A. B. EDWARDS.

KEYBOARD FOR TYPE WRITING MACHINES.

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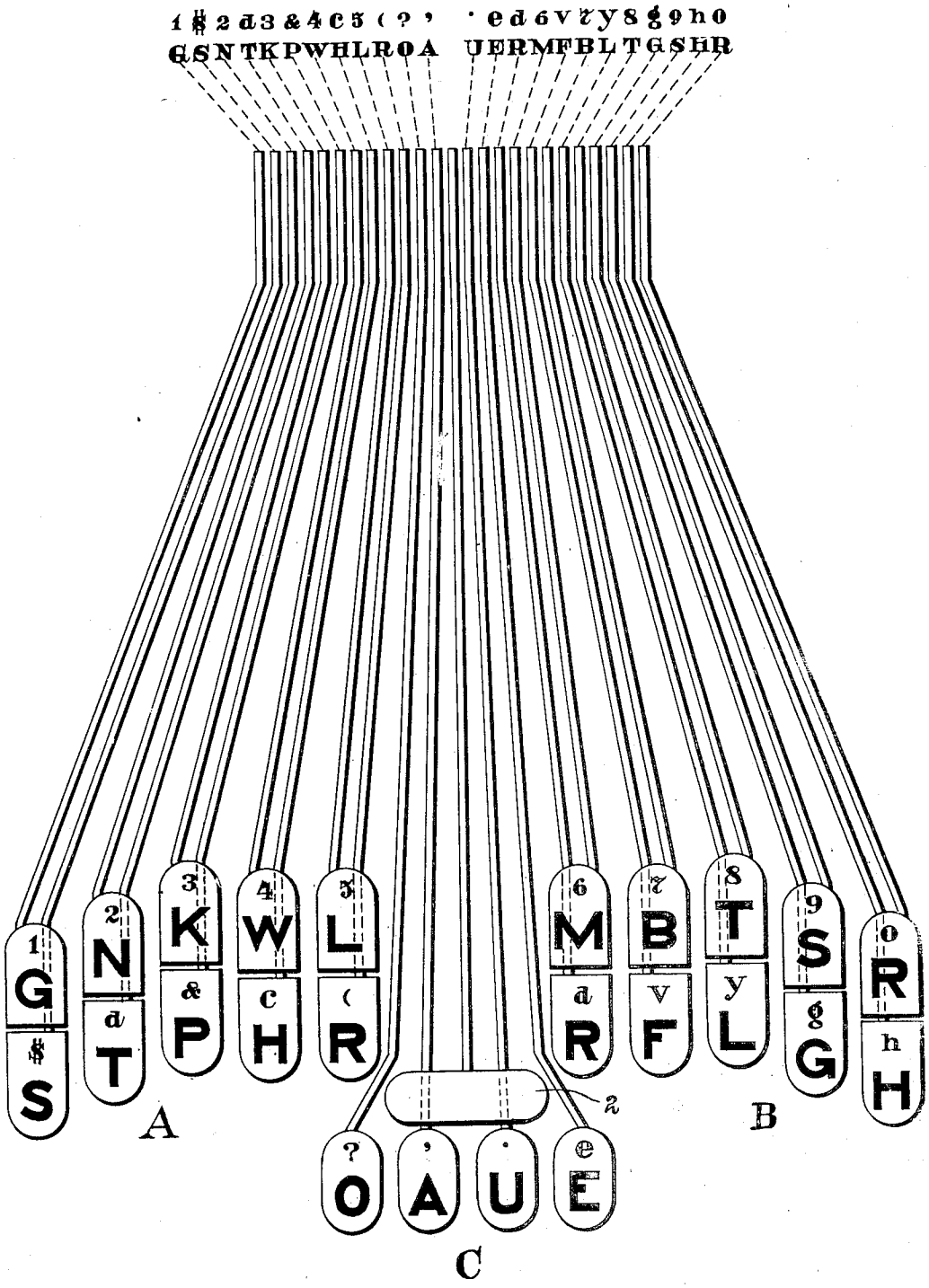

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KEYBOARD FOR TYPE-WRITING MACHINES.

1,197,724. Specification of Letters Patent. Patented Sept. 12, 1916.

Application filed March 16, 1914. Serial No. 824,943.

To all whom it may concern:

Be it known that I, ALRAH B. EDWARDS, citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Keyboards for Type-Writing Machines, of which the following is a specification.

My invention relates to new and useful improvements in keyboards for typewriting machines, and particularly relates to certain features of a keyboard for a stenographic typewriting machine relative to which I have pending an application filed December 12, 1912, under Serial No. 736,320.

The keyboard to which my improvement relates lies in that class of keyboards which divide the keys into several groups, one group being employed to print prefixes and initial consonants, another group to print suffixes and final consonants, and still another group to print vowels, it being possible to simultaneously actuate all or any number of the keys.

It is the object of my invention broadly stated to provide a keyboard so arranged with regard both to its keys and to the characters carried by the same, that the machine embodying such keyboard may be operated to quickly and accurately typewrite dictation or notes in a certain stenographic code.

Another object, of a general nature, is to provide a keyboard having its keys and characters so arranged as to obtain a maximum simplicity of operation, so that it will not require either long training or special intelligence to operate a machine in which the keyboard is embodied.

It is furthermore a specific object of the invention to provide a keyboard of the character above described, that will have each key adapted to print two distinct characters, one of said characters being printed when the key is actuated under normal conditions and the other being printed when a certain shift key is simultaneously displaced, the use of such a keyboard (commonly known as double case) making possible the use of a much more simple stenographic code than is practicable when a single case keyboard is used.

The accompanying drawing is a view diagrammatically illustrating a keyboard in which are embodied the novel features constituting my invention.

My improved keyboard comprises three groups of keys, which are respectively designated by the letters A, B, and C, the groups A and B being disposed symmetrically at each side of the group C, slightly to the rear of the same. The middle group is formed of five keys, four of which have the same size and shape and are in an alinement transverse of the bars carrying said keys, and the fifth key of said group, which is elongated transversely of its key bar, is disposed centrally at the rear of the other keys, adjacent to the same. The four alined keys of the group C, taken in succession from left to right respectively carry the vowels O, A, U, and E, which are represented upon said keys in the form of large capitals. Each of said keys also carries an additional small character above the letter already specified, these small characters taken from left to right being as follows: ? , . e.

The elongated key of the middle group, which key is indicated by the numeral 2 is blank and is used as a shift key.

Each of the groups A and B is comprised of ten keys arranged to form five pairs, the members of each pair being in alinement transverse with that of the keys which carry the vowels. The two innermost pairs of keys of each group A and B are in alinement parallel to that of the keys carrying the vowels. The middle pair of keys in each group A and B is set slightly back from the two innermost pairs. The two outermost pairs of each group A and B are successively set forward from the middle pair.

The rearmost keys of the group A, considered from left to right of the series, respectively carry the following letters: G, N, K, W, L and said keys taken in the same order also carry numerals 1, 2, 3, 4 and 5, each numeral being disposed above the adjacent letter and being smaller in size than said letter. The front keys of the group A taken successively from left to right of the series respectively carry the letters S, T, P, H and R, and said keys considered in the same order, also carry the following characters: $ d & c).

The rear keys of the right hand group B,

considered in the same succession as before, carry the letters M, B, T, S, and R, and also carry the smaller numerals 6, 7, 8, 9 and 0. The front keys of the same group taken in the order specified carry the large letters R, F, L, G and H, and also carry the small letters d, v, y, g and h.

The peculiar advantages in a machine for typewriting stenographic notes, of a keyboard having its keys and characters arranged as above described will now be made clear. The keys of the group A are employed in writing initial consonants (either singly or in combination) and prefixes of words and syllables, and are to be manipulated by the left hand of the operator. The keys of the group B are to be employed in writing final consonants (either singly or in combination) and suffixes of words and syllables, and are to be manipulated by the right hand of the operator. The four front keys of the group C are employed to write vowels or combinations of vowels, and are to be operated by the thumbs of both hands of the operator. The shift key 2 may be operated by the thumb of either hand. If the shift key is in its normal position, and all the other keys of the three groups are simultaneously depressed, the following letters will be written in the succession shown: G S N T K P W H L R O A U E R M F B L T G S H R.

If the shift key 2 is pressed, as well as all the other keys of the keyboard, the following characters will be written in the succession shown: 1 $ 2 d 3 & 4 c 5 (? , . e d 6 v 7 y 8 g 9 h 0.

Certain letters which do not appear upon the keys of group A are listed below, and are obtained by certain combinations of the letters which do appear as set forth:

	B	is represented by	K P	
Hard sound of	C	"	" K	
Soft " "	C	"	" S	
	D	"	" T P	
	F	"	" P H	
	M	"	" N K	
	Q	"	" K W	
	V	"	" L R	
	X	"	" S R	before consonants
	X	"	" S	" vowels
	Y	"	" K P	
	Z	"	" S	

The combinations of the letters of group B employed to represent letters not appearing in said group are as follows:

Hard sound of	C	is represented by	K	
Soft " "	C	"	" S	
	K	"	" T G	
	N	"	" F B	
	P	"	" B T	
	X	"	" T G S	
	Z	"	" S	

It will be noted that the vowel I is missing in the group C, said vowel being represented by the combination U E.

The group of keys A and the letters which they carry are especially arranged to make it possible by the striking of one or more keys in said group to write any consonant or combination of consonants such as may occur at the beginning of a word or syllable. To show how this may be accomplished a list of the various compound consonants used in the English language at the beginning of words is here given, together with their equivalent as written on a machine equipped with my keyboard.

ST=ST	SPL=SPL	CL=KL
SP=SP	SKR=SKR	CR=KR
SH=SH	TH=TH	CH=KH
SW=SW	TR=TR	DW=TPW
SPH=SPH	TW=TW	DR=TPR
SN=SN	THR=THR	BR=KPR
SM=SNK	PH=PH	BL=KPL
SQ=SKW	PR=PR	GR=GR
SL=SL	PL=PL	GL=GL
STR=STR	KR=KR	FR=PHR
SPR=SPR	KL=KL	FL=PHL

It is to be noted that there are only eleven of these compound consonants that change their form when written by the operator on my keyboard, namely, SM, SQ, CL, CR, CH, DW, DR, BR, BL, FR, and FL. It is of course, very desirable to avoid as far as possible changes in the ordinary form of these compound consonants as it is a much simpler matter for the operator to write them in their normal form, than to represent them by some other combination of letters.

A very important advantage derived from the peculiar arrangement of keys and characters in group A is the possibility of representing most prefixes by certain letters similar in sound to the prefixes which they denote. Thus for example, em, en, in and um are each represented by N. De or di is represented by the small upper case d which is carried by the same key carrying the letter T. Re, occurring before a consonant is represented by G. To represent the prefix co, as used in coöperate, the small upper case C is used, said letter being carried by the key which also carries the key H. The prefix sus, as in suspect, is represented by the dollar sign $. A complete explanation of the representation of prefixes is not deemed necessary herein.

It will be observed that no provision is made for writing the letters J, Q, and W by means of the keys of the group B since said letters have no occurrence in the English language as final consonants. Examples of the representation of suffixes by the keys of the group B are FR representing fore, FL representing full, and R representing er, ir, or ur.

By using the shift key, it becomes possible to write any number or punctuation mark representing the same by its own proper symbol, and eliminating the complexity involved in representing the numbers and punctuation marks by combinations of letters. Furthermore, the small letters carried by the front keys of the group B are made to designate various suffixes which consequently may be written by

the depression of a single key of the group B when the shift key is displaced.

Small d and v of the group B are respectively employed to designate the suffixes ed and tive. Final y is represented by the small y of the same group. Small g represents the suffix ing. Small h is used to represent tion, sion or cian.

An important feature of group B is the provision of separate keys for writing a medial and final R, this being necessary for many words such as bearer, terror, etc.

A most important advance in the art accomplished by my improved keyboard is the possibility of writing at one stroke a code equivalent of any word that will in almost every case so closely resemble the word in sound that both the writing and reading will be comparatively simple, even without a previous acquaintance with the system.

The invention is presented as including all such modifications and changes as properly come within the scope of the following claims:

What I claim is:

1. A key-board for stenographic writing machines, comprising a group of keys bearing the letters

G N K W L
S T P H R

arranged at one side of the center of the key-board, and representing singly or in combination, initial consonants and prefixes of words.

2. A key-board for stenographic writing machines comprising a group of keys carrying the letters

M B T S R
R F L G H

arranged at one side of the center of the key-board, and representing singly or in combination, final consonants and suffixes of words.

3. A key-board for stenographic writing machines, comprising a group of keys bearing the letters

G N K W L
S T P H R

arranged at one side of the center of the key-board, representing singly or in combination, initial consonants and prefixes of words; another group of keys bearing the letters

M B T S R
R F L G H

at the other side of the center of the key-board, representing singly or in combination, final consonants and suffixes of words, and a central group of keys bearing the letters O A U E representing singly or in combination, vowels and diphthongs of words.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALRAH B. EDWARDS.

Witnesses:
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R. E. C. Bruckner.