O. H. HICKS.

CORRUGATED BOARD.

APPLICATION FILED OCT. 11, 1913.

1,184,749. Patented May 30, 1916.

Fig. 1.

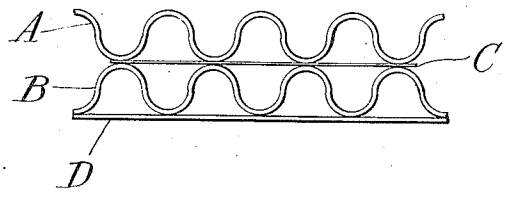


Fig. 2.

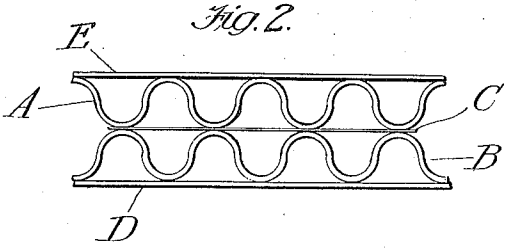
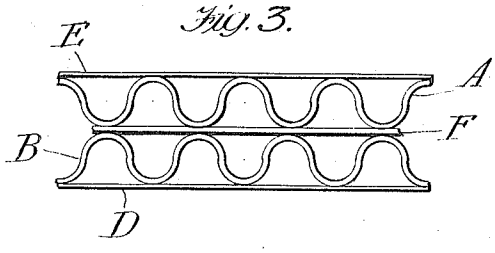


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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CORRUGATED BOARD.

1,184,749. Specification of Letters Patent. Patented May 30, 1916.

Application filed October 11, 1913. Serial No. 794,608.

To all whom it may concern:

Be it known that I, OLIVER H. HICKS, a citizen of the United States, residing at Redlands, San Bernardino county, California, have invented a certain new and useful Corrugated Board, of which the following is a specification,

My invention relates to corrugated paper board and the object thereof is to provide, as a new article of manufacture, a new form or construction of such board possessing advantages in the practical use thereof, particularly in packing and shipping boxes which are subjected to rigid requirements by the transportation companies and to the severest conditions of actual use.

My invention may be embodied either in a single-faced board or in a double-faced board.

As is well-known corrugated paper board, even of the double-faced type, while strong and resistant in a direction transverse of the corrugations is weak in the longitudinal direction thereof. In my form or construction of board I materially overcome this objection by opposing two corrugated strips, *i. e.*, arranging them so that the crowns and valleys of the corrugations will be respectively directly opposite each other, and interposing between their adjacent crowns a plain strip to which the corrugated strips are attached by a suitable adhesive. This forms a corrugated board which may be employed in this condition for various uses and which may also be single-faced or double-faced if desired and used for the same purpose for which corrugated paper board of these types is used. In practice, the combined thickness of the two corrugated strips and their interposed plain strip is substantially equal to the ordinary board employing a single corrugated strip, with the result that the corrugations of my board are smaller with the crowns closer together and consequently with the distance between the planes of the outer and inner crowns considerably lessened, thereby increasing the strength of the cross section of the board at any point as well as increasing its strength against strain in all directions.

The various features of advantage and utility in my new form of board will be understood from the description hereinafter given.

In the drawing Figure 1 is an edge view of a piece of corrugated board embodying my invention in a single faced board, it being understood that the board is herein shown on a larger scale than is intended in actual practice; Fig. 2 is a similar view but showing the board provided with two facing strips thereby making it a double faced board; Fig. 3 a view similar to Fig. 2 but showing a thicker or heavier interposed or middle strip for increased rigidity.

Referring to the embodiment of my invention as shown in Fig. 1, which represents the simplest form thereof, there are two corrugated strips A and B which are arranged in such manner that their crowns will be opposed as distinguished from any intermeshing or matching of the corrugations of these strips. Between these corrugated strips I interpose a plain strip C of suitable material, preferably but not necessarily paper of the same general character as the material from which the corrugated strips A and B are formed. The corrugated strips and the interposed strips are held together to form the corrugated structure by means of a suitable adhesive applied either to the interposed strip or to the adjacent crowns *a* whereby such crowns will be caused to adhere to the interposed strip. It will be understood that the board is shown in Fig. 1, on an exaggerated or enlarged scale for convenience in drafting and that in actual practice the board will be much thinner although of course the board may have any desired thickness. A single facing strip D is applied to the corrugated stripB in any well-known manner, the crowns of such corrugated strip being caused to adhere to this facing strip. As a result the board has the strength of the ordinary double faced corrugated board by reason of the presence of the two strips C and D and the interposed strip B and also the strength of the other corrugated strip A, which, in addition, acts as an additional cushion preferably for the inside of a receptacle made from my board.

In Fig. 2 I have shown my invention embodied in a double-faced corrugated board formed by adding a second facing strip E to the board illustrated in Fig. 1. This board has the strength of two ordinary double-faced corrugated boards and, in fact, has increased strength and rigidity thereover by reason of the smaller sized corrugations, when the boards are of the same thickness.

In Fig. 3 I have shown a modified form

of construction of board which is the same as that illustrated in Fig. 2 with the exception that it has an interposed plain strip F which is considerably heavier or thicker and more rigid than the strip C or either of its own corrugated strips or facing strips. It is obvious that such strip F may be used in either of the forms illustrated in Figs. 1 and 2.

My board has advantages over the ordinary corrugated board whether it be of the simple form shown in Fig. 1, or the double-faced type shown in the other figures, in fact it possesses the greatest possible strength in all directions due to the smaller sized corrugations and to the presence of the interposed plain strip and the opposed relation of the corrugated strips secured thereto.

I claim:

1. As a new article of manufacture a board comprising two corrugated strips arranged with their corrugations parallel and the crowns and valleys of the corrugations directly opposed to each other, an interposed plain strip, and a facing strip on one of the corrugated strips.

2. As a new article of manufacture a board comprising two corrugated strips arranged with their corrugations parallel and the crowns and valleys of the corrugations directly opposed to each other, an interposed plain strip, and facing strips on the outer faces of both corrugated strips.

3. As a new article of manufacture, a board comprising two corrugated strips arranged with their corrugations parallel and the crowns and valleys of the corrugations directly opposed to each other, an interposed plain strip, and a facing strip on a corrugated strip, said plain strip being of heavier and more rigid material than the facing strip.

OLIVER H. HICKS.

Witnesses:
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