am aware that it is old to strengthen all of the edges of a dust-pan, including the forward floor-contacting edge, by soldering a stiffening-piece thereon and by introducing a wire which is entirely enveloped in the sheet metal of the pan and in a variety of other ways different from the way herein described. Because of this fact, therefore, I do not claim, broadly, herein a strengthening device for the forward edge of a dust-pan. The methods and means heretofore employed in the previous attempts to accomplish this end have been attended by a cost of manufacture considerably greater that the cost attending the manufacture of the article herein described, which item of expense is very important at the present state of development of this art, since it is productive of a high-class article that can be manufactured and sold at a price that will bring it within the reach of the masses.

What I claim is—

1. A dust-pan having its front edge folded down and back, a slidably-connected stiffening-piece having its forward edge only incased by said fold, means to attach at intervals said stiffening-piece to the body of said dust-pan to the rear of the forward edge thereof.

2. A dust-pan having its front edge folded downwardly and backwardly, a stiffening-blade of varying thickness partially incased by said fold, and means for attaching at intervals said blade to the body of the dust-pan.

3. A dust-pan having its front edge folded downwardly and backwardly, a stiffening-blade partially incased in said fold and reinforcing the inner wall of said bend, means for slidably attaching said blade to said body, said means being placed at intervals and to the rear of the extreme edge of the bent portion.

4. A dust-pan having its front edge folded downwardly and backwardly, a stiffening-blade of varying thickness partially incased by said fold, and means for attaching said blade to the body of the dust-pan adjacent its forward lower edge.

ARTHUR T. STILSON.

Witnesses:
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GEORGE T. HACKLEY.