J. V. R. SHEPHERD.

CONTAINER.

APPLICATION FILED AUG. 7, 1919.

1,397,908. Patented Nov. 22, 1921.

Fig. 1

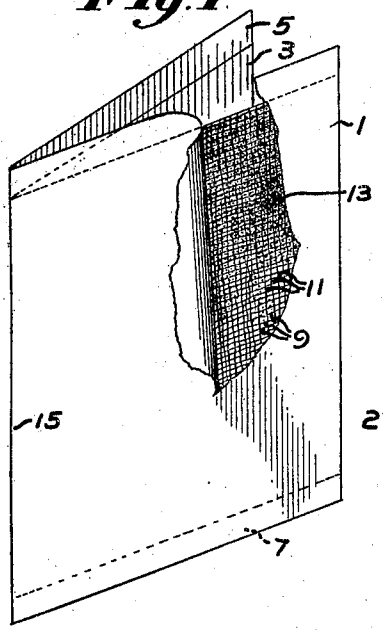


Fig. 2

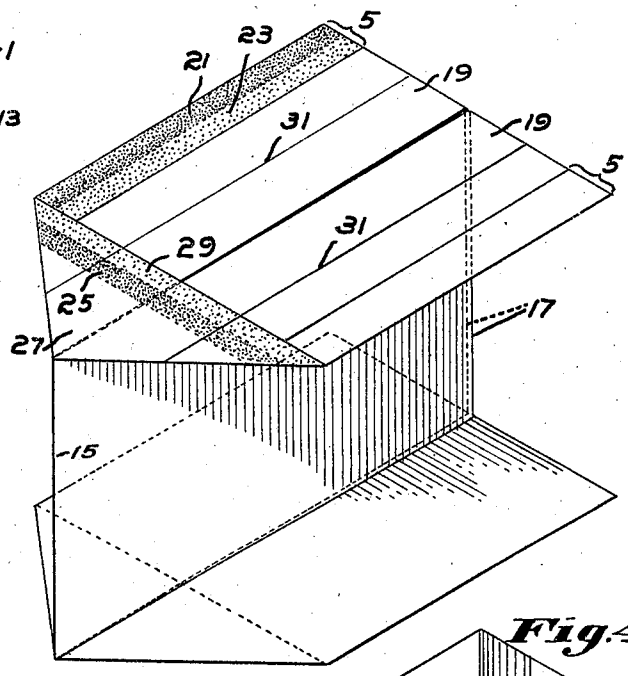


Fig. 3

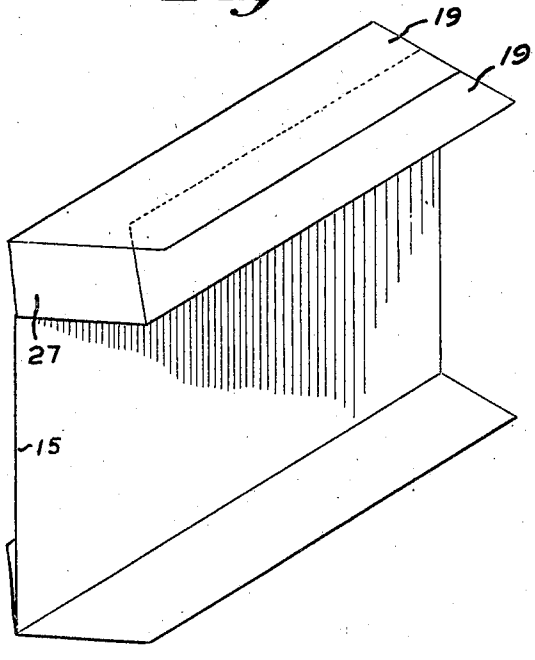
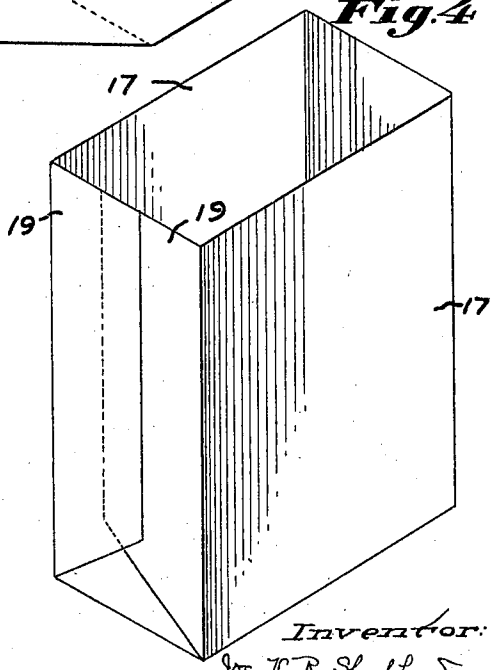


Fig. 4



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CONTAINER.

1,397,908. Specification of Letters Patent. Patented Nov. 22, 1921.

Application filed August 7, 1919. Serial No. 315,823.

To all whom it may concern:

Be it known that I, JOE V. R. SHEPHERD, a citizen of the United States, residing at Holliston, county of Middesex, and State of Massachusetts, have invented an Improvement in Containers, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

The invention to be hereinafter described relates to bags or containers, and more particularly to waterproof bags or containers.

One good form of fabric for the production of the bag or container comprises two paper layers with a layer of black asphaltum or other suitable waterproof material between them, and reinforcing filaments between the paper layers and embedded in the waterproof layer. The reinforcing filaments may be unspun fibers, such, for example, as hemp, ramie, flax or sisal fibers, or the filaments may be spun threads or other elements. Preferably the filaments extend transversely of each other to furnish reinforcement to the material both transversely and longitudinally thereof.

A blank may be died out of such material with appropriate form to be folded to produce the bag, and edges or marginal portions of the blank may be overlapped and secured together. It is important that these edges or marginal portions shall be secured together by waterproof adhesive to prevent the ingress of water through the seam thus formed into the interior of the bag. Waterproof adhesive, however, usually lacks the requisite strength to firmly secure the overlapped portions together so as to prevent the bag from rupturing or opening out at the seam. Gums or non-waterproof adhesives have the requisite strength to securely hold the overlapped marginal portions together under normal conditions, but if moisture reaches the non-waterproof adhesive, it is liable to soften and destroy the adhesive effect thereof.

One of the objects of the present invention, therefore, is to provide a bag or container having a seam formed of overlapped marginal portions which are secured by an outer waterproof adhesive and an inner non-waterproof adhesive adjacent thereto, the construction being such that the marginal portions will be strongly secured together by the non-waterproof adhesive, and the latter will be protected from the ingress of moisture thereto by the outer waterproof adhesive.

When the non-waterproof adhesive is applied it is in a moist condition, and the moisture must be dried therefrom, in order that it may have adhesive effect securely to hold the marginal portions together. If this non-waterproof adhesive be applied to a portion of the bag or container blank protected by the waterproof adhesive between the paper layers, it has been found in practice that the waterproof layer prevents the moisture in the non-waterproof adhesive from readily drying out as required to renden the same adhesive so as to secure the marginal portions strongly. Another object of the invention, therefore, is to provide a bag or container blank which may have marginal portions without the waterproof layer thereon. The non-waterproof adhesive may be readily applied to such margins, and since they are not protected by waterproof adhesive, the moisture from the non-waterproof adhesive may readily escape therefrom, and a strong seam may be obtained.

With the aforesaid and other objects in view, the character of the invention will be best understood by reference to the following description of one good form thereof shown in the accompanying drawing, wherein;

Figure 1 is a perspective view of a bag or container blank having a portion broken away to disclose the internal construction of the blank;

Fig. 2 is a perspective view of the blank folded to produce opposed sides of the bag or container, and having outwardly folded end portions positioned in readiness to receive the adhesive for securing the margins of the ends together;

Fig. 3 is a perspective view of the blank completely folded to form a bag or container; and

Fig. 4 is a perspective view of the bag or container after it has been opened out following the completion of the folding process.

Referring to the drawing, the bag blank as shown in Fig. 1 thereof, comprises an outer layer 1 and an inner layer 3 of paper or other suitable fabric, the inner layer being somewhat narrower than the outer layer to leave end margins 5 and 7.

Suitable means may be provided for reinforcing the outer and inner layers. In the present instance, they are reinforced by unspun fibers 9 extending longitudinally of the blank, and unspun fibers 11 extending transversely of the blank. It will be understood, however, that other reinforcing filaments or elements, such, for example, as mentioned above, may be used to reinforce the blank as desired.

To secure the inner and outer layers together, a layer 13 of black asphaltum or other suitable waterproof material may be introduced therebetween, and the reinforcing filaments may be embedded in the adhesive layer. The reinforcing filaments and the adhesive layer, in the present instance of the invention, cover the inner paper layer and terminate at the margins 5 and 7, the construction being such that said margins are not covered by reinforcing filaments or waterproof adhesive. In some cases the reinforcing filaments might cover said margins, but the waterproof layer should terminate at said margins.

The blank described may be folded on a central line 15 transversely of the length thereof to form the opposite sides 17 of the bag. The edges of the blank may be folded outwardly transversely to the sides 17 to present flaps 19 to be folded as more fully hereinafter described, to form the opposed ends of the bag.

When the bag is thus folded, the margins 5 and 7 will be at the outer edges of the flaps. Since the construction of the ends of the bags are similar, a description of the formation and construction of one will suffice for both.

To secure the margins of the flaps of the bag together, black asphaltum or other waterproof adhesive 21 may be applied to the margin of one of the flaps adjacent the edge thereof, and gum or non-waterproof adhesive 23 may be applied to the margin adjacent the waterproof adhesive. It will be noted that the waterproof adhesive 21 and non-waterproof adhesive 23 are on the margin of the bag which is not covered by the waterproof adhesive and the reinforcing filaments of the blank.

Similarly, waterproof adhesive 25 may be applied to the triangular portion 27 adjacent the bottom fold 15 of the blank, and non-waterproof adhesive 29 may be applied to said triangular portion adjacent to the waterproof adhesive 25 and along the edge portion thereof.

The flaps 19 may be creased along lines 31 (Fig. 2) to facilitate folding of said flaps. The uncoated flap is then first folded along the line 31 and then the other flap is folded along the line 31 into superposed relation to the first flap, as shown in Fig. 3. This will bring the waterproof adhesive 21 and non-waterproof adhesive 23 into engagement with the margin of the first folded flap to secure said margins together, and the triangular portion 27 referred to, will be secured to the folded over portions of the flaps by the waterproof adhesive 25 and the non-waterproof adhesive 29.

Since the non-waterproof adhesive is applied to portions of the blank which do not have the waterproof adhesive between the paper layers of the blank, the moisture in the non-waterproof adhesive may readily escape therefrom, so that the non-waterproof adhesive may quickly dry out sufficiently to have effect strongly to secure the folded parts together. The waterproof adhesive is also applied to the said margins of the blank, and is located externally of the non-waterproof adhesive and adjacent thereto so as to prevent ingress of moisture to the gummed or non-waterproof adhesive. As a consequence, the non-waterproof adhesive is so protected that it will always have the effect to hold the parts securely together.

After the bag has been folded as described, it will be in the condition as shown in Fig. 3. Then it may be readily opened out as shown in Fig. 4, in readiness to receive materials therein.

By my invention a bag or container is provided which may be readily folded from a blank with few and simple operations, and a bag or container is produced which is waterproof throughout while possessing the necessary strength to receive and hold heavy materials without opening of the seams at the ends of the bag.

It will be understood that the invention is not limited to the specific embodiment shown, and that various deviations may be made therefrom without departing from the spirit and scope of the appended claims.

What is claimed is:—

1. A moisture proof container formed of a blank comprising outer and inner paper layers with a waterproof layer and reinforcing filaments between the outer and inner paper layers, one of said paper layers having a lateral edge extending beyond the layers secured thereto to form a marginal portion which is free from the waterproof layer, that the moisture of non-waterproof adhesive may escape through said marginal portion, non-waterproof adhesive upon said marginal portion to secure it in overlapping relation to an opposite marginal portion of the blank, and waterproof adhesive between the overlapping marginal portions at the exposed edge thereof to exclude moisture from the non-waterproof adhesive.

2. A moisture proof bag or container formed from a blank comprising outer and inner paper layers having an adhesive waterproof layer therebetween, one of the paper

layers of the blank having a lateral edge extending beyond the layers secured thereto to form a marginal portion which is free from the waterproof layer, that the moisture of non-waterproof adhesive may escape through said marginal portion, non-waterproof adhesive upon said marginal portion to secure it in overlapping relation to an opposite marginal portion of the blank, and waterproof adhesive between the overlapping marginal portions of the blank at the exposed edge thereof to exclude moisture from the non-waterproof adhesive.

3. A moisture proof bag or container formed from a blank treated with waterproof material, the blank having a lateral marginal portion and having the waterproof material omitted from part of the width of the marginal portion, that the moisture of non-waterproof adhesive may escape through said marginal portion, non-waterproof adhesive upon said marginal portion to secure it in overlapping relation to an opposite marginal portion of the blank, and waterproof adhesive between the overlapping marginal portions at the exposed edge thereof to exclude moisture from the non-waterproof adhesive.

4. A moisture proof bag formed from a blank consisting of a paper sheet treated with waterproof material, said blank folded transversely to produce the sides of the bag, and having portions folded laterally into overlapping engagement with each other to form the bag ends, said overlapping portions having the waterproof material omitted from a portion of their width that the moisture of non-waterproof adhesive may escape therethrough, and waterproof and non-waterproof adhesives applied between the overlapping portions to secure them together, the waterproof adhesive being located externally to the non-waterproof adhesive to prevent ingress of moisture thereto.

5. A container formed of a blank comprising outer and inner paper layers with a waterproof layer and reinforcing filaments between the outer and inner paper layers, one of said paper layers having its opposite edges extending beyond the other layers to provide marginal portions free from the waterproof layer, said marginal portions secured in overlapping engagement with each other by waterproof and non-waterproof adhesives applied to the adjacent overlapping faces, the waterproof adhesive being placed between the overlapping faces at the exposed edge thereof to exclude moisture from the non-waterproof adhesive.

In testimony whereof, I have signed my name to this specification.

JOE V. R. SHEPHERD.