

Dec. 31, 1968

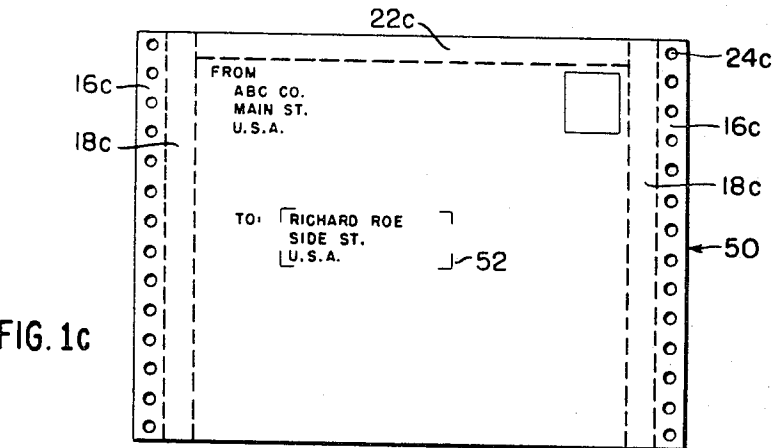
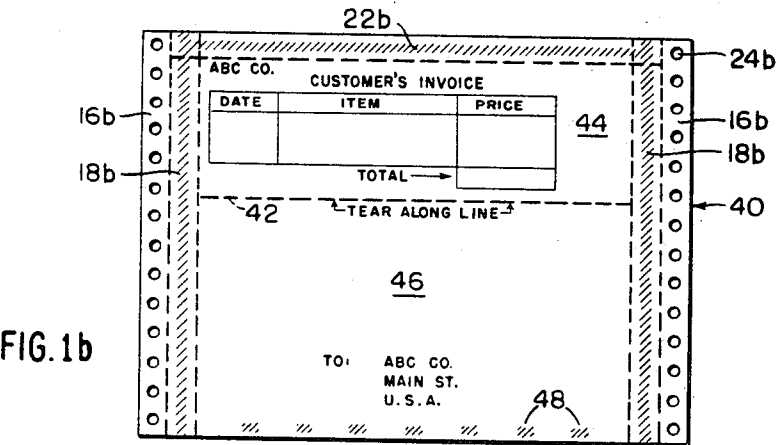
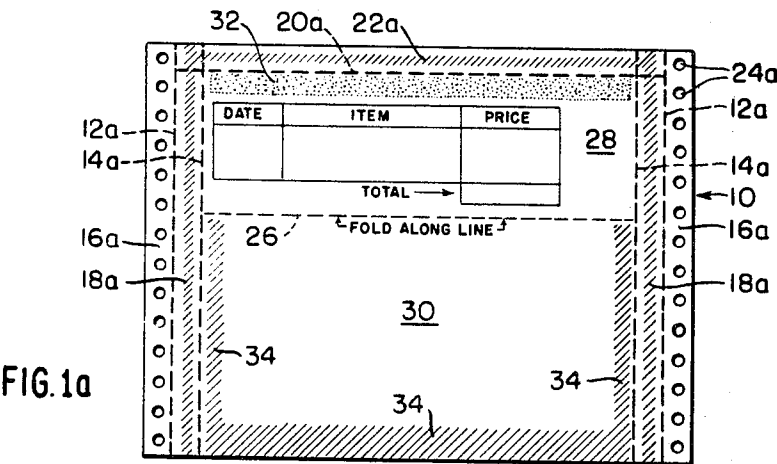
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3,419,286

BUSINESS FORM AND MAILING ENVELOPE

Filed Sept. 2, 1966

Sheet 1 of 2



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FIG. 2

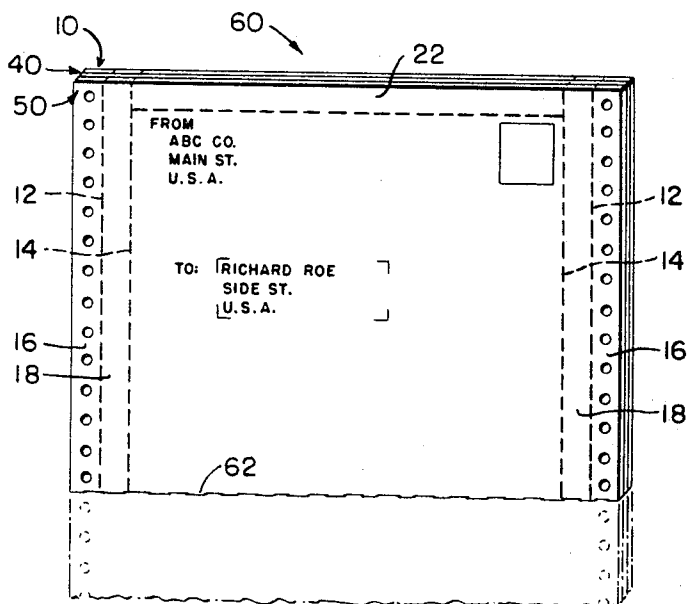
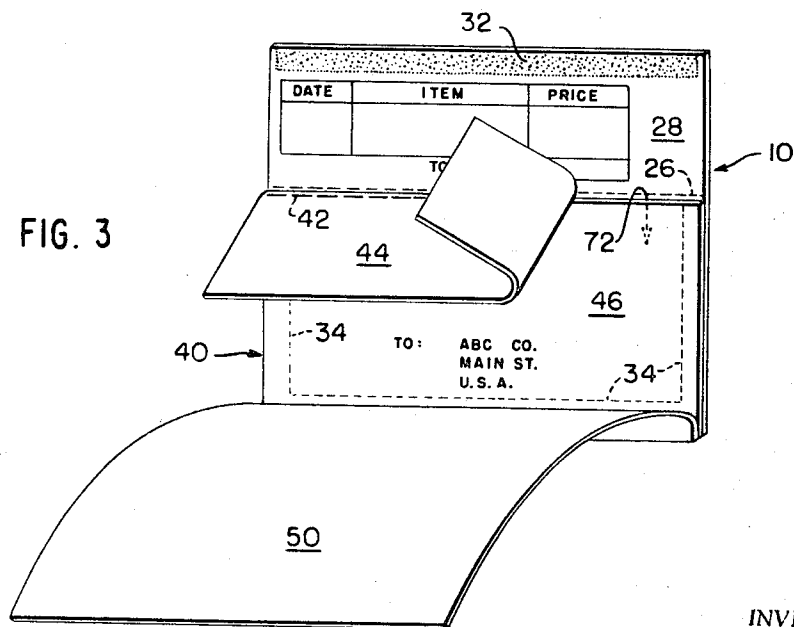


FIG. 3



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Filed Sept. 2, 1966, Ser. No. 577,076

4 Claims. (Cl. 282—11.5)

ABSTRACT OF THE DISCLOSURE

A combined mailing and return envelope comprises a bottom sheet forming one face of both an outer and an inner mailing envelope, a top sheet forming the second face of the outer envelope, and an intermediate sheet forming the second face of the inner envelope and containing a detachable invoice portion extending laterally across the envelope from side to side. The sheets are glued together at selected portions to form a unitary packet and are scored adjacent the side and top edges to provide the recipient with a means of quickly and neatly opening the packet for access to its contents.

Our invention relates to an improved business form. In particular, it relates to a continuous-form mailing envelope which is capable of being fed through data processing machinery.

The advent of data processing machines has created a new demand for business forms which are compatible with these machines. In particular, a practical billing form which may rapidly be prepared on automatic equipment and sent through the mail to customers is highly desirable. Such forms usually consist of a billing statement which is to be returned by the customer with the necessary payment, together with an invoice which is retained by the customer for his files. In addition, a self-addressed return envelope is often enclosed within the outer envelope to ensure that collections are speeded up. Previously, these statements and invoices were first prepared on billing machines and subsequently inserted, together with the return envelope, into the outer mailing envelope. The insertion of these forms into the mailing envelope (known as "stuffing") was both time-consuming and expensive. In recent years, business forms have been developed in which a billing statement, a customer's invoice, and a return envelope are simultaneously addressed and printed while incorporated within the outer mailing envelope which is sent to the customer. In most of these forms, however, the billing statement, the customer's invoice, the return envelope, and the outer mailing envelope are formed from separate and distinct layers of plies of paper, thus requiring an increased supply of paper stock and causing an increased production and assembly time, with a consequent increase in cost.

We have found that the various invoices and statements, together with portions of the outer envelope, may readily be combined with portions of the inner envelope to form a unitary, integral packet which reduces to a minimum the number of separate parts required to be assembled and which yet forms a compact, strong mailing unit.

In accordance with our invention, we provide a combined mailing and return envelope comprising a bottom sheet or ply of envelope material, an intermediate sheet, and a top sheet, all three sheets being joined together at the edges and having side and top perforated segments adjacent the edges. The bottom sheet of the packet serves as an envelope back for the outer envelope and also serves as an envelope front or back for the inner return envelope. For this purpose, a fold line is scored across the upper portion of the bottom sheet and the upper edge of this portion is coated with glue to form an adhesive flap for the

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return envelope. The intermediate sheet of the envelope packet contains a perforated upper portion on which is printed the customer's invoice and which corresponds in size to the size of the upper part of the bottom sheet described above. The upper sheet of the packet serves as the front portion of the outer mailing envelope. In addition to having perforated segments at the edges and at the top of the various plies forming the envelope packet, the packet contains additional segments of perforated material on the sides thereof, the segments having a series of holes punched therethrough in order to form feed bands for the assembly when used in connection with automatic data processing machinery. The various plies in the packet may have carbon films applied to certain surfaces in order that the plies within the assembly may be imprinted with any desired material after the plies are assembled. Preferably, however, special chemically treated papers such as the well known "action" paper may be used to ensure printing of the plies within the assembly when desired.

Accordingly, it is an object of our invention to provide an improved mailing and return envelope packet. Another object of our invention is to provide an improved mailing and return envelope packet that is relatively simple in construction and that is economical to produce in large quantities. Another object of our invention is to provide an improved mailing and return envelope packet in which a customer's invoice is incorporated as an integral portion of one of the envelopes. Yet another object of our invention is to provide an improved mailing and return envelope packet in which a customer's invoice and a billing statement are combined with portions of the return envelope and the outer mailing envelope whereby the production cost and the cost of raw stock may be greatly reduced.

The above and other further objects and features of our invention will become more readily apparent in conjunction with the following detailed description of the drawings in which:

FIG. 1a is a plan view of a combined statement form and return envelope back constructed in accordance with our invention;

FIG. 1b is a plan view of a customer's invoice and return envelope front which is used with the structure of FIG. 1a;

FIG. 1c is a plan view of a mailing envelope front which is used with the structures of FIGS. 1a and 1b;

FIG. 2 is a pictorial view of the assembled envelope packets of our invention in a continuous form suitable for feeding through automatic data processing machinery; and

FIG. 3 is a pictorial view of an envelope packet of our invention in assembled form after the detachable side and top segments have been removed.

Referring now to FIG. 1a, there is shown a sheet or ply 10 of paper having first and second lines of perforations 12a and 14a spaced inwardly of the sides of the sheet to form first and second detachable side segments 16a and 18a respectively and a third line of perforations 20a running parallel to, and spaced inwardly from, the top margin to form a detachable top segment 22a. Holes 24a are perforated in the outer detachable side segments to form the feed bands for feeding the form, when assembled, through automatic data processing machinery. A fold line 26 is scored across the sheet 10 to separate an upper portion 28, which may contain a billing statement, from a lower portion 30 and to enable the upper portion to be readily folded over onto the lower portion. The detachable side segments 18a and the detachable top segment 22a are coated with an adhesive which may be of the pressure sensitive, thermosetting, or other desired type. A similar adhesive is also applied to the areas 34 formed inwardly

of the detachable side segments **18a** and extending upwardly to the fold line **26** and laterally across the bottom margin of the sheet **10**. A top margin **32** of the upper portion **28** inwardly of the detachable top segment **22a** is provided with a gummed surface which may be moistened by the user to form an inner return envelope as herein-after described.

FIG. 1b shows a second sheet or ply **40** of paper having detachable side segments **16b** and **18b** and a detachable top segment **22b**. A line of perforations **42** allows the upper portion **44** to be detached from the lower portion **46**. As may be seen from the drawing, the upper portion **44** of the sheet **40** may contain a printed customer's invoice which is detachable from the lower portion, while the lower portion may contain the printed return address of the original sender. As will be apparent, other and different forms of information may be printed on the sheet **40** as desired. As was the case with the sheet **10** of FIG. 1a, the detachable side segments **18b** and top segment **22b** are coated with an adhesive; in addition the bottom margin of the sheet **40** carries an adhesively coated surface **48** as shown in the drawing. In order to facilitate the printing of data on the sheet **10** when it is covered by the sheet **40**, the latter sheet must be treated in some fashion. For example, a light film of carbon may be applied to a given portion of the sheet **40** on the rear side to allow data to be transferred to the corresponding portion on the front side of the sheet **10** that is below it and adjacent to it. This method of treating the paper is known as spot carbonization for obvious reasons. Thus, for example, the sheet **40** may have spot carbon applied to its rear face in a position corresponding to the statement section of the upper portion **28** on the face of the sheet **10**. By this means, information may be selectively imprinted on varying portions of different sheets merely by exerting the proper pressure on the top-most sheet. A preferred manner of enabling the imprinting of the various sheets, however, is to utilize chemically sensitized paper for the individual sheets in order that information may be transferred to selected sheets. An example of this type treatment is the well known "action" paper in which the rear face of an upper sheet of paper is treated with a first chemical and the front face of a lower sheet of paper, on which the upper sheet is superimposed, is treated with a second chemical contained in miniature capsules within the paper; pressure applied to the top sheet of paper causes the miniature capsules to burst and a chemical reaction between the adjacent faces of the papers causes ink to form in those areas where the pressure has been imposed. As was the case with the spot carbon, the various sheets need be chemically sensitized only in certain areas where it is desired to imprint information.

FIG. 1c shows a sheet or ply **50** having first and second detachable side segments **16c** and **18c** respectively and a detachable top segment **22c** in a fashion similar to that shown in FIGS. 1a and 1b. It will be noted that neither the side nor the top detachable segments of the sheet **50** carry an adhesive surface. An address portion **52** is provided for the customer's name and address. As described above with reference to FIG. 1b, selected portions of the rear face of the sheet **50** may be carbonized or may be treated with certain chemicals which will cooperate with corresponding chemically treated areas on the sheet **40** to allow data to be imprinted on the sheet **40**.

In order to form the desired envelope assembly from the structures shown in FIGS. 1a through 1c, a packet is formed by superimposing sheets **50** and **40** on sheet **10**, the sheet **40** being interposed between sheets **10** and **50**. These sheets are all of equal size and the lines of perforations forming the side and top detachable segments **16**, **18** and **22** respectively are located in the same relative positions with respect to the individual sheets and overlap each other when assembled. The resultant assembly is then subjected to pressure in order that the rear face of

the sheet **40** may be adhesively secured to the front face of the sheet **10** along the adhesive surfaces on segments **18a**, **22a**, and **34**, while the rear face of the sheet **50** is secured to the front face of the sheet **40** along the adhesive surfaces on segments **18b**, **22b**, and **48**. When so assembled, the sheets **10** and **40** form an inner return envelope, the lower portion **30** of the sheet **10** forming the back portion of the envelope and the upper portion **28** forming the envelope flap having a sealing surface **32**; the lower portion **46** of the sheet **40** forms the front portion of the return envelope. Similarly, the sheet **50** forms the front portion of the outer mailing envelope, the entire sheet **10** forming the back portion of this envelope. Thus, the sheet **10** forms one portion of both the outer and inner mailing envelopes, thus reducing the number of separate plies of paper which would otherwise be required.

The assembled sheets are shown in FIG. 2 which is a pictorial view of the assembled envelope packets prepared in the form of a strip of packets formed from continuous sheets of paper perforated at the desired intervals as indicated by the numeral **62**. The assembly **60** may now be fed through data processing machinery so that the names and addresses of customers, and the requisite billing amounts, may be imprinted directly on the various sheets by means of pressure applied to the top sheet **50**. In some cases, it will be found desirable to cover the top sheet **50** with a cover sheet (not shown) during the addressing and billing; the cover sheet may then be removed and may serve as a master file copy or may be thrown away if desired.

After the envelope assembly has been properly imprinted, the individual envelope packets are separated from each other and the side feed bands **16** and **18** are removed. The envelope packet is now ready for mailing to the customer who is to be billed. The detachable segments **18** and **22** serve as side and top sealing means for the envelope packet while in transit. Upon receipt of the packet, the customer removes the side and top detachable segments **18** and **22** respectively, thus freeing the outer envelope front sheet **50** at the side and top portions.

FIG. 3 shows the envelope packet with the side and top segments **18** and **22** respectively removed to allow the user access to the invoice and statement forms. As shown in FIG. 3, removal of the side and top detachable segments releases the outer envelope front sheet **50** on three sides and the sheet **50** may then easily be removed from the sheet **40** merely by tearing along the bottom portion of the sheet to free it from the glue segment **48** on the sheet **40**. The invoice portion **44** of the sheet **40** is then removed by tearing along the tear line **42**, thus exposing the upper portion **28** of the sheet **10**. It will be noted that the lower portion **46** of the sheet **40**, together with the sheet **10**, forms a return envelope having a pocket **72** which is sealed at the sides and the lower edge thereof by means of the adhesive **34** which is applied to the front face of the sheet **10** and which contacts the rear face of the sheet **40**. After the invoice **44** has been removed, the upper portion **28** of the sheet **10** will be seen to form an envelope flap having a gummed surface **32** for sealing the envelope. The check or other means of payment is inserted in the pocket **72** of the inner envelope and the envelope is then sealed. The billing statement, which forms the upper part of the return envelope flap, is covered from view when the flap is turned down on the face of the sheet **40** and sealed.

From the above it will be seen that with the use of three sheets of paper properly perforated and positioned, a compact structure containing an outer mailing envelope, a billing statement, a customer's invoice, and an inner return envelope is formed. Further, it will be noted that the bottom sheet or ply serves the dual function of providing a rear envelope surface for both the inner and the outer return envelopes, thus saving the added weight and expense of providing an additional and separate sheet to serve as a back for the outer mailing envelope. It will

also be noted that the upper portion of the front face of the return envelope carries the customer's invoice as a detachable integral portion thereof, thus avoiding the additional expense which would be incurred if customer's invoice were to be formed by a separate sheet of paper.

It will thus be seen that we have provided an improved mailing and return envelope packet having a minimum number of separate sheets forming the packet and which is simple and economical to produce. The reduction in the number of separate sheets required, and the incorporation of plural elements on some of the sheets leads to a direct reduction in manufacturing costs which is extremely desirable when large numbers of such packets are to be produced.

Having illustrated and described a preferred embodiment of my invention, we claim:

1. In a continuous-form mailing envelope for feeding through data-imprinting machinery, the improvement which comprises an envelope assembly consisting of first, second and third superimposed plies of equal dimensions having side, top and bottom edges respectively and having inner and outer lines of perforations parallel to, and spaced inwardly from, each said side edge to form inner and outer pairs of detachable side segments, and having a third line of perforations parallel to, and spaced inwardly from, said top edge to form a detachable top segment, each of said outer pair of detachable side segments having a row of perforate holes therein whereby said plies may be fed through said machinery in a direction parallel to said side edges, said inner pair of detachable side segments and said detachable top segment having adhesive securing means thereon whereby the ply portions forming said segments are secured together and being severable from said plies along the respective lines of perforations to release said plies from attachment to each other at least along portions of a plurality of edges, said first and third plies forming the front and rear portions respectively of an outer mailing envelope and said second and third plies forming the front and rear portions of an inner return envelope, said second and third plies being adhesively se-

cured to each other adjacent the bottom edge thereof and adjacent the side edges thereof inwardly of said side detachable segments and extending upwardly to a detachable invoice portion formed integral with one of said second and third plies and defined by a line of perforations extending laterally across said ply from side to side, the corresponding portion on the other said ply forming a sealing flap for the inner return envelope, and means for imprinting information on said invoice portion and on the corresponding portion of said return envelope when pressure is applied to said assembly.

2. The combination defined in claim 1 in which said means for imprinting information comprises carbon films on the rear faces of said first and second plies adjacent the corresponding portions of the front faces of said second and third plies which are to be imprinted.

3. The combination defined in claim 1 in which said means for imprinting information comprises pressure-sensitive imprinting elements in said plies.

4. The combination defined in claim 1 in which said detachable invoice portion is formed integral with said second ply, the edge of the corresponding portion of said third ply forming said envelope flap and having a moistenable adhesive coated thereon to permit said portion to be sealed to the envelope portion of said second ply.

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U.S. Cl. X.R.

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