

Dec. 26, 1939.

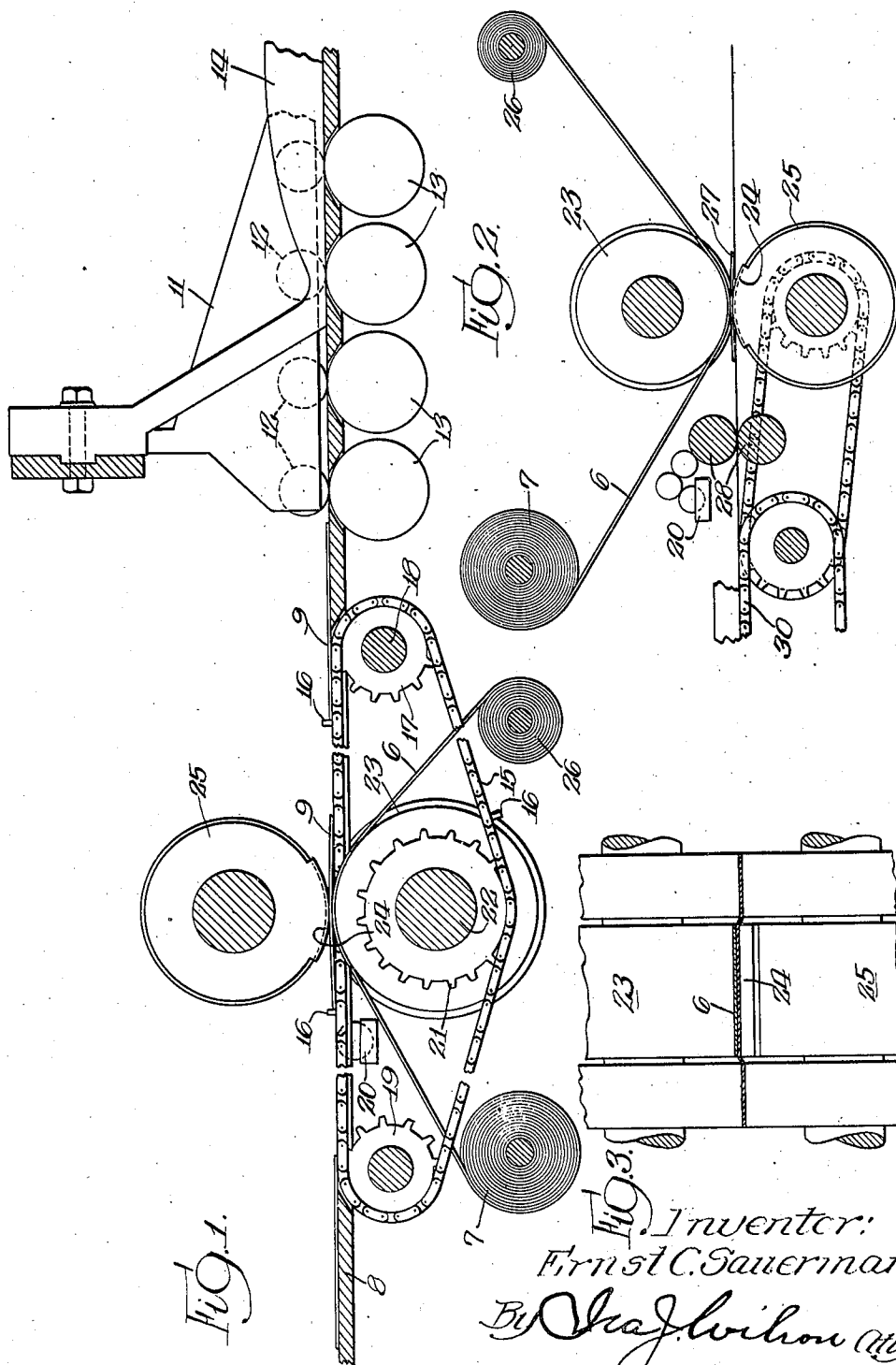
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2,184,362

MEANS FOR PRODUCING PREADDRESSED ENVELOPES

Filed Jan. 31, 1938

4 Sheets-Sheet 1



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Dec. 26, 1939.

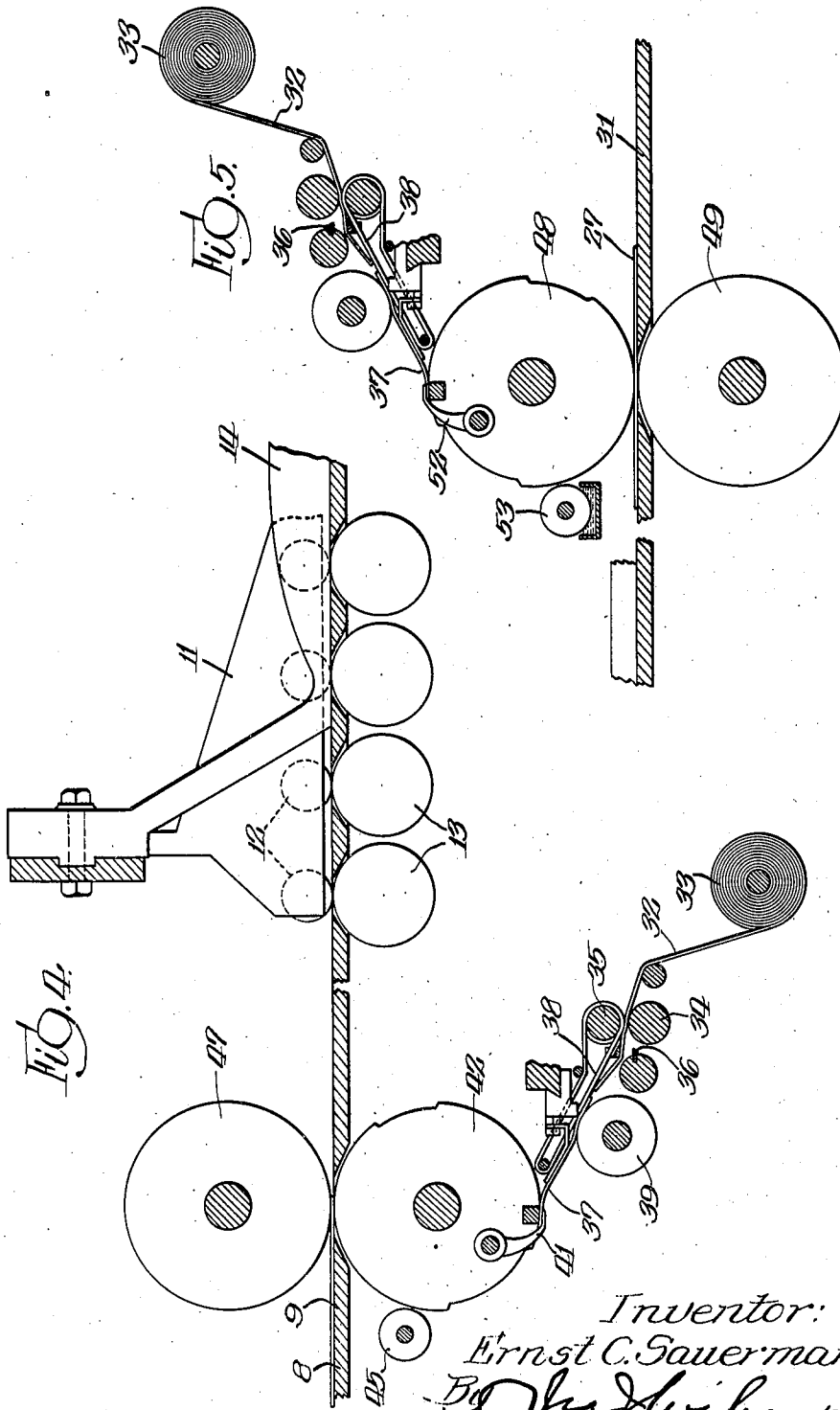
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MEANS FOR PRODUCING PREADDRESSED ENVELOPES

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4 Sheets-Sheet 2



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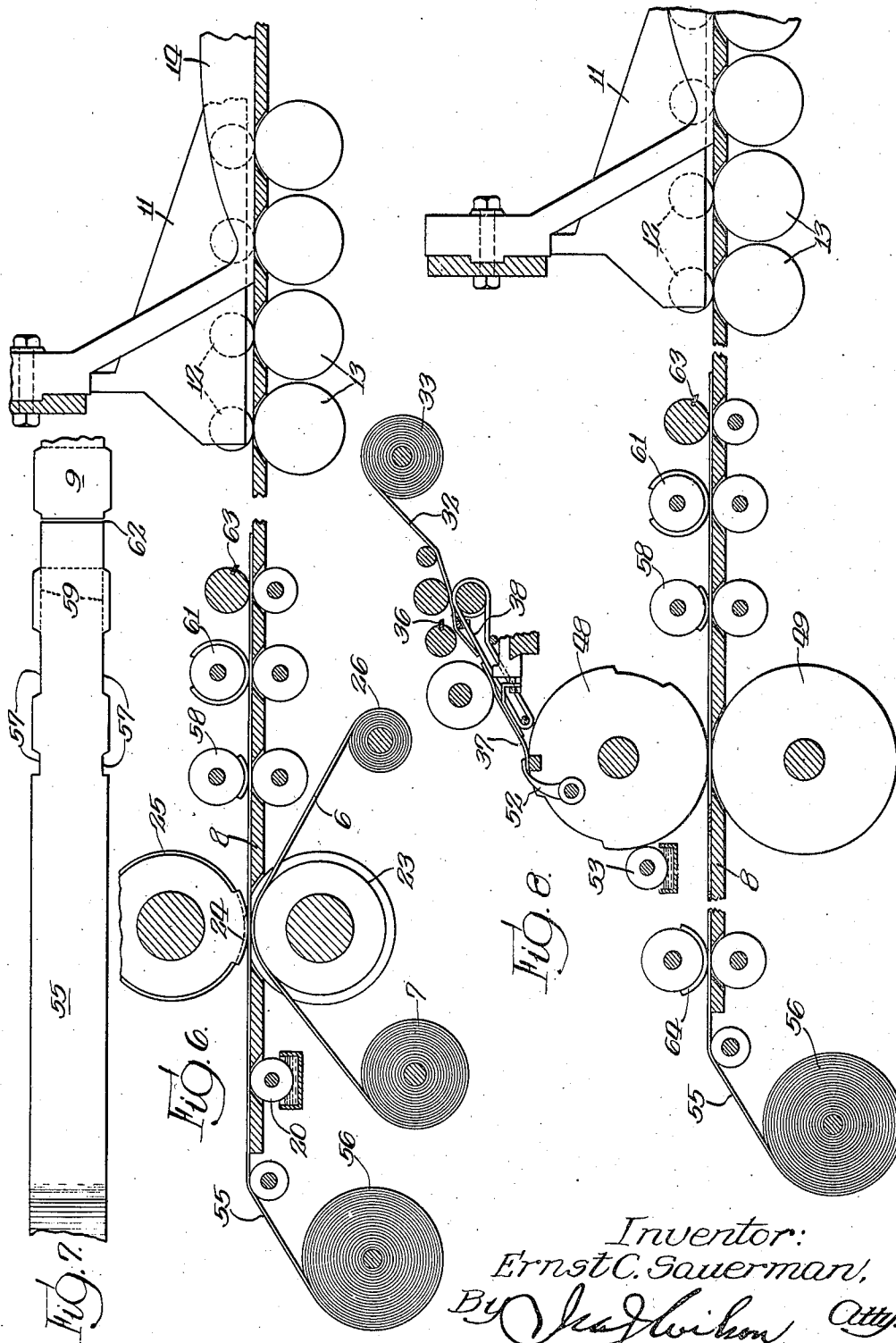
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MEANS FOR PRODUCING PREADDRESSED ENVELOPES

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4 Sheets-Sheet 3



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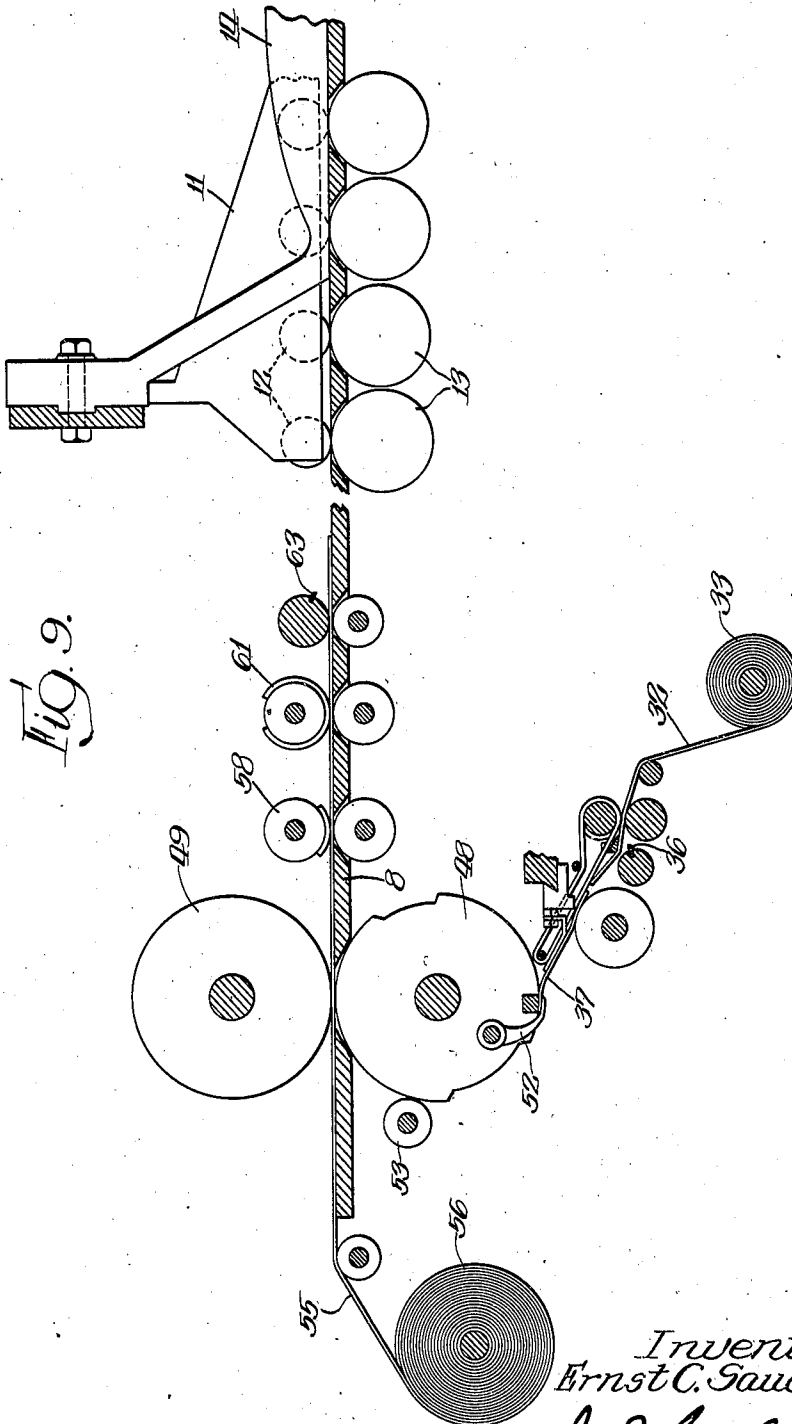
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MEANS FOR PRODUCING PREADDRESSED ENVELOPES

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4 Sheets-Sheet 4



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UNITED STATES PATENT OFFICE

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MEANS FOR PRODUCING PREADDRESSED
ENVELOPES

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Application January 31, 1938, Serial No. 187,842

1 Claim. (Cl. 93-61)

This invention relates to mailing envelopes or the like and has for its purpose the production of envelopes having the names and addresses of the recipients already appearing thereon when they are delivered to the purchaser, thereby relieving the purchaser of the necessity of individually addressing the envelopes.

The method is particularly valuable to large mail advertisers who heretofore have purchased their envelopes unaddressed and have been obliged to apply to each individual envelope either by individual typewriting, hand addressing, or addressing machines the name and address of the recipient. This addressing of envelopes in large quantities constitutes a substantial item of expense in a large advertising campaign.

My present invention aims to provide envelope users with addressed envelopes at a cost very slightly in excess of the cost of unaddressed envelopes, so that a major portion of the expense of addressing the envelopes and all of the time and annoyance of so doing is saved to the envelope users.

The cost of addressing the envelopes in accordance with my invention is very much less than the cost of applying the addresses with a typewriter, by hand, or with an addressing machine, any of which methods involves an additional handling, an additional operation and an additional operator. In accordance with my method the names and addresses are applied while the envelopes are being manufactured and during their travel through the envelope making machine, so that no additional handling of or operation upon the envelopes, the blanks or the web from which they are formed is necessary in applying the names and addresses thereto. In other words, the addressing of the envelopes becomes merely another operation in their manufacture which is performed as the envelopes, blanks, or web progress through the machine by which they are manufactured. The combination with an envelope making machine of addressing means operating simultaneously and synchronously with the other mechanisms of the machine is, so far as I am aware, novel and constitutes an important feature of my invention.

A method similar in some respects to the present and an article produced thereby are disclosed in my co-pending application Serial No. 174,050, filed November 11, 1937.

For the purpose of facilitating an understanding of my invention, I have illustrated on the

accompanying drawings somewhat diagrammatically the manner in which my novel method may be practiced together with means for carrying the same into effect.

Referring to the drawings:

Fig. 1 is a fragmentary sectional view through an envelope making machine in which I have incorporated an address applying mechanism for carrying out my improved method;

Fig. 2 is a similar view in which the address applying mechanism is located at the rear of, instead of in front of, the folding mechanism;

Fig. 3 is a fragmentary view looking toward the left at Fig. 2;

Fig. 4 is a view similar to Fig. 1 showing another mechanism for applying addresses to envelope blanks;

Fig. 5 is a view corresponding to Fig. 2 showing the mechanism arranged for applying the addresses to the folded envelopes.

Fig. 6 is a longitudinal sectional view of a machine equipped to apply the addresses to the web from which the blanks are later formed.

Fig. 7 is a plan view of the web illustrating the operations performed thereon;

Fig. 8 is a view similar to Fig. 6 showing a method of applying addresses to a web being fabricated into window envelopes; and

Fig. 9 is a similar view illustrating the application of address slips to an imperforate web from which envelopes are produced.

In accordance with the plan contemplated by my invention, the envelope user furnishes to the manufacturer the names and addresses of the recipients to whom the envelopes containing the desired mailing matter are to be sent. The envelope manufacturer reproduces this list by means of a special typewriter upon a strip of paper or the like and by the use of a special carbon paper faced against the back of the strip when the names and addresses are written thereon such names and addresses appear in reverse on the back of the strip. A similar result is attainable with a typewriter upon which the letter characters are reversed. This strip, which is known as the master strip or printing strip, is designated in Figs. 1 to 3 and 6 of the drawings by reference character 6. The front of the strip upon which the addresses appear as they are written upon the typewriting machine is disposed downwardly in Figs. 1 and 6, and the back of the strip upon which the addresses appear in reverse and from which the printing is done is disposed upwardly. In Figs. 2 and 3 the back of the strip is disposed downwardly. The names and ad-

addresses are written upon the strip in spaced relation, so that when the printing of one name and address is taking place there will be no smearing or smudging of the adjacent addresses on the strip.

The master or printing strip when made up on the special typewriting machine is wound from one roll onto another, and the roll upon which it is disposed when completed is indicated in Figs. 1, 2 and 6 by reference character 7. The back of the strip or printing face is faced outwardly on the roll.

An envelope making machine of any standard or preferred construction comprises a table or bed 8 along which the paper or other suitable material from which the envelopes are to be formed is fed to the various operating mechanisms. In accordance with the disclosures of Figs. 1 to 5 inclusive, the envelope material has been previously cut into envelope blanks and the addresses are applied to the blanks before they are folded in Figs. 1 and 4 and to the folded blanks or completed envelopes in Figs 2 and 5. Figs. 6 to 9 disclose the application of the addresses to the web in predetermined spaced relation before the web has been cut into blanks, the spacing being such that an address will appear in proper position on each blank and the completed envelope formed therefrom.

Since my invention is concerned generically with the preaddressing of envelopes as a step in their production, and irrespective of whether the addresses are applied to the web before it is cut into blanks or to the individual blanks after they have been cut and either before or after they have been folded, that area of envelope sheet material utilized in the production of a single envelope and whether it be in web, blank or envelope form will be herein designated as a "unit."

Referring for the present to Fig. 1 wherein the units to which the addresses are applied consist of previously cut blanks designated by reference character 9, these blanks are fed along the table to a blank folding mechanism designated generally by reference character 11 and comprising a series of feed rollers 12, a series of co-operating feed rollers 13, and folding plates 14 for turning over the flaps of the envelope.

In accordance with my invention, I have incorporated in a machine of this character mechanism by which the names and addresses furnished to the manufacturer and printed by him upon the strip of paper or the like, as previously explained, may be transferred or applied to the envelope blanks or units as they travel along the envelope making machine. A chain conveyor 15 equipped with blank feeding pins 16 is trained over a sprocket wheel 17 fixed on a power driven shaft 18, over a freely rotatable sprocket 19, and over a sprocket 21 fixed upon shaft 22 which carries a roll 23 over which the blanks travel. A segmental presser portion 24 of a companion roll 25 driven at the same speed as roll 23 is intermittently brought into cooperative printing relation with the successive blanks as they travel along the bed to apply an address to each in the following manner.

The printed strip of names and addresses 6 is trained from the roll 7 over the roll 23 and onto a take-up roll 26, which is intermittently actuated by feed mechanism of any preferred type to present the names and addresses on the strip successively into position to be transferred from the strip onto the lower face of the en-

velope blank 9 as the blank is pressed against the strip by the printing portion 24 of roll 25 while the strip 6 is backed up by roll 23. The simultaneous travel of the rolls 23 and 25, a blank 9, and the strip 6 at the same linear speed will produce a clear transfer impression from the strip 6 onto the face of the blank 9, so that the name and address is thereby applied to the blanks while they are traveling through the envelope making machine, thus obviating any further handling of the blanks or the performance of any address applying operations. To facilitate the transfer of the impression onto the material of the envelope unit, such material is preliminarily moistened by an application of alcohol or other liquid through the medium of an applicator 20 illustrated as comprising an applying roll running in a well.

In the form of the invention illustrated in Figs. 2 and 3 the rolls 23 and 25, instead of being mounted ahead of the blank folding mechanism, are mounted in the rear thereof and vertically reversed so as to print on the upper instead of the lower face of the unit. In this instance the blanks have been folded and fastened to produce a complete envelope 27 which is delivered by the feed rolls 28 from the conveyor 30 to an entering position between the printing rolls 23 and 25. The name and address are printed from the strip 6 upon the upper face of each envelope as it passes between these rolls.

In the form of the invention exemplified in Figs. 4 and 5 the names and addresses, instead of being directly printed on the envelope from the master or printing strip 6, are printed from the master strip upon a duplicate strip which is then cut transversely into slips each bearing a name and address. These slips are then pasted or glued to the faces of successive envelopes as they travel along the machine.

This form of the invention is particularly advantageous where a number of mailings are required to each of the addressees on a list. In such instances a number of duplicate strips are printed from the master or printing strip so that each of these duplicate strips furnishes a complete set of names and addresses for each mailing. For instance, if an advertising campaign contemplates the sending of a half dozen successive pieces of literature to each addressee, six duplicate strips will be made from the master strip and one of these duplicate strips will be used in each complete mailing series. The duplicate strips are printed from the master or printing strip by running the two strips simultaneously between pressure rolls with the back of the master strip pressed against the duplicate strip, so that the names and addresses are transferred in succession to the duplicate strip.

In Fig. 4 of the drawings, the machine includes, as in Fig. 1, a bed 8 and the folding mechanism 11 including the feed rolls 12 and 13 and the folding plates 14.

The duplicate strip which has been made from the master or printing strip, as above explained, and upon which the names and addresses have been printed from the master strip in spaced apart relation, is placed in the envelope making machine. The strip is designated in Fig. 4 by reference character 32 and the roll from which the strip is unwound for use is indicated by reference character 33. Simultaneously with the feeding of the envelope blanks through the envelope making machine, the duplicate strip 32 is fed by suitable feed rolls 34 and 35 from the roll

33 past a revolving cutter 36 by which the strip is severed transversely midway between the addresses appearing thereon into individual slips 37 each bearing a name and address. From the cutter 36 the slips are fed in succession by a belt conveyor 38 and a roll 39 into the holding jaw 41 of an applicator roll 42. This roll, which rotates in a clockwise direction viewing Fig. 4, carries the slips past the gumming roll 45 by which adhesive is applied to their outer surfaces and carries each slip into contact with the lower face of an envelope blank 9. Pressure roll 47 cooperating with roll 42 presses the slip and blank firmly together, causing the slip to adhere to the face of the blank with the name and address exposed to view on the face of the envelope. When the completed envelope with the flaps folded and gummed in the usual manner is delivered by the envelope making machine, the name and address of the recipient is already imposed thereon, so that the envelope when filled is ready for mailing.

In Fig. 5 I have illustrated the same principle of addressing the envelopes by applying slips to the faces of completed envelopes as they emerge from the envelope making machine, each slip bearing a name and address and being severed from a duplicate strip printed from the master or printing strip, as previously explained. In this instance, the applicator roll 48 and the pressure roll 49 are located at the rear, instead of in front, of the folding and other mechanisms of the machine. In other words, when the envelopes 27, completely folded, gummed and dried leave the forming machine, they are delivered between the rolls 48 and 49 and an address slip 37 carried by the holding jaw 52 of the applicator roll 48 past the gumming roll 53 and into contact with the face of the envelope is fixedly applied to each envelope. The roll 33 of the duplicate strip is, in this instance, mounted above the table 31 of the machine instead of below, as in Fig. 4. The strip feeding mechanism, the cutter and associated mechanisms are similar in structure to those disclosed in Fig. 4 but are in reversed position.

In the embodiment of my invention illustrated in Fig. 6, the addresses are applied to the envelope units while they are still in the form of a continuous web before being severed into blanks.

In this instance, the web 55 is fed from a roll 56 over the bed 8, past the moistening applicator 20 and between the rolls 23 and 25 where the addresses are applied from the printing strip 6 to the lower faces of the uncut units substantially in the manner heretofore explained in connection with Fig. 1.

After receiving the addresses in spaced relation, the strip is subjected to the usual fabricating operations consisting of the formation of the notches 57 (Fig. 7) by the notching roll 58, the scoring indicated by 59 (Fig. 7) by the score roll 61, and the cutting or severing on line 62 by the cutter 63 to produce individual blanks 9 which are then folded by the folding mechanism 11, as previously explained in connection with Figs. 1 and 4.

Fig. 8 exemplifies a method of producing pre-addressed window envelopes by which address slips are applied to the inside of the envelopes so as to be exposed to view through the windows, the application of the addresses being effected while the units are still in sheet or web form.

In this embodiment, the web 55 is fed over the bed 8, as previously, but before reaching the slip applicator roll 48, each unit is subjected to the

action of a window cutting roll 64 by which a window opening is formed therein. The mechanism for severing the duplicate strip 32 of addresses into individual address-bearing slips 37 and applying such strips to the upper faces of the uncut units, which faces become the inner faces of the completed envelopes, is substantially identical with that described in connection with Fig. 5 and consequently requires no further elaboration. It should be noted, however, that the applicator mechanism and the window cutting roll are so located and relatively timed that each address slip is accurately positioned over a previously cut window so as to be visible there-through in the finished product.

After the application thereto of the address slips, the web is notched by roll 58, scored by roll 61 and severed by cutter 63 into blanks which are folded by the folding mechanism 11, all in a manner previously indicated in connection with Fig. 6.

In accordance with Fig. 9, the address slips are applied to the lower faces of the units while still in web form so that they are located on the outside of the finished envelopes instead of on the inside, as in the method of Fig. 8.

In this instance, the web 55 is fed over the bed as previously. The window cutting mechanism is, of course, eliminated and the applicator roll is positioned beneath instead of above the bed. The notching, scoring, cutting, folding and other requisite mechanisms are in conformity in all substantial respects with the disclosure of Fig. 8.

It will be apparent from the foregoing that I have devised a method and apparatus for producing pre-addressed envelopes by which the names and addresses may be applied to the envelopes during their manufacture either by printing or impressing the addresses directly upon the envelopes or by applying to each a slip of paper or the like upon which the address appears. In either instance the application of the addresses to the envelopes occurs during the manufacture of the envelopes and prior to their delivery from the envelope making machine, thus obviating additional handling of the envelopes and the necessity of separate addressing operations. The time required in the production of an envelope so pre-addressed is no greater than that required to produce a nonaddressed envelope, since the addressing is done simultaneously with and in synchronism with the operations performed in making the envelope. As previously explained, the addresses may be applied to the envelope units when they are in either the web, blank or 55 folded condition and before or after they are gummed and may be applied to the top or bottom, back or front of the envelope, as desired.

The word "envelope" has been used throughout this application in a generic sense to designate an article to which addresses are applied, and is intended to include not only mailing envelopes but cartons, wrappers, and other containers which it may be desirable to preaddress in accordance with my invention.

The details and sequence of the steps performed in carrying out my method, as well as the structural details of the mechanism illustrated and described, may obviously be varied within considerable limits without departing from the scope of my invention as defined in the following claim.

I claim:

In an apparatus for producing a succession of mailing envelopes each provided with an individual address and ready for the reception of

mailing matter, the combination of means for advancing units composed of envelope material in an uninterrupted movement, means for forming said material into individual envelopes during such uninterrupted movement, and mechanism 5 for applying an individual address to each of said units before delivery from the machine, said mechanism comprising means for advancing a

strip of material carrying a series of individual addresses arranged thereon in spaced relation and means for transferring said addresses from said strip to the successive envelope unit during the uninterrupted travel of said units through 5 the machine.

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