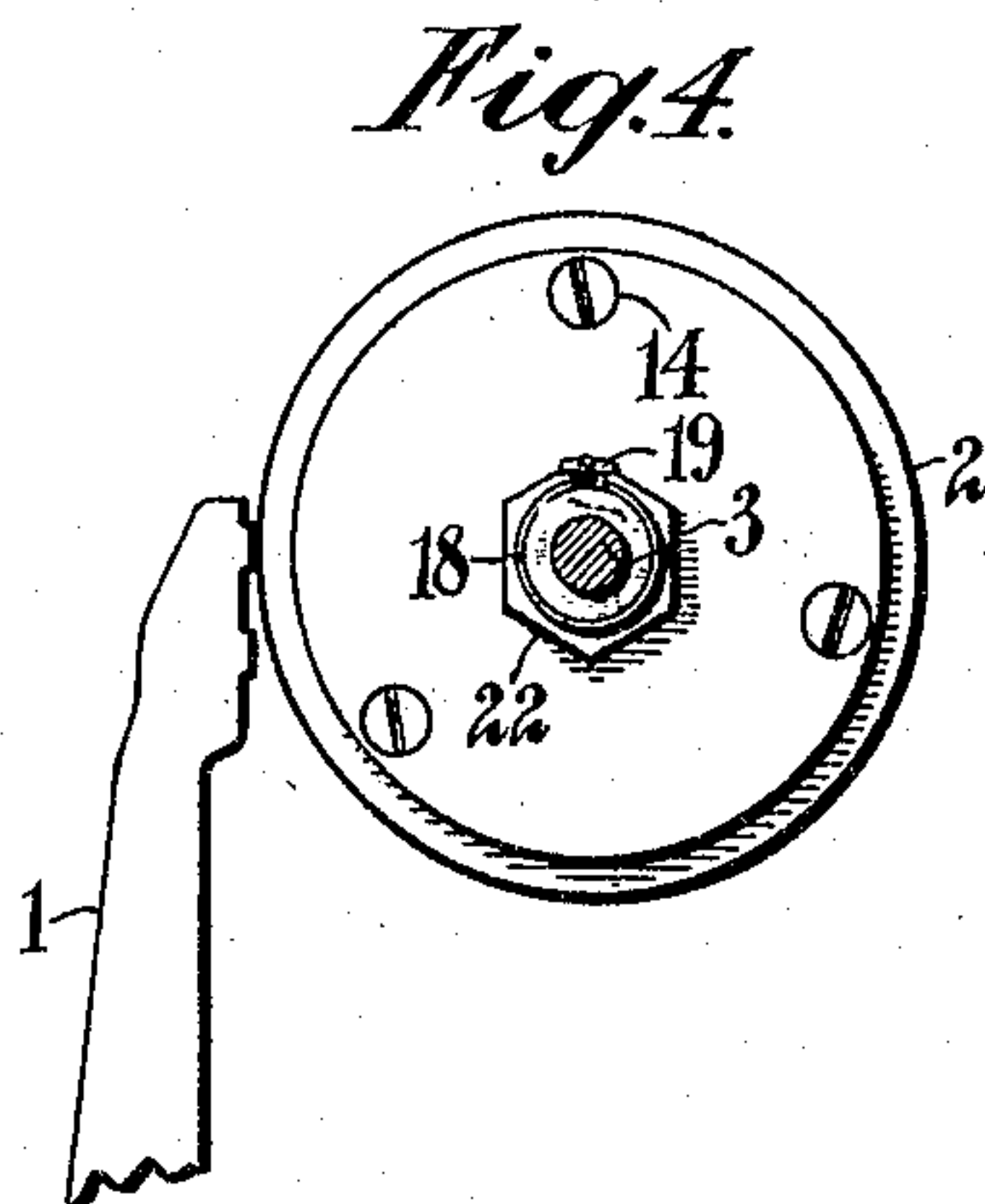
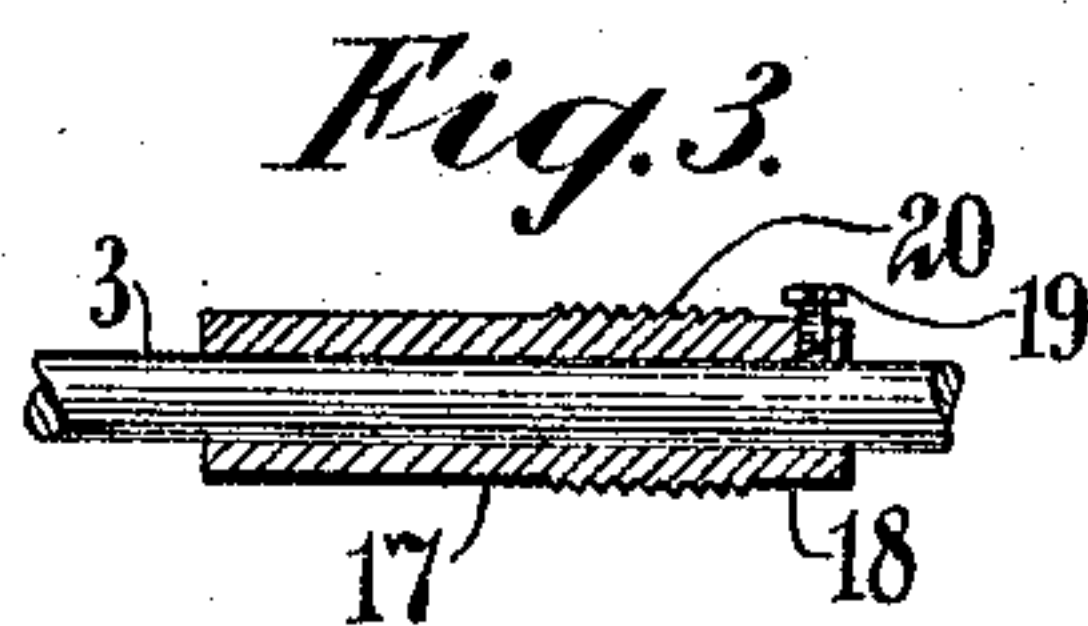
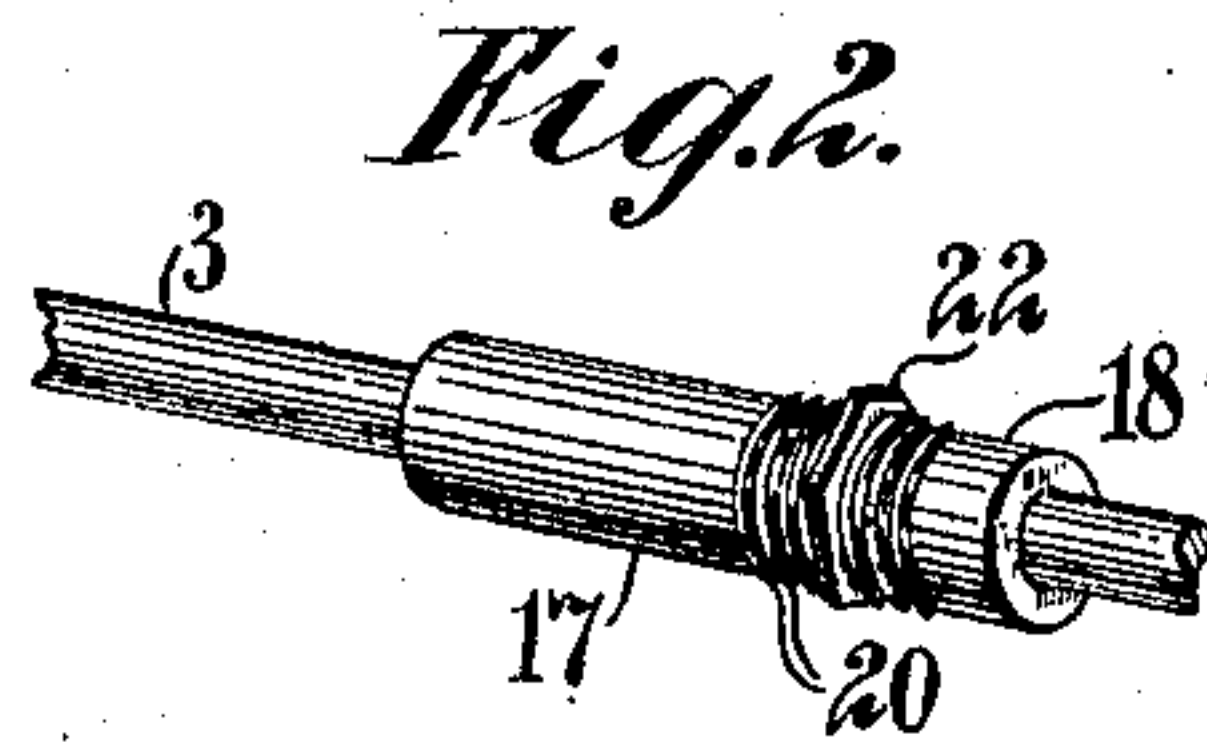
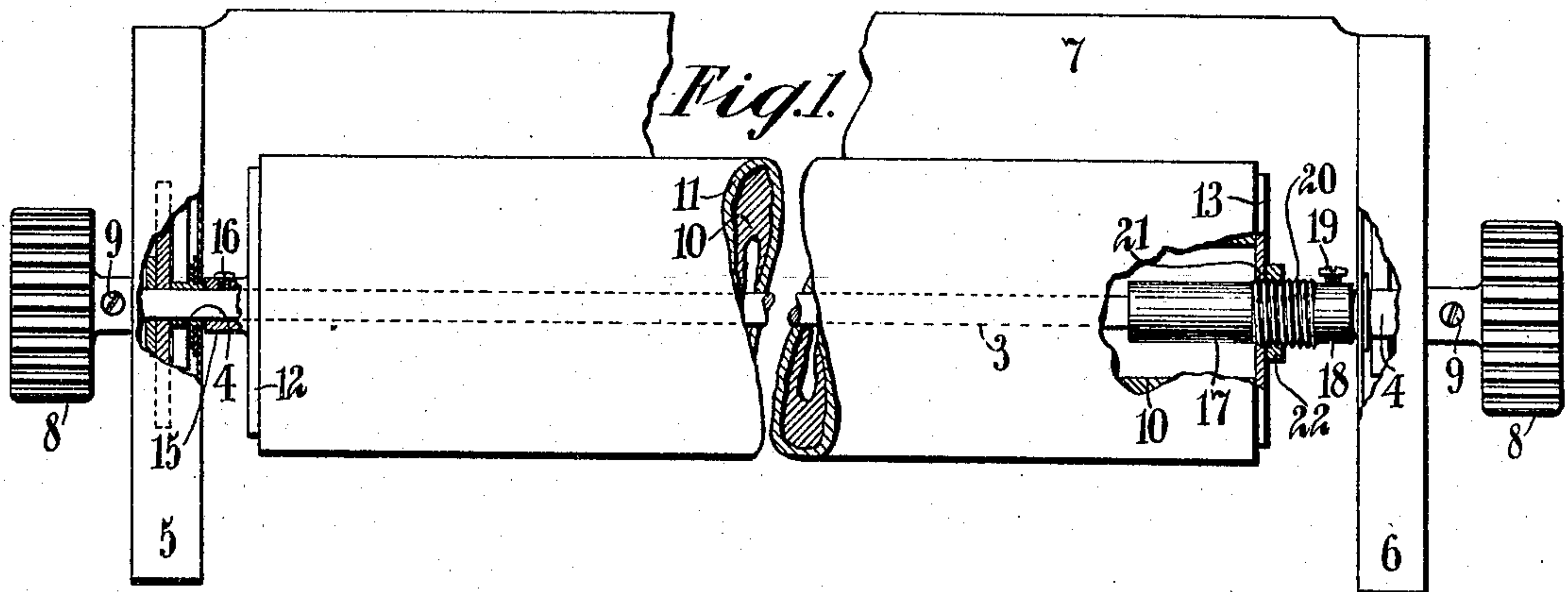


No. 855,012.

PATENTED MAY 28, 1907.

A. F. LEAR.  
TYPE WRITING MACHINE.  
APPLICATION FILED APR. 1, 1907.



Witnesses:  
H. E. Fleischer.  
H. Frankfort.

Inventor:  
Arthur F. Lear.  
By his Attorney,  
B. B. Stickney



# UNITED STATES PATENT OFFICE.

ARTHUR F. LEAR, OF NEW YORK, N. Y., ASSIGNOR TO UNDERWOOD  
TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF  
NEW JERSEY.

## TYPE-WRITING MACHINE.

No. 855,012.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed April 1, 1907. Serial No. 365,741.

*To all whom it may concern:*

Be it known that I, ARTHUR F. LEAR, a citizen of the United States, residing in the borough of Brooklyn, 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.

This invention relates to the manner of mounting revoluble platens of typewriting machines. Said platens are usually journaled in frames which are made very light in order to conduce to speed of operation of the machine, and it sometimes happens that owing to such lightness of the frame, it becomes slightly sprung or deformed, thus permitting slight endwise shake of the platen in the frame, which is highly objectionable. It has also been found impracticable, owing to unavoidable inaccuracies in manufacture, to secure an exact fit between the platen and the ends of the frame, except by going through the process of grinding off the end of the platen hub after the parts have been manufactured and are ready to assemble. In many cases the platen itself, which consists of a tube of rubber placed upon a wooden core, alters in length after it is manufactured, so that it will not fit accurately between the ends of the platen frame. For these and other reasons, it is the common practice to make platens a trifle over size and then to fit them into the platen frame by grinding the platen hubs, which is a slow and expensive process.

The object of the present invention is to provide simple, inexpensive and satisfactory means for securing an accurate fit of the platen in the platen frame. To this end, I provide one of the platen heads with an adjustable hub to fit upon the platen axle. The hub is exteriorly threaded between its ends, so as to screw into the platen head more or less as required, so as to take up the play of the platen in the platen frame. Any suitable means, such as a nut, may be used to fasten the hub to the platen head after adjustment. Upon the outer end of the hub is provided a set screw to fasten the hub to the axle. The inner end of the hub extends quite a distance within the platen, so as to give the hub a long bearing on the axle, so that the outer end or face of the hub may fit accurately to

the end of the contiguous bearing in the platen frame.

In the accompanying drawings, Figure 1 is a partial plan of the platen frame of an "Underwood" typewriting machine provided with my improvements; certain of the parts being broken away to illustrate the construction. Fig. 2 is a perspective fragmentary view showing the platen axle and the adjustable platen hub thereon. Fig. 3 is a sectional view of the axle and hub. Fig. 4 is an end view of the platen.

In the Underwood typewriting machine, types 1 strike upon the front side of a platen 2 which is secured upon an axle 3, the latter mounted in journals or bearings 4 in the ends 5, 6 of a platen frame, which also comprises a rear plate or paper shelf 7. The axle 3 projects outside of the platen frame and carries hand wheels 8, which are releasably secured by set screws 9.

The platen usually comprises a wooden core 10 having a rubber sheath 11. Metallic heads 12 and 13 are secured upon the core 10 by screws 14. The left hand head 12 has a hub 15 through which passes a set screw 16 to secure the hub to the axle. The right hand head 13 is provided with an adjustable hub 17 through the outer end portion 18 of which passes a similar screw 19 to secure it to the platen axle. It will be understood that when it is desired to remove the platen, it is only necessary to loosen one of the screws 9 and both of the screws 16 and 19, whereupon the axle, which passes through the hub and through the bearings 4, can be pulled out of the machine, thus releasing the platen.

The hub 17 is slightly enlarged at a point between its ends, and this enlargement is formed with screw threads 20, to screw into the head 13 which has a suitably threaded central aperture or socket 21. The inner end of the hub is prolonged to extend far within the platen, as seen at Fig. 1, whereby the hub is given a long bearing upon the axle 3, which it fits closely.

When the platen has been inserted in the platen frame, the hub 17 is turned outwardly to adjust it to the right, at Fig. 1, to take up the endwise play of the platen in the platen frame, or until both hubs 15 and 17 press lightly against the inner ends or faces of the bearings 4 in the ends of the platen frame.



The screws 16 and 19 may be turned to secure the hubs to the axle, and a nut 22 upon the threaded portion 20 of the hub 17 may be turned up firmly against the platen head 13, so as to fasten the hub 17 to the position to which it has been adjusted relatively to the platen head.

It will be observed that the adjustable hub affords inexpensive and readily applied means for taking up endwise play of the platen, and that I avoid the necessity of repeatedly removing the platen from the machine for grinding the end of the platen hub and replacing it in the machine for a test until an exact fit is secured. A precise fit of any platen in any suitable platen frame may be secured by a moment's manipulation after the platen is placed in the machine. When the platen is removed, the adjustment of the hub is not disturbed, so that the platen can be immediately put back and secured without the necessity of re-fitting or re-adjusting of parts.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with a frame having ends, each provided with a bearing, of a platen having heads, an axle passing through said heads and journaled in said bearings, one of said heads being provided with a hub to fit upon said axle, said hub being adjustable longitudinally of the platen, to take up longitudinal play of the platen between said bearings, and means to secure said hub to its head at different adjustments of the hub; the platen being removable from the frame by withdrawing the axle, and the hub and hub-securing means being removable with the platen without disturbing the adjustment of the hub.

2. In a typewriting machine, the combination with a frame having ends, each provided with a bearing, of a platen having heads, an axle passing through said heads and journaled in said bearings, one of said heads being provided with a hub to fit upon said axle, said hub being adjustable longitudinally of the platen, to take up longitudinal play of the platen between said bearings, means to secure said hub to its head at different adjustments of the hub, and means outside of the platen, to secure said hub to the axle; the platen being removable from the frame by withdrawing the axle, and the hub and hub-securing means being removable with the platen without disturbing the adjustment of the hub.

3. In a typewriting machine, the combination with a frame having ends, each provided with a bearing, of a platen having heads and an axle passing through said heads and journaled in said bearings, one of said heads being provided with a hub to fit upon said axle, said hub being threaded into its head for adjustment longitudinally of the

platen, to take up longitudinal play of the platen between said bearings, means to secure said hub to its head at different adjustments of the hub, and a set screw to secure said hub to said axle; the platen being removable from the frame by withdrawing the axle, and the hub and hub-securing means being removable with the platen without disturbing the adjustment of the hub.

4. In a typewriting machine, the combination with a frame having ends, each provided with a bearing, of a platen having heads and an axle passing through said heads and journaled in said bearings, one of said heads being provided with a hub to fit upon said axle, said hub being threaded into its head for adjustment longitudinally of the platen, to take up longitudinal play of the platen between said bearings; the platen and hub being removable together from the frame without disturbing the adjustment of the hub relatively to the platen.

5. In a typewriting machine, the combination with a frame having ends, each provided with a bearing, of a platen having heads and an axle passing through said heads and journaled in said bearings, one of said heads being provided with a hub to fit upon said axle, said hub being exteriorly threaded at a point between its end portions, to screw into its head, for adjustment longitudinally of the platen, to take up longitudinal play of the platen between said bearings, and means to secure said hub to its head at different adjustments of the hub; the platen and hub being removable together from the frame without disturbing the adjustment of the hub relatively to the platen.

6. In a typewriting machine, the combination with a frame having ends, each provided with a bearing, of a platen having heads and an axle passing through said heads and journaled in said bearings, one of said heads being provided with a hub to fit upon said axle, said hub being exteriorly threaded at a point between its end portions, to screw into its head, for adjustment longitudinally of the platen, to take up longitudinal play of the platen between said bearings, and means to secure said hub to its head at different adjustments of the hub; the inner end of the hub projecting within the platen to give a lengthened bearing of the hub on the axle; the platen and hub being removable together from the frame without disturbing the adjustment of the hub relatively to the platen.

7. In a typewriting machine, the combination with a frame having ends, each provided with a bearing, of a platen having heads, an axle passing through said heads and journaled in said bearings, one of said heads being provided with a hub to fit upon said axle, said hub being exteriorly threaded at a point between its end portions, to screw into its



head, for adjustment longitudinally of the platen, to take up longitudinal play of the platen between said bearings, means to secure said hub to its head at different adjustments of the hub, and a set screw threaded into the outer end of the hub, to fasten it to the axle; the platen and hub being removable together from the frame without disturbing the adjustment of the hub relatively to the platen.

8. In a typewriting machine, the combination with a frame having ends, each provided with a bearing, of a platen having heads, a detachable axle having a hand wheel and passing through said heads and journaled in said bearings, a hub member whereby one of said heads is mounted upon said axle, said

hub member mounted for adjustment longitudinally of and relatively to the platen, means for securing said hub member to its head at different adjustments, and independent means for securing the platen detachably to the axle, whereby the platen may be detached from the frame without disturbing the adjustment of said hub member; the platen and the hub-member being removable from the frame without disturbing the adjustment of the hub-member relatively to the platen.

ARTHUR F. LEAR.

Witnesses:

K. FRANKFORT,  
C. RIPLEY.