

(No Model.)

C. O. ERWIN & F. WINKLER.
TYPE WRITING MACHINE.

No. 506,427.

Patented Oct. 10, 1893.

Fig. 1

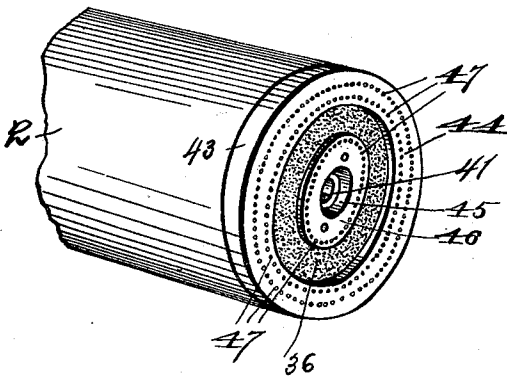


Fig. 2

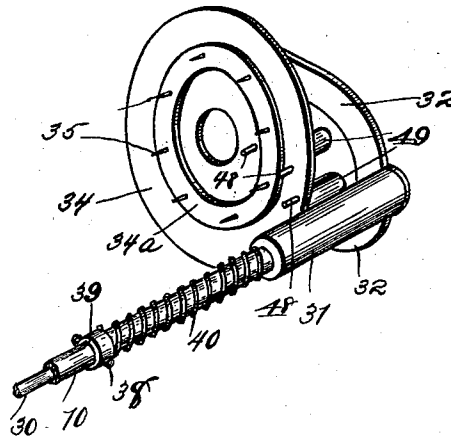


Fig. 3.

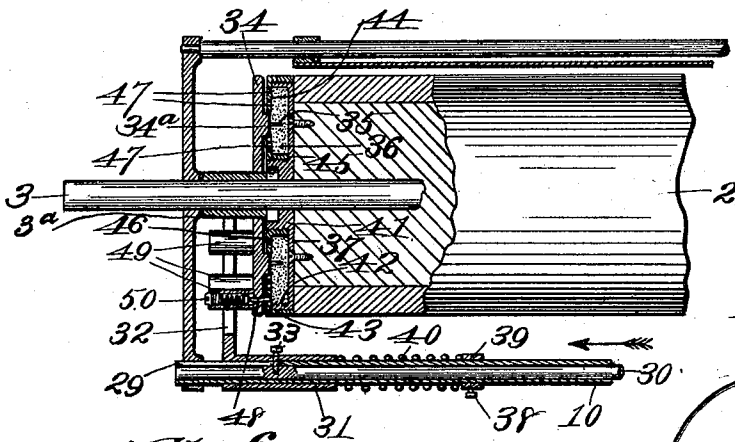


Fig. 5.

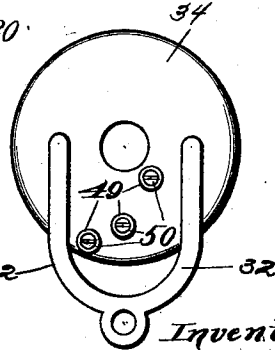


Fig. 6.

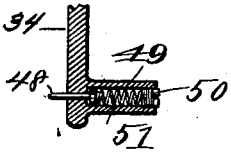
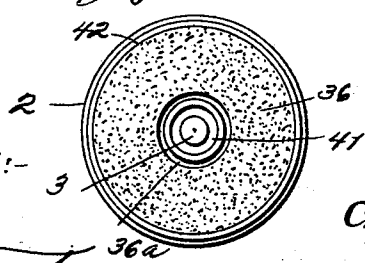


Fig. 4.



Witnesses:-
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By *[Signature]* Higdon & Higdon
Attys

UNITED STATES PATENT OFFICE.

CHARLES O. ERWIN AND FRANK WINKLER, OF KANSAS CITY, KANSAS.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 506,427, dated October 10, 1893.

Application filed June 22, 1893. Serial No. 478,422. (No model.)

To all whom it may concern:

Be it known that we, CHARLES O. ERWIN and FRANK WINKLER, of Kansas City, Wyandotte county, Kansas, have invented certain new and useful Improvements in Type-Writers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to typewriters; and the object of our invention is to produce an attachment by which the printing-cylinder of a typewriter may be securely held in any position of rotation desired, and entirely independent of the ordinary pawl and ratchet mechanism of the machine.

With these objects in view, our invention consists in certain peculiar and novel features of construction and arrangement as herein-after described and claimed.

In order that our invention may be fully understood, we will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1, is a perspective view of a portion of a typewriter printing cylinder, and showing our improved penetrable disk secured upon the end thereof. Fig. 2, is a perspective view of the sliding frame and the locking disk carried thereby. Fig. 3, is a horizontal sectional view of a portion of the printing cylinder, and showing also in section our penetrable disk and the locking disk in engagement with said penetrable disk. Fig. 4, is a view looking toward the end of the printing cylinder, and showing the penetrable disk carried thereby with the inner and outer rings removed. Fig. 5, is a rear or outer view of the locking disk, and Fig. 6, is a detail sectional view of the locking disk to clearly disclose the construction and arrangement of the spring-actuated pin mechanism.

Before entering upon a detailed description of the invention, we wish to state that this attachment is designed particularly as an improvement over the application for "improvements in typewriters," filed by us on March 31, 1893, Serial No. 468,508, and patented June, 20, 1893, No. 499,723. We found in practice that operators knowing the cylinder was not held from rotation by the usual pawl and ratchet, without first throwing the locking-

disk from engagement with the penetrable disk, would attempt to rotate the cylinder, and that with every such attempt the penetrable disk was torn or injured by the pins or points of the locking-disk, so that in a very short time it would be necessary to replace said disks with new ones. To obviate this trouble and expense, the present invention is ordained, and it consists simply in providing the penetrable disk with metallic bands or rings, having holes or recesses and in providing the locking-disk with one or more spring-actuated pins to engage said recesses and thereby relieve the penetrable disk of all strain should the operator attempt to rotate the cylinder without first moving the locking-disk from engagement with the penetrable-disk.

We make use in this case as far as practical of the same reference numerals for analogous parts as we have in the aforesaid application.

Referring to the drawings, 2 designates the printing cylinder of a type-writer which is revolubly mounted upon a stationary shaft or axle 3 supported in the upper portion of a machine in the usual manner. Supported horizontally and forming a portion of the traveling carriage of the machine is the tubular rod 10, which is formed with a longitudinal slot 29 at the end of the cylinder opposite to that usually occupied by the ratchet-wheel of Smith Premier typewriters, and adapted to slide within said tubular rod, is a slide-rod 30. A yoke-frame approximately U-shaped is secured rigidly or formed integrally at the junction of its arms 32, upon the end of a tube or sleeve 31 which surrounds loosely the tubular-rod 10, and a set-screw 33 passing through said tube or sleeve and also through the slot 29 of the tubular-rod, screws into the slide-rod 30. A disk 34 having a central opening fitting loosely around the collar or washer 3^a, of the shaft or axle 3, is carried rigidly at the outer ends of the arms 32—32 of the yoke of the tube or sleeve 31, and this disk is provided at its inner side with a circular shoulder or ring 34^a; this shoulder or ring projecting from the face of said disk a suitable distance and having a series of pins or points 35, projecting therefrom and toward the adjacent end of the printing

cylinder. In place of the usual disk secured to the left-hand end of Smith Premier type-writer cylinders, we secure a thin circular plate 37, which is of slightly less diameter than the cylinder, this plate being formed with a hub-portion 41 which encircles the shaft or axle 3, and projects outwardly. This hub-portion is externally screw-threaded. An annular and outwardly projecting flange 42 is formed at the outer margin of the said plate, and this flange is also externally screw-threaded. A disk 36 of felt or other penetrable material is fitted snugly within the outer flange and against the face of the circular plate, and is formed with a central opening 36^a, the diameter of which slightly exceeds the diameter of the hub-portion 41, so that a circular space shall be formed therebetween. In order to securely hold this penetrable disk in place, a ring 43 internally screw-threaded is screwed upon the flange 42, and an inwardly projecting circular flange 44 at the outer margin of the ring 43, fits snugly against the face of the penetrable disk, near its outer margin. A smaller ring 45 also internally screw-threaded is screwed upon the hub 41; thus occupying the circular space between the penetrable disk and said hub, and extending outwardly from the outer margin of the ring 45, is the circular flange 46; said flange bearing against the outer side of the penetrable-disk near its inner margin. It will thus be seen that a circular space intervenes between the inner and outer flanges 46 and 44 respectively, through which access may be had to the exposed portion of the penetrable disk. Now, while the machine is printing upon a blank or sheet of ruled paper, it is designed to hold the cylinder from rotatable movement by engaging the exposed portion of the penetrable disk by the pins or points 35 of the locking-disk, the circular shoulder or flange 34^a, thereof, occupying the space between the inner and outer flanges 46 and 44, as clearly shown in Fig. 3.

Now, when it is desired to disengage the locking-disk from the penetrable disk, the slide-rod 30 is caused to move in the direction of the arrow Fig. 3, by means of mechanism clearly shown and described in our patent hereinbefore mentioned, (reference to which is herewith made,) and there held. As before mentioned without some auxiliary or means to resist the rotation of the cylinder when engaged by the locking-disk, the penetrable-disk is soon torn and rendered useless, so we perforate or recess closely in circular series the flanges 44 and 46, as shown at 47. It is to be understood of course, that only one of these flanges may be perforated or recessed or that one or more series of circularly arranged perforations or recesses may be formed, or that serrations or ratchet-teeth may be formed in place of the perforations or recesses. Should two series of perforations or recesses be formed in the flange 44 and one series in flange 46, as shown, pins corresponding in

number to said series should be provided to engage one or the other of said perforations or recesses. These pins 48 pass horizontally through the locking-disk and have heads or enlargements at their outer ends which occupy and fit snugly within tubular and horizontal projections 49 at the outer side of said locking-disk, and these tubular projections are internally screw-threaded at their outer ends, to receive screw-plugs 50. Spiral-springs 51 are fitted within said tubular-projections and bear at their opposite ends against the inner ends of the screw-plugs 50 and the headed ends of the pins; the tendency of said springs being to force and hold the pins in their extended position toward the adjacent end of the cylinder. These spring-actuated pins being arranged the same radial distance from the axis of the shaft or axle as the corresponding series of circularly arranged perforations or recesses, it will be seen that as the locking-disk is moved inward or toward the end of the cylinder, the said pins will, as the pins or points 35 engage the penetrable-disk, either each engage one of the perforations of its corresponding series or come in contact with the face of the flanges 45, and 46, between two of the perforations or recesses of their corresponding series of perforations or recesses. Of course, should one or more of the spring-actuated pins engage perforations or recesses in their corresponding series when the locking-disk is moved inward, it will be seen that any attempt to rotate the cylinder will be successfully resisted and the strain will be borne by said pins and not by the penetrable disk. Should, however, the pins not engage the said perforations or recesses, by coming in contact with the faces of the flanges 45 and 46, they will be forced outward, so that their headed ends shall compress the springs 51. It will now be seen that the pins or points 35 engaging the penetrable disk, hold the cylinder from rotatable movement and should the operator attempt to rotate the cylinder without first moving the locking-disk therefrom, the slightest movement of said cylinder will present one of the perforations opposite its corresponding-pin and the pressure of the spring causes said pin to immediately move forward and engage said perforation or recess, thus locking the cylinder from further movement.

From the above description it will be seen that we have provided an attachment which will effectually when in engagement, lock the printing cylinder from rotatable movement and will at the same time relieve the penetrable-disk of all strain.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a typewriter, the combination with the printing-cylinder, a penetrable-disk secured upon one end thereof, and rings having circular series of perforations, of a locking-disk having pins or points to engage the

penetrable-disk, and spring-actuated pins to engage the perforations of the rings, substantially as and for the purpose set forth.

2. In a typewriter, the combination with
5 the printing-cylinder having a penetrable disk at one end, and rings having flanges adapted to retain the penetrable-disk in position and also perforated in circular series, of
10 a slide-rod and a locking-disk carried by the slide-rod, and having pins or points adapted to engage the penetrable-disk, and having also tubular projections and pins having
15 heads engaging the tubular projections and passing through the locking-disk, and springs interposed between the closed outer ends of said tubular projections and the heads of said pins, and means to move the slide-rod, substantially as set forth.

3. In a typewriter, a printing-cylinder, a
20 circular plate secured to one end of the cylinder and having a tubular hub-portion encircling the shaft or axle of the cylinder, and externally screw-threaded, and a circular flange at the outer margin of said plate also

externally screw-threaded, a penetrable-disk 25 fitting against the said plate and having an opening encircling the hub-portion of the plate, a ring internally screw-threaded and engaging the hub-portion and a ring internally screw-threaded engaging the flange of 30 said plate, and outwardly and inwardly extending flanges perforated in circular series of the hub engaging ring and the flange engaging ring respectively, these perforated flanges bearing against the penetrable-disk, 35 and a locking-disk having pins or points to engage the penetrable-disk and also having spring-actuated pins to engage the perforations of the flanges at the outer side of the penetrable-disk, substantially as set forth. 40

In testimony whereof we affix our signatures in the presence of two witnesses.

CHAS. O. ERWIN.
FRANK WINKLER.

Witnesses:

MAUD FITZPATRICK,
M. P. SMITH.