

- [54] SNAP-OUT SET
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Brooklyn, N.Y.
- [22] Filed: July 31, 1968
- [21] Appl. No.: 749,186

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Attorney—Charles H. Brown

- [52] U.S. Cl. .... 282/23 R, 281/21
- [51] Int. Cl. .... B411 1/24
- [58] Field of Search..... 282/22, 22.1, 23,  
282/23.1, 24, 26, 27, 27.1, 28, 28.1, 1;  
283/18, 21

[57] ABSTRACT

A snap-out set in the form of a unique structural arrangement of an original top sheet and one or more copy sheets. The top sheet has a quality and density meeting the requirements of the scanning apparatus in an optical character reader and is provided with pre-printed spaced guide lines (bars) and line designations to enable the typist to visually align message information, for example type characters within certain area limits; for example, an indicia receiving area. The message information or type characters consist of a style or font which is acceptable to and recognizable by the optical character reader. The guide lines and line designations for the typist are of a color or property which is not recognizable by the optical character reader. Hence, the top sheet constitutes a scannable form for the scanning apparatus of the optical reader. One or more underlying sheets may be subdivided into a plurality of labels which are separable along lines of weakening for use as mailing or shipping labels.

The term "character," as used herein, means any letter, symbol, pattern, word, portion or group thereof capable of being identified by the optical character reader.

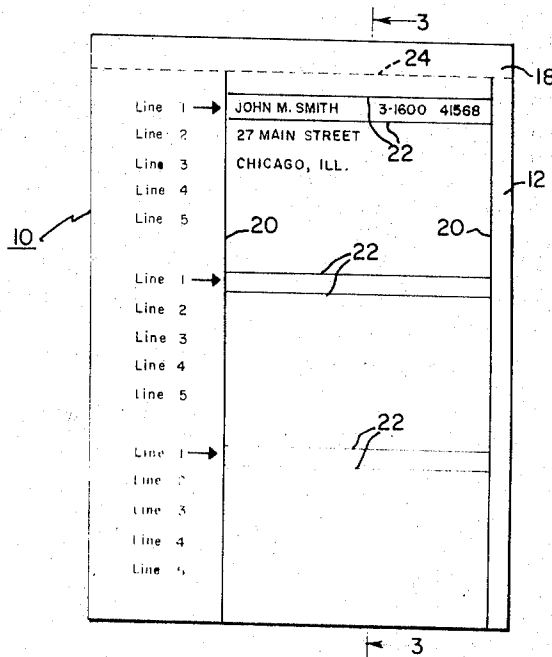
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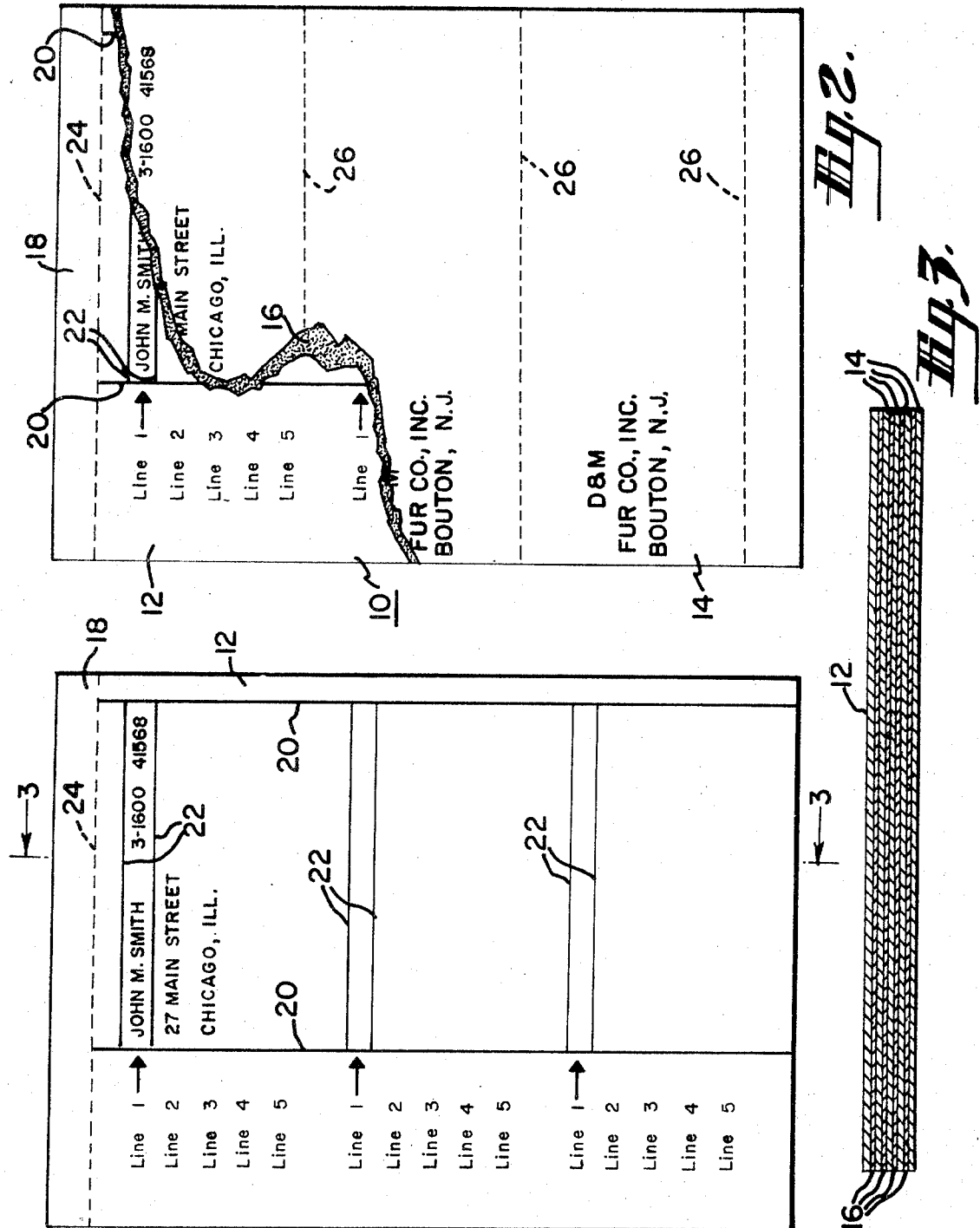
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9 Claims, 3 Drawing Figures





*Fig. 1.*

*Fig. 2.*

*Fig. 3.*

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## SNAP-OUT SET

The term "character," as used herein, means any letter, symbol, pattern, word, portion or group thereof capable of being identified by the optical character reader.

## BACKGROUND

It is known to make snap-out sets consisting of an original sheet, one or more copy sheets and as many carbon sheets as copy sheets. These sets are provided with scoring or lines of weakening for quickly separating the carbon sheets from the other sheets. One or more of the sheets may be subdivided into areas on which are typed different names and addresses for use as address labels for mailing purposes, but such labels are soon exhausted after a certain number of shipments have been made. It is then necessary to retype the addresses on additional snap-out sets in order to provide an additional number of the same labels.

A disadvantage of such known practices is that there is no way of reproducing the information contained on the mailing labels without the time and labor required for retyping additional labels;

## THE INVENTION

The foregoing disadvantage is overcome by the present invention which enables the storing and fast reproduction of the information type on the snap-out set without the necessity of retyping additional labels.

According to the present invention there is provided a snap-out set wherein the top or original sheet has such density, opacity and property as to enable it to be used as input paper for an optical character reader, while the other sheets may be of the usual weaker, thin coating of remoistening or thin copy-tissue consistency. The top sheet is provided with pre-printed horizontal and vertical guide lines or bars and also line positioning designations for visually guiding the typist to align the type characters horizontally for appearance within certain areas to be scanned by the scanning apparatus in the optical character reader. The guide lines and line positioning designations are of a property or color not recognizable by the optical reader while the characters to be typed or printed on the top sheet consist of a font which is acceptable to and recognizable by the optical reader. The top sheet hence is a scannable copy to which the keys of the typewriter are applied in printing in black ink the names and addresses, or other copy, on different lines. The spacing between pre-printed line positioning designations on the top sheet serve as a visual guide for the typist in typing the different lines of names and addresses, or other copy, so that the spacing between lines of typing coincide with the register or spacing requirements of the scanning lines of the scanning apparatus in the optical character reader. It is preferred that the top sheet be a white paper and the typed recognizable font be black ink.

## BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWING

A more detailed description of the invention follows in conjunction with a drawing, wherein:

FIG. 1 is a top-plan view of a snap-out set according to the present invention;

FIG. 2 shows the snap-out set of FIG. 1 with the top sheet and an underlying carbon sheet cut away to illustrate one form of copy sheet which is subdivided into

separable areas which, when detached, are usable as address or mailing labels, and

FIG. 3 is a sectional view of the snap-out set of FIG. 1 taken on line 3 — 3.

Throughout the figures of the drawing the same parts are designated by the same reference numerals.

## DETAILED DESCRIPTION

The snap-out set 10 of the invention comprises a top or original sheet 12 of a density, opacity and stock acceptable as input to an optical character reader, a plurality of copy sheets 14 of thinner and/or gummed (adhesive) tissue paper consistency and intervening ordinary carbon paper transfer sheets 16, all detachably held together by means of a stub 18 at the top of the sheets. The carbon sheets may be eliminated where the other sheets are NCR treated or processed so that pressure on one sheet will cause duplication on an underlying sheet. This stub serves to hold the sheets 12, 14 and 16 together in any known way, as by means of adhesive applied to the set along the width thereof in known manner, as for example through spaced openings not shown, which pierce the stub 18, it being understood that no claim is made herein to the manner of holding the sheets together. A line of weakening, such as a line of perforations or a scored severance line 24 extends over the entire length of the stub.

The top sheet 12 is provided with pre-printed spaced horizontal guide lines 22, spaced vertical guide lines 20 and line positioning designations "Line 1," "Line 2," etc., to the left and outside the left-most vertical guide line 20. To the right of each line positioning designation "Line 1" there are two parallel horizontal lines 22 extending the full width between vertical guide lines 20, for enabling the typist to visually align the snap-out set horizontally in the typewriter so that the lines of type are perfectly horizontal and positioned centrally between the two lines 22 and on opposite sides of the arrow designation adjacent "Line 1." The printing by the typist is done by a typewriter on the top sheet 12. In positioning the snap-out set within the typewriter, the typist visually and carefully checks the alignment by comparing the positioning of the top edge of the typewriter shield or bar with the top pair of horizontal line designations 22 and line positioning designation "Line 1" and its arrow after the snap-out set is in the typewriter roller, so that the typed characters will be perfectly horizontal or parallel to the preprinted horizontal lines 22, thereby avoiding skew or undesirable angling of the snap-out set. If the first line of characters fall centrally and properly within each pair of horizontal guide lines 22 identified by line positioning designation "Line 1" then all other subsequent lines of typed characters will also be horizontal and perfectly parallel to the first line of type. The proper spacing between parallel lines of typed characters is accomplished by suitable adjustment of the typewriter ratchet mechanism which is standard on all typewriters, such that each line of type appears adjacent its line positioning designation. This spacing registers with the scanning lines of the scanning apparatus of the optical character reader.

The vertical guide lines or bars 20 are so placed on the top sheet 12 to visually guide the typist to confine her typing to the area between the vertical lines 20.

The pre-printed guide lines 20 and 22 and the line positioning designations "Line 1," etc. are of a color

not recognizable by the optical character reader, and are hence ignored by the scanning apparatus. The font and ink used by the typewriter is such as to be acceptable to and recognizable by the optical character reader.

The underlying sheet copies 14 may each comprise a plurality of address mailing labels in separable detachable areas defined within lines of weakening or severance lines 26, or COD record and shipping labels, or information labels; and these labels may have pre-printed information thereon outside the vertical guide line areas defined by lines 20 on the top sheet; for example "D & M Fur Co., Inc., Bouton, N.J." Hence, the vertical lines 20 assure that the margin requirements for the underlying labels are fulfilled and that the typing on the top sheet and the reproduced copy is confined to the designated typing area.

When the top sheet 12 is completely filled in with the typed characters, the snap-out set is removed from the typewriter and all sheets separated and decollated into groups of top sheet (the scannable form), page 1, shipping labels, page 2, COD form, page 3, etc., depending on the requirements of use for the snap-out set. The top sheet may now be used as input to an optical character reader. The typed characters on the top sheet are acceptable readable font which the optical reader will scan and then convert the scanned characters to suitable impulses, for example electrical impulses, which can be recorded on magnetic tape or other suitable storage means, such as punched cards, or transmitted to a remote location for storage, conversion or utilization as above. Because the typing of the labels is the important activity in the use of the snap-out set, the top sheet (original or scannable form) becomes a valuable by-product which when used with an optical character reader eliminates the necessity for retyping the same information when it becomes necessary or desirable to process or recapture the same information. By feeding the information resulting from scanning the top sheet into a computer this information can be stored permanently and then quickly and easily reproduced. The optical character reader, when fed by the top sheets from different snap-out sets as input, aligns all input top sheets by means of stop fingers and suction belts, so that the top edges of the top sheets (scannable forms) are perfectly parallel with the reading mirror of the scanning apparatus. Such an arrangement is conventional and used by way of example in the optical characters reader manufactured and sold by Control Data Corporation, Model 915 OCR. For this particular optical reader, the input paper or original top sheet of the snap-out set need only be a conventional 20-60 lb. bond low rag content, low opacity paper.

One illustration will now be given of the importance of applicant's invention to one field of industry. After the mailing labels which are on copy sheets 14 have been typed by typing on the top sheet 12, the snap-out set sheets are separated and decollated into top sheets (scannable forms), mailing labels and other forms (white or colored) as required. Immediately, the mailing labels may be affixed to envelopes or printed matter containing the subject matter to be shipped; for example tickets to a show or circus or fulfilling orders. The scannable top sheets may be stored until it becomes desirable to convert the information thereon to magnetic tape which constitutes input to a computer, which in turn, enables the ticket seller to automatically extract,

recall or print out the information originally typed on the mailing or shipping label. Thus once a year or periodically, the shipper can solicit or send out reminders of future performances in the form of reproduced labels without the necessity of retyping the mailing or shipping labels if the computer is properly programmed. The information on the labels can be so descriptive that when the top sheet is scanned, the computer which is fed with the scanned information can recall the source of the order, the amount of the sale, the day of the seat reservation, and other details which may be important for accounting and survey purposes. Such information, for example, is shown on FIGS. 1 and 2. The numbers within the top pair of horizontal lines 22, after the name "John M. Smith" may designate that three tickets were sold for sixteen dollars (\$16.00) on Apr. 15, 1968 (41568).

I have thus provided a unique structure for a snap-out set wherein the top sheet is a highly useful by-product and the relationship of the printed matter on the scannable top sheet to the other elements provides new and useful results.

What is claimed is:

1. A snap-out set designed for use with a scanning optical reader comprising a plurality of equal size superimposed coextensive sheets detachably coupled together along correspondingly positioned marginal areas to a separate portion, the top sheet of said set being of such quality and density as to be acceptable as a scannable form by an optical character reader for abstracting therefrom information printed thereon with spacing between lines of printed information coinciding with the spacing requirements of the scanning lines of the scanning apparatus in the optical reader and in a font and style acceptable to and recognizable by said optical character reader, at least one of said other sheets being coated on one side with gummed adhesive and divided into separable equal size areas for use as mailing labels and on which said printed information is adapted to appear, said top sheet being provided with vertical guidelines defining the area limits within which the recognizable information is to be printed, and with preprinted line positioning designations to the left of said vertical guide lines, said guidelines and line positioning designations providing visual guides for the typist (and being of a character which is not) which are unrecognizable by said optical reader.

2. A snap-out set according to claim 1 wherein said guidelines and line designations are of a color different from that used to print recognizable information on said top sheet.

3. A snap-out set according to claim 2 wherein said top sheet is provided with both horizontal and vertical guidelines, said separable areas being joined together by scored lines.

4. A snap-out set according to claim 3 wherein the scored lines between said separable areas extend across the width of the sheet to thereby constitute separable mailing labels, that portion of each separable area which is located outside the vertical lines appearing on the top sheet and beneath the line designations on the top sheet having preprinted thereon the name of the person, firm or corporation which uses the label.

5. A snap-out set according to claim 1 characterized by the fact that only the top sheet is provided with the guide-lines and preprinted line designations.

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6. A snap-out set according to claim 3 wherein there are two spaced vertical guidelines, and said preprinted line designations appear to the left of the left-most vertical guide-line.

7. A snap-out set according to claim 2, wherein at least said top sheet is white, said all of sheets being co-extensive, and said recognizable font is printed on said white sheet in black ink to provide a high degree of light reflecting properties for the scanning apparatus in said optical character reader.

8. A snap-out set according to claim 3, wherein said sheets are paper and are detachably coupled by lines of weakening to a stub, said top sheet on which information is to be printed having a density greater than the other sheets, said other sheets but not said top sheet being subdivided into areas separable from one another by lines of weakening, the different areas and lines of weakening in each of said other sheets respectively registering with correspondingly positioned areas and lines of weakening on said other sheets, and carbons interposed between said sheets, said line positioning designations being outside the areas defined by the vertical guidelines.

9. A snap-out set designed for use with a scanning optical reader comprising a plurality of equal size superimposed coextensive sheets detachably coupled to-

gether along correspondingly positioned marginal areas, the top sheet of said set being of such quality and density as to be acceptable as a scannable form by an optical reader for abstracting therefrom information printed thereon in black ink with spacing between lines of printed information coinciding with the spacing requirements of the scanning lines of the scanning apparatus in the optical reader and in a font and style acceptable to and recognizable by said optical reader, at least one of said other sheets being coated on one side with gummed adhesive and divided into separable equal size areas for use as mailing labels and on which said printed information is adapted to appear, said top sheet being provided with vertical guidelines defining the area limits within which the recognizable information is to be printed, and with preprinted line positioning designations to the left of said vertical guide lines, said guidelines and line positioning designations providing visual guides for the typist and being of a color which is unrecognizable by said optical reader, and an ordinary carbon paper transfer sheet having duplicating material over substantially one entire surface positioned between adjacent ones of said plurality of equal size superimposed sheets.

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UNITED STATES PATENT OFFICE  
CERTIFICATE OF CORRECTION

Patent No. 3,743,323 Dated July 3, 1973

Inventor(s) Max Houss

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 1, line 35, after "remoistening" insert -- gum --.

Claim 1, line 5, change "separate" to -- separable --.

Claim 1, line 20, "posi-tioning" should read -- positioning --.

Claim 1, lines 23 and 24, cancel "(and being of a character which is not)"

Signed and sealed this 7th day of May 1974.

(SEAL)

Attest:

EDWARD M. FLETCHER, JR.  
Attesting Officer

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Commissioner of Patents