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MANUFACTURE OF BOTTLE ENVELOPS.
APPLICATION FILED JULY 8, 1903.

Fig. 1.

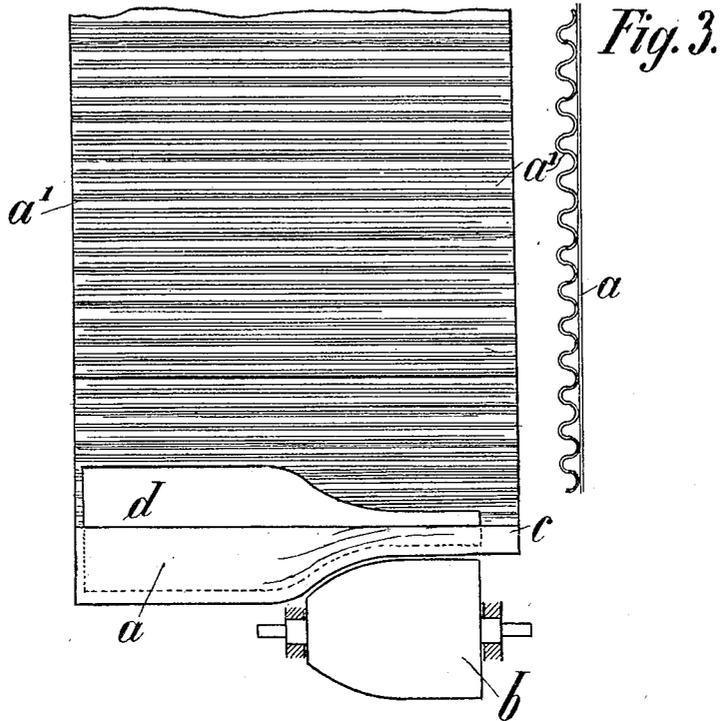
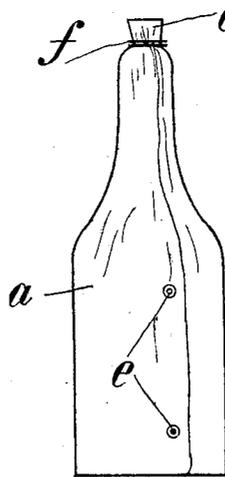


Fig. 2.



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UNITED STATES PATENT OFFICE.

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MANUFACTURE OF BOTTLE-ENVELOPS.

No. 805,299.

Specification of Letters Patent.

Patented Jan. 9, 1906.

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To all whom it may concern:

Be it known that we, CHRISTIAN BERNHARDT ELIAS HENKE and GEORG ADOLF HEINRICH SCHULTE, subjects of the German Emperor, and residents of Bremen, in the German Empire, have invented certain new and useful Improvements Relating to the Manufacture of Bottle - Envelops, of which the following is a specification.

The present invention relates to the manufacture of bottle and like envelops or casings.

Latterly the well-known straw envelops or cases for bottles and the like have been largely replaced by cases or wrappers formed of corrugated cardboard for the reason that such cases are not only cheaper than those made of straw, but also because owing to the stiffness of their corrugations they afford better protection than straw covers. These newer bottle-covers are, however, defective by reason of the fact that they conform to the shape of the bottle or other vessel to a limited extent only.

This invention relates to a method of producing bottle and the like covers of corrugated cardboard which will exactly conform to the shape of the vessel to be covered.

This method or process consists, essentially, in wrapping around the bottle or other vessel which it is desired to cover or around a core presenting the same outer form a piece of corrugated cardboard and in pressing this latter until it conforms to the shape of such core, those portions of the cardboard which are intended to be pressed around the smaller portions of the core being moistened by means of a moist heat until they assume the form and contour of the article to be packed without appreciable resistance. This moistening may be advantageously effected by means of glue, steam, or vapor, as by this means a small quantity of glue is conveyed to the cardboard, which causes the latter to regain upon drying rigidity, which is somewhat decreased by the steaming. Preferably an end of the cardboard is left extending beyond the smaller extremity of the core and drawn together by means of a wire or thread. The two longitudinal edges of the formed cover may be held together by means of pins or the like.

In the accompanying drawings, Figure 1 is a diagrammatic view illustrating in what

manner the cardboard may be wound around a core by means of a suitable roller. Fig. 2 is an elevation of a finished envelop, and Fig. 3 is an edge view of the corrugated cardboard.

Similar letters refer to similar parts.

According to this invention a suitable length of corrugated cardboard *a a'*, Figs. 1 and 3, is laid flat upon the work-table, (not shown,) the corrugations *a'* being upward. After moistening or steaming by any suitable means that portion of the cardboard which is to conform to the neck of the bottle, as above mentioned, sufficient cardboard is cut from the length to cover the core *d* (or vessel, respectively) and is shaped to said core or vessel either by hand alone or by a shaping-roller *b* or the like, or by the two methods combined. Fig. 1 shows the corrugated cardboard partly rolled or shaped around the core. The shaping roller or rollers may be appropriately mounted and driven in any desired manner or manipulated by hand. After the corrugated cardboard has been rolled or shaped around the core the end *c*, extending beyond the smaller end of the core or the mouth of the bottle, respectively, is drawn and tied together by means of a wire or thread *f* and the overlapping edges of the cardboard secured or united by pins *e* or in any other suitable manner, thus forming an envelop or casing having the exact configuration of the core or the vessel to be wrapped. In this manner a large number of envelops or casings may be uninterruptedly formed from a continuous band of corrugated cardboard. If desired, the overlapping edges of the envelops may remain unfastened or un-

Practice has demonstrated that sufficient glue and moisture is taken up by heated air forced through a hot-glue solution or by a jet of steam forced through such a solution to restore the rigidity of the cardboard moistened thereby upon drying, though an attenuated hot-glue solution may be used.

The method of forming bottle envelops or cases from the material described is not only very simple, requiring no complex mechanism or dies, but also embodies various advantages in that the envelop may be applied to the bottle after it has been filled at the establishment where the contents of the bottle are

manufactured or prepared or at a bottling establishment, in that the gathering of the wrapper at the end of the neck forms a cushion over the seal of the bottle that protects
5 the latter against end thrusts or shocks, in that the glue carried along with the steam restores to the neck portion of the wrapper the rigidity which has been partially-destroyed
10 by the steaming or moisture and imparts to the neck a permanent set which cannot otherwise be obtained, so that the wrapper or envelop will fit the whole of the bottle snugly, and as but little moisture is required to impart to the cardboard the required plasticity
15 the moistened neck portion dries very rapidly.

A further advantage of having the outer surface of the wrapper or envelop substantially smooth is that labels may be readily
20 affixed thereto, while the resistance to pressure of the fluting in contact with the bottle is much greater than would be the case if the smooth face of the wrapper were in contact with the bottle.

25 Having fully described our invention, what

we claim, and desire to secure by Letters Patent, is—

The method of making bottle-wrappers from fluted cardboard having a plain backing, which consists in wrapping a strip of
30 such cardboard around the body of a bottle or around a smooth core of like form with the plain backing outside and the fluting lengthwise of the bottle-core, steaming that portion of the cardboard which is to form the
35 neck of the wrapper, shaping said neck by pressure, gathering and tying the end of the neck and uniting the overlapping sides of the cardboard, whereby said board will be evenly
40 creased all around at the neck by reason of the pressure on the fluted board which starts the creases between adjacent flutings attached to the backing and causes the creases to lie parallel to the axis of the wrapper.

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