April 13, 1948. A. E. SIDNELL 2,439,757

PERFORATED RUBBER LAUNDRY BAG

Original Filed Jan. 21, 1941 2 Sheets-Sheet 1

FIG. 1

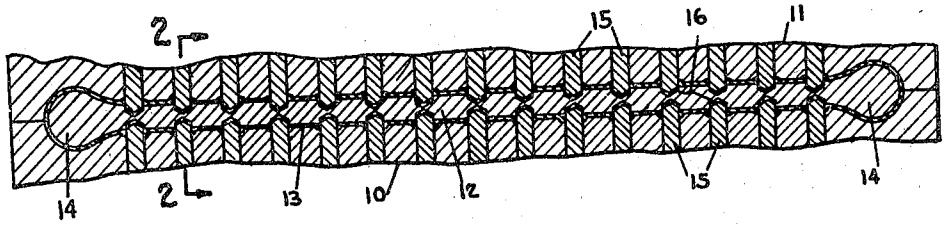


FIG. 2

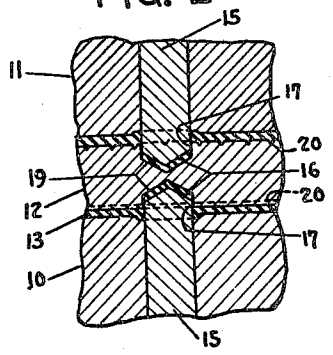


FIG. 3

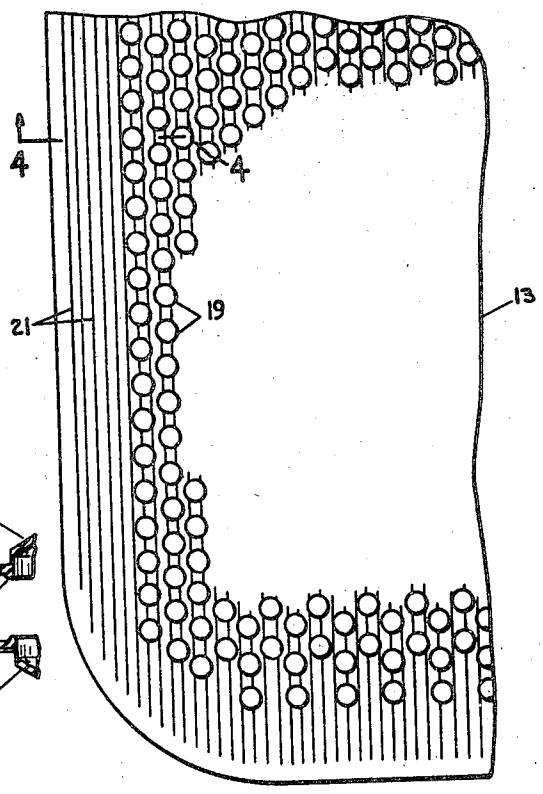
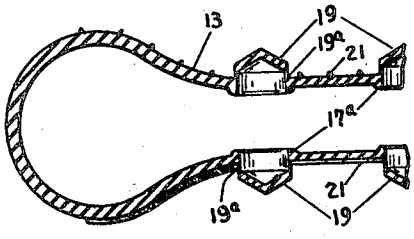


FIG. 4



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FIG. 5

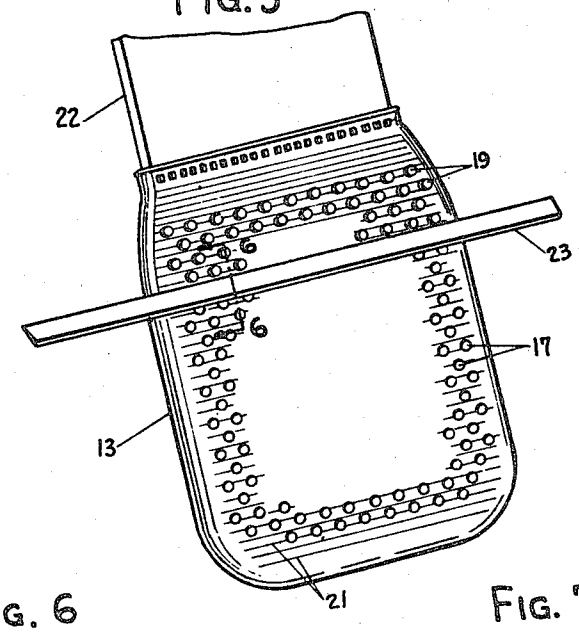


FIG. 6

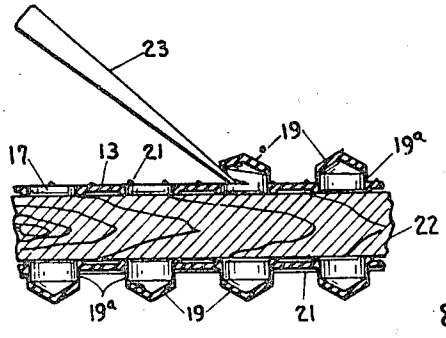


FIG. 7

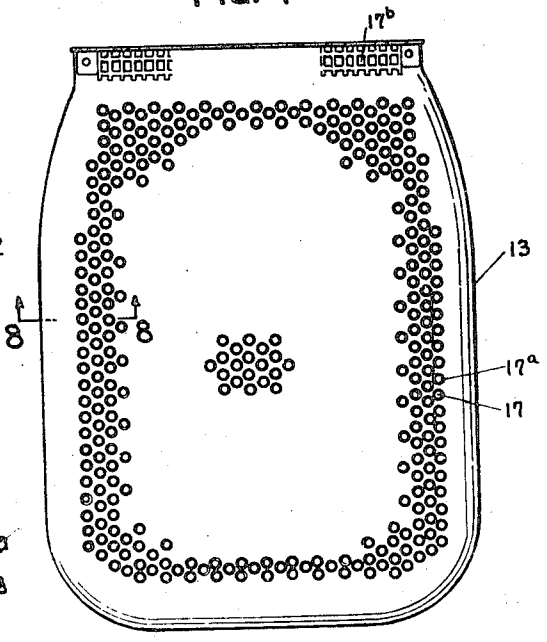
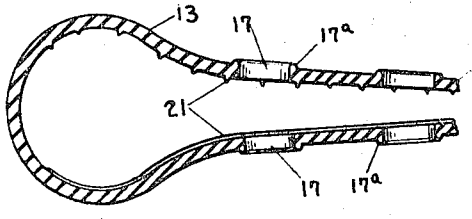


FIG. 8



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UNITED STATES PATENT OFFICE

2,439,757

PERFORATED RUBBER LAUNDRY BAG

Albert E. Sidnell, Akron, Ohio, assignor to Seiberling Latex Products Company, Barberton, Ohio, a corporation of Ohio

Application January 21, 1941, Serial No. 375,145, which is a division of application Serial No. 272,586, May 9, 1939. Divided and this application June 23, 1943, Serial No. 491,868

1 Claim. (Cl. 150—1)

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This invention relates to laundry or like bags of rubber or the like.

An object of the invention is to provide a substantially flat vulcanized rubber bag of the character described having curved edge portions with a comparatively large radius to obviate splitting of the bag along these edges while the bag is in service.

These and other objects of the invention will be manifest from the following brief description and the accompanying drawings.

This application is a division of application Serial Number 375,145, filed January 21, 1941, which has matured into Patent 2,346,335. Said application was, in turn, a division of application Serial Number 272,586, filed May 9, 1939, which matured into Patent 2,286,117.

Of the accompanying drawings:

Figure 1 is a transverse cross-section, partly broken away, through a mold as used for vulcanizing an improved laundry bag embodied in the invention.

Figure 2 is an enlarged fragmentary cross-section taken on line 2—2 of Figure 1.

Figure 3 is a view showing a portion of a bag which has been removed from the mold after vulcanization thereof and turned wrong-side out to expose the nubs formed at the perforations during vulcanization.

Figure 4 is an enlarged cross-section taken on line 4—4 of Figure 3.

Figure 5 is a perspective view illustrating the manner of mounting the bag while still wrong-side out, for removal of the nubs.

Figure 6 is an enlarged fragmentary cross-section taken on line 6—6 of Figure 5.

Figure 7 is a plan view of a finished bag in right-side-out condition.

Figure 8 is an enlarged cross-section taken on line 8—8 of Figure 7.

Referring to Figures 1 and 2 of the drawings, the numeral 10 designates the lower section, 11 the upper section, and 12 the intermediate section or core of a laundry bag mold. The manner of utilizing this mold for shaping plastic sheet rubber therein to provide a laundry bag or like article is well-known in the art.

The respective mold sections preferably are designed to form substantially flat bags 13 having the adjacent walls thereof relatively close together so as to reduce the thickness of the core, and hence the weight thereof, thereby facilitating more efficient handling of the core by press operators. To prevent splitting of bag 13 along the edge portions thereof, as described, the respective mold sections preferably are designed to form enlarged bead or rounded edge portions about the bag, as indicated at 14 (see Figure 1). The surfaces of the rounded portions 14 of the core may merge or taper into the flat surfaces thereof with a relatively large radius, so that the edge portions of the bag will merge smoothly into the closely adjacent flat walls thereof. Thus the core 12 may be of relatively thin, light weight construction and yet form rounded edge portions of large radius on the bag for the purpose above referred to.

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For forming perforations in the bag, the upper and lower sections 11 and 10 may be provided with a plurality of pins 15, 15 which project from the inner faces of said sections, the projecting ends of the pins being arranged to be received in correspondingly arranged recesses 16, 16 in opposite sides of core 12, when the sections are in the relation shown in Figures 1 and 2. A very slight clearance is allowed between pins 15 and the sides of recesses 16, the clearance best suited for the present purposes having been found to be approximately .005 inch. Also, when the sections are in the press-closed positions thereof, there preferably is allowed a substantially greater clearance between the ends of the pins 15 and the bottoms of holes 16 sufficient to receive the rubber pushed out of the side-walls of bag 13 in forming perforations 17, 17 therein. This arrangement is such that relatively thick nubs 19, 19 formed in the vulcanizing process are connected to bag 13 at the edges of the perforations 17 only by a very thin film or web of rubber 19a, so that the nubs may readily be detached to leave the perforations with substantially clean, smooth edges, as will be subsequently described.

Mold sections 10 and 11, may be provided with grooves on the inner faces thereof surrounding pins 15, so that rubber will be pressed into the grooves during the vulcanizing step to form continuous reinforcing ribs 17a about edges adjacent the perforations.

Longitudinal grooves 20, 20 may be provided on both sides of core 12, the grooves on one side preferably extending angularly of those on the other side, so as to produce similarly angularly disposed ribs 21, 21 on the inside faces of the bag. These ribs 21, besides reinforcing the bag, prevent the sides of the bag from sticking together.

As best shown in Figures 5 and 6, after the bag 13 has been removed from the vulcanizing mold it is turned wrong-side-out to present nubs 19 to the exterior thereof and then it is stretched over a suitable flat board or form 22. By rubbing a

suitable straight edged tool or scraper or knife 23 over the surfaces of the bag to engage under nubs 19, the latter may rapidly be separated from the bag, by virtue of the thin web 19a being easily disrupted or torn away from the bag adjacent the perforations.

When the nubs 19 have been removed from both sides of the bag 13, the latter is turned right-side-out to present to the interior of the bag the reinforcing rib 17a which encircles the edge of each perforation on one surface of the bag, as shown in Figures 7 and 8. When the bag is in use, its contents distend the bag at the perforations, and the reinforcing ribs 17a withstand the abrasion to which the outside edges of the perforations are then subjected.

Modifications of the invention may be resorted to without departing from the spirit thereof or the scope of the appended claim.

What is claimed is:

A molded laundry or like bag of vulcanized elastic or resilient material which unfilled has spaced, flat, flexible walls with perforations throughout a large portion of the body thereof, each perforation being reinforced around the outside edge thereof by a molded rib of the said material which is integral with the wall, the edge portions of the bag between the perforated walls being rounded on a radius greater than the distance between the walls when the bag is not filled.

ALBERT E. SIDNELL.

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