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APPARATUS FOR ASSEMBLING TYPE CHARACTERS

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Fig. 2



Fig. 1

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Fig. 3



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APPARATUS FOR ASSEMBLING TYPE CHARACTERS

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6 Claims. (Cl. 235—70)

This invention has to do with the laying out of printed matter, and more particularly to the assembly of type characters of different sizes and styles.

In laying out printing, such as display lines or body type, it is customary to make use of a type of such size that the printed matter will substantially fill the space allotted to it. In view of the large number of type faces in common use, the selection of suitable type faces in the correct sizes for widely different jobs of printing is a time-consuming operation.

It is, therefore, an object of the present invention to provide improved apparatus for use in assembling different sizes of type of various type faces in lines of predetermined widths.

To this end and as illustrated, the invention provides a holder carrying supports, each of which has a type display surface bearing a type face in different sizes and a scale divided into sections corresponding to the type sizes, together with a movable scale divided into sections numbered to represent the number of type characters in a line of type of given width, the gage being cooperable with each scale to indicate the number of characters in a line of given width for the various sizes of type upon a selected display surface.

This device is advantageous in that the representation of the various type faces facilitates the selection of the particular type face to be used, after which, for a line of given width, the number of characters of each size of type, which can be included in the line to be used, can readily be ascertained by application of the movable scale to the fixed scale on the support bearing the type face selected.

In another aspect, the invention involves a method of assembling characters of type, in which the apparatus above set forth is utilized in translating the number of characters to be included in a line of given width to the size of type to be used, or vice versa.

These and other features of the invention are illustrated in the following specification and the accompanying drawings, and are pointed out in the claims.

In the drawings,

Fig. 1 is a perspective view of a device embodying the invention;

Fig. 2 is a plan view of the movable scale; and

Fig. 3 is a plan view on an enlarged scale of one of the supports bearing one of the type faces.

In carrying out the invention, use is made of the fact that for many type faces the original type creation is preserved throughout several or all of the different sizes of type. Type of the various sizes retains the individuality of the original, but differs in the numerical count of characters in a line of the same width. For most display types, it has been found that in a line of type of given width the average number of characters, counting the thin letters *i*, *l*, and *r*, and spaces as a half character each, is fairly constant. For many type faces, it has been found that there is a definite relation between the number of characters in a line and the size of type, such that the number of characters, multiplied by the size of type in points and divided by the width of the line in picas, equals a constant for a particular type face. This does not apply to all type faces, nor does it necessarily apply to all sizes of every type face. However, there is a sufficient number of sizes of type of different makes, so that for a given type face it is usually possible to select from three to six different sizes in which this relation holds true. For example, in Campanile, upper and lower case 24-point, set 12-picas wide, there are, on the average, 18 characters. For such a line, the relation for this particular size of type is as follows:

$$\frac{18\ (\text{number of characters}) \times 24\ (\text{point size})}{12\ (\text{width in picas})} = 36$$

which is the constant for this type face. This relation holds true for other sizes of Campanile and other widths of line. For example, in a line 24-picas wide, 72-point type has 12 characters; 60-point, 14.4 characters; 48-point, 18 characters; 42-point, 20.6 characters; 36-point, 24 characters; 30-point, 28.8 characters; 24-point, 36 characters; 18-point, 48 characters; and so on.

As shown in Fig. 1, the device comprises a holder 10 carrying a plurality of supports 12 in the form of cards, each of which is mounted upon one of a plurality of rods 14 having enlarged end portions 16, which are slidably positioned in channels 18 extending along opposite sides of the holder. Each of the supports 12 bears a representation of several lines of type of a selected type face, that shown in Fig. 1 being Baskerville. Another type face, shown in Fig. 3, is Campanile. It is to be understood that other supports carried by the holder bear representations of other type faces, it being intended to provide supports bearing a wide range of type faces adapted for use in various printing jobs which may be encountered.

The support bearing the Campanile type face, as shown in Fig. 3 in substantially full size, is typical of the supports carried by the frame.

This support bears several lines of Campanile type, each line being 24-picas in width. The lines are of different point sizes of type and are graduated from 18-point type in the bottom line to 72-point type in the top line. The type is so selected for each line that the number of characters in the line multiplied by the point sizes, and divided by the line width (here 24-picas) equals or nearly equals 36, the constant for the Campanile type face.

Each of the supports 12 is provided with a fixed scale 20, which is cooperable with a movable gage 22 to indicate the relation between the type size and the number of characters in a line of given width and of a selected type face. The gage 22, best shown in Fig. 2, comprises a proportional parts or logarithmic scale with the sections marked off from left to right to represent, in this case, the number of type characters. In making the fixed scale, the movable gage is placed along a line 24 on the support, and marks are made on the support, opposite the numbers on the gage, representing the number of characters for each type size, as shown by the above formula, or found by counting the number of characters in a 24-pica line of the type of the size in question. The marks on the support are labeled with numbers indicating the type sizes corresponding to the character count for a line of that width. For example, the division designated by the numeral 18 on the scale 20 is located opposite the division marked 48 on the gage 22, thus indicating that the point size 18 corresponds to a character count of 48. Similarly, division 24 on the scale 20 is opposite division 36 on the gage 22 and indicates that the point size 24 corresponds to a character count of 36. The point sizes for other character counts are similarly designated on the scale 20. Since both the scale and gage are laid out for 24-pica width, an index or reference point 25, which corresponds to the constant for the particular type face in question, is indicated conveniently by the left end of a heavy black line 26.

Since the divisions on the support and on the gage are proportional, the relation between the sizes marked on the fixed scale and the character count for lines of other widths can be obtained by setting a number on the gage corresponding to the line width opposite to the index. Then, the numbers on the gage representing the number of characters in a line of the selected width will appear opposite the corresponding sizes marked on the fixed scale.

The same gage can thus be used to determine the relation between the point size of type and the number of characters in lines of various widths for any size of type of the various type faces shown upon the supports.

In the use of the device, after the available width of line has been determined for the particular job of printing at hand, the operator selects a suitable type face from those appearing on the supports 12 and lays on the fixed scale 20 thereof, the movable gage 22 with the number thereon representing the width of line located opposite the index of the fixed scale. The scale and gage will then be in such relation that on the gage the number of characters in a line will be indicated opposite the corresponding type size indicated on the fixed scale. In selecting a type size, the size indicated on the fixed scale lying nearest to the number of characters indicated on the gage is selected, this being adequate for practical purposes.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A device for the purpose described comprising a holder, supports positioned in the holder each having a type display surface, a type face in different sizes carried on said surface, said surface also carrying a scale divided into sections corresponding to the type sizes, and a movable gage having a surface divided into sections numbered to represent the number of type characters in a line of type of given width, said gage being cooperable with each scale to indicate the number of characters in a line of given width for the various sizes of type upon a selected display surface.

2. A device for the purpose described comprising a holder, supports positioned in the holder each having a display surface, a type face in different sizes carried on said surface, said surface also carrying a fixed scale divided into sections corresponding to the type sizes, the scale having an index, and a movable gage having a surface divided into calibrated sections numbered to represent the number of type characters in a line of type of given width, said gage being cooperable with each scale when set with a number on the gage corresponding to the line width in alinement with the index to indicate the number of characters in a line of the given width for the various sizes of type upon a selected display surface.

3. A device for the purpose described comprising a holder, supports positioned in the holder each havinge a type display surface, a type face in different sizes carried on said surface, said surface also carrying a scale divided into sections corresponding to the type sizes and having an index, and a movable gage having a surface divided into calibrated sections numbered to represent the number of type characters in a line of type of given width, said gage when positioned upon the scale with a number on the gage representing the width of line in alinement with the index on the scale being cooperable with each scale to indicate the number of characters in a line of the given width for various sizes of type upon a selected display surface.

4. A device for determining the size of type to be used in accommodating a given number of characters of type of a selected type face to a line of given width comprising a plurality of supports each bearing a type face in type of different point sizes, a scale carried by each support, each scale having numbered divisions representing the various sizes of type on the support and having an index positioned along the scale in accordance with a characteristic of the particular type face on the support, and a gage having numbered divisions representing the number of characters in lines of different widths, the construction and arrangement of parts being such that when the gage is placed with a number thereon representing the width of line in picas upon the index the number of characters in a line of the given width are located on the gage opposite the type sizes indicated on the scale.

5. Apparatus for the purpose described comprising a plurality of supports each having thereon a different type face in several point sizes and a logarithmic scale having divisions progressively numbered to correspond to the point sizes on a support, the scale having an index positioned at a location determined for the particular type face on the support, and a movable logarithmic

gage having divisions progressively numbered to correspond to the number of characters in a line of type such that when the gage is placed along the scale on a support bearing a selected type face with a number on the gage corresponding to a selected line width positioned in alinement with the index the point sizes of the selected type are indicated upon the scale opposite the number of characters indicated upon the gage.

6. Apparatus of the character described comprising a plurality of supports each having thereon a different type face in lines of type of different sizes, a movable gage member, and proportionate parts scales, carried by each of the supports and by the gage member, each of the scales on the supports having divisions numbered to correspond to the point sizes of type on the support and an index positioned along the scale in accordance with a characteristic of the particular type face on the support, the scale on the gage member having numbered divisions complementary to those on the scales on the supports, the construction and arrangement of the parts being such that when the gage member is placed with its scale extending along the scale on the support the type sizes indicated upon the scale on the support are located opposite numbers on the gage member representing the corresponding numbers of characters in a line of a width in picas corresponding to the number indicated on the gage member opposite the index.

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