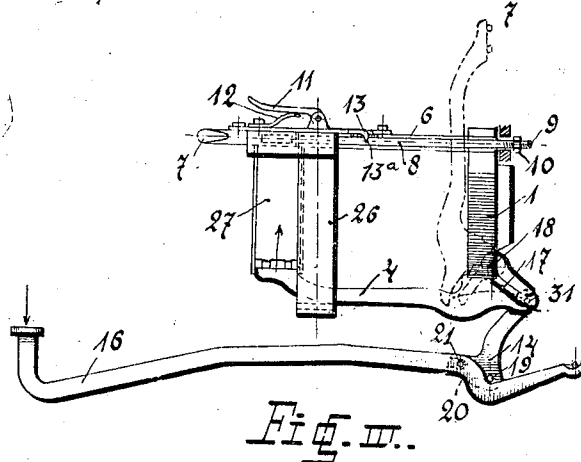
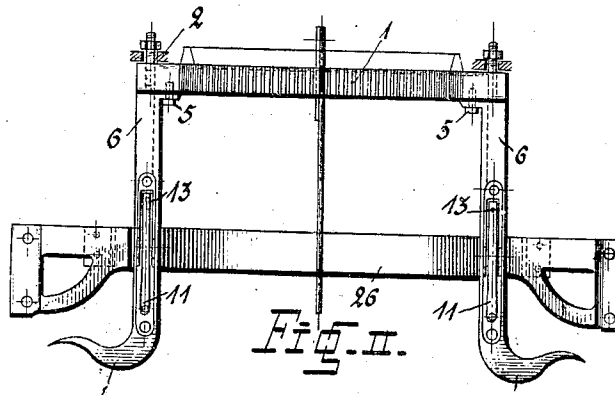
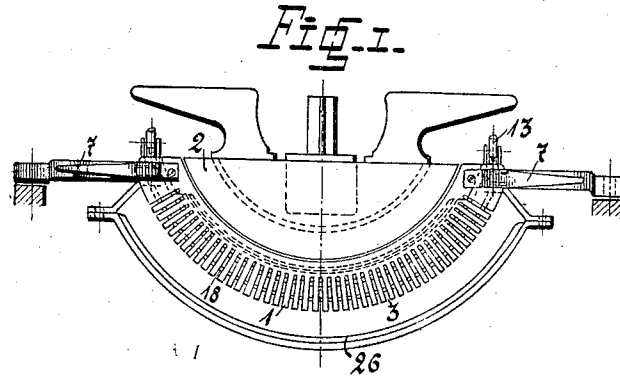


S. DANIELSKI-BUSCH.
 TYPE BAR FRAME FOR TYPE WRITING MACHINES.
 APPLICATION FILED FEB. 2, 1910.

1 005,613.

Patented Oct. 10, 1911.

2 SHEETS—SHEET 1.



Witnesses

B. B. Collings.

[Signature]

Inventor

S. Danielski-Busch.

[Signature]

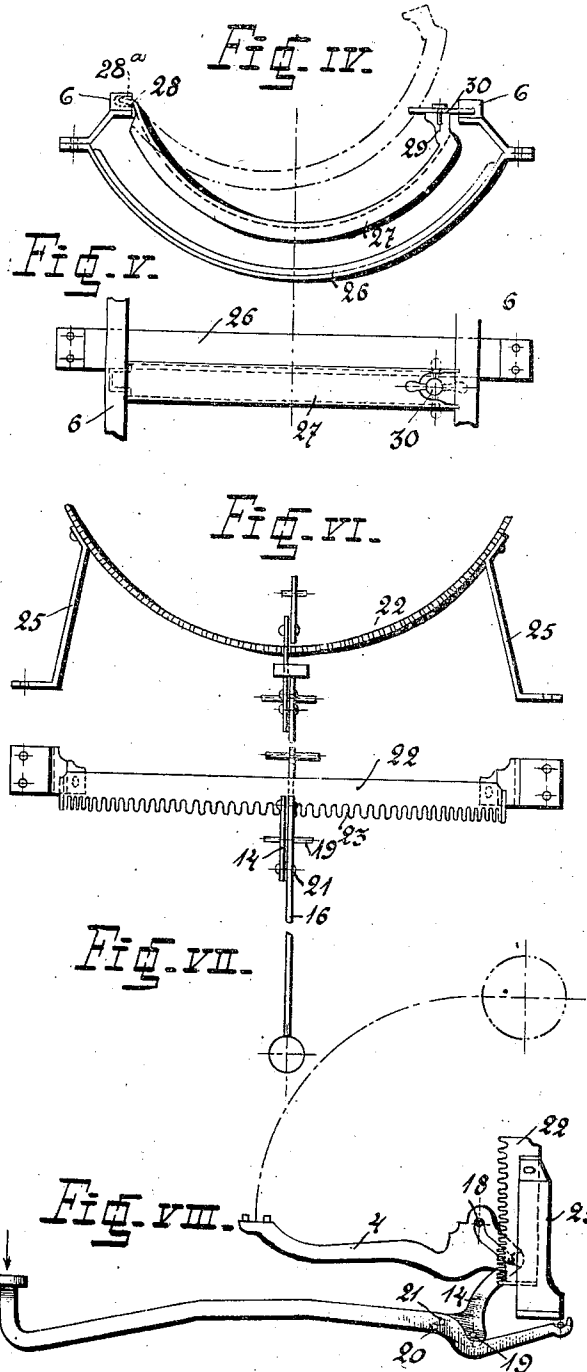
[Signature] Attorneys

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Inventor
 S. Danielski Busch.
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UNITED STATES PATENT OFFICE.

STANISLAW DANIELSKI-BUSCH, OF MOSCOW, RUSSIA.

TYPE-BAR FRAME FOR TYPE-WRITING MACHINES.

1,005,613.

Specification of Letters Patent.

Patented Oct. 10, 1911.

Application filed February 2, 1910. Serial No. 541,543.

To all whom it may concern:

Be it known that I, STANISLAW DANIELSKI-BUSCH, a subject of the Czar of Russia, residing at Moscow, Russia, have invented certain new and useful Improvements in Improved Type-Bar Frames for Type-Writing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to type-writing machines and particularly to that class of machines employing a type bar supporting and guiding frame having the form of a vertically arranged semicircle, as in the Underwood class, or the like and the object of the invention is to provide an arrangement which permits the changing or replacing the said bars.

The characteristic feature of the invention consists in the fact that while the upper part of the frame is, as heretofore, combined with the body of the machine, being secured thereto by a screw, the lower part, in which the type bars are lying, can be directly separated from the body of the machine, leaving the keyboard untouched. This arrangement permits replacing one class of letters by another, for instance Russian types by those of the Latin alphabet or the like, whereas in typewriting machines of the ordinary construction the type bars are firmly fastened either separately or together with the type bar frame to the body of the machine, the changing of these bars being therefore impracticable.

In the accompanying drawings, wherein is illustrated one of the various possible embodiments of my invention, Figure I is a front elevation of the removable type bar frame, Fig. II is a top view of the same, Fig. III is a side elevation of the frame with type bars and other members, Figs. IV and V are a front elevation and a top view, respectively, of a front cushion and safety plate for the type bars, and Figs. VI to VIII are a front elevation, a top view and a side elevation, respectively, of a comb member serving to secure the coincidence of the type bars with the pins of the junction or intermediate levers.

Similar reference characters refer to similar parts throughout the several figures of the drawings.

As above mentioned, the type frame 1

does not make a solid piece with the body 2 of the machine, but forms an independent member having the shape of a semicircle with slots 3 into which the type bars 4 are mounted. By means of the screws 5 the frame 1 is firmly fastened to the rods 6, provided at their front ends with handles 7. These rods have slots by means of which they can slide upon guide members 8 secured as by means of a screw threaded part 9 and a nut 10 to the body of the machine. Upon the rods 6 are disposed pressure levers 11 of which the rear ends 13 fall into the notches 13^a of the guides 8, when the frame is put in place, and in such manner secure the correct position of the frame with the type bars. To this end the levers 11 are supported by means of springs 12.

In order that the frame 1 with type bars 4 may be separated from the other parts of the writing machine, the junction of the type bars 4 with the intermediate levers 14 operated by the key levers 16 is formed in somewhat different manner than in the usual construction of writing machines. This junction is clearly shown in Figs. III and VIII. In the illustrated embodiment each type lever 4 is provided with a slot 17 open at its one end. By means of this slot the lever is put on a wire 18 inserted in the frame and serving as a fulcrum for the several levers. Into this slot 17 enters, through the open end, the pin 31 of the intermediate lever 14 rocking on the fulcrum 19 and connected by means of the forked end 20 and the pin 21 with the corresponding key lever 16. The shape of the open end of the slot 17 corresponds to the path of the pin 31.

In order that the pins 31 of the intermediate levers 14 may lie each opposite to its type bar 4 there is disposed behind the intermediate levers a semicircular comb member 22 (Figs. VI, VII and VIII) provided with teeth 23 and supported by standards 25 secured to the framework of the machine.

When the type bars are in the position of rest they lie on the cushion member 26. In order however that they may remain in place during the taking out of the frame 1, they are locked by a safety plate 27, shown in Figs. III, IV and V. This plate is provided at one end with a projection 28 and at the other end with a projecting part 29, on which is pivotally mounted a locking

member 30. On putting on the safety plate before taking out the frame 1, the projection 28 is inserted into a lateral notch 28^a of the rod 6. Into the corresponding notch of the other rod is inserted one of the projections of the lock 30.

For taking out the frame, the operation will be as follows: After inserting the safety plate 27 in the manner above described the levers 11 are pressed down and the complete frame 1 with type bars 4 are drawn off by means of the handles 7; thereby the slots 17 of the bars 4 slide from the pins 31 of the intermediate levers. When the frame is drawn off, each type bar can be easily taken out, if necessary, and replaced by another. In inserting the same or a substitute frame, the latter is pushed forward until the ends 13 of the levers 11 fall into the corresponding notches of the guide members 8. The lock 30 is then to be turned for releasing the end of the safety plate which is then to be taken out. Owing to the action of the comb member 22, the pins 31 of the intermediate levers are brought always just opposite the corresponding slots of the type bars 4 so that the complete operation of changing the alphabet is reduced to the inserting or taking out of the safety plate and to the drawing off or pushing forward of the frame by means of the handles 7, whereby no special attention is required. Moreover, as before mentioned, the improved arrangement permits replacing quickly and easily the type bars.

What I do claim as my invention and desire to secure by Letters Patent, is:—

1. In a typewriter, the combination of a removable type bar frame adapted to carry

a system of type bars, said frame comprising a plurality of slotted rods provided at their front ends with handles, notched guide members attached to the main frame of the machine and located in the slots of said rods, and securing levers mounted on said rods, the rear ends of said levers being adapted to fit in the notches in said guide members; substantially as described.

2. In a typewriter, the combination of a type bar frame removably secured to the frame of the machine and adapted to carry a system of type bars, a plurality of rods secured to said type frame, the rods being provided with lateral notches, a safety plate for said type bars having a projection at one end for insertion into one of the lateral notches, a projecting part at the other end of the safety plate, and a lock comprising a bar pivotally mounted upon said projecting part and one of the ends of the bar being inserted into the corresponding notch of the other rod, substantially as described.

3. In a typewriter, the combination of a type bar frame adapted to carry a system of removable type bars, a plurality of rods secured to said type bar frame, guides attached to the frame of the machine and slidably supporting said rods, means for securing said rods to the guides, and a safety plate for locking the type bars in place during the removal of the type bar frame from the machine, in presence of two witnesses.

In testimony whereof, I affix my signature, in presence of two witnesses.

STANISLAW DANIELSKI-BUSCH.

Witnesses:

GUSTAV O. HARTING,
MECISLAW OLCHEWSKY.