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M. H. SIDEBOTHAM

2,084,922

CORRUGATED WRAPPER

Original Filed Feb. 27, 1934

Fig. 1

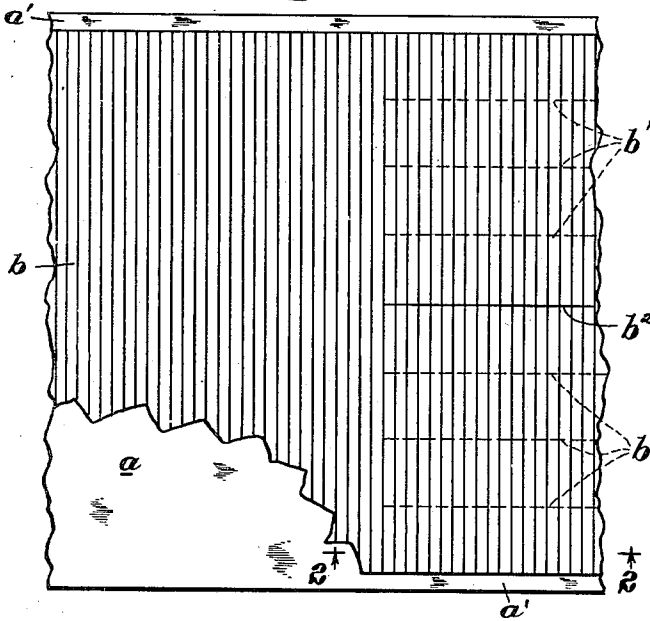


Fig. 3

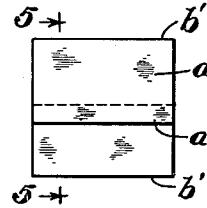
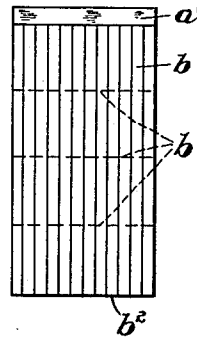


Fig. 4

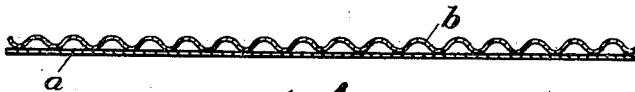


Fig. 2

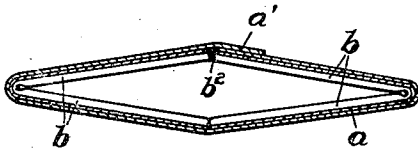


Fig. 5

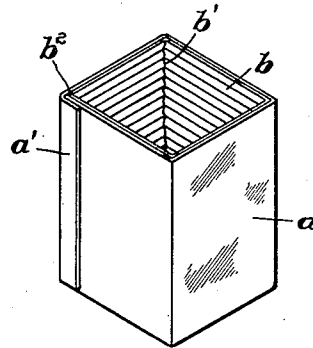


Fig. 6

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2,084,922

CORRUGATED WRAPPER

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Original application February 27, 1934, Serial No. 713,222. Divided and this application June 12, 1935, Serial No. 26,153

3 Claims. (Cl. 229-90)

The present application is a division of my application filed February 27, 1934, Serial No. 713,222, which became Letters Patent No. 2,024,013 December 10, 1935, and in which is explained a machine for making article containers, comprising means for causing two paper webs of different widths to travel, corrugating mechanism for operating on the narrower web, means for adhesively connecting the corrugated web with the wider web to provide a duplex web having margins of single thickness, means for dividing the duplex web into two webs each having a thin margin, means for applying adhesive to the thin margin of each of said two webs, folders for converting said two webs into flat tubes with the thin margins overlying the opposite margins, and means for cutting the two flat tubes into sections. The said machine described and claimed in said patent converts two webs of paper into the completed articles claimed herein at the rate of 50,000 per hour.

Many attempts have heretofore been made to produce wrappers of the general outline illustrated by the accompanying drawing, a widely known wrapper on the market comprising a blank consisting of a corrugated layer and a smooth layer which, at one corner of the completed article, has a strip of tape adhesively secured thereto to hold the abutting edges of the blank together.

Another type of wrapper is illustrated in Letters Patent No. 484,627, employing a corrugated layer and a smooth layer of paper, equalling each other in area, but which can not be supplied in flat-folded condition to users and instantly opened and filled by the latter. Something has to be added to fasten the parts together.

Another type, illustrated in Letters Patent No. 1,148,115, consists of a corrugated layer and a smooth layer of equal area, rolled to cylindrical form and having a third and larger layer to serve as a cover, but the wrapper can never be supplied to users in flat-folded condition.

Another type, illustrated in Letters Patent No. 941,256, consists of three layers cemented together, the intermediate layer being corrugated, but which could not be supplied to users in flat-folded condition, ready for use, because of the presence of secured end plates and the inner cemented layer.

The object of my invention as a whole, is to provide economical paper wrappers for fragile articles, which wrappers, complete and ready for use, may be shipped or stored in flat condition,

and are capable of being instantly opened to set-up condition and filled for display or sale.

Another object is to provide wrappers having such structure as to render them capable of a high speed of production such as the 50,000 an hour rate of the machine of the Patent No. 2,024,013 referred to.

With said object in view, my invention consists in the improved wrappers, for protectively containing fragile articles such as electric light bulbs or radio tubes, substantially as hereinafter described and claimed.

Of the accompanying drawing:—

Figure 1 is a plan view of a portion of the combined or duplex web prior to the cutting thereof along its mid-width.

Figure 2 represents a section on line 2—2 of Figure 1 on a larger scale.

Figure 3 is a plan view of a portion of the duplex web of which the completed wrapper is composed.

Figure 4 is a plan view of a complete wrapper after it has been cut from the tube.

Figure 5 represents a section on line 5—5 of Figure 4.

Figure 6 is a perspective view of one of the wrappers set up or opened for use.

Similar reference characters indicate similar parts or features in all of the views.

In carrying out my invention, as explained in the Patent No. 2,024,013 hereinbefore referred to, two webs or layers of paper are employed, one being wider than the other. The narrower one *b* (Fig. 1) is transversely corrugated and the crowns of the corrugations are adhesively secured to the wider web or layer *a* which is left flat or comparatively smooth, with the edges of the latter extending beyond both edges of the corrugated layer. So far as the present invention is concerned, such assemblage of the two layers, and the other operations presently described, may be effected manually or by such a machine as illustrated and described in the Patent 2,024,013 referred to. And it is to be understood that, in practice, the flat wider layer *a* usually bears printed matter on its outer surface.

The corrugated layer of the duplex material so far described is creased as at *b*¹, and both layers are cut at the mid-width *b*², each portion of the duplex web then having at one edge an integral extension *a*¹ of thin paper adapted to receive adhesive material, the other edges of the two layers being in alinement at *b*².

After the cutting just described, the duplex material is folded on two of the crease lines *b*¹,

the flap a^1 being provided with adhesive material, the folding being so effected as to cause the adhesive-carrying flap to overlie and adhere to the margin where the cut b^2 was effected, as illustrated by comparing Figures 3, 4, 5, and 6, thus forming a flat-folded tube. The said flat-folded tube is then cut transversally into sections.

The final result is to produce flat folded wrappers such as illustrated by Figures 4 and 5, capable of being stored or shipped in that condition, and ready to be opened up for use as illustrated by Figure 6.

It is to be understood that so far as the present invention is concerned, such duplex material as illustrated in the left-hand area of Figure 1 may be shipped to customers for them to do the cutting and folding which has been described.

Having now described my invention, I claim:

1. A flat-folded wrapper tube, designed for transverse severance into wrapper sections, said wrapper tube comprising an inner member and an outer member adhesively secured together, the said inner member being a corrugated rigidifying element the opposite longitudinal edges of which are relatively juxtaposed forming a joint, the outer member being a binding element one of the longitudinal edges of which extends integrally beyond the joint of the said inner member thus

forming a connecting flap secured upon the outer surface of the wrapper tube.

2. A complete flat-folded wrapper made from a flat-folded wrapper tube designed for transverse severance into sections, said wrapper tube comprising an inner member and an outer member adhesively secured together, the said inner member being a corrugated rigidifying element the opposite longitudinal edges of which are relatively juxtaposed forming a joint, the outer member being a binding element one of the longitudinal edges of which extends integrally beyond the joint of the said inner member thus forming a connecting flap secured upon the outer surface of the wrapper tube.

3. A wrapper tube, designed for transverse severance to form complete wrapper sections, said wrapper tube comprising an inner member and an outer member adhesively secured together, the said inner member being a corrugated rigidifying element the opposite longitudinal edges of which are relatively juxtaposed forming a joint, the outer member being a binding element one of the longitudinal edges of which extends integrally beyond the joint of the said inner member thus forming a connecting flap secured upon the outer surface of the wrapper tube.

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