

Jan. 16, 1962

W. F. BERNART ET AL

3,016,820

PRINTING VALUES AND IDENTIFYING MARKS ON DRAFTS

Filed Sept. 11, 1956

2 Sheets-Sheet 1

United States Postal Money Order

PAY AMOUNT IN THIS BLOCK →

DOLLARS	CENTS
0	2
2	4
4	7
7	5

SAME AS BELOW

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

INFORMATION TO BE INSERTED BY PURCHASER

TO JOHN JONES

PAYEE

WILLIAM SMITH

PURCHASER

301 GREEN ACRE LANE

PURCHASER'S STREET ADDRESS

SMITHVILLE, CONN.

PURCHASER'S CITY AND STATE

VOID IF ALTERED

INITIAL OF ISSUING EMPLOYEE

STAMP

PURCHASER'S RECEIPT

DETACH AND HOLD

ISSUING OFFICE

POST OFFICE RECORD

INITIAL OF ISSUING EMPLOYEE

FIG-1.

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FIG-2.

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Jan. 16, 1962

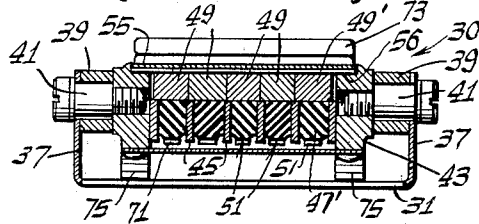
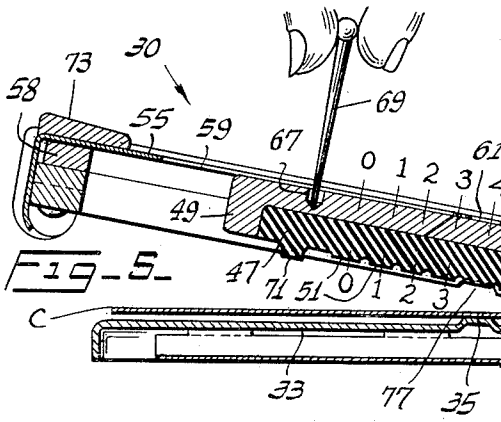
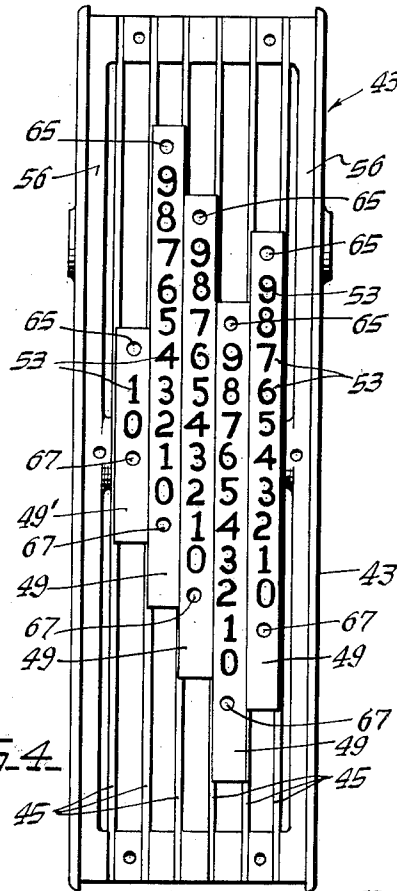
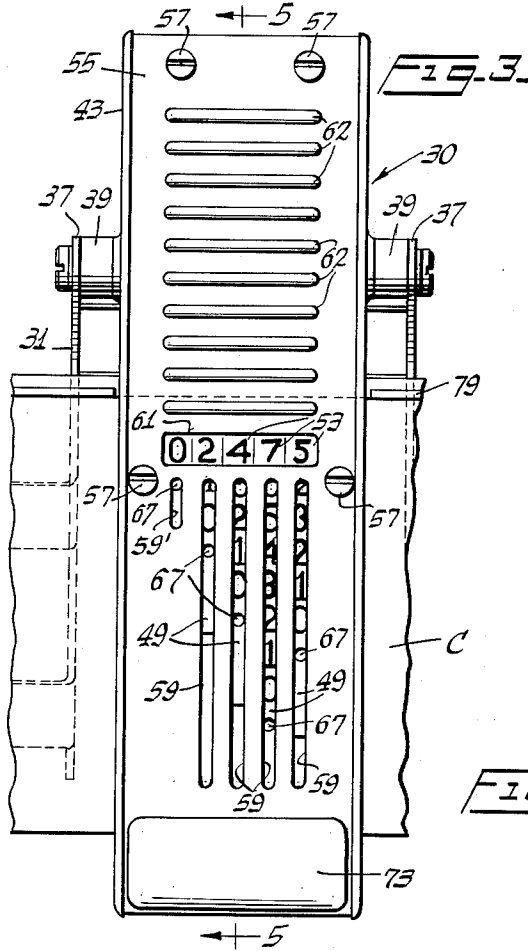
W. F. BERNART ET AL

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PRINTING VALUES AND IDENTIFYING MARKS ON DRAFTS

Filed Sept. 11, 1956

2 Sheets-Sheet 2



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3,016,820

PRINTING VALUES AND IDENTIFYING MARKS ON DRAFTS

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5 Claims. (Cl. 101-94)

This invention relates to the writing, reading and recording of drafts and the like, and particularly to the preparing and issuing of, and accounting for, postal money orders by a convenient system which is at once both economical of the official's time and effort, and provides the necessary duplicate record keeping information in handy form for automatic sensing in modern data processing equipment.

Heretofore the preparation of drafts such as postal money orders has required handwritten notations on the body of the draft, a record stub and a receipt for the purchaser of the draft, in addition to the preparation of a handwritten application by the purchaser.

It is an object of the present invention to provide an arrangement whereby the handwriting work on the part of the postal agent in preparing postal money order forms can be substantially eliminated.

It is another object of the present invention to provide a stamping device operable to effect the foregoing object on a preprinted form.

It is another object of the invention to provide quickly and easily settable stamp means by which certain information, such as value, which must appear on all parts of the form can be expeditiously inserted without the need for resorting to handwriting, and can be accurately placed without difficulty.

Another object of the invention is the provision of readily settable stamp means of extremely simple structure which, with a single stamping operation, will provide both legible indicia and corresponding coded information on the form.

It is a feature of the present invention that the immediately foregoing object is attained by the use of a slidable printing die which can be positioned lengthwise of itself to print one of several characters thereon at a predetermined location where a selective platen is arranged, and which also carries a coding die which has a printing face more prominent than the character printing faces, or other means capable of locally altering the physical characteristic of the form, and which simultaneously places a coding mark whose location corresponds to and signifies the value of the character printed by the particular character die found opposite the platen.

Other objects, features and advantages will appear as the description proceeds.

In the drawing:

FIG. 1 is a face view of a fully executed form for a postal money order according to the present invention;

FIG. 2 is a plan of a printing or stamping device for marking a postal money order of the type shown in FIG. 1, and showing the money order form in place therein with alternate positions illustrated in broken lines, to illustrate the use of the device;

FIG. 3 is a fragmentary plan of the device of FIG. 2 to a larger scale;

FIG. 4 is a plan of the type carriage portion of the FIG. 3 device with the cover plate removed;

FIG. 5 is a section taken substantially on line 5-5 of FIG. 3 but with the printing elements all centrally positioned;

FIG. 6 is a section taken substantially on line 6-6 of FIG. 5; and

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FIG. 7 is a detail bottom plan of a portion of one of the type elements.

Referring to the drawing, the present system for draft preparation, such as the filling in of forms for postal money orders, involves the use of a card C, FIG. 1, which takes the place both of the application and the final draft. The card C is preferably fairly stiff and of a size to be properly handled by suitable card sorting and data processing equipment and carries designated areas 11 for the reception of information to be written in by the purchaser. Other areas 13 and 15 are reserved for authenticating information, such as the agent's signature or initials and the stamp of the particular post office. One portion of the card, extending up and down when the card is held in reading position, is designated 17 and reserved for value data. This portion includes a tier 19 of normally blank squares in which numerals 20 denoting the number of dollars and cents may be written or printed. In line with each square in the tier 19 is a column 21 of squares with digits preprinted therein running serially and which are preferably to be marked with an overprint or block-out spot 23 in that square corresponding to the numeral written in the blank square in line with it. Column 21' is shown as shorter than the columns 21 merely because the card shown is designed to take care of values only up to but not including 200 dollars. The block-out 23 serves the dual purpose of verifying the numerals written in tier 19, and providing readily sensed spots which can be used, by virtue of their positions, to actuate data processing machines such as automatic accounting devices and the like.

About the same size as the value designating portion 17 of the card C, is a receipt tab 24 and a record tab or stub 25. These are extensions of the card C and may be separated therefrom and from each other along lines of weakening 27 and 29 respectively. They are similar in arrangement, each having a tier of normally blank squares 19a or 19b placed in corresponding location to the tier 19 aforesaid. Beneath the tiers 19a and 19b are also areas 21a and 21b each corresponding to the total areas of the columns 21 and 21' heretofore described. However, the columns of digits need not actually appear and are omitted from the form shown as will be seen in FIG. 1. Provided also on the tabs 24 and 25 are areas for authentication. In the case of receipt tab 24 this is shown as a space 15a for the stamp of the issuing post office, and in the case of record tab 25, this is shown as a space 13a for the agent's signature or initials. The spaces 15a and 13a may overlap the areas 21a and 21b as shown, if convenient or desirable.

A convenient device 30 for marking the area 17 of the body and both of tabs 24 and 25 with the same value information, is shown in FIGS. 2 to 7, and consists of base 31 which provides a table surface 33 having a raised platen 35. At one end of the base 31 are upwardly extending ears 37 carrying bearings 39 which receive the trunnions 41 for rockably mounting a type carriage or printing head 43 which overlies the table 33 and platen 35. The type carriage is a grating which includes spaced parallel dividers or rails 45 extending from end to end of the carriage, and between each adjacent pair of which is slidably mounted on elongate printing die 47 or 47' carried in an elongate holder 49 or 49' and making up a slidable printing element which rides on the upper edges of the adjacent rails 45 with the printing die projecting downwardly between the same. Each of the printing dies 47 carries a row of reverse reading types 51 representing the digits from 0 to 9 serially arranged, while the holder 49 has corresponding direct reading indicia 53 arranged on its upper surface, each item preferably directly above the type to which it corresponds as indicated by the

numbered location marks in FIG. 5. It will be understood, however, that this particular relative location is not required, it being merely necessary that the type 51 and its corresponding indicia 53 be related in such a way that when the type 51 overlies the platen 35 its corresponding indicia 53 is exposed at a suitable reading station such as will presently be described. Shorter dies and holders 47' and 49' having only two digits are shown in the end position for the particular use herein as explained above in connection with column 21' on section 17 or card C.

The upper surface of the type carriage 43 is overlaid by a cover plate 55 which is fastened in place by screws 57. The cover plate rests against suitable ledges 56 on the sides of the carriage, and spacer blocks 58 at the ends of the carriage, which position it above the upper surfaces of the rails 45 to provide room sufficient for the holders 49 and 49' to slide therebetween. In one half of the cover plate 55 there are formed a series of longitudinal operating slots 59 and 59'. The central portion of the cover plate has an opening or reading station 61 which in the form shown overlies the platen 35 and makes it possible for the operator to read what value has been set on the printing dies 47, 47'. Transverse embossed ribs 62 formed in the other half of the cover plate provide inverted grooves 63 on the underside of the plate for cooperation with spring-pressed detent balls 65 carried by the holders 49. By virtue of the engagement of the balls 65 with grooves 63 it is possible for the operator to determine by tactile sensation and by sound when the type face 51 which he is selecting has reached exact printing position. Furthermore the holder 49 in question is retained in selected position thereby against accidental displacement until affirmatively reset. Each holder 49 has on its upper surface a recess 67 which may be entered with an implement 69 via the corresponding slot 59 in the cover plate for setting the holder in desired position to place the selected type 51 over the platen 35. Each of the printing dies 47, 47' also carries at one end means for locally altering the physical characteristics of a sheet or card, preferably a printing face 71, which depends to a level lower than that of the type faces 51 for cooperating with the table 33 in placing the spots or block-outs 23 which correspond in their position to the numeral being printed at the location of the platen 35.

In order to simplify the operation of the device, the elongate printing dies are preferably of a known kind which is made of resilient, porous, elastomeric material impregnated with ink, which will give off a slight amount of ink at the type faces in response to moderate pressure and which will give a large number of impressions without reinking.

On the upper surface of the cover plate 55 at the end remote from the bearings 39 is provided a finger piece 73 which may be engaged by the operator and depressed when a printing operation is to be performed.

Mounted on the lower portion of the type carriage 43 so as to extend between the axis of pivots 41 and the finger piece 73, are leaf springs 75 which normally urge the type carriage 43 to raised position ready to receive a card to be printed.

As seen in FIG. 5, the lower edges of the rails 45 as well as the lower edges of the side members of carriage 43 are notched as indicated by reference character 77. The notches 77 are placed in alignment with the platen 35 so as to permit the particular indicia 51 above the platen to print without interference between the adjacent machine parts. Furthermore, the lower portions of the tracks 45 adjacent notches 77 serve as guards to hold the card depressed slightly adjacent the platen 35 and thereby avoid the making of impressions by indicia adjacent but not at the printing position, and which are not supposed to print under the circumstances.

The table 33 preferably includes an edge guide member 79 and an end guide member 81 to aid in positioning the

card C in primary printing position, and also carries guide marks 83 and 85 to assist the operator in placing the card in secondary printing positions.

In use, the cards C are provided to the prospective purchaser in place of the presently used money order applications. The purchaser letters the payee's name and his own name and address in areas 11 on the card C and presents it to the post office official with the money in payment for the same.

The post office official or operator makes a setting on the printing device 30 corresponding to the amount for which the order is to be issued by inserting the implement 69 in each of the recesses 67 and moving the corresponding printing die 47 or 47' to a position where the proper numeral 53 is exposed in the opening 61. As seen in FIG. 5, the operator has just completed a setting of one element giving a reading of the numeral "4." When the setting of all elements is complete, the operator places the card C on the table 33 with one end against the guide 81 and the edge against the guide 79 as seen in FIG. 2. By depressing the finger piece 73 he simultaneously applies numerals 20 in the tier 19 and the corresponding spots 23 or other equivalent local physical alterations to columns 21 of the value designating portion 17 of the card. Without resetting the printing dies 47, 47', the operator then repeats this printing step twice, but with the card C in two other different positions indicated as Cx and Cy in FIG. 2. The first such other position, Cx, is arrived at by keeping the card C against the guide 79 and registering the corner X with the table mark 83. Printing in this position causes reproduction of the printed numerals and spots on the receipt tab 24. The second such other position, Cy, is arrived at by keeping the card C against the guide 79 and registering a suitable index mark on the card, e.g. the line Y, FIG. 1, with the table mark 85 which is appropriately placed for the purpose. Printing in this position causes reproduction of the printed numerals and spots on the record tab 25. The official then merely validates the card by stamping with the post office stamp in spaces 15 and 15a, writes his initials in spaces 13 and 13a, and separates the record tab 25 for filing.

The simultaneously applied spots 23 or other equivalent local physical alterations, in addition to providing for ready sensing in automatic data processing equipment, serve admirably as assurances of the correctness of the numerical notation in tier 19, since they are in most instances much more difficult to erase or change than would be the numerals themselves, and their indication depends only upon their position whether or not the print or other registering effect employed is exceedingly sharp and clear. The spots 23 may also comprise fluorescent ink, magnetic ink or any other ink having some ingredient which is particularly adaptable for use in reading and processing machines.

From the foregoing description it can be seen that there has been devised a new device by which the writing of drafts such as post office money orders can be handled with greatly increased speed and efficiency, and without any sacrifice of security or accuracy. The resulting draft is also ideally arranged for handling by data processing or automatic accounting equipment, so that important savings can also be realized in this direction.

What is claimed is:

1. A printing member for printing postal money orders and the like comprising a carriage having spaced longitudinal rails; a plurality of elongate printing elements arranged side-by-side on said carriage and slidable on said rails, each of said elements carrying a row of digit types and being settable longitudinally to bring a selected digit of the row to a printing line at which the selected digits from all elements may be simultaneously printed to give a desired number; and a spot printing type at a predetermined location on each of said elements and settable therewith to a position which is different for each setting

of the element whereby the spot type prints a spot whose position is indicative of and confirms the digit on the same element at the printing line.

2. A printing device for printing postal money orders and like sheets comprising a table having a raised platen thereon; an elongate printing element carrying a row of digit types and being settable longitudinally to bring a selected digit of the row into cooperating relationship with said platen for printing the selected digit on a sheet introduced between the same and the platen, and being movable towards and away from the table to effect a printing operation; and a raised spot printing type at a predetermined location on said element and settable therewith to a position which is different for each setting of the element whereby the spot type cooperates with various areas of the table other than the platen to print a spot whose position is indicative of and confirms the digit which is in cooperating relationship to the platen.

3. A printing device for printing postal money orders and the like comprising a table having a raised platen thereon; a carriage movable towards and away from the table to effect a printing operation, and having spaced longitudinal rails; a plurality of elongate printing elements arranged side-by-side on said carriage and slidable on said rails, each of said elements carrying a row of digit types and being adjustable longitudinally to bring a selected digit of the row to a printing line at a point opposite said platen and at which the selected digits from all elements may be simultaneously printed to give a desired number; and a raised spot printing type at a predetermined location on each of said elements and settable therewith to a position which is different for each setting of the element whereby the spot type cooperates with various areas on the table other than the platen to simultaneously print a spot whose position is indicative of and confirms the digit printed by the same element in cooperation with the platen.

4. A printing device for printing postal money orders and like sheets comprising a table having a raised platen thereon; a printing member hinged to said table for guided printing movement towards and away from the table; an elongate printing element slidable on said printing member and carrying a row of digit types and being settable longitudinally to bring a selected digit of the row into cooperating relationship with said platen for

printing the selected digit on a sheet introduced between the same and the platen, and being transversely movable towards and away from the table with the printing movement of the printing member to effect a printing operation; and a raised spot printing type at a predetermined location on said element and settable therewith to a position which is different for each setting of the element whereby the spot type cooperates with various areas of the table other than the platen to print a spot whose position is indicative of and confirms the digit which is in cooperating relationship to the platen.

5. A printing device for registering value information on postal money orders and like and sheets comprising a table having a platen thereon; a carriage movable towards and away from the table to effect a printing operation; said carriage carrying an elongate printing element having a row of digit types; said printing element being longitudinally settable along said carriage to bring a selected digit of the row into cooperating relationship with said platen for printing the selected digit on a sheet introduced between the same and the platen; and means for locally altering the physical characteristics of the sheet; said means being fixed at a predetermined location on said printing element and settable therewith to a position which is different for each setting of the element so as to effect such physical alteration in a position indicative of and confirming the digit which is at the moment in cooperating relationship to the platen.

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