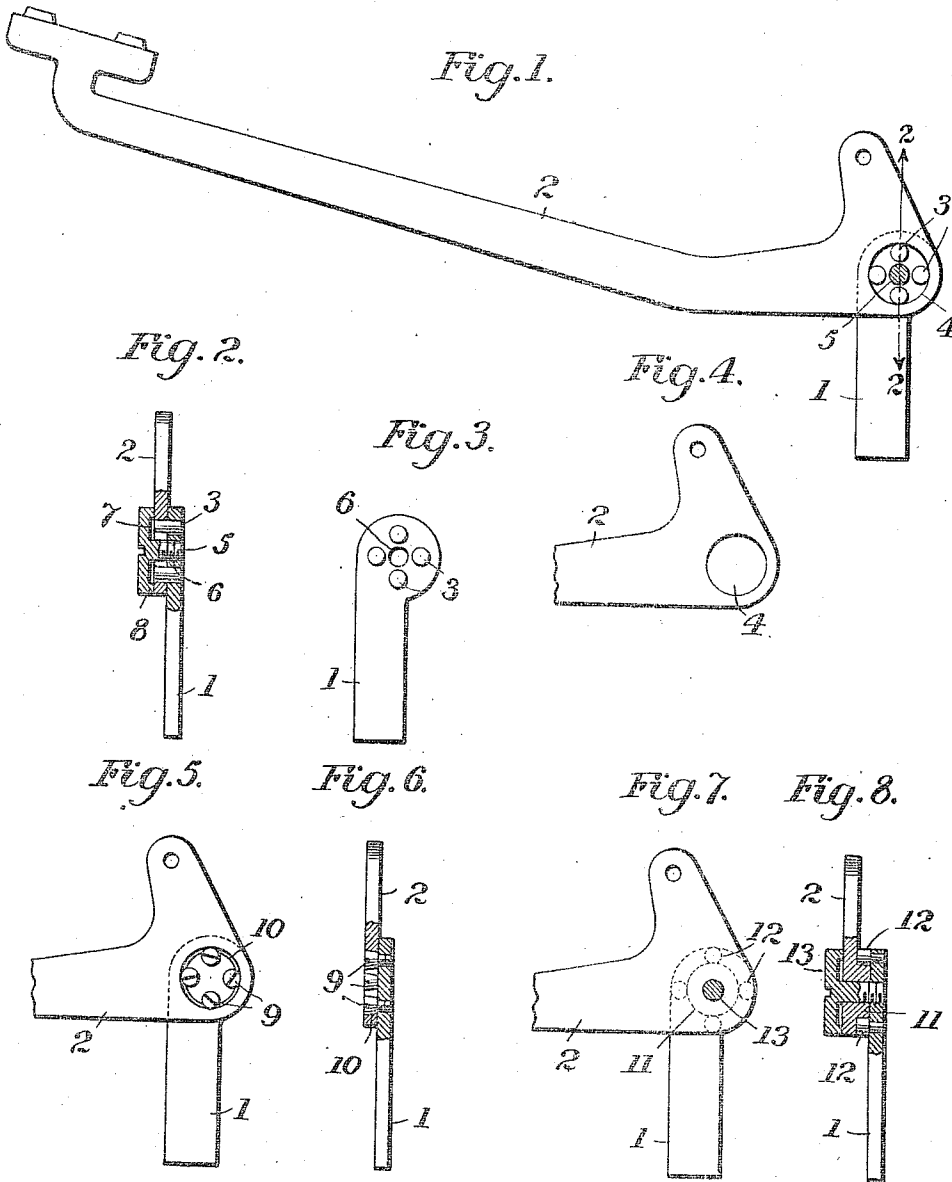


979,480.

Patented Dec. 27, 1910



Witnesses
J. J. McCarthy

Inventor
Henry M. Hamilton
 By *Foster Freeman Watson & Co.*
 Attorneys

UNITED STATES PATENT OFFICE.

HENRY M. HAMILTON, OF SCRANTON, PENNSYLVANIA, ASSIGNOR TO INTERNATIONAL TEXT BOOK COMPANY, OF SCRANTON, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

TYPE-WRITING MACHINE.

979,480.

Specification of Letters Patent.

Patented Dec. 27, 1910.

Application filed July 12, 1907. Serial No. 383,485.

To all whom it may concern:

Be it known that I, HENRY M. HAMILTON, a citizen of the United States, and residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

The object of the present invention is to produce a simple and durable type bar joint which is adapted to be easily adjusted and to operate with a minimum of friction.

The invention will be described in connection with the accompanying drawing, in which,

Figure 1 is a side view of a type bar and hanger embodying the present invention, partly in section; Fig. 2 is a section on the line 2—2 of Fig. 1; Fig. 3 is a face view of the hanger shown in Figs. 1 and 2, the type bar being removed; Fig. 4 is a side view of part of the type bar; Figs. 5 and 6 are views similar to Figs. 1 and 2 showing a different form of the invention; Figs. 7 and 8 are views similar to Figs. 1 and 2 showing still another form of the invention.

Referring to Figs. 1, 2 and 3, 1 indicates a hanger the shank of which may be of any form suitable for attachment to the segment of a typewriting machine, and 2 indicates a type bar pivotally connected with the hanger. The hanger is provided with a plurality of pins 3 arranged in a circle and projecting from one side, which pins form the bearing proper for the type bar. The type bar is provided with a circular opening 4, the wall of which closely encircles the pins 3. The type bar may be connected with the hanger by any suitable means, a convenient means being a screw 5 passing centrally through the opening 4 and into a threaded opening 6 in the center of the hanger. This screw is preferably undercut, as at 7, leaving a marginal flange 8 only in contact with the type bar.

In Figs. 5 and 6 I have shown a plurality of conical pins 9 which are screwed into or otherwise connected with the hanger 1, the larger ends of the pins being farthest from the hanger. The wall 10 of the opening in the type bar is reversely coned and adapted to fit snugly about the pins 9 and hence the said pins are adapted to retain the type bar on the hanger without additional means. A screw such as the screw 5

of Fig. 2, may be used, if desired, to afford greater security in the joint and to assist in guiding the type bar. By removing two of the pins 9 the type bar may be removed from its hanger and it is preferable to have said pins in the form of screws two or more of which may be easily detached from the hanger.

In Figs. 7 and 8 I have shown a form of the invention which is the reverse of that shown in Figs. 1 to 4. Thus in Figs. 7 and 8 the type bar 2 has a laterally extending hub 11 which fits within a series of pins 12 which are arranged in a circle upon the type bar hanger 1. In this case a screw 13 or other suitable retaining means is used to retain the type bar on the hanger.

I have found that a type bar mounted on a circular series of pins runs with a minimum of friction and may be easily kept in alinement. Furthermore the space between the pins is adapted to hold lubricant to further reduce the friction of the joint. The screw having a lateral flange is also adapted to hold the type bar in alinement with a minimum of friction.

It will be seen that, broadly, my invention consists in a type-bar bearing in which one of the parts has a continuous circular bearing surface and the other has a plurality of cooperating bearing surfaces, or in other words, an interrupted bearing surface.

Having described my invention what I claim and desire to secure by Letters-Patent is,

1. In a typewriting machine, the combination of a type bar hanger and a type bar mounted thereon, one of said parts having a circular series of laterally projecting pins each supported at one end only and the other part having an eye to receive said pins, the type bar being adapted to turn about said pins.

2. In a typewriting machine, the combination of a type bar hanger and a type bar mounted thereon, one of said parts having a circular series of laterally projecting pins and the other part having an eye to receive said pins, the type bar being adapted to turn about said pins, and a screw passing through said eye and into the part carrying the pins, for the purpose set forth.

3. In a typewriting machine, the combination with a hanger provided with a circular series of laterally projecting pins each sup-

ported at one end only, of a type bar having an eye, the wall of which is adapted to encircle and bear upon said pins.

4. In a typewriting machine, the combination with a hanger provided with a circular series of laterally projecting pins, of a type bar having an eye, the wall of which is adapted to encircle and bear upon said pins, and a screw passing through said eye into the hanger and adapted to bear on the type bar.

5. In a typewriting machine, the combination with a hanger provided with a circular series of laterally projecting pins, of a type bar having an eye, the wall of which is adapted to encircle and bear upon said pins, and a screw passing through said eye into the hanger and having a laterally projecting annular flange adapted to bear on the type bar.

6. In a typewriting machine, the combination of a type bar and a hanger, one of said parts having a circular series of laterally

projecting pins each supported at one end only and the other part having a circular bearing adapted to engage said pins.

7. In a typewriting machine, the combination of a type bar and a hanger, one of said parts having a circular series of laterally projecting pins and the other part having a circular bearing adapted to engage said pins, and a screw for preventing the separation of said parts.

8. In a typewriting machine, the combination of a type bar and a hanger, one of said parts having a circular series of projections each supported at one end only and the other part having a circular bearing adapted to engage the projections.

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

HENRY M. HAMILTON.

Witnesses:

I. ELVET JONES,
FRANK J. TANNER.