July 25, 1939. E. O. HABERFELD 2,167,150

KEYBOARD FOR TYPEWRITING MACHINES AND OTHER COMMERCIAL MACHINES

Filed Aug. 3, 1937

Fig. 1.

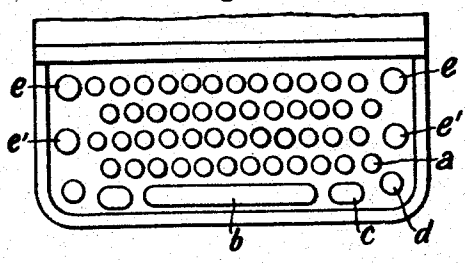


Fig. 2.

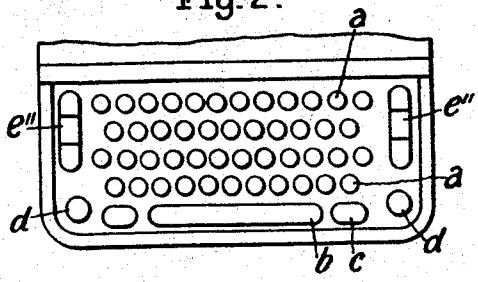


Fig. 2a.

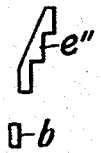


Fig. 3.

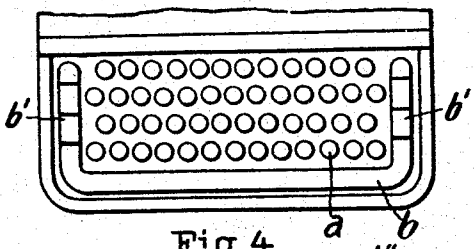


Fig. 3a.



Fig. 4.

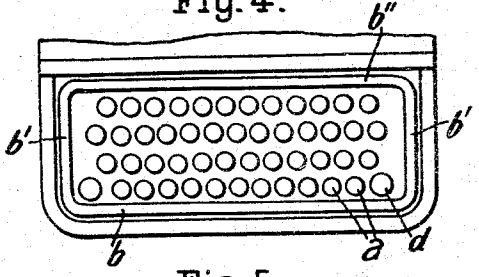
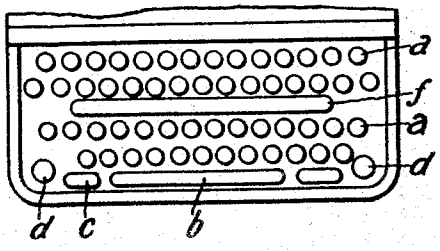


Fig. 5.



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KEYBOARD FOR TYPEWRITING MACHINES AND OTHER COMMERCIAL MACHINES

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Application August 3, 1937, Serial No. 157,166
In Germany August 31, 1936

2 Claims. (Cl. 197—100)

While with the keyboard of typewriting machines as now designed the modern manner of writing, especially the ten-finger system, has been fully considered as regards the arrangement of the character-bearing keys, the space key is still arranged in the same manner as with the first typewriting machines which appeared on the market. But it is just this key which is most used and which is of decisive importance for the speed and the convenience of the writing. The character-bearing keys are, as a rule, operated with the eight fingers, apart from the thumbs, whereas these latter are used practically exclusively for actuating the space key. The ten-finger system has, thus, not been developed to perfection which is due to the provision of the one ledge-shaped space key in front of the character-bearing keys. This arrangement is particularly unfavorable for typewriting machine writers who do not command the ten-finger system, as is still the case with older employees, especially, however, a large number of persons, chiefly book-keepers, who pass over from writing by hand to writing with a machine. The digit-bearing keys form the uppermost row of the keys, thus counter to the space key, and the hand must, therefore, jump to and fro over the other rows of keys, whereby the writing of numbers is considerably delayed.

The present invention aims at perfection concerning the ten-finger system; it improves this system in such a degree that a far greater writing speed is rendered possible. Now, indeed, all ten fingers can be fully utilized, in that the space key can be actuated not solely by the thumbs, but by other fingers, too, especially by the little fingers, but also by the other fingers, depending upon the constructional form of the invention. I attain the object in view by providing, besides the known ledge-shaped space key located in front of the character-bearing keys additional space keys, especially laterally from the rows of keys; these additional space keys may be individually and independently operable, or may be coupled with the main space key, viz. that at the front; they may be formed by rectangular extensions of the main space key, and it is even possible to provide another ledge-like space key at the rear of the keyboard and to connect also this key with the lateral additional space keys so that then an oblong frame is obtained which encloses the character-bearing keys on all sides. Where a rear space ledge is provided, the lateral additional space keys may, under circumstances, be dispensed with, but the second space ledge need not indispensably be located at the rear of the character-bearing keys, but may be located also among them, for instance between the second and the third row of said keys.

In all these cases the writing of book-keeping matter in which digits and numbers play an important part is considerably facilitated in comparison to the usual typewriting machines. As the digit-bearing keys are generally in the rear row an additional space key or additional space keys arranged according to this invention can be struck with the little fingers without withdrawing the other fingers from their proper position for conveniently striking the letter-bearing or digit-bearing keys to be used. As regards book-keeping matter with its numbers the point must be paid attention to, that after every place pertaining to the thousands and before every place pertaining to the cents the space key must be actuated. It is, thus, obvious that the invention is very useful for all writers of typewriting machines and the like who do not command the ten-finger system, in that the writing is highly facilitated and much time is saved.

The invention is illustrated diagrammatically and by way of example on the accompanying drawing on which

Figure 1 is a plan of a keyboard designed according to this invention.

Figure 2 is a similar representation showing a modification.

Figure 2*a* is a side-view of one of the additional lateral space keys, together with an end view of the usual ledge-like space key.

Figure 3 is likewise a representation similar to Fig. 1 and shows another modification.

Figure 3*a* is a side-view of one of the additional lateral space keys of this modification, and

Figs. 4 and 5 show two further constructional forms of the invention, all as fully described hereinafter.

Referring to Fig. 1, *b* denotes the known usual long or ledge-like space key, *c* denotes the known return key and *d* the known shift key. *e* and *e'* are additional space keys provided according to this invention. There are in this example two such keys on the left-hand side and two on the right-hand side of the keyboard, at the ends of the first and of the third row of keys, so that if the writing person is engaged on the first or digit row, he or she may use then at once the little finger of the right hand or of the left hand without withdrawing the respective hand from that row of keys. In some cases it may be sufficient to provide only the additional space keys *e*, in

other cases additional space keys may be provided for every row of keys.

In Fig. 2 lateral additional space keys are provided for the first, the second and the third row of keys, but the keys on the left-hand side and those on the right-hand side are united with one another so as to constitute one body or member *e''* which is stepped in accordance with the position of height of said rows of keys. But instead of being stepped, the members *e''* may be oblique, each of them presenting then a continuous face.

In Fig. 1, as well as in Fig. 2, the additional space keys may be operable individually and independently from one another and from the main space key *b* or they may be coupled with the main space key. Another possibility is to unite the main space key and the lateral additional space keys with one another, as in Fig. 3, all space keys together forming a long U embracing the entire set of the character-bearing keys. In Figs. 3 and 3*a* the lateral legs *b'* of the U are stepped, as in Figs. 2 and 2*a*, but, if preferred, they may be oblique.

I claim:

1. In a keyboard for a typewriting or other commercial machine, the combination with the banked set of character-bearing keys normally requisite for such a machine, of a space key effectively operable independently of said character-bearing keys and positioned to extend in the form of a U along the front and both sides of said set of character-bearing keys, all portions of the upper face of said space key being spaced from and on the same level as the faces of the directly-opposite character-bearing keys so that said space key is accessible for operation independently of said character-bearing keys throughout its entire extent.

2. In a keyboard for a typewriting or other commercial machine, the combination with the banked set of character-bearing keys normally requisite for such a machine, of a space key effectively operable independently of said character-bearing keys and positioned to extend in the form of a closed loop along the front, rear and both sides of said set of character-bearing keys, all portions of the upper face of said space key being spaced from and on the same level as the faces of the directly-opposite character-bearing keys so that said space key is accessible for operation indepenently of said character-bearing keys throughout its entire extent.

ERWIN OTTO HABERFELD.