

E. M. HAWKINS & F. G. FEELEY.
JOINT FOR CORRUGATED PAPER BOARD.
APPLICATION FILED DEC. 27, 1913.

1,101,928.

Patented June 30, 1914.

Fig. 1

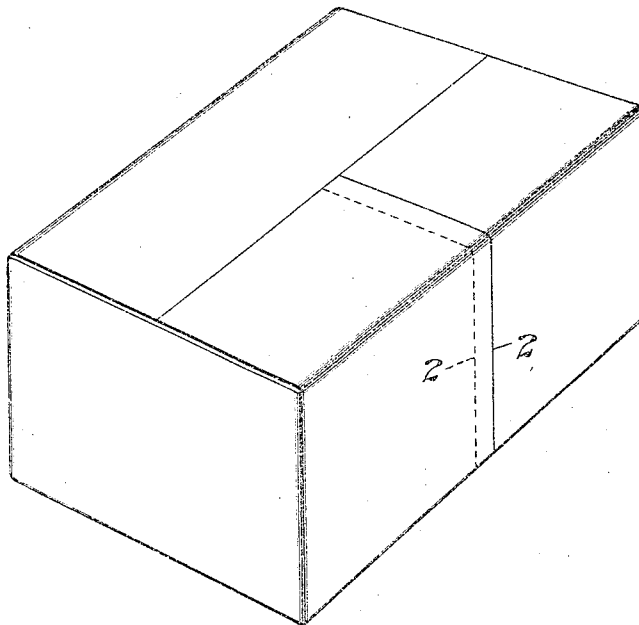
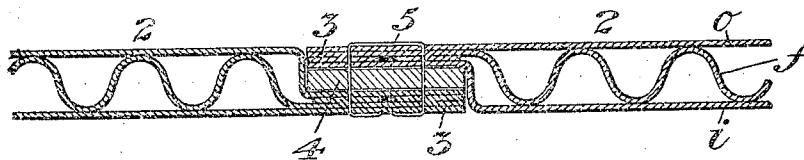


Fig. 2



WITNESSES
Chas. J. Claggett
A. M. Cassidy

INVENTORS
Edgar M. Hawkins
Frank G. Feeley
BY
Charles E. Dore
THEIR ATTORNEY

UNITED STATES PATENT OFFICE.

EDGAR M. HAWKINS, OF ROCHESTER, NEW YORK, AND FRANK G. FEELEY, OF CHICAGO, ILLINOIS, ASSIGNORS TO M. D. KNOWLTON COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

JOINT FOR CORRUGATED PAPER-BOARD.

1,101,928.

Specification of Letters Patent.

Patented June 30, 1914.

Application filed December 27, 1913. Serial No. 808,552.

To all whom it may concern:

Be it known that we, EDGAR M. HAWKINS and FRANK G. FEELEY, citizens of the United States, and residents, respectively, of Rochester, in the county of Monroe and State of New York, and of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Joints for Corrugated Paper-Board, of which the following is a specification.

This invention relates to a joint for corrugated board, and especially to a joint for corrugated paperboard boxes, and the main object of the invention is to provide as a substitute for the weak taped joints heretofore used for joining section of corrugated board a new type of joint having a strength equal to or greater than that of the board itself.

It is well known that the taped joint now in general use for joining the ends of the board in a paperboard box is the weakest part of such a box. The joint of the present invention is intended to be formed either wholly or mainly from the material of the board itself. This would be difficult to do and obtain a strong joint with corrugated board as formed in the past, as it was the regular practice to use lining sheets, particularly on the inside of the board, of insufficient strength for such a purpose. It is now intended, however, to make the corrugated board with lining papers of much greater strengths than those heretofore used, and these can be used to produce joints the strength of which will be equal to or greater than that of the board itself.

In carrying the invention into effect a corrugated board made from lining sheets and a corrugated filler of the desired strength is reduced in cross section at an end to be joined in such a manner as to be capable of receiving a portion of the other end of the board, and the two sections to be joined when placed together are secured in position by suitable means, as by stitching, or by staples, or by an adhesive. In the form of invention here shown, both of the ends to be joined are provided with tongues at one side thereof formed by crushing down the filler and these tongues, each comprising the two lining sheets of the board with the interposed crushed filler, are secured together in an overlapping relation.

In the accompanying drawings:—Figure 55 1 is a perspective of a one-piece container made from corrugated paperboard and having a joint formed in accordance with the present invention. Fig. 2 is an enlarged cross-sectional detail of the joint.

Similar reference characters designate like parts in all the figures of the drawings. 2-2 designate end sections of corrugated board suitable for the purpose of forming a joint from the materials of the board. This means that the filler *f* is of suitable material and that the inner and outer lining sheets *i* and *o* have considerable strength—sufficient to enable them to form, when properly combined as hereinafter described, a joint that will be at least as strong as the board itself. The end sections of corrugated board so constructed may then be suitably treated to produce a suitable joint.

In the present case, the two end sections 2-2 of the board are reduced by crushing down one side of each board to close contact with the opposite side for the proper distance. The sum of the thicknesses of the resulting two tongues 2-3, is considerably less than the thickness of the board, and necessitates the insertion of a filler between the tongues. For this purpose we prefer to employ a fiber strip or solid board 4, which may be the usual fiber container board of proper thickness. When inserted in place between the two tongues 2-3, the three-ply joint formed will be securely united, as by stitches, rivets, staples, or otherwise. Staples 5, are shown in Fig. 2 for making a strong joint. The filler 4 may extend up to or beyond the lines of the crushed portions, as desired.

It will be clear from the foregoing that the utilization of the strong lining sheets of the board in the formation of the joint in the manner illustrated and described will produce a joint of a strength equal to or greater than that of the board itself.

What we claim is:—

1. A joint for corrugated board, comprising a pair of overlapping board sections each having at one side thereof a reduced tongue formed by the crushing of the corrugated filler, and means for securing said tongues together.

2. A joint for corrugated board, comprising a pair of overlapping board sections

each having at one side thereof a reduced tongue formed by the crushing of the corrugated filler, a solid board for filling the space between said tongues, and means for
5 securing said tongues and solid board together.

3. A joint for corrugated board, comprising a pair of overlapping board sections, each composed of two lining sheets with an
10 interposed corrugated filler and each having at one side thereof a reduced tongue comprising the opposite lining sheets, and means for securing said tongues together.

4. A joint for corrugated board comprising a pair of overlapping board sections,
15 each composed of two lining sheets with an interposed corrugated filler and each having

at one side thereof a reduced tongue comprising the opposite lining sheets, a board interposed between said tongues, and means 20 for securing said tongues and board together.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

EDGAR M. HAWKINS.
FRANK G. FEELEY.

Witnesses as to Edgar M. Hawkins:

THOS. D. PATTON,
HENRY A. WOOD.

Witnesses as to Frank G. Feeley:

R. C. GULLEN,
N. F. MORRISSEY.