

No. 668,518.

Patented Feb. 19, 1901.

H. H. HIGHAM.
BOTTLE WRAPPER.

(Application filed June 27, 1900.)

(No Model.)

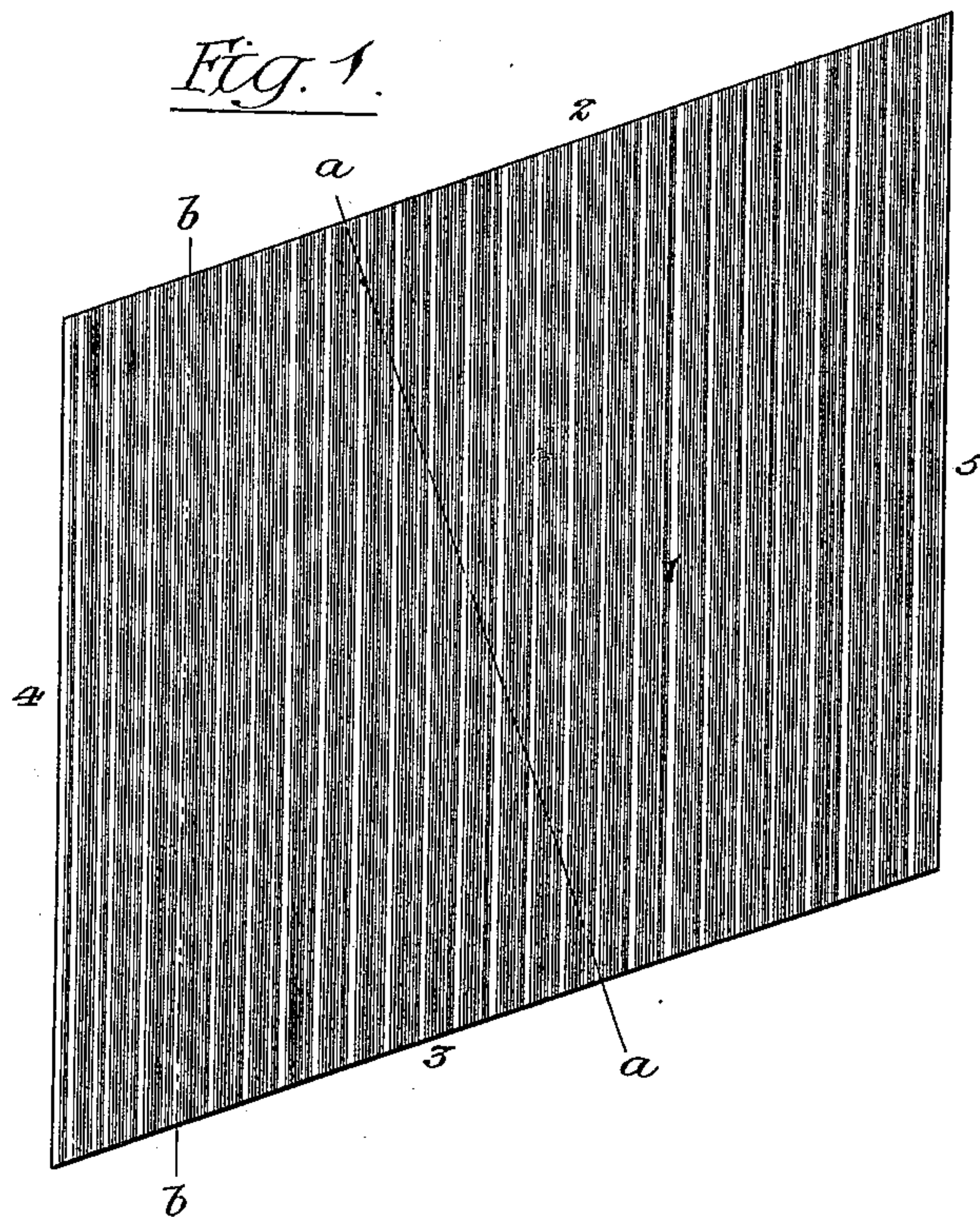
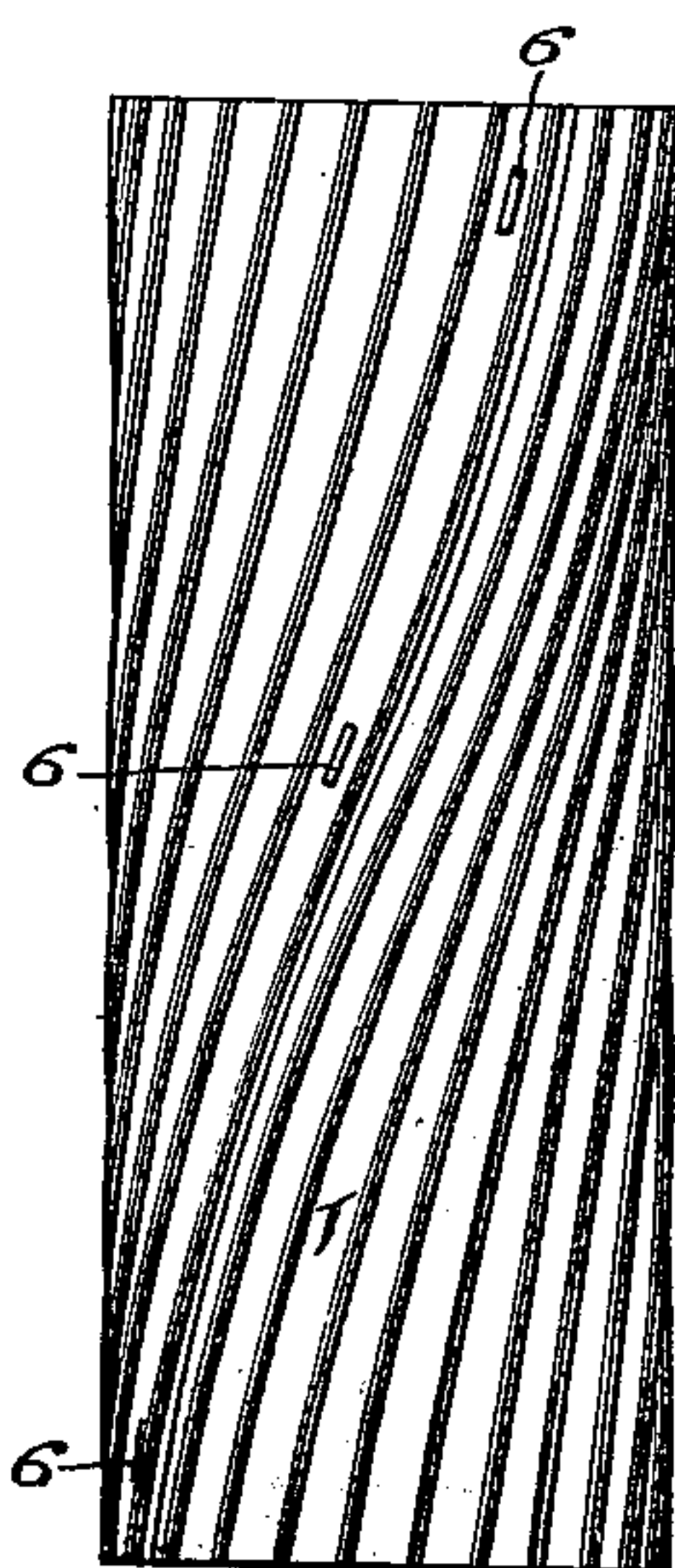


Fig. 2.



Witnesses:-
Frank L. A. Graham.
Louis H. Whitbread.

Inventor:-
Howard H. Higham
by his Attorneys:-
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UNITED STATES PATENT OFFICE.

HOWARD H. HIGHAM, OF PHILADELPHIA, PENNSYLVANIA.

BOTTLE-WRAPPER.

SPECIFICATION forming part of Letters Patent No. 668,518, dated February 19, 1901.

Application filed June 27, 1900. Serial No. 21,802. (No model.)

To all whom it may concern:

Be it known that I, HOWARD H. HIGHAM, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Bottle-Wrappers, of which the following is a specification.

The object of my invention is to produce from corrugated paper bottle-wrappers of such character that the peculiar properties of
10 the corrugated paper are utilized in a better way than in such bottle-wrappers as now made.

In the accompanying drawings, Figure 1 represents a blank for a corrugated-paper
15 bottle-wrapper made in accordance with my invention, and Fig. 2 is a view of the wrapper made from said blank.

Any corrugated sheet of thin material—such as paper, cardboard, wood veneer, or the like—
20 offers resistance to crushing strain only when said strain is exerted in a line diagonal to the line of corrugations—that is to say, in a line more or less transverse to the rows of arches presented by said corrugations. Thus a cor-
25 rugated sheet will strongly resist pressure in a line bearing the relation to the corrugations of the line *a a*, Fig. 1, while it offers little or no resistance to the crushing action exerted in a line parallel with the corrugations, or as
30 indicated by the line *b b*, Fig. 1. In making bottle-wrappers of wood veneer advantage can be taken of this fact by running the corrugations at an angle to the grain of the wood, since the latter is the influence
35 controlling the direction of the bend or fold of the corrugated blank—that is to say, the blank must be bent or folded in a direction parallel with the grain, the direction of the corrugations having no influence whatever in determining such bend or fold. In dealing with
40 corrugated paper, however, the conditions are different, the paper having no grain and the corrugations becoming the factor which controls the direction of bend or fold of the
45 blank. Consequently in making bottle-wrappers of corrugated paper it has been customary to bend or fold the same on lines parallel with the corrugations and to prevent crushing of the corrugations by cementing or other-
50 wise securing a backing-sheet to the corrugated wrapper, thus adding materially to the expense of the wrapper, both by reason of the additional material employed and the extra labor required. I have ascertained by ex-

periment, however, that in bending a sheet 55 of corrugated paper it is possible to twist the same to such an extent that the corrugations 1 will assume an angle in respect to the axial line of the completed wrapper sufficient to prevent crushing of said corrugations by any 60 strains upon the same likely to be caused by the pressing of the wrapper against the sides of the bottle. In order, however, that the upper and lower edges of the wrapper shall be straight and parallel, the upper and lower 65 edges 2 and 3 of the blank are diagonal in respect to the line of the corrugations—that is to say, they are inclined at an angle other than a right angle thereto, the opposite side edges 4 and 5 of the blank being by prefer- 70 ence parallel with said corrugations in order to insure the neat fitting together of the overlapping edges of the blank in forming the wrapper, as shown in Fig. 2, and the ready maintenance of these overlapping edges in 75 proper place. The securing medium employed may be a number of staples 6, passed through the overlapping portions of the blank, or said overlapping portions may be cemented together, if desired. 80

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

1. The within-described blank for a bottle-wrapper, said blank consisting of a sheet of 85 corrugated paper having its top and bottom edges diagonal in respect to the line of the corrugations and its opposite side edges parallel with said corrugations, substantially as specified. 90

2. A bottle-wrapper consisting of a bent and twisted sheet of corrugated paper having its corrugations disposed diagonally in respect to the axial line of the wrapper, substantially as specified. 95

3. A bottle-wrapper consisting of a bent and twisted sheet of corrugated paper having its corrugations disposed diagonally in respect to the axial line of the wrapper and having overlapping edges parallel with said 100 corrugations, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HOWARD H. HIGHAM.

Witnesses:

F. E. BECHTOLD,
JOS. H. KLEIN.