

(No Model.)

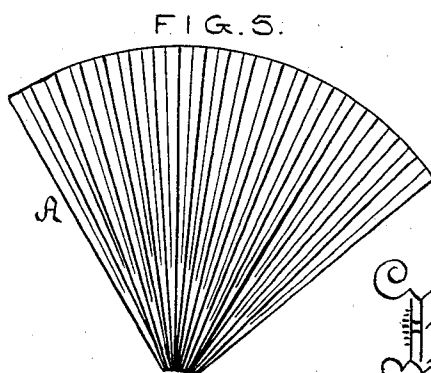
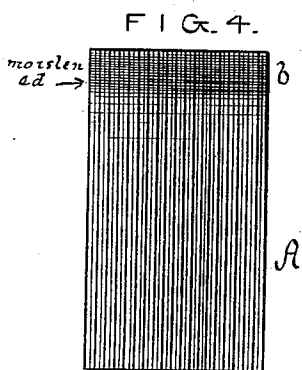
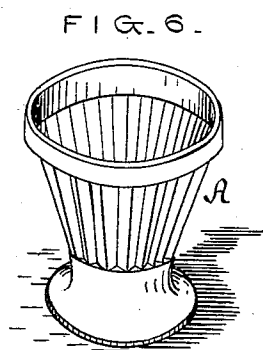
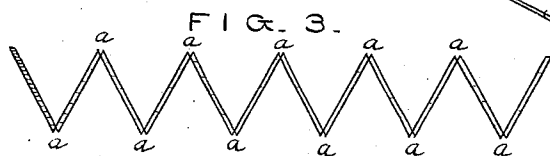
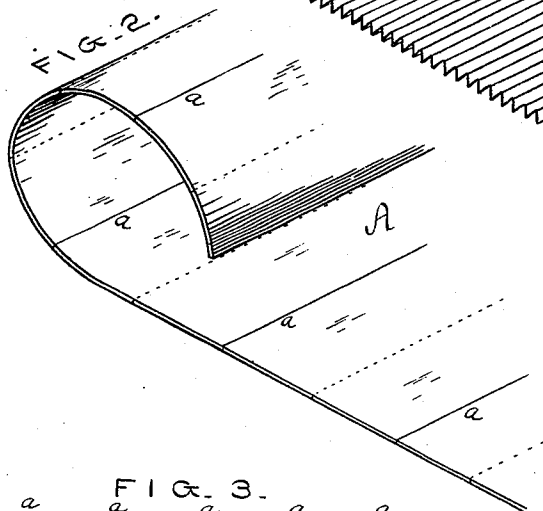
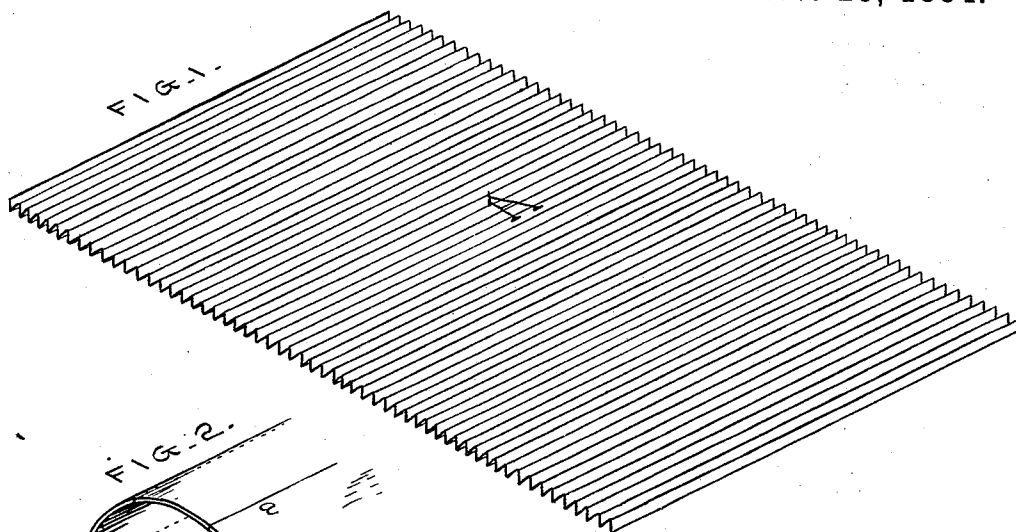
2 Sheets—Sheet 1.

S. FRIEND.

MATERIAL FOR BOTTLE WRAPPERS.

No. 308,352.

Patented Nov. 25, 1884.



WITNESSES.

*John K. Warren*  
*Bradford K. Ruffer*

*Inventor.*

SAMUEL FRIEND.

By *L. P. Graham*  
atty.

No Model.)

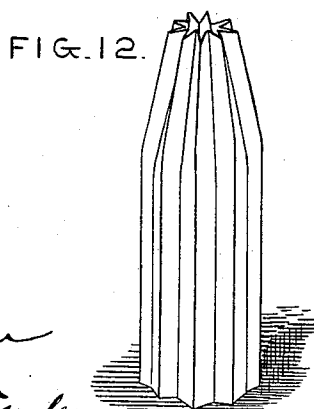
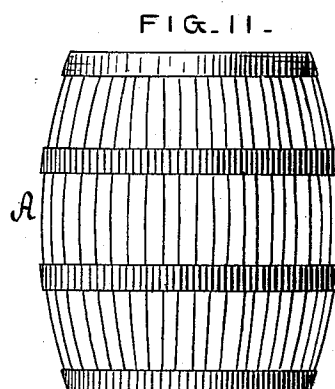
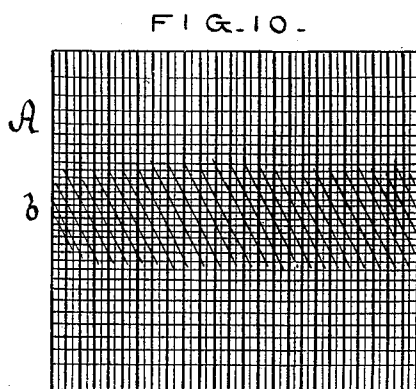
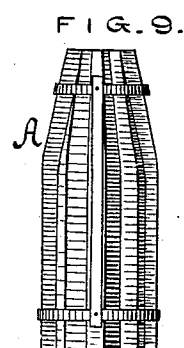
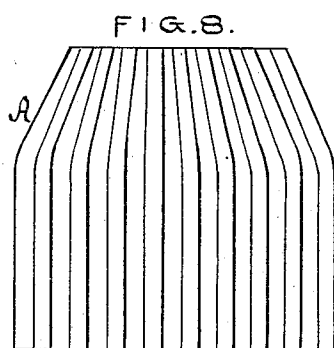
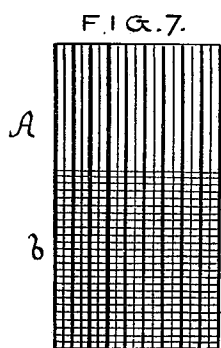
2 Sheets—Sheet 2.

S. FRIEND.

MATERIAL FOR BOTTLE WRAPPERS.

No. 308,352.

Patented Nov. 25, 1884.



Witnesses  
John K. Warner  
Bradford K. Dwyer

Inventor.  
SAMUEL FRIEND.  
By L. P. Graham  
att.

# UNITED STATES PATENT OFFICE.

SAMUEL FRIEND, OF DECATUR, ILLINOIS.

## MATERIAL FOR BOTTLE-WRAPPERS.

SPECIFICATION forming part of Letters Patent No. 308,352, dated November 25, 1884.

Application filed August 9, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL FRIEND, a resident of the city of Decatur, county of Macon, and State of Illinois, have invented certain new and useful Improvements in Material for Bottle-Wrappers, &c., of which the following is a specification.

My invention consists in a material for bottle-wrappers, &c., prepared and shaped in the manner hereinafter set forth.

The first part of the process necessary to prepare my material consists in checking wood veneer crosswise of the grain on opposite sides alternately, and bending or crimping the same on the checked lines into a series of plane-surfaced corrugations.

The second part of the process necessary to prepare my material consists in applying moisture to portions of the sheets so prepared.

In the drawings accompanying and forming a part of this specification, Figure 1 represents a sheet of material as it appears after being subjected to the first part of the above-mentioned process. Fig. 2 shows the manner of checking the sheets, and Fig. 3 is an enlarged edge view of a portion of Fig. 1. Fig. 4 represents a sheet of the material undergoing the second part of the process, (the horizontal lines *b* indicating the moistened portion,) and Fig. 5 shows the form of said sheet after the water has had its natural effect thereon.

The result of the first part of the process is to produce a material in which strength, elasticity, pliability, and lightness are united in a pre-eminent degree, and in the second part of the process the moisture causes the bends to tend to straighten, and this tendency, opposed to the negative tendency of the dry portions, causes variations in form.

To illustrate in part the various purposes to which the material may be applied, I have introduced Figs. 6, 7, 8, 9, 10, 11, and 12, which are to a certain extent self-explanatory.

Fig. 6 shows a conical receptacle, that may be formed of the sheet shown in Fig. 5 by securing to it a base and upper binding or hoops, of wood or metal or other material known for the purposes, in any known manner. Figs. 7, 8, and 9 show the manner of producing a bottle-wrapper, and Fig. 12 shows said bottle-wrapper in perspective, without bands or other uniting devices, while Fig. 9 shows the same wrapper with an upper or lower band united by a vertical strip, which may also secure the vertical joint of the wrapper. Figs. 10 and 11 indicate the manner of forming a barrel with my material, which has the body of my material shaped by moisture, and is provided with the usual heads or hoops, and various other applications can be made of the same.

A represents the corrugated sheets, *a* indicates the position of the bends, and *b*, as before stated, shows where moisture is applied.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The sheets for the construction of bottle-wrappers, &c., herein described, consisting in wood veneer checked crosswise of the grain in parallel lines on opposite sides alternately, and bent or crimped on the checked lines into a series of plane-surfaced corrugations, as set forth.

2. The sheets for the construction of bottle-wrappers, &c., herein described, consisting in wood veneer checked crosswise of the grain in parallel lines on opposite sides alternately, bent or crimped on the checked lines into a series of plane-surfaced corrugations, and shaped into a required form by means of moisture applied to portions of its surface, as and for the purposes set forth.

SAMUEL FRIEND.

Attest:

C. C. CLARK,  
J. N. BILLS.