

Jan. 31, 1961

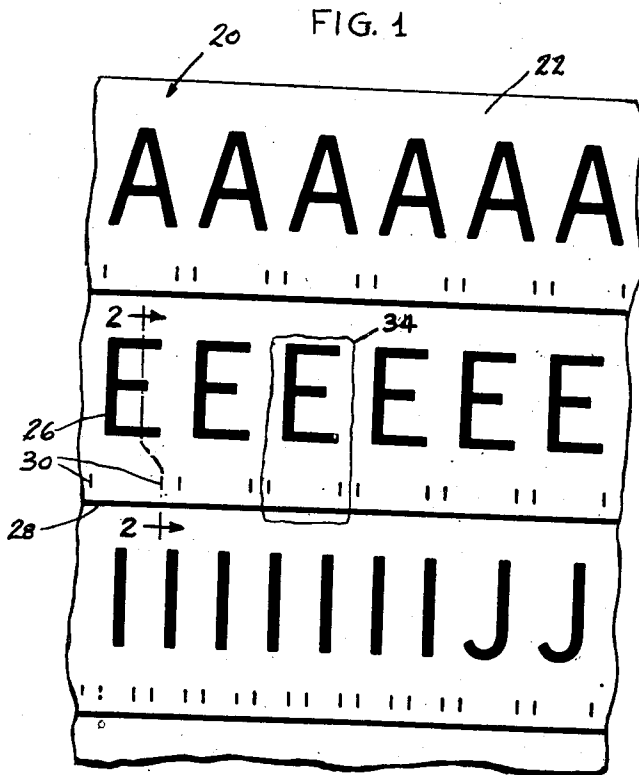
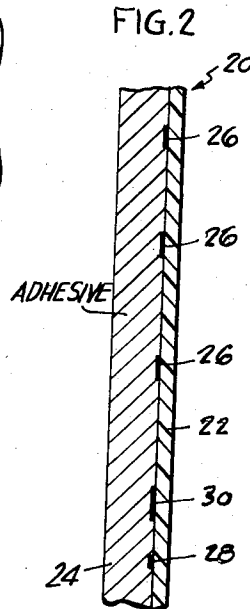
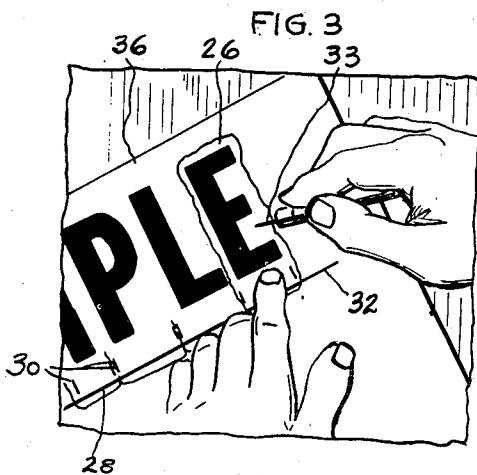
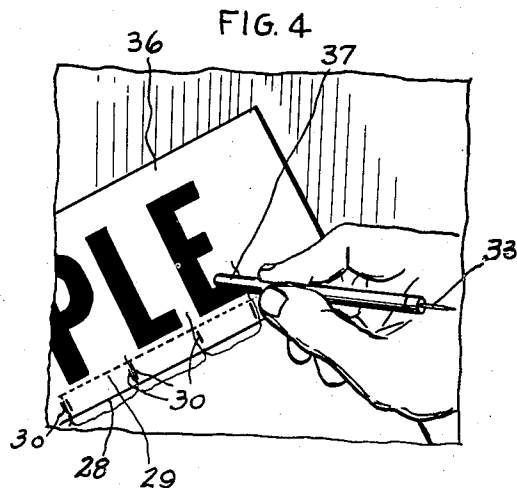
R. F. SERAFIN

2,970,043

TRANSPARENT CHARACTERS WITH SPACING AID

Original Filed March 31, 1959

3 Sheets-Sheet 1



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TRANSPARENT CHARACTERS WITH SPACING AID

Original Filed March 31, 1959

3 Sheets-Sheet 2

FIG. 5

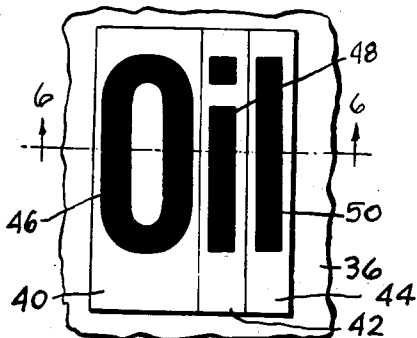


FIG. 6

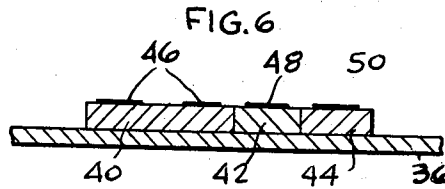


FIG. 7

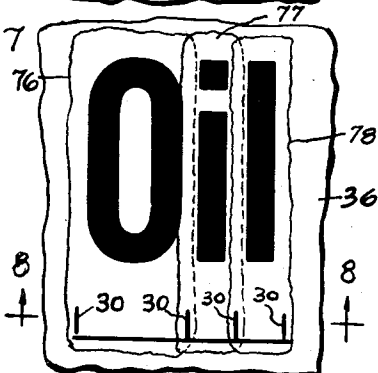


FIG. 8

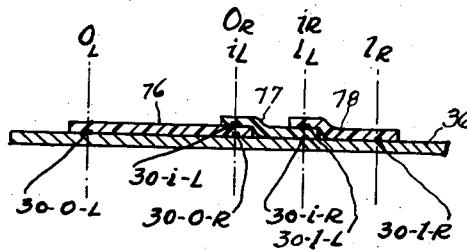


FIG. 9

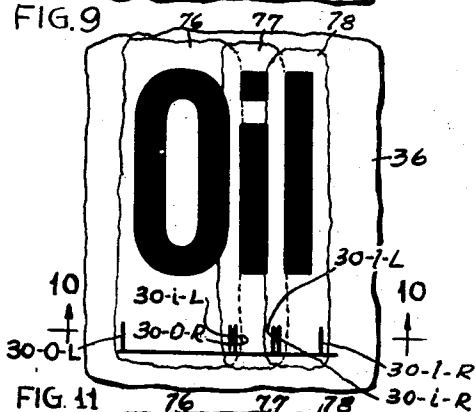


FIG. 10

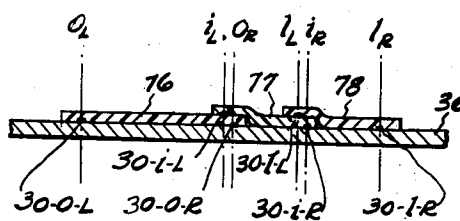


FIG. 11

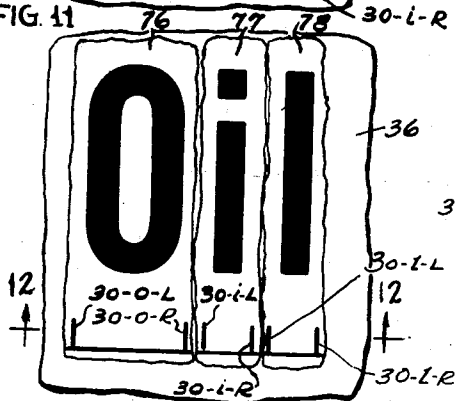
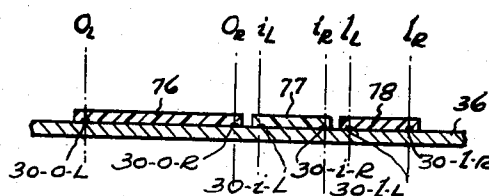


FIG. 12



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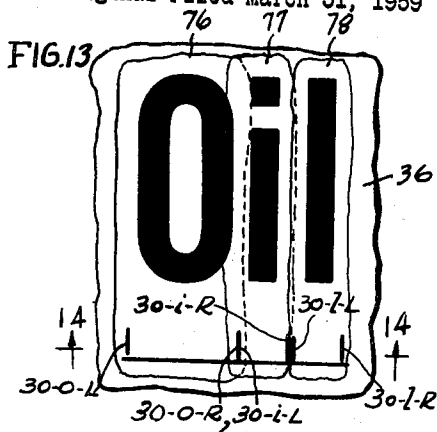
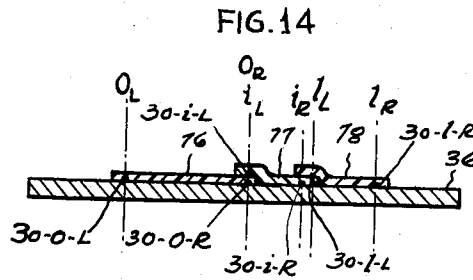
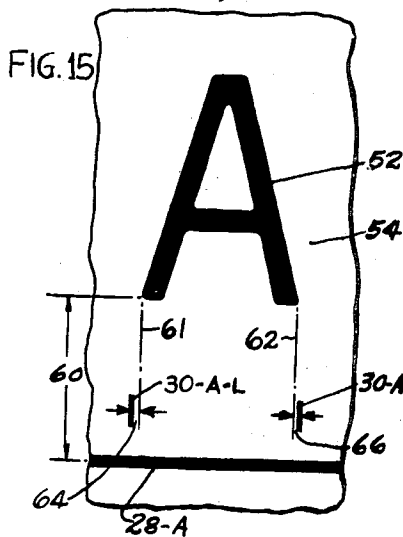
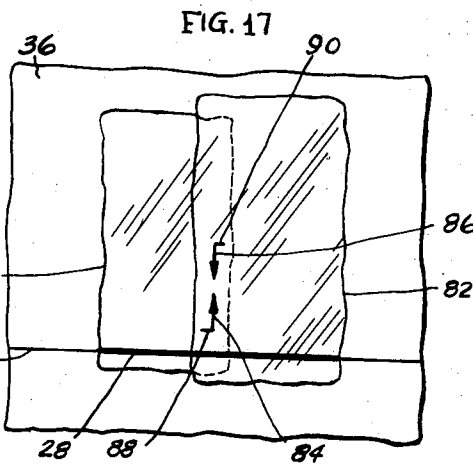
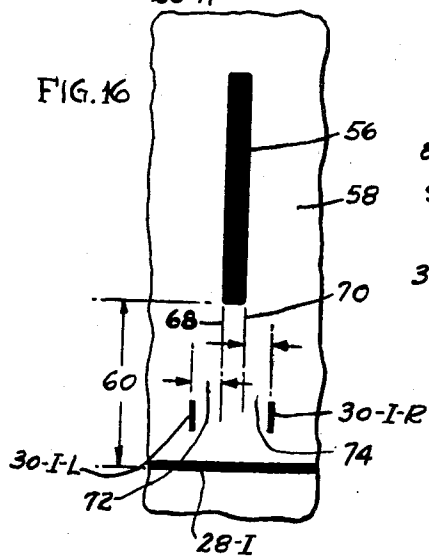
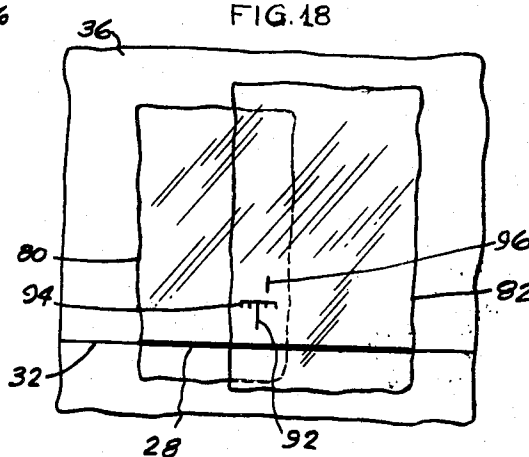
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2,970,043

TRANSPARENT CHARACTERS WITH SPACING AID

Original Filed March 31, 1959

3 Sheets-Sheet 3



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1

2,970,043

TRANSPARENT CHARACTERS WITH
SPACING AID

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Continuation of application Ser. No. 803,231, Mar. 31,
1959. This application Aug. 30, 1960, Ser. No. 52,809

7 Claims. (Cl. 41—21)

This invention relates generally to composition of characters for reproduction and/or display purposes and more particularly is concerned with a novel construction of characters applied on transparent sheets and provided with novel spacing means.

This application is a continuation of application for patent, Serial No. 803,231, filed March 31, 1959, for the invention entitled "Transparent Characters With Spacing Aid," and now abandoned.

The classical method of composing for typography is well-known. The characters were carved or cast into blocks, and an assembly of blocks was used to transfer ink from a roller to paper or the like. The more sophisticated methods of recent years, and indeed, the almost universal methods in use today involve the production of plates from the original assembly of blocks because of the stress to which the typographical medium is subjected during impression. Practically all important composition, however, is based upon an original assemblage of characters formed on blocks of type or the like, with the addition of cuts, half-tones and the like.

The skill of the typographer is evidenced in the spacing between characters arranged side by side.

Consider, for example, the conventional type cast upon metal blocks, known as foundry type. The body of the metal from which the type has been cast usually is rectangular in cross section and the character is set upon the end thereof with a spacing about the character determined by the shape of the character and the clearance which is desired between the character itself and the edge of the type member. Various factors control the clearance, including the style of the character and its size. Other factors relate to the art of design of type fonts for readability, artistic appearance, ink carriage, sharpness of print, and so forth. When the individual characters are assembled side by side to form a grouping, such as a word, the mere side by side association of the characters will normally provide geometrically equal spacing between the side limits or bounds of the characters.

It is well-known that equal spacing between characters of an assemblage, such as a word, does not provide a pleasing appearance because, optically, the characters do not appear to be spaced equally apart. The effect can best be studied by the examination of typewritten text, which has an additional factor contributing to the unpleasant optical effect. The type blocks of ordinary foundry type and other cast or formed type are not all of the same width, but all of the blocks of the conventional typewriter are of the same width and hence such characters as the "i" and the "w" of the typewriter blocks must be formed on blocks of the identical width. Even in the case of foundry type, if placed side by side, the results are unsatisfactory. Letters such as "i," "l," "I," "H," and similar letters when placed equally spaced apart have a completely different appearance from the rounded characters such as "o," "a," "g," and the like when similarly spaced. Likewise, the effects of mix-

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tures of such letters produce different optical impressions depending entirely upon which character is alongside of which.

Mere pleasantness of effect is not the desideratum which justifies the effort required to attempt to achieve the optical uniformity between letters with which this invention is concerned, as will become apparent. Optically pleasing appearance of textual matter makes for greater legibility and easier reading and thus contributes directly to easier comprehension. The salutary effects of improved legibility upon the reader include faster reading, less eye strain, easier scanning and greater ability to concentrate. These factors are extremely important in the case of juvenile textual matter, but the benefits are not limited thereto.

The skilled typographer spends time to provide spacing between characters which will achieve the desired optically pleasant effect. In the case of the foundry type, spacers are used between characters to achieve the desired results, consisting of shims, metal strips, cardboard, other blank blocks and the like. The skilled typesetter is thus able to supplement the space normally provided by the type founder between characters and adjusts the spaces between characters. The skill is required especially where the typesetter works with many different fonts of type of different configurations. Through the development of the art, various rules and general aids have been evolved which typesetters usually know and apply, such as, for example, one proposal that the composer must consider that there is an equal volume of imaginary liquid flowing between each pair of characters of an assembly.

In the past several decades the graphic arts have grown greatly in the new forms and media by means of which intelligence can be placed before the reading public as so-called printed matter. Many considerations have prompted this change, not the least of which have been the high cost of conventional typography, the time required to obtain results, the inflexibility of this medium. Many new methods of reproduction have also contributed, and especially this is true of the low-cost methods of photographic reproduction available today.

Characters are now available printed or otherwise applied to paper, cardboard, acetate cellulose and many other flexible materials, which are supplied to the user in either sheet, strip or padded form. These will be called "flexible-base" characters hereinafter, because the carrier sheet or member upon which they are mounted or applied is flexible. The carrier member or sheets of the character are either provided with a self-adhering adhesive or can be applied with some readily available adhesive which is pressure-sensitive, heat-sensitive, or suitable for moistening, to any kind of artwork, drawings, work-sheets, advertising or display layouts and the like. The composer in this case merely cuts the characters that he needs from the sheets, or strips them from the blocks or pads, and places them as he sees fit, in any arrangement, to provide a master which can be photographed to make plates of any kind. Such arrangements may be used directly in reproducing processes or simply as single-use displays. For example, regular photo-engraved plates or lithographic plates can be made or the layouts used in many of the other direct reproducing processes without intervening plates.

An example of the kind of flexible-base characters which have become popular is to some extent described in U.S. Patent 1,963,778. The characters are printed in ink upon the bottom surface of a sheet of acetate cellulose, such as the familiarly known "cellophane," and this printed surface is covered with a very thin layer of a flexible wax or other adhesive. When used, the letters are cut out of the sheet, applied to the artwork or lay-

out and burnished in place to cause them to adhere. The wax layer becomes substantially invisible.

Obviously the artist, draftsman or engineer using the characters cannot be expected to have the skill of the typesetter, and hence heretofore the spacing between characters of all known flexible-base letters has been a matter not completely satisfactory, to say the least. Where characters are padded, and each character is mounted or printed on an individual piece of cardboard, the characters can be applied side by side as determined by the boundaries of the cardboard base, and the maker has supplied strips of cardboard of varying widths to enable the user to adjust the spacing according to known typesetting techniques. The use of such characters is limited, however, and even the use of the cardboard strips is not easily executed. The adjustment of letter spacing in the case of flexible transparent materials is an even greater problem than in the case of the common foundry type, depending upon the type of material, size of letters and the like, requiring a degree of manipulative dexterity above the level of the average user. It is pointed out here that flexible-base characters are used by persons in a wide spread of fields only a minute number of which could be expected to have the skill of the typesetter or the artistry of a composer familiar with the problems of optically adjusting letter spacing. Even the minimum results of equal side-by-side spacing inherent in bare composition of foundry type without spacers or shims are not available to the ordinary user of transparent flexible-base characters. There is no way of butting the letters or numbers side by side, since marks at the level of the characters themselves would reproduce with the characters or have to be cut away before burnishing or otherwise finally affixing the character in place.

The primary object of the invention is to obviate the disadvantages of prior flexible-base characters by providing an aid which will enable even the most inexperienced user to achieve some degree of proper letter spacing in the use of such flexible-base characters.

Another object of the invention is to provide an aid for the proper spacing of flexible-base characters which is applied upon the carrier sheet of such characters and which is arranged for simple and ready use at a location which is easily removed so that when the character is reproduced, the aid is not present.

Still a further object of the invention is to provide an aid for achieving the proper optical spacing of flexible-base characters which can be used by those having a small degree of skill in order to adjust the spacing substantially perfectly.

In connection with the immediately above-mentioned object, the advantages of the invention herein are in certain instances practically impossible of achievement with the characters formed on foundry type, Linotype, or even flexible-base characters mounted on cardboard or opaque materials. Often an occasion occurs where the side-by-side spacing of characters is less than the distance between the boundaries of the base or block mounting the character. Such combinations of characters such as "VA," "LT," and the like are so close together for optimum optical spacing that one character is actually overlapping the other. Hand lettering composition may achieve this kind of spacing, but it is practically impossible with any characters mounted on blocks. Flexible-base characters can be applied in such a manner as to achieve such spacing, if desired, but the characters must be mounted upon transparent carrier sheets, and the spacing must be carefully adjusted. The invention herein enables such kind of spacing to be readily accomplished through the use of the indicia or marks which are described and claimed hereinafter.

In other words, certain combinations of block-mounted characters when set side-by-side, that is, without spacers or shims between blocks, such as for example, the combination of letters "gli" cannot readily be corrected to pro-

duce a pleasant optical appearance unless the characters can be moved closer together. Actual physical cutting of the blocks, known as "mortising" can be done, but this is difficult and expensive, and in the case of small characters is completely impractical, if not impossible. The adjustment required can be accomplished through the use of skillful handling of flexible-base characters if the carrier sheet or member is transparent, but by the use of the invention the adjustment is so greatly facilitated that the factor of skill has been materially reduced. Ordinary users can accomplish results which were formerly capable of being achieved only by the most skilled of layout artists.

The objects and advantages which are set forth hereinabove are only mentioned to indicate the nature of the achievement which is made in the arts and sciences by the invention herein, and not to point out the only ends accomplished by the invention. Many others will occur to those skilled in this art as the description hereinafter proceeds. Likewise, while the preferred embodiment of the invention is illustrated in considerable detail hereinafter to comply with the patent laws, nevertheless it is desired to point out that the structure and the form of the invention can be varied from the preferred embodiment without losing any of the advantages and benefits.

In the drawings:

Fig. 1 is a fragmentary plan view of a portion of a carrier sheet of flexible material such as cellophane having characters applied thereto for use in making layouts and the like, and having the spacing aids or indicia of the invention applied thereto.

Fig. 2 is a sectional view through the sheet along the line 2—2 of Fig. 1 and in the direction indicated, the dimensions being greatly exaggerated for clarity of explanation.

Figs. 3 and 4 are perspective views showing the manner of making a layout using the flexible-base letters of the invention.

Fig. 5 is a top plan view of an assemblage of characters of the kind which are applied to blocks, the same comprising the prior art.

Fig. 6 is a sectional view through the assemblage of Fig. 5 and taken along the line 5—5 thereof and in the indicated direction, the dimensions being exaggerated.

Fig. 7 is a top plan view of a fragment of a layout sheet having an assemblage of characters applied thereto using the spacing aids of the invention to obtain the spacing between letters determined by coincidence of the spacing indicia.

Fig. 8 is a sectional view taken through the assemblage of Fig. 7 along the line 8—8 and in the indicated direction, the dimensions being exaggerated.

Figs. 9, 11 and 13 are views similar to that of Fig. 7 but showing different kinds of spacing between characters.

Figs. 10, 12 and 14 are sectional views taken respectively through the lines 10—10, 12—12 and 14—14 of Figs. 9, 11 and 13 in the direction indicated, the dimensions being exaggerated.

Figs. 15 and 16 are fragmentary plan views of two characters from carrier sheets constructed in accordance with the invention, the same illustrating the relationships between the spacing aids and the characters themselves.

Figs. 17 and 18 are fragmentary enlarged plan views of a lower corner of each of a pair of adjacent carrier members having characters thereon showing modifications of the indicia.

The invention is characterized by the provision of certain spacing aids which are in the form of indicia applied to the flexible carrier sheet upon which the characters themselves are mounted. The spacing indicia, as they will at times hereinafter be termed, are so related to the characters as to enable the average user to achieve a better than average spaced assemblage of characters or line of the same by the use of a simple technique; enable

the user to achieve various kinds of other spacing effects, especially the optically ideal effect in which all characters have the appearance to the reader of being equally spaced apart.

The invention herein is directed to a structure in which the characters are printed or silk-screened or otherwise applied to transparent sheeting material, such as cellulose acetate or the like which is capable of being separated by scratching or cutting the same with a sharp instrument. In Figs. 1 and 2 there is illustrated a sheet of the characters referred to which differs from the prior known structures only in that the spacing aids of the invention are provided, but this difference provides the conversion of the results to be achieved from haphazard amateurish, unsightly and ill-balanced grouping of characters to balanced, professional-looking, eye-pleasing composition.

The reference numeral 20 is applied to the entire sheet generally while the character 22 is used to designate the carrier sheet member which may be formed of any plastic, flexible transparent sheeting, such as for example, acetate cellulose or any other form of cellophane sheeting. As shown in Fig. 1, the usual sheet 20 has a plurality of characters printed thereon, the characters of Fig. 1 being shown in three rows, and comprising "A's," "E's," "I's," and "J's." In the manufacture of the sheet 20, the characters are printed on the back of the carrier member 22, and the printing is thereafter covered with a layer of flexible wax 24 or other adhesive. The printing of the characters on the back of the sheet gives sharper reproduction qualities and protects the printed character. The burnishing of the carrier member 22 intimately presses the printed matter against the layout sheet and gives a good appearance to the matter. The invention, however, does not exclude surface printing.

In Fig. 1 the character "E" at the left hand end of the second row is designated 26, and the sectional view is taken through this portion of the sheet 20 vertically through the three legs of the "E" so that in Fig. 2 the three legs are shown as raised from the back of the carrier member 22 covered with the wax material 24. Obviously the thicknesses are greatly exaggerated, since the carrier member 22 is a few thousandths of an inch thick, the printed portions have practically no thickness at all, and the wax coating is as thin as can physically be applied and retain adhering qualities.

Note that beneath each row of characters there is printed a horizontal line such as shown at 28 by means of which the vertical placement of the characters is facilitated, and in addition, each character has a pair of short vertically arranged marks 30 which are just above the guide lines 28 defining the normal spacing width thereof. These marks 30 are hereinafter termed spacing indicia, and are preferably fine lines a fraction of an inch in length, quite unobtrusive, but nevertheless clearly visible. They could comprise slots or perforations in the carrier member 22. Preferably the spacing indicia are printed at the same time that the characters are printed and in the same color, and are usually applied to the plate from which the sheet 20 is printed at the same time that the other matter is applied. In Fig. 2, the exaggerated thickness of the ink of the character 26 is also carried to the line 28 and the spacing indicia 30.

Before proceeding further with the explanation of the details of the invention, reference should be had to the two views of Figs. 3 and 4 in which two steps in the application of the characters of the sheet 20 to a layout sheet or artwork are illustrated. The application is no different from known techniques, except for the use of the spacing indicia.

The artwork or layout is prepared for the application of characters by drawing a blue line (blue does not photograph) wherever the characters are to be adhered, but spaced slightly below the location. This line is shown in Figs. 3 and 4 at 32 and several letters are shown

already applied. In this case the letter "E" is being applied. The artist or other user cuts around the letter "E" of the sheet 20 lightly with a sharp instrument such as a stylus 33, the outline of such cut being shown in Fig. 1 at 34, it being noted that the outline encompasses a substantial portion of the guide line 28 and both of the spacing indicia 30 of the said character. The artist then lifts the character on his stylus 33 carefully and moves it to the layout 36. The layout is usually a sheet of drawing paper, tracing cloth, or other material and may include hard surfaces, transparencies and the like. In the discussion herein, the word layout will usually be used to designate all.

The layout is shown at 36 and the artist lays the new character 26 in its position and aligns the section of the guide line 28 with the blue line 32 to achieve vertical spacing, after which he carefully positions the left spacing mark in its desired relationship with the right hand spacing mark of the previous letter, and lightly presses the letter into place against the layout 36. After being certain that the alignment is as desired, he burnishes the surface of the letter with a smooth instrument such as the blunt end of the handle 37 of the stylus to cause its adherence to the surface of the layout, but does not burnish the guide line 28 or either of the spacing indicia. After all characters have been applied, the guide lines and spacing indicia of all are cut away in one long stroke on broken line 29 in the case of the preferred structures and removed from the layout after which the artist burnishes the characters firmly against the layout to cause good adherence. When completed, the outlines of the character pieces will be substantially invisible, especially to the camera which will photograph the layout, if photography is used.

Attention is now invited to Figs. 5 and 6 which illustrate one form of the prior art type of characters. The layout 36 has three characters applied thereto, comprising the letters of the word "Oil." The characters are printed on the surfaces of cardboard, and thus there are three cardboard members 40, 42 and 44 which are of different widths but of the same vertical length, abutted side by side and adhered to the layout in any suitable manner. The adhesive is not shown. These cardboard members are usually provided in pads with perforations along an edge (not shown) and are stripped from the pads and applied as needed. In the respect that the edges are abutted, these members are no different from the conventional foundry type, the distinction being in the flexibility of the cardboard characters, the type being made of metal, and the characters of the cardboard having no relief. The characters are shown at 46, 48 and 50 printed to the surface of the members 40, 42 and 44 respectively, and hence, having substantially no thickness.

As in the case of the foundry type, spacing can be accomplished with cardboard members by the use of narrow strips of cardboard that are furnished by the manufacturers and which must be interposed between the cardboard members, just as the shims and spacers of metal and the like are interposed between the blocks of foundry type by the typesetter. These strips are not shown in the drawings, but it should be obvious that their use is not convenient, since the handling of fine strips of different sizes is difficult and time consuming. Furthermore, such characters do not reproduce well, since the lines between members are often visible, lighting must be adjusted to eliminate shadows from blocks, and the cardboard prevents the letters from being applied on top of other text or drawn matter that it is not desired to cover. Since the characters are raised from the layout the focussing for sharp photography is a compromise where there is matter on the layout which must also appear.

Again, as in the case of foundry type, it is practically impossible to decrease the spacing between characters the minimum limit of which is determined by the width of the members themselves. The only way that this could

be done is by accurately and carefully slicing narrow strips from the sides of the cardboard members. The average user has enough difficulty attempting to apply the letters in proper alignment side by side without increasing his tribulations by requiring that he take a few thousandths of an inch accurately from the edges of the cardboard members.

The invention comprises providing the spacing indicia 30 for each letter in suitable locations to enable the user to properly space the characters horizontally as they are applied. Attention is invited now to Figs. 15 and 16 which illustrate characters which have been cut from a typical sheet such as 20. These characters are the letter "A" and the letter "I" which have been chosen because their usual spacing arrangements are completely different from one another. The letter "A" is designated 52 and its portion of the sheet 20 is designated 54, while the letter "I" is referred to as 56 while its portion of the sheet 20 is 58. The guide line of the portion 54 is 28-A while the guide line of the portion 58 is 28-I. The distance of the guide lines from their respective characters is the same as at 60.

The spacing marks of the two characters are designated 30-A-L, 30-A-R, 30-I-L, and 30-I-R. This nomenclature is chosen merely for convenience to identify the character and the right or left mark, such as, for example, 30-A-R signifies the spacing indicia or mark of the character A on the right hand side. In choosing the location of the indicia, many factors are considered. These factors include all of the dimensional and esthetic considerations related to the size of the character, the design of the character, the thickness of the horizontal and vertical strokes of the characters, their form relationships with one another, and in addition, the appearance of the various characters when alongside one another for different conditions of spacing. The manufacturer of such a sheet as 20 can determine all of these factors and arrive at the best spacing for the indicia and so position the same.

The characters 52 and 56 are simple block letters and their appearance in words is completely different. The letter "A" has the large triangular space on both sides thereof which will provide a large blank space when coupled with any other character, and especially such characters as "V," "T" and the like. Consequently, it is optically preferable that the letter "A" be located quite close to its next adjacent letters. In Fig. 15, the vertical broken lines 61 and 62 mark the left and right limits or bounds of the character 52 itself, and the spaces between these limits and the respective indicia 30-A-L and 30-A-R are designated 64 and 66. These spaces are very small as will be seen—practically no space at all. The letter "I" on the other hand is formed of a single vertical stroke. Placed alongside another character having a vertical stroke, such as, for example, alongside "H," or to the left of "E," "F," or the like, there will be very little space if the adjacent character is too close. Even other characters alongside of "I" need more spacing than would the character "A." The vertical broken lines 68 and 70 represent the left and right limits or bounds of the character 56 and the spaces between these limits and the indicia marks are designated 72 and 74.

The spaces 64 and 66 are very much smaller than the spaces 72 and 74. If a layout artist were forming groups of characters and caused the indicia marks 30 of adjacent characters to coincide, he would be taking maximum advantage of the effort which the maker of the sheet 20 put into the planning of the spaces, such as 64, 66, 72 and 74. The artist would in effect be spacing the characters with substantially the same effect as the typesetter in setting his type side-by-side without spacers, but with the slight difference that the foundry type character must have draft for enabling removal from the mold, and must also not be so close to the edge of the block as to result in weakness. The flexible-base characters of the type shown in Fig. 15 could be made without the spaces 64

and 66 altogether with no ill effects. The cardboard or paper characters of Figs. 5 and 6 that are padded cannot be printed too close to their edges because since these members are die-cut, wrinkling or compression of the paper at the very edges thereof will destroy the perfectness of the printed character.

Such sheets as described wherein the spacing of the indicia 30 varies from character to character can be used to great advantage by amateurs and novices in the application of these characters to layouts. The article is sold in sheet form that can have suitable instructions for proper spacing, informing the user that a degree of optical adjustment of the characters has already been provided in the indicia or marks 30, and that all he need do is to apply these characters with their marks perfectly coinciding.

Such composition is shown in the assembly of characters applied to layout 36 of Fig. 7. In this case, three characters comprising the upper case "O" and the lower case "i" and "l" have been cut from a sheet such as 20 and applied to a layout sheet with their adjacent spacing indicia marks 30 all coincident. The portions of sheeting 22 upon which the characters are applied are designated 76, 77 and 78. As can be seen in Fig. 8, in order to cause the coincidence of the mark 30-O-R with the mark 30-i-L (using the same notation as above) the portion 77 overlaps the portion 76. Likewise, to cause the coincidence of the mark 30-i-R with the mark 30-l-L, the portion 78 overlaps the portion 77. In Fig. 8, vertical broken lines are drawn through the indicia marks 30 (the printed characters not being shown), and marked according to their character and whether right or left. Thus, the line O_L represents the position of the mark 30-O-L; the line O_R is coincident with the line i_L ; etc. It should not be forgotten that the thicknesses of the various layers are exaggerated to illustrate the structure.

In the case of Figs. 9 and 10, the characters are again the same as in Figs. 7 and 8, cut from a similar sheet 20 comprising the portions 76, 77 and 78 having the "O," "i," and "l" thereof. In this case, instead of applying the characters with their adjacent spacing marks coincident, the characters are very close together, as might be required in a layout which does not have sufficient space for ordinary arrangements. This cannot be easily done with foundry type, as explained, nor with the flexible-base characters that are mounted on blocks of paper or cardboard. In this case the portions are again overlapped, but by a substantial additional amount so that the spacing marks of adjacent characters extend inside one another, that is, the spacing between characters is less than that established by coincident spacing marks. Thus, in Figs. 9 and 10, the mark 30-O-R is now to the right of the mark 30-i-L while the mark 30-i-R is to the right of the mark 30-l-L. Such narrow spacing may easily be achieved by the invention by simply laying out the characters that way. The indicia 30 are fully visible at all times during the process of applying the portions carrying the characters, even though overlapped, since the carrier sheet 22 is transparent and the indicia are easily seen and can be spaced as desired. Using this technique, a character "V" and a character "A" can be spaced alongside of one another so that their adjacent strokes extend well within one another's lateralmost extent. This would not be possible with foundry type without physical mortising of the metal. In the case of cardboard or paper mounted flexible-base letters, the only way this could be done would be to cut an irregular notch in each of the juxtaposed edges of the adjacent members to enable them to fit together.

The layouts of Figs. 11 and 12 illustrate a situation in which the same characters are applied to the layout 36 but with a somewhat wider than usual spacing. This is easily done with the aid and guidance of the indicia of the invention and need not be explained.

The skilled artist need not follow the guidance of the indicia 30 which, of course, must be placed to take care of universal conditions. Consequently, he varies the spacing of the characters of his layout, using his skill and judgment but is very greatly aided by the indicia of the invention. In Figs. 13 and 14, the same characters 76, 77 and 78 are used to illustrate an arrangement of the word "Oil" in which the spacing between the "O" and the "i" is obtained by providing coincidence between the marks 30-O-R and 30-i-L, but the spacing of the "i" and "l" is increased for improving the esthetic appearance of the assembly of characters. The adjacent marks 30-i-R and 30-l-L are thus spaced apart.

In every case the characters are applied in the same way. There is no need for measurements, additional instruments, or cutting or adjusting any more than in the application of the characters of known flexible transparent sheets of this kind. The marks are small and so close together that it is quite easy even for an amateur to judge distances for choosing spacing to suit his needs.

It is believed that the invention has been sufficiently described to enable those skilled in this art to understand and practice the same and to produce sheets which are constructed in accordance with the principles thereof. The invention is readily practiced in variant forms without departing from the spirit or scope thereof as set forth in the appended claims.

Instead of short vertical lines or perforations, the indicia could be in the form of small arrowheads, either all pointed in the same direction, or with the right hand marks pointed in one direction, such as upward, and the left hand marks in the opposite direction. Such arrowheads could be at a different level, so that alignment of the marks or adjustments of the same relative to one another is facilitated. For example, in Fig. 17 there is illustrated the bottom corners of a pair of transparent flexible carrier members 80 and 82, the characters not being here shown. The guide line 28 of the members 80 and 82 coincides with the guide line 32 drawn on the layout 36. Instead of the indicia shown in the other views, the spacing indicia here comprises arrowheads on opposite lateral sides of the characters, and hence on coincident edges of the members 80 and 82. The right hand arrowhead 84 of the character points upward and is slightly closer to the guide line 28 than the left hand arrowhead 86, which, it will be seen, points downward. Aligning the points of the arrowheads for the condition of spacing described in connection with Fig. 7 is extremely simple, and adjustment to one side or the other is just as readily accomplished. The use of opposite indicia at different levels is especially advantageous where the material from which the carrier is made is not completely transparent or where the adhesive is cloudy. To more readily identify the association of the arrowhead with its carrier member, the arrowhead 84 may have a tail 88 directed to the left to indicate that this arrowhead is mounted on the left hand member 80, and the arrowhead 86 may have a tail 90 directed to the right to identify it.

In Fig. 18 there is illustrated another form of the invention in which one lateral side of the member has a vertical mark 92 at one level with a small horizontal scale 94 thereon, and the other lateral side of the same member has a vertical mark 96 but at a slightly higher level. The spacing of the characters in this case is easily measured while they are being mounted. Preferably the mark with scale is on the right hand side since the left hand member 80 is normally laid down first.

The invention contemplates that the indicia will be preferably close to the guide lines so that after mounting a grouping, the entire bottom end thereof including all indicia and the guide line can be cut away in a single stroke. The indicia could as well be spaced above the character. The indicia could be connected with the guide lines, or have short horizontal spurs themselves to serve as guide lines for vertical alignment. The in-

dicia could take the form of dotted lines, triangles, rectangles, circles or other geometric forms, either open or solid, preferably the former. Where the spacing for certain characters varies greatly with the nature of the adjacent character, the indicia may have varying thicknesses or scales such as shown in Fig. 18, and the user instructed to use the center or one side or the other for different conditions of adjacent characters.

The type of indicia used to a great extent depends upon the size of the characters. It would not be expected, for example, that the form of Fig. 18 will be used with extremely small characters where the scale would be practically too small.

The examples which have been described hereinabove as preferred embodiments and variations of the invention are not to be considered limiting.

What is desired to secure by Letters Patent of the United States is:

1. An article of manufacture comprising, a flexible transparent sheet of material capable of being separated into parts of desired size and shape and having an adhesive backing, a plurality of characters of various configurations and of texture contrasting with said material formed on said sheet whereby the separated parts may each contain a single character and the characters may be aligned in horizontal groupings laterally spaced within the groupings for conveying intelligence, and the parts may be adhered to a layout surface one after the other to form said groupings, said sheet having a plurality of pairs of indicia thereon, a pair of such indicia being associated with and vertically spaced from each character and respectively having predetermined lateral spacing outside of the lateral edges of the respective characters, each separated part which has a single character thereon also adapted to have thereon the pair of indicia associated with said single character, the amount of said lateral spacing from said respective opposite edges being so related to the particular configuration of the character with which each said pair of indicia is associated such that the characters of a grouping when formed on a layout will have substantially proper optical spacing between characters when the juxtaposed indicia of each contiguous pair of characters of said groupings have a substantially constant spatial relation to one another, with the same relationship existing between similarly located indicia of other groupings associated with said grouping, if any, and said sheet having guide means thereon, at least a portion of which is adapted to be also included with each single character when its part is separated from said sheet, for aligning the characters of a grouping along the same horizontal line on said layout, said characters being arranged on said sheet in a plurality of horizontal rows with the characters in each row aligned with one another, said guide means comprising an elongate horizontal bar formed on the said sheet below each row and each bar being equispaced from the associated row, the indicia of each character being located adjacent the said bar below the said character whereby after the formation of a grouping, the guide means and indicia thereof may be removed from said layout surface at the same time.

2. A structure as claimed in claim 1 in which each said indicia comprises a short, vertically arranged visible dash-like mark provided on said sheet and adapted to be cut away with a fragment of said sheet after the character with which the same is associated has been adhered to said layout.

3. An article of manufacture comprising, a flexible transparent sheet of material capable of being separated into parts of desired size and shape and having an adhesive backing, a plurality of characters of various configurations and of texture contrasting with said material formed on said sheet whereby the separated parts may each contain a single character and the characters may be aligned in horizontal groupings laterally spaced with-

in the groupings for conveying intelligence, and the parts may be adhered to a layout surface one after the other to form said groupings, said sheet having a plurality of pairs of indicia thereon, a pair of such indicia being associated with and vertically spaced from each character and respectively having predetermined lateral spacing outside of the lateral edges of the respective characters, each separated part which has a single character thereon also adapted to have thereon the pair of indicia associated with said single character, the amount of said lateral spacing from said respective opposite edges being so related to the particular configuration of the character with which each said pair of indicia is associated such that the characters of a grouping when formed on a layout will have substantially proper optical spacing between characters when the juxtaposed indicia of each contiguous pair of characters of said groupings have a substantially constant spatial relation to one another, with the same relationship existing between similarly located indicia of other groupings associated with said grouping, if any, and said sheet having guide means thereon, at least a portion of which is adapted to be also included with each single character when its part is separated from said sheet, for aligning the characters of a grouping along the same horizontal line on said layout, said characters being arranged on said sheet in a plurality of horizontal rows with the characters in each row aligned with one another.

4. A structure as claimed in claim 3 in which each said indicium comprises a short, vertically arranged visible dash-like mark provided on said sheet and adapted to be cut away with a fragment of said sheet after the character with which the same is associated has been adhered to said layout.

5. An article of manufacture comprising, a flexible transparent sheet of material capable of being separated into parts of desired size and shape and having an adhesive backing, a plurality of characters of various configurations and of texture contrasting with said material formed on said sheet whereby the separated parts may each contain a single character and the characters may be aligned in horizontal groupings laterally spaced within the groupings for conveying intelligence, and the parts may be adhered to a layout surface one after the other to form said groupings, said sheet having a plurality of pairs of indicia thereon, a pair of such indicia being associated with and vertically spaced from each character and respectively having predetermined lateral spacing outside of the lateral edges of the respective characters, each separated part which has a single character thereon also adapted to have thereon the pair of indicia associated with said single character, the amount of said lateral spacing from said respective opposite edges being so related to the particular configuration of the character with which each said pair of indicia is associated such that the characters of a grouping when formed on a layout will have substantially proper optical spacing between characters when the juxtaposed indicia of each contiguous pair of characters of said groupings have a substantially constant spatial relation to one another, with the same relationship existing between similarly located indicia of other groupings associated with said grouping, if any, and said sheet having guide means thereon, at least a portion of which is adapted to be also included with each single character when its part is separated from said sheet, for aligning the characters of a group-

ing along the same horizontal line on said layout, said characters being arranged on said sheet in a plurality of horizontal rows with the characters in each row aligned with one another, said guide means comprising an elongate horizontal formation applied to said sheet vertically spaced from each row and each formation being equispaced from the associated row.

6. A structure as claimed in claim 5 in which the indicia of each character is located adjacent the said formation vertically spaced from said character whereby after the formation of a grouping, the guide means and indicia thereof may be removed from said layout surface at the same time.

7. An article of manufacture comprising, a flexible transparent sheet of material capable of being separated into parts of desired size and shape and having an adhesive backing, a plurality of characters of various configurations and of texture contrasting with said material formed on said sheet whereby the separated parts may each contain a single character and the characters may be aligned in horizontal groupings laterally spaced within the groupings for conveying intelligence, and the parts may be adhered to a layout surface one after the other to form said groupings, said sheet having a plurality of pairs of indicia thereon, a pair of such indicia being associated with and vertically spaced from each character and respectively having predetermined lateral spacing outside of the lateral edges of the respective characters, each separated part which has a single character thereon also adapted to have thereon the pair of indicia associated with said single character, the amount of said lateral spacing from said respective opposite edges being so related to the particular configuration of the character with which each said pair of indicia is associated such that the characters of a grouping when formed on a layout will have substantially proper optical spacing between characters when the juxtaposed indicia of each contiguous pair of characters of said grouping have a substantially constant spatial relation to one another, with the same relationship existing between similarly located indicia of other groupings associated with said groupings, if any, and said sheet having guide means thereon, at least a portion of which is adapted to be also included with each single character when its part is separated from said sheet, for aligning the characters of a grouping along the same horizontal line on said layout, said characters being arranged on said sheet in a plurality of horizontal rows with the characters in each row aligned with one another, said guide means comprising an elongate horizontal formation formed on the said sheet below each row and each formation being equispaced from the associated row, the indicia of each character being located adjacent the said formation below the said character whereby after the formation of a grouping, the guide means and indicia thereof may be removed from said layout surface at the same time.

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