S. D. BUSZ.

TYPE WRITING MACHINE.

APPLICATION FILED DEC. 2, 1909.

1,090,597. Patented Mar. 17, 1914.

Fig. 1.

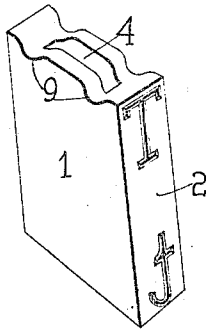


Fig. 2.

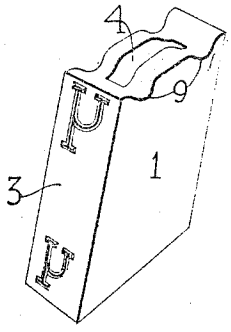


Fig. 3.

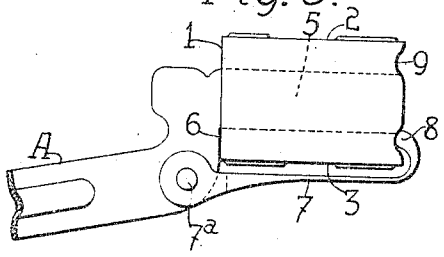


Fig. 4.

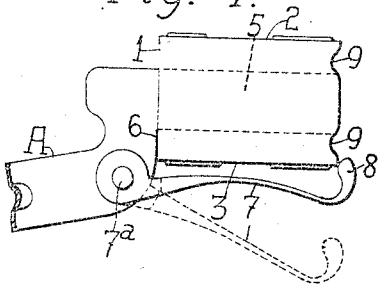


Fig. 5.

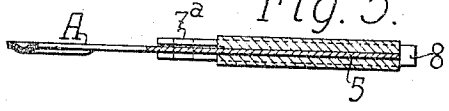


Fig. 6.

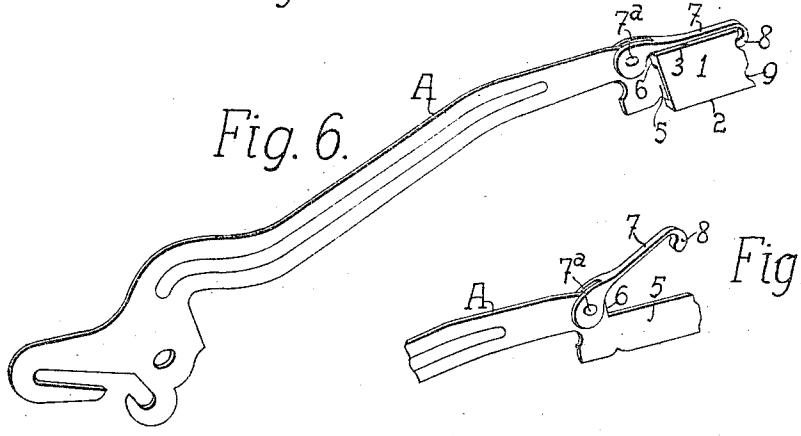


Fig. 7.

Witnesses:
John O. Seifert.
Ralph S. Warfield

Inventor:
Stanislas Domieleski Busz.
By D. C. Stickney
Attorney

UNITED STATES PATENT OFFICE.

STANISLAS DANIELSKI BUSZ, OF MOSCOW, RUSSIA, ASSIGNOR TO UNDERWOOD TYPE-WRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

1,090,597. Specification of Letters Patent. **Patented Mar. 17, 1914.**

Application filed December 2, 1909. Serial No. 530,919.

To all whom it may concern:

Be it known that I, STANISLAS DANIELSKI BUSZ, a subject of the Czar of Russia, residing in the city of Moscow, Russia, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to types for typewriters, and more particularly to type blocks, which may be reversed to bring into use other faces bearing different types; the object being to secure the changeable types firmly on the type bars, so that they will maintain their proper alinement and will make clear imprints on the paper, and to produce a type-bar of this kind which shall be practicable, inexpensive and readily applicable to existing machines.

In carrying out the invention, I provide type blocks having a plurality of type faces or sides, as English and Russian alphabetical characters, for instance, which type-blocks are removably secured on the type-bars. I also provide means for holding the type blocks fixed on the bars.

In the accompanying drawings, Figures 1 and 2 are perspective views of a type-block, showing two opposite sides bearing letters from the English and Russian alphabets, respectively. Fig. 3 is a side view showing the type block applied to the type bar and held fixedly thereon by the detent. Fig. 4 is a similar view showing the detent partially released, the dotted lines showing the position of the detent when wholly released. Fig. 5 is a cross sectional view longitudinally through the type block, showing the manner of its reception upon the type bar. Fig. 6 is a perspective view of the type bar inverted. Fig. 7 shows the bar with the block removed therefrom.

Upon a type bar A is secured a type block 1, having a number of faces, one of which 2, bears an English type and another, 3 a Russian type, for instance; this type block having two type faces may be called "duplex." When it is desired to change the machine so that it will write in Russian, instead of in English, for example, the type blocks are taken off from the type bars, reversed, and replaced on the type bars to bring the Russian types into use. This is accomplished by providing the type blocks with sockets 4 in which fit fingers 5 on the free ends of the type bars, the type blocks being capable of slipping on and off the fingers, but not rotatable thereon.

Owing to the rapidity with which the type bars are operated, and to the force with which the type strikes the platen, it is necessary that the type blocks be well secured upon the bars to prevent them from accidentally flying off or becoming displaced. Accordingly each type block is held firmly against a shoulder 6 by a detent or latch 7, which may be pivoted to the type bar at 7^a and hooked to take over the outer end of the type block; a tooth 8 being preferably formed on the latch to be crowded over the outer end of the type block, thereby placing the latch permanently under tension; said latch having a resilient construction to permit it to be forced upon the type block. The tooth catches in either of two notches 9 in the type block.

The latch being in released position, the type block is slipped or forced onto the type bar, until the inner end of the block engages the stop 6 after which the resilient latch 7 is swung to engage the type block, its tooth 8 being forced over the outer end of the type block until it enters the recess or notch 9. To remove the type block, the latch is released and the block slipped off for reversal, cleaning or substitution, as desired.

The type is fixed very firmly upon the finger or tenon 5 of the type bar, so that there is no possible shake or yielding of the type relatively to the bar itself, thus insuring that the type shall make good impressions upon the paper. The constant firm pressure of the block against the shoulder 6, effected by the tension of catch 7, is also conducive to this result. Moreover, the provision of the shoulder 6 is of value in alining the types, since the block must always come to the same position on the bar, whichever face thereof is put into use; and the entire system of types can be readily alined with one another, depending upon shoulders 6 for finally positioning the blocks. The type bar A is usually formed of sheet metal, so that the finger or tenon 5 may be readily formed thereon and have sufficient depth or breadth to give the tightly fitting block the requisite firm hold upon the bar. The latch 7 is placed under the block or in line with the body of the bar itself, or in other words, is

mounted to swing in the same plane in which the type bar swings. This is a compact arrangement, since the latch does not take up any room at the side of the type-block, and hence the types may lie in their usual close arrangement in the type basket.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with a duplex reversible type head having surfaces, a type bar having coöperating surfaces substantially parallel to each other sliding on said first surfaces, and type faces on said head positively positioned and supported by engagement of said surfaces.

2. In a typewriting machine, the combination with a duplex reversible type head having surfaces, a type bar having coöperating surfaces substantially parallel to each other sliding on said first surfaces, and type faces on said head positively positioned and supported by engagement of said surfaces, each side of said head having a plurality of type thereon.

3. In a typewriting machine, the combination with a duplex reversible type head having surfaces, a type bar having coöperating surfaces substantially parallel to each other sliding on said first surfaces, type faces on said head positioned and supported by engagement of said surfaces, and a detent entering an opening in said head for securing the type head on the bar.

4. In a typewriting machine, the combination with a type bar, of a type block removably mounted on the bar, and a latch pivoted to the bar and lying in the same plane with the bar to engage the type block and secure it against displacement relative to the type bar.

5. In a typewriting machine, the combination with a type bar, of a type block removably mounted on the bar, and a swinging latch pivoted to the bar and engaging the outer end of the type block to prevent accidental displacement thereof.

6. In a typewriting machine, the combination with a type bar, of a type block removably mounted on the bar, and a detent engaging the outer end of the type-block to prevent accidental displacement thereof relative to the bar.

7. In a typewriting machine, the combination with a type bar having a stop and an integral tongue thereon, of a duplex type block having type faces on its opposite sides and having a perforation between its sides forming a socket, whereby it is removably mounted on the tongue of the bar, and a detent engaging the block to secure it against the stop.

8. In a typewriting machine, the combination with a type bar having a stop and an integral tongue thereon, of a duplex type block having type faces on its opposite sides, and formed with a socket between its sides and capable of being slipped on and off said integral tongue, and a detent engaging the block to secure it against the stop.

9. In a typewriting machine, the combination with a type bar, of a duplex reversible type block, a tongue integral with said bar on which said type block is removably mounted, and a detent of a resilient character mounted on the bar for securing the type block on the bar.

10. In a typewriting machine, the combination with a type bar, of a type block removably mounted thereon, and having a recess formed in one end thereof, and a detent having a tooth to catch in the recess for securing the type block on the bar.

11. In a typewriting machine, the combination with a type bar, of a type block removably mounted on the bar, and a resilient detent having a tooth adapted to be crowded over the outer end of the type block to firmly secure the block on the bar.

12. In a typewriting machine, the combination with a type bar, of a type block removably mounted on the bar, and a latch pivoted to the bar and passing beneath the type block to secure it on the bar against flying off.

13. In a typewriting machine, the combination with a type bar, of a reversible type block removably mounted on the bar and having a recess adjacent to each of its opposite faces, and a detent having a tooth to catch in one or the other of said recesses to secure the block on the bar.

14. In a typewriting machine, the combination with a type bar, of a reversible type block removably mounted on the bar and having a recess adjacent to each of its opposite faces, and a detent extending adjacent to that face of the reversible block lying in inoperative position, said detent having a tooth to catch in the recess lying adjacent to the inoperative face to firmly secure the block on the bar.

15. In a typewriting machine, the combination with a type bar, of a type block removably mounted on the bar, and a resilient detent having a tooth adapted to be crowded over the outer end of the type block and catch in a recess formed in such outer end to firmly secure the block on the bar.

16. In a typewriting machine, the combination with a type bar, of a type block removably mounted on the bar, and a latch pivoted to the bar and having a hooked end to take over the outer end of the type block, and a tooth on the free end of the latch receivable in a recess in the outer end of the type block.

17. In a typewriting machine, the combination with a type bar having a stop thereon, of a reversible type block capable of

being slipped on and off the bar, and a detent of a resilient character for securely holding the block against the stop.

18. In a typewriting machine, the combination with a type bar, of a reversible type block capable of being slipped on and off the bar, and a swinging detent lying in alinement with and beneath the bar, for firmly securing the block on the bar against displacement.

19. In a typewriting machine, the combination with a type bar, of a reversible type head, an opening in said type head, a tongue of rectangular section on said bar extending substantially through said opening and closely fitting it, and a spring detent to hold said head on said bar.

20. In a typewriting machine, the combination with a type bar having a shoulder, of a reversible type head having an opening therein, an integral tongue of rectangular section on said bar extending substantially through said opening and closely fitting it, and a spring detent to press said head against the shoulder on said bar.

STANISLAS DANIELSKI BUSZ.

Witnesses:
HENRY DIERING,
GUSTAV EUGENE HASHRIG.