F. L. MORGAN.

TYPE WRITING MACHINE.

APPLICATION FILED NOV. 20, 1908.

918,459. Patented Apr. 13, 1909.

Fig. 1.

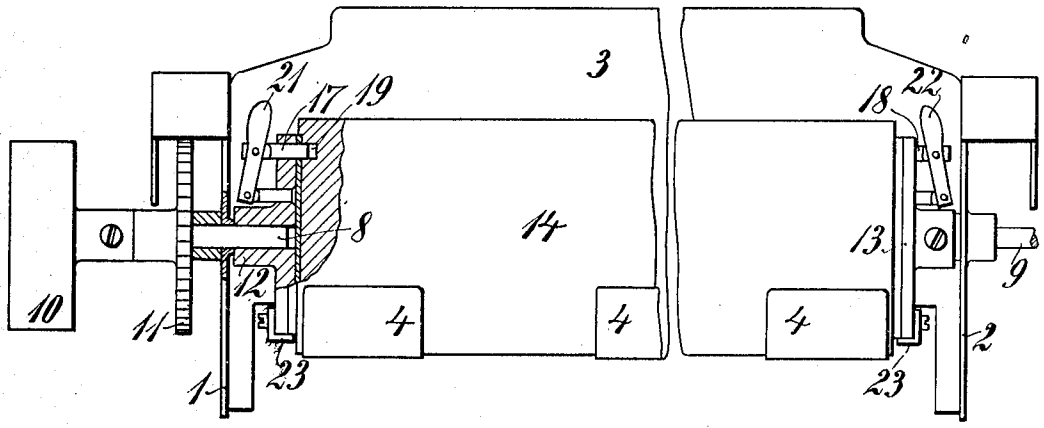


Fig. 2.

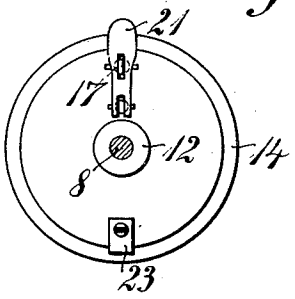
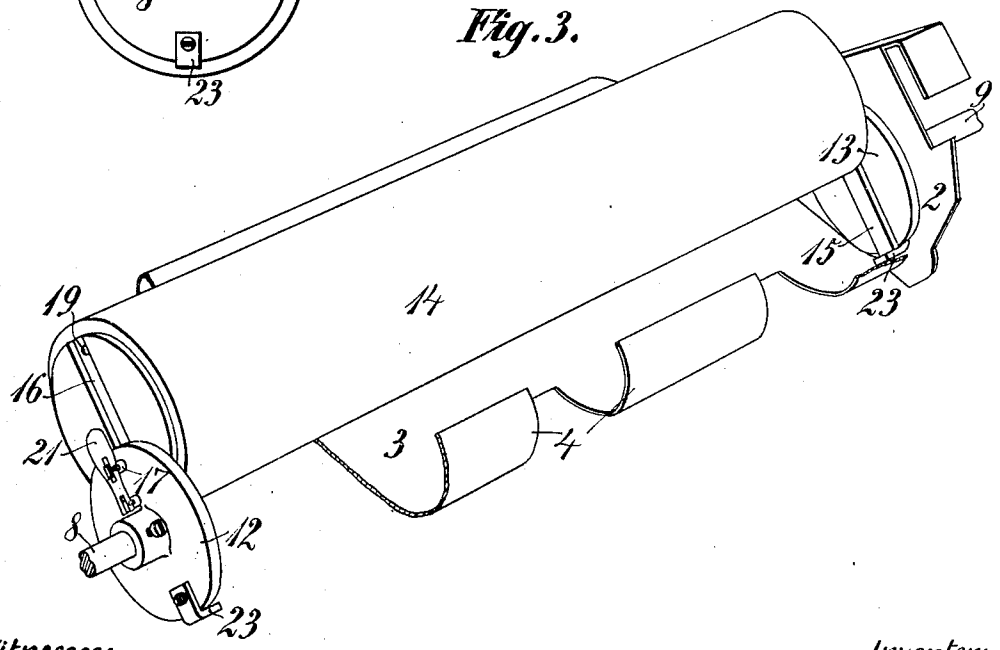


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRANK L. MORGAN, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

No. 918,459. Specification of Letters Patent. Patented April 13, 1909.

Application filed November 20, 1908. Serial No. 463,513.

To all whom it may concern:

Be it known that I, FRANK L. MORGAN, a citizen of the United States, residing in the city of Washington, District of Columbia, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to the rotatable platens of typewriting machines.

The platen is usually mounted in a platen frame by means of an axle. It is, however, often desirable to substitute a platen having a soft and yielding printing surface for one having a hard surface, and in order to do this it is usually necessary to remove the platen axle with its appurtenances from the platen.

The principal object of this invention is to avoid the necessity of removing the platen axle when changing the platen, and to provide a simple and inexpensive construction whereby the platen can be readily removed from and replaced in the machine. To this end I provide a platen having a diametrical groove or slot in each end, and I rotatably mount in each of the platen-frame ends a head which is complemental to the platen end; said head provided with a key in the form of a diametrical feather or rib to engage the slot in the platen ends, to couple the heads and cylinder; and means are also provided to lock the heads to the cylinder.

In the accompanying drawings, Figure 1 is a front elevation, partly in section, of the platen frame of an Underwood front strike writing machine with my improved platen mounted therein. Fig. 2 is an end elevation of the platen and platen head, and Fig. 3 is a perspective view showing the manner of removing the platen.

The invention is illustrated in connection with the platen frame of the standard Underwood typewriting machine, which comprises ends 1, 2, and a rear paper shelf 3 extending between and secured to said ends, said shelf also curving forwardly beneath and up around the front of the platen, as at 4.

Permanently mounted to rotate in the platen frame ends are opposite separate spindles 8, 9, provided at their outer ends with knobs 10. The usual line space wheel 11 is mounted upon the spindle 8. Secured to the inner ends of the spindles are heads 12, 13. These are complemental to the ends or end-pieces of a cylindrical platen 14. The heads are provided with feathers or keys, in the form of ribs 15 extending diametrically, to fit corresponding key-ways or slots 16 in the platen ends, to couple the heads to the platen. The heads 12, 13 are also provided with detents 17, 18 to engage sockets or recesses 19 in the platen ends, to lock the heads to the platen to enable the heads to rotate or control the platen, and to prevent displacement of the platen transversely of its axis. Said detents are provided with finger-pieces 21, 22 to throw them into and out of locking positions.

When it is desired to remove the platen, it is rotated until the keys 15 are in substantially vertical positions, or until the finger-pieces 21, 22 are in their uppermost positions. The detents are then thrown out of engagement with the platen by means of the finger-pieces, and the platen lifted upwardly from the machine, as at Fig. 3.

To replace the platen in the platen frame, the keys 15 on the heads 12, 13 are caused to register with the slots or slide-ways 16 in the ends of the platen, and the platen slid down along said keys until it rests upon abutments or seats 23 provided upon the heads, and the detents 17, 18 forced into the sockets 19 in the ends of the platen, when the platen is in readiness for writing.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with a platen frame, of a pair of platen-rotating heads rotatably and permanently mounted therein, and a platen releasably engaged by said heads.

2. In a type writing machine, the combination with a platen frame, of a pair of separate heads rotatably mounted therein, and a cylindrical platen; said heads provided with means to couple them to the platen and to lock the platen against transverse displacement.

3. In a typewriting machine, the combination with a platen frame, of a cylindrical platen provided with a slot or keyway in each end, and a pair of heads rotatably mounted in the platen frame; each head provided with a key in the form of a rib extending diametrically thereof to engage the keyway in the end of the platen to couple the head to the platen.

4. In a typewriting machine, the combina-

tion with a platen frame having a pair of ends, of separate spindles journaled in said ends, heads secured to said spindles, a platen releasably engaged by said heads to rotate therewith, and detents carried by the heads to engage and lock the cylinder against radial displacement.

5. In a typewriting machine, the combination with a platen frame having a pair of ends, of separate spindles journaled in said ends, heads secured to said spindles, a platen releasably engaged by said heads to rotate therewith, and detents carried by the heads to couple the heads and cylinder and to lock the latter against radial displacement; said detents provided with finger pieces to throw them into and out of engagement with the cylinder.

6. In a typewriting machine, the combination with a platen frame having a pair of ends, of a cylindrical platen provided with a pair of end-pieces, a pair of heads complemental to the platen end-pieces and rotatably mounted in the platen frame ends, releasable means to couple said heads to the platen, and means to rotate the heads and platen.

7. A removable platen for a typewriter comprising a cylindrical body portion having a pair of end-pieces, each provided with a slot or keyway extending diametrically thereof.

8. In a typewriting machine, the combination with a platen frame having a pair of ends, of heads, spindles on which said heads are secured and separately journaled in the platen frame ends, a cylinder engaged at its ends by said heads, and releasable means to couple the cylinder and head.

9. In a typewriting machine, the combination with a platen frame having a pair of ends, of a removable cylinder having a keyway in each end in the form of a recess extending diametrically thereof, a pair of heads complemental to the cylinder ends and mounted to rotate in the platen frame ends, and provided with keys to fit the keyways in the cylinder ends to couple the heads and cylinder together, a detent carried by each head to engage the cylinder and lock it against transverse movement, and finger-pieces connected to the detents.

10. In a typewriting machine provided with a platen frame having a pair of ends, the combination of a spindle journaled in each end, a head having a key in the form of a radial rib secured to each spindle, means to rotate said spindles, a cylinder having key seats or recesses in its ends to be engaged by the keys on the heads, detents carried by the heads to engage the cylinder to lock the heads to the cylinder, and finger-pieces to throw the detents into and out of engagement with the platen.

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