

No. 644,602.

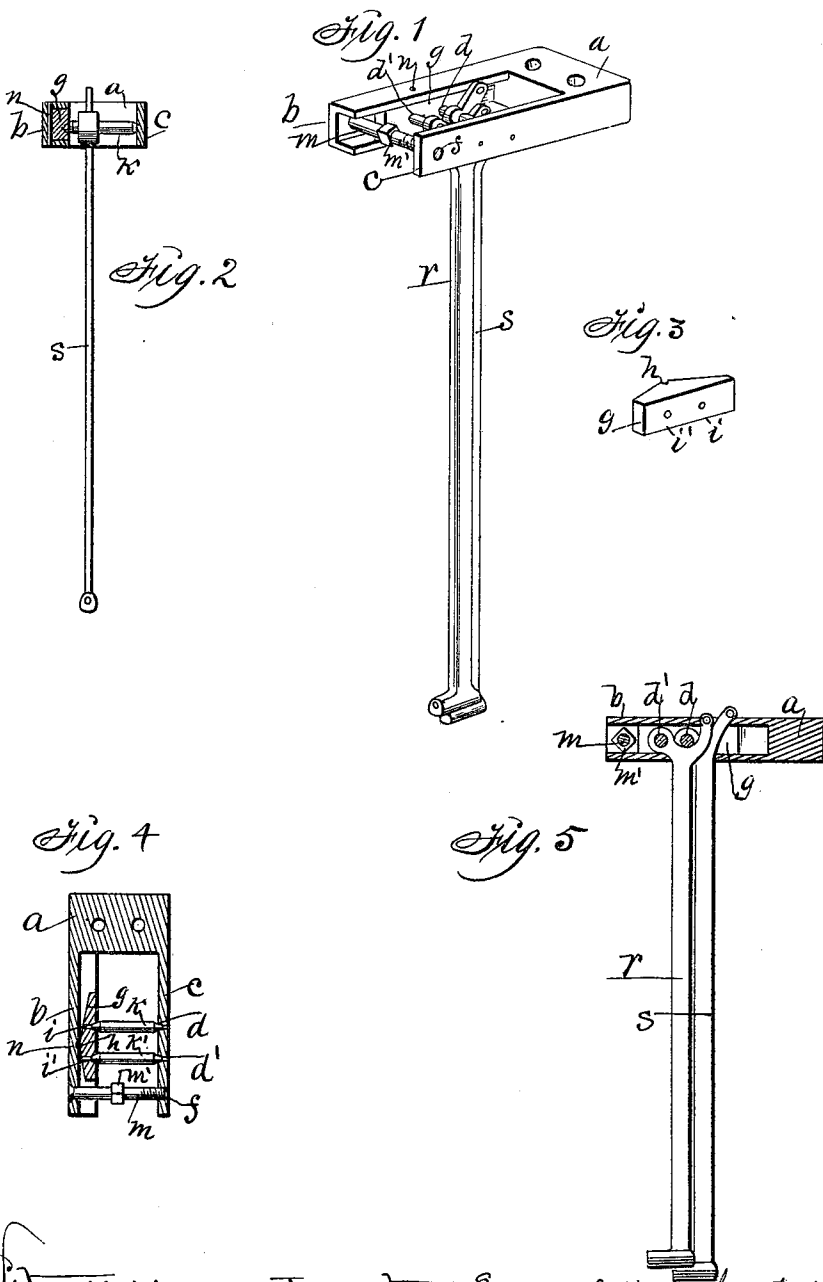
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DUPLEX TYPE BAR HANGER.

(Application filed Dec. 5, 1899.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

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DUPLEX TYPE-BAR HANGER.

SPECIFICATION forming part of Letters Patent No. 644,602, dated March 6, 1900.

Application filed December 5, 1899. Serial No. 739,261. (No model.)

To all whom it may concern:

Be it known that we, ERNEST A. HORNBOSTEL, Sr., and ERNEST A. HORNBOSTEL, Jr., citizens of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Duplex Type-Bar Hanger, of which the following is a specification.

Our object is to provide means to facilitate pivoting, adjusting, and maintaining true alinement of type-bars in type-writing machines.

Our invention consists in the construction, arrangement, and combination of a duplex type-bar hanger, an equalizing-lever having journal-bearings, two pivots, two type-bars, and means for adjusting the equalizing-lever to regulate the friction of the journals in their bearings, as hereinafter set forth, pointed out in our claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view showing all the parts combined as required for practical use. Fig. 2 is a transverse sectional view on the pivotal line of the equalizing-lever. Fig. 3 is a perspective view of the equalizing-lever detached from the hanger. Fig. 4 is a horizontal sectional view of the hanger and equalizing-lever, showing the position of the two type-bar pivots and a screw for adjusting the equalizing-lever relative to the pivots. Fig. 5 is a vertical longitudinal sectional view of the hanger and shows the forms and positions of two type-bars pivoted to the equalizing-lever.

The letter *a* designates the rear end portion of the hanger, provided with holes for the passage of screws for fastening the hanger in place on a machine-frame, and *b* and *c* are parallel forward extensions adapted to support type-bars. The part *b* has a longitudinal groove in its inside face extending from its free end rearward to admit the equalizing-lever. The part *c* is flat and has a limited degree of flexibility that allows its free end to be adjusted relative to the part *b*. It is provided on its inside face with bearings *d* and *d'*, as clearly shown in Fig. 4, and also has a screw-seat *f* near its free end.

The equalizing-lever *g* has a straight flat front face and flat top and bottom faces and

a double-inclined rear face and a groove *h* at the junction of the two inclines adapted to engage a pin or pivot which serves as a fulcrum upon which the equalizing-lever can vibrate within the groove of the extension *b* of the hanger, into which it is fitted. Conical bearings *i* and *i'* are formed in the front face of the lever and in alinement with the bearings in the part *c* of the hanger. Pivots *k* and *k'*, having conical journals on their ends, are fitted in the bearings in the lever *g* and the part *c* of the hanger, as clearly shown in Fig. 4.

m is a screw extended through an aperture in the end portion of the part *c* of the hanger and provided with an angular collar *m'*, adapted to be engaged by a wrench. The end of the screw enters the screw-seat *f* in the part *c*.

n is a pin fixed in the coinciding grooves *h* *h'* in the lever *g* and the part *b*.

r is a type-bar fixed to the pivot *d*, and *s* is a mating bar, but shorter, fixed to the pivot *d'*. The two type-bars are thus connected with the duplex hanger in such a manner that their bearers (the pivots) will always be parallel with each other and also in such a manner that the friction of their journals in the bearings can be simultaneously regulated by means of the screw *m*.

In drawing the part *c* of the hanger toward the part *b* by means of the screw the equalizing-lever will be actuated as required to keep both the bearings in its face equal distances from the two bearings in the flexible part *c* of the hanger, and consequently the friction of the journals on both the pivots to which the type-bars are fixed will be readily regulated in their bearings by simply adjusting the one screw that connects the end portions of the parts *b* and *c* of the hanger.

Having thus described the construction and function of each part, the practical operation and utility of our invention will be obvious to persons familiar with the art to which it pertains, and

What we claim as new, and desire to secure by Letters Patent therefor, is—

1. In a duplex type-bar hanger having two extensions, an equalizing-lever having two journal-bearings in combination with one of

the parallel forward extensions of the hanger and means for adjusting one of the said extensions relative to the other and the lever, for the purposes stated.

- 5 2. A duplex type-bar hanger having one or more screw-holes and two parallel forward extensions and a groove in the inside face of one of the extensions, an equalizing-lever having two journal-bearings, fitted and pivoted in
10 said groove, corresponding journal-bearings in the other parallel extension, and a screw in the front ends of said parallel extensions, arranged and combined to operate in the manner set forth for the purposes stated.
- 15 3. The equalizing-lever having a double-inclined plane on its rear face and a groove at the juncture of the two planes, straight flat faces on its top, bottom and front and two pivot-bearings, in combination with one of the
20 parallel forward extensions of a duplex type-bar hanger having a longitudinal groove in its inside face to admit the lever, and a transverse groove coinciding with the groove in the lever, and a pin for pivotally connecting the
25 lever with said extension, to operate in the manner set forth.
4. The equalizing-lever having a double-inclined plane on its rear face and a groove at the juncture of the two planes, straight flat
30 faces on its top, bottom and front and two pivot-bearings, in combination with one of the

parallel forward extensions of a duplex type-bar hanger having a longitudinal groove in its inside face to admit the lever, and a transverse groove coinciding with the groove in the lever, and a pin for pivotally connecting the lever with said extension, and means for adjusting one of the parallel forward extensions relative to the other extension, to operate in the manner set forth.

5. A duplex type-bar hanger, comprising a rear end portion adapted to be fixed to the frame of a type-writer, two parallel forward extensions and one of them provided with a groove extending longitudinally from its free front end rearward, and the other extension flexible and provided with two pivot-bearings, an equalizing-lever having two pivot-bearings fulcrumed in the groove of said grooved extension and also provided with two pivot-bearings, two pivots having type-bars fixed thereto fitted in the said bearings and a screw for adjustably connecting the ends of the two parallel extensions, all arranged and combined to operate in the manner set forth, for the purposes stated.

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