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METHOD FOR PRODUCING JUSTIFIED TYPEWRITTEN
COPY AND DEVICE FOR PRACTICING SAME
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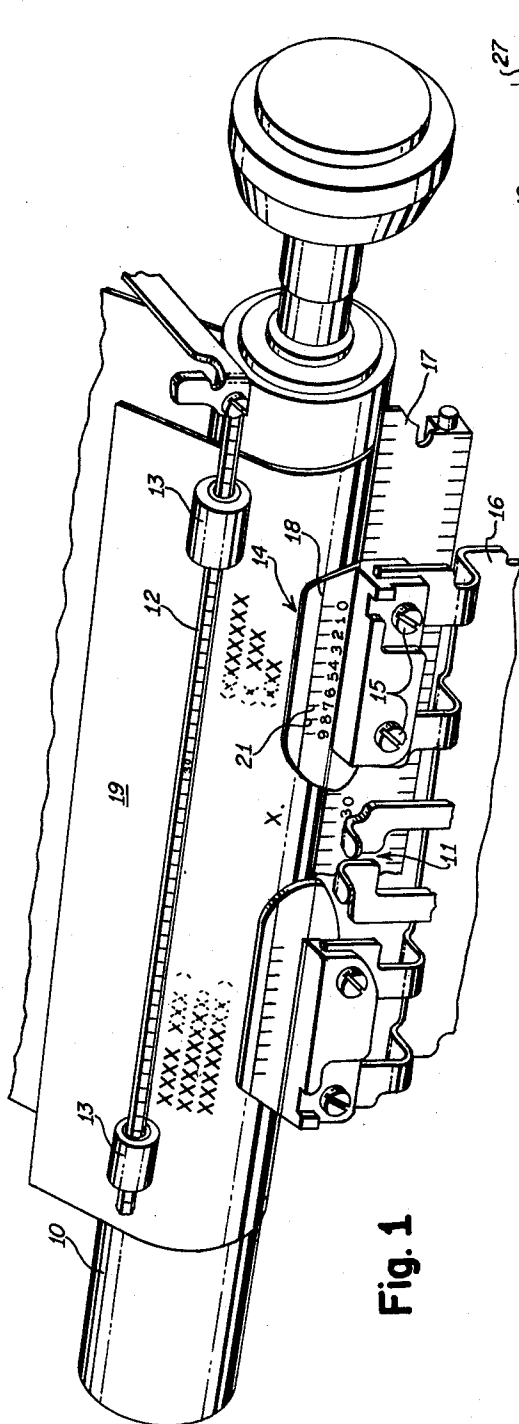


Fig. 1

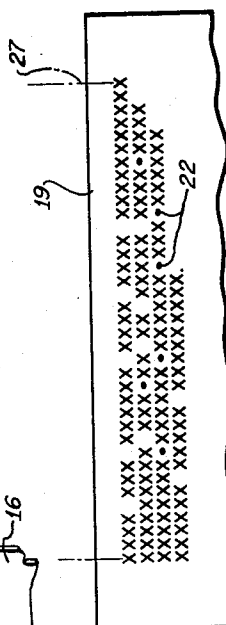


Fig. 3

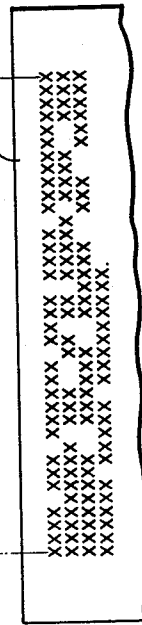


Fig. 4

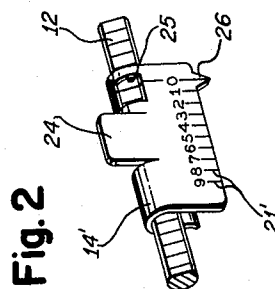


Fig. 2

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METHOD FOR PRODUCING JUSTIFIED TYPE-WRITTEN COPY AND DEVICE FOR PRACTICING SAME

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1 Claim. (Cl. 197—84)

This invention relates to a method for producing justified typewritten copy and to devices for practicing the method; more particularly it relates to a scale device mounted on the typewriter, positionable relative to a worksheet and characterized by indicia for determining the relative lengths of typewritten lines relative to the longest line of typewritten copy or to a selected right hand margin position; and specifically it relates to a novel method for producing justified typewritten copy utilizing the information provided by said scale device.

Numerous mechanisms heretofore known and used with typewriters for the purpose of producing justified copy in a final typing are characterized by means for controlling the typewriter escapement to automatically effect smaller or larger increments of movement between characters, words or both. Whatever the mechanism employed the typing of a first or preliminary copy is required in order to determine the surplus or deficit of each line so that during the final typing the escapement mechanism, prior to typing each line, can be conditioned to make up the surplus or deficit and thereby produce justified copy.

In these prior art methods the accuracy of the determination of surplus or deficit spacing increments depends on manipulation of mechanisms relative to a scale or on visual judgment, and thereafter, as noted above, the escapement mechanism of necessity must be accordingly adjusted prior to typing each line of justified copy. Such requirements are time consuming in that they break the typist's rhythm and require mental calculations for each line, both of which are bothersome and susceptible of errors.

In accordance with the present invention justification is accomplished by increasing the spacing between words to increase the length of lines so that all the lines of copy are of equal length. Deficit spacing of lines relative to the longest line of unjustified copy or of all the lines relative to the set right hand margin stop are accurately determined by a scale provided on the machine. The scale is so located relative to the copy that deficit spacing of all the lines of copy may be determined and in accordance with the method of the invention a typist with reference to said determinations may judiciously indicate on the entire unjustified copy those interword spaces which must be expanded as by double spacing in the typing of the final copy to produce a justified copy.

Accordingly, an object of the invention is in the provision of a novel method for producing justified copy.

Another object of the invention is in the provision of a scale device for accurately determining spacing deficits on lines of unjustified copy and in a method for utilizing said determinations in a facile manner without the need for complicated, expensive, and time consuming manipulative escapement conditioning mechanisms.

Another object of the invention is in the provision of a method for producing justified copy wherein the typing of the justified copy may be accomplished from beginning to end without the necessity for calculation between lines.

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with

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the accompanying drawings in which like reference numerals designate like parts throughout the figures thereof and wherein:

FIGURE 1 is a partial perspective view of typewriter apparatus supporting a worksheet and a scale in accordance with the invention;

FIGURE 2 is a fragmentary perspective view of a modified scale device particularly suited for practicing the invention on matrix typewriter machines;

FIGURE 3 is a partial view of a worksheet with unjustified copy; and

FIGURE 4 is a partial view of a worksheet after justifying the copy of FIGURE 3.

Referring now to the drawings wherein like reference characters designate like or corresponding elements throughout the several views there is shown in FIGURE 1 a typewriter platen 10 which as will be understood is rotatably mounted on a carriage (not shown) which in turn is mounted for movement relative to a printing station 11 carried by the machine frame in machines of the type wherein a plurality of type bars are supported in a basket for individual movement toward the printing station. In matrix (movable printing point) typewriters the platen 10 is rotatably mounted on a stationary frame member and a type matrix supported on a movable carriage transverses the platen from left to right to effect printing. Both types of machines employ a paper hold down bail 12 provided with paper feed rollers 13. The paper bail 12 is provided with indicia representative of spacing increments to apprise an operator of the position of the worksheet relative to the printing station or point, be it of the fixed or movable type.

In accordance with the invention a scale device generally designated by 14 is secured as by screws 15 to a frame supported bracket 16. The scale device, which may comprise one of a pair of scales which serve as card guides, is preferably of transparent plastic and, as shown in FIGURE 1, is located immediately in front of and extends above a printing point scale 17. As shown in FIGURE 1 the scale device is impressed with a horizontal line 18 to permit horizontal alignment of typed lines on a worksheet 19 supported by the platen relative thereto. Perpendicular to and extending below the horizontal line 18 are a plurality of short vertical lines 21 which are spaced in accordance with the pitch of the typewriter and located so as to be in alignment with the vertical centers of typed characters as clearly shown in FIGURE 1. The scale is provided with number indicia from 0 to 10, for example, with the sequence of numbers ascending in order from right to left as viewed in FIGURE 1 and each number is located adjacent a vertical line 21. These numbers are employed to facilitate the accurate determination of the deficit in spacing of the lines of typewritten matter relative to the longest line thereof or relative to a selected right hand marginal position in the manner to be presently explained.

With reference to FIGURES 1 and 3 there is shown a worksheet with, for purposes of explanation, only four lines of typing thereon; produced without regard to even right margins. As is evident one line thereof is the longest line and all of the others are shorter, although it is to be understood that any line might be the longest. Hence after typing the unjustified copy and while said copy remains in the typewriter the typist will position the carriage so that the terminal character of the longest line of said unjustified copy is in vertical alignment with the zero mark line 21 on scale 14. In the example illustrated in the drawing, the top line of the text happens to be the longest line. The platen is therefore indexed to successively bring the other lines of said copy adjacent the horizontal line 18 on scale 14. This enables the typist to insert the required number of marks in each line as

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determined by the scale so that as the platen is indexed marks entered on successive lines can be judiciously inserted so as not to be in alignment with one another from line to line. This prevents the formation of unsightly and undesirable "white lanes" or "rivers" when typing the justified copy. In the example the terminal character of line two is aligned with the vertical indicia corresponding to number 2, indicating that the deficit of line two is two space increments, which if added to line two in the final typing will bring the terminal character thereof in alignment with the terminal character of line one.

In accordance with the invention the operator will then judiciously insert marks 22 as shown in FIGURE 3, which preferably take the form of dots of a contrasting color, in line two on the preliminary or unjustified typing to thus indicate to the typist during final typing the places where two spaces are needed instead of the usual single space for proper justification. After inserting two marks in line two, the platen 10 is again indexed so that line three is directly above horizontal line 18 of scale 14. With line three thus positioned the typist will note from the scale that the terminal character of line three is in vertical alignment with the vertical line 21 corresponding to numeral 4, indicating to the typist that line three requires four additional spaces during final typing in order to bring its terminal character in vertical alignment with the terminal character of line one. Hence the typist will judiciously place four marks in line three. In the example text given it will be noted that line four is the end of the paragraph, and for this reason no justification is required.

Alternatively, an operator may simply write on the end of each line a number indicating its deficit and after removing the sheet marking that number of judiciously selected interword spaces to indicate double spacing.

Having thus composed or properly marked the unjustified text shown in FIGURES 1 and 3 by placing marks 22 preferably of a contrasting color and of the required number in each line of the worksheet 19 containing the unjustified typewritten matter and while said worksheet remains in the typewriter, a fresh sheet of paper may then be threaded around the platen 10. The typist may now rewrite the four lines shown in FIGURE 3 and each time she reaches a mark 22 she will depress the space bar twice instead of once and in this manner the final typing will appear in justified form as clearly shown in FIGURE 4.

Note should be taken of the fact that if the unjustified text is written on a machine of one pitch and properly marked for justification, the final typing may be done on a machine having a different uniform pitch, such as elite, and the final typing will always be properly justified.

An alternate embodiment which may be employed with the fixed printing point machine as well but which is more suited to the movable printing point machine is shown in FIGURE 2. In this embodiment a scale device 14' with indicia 21' and numbers formed thereon takes the shape of a C or U shaped clamp adapted to be movably mounted on the paper bail. The scale clamp is provided with a finger tab 24 to effect its movement; and adjacent its upper right end it is provided with a cutout 25 so that the paper bail scale may be read therethrough. Further as shown in FIGURE 2 the forward side of the scale clamp is provided with a depending pointer 26 positioned in alignment with the zero indicia 21' to enable the positioning of the scale clamp in alignment with the terminal character of the longest line or with a selected marginal position as hereinbefore explained.

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A feature of the FIGURE 2 scale clamp is the fact that it may be positioned at the bail scale location corresponding to the position of the right end margin stop. This feature visually indicates the position of the right margin stop permitting a typist to gauge her lines during the first typing.

Where accurately centered justified copy is desired it is to be understood that the scales of FIGURE 1 or 2 may be positioned relative to the worksheet such that the zero point thereof is aligned with the right hand margin setting as indicated by dotted line 27 in FIGURE 3 rather than with the terminal character of the longest line thereby requiring, if the longest line does not extend to the right hand margin setting, expansion of the longest line as well.

It should be understood that the foregoing disclosure relates to only a preferred embodiment of the invention and that it is intended to cover all changes and modifications of the example of the invention herein chosen for the purposes of the disclosure which do not constitute departures from the spirit and scope of the invention.

The invention claimed is:

A method for producing justified typewritten copy comprising the steps of:

typing a first unjustified copy without regard to a right hand margin,

after typing said first unjustified copy and while it remains in the typewriter positioning the typewriter carriage so that the terminal character of the longest line is aligned with a zero line on a typewriter mounted scale having index lines and corresponding indicia ascending in value from right to left and spaced to correspond with the letter spacing movements of said carriage,

keeping the carriage in such position while determining in turn from the scale the number of character spaces the terminal character of each line is indented from the terminal character of the longest line by indexing the platen to successively bring each unjustified line into parallel relation with the edge of said scale and in close visual proximity to said index lines on said scale corresponding to said indicia,

marking said unjustified copy while it remains in said typewriter by placing as many marks as indicated by said determinations on each unjustified line between as many judiciously selected intraword spaces such that said marks are not in alignment with one another from line to line,

removing the marked unjustified copy from the typewriter,

and finally typing a second justified copy by using double spacing at each mark recorded on said first unjustified copy whereby the lines of said second justified copy will be as long as the longest line of said first unjustified copy.

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