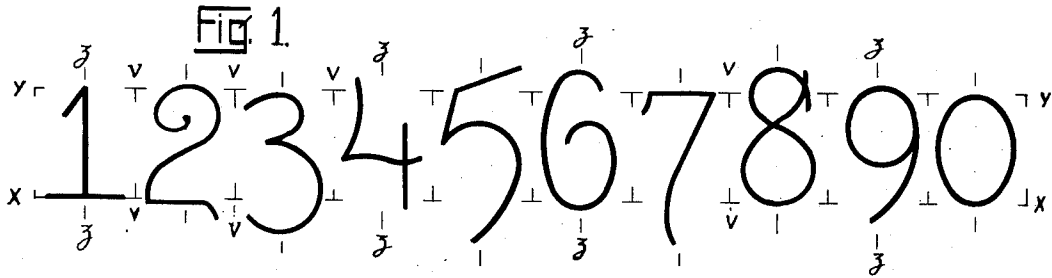
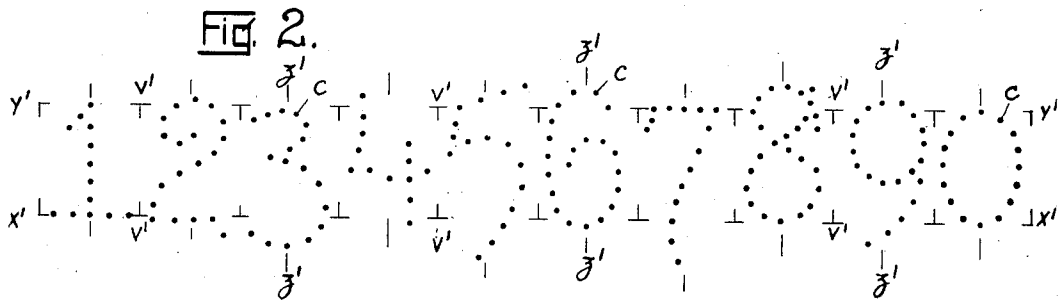
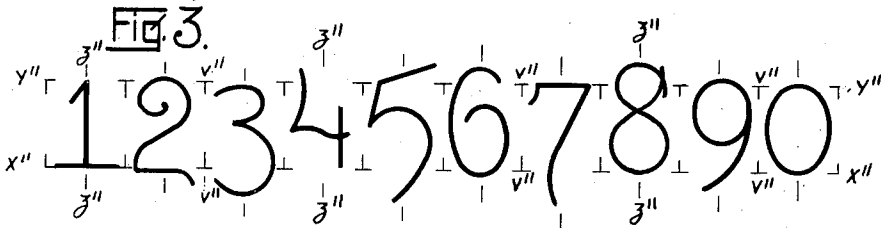
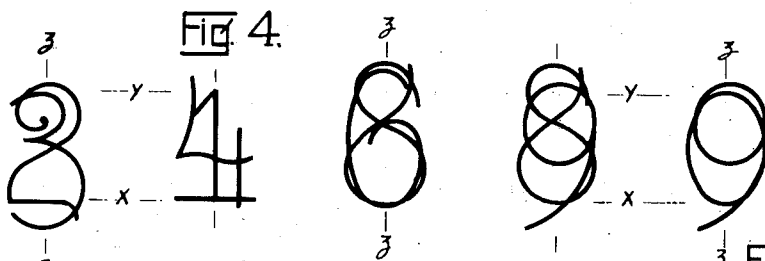
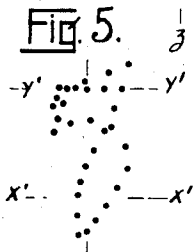
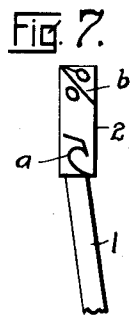
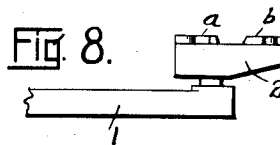
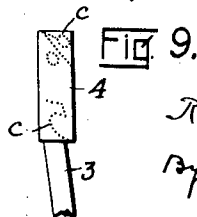
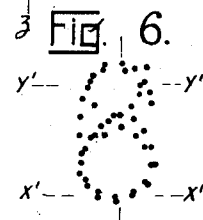


R. McK. JONES.
TYPE FOR WRITING MACHINES.
APPLICATION FILED AUG. 19, 1918.

1,292,332.

Patented Jan. 21, 1919.



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TYPE FOR WRITING-MACHINES.

1,292,332.

Specification of Letters Patent.

Patented Jan. 21, 1919.

Application filed August 19, 1918. Serial No. 250,521.

To all whom it may concern:

Be it known that I, ROBERT McKEAN JONES, subject of the King of Great Britain and Ireland, and resident of Stony Point, in the county of Rockland and State of New York, have invented certain new and useful Improvements in Types for Writing-Machines, of which the following is a specification.

My present invention relates to types for writing machines, and the general object of the invention is to provide new and improved types for such machines and which are especially adapted to prevent overprinting to change the denominations of numerals without detection.

It is the custom of many business organizations, which issue a large number of checks for payroll or other purposes, to print on the checks a notice authorizing the payment of the amount written in figures, and some banks and bankers seem well disposed toward the omission of a statement of the amount on the check written in words if otherwise adequate protection against fraud is maintained. Checks so written make it possible to state the name of the payee and the numerals indicating the amount to be paid in a single line of writing, thus greatly condensing and simplifying the duplicate record kept by the maker of the check. For such work indenting or perforating types which drive the ink of a chemically prepared ribbon into the fabric of the paper are sometimes used to prevent fraudulent alterations.

In the use of typewriters for such purposes one objection has been that it has heretofore been possible to write one figure over another in such a way as to change the amount without the alteration being easily detected. For example, the figure "1" could be readily changed into a "4" since the perpendicular lines of both figures substantially coincided in position. The lines of other figures also have come together closely enough to permit changing by overprinting without much difficulty.

To overcome this objection I have devised a set of numerals of special form which do not exhibit any coinciding lines when imposed one upon another, and I have further devised an improvement in the indenting or perforating types which will prevent the success of an attempt at fraudulent alteration by printing one figure over another,

such attempt at overprinting being made plainly visible by the use of my invention.

To the above and other ends which will hereinafter appear, my present invention consists in the features of construction, combinations of devices and arrangements of parts to be hereinafter described and particularly pointed out in the claims.

In the accompanying drawings,

Figure 1 shows the basic outlines of a set of numerals designed in accordance with my present invention, said figure being drawn on a scale six times the size of the originals, the pattern size being spaced eight characters to the inch, as ordinarily used in the typewriter.

Fig. 2 is a view corresponding to Fig. 1 but showing the basic outlines for indenting or stencil types.

Fig. 3 is a view corresponding to Fig. 1 but showing characters spaced ten to the inch.

Fig. 4 illustrates examples of the results obtained by writing one numeral over another, the characters corresponding to those in Fig. 1.

Figs. 5 and 6 are further examples of writing one indenting or perforating numeral over another of the sort illustrated in Fig. 2.

Figs. 7 and 8 are enlarged fragmentary views illustrating respectively the face and the side elevation of a type bar provided with a type of my invention, such as is illustrated in Figs. 1 and 3.

Fig. 9 is an enlarged plan view of a fragmentary type bar provided with an indenting or perforating type such as shown in Fig. 2.

My invention is particularly adapted for use with writing machines employing type bars. One example of type bars is illustrated in Figs. 7 and 8 and marked 1. Each type bar may be provided with a type block 2. The faces of the type blocks may have formed on them in any suitable way the characters, there being two characters *a* and *b* on each type block when the machine is of the shiftable case style, as in the present instance. A type bar 3 showing a type block 4 provided with perforating or indenting type faces *c* is illustrated in Fig. 9. The type blocks are not shown in Figs. 1 to 6, these figures illustrating only the basic outlines of the characters or numerals and omitting the representation of the type

blocks on the faces whereof these characters are formed. In Fig. 1, which shows on an enlarged scale, viz., six to one, the basic outlines of types spaced eight characters to the inch, I have indicated the bottom and top lines of the letters of the alphabet with which these numerals would be used, the bottom line being indicated by the dotted line $x x$ and the top line by the dotted line $y y$. The center of balance of each of the types is indicated by a vertical dotted line $z z$, while the divisions between the printing fields of the types are indicated by dotted lines $v v$. These different lines have been purposely drawn so as not to encroach on the fields of the characters in order that the clear representation of said characters be not interfered with. The principle followed in designing the characters has been the avoidance of coincidence of the lines or parts of lines in any one of the ten numeral characters with another, should the two be written one over or upon another. For example, the vertical line of the "1" character is in its center of balance $z z$, while the vertical stem line of the "4" character is considerably to the right of its center of balance $z z$, instead of being in or close to the center of balance as has been common heretofore. The result is that if the "4" character be written over or upon the "1" character, the two vertical lines will distinctly appear as will all the other lines of the two characters, as shown in Fig. 4. Said Fig. 4 shows also other examples of writing one numeral over another. First, starting from the left, it shows a "3" written over a "2"; the next is the "4" written over the "1" that has been referred to above; the next is an "8" written over a "6"; the next a "9" written over an "8"; and the next a "9" written over a "0." An examination of these examples will show that in no instance is there coincidence or substantial coincidence of lines or parts of lines of two numerals. In each instance the entire basic outline of both numerals can readily be followed or traced. It will be found on examination and comparison that this is true of any of the possible combinations of numerals that can be effected.

In making from my novel type designs exact patterns for the indenting or stencil types, a further precaution is introduced, as will be best understood from a consideration of Fig. 2, which shows indenting types of a size suitable for the spacing of eight characters to the inch, corresponding to Fig. 1, said Fig. 2 being drawn to the same scale as Fig. 1. In said Fig. 2 the bottom and top lines of the letters of the alphabet with which the types would be used are indicated by the dotted lines designated respectively as $x' x'$ and $y' y'$. In Fig. 2 the dotted lines representing the centers of balance are designated as $z' z'$ and the vertical lines

separating the fields of the characters are designated as $v' v'$. The basic outlines of the stencil types shown in Fig. 2 are the same as are the basic outlines of the full line types of Fig. 1, but in Fig. 2 it will be understood the dots c , used to outline the characters, represent each the location of a point or indenter, it being well understood that the impressing faces of the stencil or indenting types are composed of points which indent or perforate the paper. These points c are by my invention so placed for each type that they do not strike in the same places as those composing any other numeral or character at any essential point. In other words, there is substantially no coincidence of the striking points of one character or numeral with those of any other. Any attempt to print any numeral or character over another, therefore, would result in such a mutilation of the paper and obliteration of both characters as could easily be detected by even casual observation and would make illegible the figures thus treated. For example, Fig. 5 shows the result of overprinting a "7" on a "5," while Fig. 6 shows an "8" printed over a "6." With care the dots c of each of the characters in the two figures may be traced out or followed since there is no coincidence of any dot of one character with any dot of another. The general effect, however, is to give the impression of a meaningless conglomeration of perforations, the result of course being to indicate tampering to the most casual observation.

The size of types printing eight characters to the inch is not generally adapted for use with typewriting machines employing adding attachments or computing mechanisms, as such attachments or mechanisms ordinarily provide for ten characters to the inch. Since adding attachments are frequently used in connection with machines employed for writing checks or doing other work involving numerals or figures, I have shown in Fig. 3 an example of my invention applied to a set or series of numeral characters designed to be written ten to the inch. These characters, in basic outline, substantially correspond to the larger characters shown in Fig. 1 and need not therefore be referred to more specifically. The set shown in Fig. 3 is a full line set but it will be understood that the indenting, perforating or stencil types would correspond in size to the characters of Fig. 3 and in principle of location to the indents or points of Fig. 2. In Fig. 3 the bottom and top lines of the corresponding alphabetical types are indicated respectively by the dotted lines $x'' x''$ and $y'' y''$ while the center of balance of each type is indicated by a vertical line $z'' z''$, and the lines dividing the fields by dotted lines $v'' v''$.

It will be observed that by my present

invention there is provided a set of figures easily legible and attractive in design but composed of lines which are so placed that the impression of any one type printed over any other will distinctly reveal the entire outline of each type, due to the fact that the lines composing the types will not coincide; and further that in the case of the types formed by indenting or perforating points which are especially adapted for writing checks, vouchers or other documents, which it is desired to protect against fraudulent alteration, the points of each character are so disposed that they do not coincide with those of any other character of the set of numerals, should one be printed over the other, so that any attempt at alteration will result in a mutilation of the paper and the illegibility of the writing. In no prior constructions that I am aware of are these principles employed. Prior designs of full line types are not sufficiently distinctive to guard against overprinting, and while of course indenting types are well known, the indenting points have not heretofore been arranged with regard to any

particular system, much less according to a system which would prevent coincidence of indentation or outline.

Various changes may be made without departing from my invention.

What I claim as new and desire to secure by Letters Patent, is:—

1. Numeral types for writing machines, the faces of which are laid out on lines such that when any one type is printed over any other type it will print out of coincidence therewith.

2. A set of numeral types for writing machines having type faces composed of separate points, said types having distinct and separate basic outlines when written one over another and the points of each character striking at different points from the points of the other characters.

Signed at New York, in the county of New York and State of New York, this 16th day of August A. D. 1918.

ROBERT McKEAN JONES.

Witnesses:

CHARLES E. SMITH,
E. M. WELLS.