

Jan. 30, 1945.

A. L. ERICKSON ET AL

2,368,531

DUPLICATION SYSTEM

Filed May 10, 1943

4 Sheets-Sheet 1

DOE MANUFACTURING COMPANY
PAYROLL SUMMARY SHEET

PAYROLL FOR WEEK ENDING _____

FIG. 1.

DEPARTMENT										SHEET NO			
SCALE	RATE	DEPT. NO.	CLOCK NO.	NAME AND SOCIAL SECURITY NUMBER	CHECK NO.	WEEK ENDING	HOURS PAID FOR	GROSS PAY	DEDUCTIONS				NET PAY
									P.O.D.B.	P.R.TAX	SEN. SAV.	GR. INS.	
1	1.53 1/4	12	163	George Brown 358-14-6559	120461	3/5/43	47	72.03			12.00	1.00	58.51
2	1.53 1/4	12	164	Fred Hanson 631-12-4612	120462	3/5/43	47	72.03			12.00	1.00	58.51
3	1.53 1/4	12	165	John Haseer 729-16-3792	120463	3/5/43	47	72.03			12.00	1.00	58.51
4													
23													
24													
SHEET TOTALS													
DEPARTMENT TOTAL													
GRAND TOTAL													

Inventors:
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Robert R. Haskell
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4 Sheets-Sheet 2

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4 Sheets-Sheet 3

FILE

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4 Sheets-Sheet 4

163	George Brown 358-14-6559	120461	3/5/43				58 51
164	Fred Hanson 631-12-4612	120462	3/5/43				58 51
165	John Hager 724-16-3792	120463	3/5/43				58 51
CLOCK NO.	PAY TO THE ORDER OF ABOVE	CHECK NO	WEEK ENDING	PAY THIS AMOUNT			

DOE MANUFACTURING COMPANY
WALTHAM, MASS.

NOT GOOD FOR OVER 100 DOLLARS

TO UNION MARKET NATIONAL BANK
53-955
WATERTOWN, MASSACHUSETTS

DOE MANUFACTURING COMPANY
(PAY ROLL ACCOUNT)

THIS CHECK IS VOID AFTER 30 DAYS FROM DATE

AUTHORIZED SIGNATURE

14

PLEASE TEAR OFF THIS STUB AT PERFORATION WHEN CASHING YOUR
YOUR EARNING RECORDS APPEAR ON THE REVERSE SIDE

Fig. 4.

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UNITED STATES PATENT OFFICE

2,368,531

DUPLICATION SYSTEM

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Application May 10, 1943, Serial No. 486,316

2 Claims. (Cl. 283—66)

The present invention relates to duplicating systems and is particularly concerned with the combination of a plurality of sheets or strips in such fashion as to enable them to be used conjointly and individually to facilitate the keeping of records and the making out of such individual instruments as checks and deduction slips. The invention is not limited specifically to use in connection with payrolls but its application to payroll transactions is a good example of the way in which the invention may be used in modern business practices.

The invention is embodied in a device known as a book of unit strips which comprises a multiplicity of individual sheets or cards arranged in overlapped, superposed relation so that a certain portion of each sheet (a width of one or more lines) is exposed on each side of the assembly of sheets hereinafter referred to as the book of unit strips. This book of unit strips may be built up of any desired number of sheets such as fifteen, twenty, twenty-five or thirty and is used as a single entity for the record making.

It is the purpose of the present invention to provide in a unit strip of this character cooperating parts whereby to produce from each strip two correlated separate records which are prepared from the same master record and carried together throughout the entire preparation process, after which they are separated into individual sheets and further separated into a plurality of individual records.

The features and advantages of the invention will appear more fully as the description proceeds, reference being had to the accompanying drawings wherein a preferred form of the invention is shown. It should be understood however that the drawings and description are illustrative only and should not be considered as limiting the invention except insofar as it is limited by the claims.

In the drawings:

Fig. 1 is a plan view of a payroll summary sheet that is made up as a master sheet in the use of this invention;

Fig. 2 is a plan view showing one side of an overlapped assembly of sheets or book of unit strips;

Fig. 3 is a plan view showing the other side of the book of unit strips shown in Fig. 2; and

Fig. 4 is a plan view illustrating a plurality of the sheets that compose the book of unit strips after they have been separated from each other but before they are taken out of the overlapped relation.

Referring now in detail to the drawings, the present invention is shown as applied to the making out of payroll checks and employees' earning records. This is merely an example of its application as the making of other records may employ the invention. In this connection the customary procedure is to figure up the payroll for the employees and make out a payroll summary sheet such, for example, as the summary sheet 10 shown in Fig. 1. This payroll summary sheet is provided with a multiplicity of columns for several entries which are necessary in order to identify the employee with respect to department, Social Security number and clock number to give his rate of pay, the pay period, the hours paid for, the gross pay, the various deductions, and the net pay all in a single line. The entries on the payroll sheet for each individual preferably are made in hectograph ink using a pen, pencil or typewriter so that the payroll sheet may be used as a master sheet for duplication by the usual hectograph process. Where the duplication is to be accomplished by the liquid or mirror script process it is necessary to place a carbon sheet against the back of the payroll summary sheet in order to produce on the back of the payroll summary sheet a master having the characters in reverse. This is accomplished of course by typing or writing on the face of the sheet and having the active side of the carbon sheet facing the back of the payroll sheet.

The making out of the payroll sheet involves nothing new but in order to use this payroll sheet as a master sheet for the making out of the checks and earning records for the employees we provide a book of unit strips such as is shown in Figs. 2 and 3. This book of unit strips comprises a multiplicity of sheets or strips 11. Each sheet has two separation places indicated by lines of perforations 12 and 13 adjacent its ends and a third separation place indicated by a line of perforations 14 which extends between the two lines of perforations 12 and 13 a short distance from one side edge of the sheet. It is to be understood that the separation may be accomplished in any other suitable manner than by using perforations, but that is the preferred way of separation. The perforated sheets are printed as shown in Figs. 2 and 3 to provide on the section 15 which lies on one side of the line of perforations 14 the same column headings as are provided on the payroll summary sheet except that in order to shorten the check form all of the columns to the left of the clock number column in Fig. 1 are left off. The printing is so placed

as to leave space between it and the line of perforations 14 to insert the name of the company and to leave substantially a full line space between it and the free edge of the sheet 11. By "full line space" we mean the width of the space shown on the payroll summary sheet to receive the individual records concerning a particular employee. The opposite side of each sheet 11 carries no printed information on the section 15, but upon the larger section 16 the usual printed matter that is applied to a check appears between the line of perforations 14 and the other free edge of the sheet. This section 16 also contains, adjacent its free edge, the full line width 17 beneath which are printed identifying legends giving the clock number, instructions to pay to the person whose name is entered, check number, and week ending. This full line space also carries a blackened section 18 which is positioned to correspond to the hours paid for, gross pay, and deduction sections of the payroll sheet. Where the full line width 17 is not needed and the check may desirably be shorter to conform to a check size that is more desirable, another separation line (not shown) at right angles to the line 14 may be provided so that the check may be shortened. A multiplicity of these sheets are secured together in overlapped relation so as to expose a full line width of each sheet by applying adhesive to the contacting faces of the end portions 19 and 20 of the sheets in spots running parallel to the edges and pressing the sheets together to cause them to adhere to each other. When a number of the sheets have been adhered to each other in this relation this group of sheets constitutes a book of unit strips that is ready for use in the duplicating system.

When the payroll summary has been made in hectograph ink this payroll summary may be placed on a gelatin pad of a duplicating machine to transfer to the gelatin a reverse image of the data provided on the payroll sheet. When this has been done the book of unit strips is next impressed on the gelatin pad in such position as to transfer one or more lines of the image to each of the exposed portions of the section 15 of the book. The individual entries then appear on the book of unit strips, as shown in Fig. 2; that is, the actual clock numbers, names, check numbers, etc. are individually entered upon the section 15 of the several sheets in the book of unit strips. The book is then turned over and again impressed on the gelatin pad so that at the top of the check section 16 of each sheet corresponding clock numbers, names, check numbers, etc., as shown in Fig. 3, will be entered.

The blackened sections 18 however will prevent the printing of legible records of the hours paid—gross pay—deductions section. In this way the blackened section 18 acts as a block-out to prevent the showing, on the face of the check, of detailed figures as to the individual's deductions and hours of work, and the check section 16 gives only the essential information necessary for purposes of the check.

It should be noted that it is essential to register the unit strips properly with the legend on the gelatin master so that on the back side, as shown in Fig. 2, the transfer is made to the lower edge of the sheet 11 while on the front side, as shown in Fig. 3, the transfer is made to the top edge of the sheet 11.

When the book of unit strips has been passed through the second duplicating operation it is ready for separation into its individual sheets.

The separation of the several sheets from each other is accomplished by tearing along the lines 12 and 13 so as to separate the end portions 19 and 20 from the sheets. This separation at the same time accomplishes a release of the section 15 and the section 16 from each other on each individual sheet to the extent that it is only necessary to tear them apart along the line of perforations 14. The end portions, having served their purpose as securing means, are thrown away, leaving a series of sheets as shown in Fig. 4. Each sheet is then passed out to the employee whose name appears at the upper lefthand corner thereof and the employee completes the separation of the section 15 from the section 16 by tearing them apart along the perforated line 14. The section 15 comprises an earning record which the employee may keep for his own record purposes, while the section 16 serves as a check which the employee may cash by presenting it to the bank upon which it is drawn.

It is believed that the foregoing description illustrates the manner in which the present invention is advantageously used to provide two separate records from the single copying on a payroll sheet of the information necessary for the individual and for his check. The unit strips prepared in accordance with this invention have the advantage of being well secured at both side edges so that they may be handled easily and without damage to the checks and earning records which remain as permanent records. The making up of checks and earning records in this fashion saves a substantial amount of labor and guarantees that the earning record and check record will be exactly the same because the information for both comes off of the same line through a duplicating process by the simple expedient of running the unit strip through a duplicating machine with one side in contact with the master sheet or pad and then turning the unit strip over from side to side and running it through again.

While there have been shown and described certain embodiments of the invention, it is to be understood that it is capable of many modifications. Changes, therefore, may be made without departing from the scope of the invention as described in the appended claims, in which it is the intention to claim all novelty inherent in the invention as broadly as possible, in view of the prior art.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A sheet assembly of the character described, comprising a multiplicity of like sheets arranged in overlapped relation so as to expose a portion of each sheet adjacent one side edge on one surface of the assembly and a portion of each sheet adjacent its other side edge on the other surface of the assembly, the said sheets being secured to each other along their end edges whereby to provide a unit assembly that can be handled as a single device, each of said sheets having a line of perforations extending lengthwise thereof between the exposed sections of the sheets, said line of perforations terminating inside the secured together portions of the sheets whereby when the secured together portions are removed the sheets may be separated into two sections, one of which contains the exposed portion at one side edge of the sheet and the other of which contains the exposed portion at the other side edge of the sheet, the exposed portion at one side edge of each sheet having a blackened section thereon.

2. An assembly pad for use in the duplication of information on both sides of an individual record sheet which is separable into two sections, comprising a plurality of like sheets arranged in overlapped relation so as to expose a portion of each sheet on each side of the assembly, said sheets having lines of severance adjacent the opposite ends thereof and an intermediate line of severance connecting the first named lines between the exposed portions of the side edges 10

thereof, the said end portions of said sheets being secured to each other whereby the assembly of sheets may be handled as a unit, the exposed portion at one side edge of each sheet having a blackened section thereon whereby to prevent transfer to this section of the sheet of certain of the material that is transferred to the exposed side edge of the other section of the sheet.

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