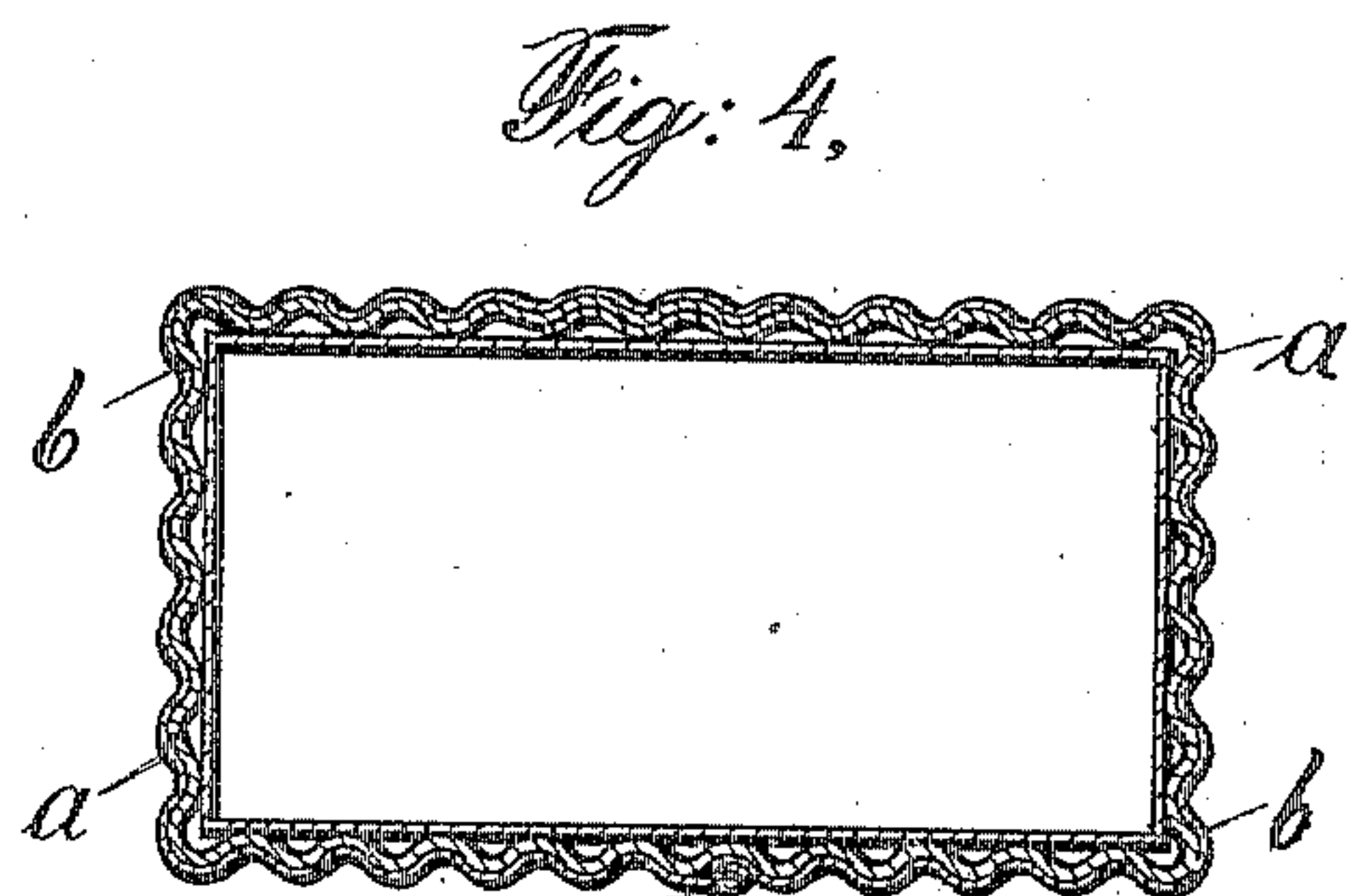
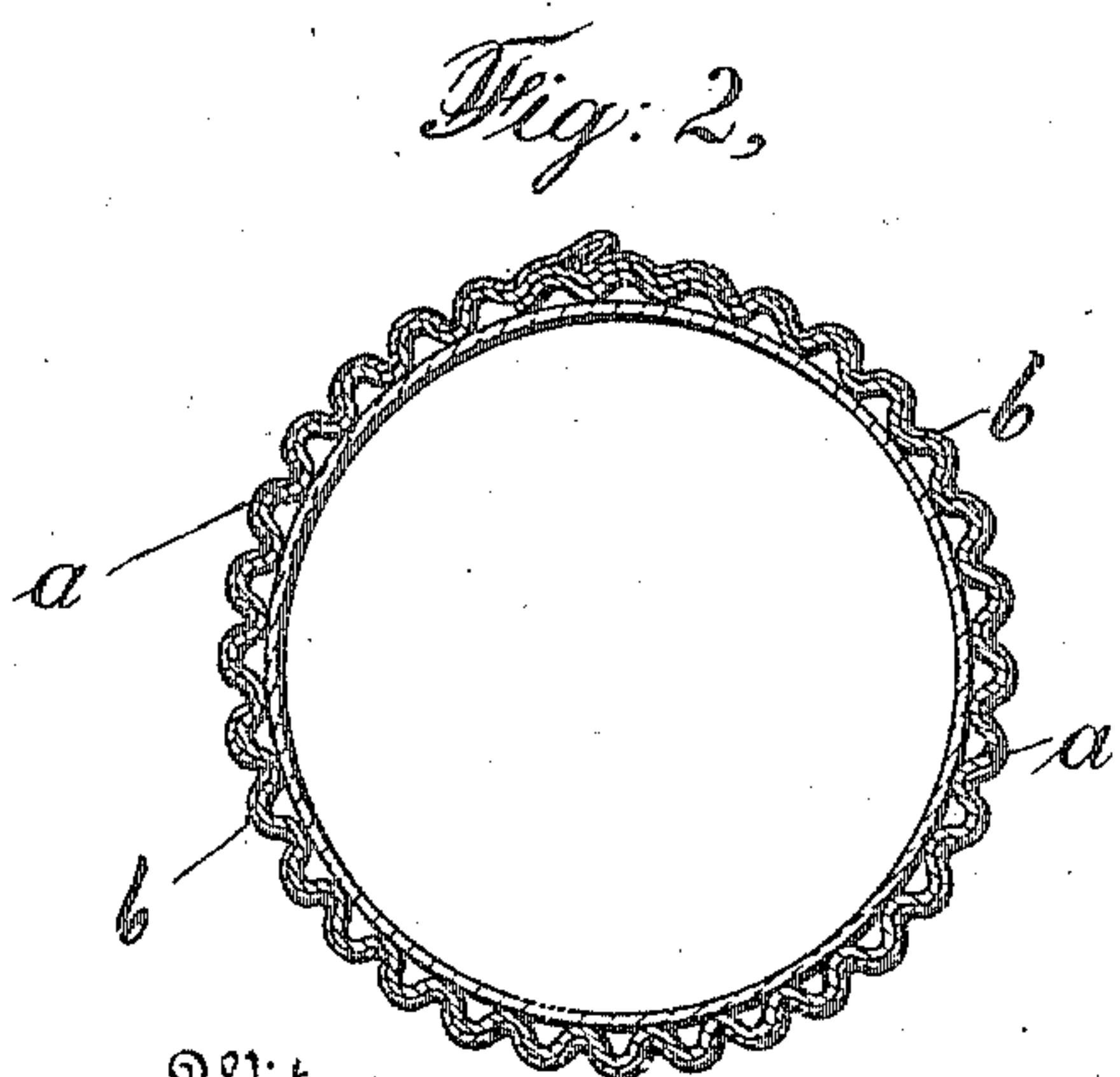
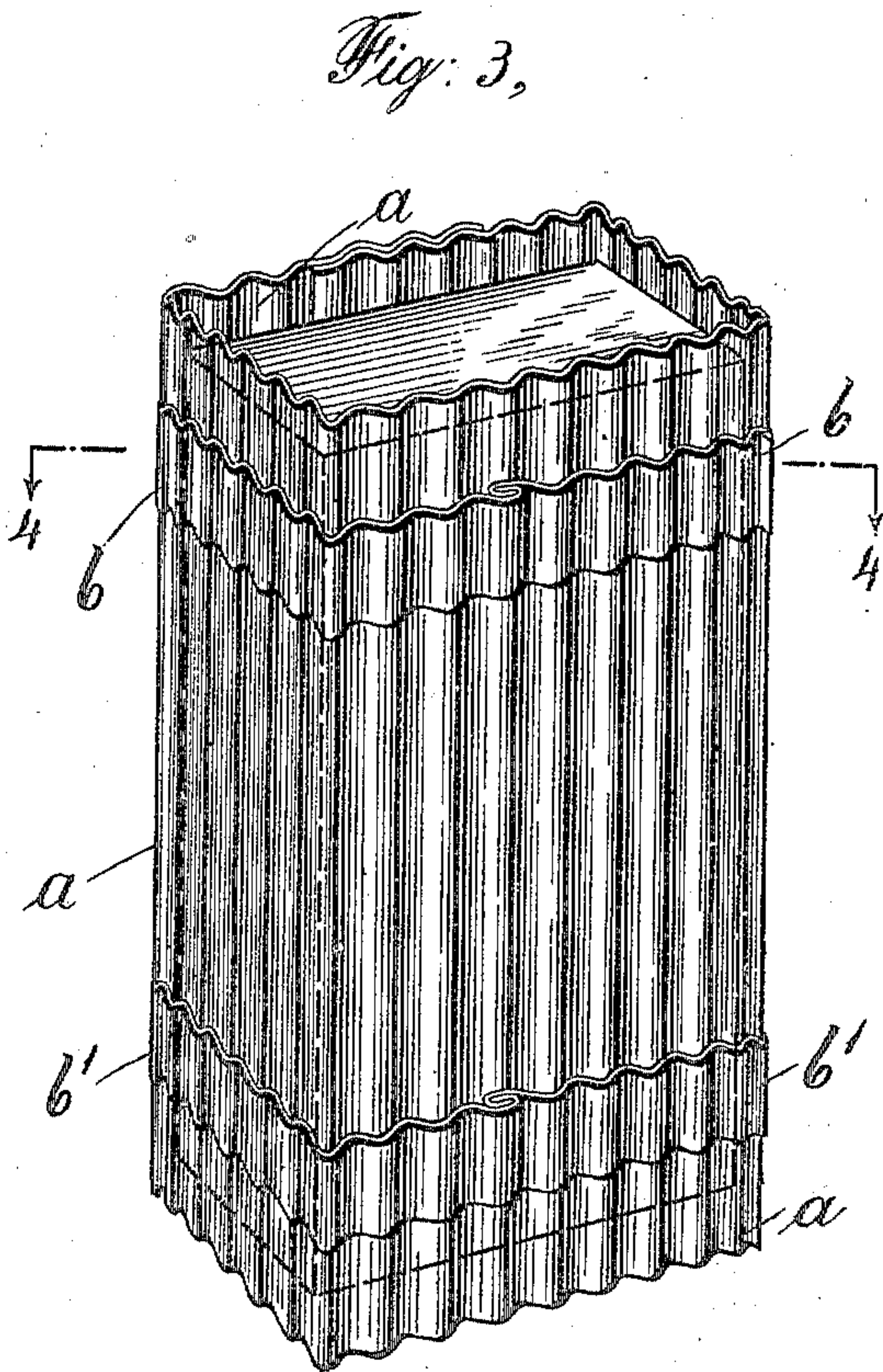
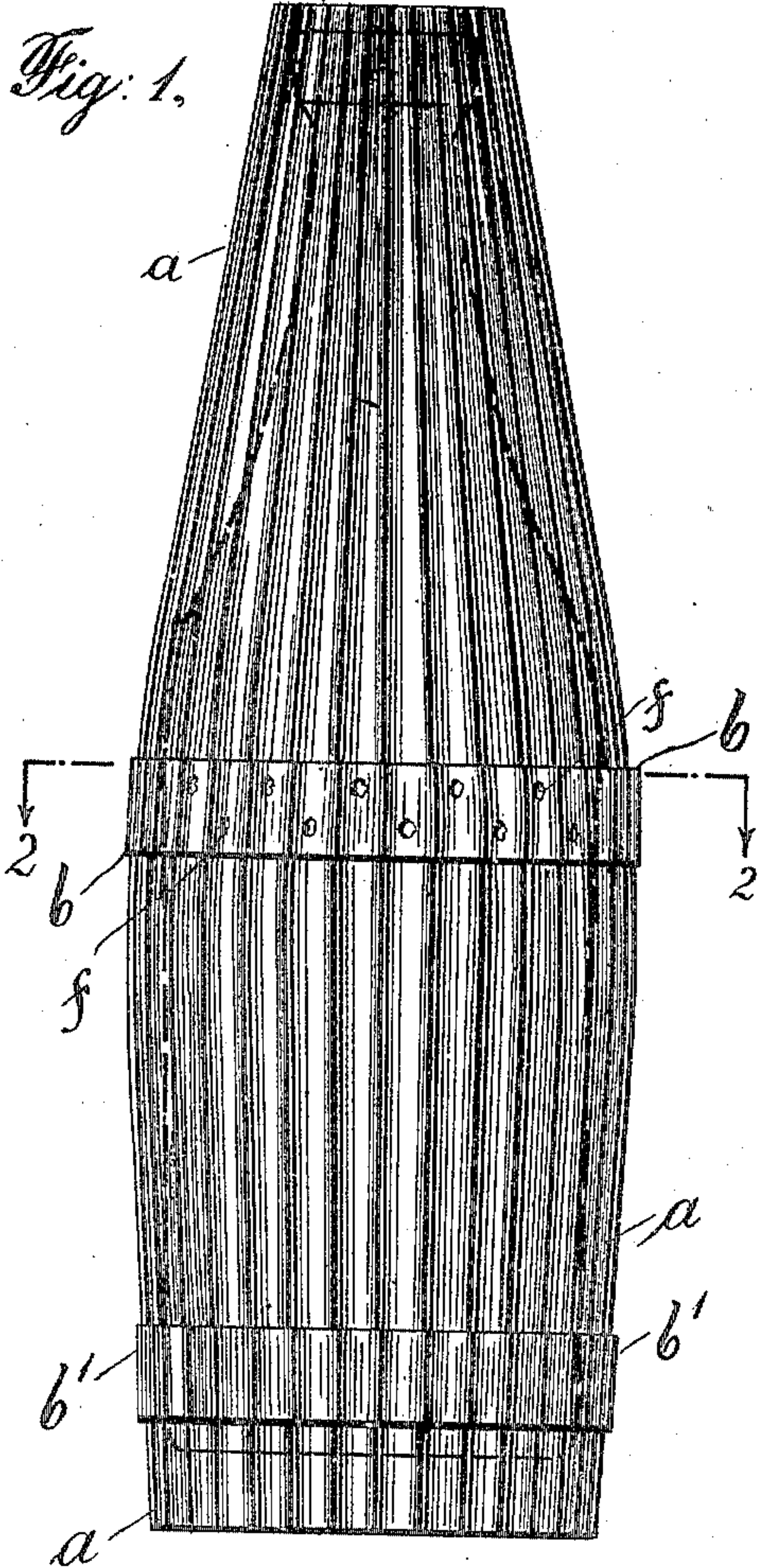


X. PÈNE.
BOTTLE WRAPPER.
APPLICATION FILED OCT. 5, 1908.

950,785.

Patented Mar. 1, 1910.
2 SHEETS—SHEET 1.



Witnesses:
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950,785.

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2 SHEETS—SHEET 2.

Fig. 5,

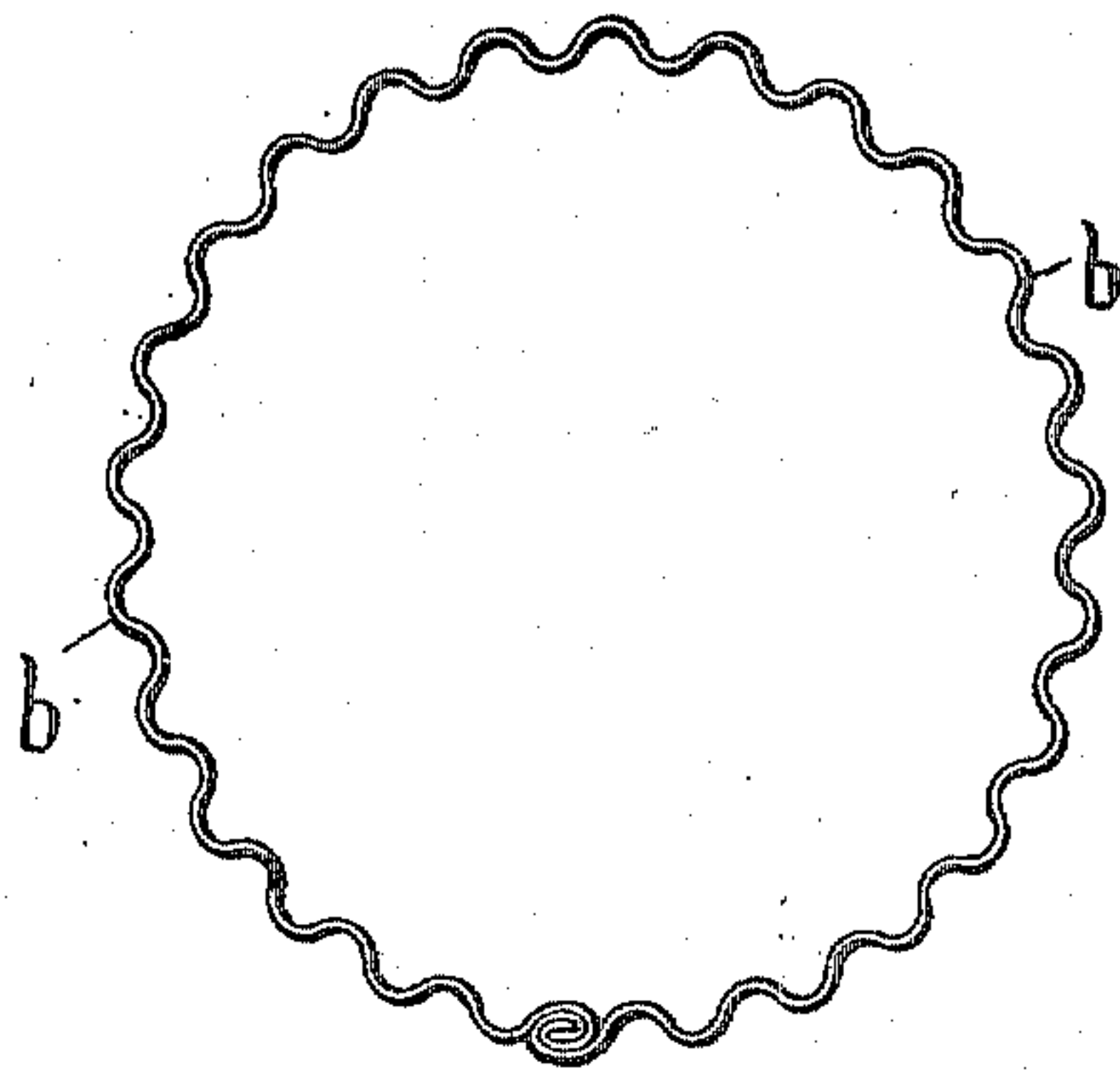


Fig. 6,

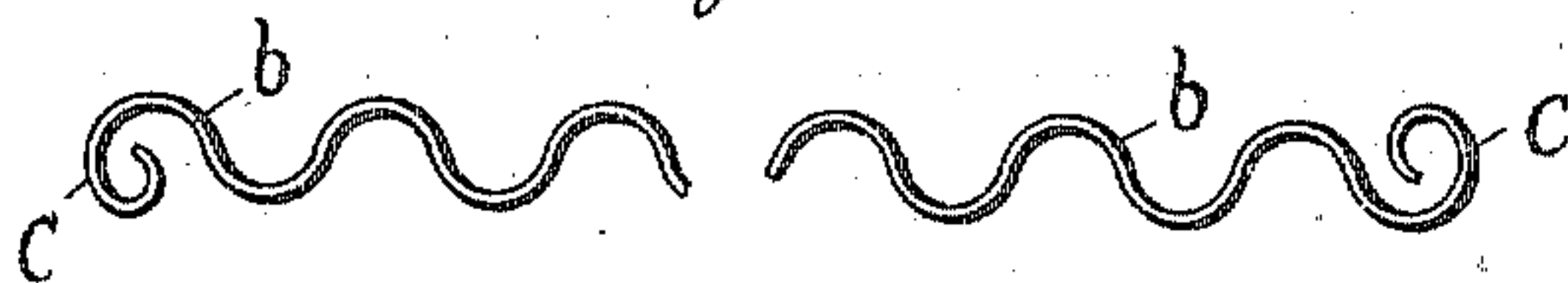


Fig. 7,



Fig. 8,

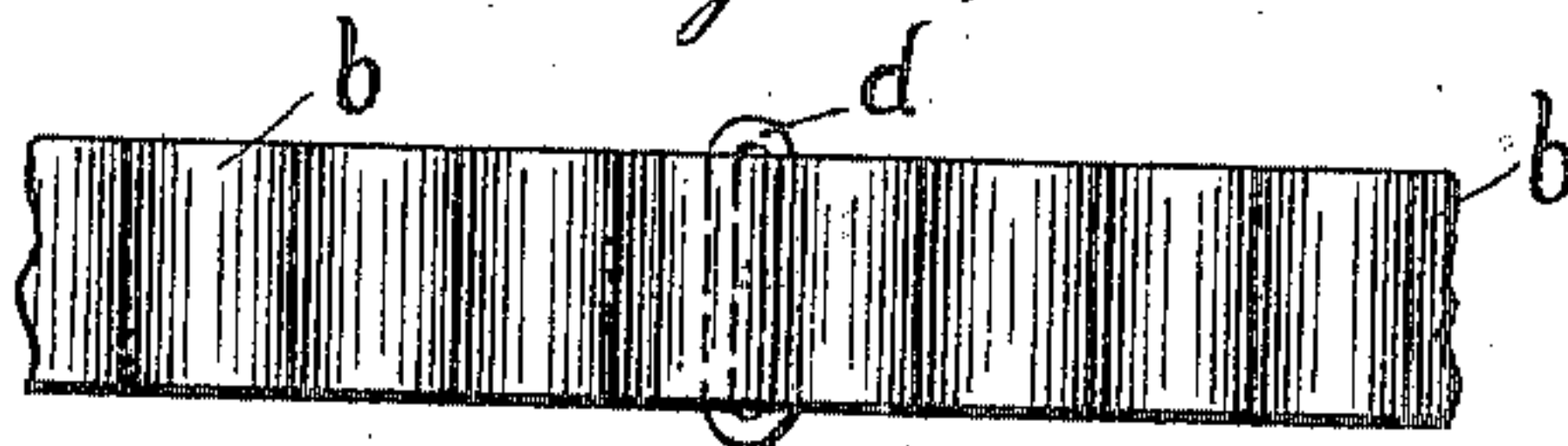


Fig. 9,



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UNITED STATES PATENT OFFICE.

XAVIER PÈNE, OF OZONE PARK, NEW YORK, ASSIGNOR TO ROBESON L. LOW, TRUSTEE,
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BOTTLE-WRAPPER.

950,785.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed October 5, 1908. Serial No. 456,347.

To all whom it may concern:

Be it known that I, XAVIER PÈNE, of Ozone Park, county of Queens, and State of New York, have invented certain new and useful Improvements in Bottle-Wrappers, whereof the following is a full, clear, and exact specification.

My invention relates to wrappers for bottles and other breakable packages, and particularly to those known as corrugated paper wrappers or straw-board wrapping, though it is also applicable to such wrappers made of other material, and consists of the hereinafter more fully described combination wrapper, illustrated in the accompanying drawings, wherein—

Figure 1 is an elevation of my improved wrapper for an ordinary round bottle; Fig. 2 a sectional view on line 2—2 indicated in Fig. 1; Fig. 3 is a perspective view of such a combination wrapper for an angular package; Fig. 4 a sectional view on line 4—4 indicated in Fig. 3; Fig. 5 is a plan view of the corrugated reinforcing band; Fig. 6 is a detail view, a top view of the band, drawn on an enlarged scale, showing how its ends are prepared for joining or clasping them together; Fig. 7 is another detail view, drawn on an enlarged scale, showing an edge view of a part of such a band alternately burred; Fig. 8 is a plan view and Fig. 9 a top view respectively, of the reinforcing band provided with another device for joining its ends together.

The corrugated straw-board wrapping for bottles and other breakable packages has been used extensively for many years; they are better than other wrappings, particularly for bottles packed in cases (boxes), but they do not safely protect or prevent breaking of such packages, and there is still a very large percentage of loss on that account suffered in commerce from that cause.

The attempts, to improve upon the corrugated bottle wrappers, heretofore made, that came to my knowledge, failed for one reason or another, and the fact, that the corrugated wrappers, now in use, are in all essential features the same as they were introduced in use some thirty years, tends to show that none of the improvements proposed was found suitable or practical. My own experience suggested that the use of such corrugated wrappers requires some means to prevent the corrugations from

collapsing. Such wrappers must be made of some soft, compressible material as paper, straw or paperboard and are preferably corrugated to improve the protecting quality of the material. Bottles and such other breakable packages are usually shipped thus packed in boxes. If the wrapper is exposed to dampness, as for instance when such a box is carried in the hold of a ship, the wrapping softens, the corrugations collapse and its protecting capacity is so much reduced, that a jar, or even the pressure of one package upon the other, suffices to cause breaking of bottles or such other breakable packages. It also happens, very often, that one of a number of bottles, packed in a box, breaks, and then almost as a rule the liquid, exuding from it, soaks the wrappings of several, if not of all of the other bottles, packed in the same box, and renders these wrappings practically useless as means for protecting the bottles. In such a case frequently all other bottles packed in the same box, are broken. While this happens more often to shipments of ordinary round bottles packed in boxes, it is almost equally true in respect to all other breakable packages used for shipping liquid goods.

I have tried various sizes and coatings to render the wrappers impervious to dampness; found however, such process impracticable, in that it complicates the manufacture of the wrapping material, adds greatly to the costs and renders the wrappers also hard and brittle, thus destroying, to a large extent, their protective quality. Finally, after experimenting with various supporting and reinforcing devices, I evolved the combination wrapper illustrated in the accompanying drawings.

Referring to these drawings, *a* denotes a wrapper of corrugated paper or of other soft and compressible material, made in size to fit the bottle wrapped therein and indicated in Fig. 1 by dotted lines.

b and *b'* are bands made of any material impervious to dampness, capable of being corrugated or formed into ridges and of sufficient tensile strength and rigidity to retain its shape against such pressure as results from the weight of such packages, when packed in a box, or other suitable receptacle. Thin, sheet metal, preferably iron, is the most suitable material for manufacture of such bands, but rubber sized fabric and the

like, may also be used. These bands are corrugated, as shown in Fig. 5, and it is desirable that the corrugations of the band should correspond to those of the wrapper *a*. It is preferable to use two such bands *b* and *b'* placed approximately in the position shown in Figs. 1 and 3 upon the wrapper.

The bands may be produced as endless bands having their ends soldered or riveted together. Such band must be made to set snugly upon the wrapper. They may also be made in strips, provided with clasping devices on their ends, as for instance shown at *c* in Figs. 6 and 7, or with a wire loop *d* as shown in Fig. 8. When the bands are manufactured as strips with the ends thereof formed into a clasping device, as shown in Figs. 6 and 7, their length must correspond to the circumference of the wrapper *a* when the bottle is inserted therein. Their ends are then clasped together when the bands are applied to the wrappers. This may be done before the bottles are pushed into the wrappers, and if done, facilitates the application of the bands and secures a snugger fit of the band upon the wrapper. They may, however, as well be applied to the wrappers after the bottles are pushed in. When such wire loops, as shown at *d* in Fig. 8, are employed for securing the ends of the bands together, the strips composing the bands are made longer than the circumference of the bottle; such bands are passed around the wrapper and fastened thereon by inserting its other end through the wire loop *d* and then bending it back while the band is held tight around the wrapper.

The ends of the reinforcing bands *b* and *b'* may also be joined together by such wire staples as are employed for fastening together the edges of the paper wrapper and the same staples may be used for securing together both the edges of the paper wrapper and also the ends of the bands. Such manner of manufacture of my improved bottle wrappers is most economical and suitable when large quantities of such bottle wrappers for packing bottles or packages of uniform size are manufactured, as in fact it is universally done.

To secure more safely the reinforcing bands *b* and *b'* upon the paper wrapper *a* and to secure the bottles or packages so wrapped in their positions relatively to each other, when packed in a box, the reinforcing bands may be perforated, by a punch, so as to produce burring of the edges of the perforations. The burs *f* may be made to project all to the outside of the band, or they may be produced to project alternately outside and inside, as shown at *f* and *f'* respectively in Fig. 7. The inside burs are pressed into the wrapper when the reinforcing bands *b* and *b'* are applied to it, and being rough and sharp, prevent the sliding

of the band on the wrapper; the outside projecting burs prevent sliding of the wrapped packages in the box. While this burring of the bands is advantageous, it is not essential for attaining the object of my invention. The bands *b* and *b'* should be applied to sit snugly, tight on the wrapper, and if the wrapper is so produced that the bands *b* and *b'* are set snugly thereon, they will keep their position upon the wrapper and prevent collapsing of the corrugations, if the package should be exposed to dampness or wet.

Heretofore, a flat sheet, pasted to the apexes of the corrugations of such bottle wrappers, was used for supporting the corrugations and making them more rigid. This, however, does not prevent the corrugations from collapsing and loosening the bottle, wrapped therein, when the packages are exposed to dampness or wet. My improved combination wrapper as herein shown and described dispenses entirely with the necessity, or even desirability, of such flat reinforcing sheets, whereby not only the costs of the wrapping, but also its weight, is considerably reduced. Yet more important, however, is, that such combination wrapper effects safely and permanently, under all conditions, the object sought to be attained by the flat sheet and that the attaining of the result is not dependent on keeping the package dry. Moreover, the reinforcing band forming part of my combination wrapper increases the resisting capacity of the wrapper to such a degree that even rough handling of the boxes, wherein such bottles or packages are forwarded, will not result in breaking the containers and spilling the liquids; and if a bottle or container should burst, as it sometimes happens, the resulting wetting of the wrappers of the other bottles in the box will not cause the corrugations to collapse; my improved combination wrapper will, even under such conditions, protect the bottle or other container of liquid thus wrapped, keeping it safe and protected against damage or breaking by pressure or jolting.

I claim as my invention:

1. A wrapper for bottles, comprising a corrugated paper wrapper, reinforced by a corrugated metal band, the corrugations of the band registering with and fitting closely the corrugations of the wrapper.

2. A wrapper for bottles, comprising a corrugated paper wrapper, reinforced by a corrugated metal band, the corrugations of the band registering with and fitting closely the corrugations of the wrapper, the band having inwardly projecting burs engaging the wrapper to prevent displacement of the band.

3. A wrapper for bottles, comprising a corrugated paper wrapper, reinforced by a

corrugated metal band, the corrugations of the band registering with and fitting closely the corrugations of the wrapper, the band having outwardly projecting burs for engagement with other objects in a package to prevent displacement.

4. A wrapper for bottles, comprising a corrugated paper wrapper, reinforced by a corrugated metal band, the corrugations of the band registering with and fitting closely the corrugations of the wrapper, the band having inwardly and outwardly projecting burs for preventing displacement.

5. A wrapper for bottles comprising a corrugated wrapper reinforced by a substantially rigid corrugated band, the corrugations of the band registering with and

fitting closely the corrugations of the wrapper.

6. A wrapper for bottles comprising a corrugated wrapper reinforced by a corrugated rigid band the corrugations of the band registering with the corrugations of the wrapper and means for securing the band and wrapper together to prevent displacement of the band.

7. A corrugated paper wrapper reinforced by a substantially rigid band having corrugations engaging the corrugations of the wrapper.

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Witnesses:

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