July 14, 1970 Z. KUKULSKI 3,520,472

TAMPER-PROOF ENVELOPE

Filed July 5, 1968 2 Sheets-Sheet 1

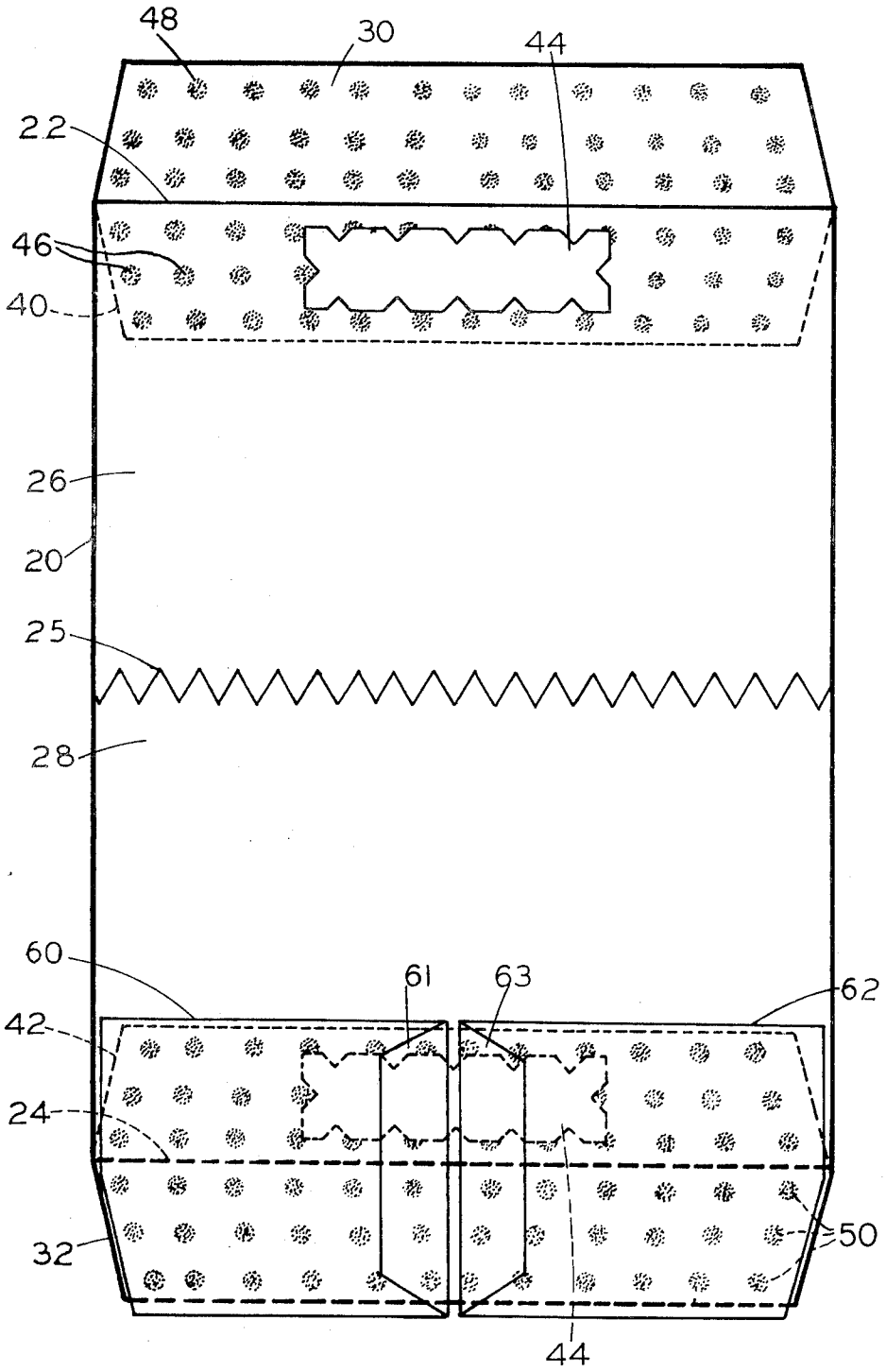

FIG. 1

INVENTOR.
ZDZISLAW KUKULSKI

BY

ATTORNEY

July 14, 1970 Z. KUKULSKI 3,520,472

TAMPER-PROOF ENVELOPE

Filed July 5, 1968 2 Sheets-Sheet 2

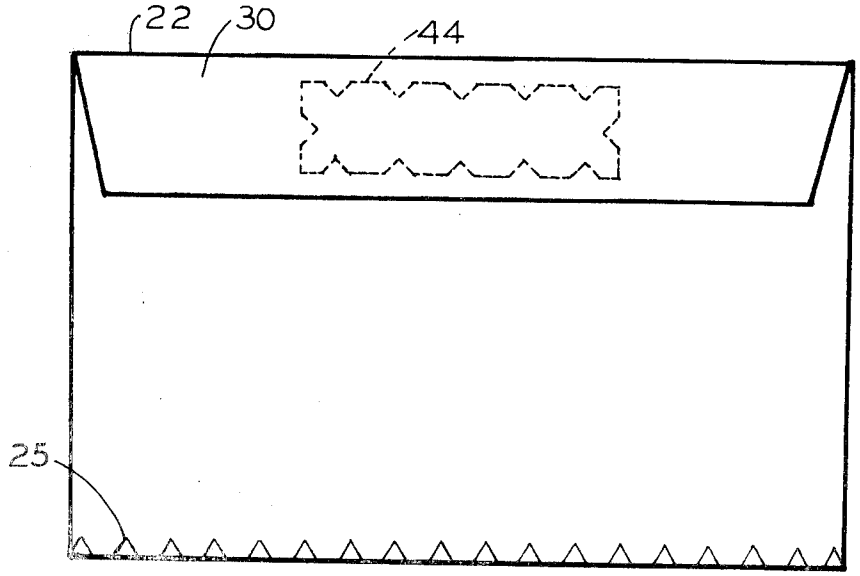

FIG. 2

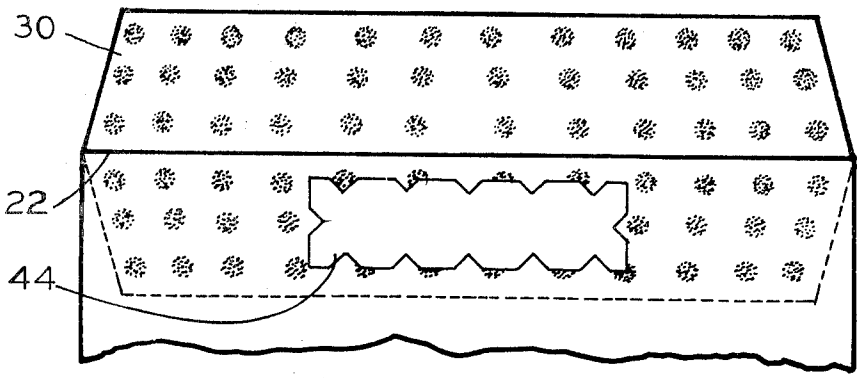

FIG. 3

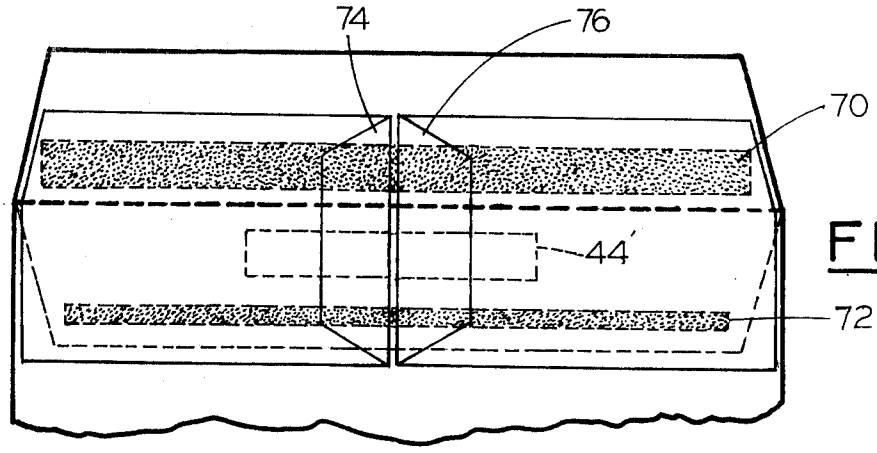

FIG. 4

INVENTOR.
ZDZISLAW KUKULSKI
BY
ATTORNEY

United States Patent Office 3,520,472
Patented July 14, 1970

3,520,472

TAMPER-PROOF ENVELOPE

Zdzislaw Kukulski, 2101 Bridgeway,
Sausalito, Calif. 94965

Filed July 5, 1968, Ser. No. 742,664
Int. Cl. B65d 27/30
U.S. Cl. 229—80 7 Claims

ABSTRACT OF THE DISCLOSURE

Envelope of transparent plastic, with opacifying liner divided in two parts by a zig-zag heat seal, and having flaps at both ends with adhesive protected by release sheet, the envelope when folded, adapted to make a tight fit in a further envelope for mailing, the construction being proof against tampering without leaving evidence of such.

This invention relates to a water- and tamper-proof mailing envelope or container.

An object of the present invention is to provide a mailing envelope or container that will withstand the destructive effects of climate extremes, such as excessive heat and humidity as encountered in tropical areas, dust penetration, tarnish of fading and protection from insect attack. Further the construction is such as to eliminate the chance of tampering without leaving visible evidence thereof, and to further eliminate the possibility of inspection of the contents without breaking the seal as by strong light or other means.

The above and other novel features of the invention will appear more fully hereinafter from the following detailed description when taken in conjunction with the accompanying drawings. It is expressly understood that the drawings are employed for purposes of illustration only and are not designed as a definition of the limits of the invention, reference being had for this purpose to the appended claims.

In the drawings, wherein like reference characters indicate like parts:

FIG. 1 is a plan view of the container before sealing;

FIG. 2 is a plan view of the container sealed and folded;

FIG. 3 is a plan view of one end of the container before sealing, and before applying the signature tag; and

FIG. 4 is a plan view of a modified container.

Referring to the drawings, there is shown a container comprising a body portion **20** in flat form and of seamless tubular plastic such as thin Mylar or the like. The tubular portion which is flat and extends from the flap fold line **22** at one end to the flap fold line **24** at the other end. The tubular sleeve may have a width slightly less than the length of an envelope into which it may be inserted, and a length between fold lines **22** and **24** of nearly double the width of the envelope for which it is designed. The tubular sleeve will be partially heat sealed preferably along a zig-zag line across the center as indicated at **25**, to form two pockets **26** and **28**, the seal securing the two walls together sufficiently to prevent separation without a degree of destructive effect to one or the other or both walls of the sleeve.

One wall of the sleeve is extended at each end to form flaps **30** and **32**. For economy one wall may be extended at one end and the other wall extended at the other, for this purpose. The flaps are clear transparent plastic. The internal wall of the body portion is rendered opaque by the application of black paint, or a metallized surface such as to render the sleeve portion impenetrable by strongly concentrated light, and thus prevent observation of the contents. Such internal metallized or opaque surfaces in combination with the clear plastic tends to intercept and reflect light directed at the container and thus prevent any observation of the contents therewithin.

Within the areas indicated by the broken lines **40** and **42** which outline the area over which the respective flaps will extend when sealed, is a signature tag **44** or label of thin paper adhesively attached to the side wall of the sleeve. Such tag or label will be of material susceptible of being written on with ink or pencil, and the area thereof will preferably be such as to be completely covered by the flap and surrounded by adhesive **46** so that when the flap is folded over, the tag while visible through the transparent flap is completely enclosed by the sealing effect of the adhesive employed on the sleeve wall, as well as the flap as at **48** and **50**.

In practice the adhesive will be such that when the flap is once folded over the sleeve wall and the adhesive placed under pressure, the flap and sleeve wall take on a bonding effect such that the flap may not be separated from the sleeve wall without destruction of the pocket wall or the furnishing of evidence of the tampering.

The adhesive surfaces of the flap and sleeve side wall may be protected prior to use by silicone treated release sheets of plastic or paper material which will adhere lightly to the adhesive coated surfaces but which may be readily removed to expose the adhesive immediately prior to sealing over the flaps to seal the pockets. Such sheets are shown in position at one end as at **60** and **62** with pull tabs **61** and **63**.

It will be seen that the seal dividing the pockets protects one of the pockets from access from the other without evidence thereof, should the other pocket be tampered with. The container when folded at the midsection along the center of the zig-zag partial heat seal, and with both flaps sealed, is readily slipped into a mailing envelope having dimensions just a little larger, so as to neatly receive the container. A letter comprising two or more sheets may have one or more sheets sealed into one pocket and remaining sheets sealed into the other.

In the modified form shown in FIG. 4, the adhesive for each flap is applied in strip form to the flap as at **70** and to the sleeve wall as at **72**, and such adhesive protected until ready for use by silicone or wax treated release sheets **74** and **76**. By such arrangement the adhesive on the flap and that on the sleeve exterior are complemental when the flap is folded for sealing, and protected by the release sheets until it is time for use.

In general, the folded tubular portion will be made so as to fit within a standard size envelope. In inserting mail into a pocket, the release sheet may be removed from the sleeve, to expose the tag, and while protecting the flap adhesive while inserting the correspondence into the container. Thereafter the release sheet is removed completely, and the flap sealed. By employing thin signature tag paper **44**, removal from its adhesion to the plastic sleeve may be prevented without tell-tale damage. The use of the zig-zag heat seal tends to prevent cutting the seal away from the plastic and resealing, without materially and noticably varying the size so as to render obvious the effect of such tampering. If desired a single container may be provided with a single flap, and a zig-zag seam.

While several modifications of the invention have been illustrated and described, it is to be understood that the invention is not limited thereto. Various changes in the construction and arrangement may be made without departing from the spirit of the invention, as will be apparent to those skilled in the art.

What is claimed is:

1. A tamper-proof letter mailing container, adapted to fit in an envelope, comprising a tubular section of thin

wall transparent plastic, the inside wall of which is coated with opacifying medium to reflect light.

2. A container as set forth in claim 1, wherein the tubular section is in the form of a seamless flat sleeve, and in which one side of the sleeve has an integral flap extension for folding over the end of the sleeve, and an adhesive flap sealant applied to the container.

3. A container as set forth in claim 1, wherein one end of the tubular section is heat sealed along a zig-zag line to prevent access without injury to a considerable portion of the end of the section.

4. A container as set forth in claim 2 wherein the sleeve is heat sealed along a zig-zag line at one end.

5. A container as set forth in claim 1 wherein the tubular section is in the form of a flat sleeve, having a flap extension at each end and in which the sleeve is divided centrally by a zig-zag heat seal, and in which a sealant is applied to the container for each of the flaps.

6. A container as set forth in claim 5 wherein the adhesive is covered with a release sheet.

7. A container as set forth in claim 5 wherein an identification tag is adhesively monded to the outside wall of one side of the sleeve and within the area covered by a closed flap.

References Cited

UNITED STATES PATENTS

942,420	12/1909	Swett.	
1,800,143	4/1931	Hughes	229—48
2,756,875	7/1956	Yochim	229—72 X
3,120,336	2/1964	Whatley	229—66
3,439,868	4/1969	Kuhnle	229—74

FOREIGN PATENTS

24,710	8/1901	Switzerland.

DAVID M. BOCKENEK, Primary Examiner

U.S. Cl. X.R.

229—72, 83