United States Patent

Katz et al.

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[45] **May 30, 1972**

[54] FORMING MULTIPLE PAGE PAMPHLET

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[73] Assignee: **said Katz, by said Grainger**

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[21] Appl. No.: **123,543**

[52] **U.S. Cl.** .....**93/61 R**, 270/37, 270/86, 270/41

[51] **Int. Cl.**.....**B31b 1/00**

[58] **Field of Search** 270/37, 53, 86, 41; 281/3; 93/61, 62

[56] **References Cited**

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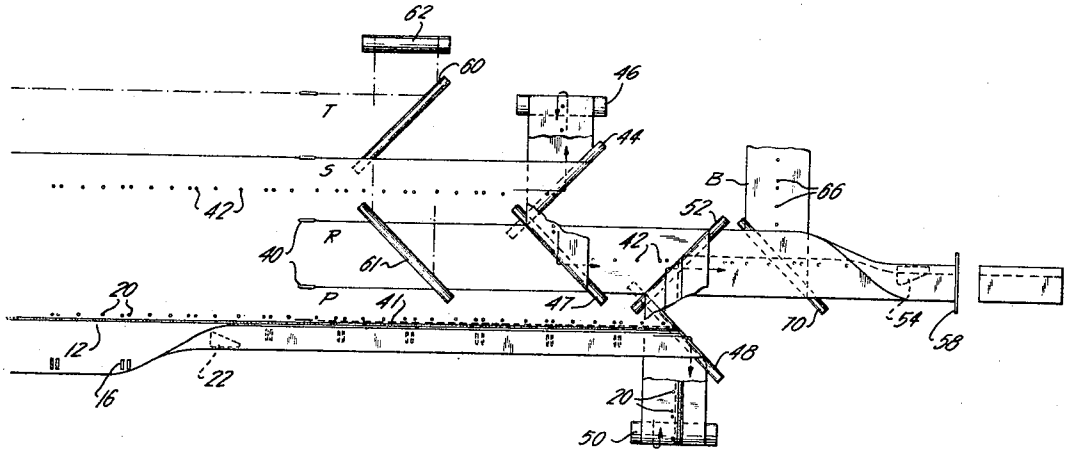
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[57] **ABSTRACT**

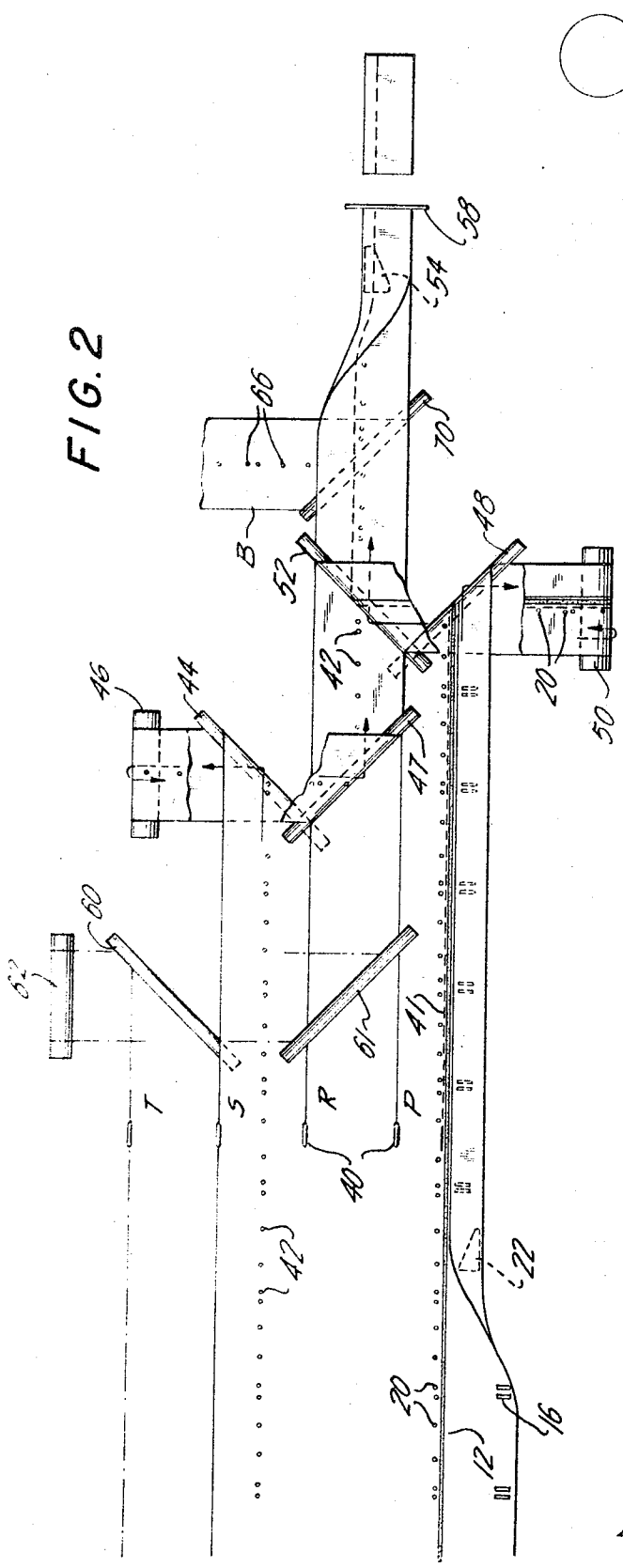
Forming additional pages in envelope containing pamphlet from wider web or side fed additional ribbon.

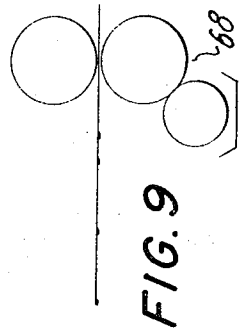
10 Claims, 19 Drawing Figures

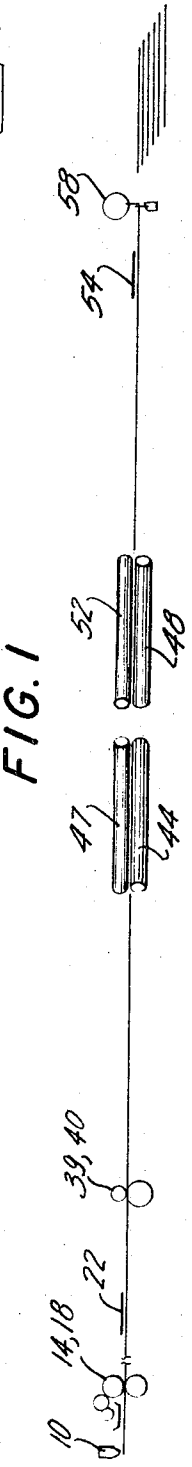


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3 Sheets-Sheet 1







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FIG. 3

STEP1 FOLD ENVELOPE



FIG. 4

STEP2 SLIT WEB



FIG. 5

STEP 3 DISPLACE WEB #1



FIG. 6

STEP 4 DISPLACE WEB #3

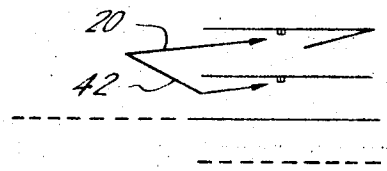


FIG. 7

STEP 4 HALF FOLD & COMBINE



FIG. 8

FINISHED BOOK

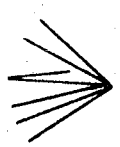


FIG. 12

STEP1 APPLY GLUE

FIG. 13

STEP2 SLIT & PERFORATE

FIG. 14

STEP 3 FORM POCKET



FIG. 17

STEP1 APPLY GLUE

FIG. 18

STEP 2 SPLIT & PERFORATE

FIG. 19

STEP 3 FORM POCKET



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FIG. 10

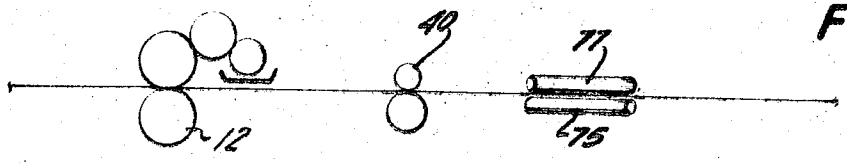


FIG. 11

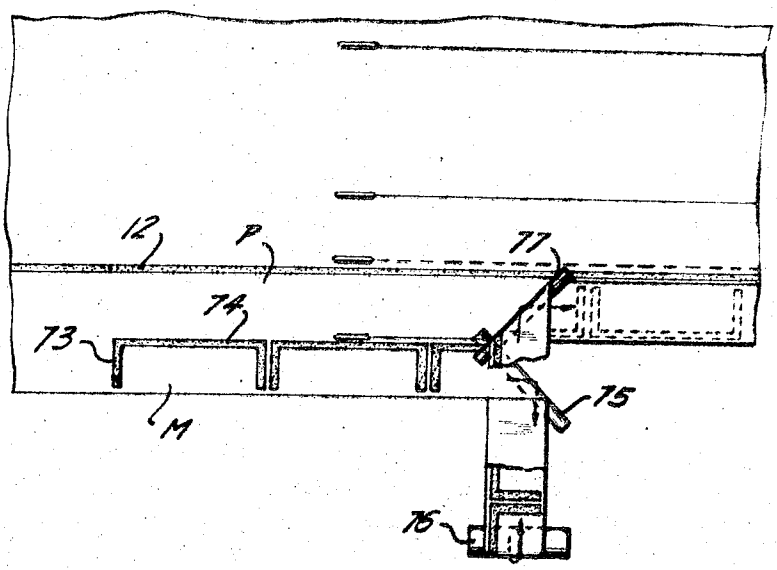


FIG. 15

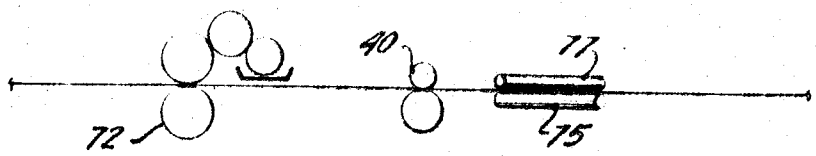
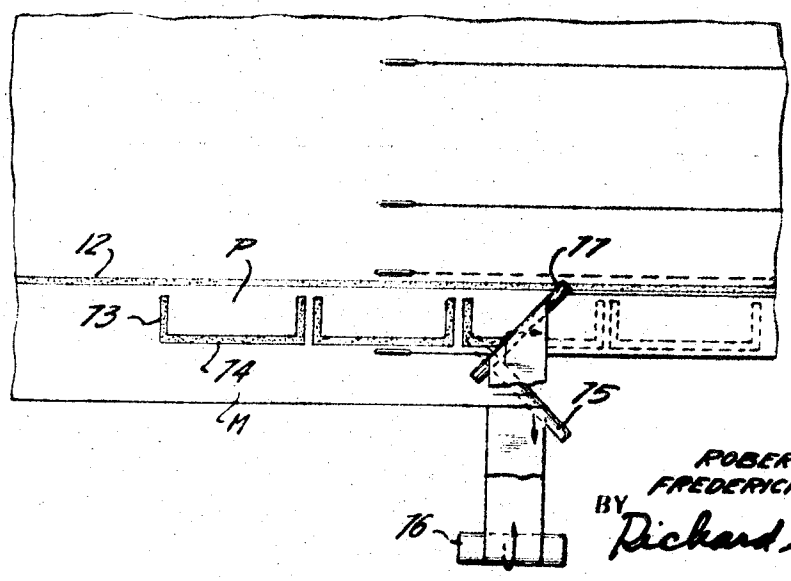


FIG. 16



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FORMING MULTIPLE PAGE PAMPHLET

FIELD OF INVENTION

This invention relates to method of making pamphlets having envelopes contained therein from paper stock, with additional pages from a wider starting web, or new fed ribbon.

BACKGROUND

The above-noted copending application forms an envelope by one margin of a moving web, folding the web in half forming a crease therein, then in quarter fold at a longitudinal line having stitch glue thereon, the half-fold crease is slitted to separate pages, and the web is finally cut to sever separate pamphlets. The envelope is formed in the outer or cover page, and only one pair of other pages is formed inside.

SUMMARY

According to the present invention, the paper stock having the envelope formed therein is in a wider stock, which is slitted to form separate ribbons, which are fed into superimposed relation with the envelope strip, and folded to form a multiple crease, secured together along the fold line, and finally cut transversely to sever the same into successive multiple page envelope containing pamphlets. Preferably these ribbons are superimposed by at least one turn bar and bay roller combination. The envelope may be inside the cover or outer pages of the pamphlet.

DRAWINGS

FIG. **1** is an elevation of the paper stock in process of forming the multiple page envelope containing pamphlet;

FIG. **2** is a plan of the paper stock in process as shown in FIG. **1**;

FIGS. **3**, **4**, **5**, **6**, **7**, and **8** are transverse sections taken at their stages along toward the completion of the process;

FIG. **9** is an elevation of an auxiliary glue unit;

FIG. **10** is a partial elevation showing a modification;

FIG. **11** is a plan view of the structure shown in FIG. **10**;

FIGS. **12**, **13**, and **14** are partial elevations of FIG. **11**;

FIG. **15** is a partial elevation of a further modification;

FIG. **16** is a plan of the modification shown in FIG. **10**; and

FIGS. **17**, **18**, and **19** are partial elevations of FIG. **16**.

PREFERRED EMBODIMENT

The paper stock such as a web is continuously fed from a roll, and passes under a remoist glue applicator **10**, which forms a flap sealing line **12**. The stock then passes under a stitch and pocket glue applicator **14** which supplies pocket glue in transverse lines **16** at spaced intervals along the margin of the moving web, spaced outward from the remoist glue line **12**.

A stitch glue line **20** is formed longitudinally on the moving stock spaced inward from the pocket glue pairs **16** and outward from the remoist glue line **12**, by passing under a stitch glue applicator part **18** which forms a line of intermittent spots. The margin M passes to an envelope former **22**, which as shown in FIG. **3** folds the outer part of the moving margin over the remaining part of the same and adhering the pocket glue pairs **16** thereto.

The moving stock then passes under a slitter **40**, which divides the stock into ribbons P, R, and S. The slitter may also have a wheel **39** to form a line of perforations **41** for the ultimate removal of the envelope from the finished pamphlet. The ribbon S, which has a glue stitch line **42** thereon, passes over a turn bar **44**, then under bay roller **46**, up over a turn bar **47** to overlie the ribbon R as shown in FIG. **5**. Each turn bar section consists of bars at right angles to each other and 45° to the stock. The distance between the bars controls the ribbon displacement.

The ribbon P having the envelope pocket glue **16** thereon passes over the turn bar **48**, then under bay rollers **50**, on up over its former path to turn bar **52**, over which it passes down to overlie the ribbon S.

The turn bar and bay roller combination not only moves its ribbon laterally and into superimposed relation, but also turns it upside down into reversed position. Hence as shown in FIG. **3**, the glue stitch lines **20** and **42** are on the underside of their respective ribbons P and S.

The superimposed ribbons P, R, and S now pass to half-fold former **54**, which as shown in FIG. **7**, brings the envelopes on the other side thereof, forming a multiple crease **56**. The creased ribbons now pass to a transverse cutter **58** which severs the same at the center of the pairs of pocket glue lines **16** to form successive multiple page envelope containing pamphlets as shown in FIG. **8**.

It should be noted that the paper stock may be wide enough to have the slitter **40** form an additional ribbon T, which passes down under a turn bar **60** on down over bay roller **62** under its former path and down over turn bar **64** to overlie the ribbon R, before the ribbon S is applied thereover.

Furthermore, an additional ribbon B as shown in FIG. **6** and pregummed on the bottom as at **66** by a glue unit **68** shown in FIG. **9** may be introduced at one side. This will pass over the turn bar **70** to underlie the ribbon R as shown.

As shown in FIGS. **10** and **11**, the stock having remoist glue line **12**, passes under a pocket glue applicator **72**, which applies pocket glue transverse lines **73** with a joining longitudinal line **74**.

The moving stock then passes under a slitter **40** which separates the margin M from the ribbon P. The margin M then passes down under the turn bar **75**, around bay roller **76**, and down over turn bar **77**, to overlie the ribbon P. A separate preglued ribbon B can be added as shown in FIGS. **6** and **9**.

In the form shown in FIGS. **15** and **16**, the pocket glue lines **73** and **74** are applied to the stock portion which later forms the ribbon P. The margin M passes over turn bar **75**, bay roller **76** and turn bar **77** to overlie the ribbon P.

What is claimed is:

1. Method of producing envelopes contained in pamphlets which comprises

forming envelopes along paper stock;

folding said stock longitudinally beside said envelopes;

slitting said stock to form separate ribbons;

feeding said ribbons into superimposed relation with said envelopes;

folding said superimposed ribbons to form a multiple crease;

securing the folded portions together along said multiple crease; and

finally cutting said stock transversely to sever the same into successive multiple page envelope containing pamphlets.

2. Method as claimed in claim **1**, in which said ribbons are superimposed by the use of turn bars.

3. Method as claimed in claim **2**, in which said turn bars cooperate with bay rollers.

4. Method as claimed in claim **1**, in which longitudinal lines of adhesive are applied to certain of said ribbons before they are superimposed.

5. Method as claimed in claim **1**, in which a line of perforations is formed in said stock between said envelope and said first crease.

6. Method as claimed in claim **1**, in which said envelope containing ribbon is superimposed upon the other ribbons and folded inside thereof to lie between pages outside thereof.

7. Method as claimed in claim **1**, in which an additional ribbon from a separate source is added to said superimposed ribbons.

8. Method as claimed in claim **1**, in which said envelopes are formed by applying to said stock a pair of transverse lines of pocket glue; and

applying a longitudinal line of pocket glue between said transverse pocket glue lines.

9. Method as claimed in claim **1**, in which said envelope bearing ribbon is separated from the others before it is brought into superimposed relation.

10. Method of producing envelopes contained in pamphlets which comprises

forming envelopes along one side area of a strip of paper stock while leaving the other side area flat;

adding a strip of paper of substantially the same width from a separate source to bring the two strips into superimposed relation;

folding said superimposed strips longitudinally along a median line to form a multiple crease;

securing said folded strips together along said multiple crease; and

finally cutting said stock transversely to sever the same into successive multiple page pamphlets.

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