F. A. COOK.

TYPE WRITING MACHINE.

APPLICATION FILED JAN. 8, 1909.

950,998. Patented Mar. 1, 1910.

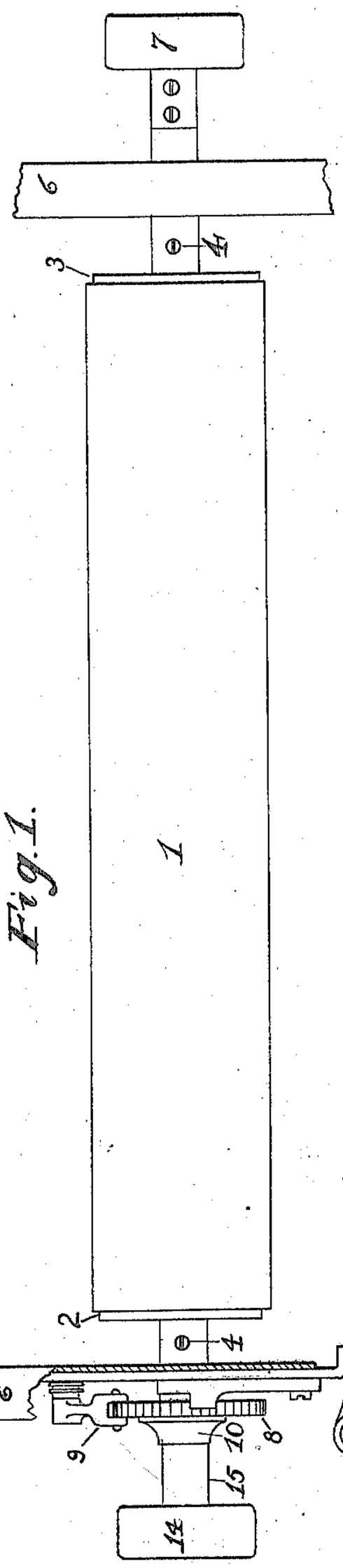


Fig. 1.

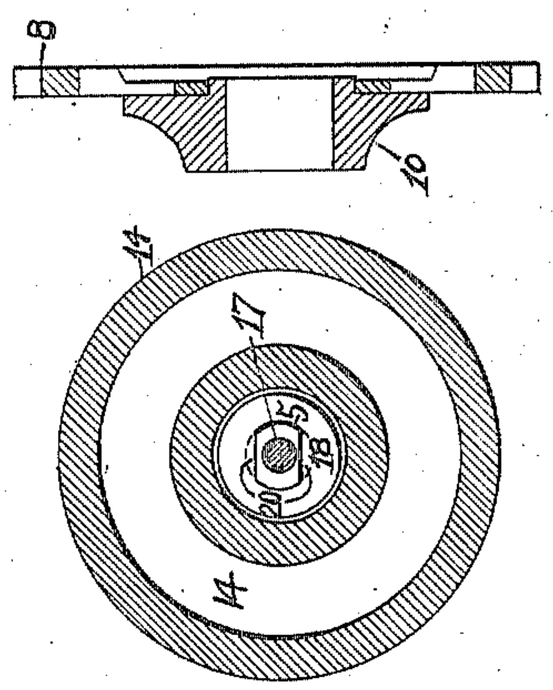


Fig. 3.

Fig. 4.

Fig. 2.

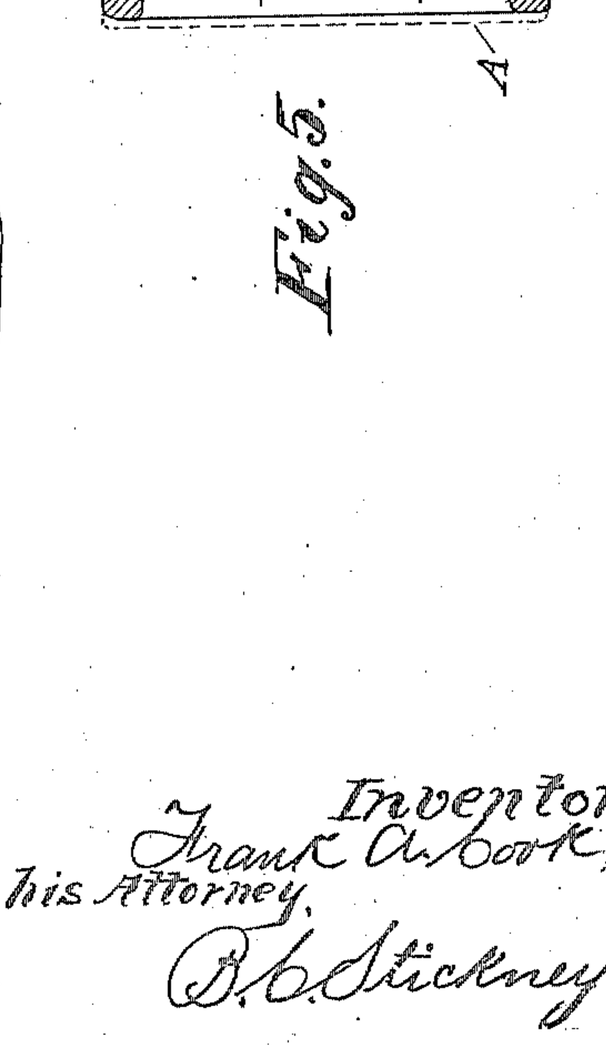
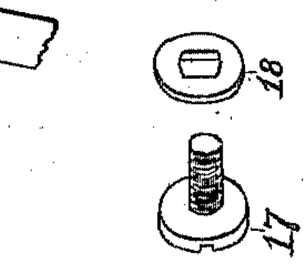


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANK A. COOK, OF HARTFORD, CONNECTICUT, ASSIGNOR TO UNDERWOOD TYPE-WRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

950,998. Specification of Letters Patent. Patented Mar. 1, 1910.

Application filed January 8, 1909. Serial No. 471,240.

To all whom it may concern:

Be it known that I, FRANK A. COOK, a citizen of the United States, residing in Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to the line-spacing mechanism of typewriting machines, and particularly to means for releasing the revoluble platen from the control of the usual line-space wheel, so that the platen may be rotated while the line-space wheel remains stationary, for the usual purposes.

The principal object of the invention is to provide a simple, inexpensive and effective construction for this purpose, which may be readily applied to existing forms of typewriting machines.

In the accompanying drawings, Figure 1 is a plan view of the platen and part of the platen frame of an Underwood front strike typewriting machine, showing my improvements applied thereto. Fig. 2 shows in perspective the separate parts which are included in the present invention. Fig. 3 is a sectional elevation showing especially the connection between the hand wheel and the platen axle. Fig. 4 is a sectional view of the line-space wheel and its hub. Fig. 5 is a longitudinal sectional view of one end of the platen axle and its appurtenances.

The usual revoluble platen 1 is fixed by means of heads 2, 3 and screws 4 upon an axle 5, which is journaled in the ends 6 of a platen frame and provided at one projecting end with a hand wheel 7 for turning the platen. Upon the other projecting end of the platen axle is carried a line-space wheel 8, held by a spring detent 9 provided upon the platen frame. Fixed to or formed upon the line-space wheel is a hub 10 whereby it is loosely mounted upon a collar 11, the latter fixed upon the axle 5 and having at its inner end a head 12 and at its outer end a threaded portion 13.

A hand wheel 14 similar to 7 is provided with a hub 15, the inner end of which is threaded at 16 to screw upon the collar threads 13 and jam or bind the line-space wheel against the head 12, so that the platen cannot turn independently of the line-space wheel. The hand-wheel 14 is normally used for rotating the platen and line-space wheel in the usual manner, but when it is desired to turn the platen independently of the line-space wheel, the operator grasps both hand wheels 7 and 14, and turns the wheel 14 to the left to release the line-space wheel.

The releasing movement of the hand wheel 14 is limited by a headed screw 17, which is threaded tightly into the end of the platen axle 5. A washer 18 is loosely confined between the head of the screw and the outer end of the hub 15, the latter fixed to the hand wheel 14 in any suitable way, as by means of a pin 19. The washer 18 should be only thin enough to permit a slight movement of the hand wheel 14 longitudinally of the shaft 5, as indicated by dotted line A, which is sufficient to enable the hand wheel to turn upon the threaded collar 13 far enough to relieve the pressure between the line-space wheel and the binding head 12. Usually about a quarter of a turn of the hand wheel will be found sufficient for this purpose. The washer 18 is keyed upon the end of the axle (Fig. 3) so that the hand wheel 14 may not be able to loosen the screw 17; two flats or notches 20 being cut upon the end of the axle, and the washer having an approximately square hole as shown, to fit upon such notched end. The washer is therefore confined between the head of the screw and the shoulders formed by cutting the notches in the end of the axle. The hub 15 of the hand wheel 14 has a bore of small diameter at its outer end to fit upon the end of the axle 5.

The device is found in practice to work satisfactorily when the working face of the binding head 12 is flat or in a plane at right angles to the axis of the line-space wheel. The diameter of the binding head should be relatively large, as shown, and it may be provided with an annular cutaway 21 between its periphery and the collar or hub 11, so that only the outer portion of the binding head will be effective, whereby a good grip of the line-space wheel is secured without undue tightening of the nut 15. The hand wheel 14 may be used to rotate the platen when the latter is clutched to the line-space wheel, as explained; and when the platen is loosened from the line-space wheel, the hand wheel 7 may be used to return the platen; or, if desired, the hand wheel 7 may

be grasped and the hand wheel 14 turned to the left sufficiently to produce a clamping action between the screw head 17, the washer 18 and the outer end of the hub 15, thus fixing the hand wheel 14 tightly enough to the axle 5 to enable the hand wheel to be used for rotating the platen.

Variations may be resorted to within the scope of the invention.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with a platen fixed upon an axle journaled in a platen frame, of a binding head fixed upon the axle and having a collar, a line-space wheel loose upon said collar, a nut threaded upon the collar to force the line-space wheel against the binding head, said nut fixed to a hand wheel capable of turning the platen, a headed device in the form of a screw threaded into the end of the platen axle, and a washer keyed to the end of the platen axle and loosely confined between said platen axle and the head of the screw, to permit slight movement of the hand-wheel longitudinally of the platen axle.

2. In a typewriting machine, the combination with a platen fixed to an axle, of a binding head and a threaded collar fixed upon the axle, a loose line-space wheel contiguous to the binding head, and a platen-revolving hand-wheel having a hub threaded at its inner end to screw upon said threaded collar to bind the line-space wheel against said binding head.

3. In a typewriting machine, the combination with a platen fixed to an axle, of a binding head and a threaded collar fixed upon the axle, a loose line-space wheel contiguous to the binding head, a platen-revolving hand-wheel having a hub threaded at its inner end to screw upon said threaded collar to bind the line-space wheel against said binding head, said hub fitting at its outer end upon the end of said axle, and a screw threaded into the end of said axle to confine the hand-wheel thereon.

4. In a typewriting machine, the combination with a platen fixed to an axle, of a binding head and a threaded collar fixed upon the axle, a loose line-space wheel contiguous to the binding head, a platen-revolving hand-wheel having a hub threaded at its inner end to screw upon said threaded collar to bind the line-space wheel against said binding head, said hub fitting at its outer end upon the end of said axle, and a screw threaded into the end of said axle to confine the hand-wheel thereon; provision being made for permitting limited rotation of the hand wheel to relieve the binding action upon the line-space wheel, to permit the platen to be rotated independently of the latter.

5. In a typewriting machine, the combination with a platen fixed to an axle, of a binding head and a threaded collar fixed upon the axle, a loose line-space wheel contiguous to the binding head, a platen-revolving hand-wheel having a hub threaded at its inner end to screw upon said threaded collar to bind the line-space wheel against said binding head, said hub fitting at its outer end upon the end of said axle, and a screw threaded into the end of said axle to confine the hand-wheel thereon; provision being made for permitting limited rotation of the hand wheel to relieve the binding action upon the line-space wheel, to permit the platen to be rotated independently of the latter; a washer being keyed upon the end of said axle and loosely confined between the head of the screw and a shoulder on the axle, to permit slight movement of the hand wheel lengthwise of the axle when releasing the line-space wheel.

FRANK A. COOK.

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