

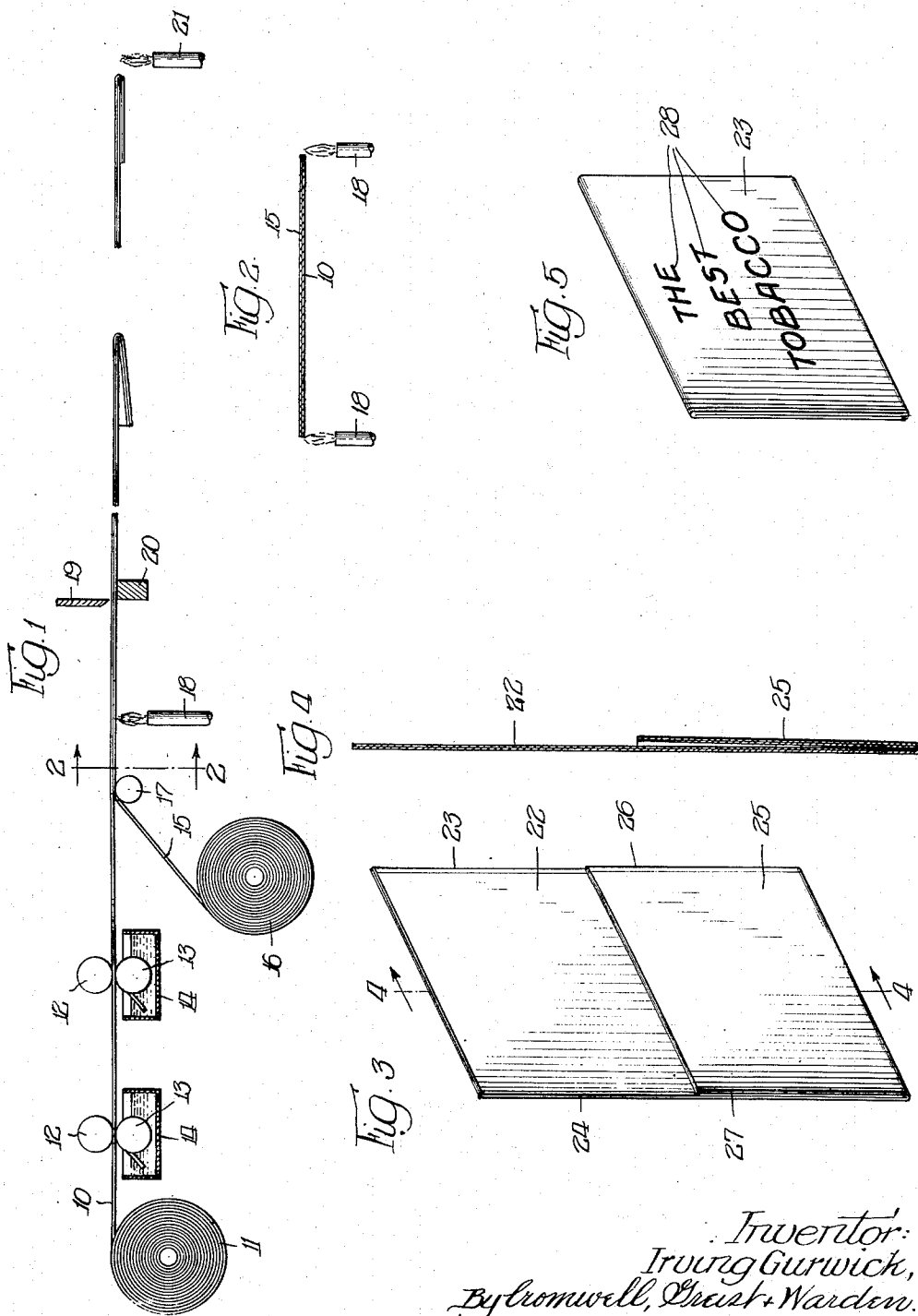
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CONTAINER AND METHOD OF MAKING SAME

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CONTAINER AND METHOD OF MAKING
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3 Claims. (Cl. 93—35)

The present invention relates to an improved pouch or envelope and method of forming the same from a sheet of material such as the transparent rubber product known as "Pliofilm."

5 A principal object of the invention is the provision of a pouch or envelope container for packaging products such as tobacco, the pouch being constructed from transparent edge-joined rubber hydrochloride sheets of a moisture-resisting

10 nature. An additional object is to provide a container consisting of two edge-welded sheets of "pliofilm" or transparent rubber hydrochloride having the interior surface of the exterior layer printed with a design in reverse and preferably an over-

15 all color which is dried prior to welding the two layers together. A further object is to provide an improved method of securing sheets of "Pliofilm" together

20 and of forming containers therefrom. These and other objects will be evident upon a consideration of the following description and by reference to the accompanying drawing, in which

25 Fig. 1 is a diagrammatic view illustrating the method of forming containers in accordance with the present invention;

Fig. 2 is a cross-sectional view taken along line 2—2 of Fig. 1 and shows the method of welding sheets of "Pliofilm" together;

30 Fig. 3 is a perspective view of a container constructed as shown in Fig. 1;

Fig. 4 is a cross-sectional view of the container taken along line 4—4 of Fig. 3; and

35 Fig. 5 is a view of the completed pouch with design showing and the closure flap in overlapped position.

As shown in Fig. 1, the container is formed from two webs of "Pliofilm," which is a transparent pellicle of a rubber compound which has been reacted with HCl. The web 10 which is to constitute the outer layer of the container is taken from roll 11 and is passed through a suitable printing device for depositing a design in reverse upon the inner side of the web. In the drawing this printing mechanism is illustrated by two intaglio units, each of which consists of an impression cylinder 12, and an etched printing cylinder 13 rotating in color bath 14 having a conventional doctor blade.

50 The first color unit may deposit printed designs in reverse directly upon the inner surface of the web and the second unit may deposit a larger or block body of a different color over the entire portion of the web. However, in many cases it will be found desirable to leave open or

window spaces through which the contents of the container may be observed.

The intaglio printing units utilize a quick-drying ink which may be of the lacquer type contained in a low-boiling organic solvent. Other types of printing likewise may be employed. Where a slow-drying ink is employed, the printing operation desirably may be separate from the combining operation rather than as shown in Fig. 1.

The second web 15 is taken from roll 16 and is passed into adjacent relation with web 10 beneath the roller 17.

Considerable difficulty has been encountered in producing a satisfactory bond between two portions of "Pliofilm." Solvent bonding methods are undesirable, particularly in the presence of inks which are soluble in the solvents. I have found that a strong and highly satisfactory edge bond may be produced between the two webs by subjecting the adjacent webs to heat without pressure. This may be done by passing the proximate webs adjacent an open flame in the manner shown in Figs. 1 and 2. No pressure is required to complete the bond and the welded edge produced by the flame is permanent without detracting from the appearance of the combined webs. The weld between the two webs may extend inwardly for only a short distance which may be of the order of the thickness of the combined webs.

The flames for providing the edge weld on the adjacent webs preferably are slightly spaced from the material of the webs in order not to subject the rubber compound to too much heat, the positions being indicated by the gas jets 18 located on each side of the webs just after the roller 17. The position of these flames with respect to the webs may be seen in Fig. 2.

The united webs then pass through a cutting unit indicated by the knife members 19 and 20. The webs are cut into container blanks, and one section of the blanks is turned over to produce a pouch or body portion and a flap member. Thereafter, the edges of the turned-over sections again are passed adjacent additional gas jets 21 which weld the four adjacent sections together into the form of a pouch. The open flame of jets 21 causes the overlapped welded edges to blend together in a single, hardly noticeable edge.

The resulting pouch consists of a flap portion 22 having welded edges 23 and 24 and a pouch section 25 having welded edges 26 and 27. The printed matter indicated at 28 in Fig. 5 is ob-

served through the thickness of the outer pellicle formed by web 10. As the printed matter is between the two pellicles, it is amply protected and will retain its attractive appearance. Tobacco or other material to be packaged may be inserted in the pouch portion 25 and the flap 22 is turned over to close the container. "Pliofilm" is resistant to moisture penetration and by providing two un laminated films of this material the pouch maintains the packaged material in particularly fresh condition. This un laminated condition also provides for insulation by reason of the air film between the layers of "Pliofilm."

In place of the open flames shown in the drawing, it is possible to employ heated bars or the like which are positioned adjacent the portion of the webs to be welded. In this case the material is subjected to a temperature between 230° F. and 250° F., and the heated bars are placed just close enough to the webs to effect heat transfer without exerting detrimental pressure. Ordinarily, it is sufficient to provide a kiss contact between the heat elements and the webs.

The method of forming the pouch with heating elements has the advantage that interior portions or strips may be welded. Thus, the two webs may be provided with a side fold and transverse weld lines. By cutting the web along the transverse weld lines, individual pouches are produced. The longitudinal edges of the webs likewise may be welded to seal air therein for insulation purposes. As the edges of the pouch constitute its weakest portion, it often is desirable

to turn the edges over before the welding operation to provide a relatively thick welded edge.

It will be recognized that other changes in the container or envelope and its method of manufacture as described herein may be made without departing from the scope of the invention as defined in the appended claims.

I claim:

1. A container of the type described, comprising proximate un laminated inner and outer pellicles of transparent rubber hydrochloride having their adjacent edges autogenously bonded together, said pellicles being folded over to form a pouch portion provided with autogenously bonded edges.

2. A container of the type described, comprising proximate un laminated inner and outer pellicles of rubber hydrochloride folded over to form a pouch portion and having their adjacent edges autogenously bonded together, the inner side of said outer pellicle having a design printed in reverse and an overall color printed over said design.

3. The method, which comprises printing a design in reverse on the inner side of an outer pellicle of rubber hydrochloride, placing said outer pellicle adjacent an inner pellicle, autogenously bonding the adjacent edges only of said pellicles together, folding the bonded pellicles into container form, and again autogenously bonding the edges of said pellicles together.

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