

A. FUTTERKNECHT.
SYSTEM OF TYPE LEVERS FOR TYPE WRITING MACHINES.
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1,006,202.

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Fig. 2.

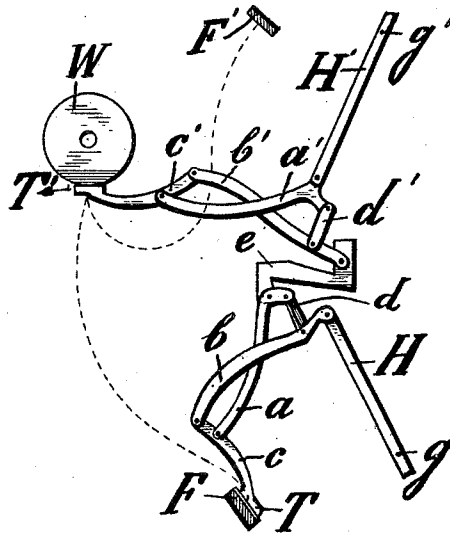
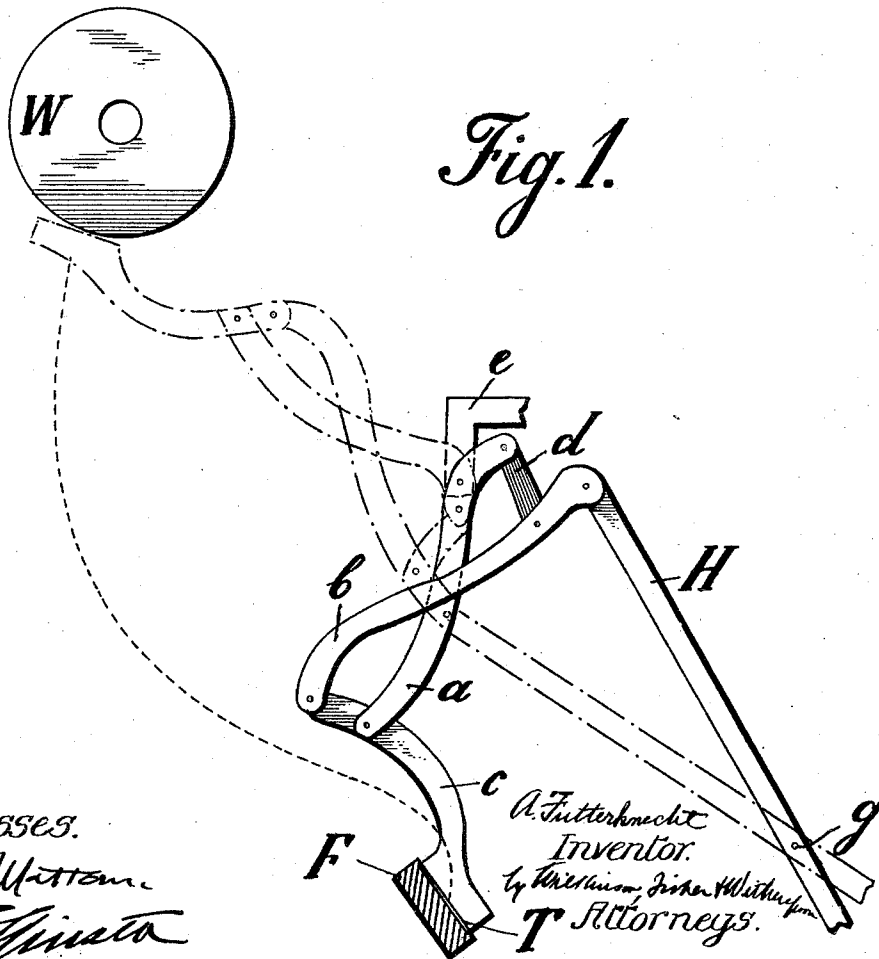


Fig. 1.



Witnesses.
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SYSTEM OF TYPE-LEVERS FOR TYPE-WRITING MACHINES.

1,006,202.

Specification of Letters Patent.

Patented Oct. 17, 1911.

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To all whom it may concern:

Be it known that I, ADOLPH FUTTERKNECHT, a subject of the Emperor of Germany, and a resident of Pernau, Livland, Russia, practical engineer, have invented a new and useful Improved System of Type-Levers for Type-Writing Machines, of which the following is a specification.

This invention relates to improvements in typewriting machines, and particularly to the arrangement and operation of the type bars.

The object of the invention is to provide type bars which are compactly arranged and carry type adapted to contact with a pad before printing.

A further object of the invention is to provide two sets of type bars carrying different kinds of type, and in which both sets of type are adapted to strike the same platen.

With the above and other objects in view, the invention consists in certain combinations and arrangements of the parts hereinafter described, and the novel features thereof will be particularly pointed out in the claims.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which like characters of reference indicate corresponding parts.

Figure 1 is a view illustrating my invention; and Fig. 2 shows two sets of type bars in relative position.

a and *b* represent a pair of cross levers pivotally connected to a type bar *c* carrying type *T* adapted to press against an ink pad *F* and then strike at the printing point of the platen *W*. The lever *a*, near its free end is pivoted to the lower leg of a horizontal Z-shaped rigid support *e* and the free end of said lever is bent inwardly and is pivotally connected to a link *d* which is pivotally connected to the lever *b* near its free end. The free end of the lever *b* is pivoted to a bar *H* mounted on a fixed pivot *g* and is adapted to be connected to a suitable key lever for actuating the type bar *c*. The travel of the type *T* and the position of the mechanism when the type is in its printing position is shown in dot and dash lines in Fig. 1.

Referring to Fig. 2 a lever *b'* has one of its ends pivotally connected to the upper leg of the rigid support *e* and its other end to

a type bar *c'* carrying type *T'* which may be of a different language from the type carried by the first mentioned set of type bars. The type *T'* is adapted to contact with the upper ink pad *F'* and then strike the same printing point on the platen *W* as the first mentioned type. Pivotaly connected to the type bar *c'* is a lever *a'* which crosses the lever *b'* and its inwardly bent free end is pivotally connected thereto by a link *d'*. A bar *H'* pivotally connected to the link *a'* near the link *d'* is pivotally mounted as at *g'* and adapted to be connected to a key lever for actuating the type bar *c'*. The dotted line in Fig. 2 shows the travel of the type *T'*.

By the above described system of type bars and actuating mechanism, compactness of the parts and uniformity of stroke is obtained, and sets of type in different languages may be carried and either set used at will.

It is to be understood that slight changes in the form, proportion and minor details of construction may be resorted to without sacrificing any of the advantages or departing from the spirit of the invention.

Having fully described my invention, what I claim is:—

1. The combination with a type bar carrying type, of crossed levers pivotally connected thereto, one of the levers being pivotally supported and having a link connected to its free end, said link being connected to the other lever, and means for operating the last named lever to actuate the type bar, substantially as described.

2. The combination with a type bar carrying type, of double curved crossed levers pivotally connected thereto, one of the levers being pivotally supported and having a link connected to its free end, said link being connected to the other lever near its free end, and means connected to the free end of the last named lever for actuating the type bar, substantially as described.

3. The combination with an ink pad and a platen of a type bar carrying type normally in contact with the ink pad, a pair of double curved crossed levers pivotally connected to the type bar, one of the levers being pivotally supported and having a link connected to its free end, said link being connected to the other lever near its free end, and means connected to the free end of the

last named lever for actuating the type bar to cause the type bar to strike the platen, substantially as described.

4. The combination with a type bar carrying type, of crossed levers pivotally connected thereto, the free end of one of the levers being pivotally supported, a link connecting the free end of the other lever to the first named lever, and means for operating said other lever to actuate the type bar, substantially as described.

5. The combination with an ink pad and a platen of a type bar carrying type normally in contact with the ink pad, a pair of double curved crossed levers pivotally connected to the type bar, the free end of one of the levers being pivotally supported, a link connecting the free end of the other lever to the first named lever, and means connected to said other lever for causing the type to strike the platen, substantially as described.

6. The combination with a lower and an upper ink pad and a platen of type bars carrying type normally in contact with the respective ink pads, and means for actuating the type bars to cause the type to strike the same printing position on the platen, substantially as described.

7. The combination with a lower and an upper ink pad and a platen of type bars carrying type normally in contact with the respective ink pads, a pair of crossed levers pivotally connected to each type bar, one of the levers connected to the lower type bar being pivotally supported and having a link connected to its free end, said link being connected to the other lower lever, a pivoted bar connected to the free end of the last named lower lever, the free end of one of the upper levers being pivotally supported, a second link connecting the free end of the other upper lever to the first upper lever, a second pivoted bar connected to said other upper lever, and means respectively connected to the lower pivoted lever and the upper pivoted lever for actuating the lower and upper type bars to cause the type to strike the same printing position on the platen, substantially as described.

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

ADOLPH FUTTERKNECHT.

Witnesses:

LAURANCE HILL,
HENRY DE SOTA.