

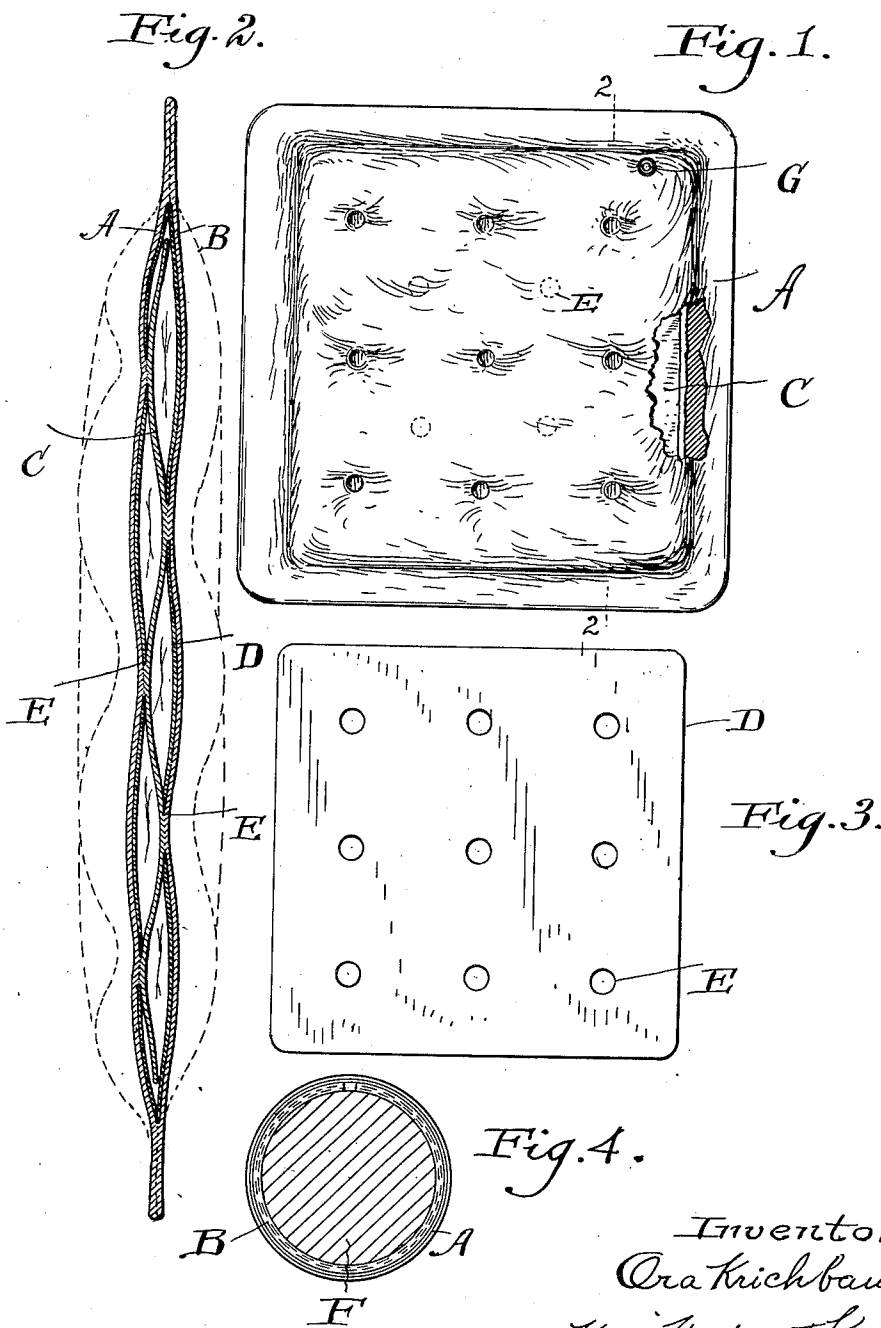
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METHOD OF MAKING A RUBBER ARTICLE

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METHOD OF MAKING A RUBBER ARTICLE.

Original application filed February 27, 1925, Serial No. 12,044. Divided and this application filed July 6, 1926. Serial No. 120,624.

The present invention relates to a rubber article adapted for inflation, or to contain water or other fluid.

This case is a division of my co-pending application, No. 12,044 filed February 27, 1925.

One object of the invention is to provide a structure in which the bulging of one part of the article is prevented when pressure is applied to another part thereof.

Another object is to provide a structure which unites the inner walls of the article, thereby to resist local bulging effects when the article is inflated. A further object is to provide a method of making the article.

Reference should be had to the accompanying drawings in which—

Fig. 1 is a top plan view, with a portion in section;

Fig. 2 is a sectional view;

Fig. 3 is a plan view of a member used in making the article; and

Fig. 4 is a sectional elevation of a form on which the article is molded.

The article which will be described is a rubber air cushion, as this is the embodiment of the invention so far developed, but no limitation of the invention is intended by the specific description.

The cushion is formed in any desired shape, but the one herein shown is rectangular or substantially so, and consists of two outside members A and B which are formed of sheet rubber. These outside members are secured together at or adjacent their edges, so that the article forms a closed envelope or bag.

The manner of securing the sheets of rubber may be by a suitable rubber cement which is well known in the rubber art, but I prefer to secure attachment by vulcanizing the rubber sheets together, at their contacting edge portions.

Inside the envelope formed by the members A and B is an intermediate flexible member C which is preferably formed of rubber. This intermediate member C is secured to the inside surfaces of the members A and B at a plurality of small areas or spots and preferably the spots of attachment between the intermediate member C and the member A are staggered with respect to the spots of attachment between the members C and B. Preferably the edges of the intermediate member C are free and unse-

cured to either the members A or B so that air may pass around the edges.

From the description given it will be seen that the structure provides in effect a plurality of air pockets, on both sides of the intermediate member C, but these pockets are connected with contiguous pockets, so that air may pass between pockets but there is a restricted passage of air and because of this the air cannot rush to one part of the envelope when pressure is applied to another portion of the envelope.

In another aspect of the invention the intermediate member C may be viewed as forming a flexible connection between the outer members A and B whereby these members are prevented from unduly bulging under air pressure.

For the purpose of inflating the article a suitable valve is provided. This is indicated at G in Fig. 1. Such valves are well known in the art and need no description.

I will now describe the method by which I prefer to make the article described.

Two sheets of raw rubber of the proper size and an intermediate sheet of raw rubber of proper size, are taken. A sheet of paper or equivalent material for the purpose is provided, which in size is the same as that of the inside of the envelope which is slightly larger than the intermediate sheet C. Such a sheet is shown at D in Fig. 3. This sheet is provided with a plurality of openings E which are spaced apart and arranged as desired.

This sheet D is laid upon one of the sheets of rubber which will form one of the outer members of the article. Then the intermediate sheet of raw rubber is laid upon the sheet D. Then a second sheet of paper or equivalent material in all respects similar to the sheet D is laid over the intermediate sheet of raw rubber and then the second outside sheet of raw rubber is laid over the second sheet D.

Thus it will be seen that the outside rubber sheets are in contact at or adjacent their edges, and further that these outside raw rubber sheets are in contact with the intermediate sheet of raw rubber at spots where there are holes through the paper sheets D.

Preferably the openings E in the two sheets D which are used as described are staggered with respect to each other, so that contact spots between the intermediate rub-

ber sheet and one of the outside rubber sheets are staggered with respect to the contact spots between the intermediate rubber sheet and the other outside rubber sheet.

5 When the rubber sheets and paper sheets are arranged as described, the article is vulcanized and there will be areas of attachment between the outside rubber sheets at their edges and also between the intermediate
10 rubber sheet and the outside rubber sheets at places where there were holes in the paper sheets.

I prefer to vulcanize the article upon a round mandrel such as indicated at F, in
15 Fig. 4, so that the finished article will have a tendency to roll up easily, into a scroll form, in which form it is easy to carry or store it.

Having thus described my invention, I
20 claim:

1. The method of manufacturing a rubber article which consists of taking two sheets of raw rubber of desired size and a sheet of raw rubber of smaller size, placing separating
25 sheets of suitable material formed with holes therein upon opposite sides of the sheet of raw rubber of smaller size, then placing the said sheet of rubber with the separating material assembled with respect thereto be-
30 tween the two sheets of rubber and vulcanizing the assembled sheets.

2. The method of manufacturing a rubber article which consists in taking two
35 sheets of raw rubber of the desired size and a sheet of raw rubber of smaller size, placing sheets of paper or equivalent material with

holes in it upon opposite sides of the sheet of raw rubber of smaller size which sheets of paper are slightly smaller than the large sheets of rubber, placing said sheets of rubber and paper between the other larger
40 sheets of rubber and vulcanizing the assembled sheets.

3. The method of manufacturing a rubber article, which consists of taking two
45 sheets of raw rubber of desired size and a sheet of raw rubber of smaller size, placing separating sheets of suitable material formed with holes therein upon opposite sides of the sheet of rubber of smaller size, then placing said sheet of rubber, with its separating material assembled with respect thereto, between the two larger sheets of rubber, then wrapping the combined sheets of rubber around a cylindrical mandrel and
55 vulcanizing the assembled sheets.

4. The method of manufacturing a rubber article, which consists of taking two sheets of raw rubber of the desired size and a sheet of raw rubber of smaller size, placing sheets
60 of paper or equivalent materials with holes in it on opposite sides of the sheet of raw rubber of smaller size, which sheets of paper are slightly smaller than the larger sheet of rubber, placing said sheets of rubber and
65 paper between the other larger sheets of rubber, wrapping said sheets around a cylindrical mandrel and vulcanizing the assembled sheets.

In testimony whereof, I hereunto affix my
signature.

ORA KRICHBAUM.