

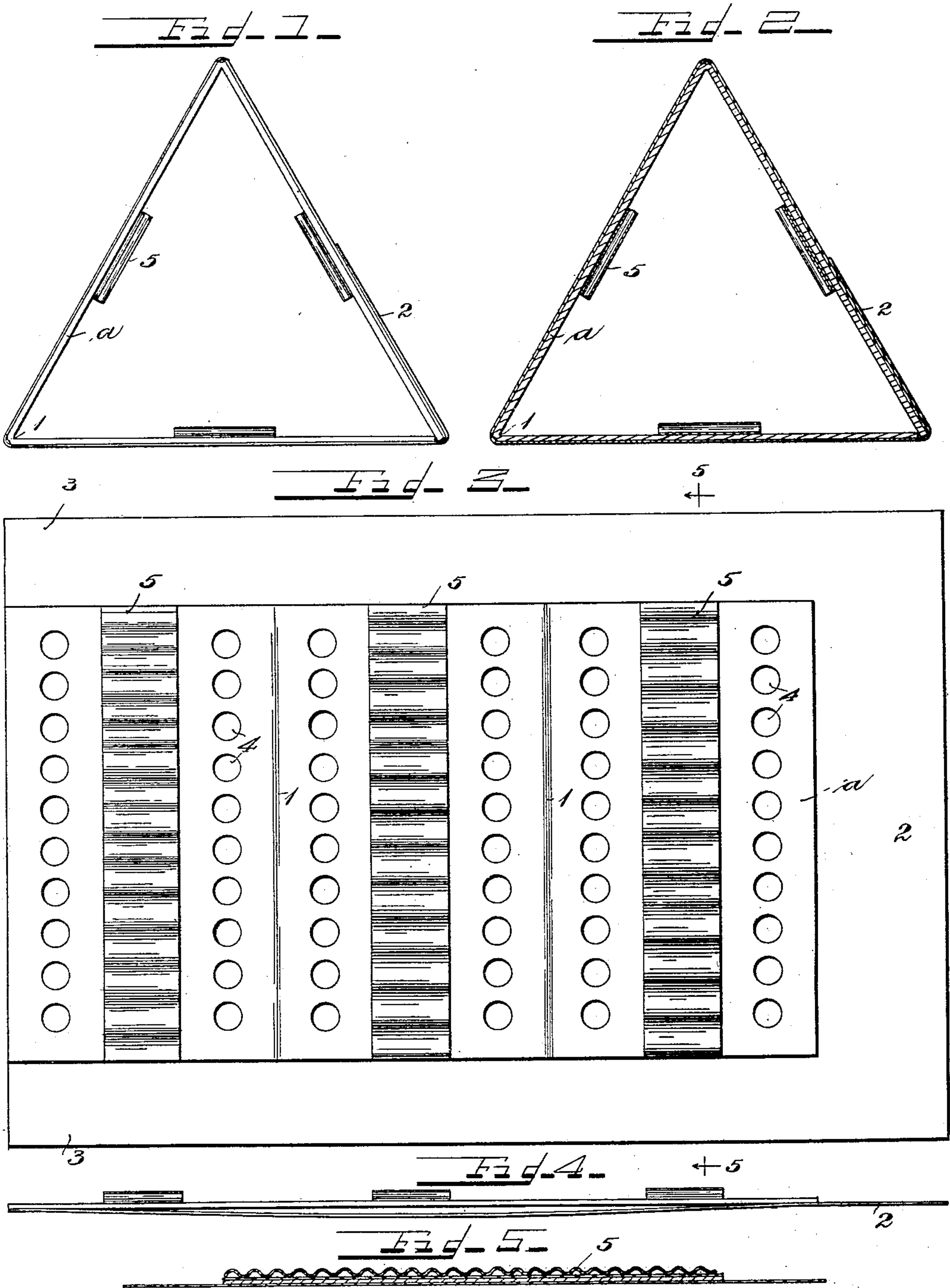
No. 746,014.

PATENTED DEC. 8, 1903.

E. H. CALLAHAN.
MAILING WRAPPER.
APPLICATION FILED MAY 9, 1900.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses.

Chas. J. Schmitt.
May W. Zabel

INVENTOR
E. H. CALLAHAN
BY Charles A. Brown & Co.
ATTORNEYS

No. 746,014.

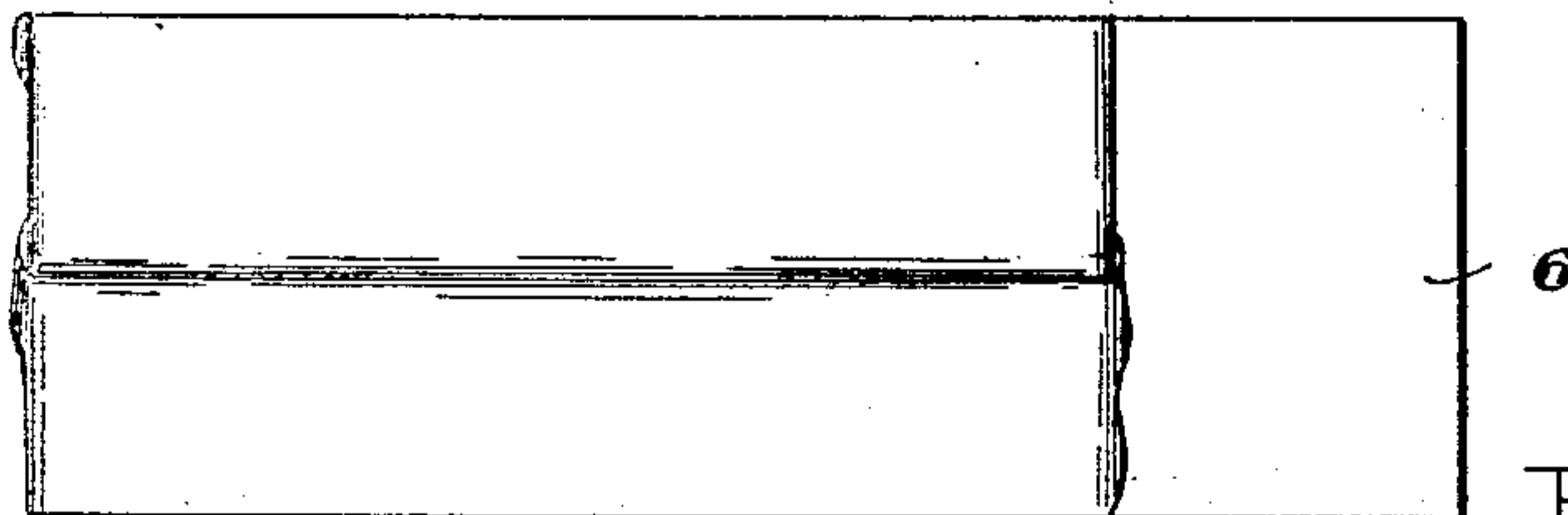
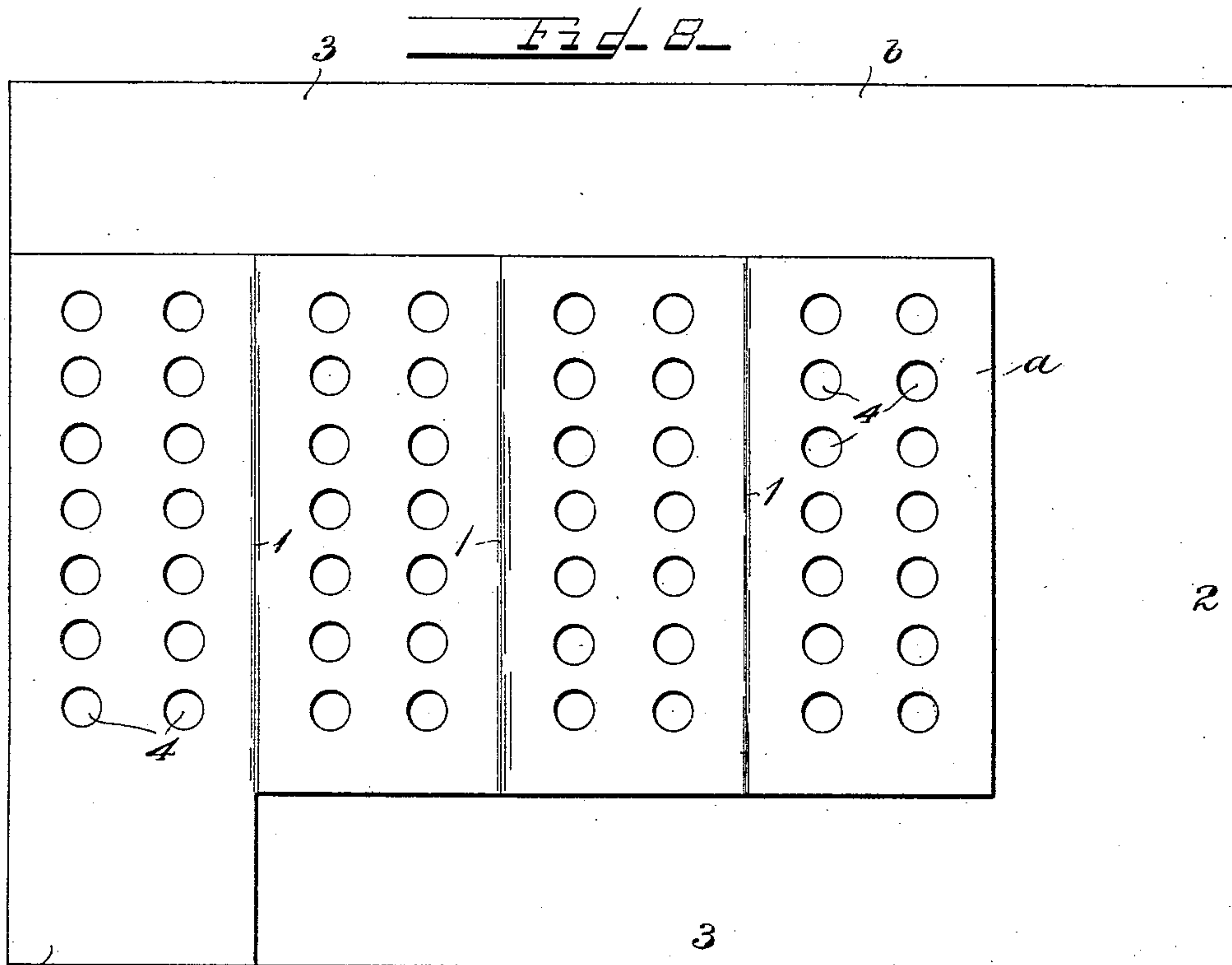
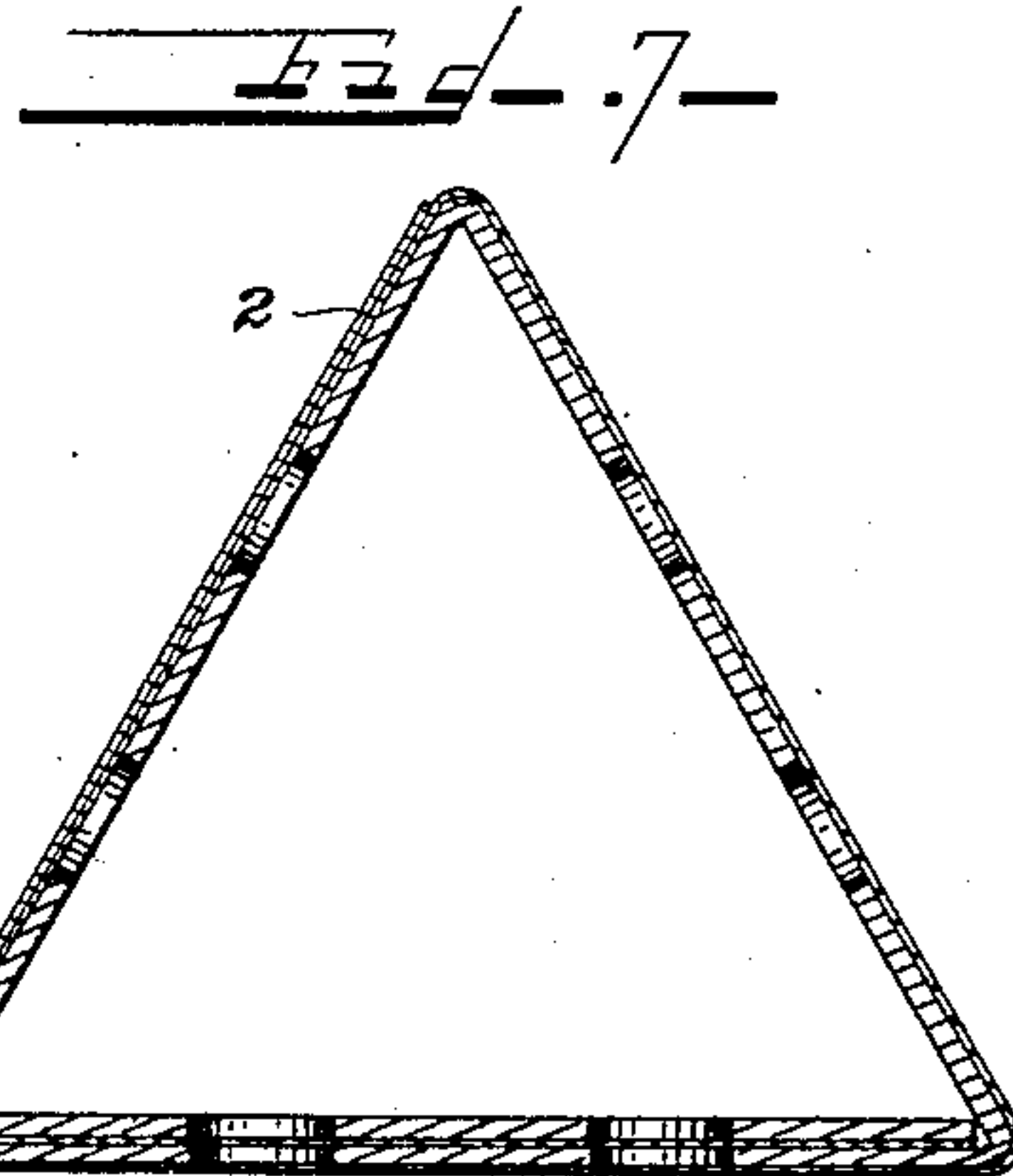
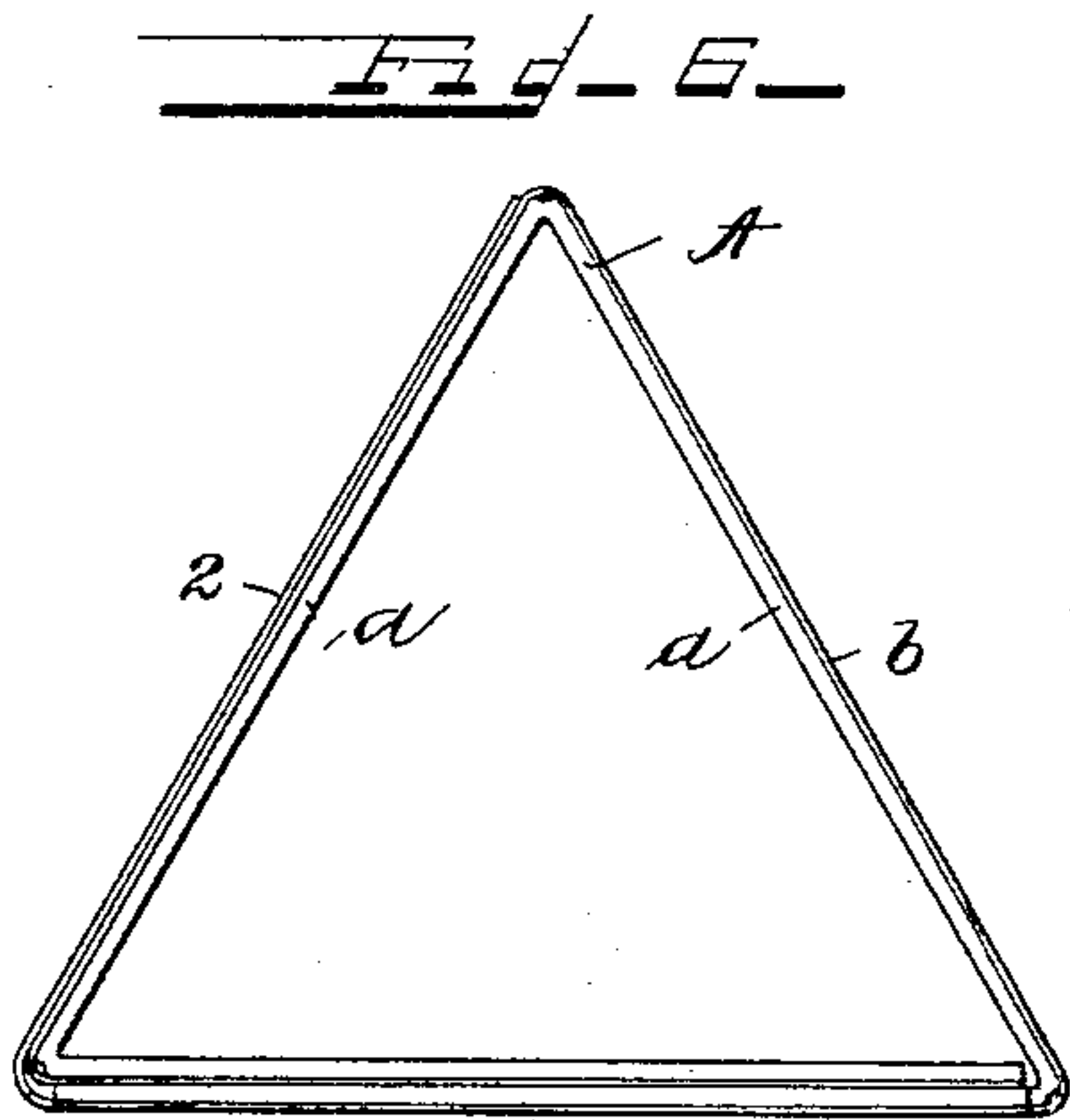
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2 SHEETS—SHEET 2.



WITNESSES

Chas. J. Schmidt.
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Fig. 9
BY

Charles A. Brown & Co.
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INVENTOR

E. H. CALLAHAN

UNITED STATES PATENT OFFICE.

EARLE H. CALLAHAN, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
AMERICUS F. CALLAHAN, OF CHICAGO, ILLINOIS.

MAILING-WRAPPER.

SPECIFICATION forming part of Letters Patent No. 746,014, dated December 8, 1903.

Application filed May 9, 1900. Serial No. 16,035. (No model.)

To all whom it may concern:

Be it known that I, EARLE H. CALLAHAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Mailing-Wrappers, (Case No. 2,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to wrappers or covers in and by which packages or articles can be shipped and mailed from one place to another.

The principal object of the invention is to render it practically impossible for the article to be injured in transmission, no matter to what hard usage it may be subjected.

To the attainment of the foregoing and other desired ends my invention consists in matters hereinafter set forth.

In the accompanying drawings, Figure 1 is an end view of a wrapper or tube embodying my invention. Fig. 2 is a transverse section of the same. Fig. 3 is a view of the material out of which the wrapper is composed preparatory to forming the same. Fig. 4 is an end view of the material shown in Fig. 3. Fig. 5 is a transverse section on line 5 5 in Fig. 3. Figs. 6, 7, and 8 are views corresponding to Figs. 1, 2, and 3 of a modified form of the invention, and Fig. 9 is a top view of a wrapper supposed to contain an article and having its ends closed.

In the drawings I have shown to illustrate my invention a wrapper having a triangular cross-section, although in the broader features of the invention I do not wish to be understood as confining myself to a wrapper of this kind. When having a triangular cross-section, however, the wrapper is preferably composed of three sides *a a a* of equal width, so that the cross-section is that of an equilateral triangle. The sides *a a a* are understood to be composed of any suitable material, such as cardboard or the like. In accordance with my invention the framework of the wrapper thus composed of a plurality of sides is surrounded by a sheet or strip *b* of thin and flexible yet strong and inelastic material—such, for example, as heavy wrapping-

paper. This sheet or strip of thin material is applied so that it entirely surrounds the sides *a a a* and also so that when it surrounds them it is under tension in a direction transversely of said sides—that is to say, the sheet or strip *b* when surrounding the sides *a a a* tends to compress them and reduce the cross-sectional size of the wrapper. As a result the sides *a a a* are continually subject to compression, which tends to make them more compact and resistant to pressure, while at the same time there is a continual tendency to bulge these sides longitudinally between their meeting-lines, or, in other words, there is a tendency for the wrapper to assume a circular instead of a polygonal cross-section. From this it will be obvious that the sides *a a a* have that resistance to inward pressure which is characteristic of a circular body. Consequently any pressure directed against these sides will be resisted by a resistance very much greater than the normal resistance of the sides and covering of thin material when the latter is not under transverse tension. By actual experiment and use of wrappers constructed in this way with an outer layer of thin material under transverse tension I find that the resistance to crushing or indentation is exceedingly and surprisingly great. With a wrapper composed of ordinary pasteboard surrounded by a layer of wrapping-paper under tension I find it practically impossible to crush the wrapper by force exerted by the hand. It is a fact obvious to all that a wrapper constructed in the ordinary way with just the cardboard or a cardboard with a covering of paper not under tension can be very easily crushed by hand. As a result of the foregoing construction, therefore, I secure a wrapper which defies and resists all ordinary crushing or injuring force which it receives either in the mail or in being sent by express.

In constructing the wrapper I find a very desirable way is to prepare the sheet or strip of thin material and the material out of which the sides are to be composed and to secure the latter firmly to or upon the former, as by gluing the two together. This is shown in Fig. 8 of the drawings, the strip or sheet *b* being arranged in a flat condition with the mate-

rial for the sides *a* laid upon and glued to it. As thus arranged the combined pasteboard and thin material are bent along lines 1 1 into the form of the wrapper. It is obvious that as this bending occurs the covering *b* will be drawn taut and subjected to tension and that when the wrapper is in its final completed condition this covering is and remains under transverse tension.

The covering *b* is desirably attached to the inner or board layer *a* only along the outer longitudinal edges of the latter, Fig. 3, whereby the cover can adjust itself properly upon all of the sides. The portion of the cover *b* between the lines of attachment to the board *a* is desirably made slightly wider than the distance between such lines, as shown in Fig. 4, the additional width causing the cover to sag or droop a little, as indicated in said figure. The extent of this excess width of the cover is sufficient to allow the proper bending of the board, but at the same time slight enough to cause the cover to be subjected to proper transverse strain when the board is bent. The cover *b* is also desirably made wider than the total width of the board *a*, so that when the wrapper has been formed by bending the two the additional portion 2 of the cover *b* can overlap one of the sides of the wrapper and be secured, as by gluing, to such side. Any other means could of course be employed for securing the folds in proper relative position. The wrapper is then ready to hold the article for shipment. The cover *b* is also desirably made longer than the layer *a* of inner material, so as to form end pieces or edges 3 3, whereby after the article has been inserted the ends 3 3 can be tucked into the wrapper, so as to close the same.

The lines 1 1, along which the inner material *a* is to be folded, are conveniently scored, so as to permit and secure the proper fold.

The layer of material forming the sides *a a a* can be of any substantial material and can have any desired constructional characteristic. In the wrapper shown in Figs. 1 to 5, inclusive, this material is conveniently provided with holes or apertures 4 4 to lighten the structure and is also provided with corrugated strips 5 5 to bind or hold the article properly in position.

In the wrapper shown in Figs. 6 to 9, inclusive, the sides *a a* are provided with rows of apertures or holes, but have not the corrugated strips 5 5 of the arrangement of Figs. 1 to 5. In this last-mentioned construction I have shown the wrapper having one side of double thickness, which is formed by making the material for the sides sufficiently wide for four sides and bending the fourth one over the first, as well shown in Figs. 6 and 7. In this construction I have shown one of the sides provided with an end or tag 6, which extends beyond the end of the wrapper when the ends are tucked in, Figs. 8 and 9. This is provided for the stamp, which can be applied to it so that when the stamp is canceled

the wrapper will not be subjected to the force ordinarily employed to cancel the stamps.

While the invention is applicable to polygonally-formed structures, I find that it is practically advantageous in a wrapper having a triangular cross-section.

It will be seen that the wrappers can be prepared and shipped in a flat condition and can be bent into proper form after being received. This is a distinct commercial advantage, as it allows the device to be shipped and stored in large quantities in a very convenient manner.

From the foregoing it will be seen that by my invention I can provide an exceedingly strong, durable, and reliable wrapper and that I can make the same in a very simple, rapid, and expeditious manner.

What I claim as my invention is—

1. A polygonal wrapper consisting of inner and outer layers of material bent along longitudinal lines so as to form the sides or walls of the wrapper, the outer layer being attached to the inner layer at such points that when the wrapper is formed, the outer layer tends to crush the inner layer, and the inner layer being sufficiently stiff to resist such crushing tendency, and being continuous at the bending-lines, substantially as described.

2. A polygonal wrapper consisting of inner and outer layers of material bent along longitudinal lines so as to form the sides or walls of the wrapper, the outer layer being attached to the inner layer at such points that when the wrapper is formed, the outer layer tends to crush the inner layer, and the inner layer being sufficiently stiff to resist such crushing tendency and being appreciably thick and continuous at the bending-lines, substantially as described.

3. A wrapper consisting of a plurality of sides arranged in polygonal form, and composed of continuous layers of stiff and flexible material, which are bent so that the stiff material is on the inside, and the flexible material is on the outside, the outer layer being secured to the inside one, only at the side edges of the latter, and being of such width as to be subjected to transverse strain when the wrapper is formed, substantially as described.

4. A wrapper comprising three sides of pasteboard material provided with perforations, and having their interior surfaces furnished with corrugated strips; and an outer covering of wrapping-paper secured to said sides under transverse tension, and having an overlapping end portion which overlaps and is secured to one of said sides, substantially as described.

5. A wrapper comprising a plurality of sides of stiff material and a cover of flexible material surrounding said sides and subjected to transverse strain, the said cover being slightly wider than the board and secured thereto only at the outer longitudinal edges thereof, substantially as described.

6. As an article of manufacture, a layer of

stiff material adapted to be bent so as to form a structure having a polygonal cross-section; and a layer of flexible material of substantially the same width as the layer of stiff material, the said layer of flexible material being secured to the layer of stiff material along longitudinal lines, and left free from the same between such lines of attachment whereby when the layers are bent to form the wrapper, the outer layer will be subject to transverse stretch, substantially as described.

7. As an article of manufacture, a layer of stiff material adapted to be bent so as to form a structure of polygonal cross-section; and a layer of flexible material secured to the layer of stiff material only along the longitudinal edges of the latter, and made slightly wider than the distance between the lines of attachment, but sufficiently narrow to subject the stiff material to transverse compression

and the flexible material to transverse tension when the article is formed into a wrapper, substantially as described.

8. As an article of manufacture, a layer of stiff material adapted to be bent so as to form a structure of polygonal cross-section, and a layer of flexible material secured to the layer of stiff material along longitudinal lines but free of said stiff material between the longitudinal lines, the flexible material being adapted, when the stiff material is bent to form a structure of polygonal cross-section, to be subjected to transverse strain, substantially as described.

In witness whereof I hereunto subscribe my name this 16th day of April, A. D. 1900.

EARLE H. CALLAHAN.

Witnesses:

J. W. JENKINS,
A. F. CALLAHAN.