C. H. CROWELL.

SAFETY SEALING TAPE.

APPLICATION FILED FEB. 14, 1913.

1,167,338. Patented Jan. 4, 1916.

Fig. 1.

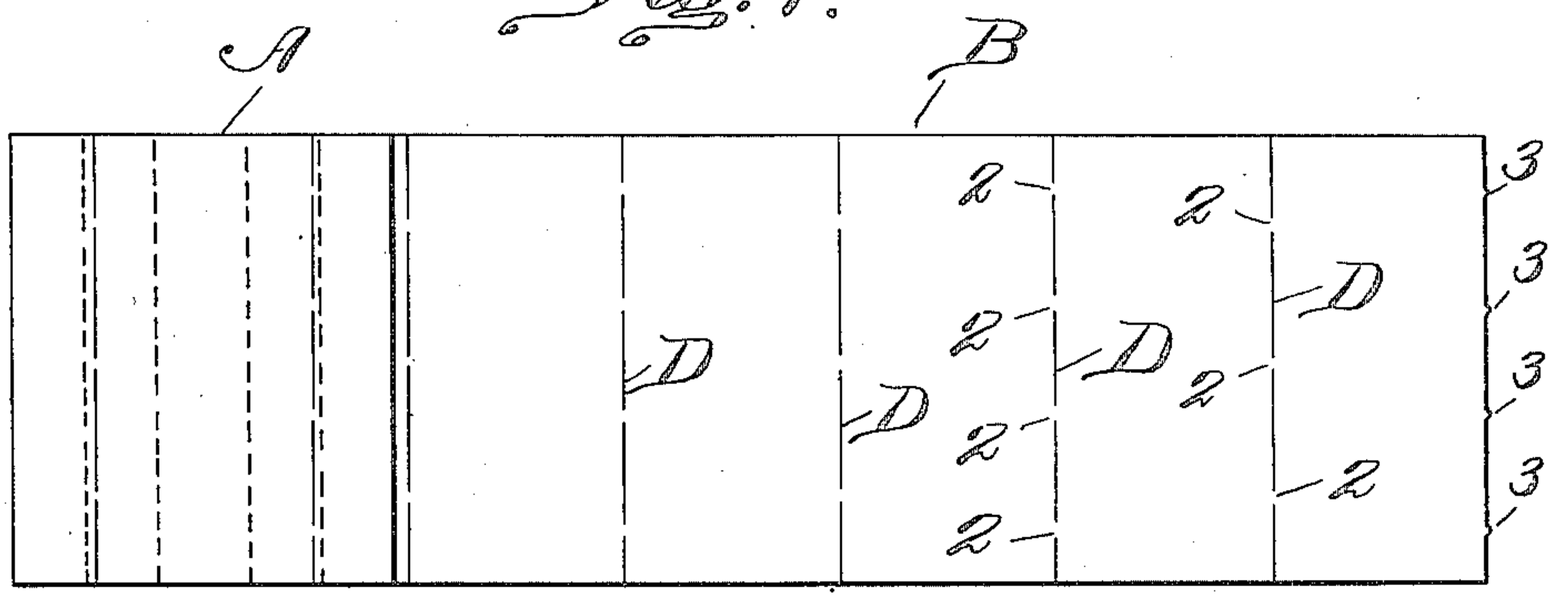

Fig. 2.

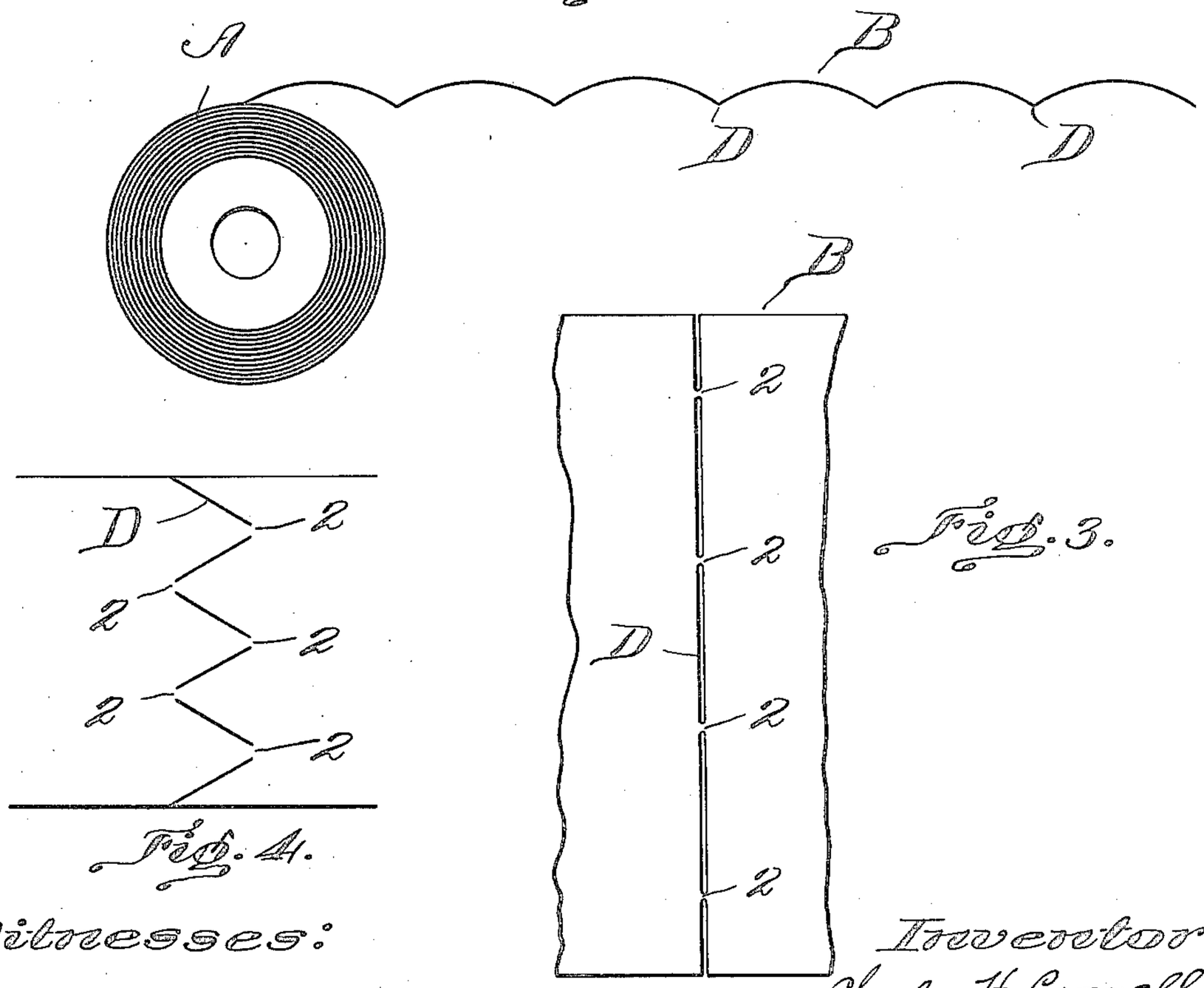

Fig. 3.

Fig. 4.

Witnesses:

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UNITED STATES PATENT OFFICE.

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SAFETY SEALING-TAPE.

1,167,338. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed February 14, 1913. Serial No. 748,298.

To all whom it may concern:

Be it known that I, CHARLES H. CROWELL, a citizen of the United States, residing at Swampscott, county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Safety Sealing-Tapes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has for its object a safety sealing tape for sealing cartons, packages and the like.

The invention is fully set forth in the following description, taken in conection with the accompanying drawings, and the novel features thereof are pointed out and clearly defined in the claims at the close of this specification.

In the drawings, Figure 1 is a plan view of a roll of tape embodying my invention with a portion of the tape pulled off the roll. Fig. 2 is a top or edge view thereof. Fig. 3 is a detail enlarged showing more clearly the partial severance of the sections. Fig. 4 is a detail showing a modification.

Cartons made from light and relatively strong material, such for example as paper board, are extensively used in the shipment of merchandise of various kinds. These cartons are usually provided with flaps, which after the carton is filled, are folded down and the edges of which meet. These meeting edges are usually sealed by means of a gummed tape which varies in width and size with the size and character of the package to be sealed. The manufacturers of such cartons also use this sealing tape for closing and sealing certain joints which are joined edges of the carton. It has been found that packages so sealed have been opened by unauthorized persons, more especially while in process of transhipment, and a portion of the contents of the package removed. In such cases the forwarding company is responsible for the loss and as a result these companies have refused to accept for shipment such packages when they contain certain kinds of goods, which they have found by experience are liable to be stolen while the package is being forwarded. The opening of these packages has usually been accomplished by carefully removing the gummed tape and after the contents, or a portion thereof, of the package has been removed, carefully replacing the tape so that the package will present its original appearance, and nothing will appear to indicate that it has been opened or tampered with. The tape is frequently provided with a body or backing of fabric to increase its toughness and strength and such tape when carefully moistened may frequently be removed without tearing or disfiguring it.

My invention has for its object to provide a tape, which I have termed a "safety tape" which may be drawn from the roll, moistened or glued and applied to the package in the packing room in the same way as the tape hitherto employed, but which is so constructed that it can only be removed, if at all, in short sections which would require more time to replace than is at the disposal of any person surreptitiously opening the package during shipment, and which when replaced in such small portions or sections would indicate clearly that the package had been tampered with. The employment of my tape therefore avoids the objections hitherto raised to the closing or sealing of the cartons or packages and renders them acceptable to the forwarding companies.

My invention will be readily understood from the following description.

Referring to the drawings, at A is shown a roll of tape put up in the usual manner. A strand of this tape embodying my invention is shown at B. The strand of tape is partially severed at short intervals transversely thereof as indicated at D. The sections of the strip thus formed are tacked together or attached only at the points marked 2, see the enlarged detail Fig. 3. These unsevered points 2 are only large enough to give sufficient strength to permit the sealer of the carton to draw the tape from the roll, properly moisten or glue it, and rub it down on the carton to cause it to adhere firmly thereto without parting the sections. The size and consequent strength of these connecting points 2 will, as will be clear, depend to a considerable extent upon the character of the material from which the tape is constructed. It will further be noted that the points 2 in the line D of partial severance are not the same for each section. In the tape shown Fig. 1 alternate lines of severance have three points 2 at which the tape is uncut, while the intermediate lines of severance have four such points. This arrangement of the uncut points enables the sections of tape to be more nearly severed

while at the same time attaching them sufficiently together to permit the tape to be drawn from the roll and properly moistened or glued and applied by the original packer and sealer of the package or carton. I do not desire to limit myself to the employment of any given number of unsevered points of attachment 2 between the sections since these may be varied almost indefinitely. Neither is it essential that the lines of partial severance D should be at right angles to the edges of the tape. Their exact position on the tape might, as will be obvious, be varied as desired, or, as might be found most efficient in a given kind of tape used. A modified form of line of partial severance is shown Fig. 4. In this case the line is in a zig-zag course across the tape. In this figure the connecting unsevered points are also indicated at 2. When such a tape composed of sections partially severed from each other has been applied by adhesive to a package or carton, and has become set and dried, any attempt to remove the tape will result in the breaking of the points 2 and the tape will consequently require to be removed section by section. Furthermore the removal of a section will leave a slight frayed or ragged projection such as indicated at 3 Fig. 1. Such a frayed point will be noticeable upon inspection after the tape has been removed and replaced.

To further insure against the removal of the tape embodying my invention from a carton or package I may waterproof the back or side of the tape opposite to that to which the adhesive is applied by coating it with a waxy substance, such as paraffin or the like. The employment of such a waterproof tape is advantageous in many ways but it is especially an advantage in my improved safety tape because it renders it very difficult or impossible to moisten the tape and so effect its removal from a carton or package to which it has been applied. For all the usual cartons however for the shipment of tape embodying my invention although not waterproofed renders the opening or tampering with the package in transit without detection practically impossible.

What I claim is;

1. A sealing tape for cartons comprising a strip of fibrous material having a series of weakened lines extending transversely of the tape from side to side, forming a series of unweakened sections extending longitudinally of the tape, said weakened portions having strength sufficient to hold the strip together while being applied to a carton, but not having sufficient strength to hold the strip together while being stripped off.

2. A sealing tape for cartons comprising a strip of fibrous material, a series of lines of transverse cuts extending from one side of the material to the other, each of said cuts in said lines of cuts being separated to leave a portion of the material intact, said lines of cuts forming a series of unweakened sections extending longitudinally of the tape, the intact portions having sufficient strength to hold the strip together while being applied to a carton, but not sufficient strength to hold the strip together while being stripped therefrom.

3. In a sealing tape for cartons, the combination of a strip of fibrous material divided into a plurality of sections extending longitudinally of the tape by a plurality of severed portions, said severed portions being separated by unsevered portions of sufficient strength to hold the strip together while being applied to a carton, and a waterproof coating on one side of said strip covering the unsevered portions thereof.

4. In a sealing tape for cartons, the combination of a strip of fibrous material, a series of transverse cuts extending from one side of the material to the other, each of said cuts in said lines of cuts being separated to leave a portion of the material intact, said lines of cuts forming a series of unweakened sections extending longitudinally of the tape, the intact portions having insufficient strength to hold the strip together while being stripped from the carton, a coating of adhesive on one side of said strip, and a wax water-proof coating on the other side of said strip covering the unsevered portions thereof.

In testimony whereof I affix my signature, in presence of two witnesses.

CHARLES H. CROWELL.

Witnesses:
WILLIAM A. MACLEOD,
ALICE H. MORRISON.