W. G. DUNHAM.

TYPE WRITING MACHINE.

APPLICATION FILED FEB. 8, 1908.

962,556. Patented June 28, 1910.

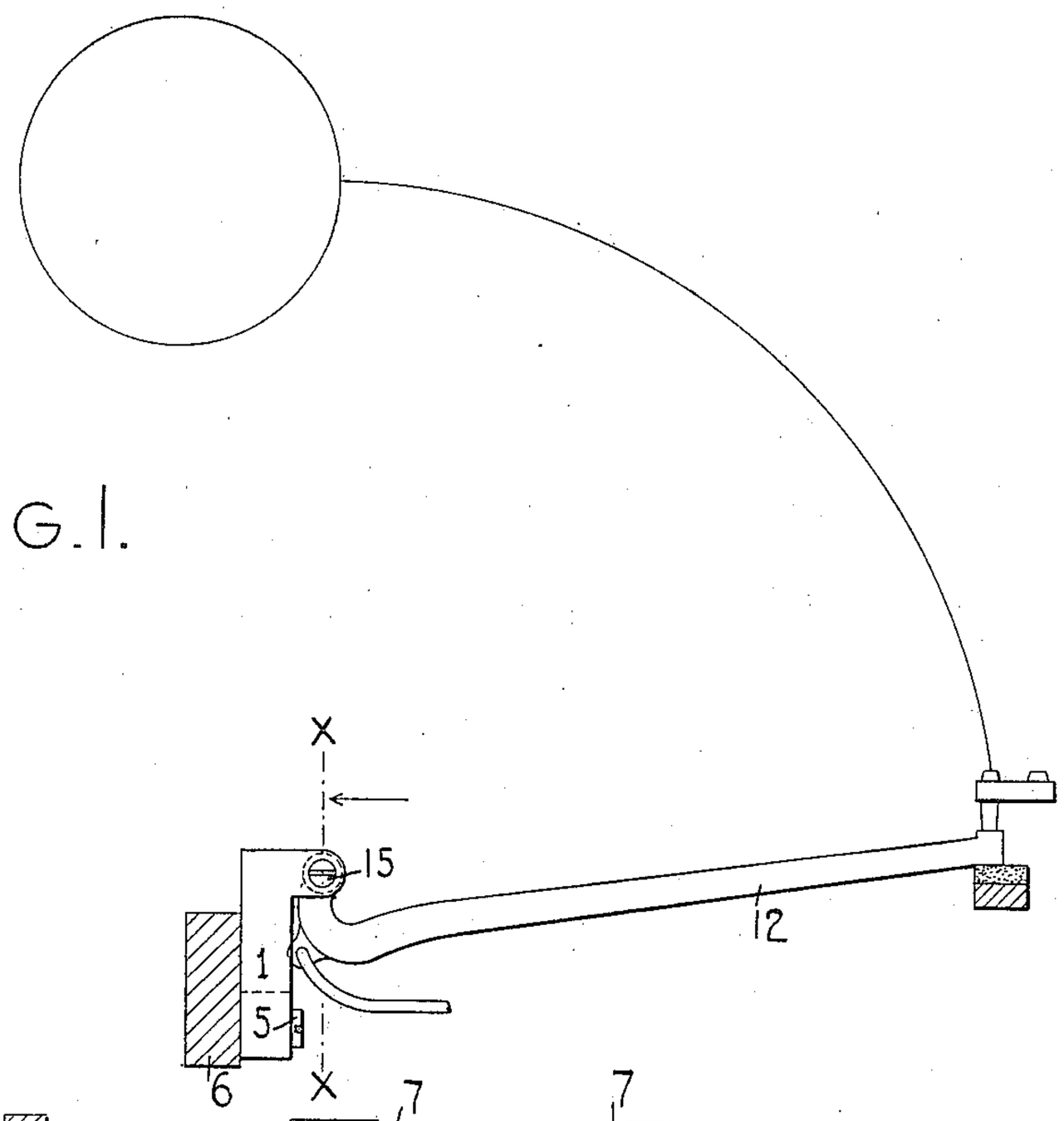
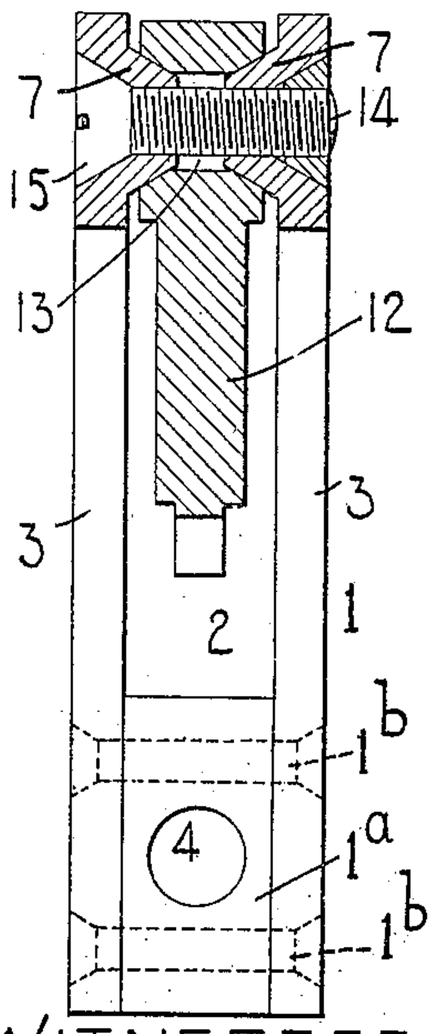


FIG. 1.

FIG. 2.



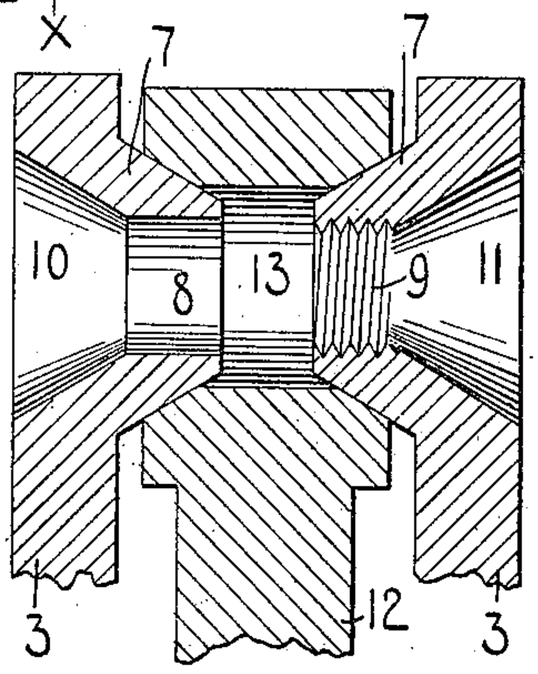


FIG. 3.

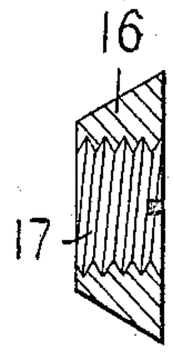


FIG. 4.

WITNESSES:

J. B. Dewes.

Wade E. Smith

INVENTOR.

William G. Dunham

By Jacob Tell

His Attorney

ANDREW B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM G. DUNHAM, OF NEW YORK, N. Y., ASSIGNOR TO WYCKOFF, SEAMANS & BENEDICT, OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

962,556. Specification of Letters Patent. Patented June 28, 1910.

Application filed February 8, 1908. Serial No. 414,971.

To all whom it may concern:

Be it known that I, WILLIAM G. DUNHAM, citizen of the United States, and resident of the borough of Brooklyn, in the city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to typewriting machines and more particularly to type bar and hanger constructions.

The object of said invention is to provide a simple and efficient construction of the character specified and to provide an efficient joint and bearing between a type bar and hanger.

To the above and other ends which will hereinafter appear, my invention consists of the features of construction, arrangements of parts and combinations of devices to be hereinafter set forth and particularly pointed out in the appended claim.

In the drawings, Figure 1 is a detailed side elevation showing a type bar and hanger embodying my invention, the segment, type rest and plates being diagrammatically shown in this view. Fig. 2 is an enlarged detail transverse sectional view of the type bar and hanger, the section being taken on the line *x*—*x* of Fig. 1 and looking in the direction of the arrow at said line. Fig. 3 is an enlarged detail fragmentary sectional view corresponding to Fig. 2, the screw bolt and nut being omitted in this view. Fig. 4 is an enlarged detail transverse sectional view of the lock nut.

The hanger 1, bifurcated at 2, is preferably made of two side pieces 3 which form hanger arms. A spacing block 1^a is interposed between the hanger arms, the parts being united by rivets 1^b. If desired, however, the parts of the hanger may be made in one piece. The block 1^a is provided with an opening 4 to receive a headed screw 5 by which the hanger may be secured to a type bar segment 6. The arms 3 of the hanger have inwardly extending integral bearing projections 7 which are preferably conical in form. These conical projections have central openings 8 and 9 which extend centrally therethrough and are countersunk in the hanger arms at 10 and 11 respectively. The opening 9 is a tapped opening as will be seen by reference to Fig. 3. The conical projections extend into corresponding recesses in opposite sides of a type bar 12. The conical recesses in the type bar communicate with a central opening 13 in the type bar so that a screw bolt 14 may pass through the openings in the hanger arms and type bar as shown in Fig. 2. The threads on the screw bolt coöperate with the threads of the tapped opening 9 in order to adjust the hanger arms relatively to each other and to properly seat the conical projections within the bearing openings in the type bar and thus effect an adjustment between the bearing portions of the type bar and hanger. The adjustable means thus provided are effective to take up any wear that may take place between the bearings of the type bar and hanger.

It will be observed that the screw bolt which connects the hanger arms is disposed axially of the pivotal axis of the type bar, at which point adjustment between the bearing surfaces of the type bar and hanger may be most efficiently effected. The head 15 of the screw bolt is received in the countersunk portion 10 of the aperture 8, whereas a conical nut 16 is received in the countersunk portion of the opening 9 in the other hanger arm. The nut 16 is threaded at 17 for coöperation with the threads on the screw bolt and constitutes a lock nut to prevent the accidental turning of the screw bolt 14.

From an inspection of Fig. 2 it will be seen that the heads of the screw 14 and nut 16 are flush with the outer sides of the hanger arms and do not occupy any space beyond the sides of the hanger so that the hangers may be closely assembled on the segment. It will also be observed from an inspection of this figure that no portion of the screw bolt 14 by which the parts are adjusted comes into contact with the type bar and that the conical projections 7 constitute the sole means for supporting the type bar in place on the hanger.

In assembling a type bar and hanger the hanger arms 3 are first brought together to introduce the conical projections 7 in the bearing openings or recesses in the type bar and the arms are riveted to the block 1^a. The screw bolt is then inserted in place and the proper adjustment between the hanger arms effected. The lock nut 16 may then be screwed into place to prevent accidental dis-

placement of the screw and in order that the parts will be not be displaced from the positions to which they have been adjusted.

What I claim as new and desire to secure by Letters Patent, is:—

In a typewriting machine, the combination of a bifurcated hanger having inwardly extending exteriorly tapered projections, one of said projections having a central plain cylindrical opening, and the other a cylindrical and threaded opening, each arm of the hanger having a depression connected with said opening, the depression in the arm bearing the threaded perforation being conical, a type bar having an eye comprising a central cylindrical portion and conical depressions at each end thereof which match the exterior tapers of the said projections on the hanger arms, the cylindrical portion of the eye of the type bar being of greater diameter than the inner ends of the said tapering projections, and larger in diameter than the cylindrical openings therein, a screw passing through the plain cylindrical portion of one projection and through the cylindrical portion of the type bar and engaging at its threaded end with the threaded cylindrical portion of the other projection, the head of the screw being seated in one of the depressions in one of the arms, and the threaded end of the screw projecting into the conical depression in the other of said arms, and a conical nut having a threaded cylindrical hole engaging the extended end of the said screw and fitting said last mentioned conical depression.

Signed at the borough of Manhattan, city of New York, in the county of New York and State of New York this 7th day of February A. D. 1908.

WILLIAM G. DUNHAM.

Witnesses:

CHARLES E. SMITH,

E. M. WELLS.