E. M. HAWKINS & F. G. FEELEY.

JOINT FOR CORRUGATED PAPER BOARD.

APPLICATION FILED DEC. 27, 1913.

1,101,927. Patented June 30, 1914.

Fig. 1

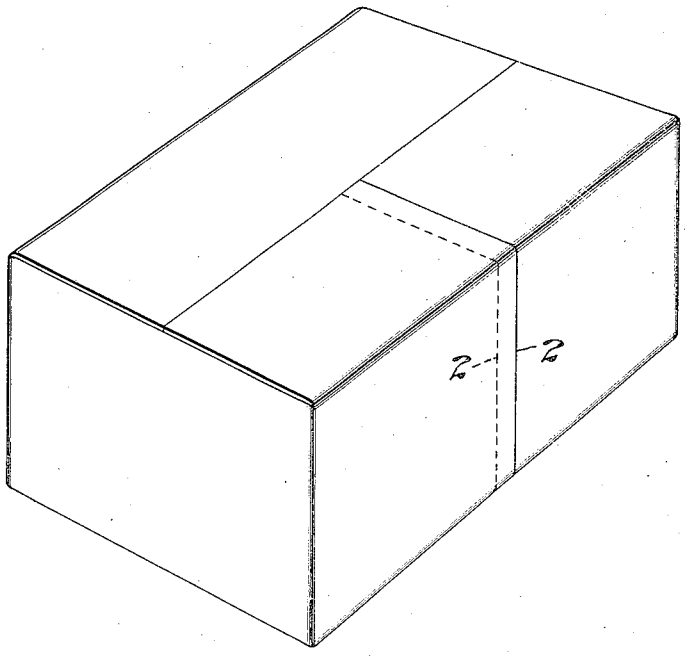
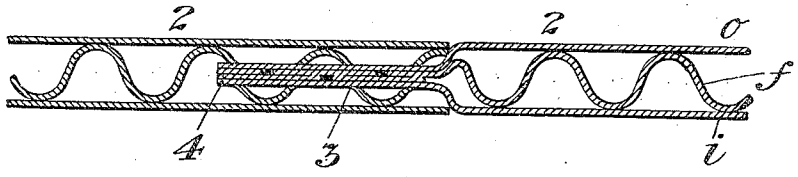


Fig. 2



WITNESSES

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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.

1,101,927. Specification of Letters Patent. Patented June 30, 1914.

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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 sections 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 edhesive. In the form of invention here shown, one of the ends to be connected is reduced in thickness by the crushing of the corrugated filler and the other is formed with an opening to receive said reduced portion.

In the accompanying drawings:—Figure 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 end of one section is split a sufficient distance, as shown at 3, to receive a correspondingly positioned tongue 4, of the other end section. Both the slit 3 and the tongue 4 are preferably located centrally of their respective sections 2—2. The tongue 4 may be formed in any suitable manner, but preferably by reducing the filler of the corrugated board by crushing, instead of removing it. When this tongue is inserted in the slit 3 it may be secured in place in any suitable manner, as by stitching, or by staples, or by any suitable adhesive. In the present case an adhesive is employed as the securing means.

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 complementary board-sections one of which is reduced in cross section by the crushing of the corrugated filler, and means for securing said sections together.

2. A joint for corrugated board, comprising a pair of complementary board-sections one of which is disposed between the sides of the board and is reduced in thickness by the crushing of the corrugated filler and the

other of which has an opening to receive said reduced section, and means for securing said sections together.

3. A joint for corrugated board, comprising a pair of complementary board-sections one of which is a substantially central tongue reduced in thickness by the crushing of the corrugated filler and the other of which has an opening to receive said reduced tongue, and means for securing said sections 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,
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Witnesses as to Frank G. Feeley:
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