

J. F. BYRNE.
BOX OR CONTAINER.
APPLICATION FILED AUG. 9, 1909.

941,356.

Patented Nov. 30, 1909.

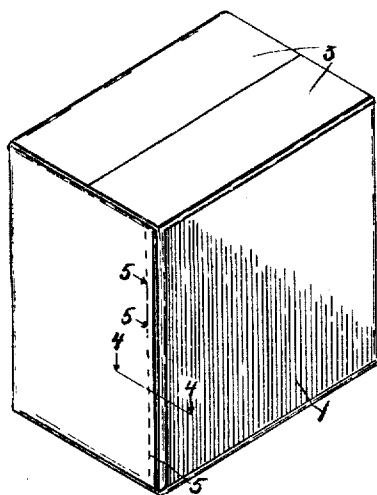


Fig. 1.

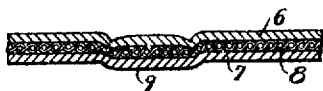


Fig. 2.

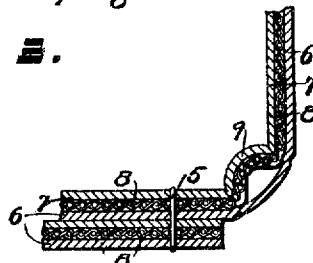


Fig. 3.

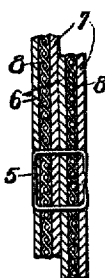


Fig. 4.

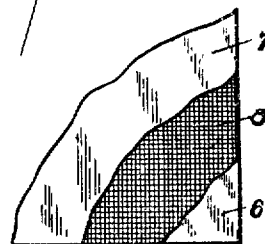


Fig. 5.

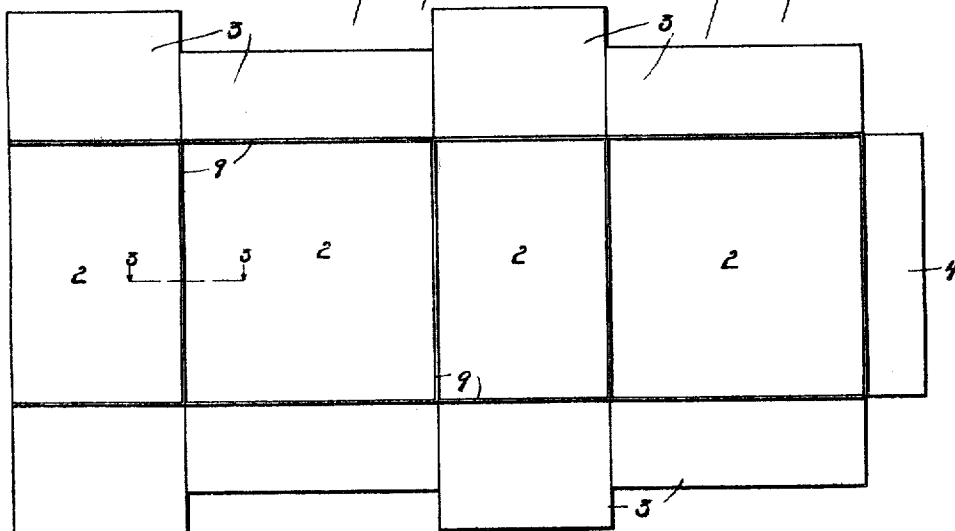


Fig. 6.

Witnesses
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UNITED STATES PATENT OFFICE.

JOHN F. BYRNE, OF BATTLE CREEK, MICHIGAN.

BOX OR CONTAINER.

941,356.

Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed August 9, 1909. Serial No. 511,941.

To all whom it may concern:

Be it known that I, JOHN F. BYRNE, a citizen of the United States, residing at the city of Battle Creek, county of Calhoun, State of Michigan, have invented certain new and useful Improvements in Boxes or Containers, of which the following is a specification.

This invention relates to improvements in boxes or containers.

Owing to the expense incident to the use of wood for boxes or containers for shipping various products such as, for example, prepared cereal food, cheaper materials are being used such as cellular board. The boxes or containers formed of cellular board, however, are easily punctured or broken in use and for that reason are not entirely satisfactory.

It is the main object of my invention to provide an improved box or container which will be economical to produce and one which is, at the same time, very strong and durable and not likely to be broken or injured in use.

A further object is to provide an improved blank for boxes or containers.

Still further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The structure described constitutes one effective embodiment of my invention. Other embodiments would be readily devised by those skilled in the art.

The invention is clearly defined and pointed out in the claims.

A structure constituting an effective and preferred embodiment of the features of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure 1 is a perspective view of my improved box or container. Fig. 2 is a plan view of the blank thereof. Fig. 3 is an enlarged detail section taken on a line corresponding to line 3—3 of Fig. 2. Fig. 4 is an enlarged detail section taken on a line corresponding to line 4—4 of Fig. 1. Fig. 5 is an enlarged detail section taken on a line corresponding to line 5—5 of Fig. 1. Fig. 6 is a detail plan showing the material of my improved blank.

In the drawings, similar reference char-

acters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawings, my improved box or container 1 is preferably formed of the blank shown in Fig. 2 which consists of side wall portions 2 having extensions or flaps 3 at each end adapted to form the top and the bottom of the box. One of the side walls 2 is provided with an extension or securing flap 4 which is lapped upon the inside of the wall at the other end of the blank and secured thereto by cementing or by the use of staples as 5, see Fig. 5.

My improved blank is formed of a laminated material consisting of an outer layer 6 and an inner layer 7 of paper with a layer of burlap 8 interposed between the same, the layers of paper and burlap being cemented together throughout. The outer layer 6 of paper is preferably of a better grade than the inner layer and in practice I find it to be satisfactory to use a cheaper grade of material for the inner layer 7. The blank thus built up is very rigid and is capable of withstanding heavy blows without puncturing or breaking.

To permit the folding of the blank I crush the same along the folding lines thereof, preferably by passing it between dies and thus forming offsets therein as clearly appears in Fig. 3. These dies are preferably transversely curved as I find such dies to be more effective. This crushing renders the inner and outer layers of the blank flexible and breaks up the cement or glue at the point of flexure so that the layers of paper coacting with the layer of burlap form very strong and flexible hinges which, while they readily permit the folding of the blank, are at the same time very strong. By building up the blank of the several layers as described the rivets 5 may be subjected to very severe strain without the likelihood of their pulling out. The flap 4 may be secured, however, by cementing only.

My improved box or container is economical to produce and is, at the same time, very strong and durable being capable of withstanding very severe usage without liability of crushing or puncturing and this, in connection with its economy of manufacture, renders it a very desirable structure.

Having thus described my invention, what

I claim as new and desire to secure by Letters Patent is:

1. A box having side wall portions provided with extensions or flaps adapted to form the top and bottom of the box, said side wall portions and flaps being formed of a blank comprising outer and inner layers of paper and a layer of burlap disposed between them, said layers of paper and burlap being cemented together, said blank being crushed along the folding lines thereof, whereby said inner and outer layers are rendered flexible and coacting with said interposed layer form flexible connections for the several parts of the blank.

2. A container or box blank comprising two layers of paper, and a layer of burlap disposed between them, said layers of paper and burlap being cemented together, said blank being crushed along the folding lines thereof, whereby said layers of paper are

rendered flexible and coact with said interposed layer of burlap to form flexible connections for the several parts of the blank.

3. A box blank comprising outer and inner layers of paper and a layer of burlap disposed between them, said layers of burlap and paper being cemented together, said blank being crushed inwardly and offset along the folding lines thereof, whereby said inner and outer layers of paper, coacting with said interposed layer of burlap, form flexible connections for the several parts of the blank.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

JOHN F. BYRNE. [L. s.]

Witnesses:

FRANK E. HEINZE,
JUSTIN F. RAYNUS.