Oct. 9, 1928.

1,686,627

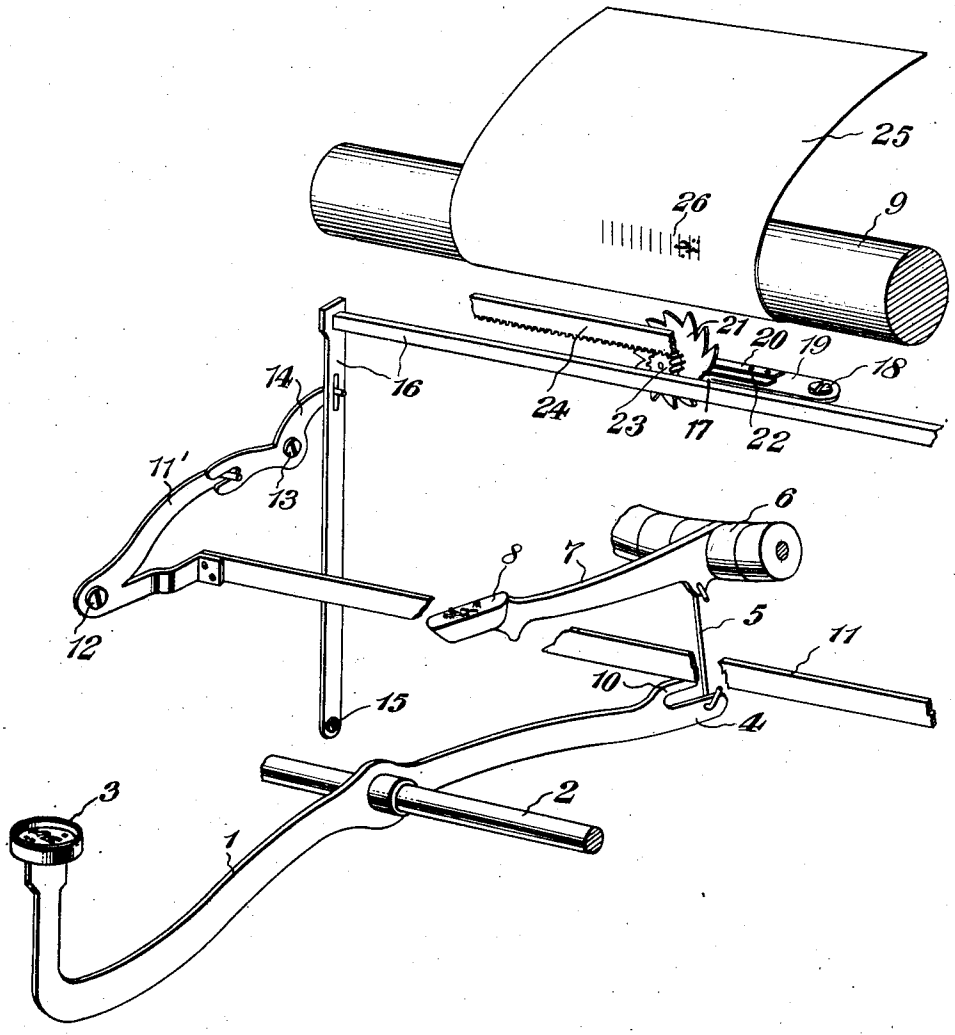
F. W. MÜLLER

TYPEWRITER

Filed Jan. 22, 1925

2 Sheets-Sheet 1

Fig. 1.



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Fig. 2.

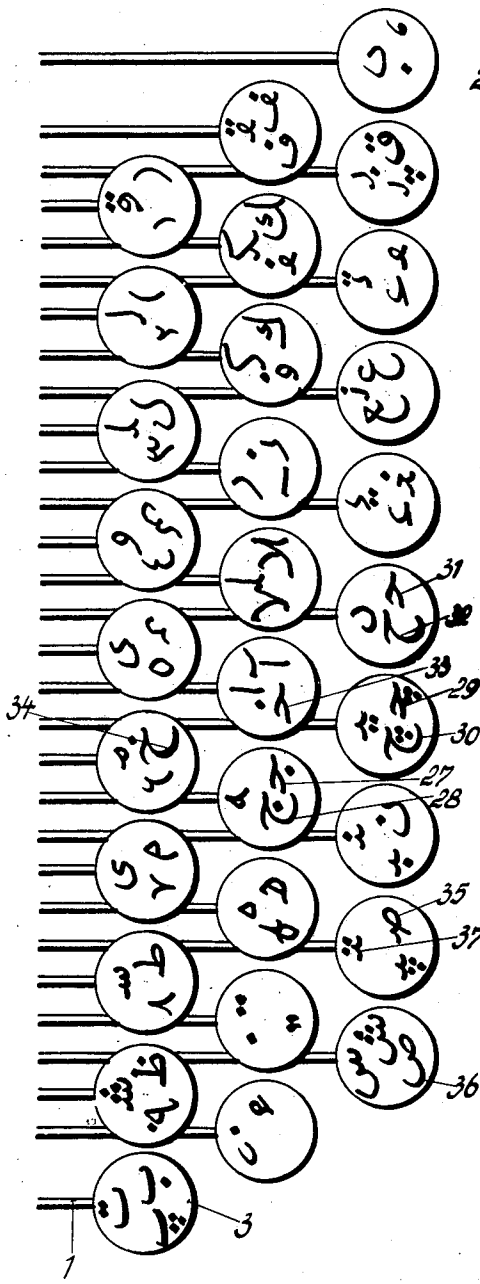


Fig. 3.

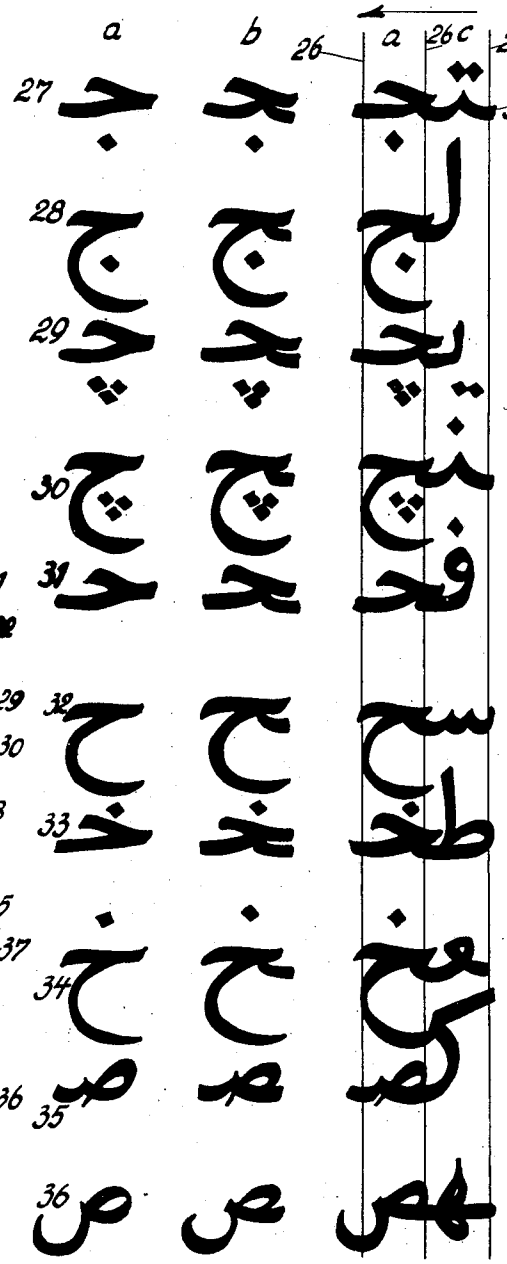


Fig. 4.

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UNITED STATES PATENT OFFICE.

FRIEDRICH WILHELM MÜLLER, OF DRESDEN, GERMANY.

TYPEWRITER.

Application filed January 22, 1925. Serial No. 3,938.

The invention relates to type-writers and to the types of type-writers and consists in, that the types are of a breadth which is greater than the distance over which the paper is transported after every print of a type. Those parts of the type which surpass the normal breadth on one, or on both sides serve for connecting the adjoining characters. This can be done in different ways and depends on the language and the kind of characters.

In a case of character f. i. of the Turkish Persian or similar language a saving in the number of types and an essential improvement of the legibility is possible.

In Turkish writing, the form of characters used is such that portions thereof extend into spaces occupied by other characters, resulting in such characters being connected with each other without interruption. In accordance with the present invention, the form of a printed character is changed by printing next thereto another character which has a portion printed within the space occupied by the first character and thus certain characters which would ordinarily take different forms at different places may now be made with a key having only one form of the character thereon.

Fig. 1 is a fragmentary perspective view of a typewriter mechanism constructed in accordance with the invention,

Fig. 2 is a plan view of the keyboard of the typewriter;

Fig. 3 illustrates essential characters in the Turkish language, and

Fig. 4 illustrates the manner of printing characters with portions overlapping in accordance with the present invention.

The saving in types becomes evident by the following statements.

The character "dschim" f. i. has the four forms as illustrated in Fig. 3, for which in printing and in type-writing heretofore special types are in use:

When standing apart as shown at (28^a).

When standing at the beginning as shown at (27^a), of a word.

When standing in the midst as shown at (27^b), of a word.

When standing at the end as shown at (28^a) of a word.

The invention now allows that special types for the two forms 27^b (in the midst) and 28^a (at the end) may be dispensed with. For instance if the letter "dschim" is to be placed at the end of a work, one uses the form for standing apart (28^a) which by the connecting line of the preceding character, which enters the area of this type, is changed into the form for standing at the end (28^b). A special type for 28^b is not needed.

In the mechanism shown in Figure 1, the numeral 1 designates a key lever rockingly mounted on the shaft 2 and having at one end the key 3. The opposite end 4 of the lever is connected by a link 5 to the type lever 7 pivoted at one end on the shaft 6 and carrying at its opposite end the type 8, which is movable toward the platen 9. Adjacent the end 4 of the lever 1 the same is provided with an extension 10 adapted, when the key 3 is depressed, to rock the bar 11 upwardly about the pivot 12. This rocking movement is transmitted to an arm 11′ of the bar 11 and said arm thereupon moves the lever 14 about the pivot 13. At 15 there is pivoted a frame 16 engaged by one end of the lever 14 so as to be rocked about the pivot 15 when the lever 14 is actuated. The movement of the frame 16 actuates an arm 19 pivoted at 18 and provided with an extension 17 engaged by said frame. The arm 19 carries the teeth 20 and 22, the former of which is released from the ratchet wheel 21 by the movement of the arm 19 and the latter tooth operates to advance said ratchet wheel one step. The movement of the ratchet wheel is transmitted through the pinion 23 to the rack 24 which controls the movement of the typewriter carriage to the left so that upon each operation of one of the keys a character is printed on the sheet 25 which is marked with the lines 26. The example shown on the sheet indicates the characters 27 and 37, as shown in Fig. 4.

The letters 27 to 36 shown under the column *a* (Fig. 3) are changed into ending forms through the preceding character in the midst, which are partially indicated in the column under *b*. The characters in the column *a* in Fig. 4 correspond to those in the column *a* (Fig. 3) and are shown in combination with other complete characters in column *c* (Fig. 4), portions of which latter characters are shown in column *b* (Fig. 3).

The same saving of types is reached with a series of other types.

In the above described manner the number of types can be reduced in such a way, that the usual expedient of dividing the types into fundamental forms and additional signs

to be printed separately by so called deadkeys is obviated whereby the writing was rendered difficult and errors very likely to occur.

Claims:

In a typewriter, a movable carriage, a plurality of types having characters thereon of a width greater than the distance that the carriage moves each time a type is printed, and mechanism for moving said carriage so that the form of a printed character is altered on either side thereof by the printing of another character next thereto which has a portion printed within the space occupied by the first named character.

In testimony whereof I have affixed my signature.

FRIEDRICH WILHELM MÜLLER.