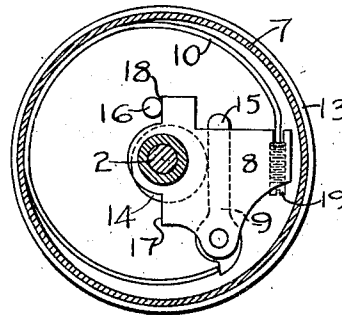
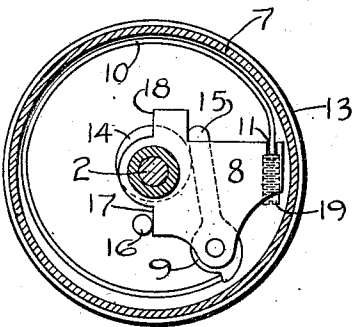
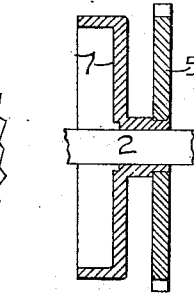
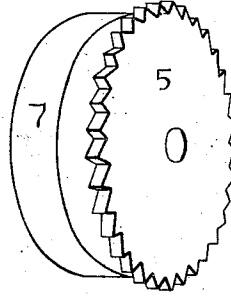
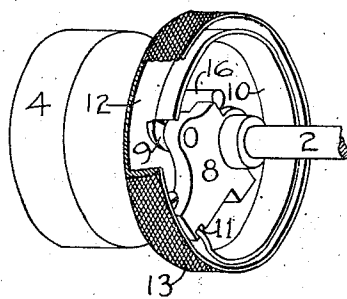
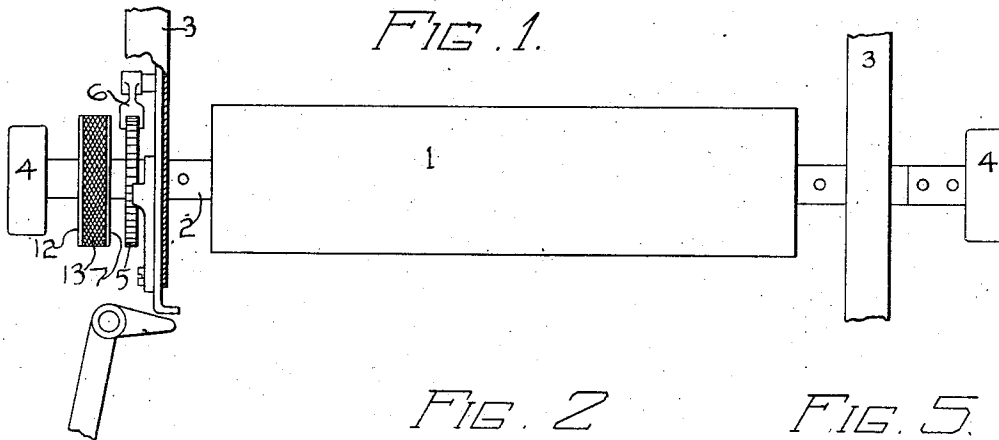


L. NEY.
TYPE WRITING MACHINE.
APPLICATION FILED APR. 8, 1909.

979,991.

Patented Dec. 27, 1910.



WITNESSES
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LOUIS NEX, OF HARTFORD, CONNECTICUT, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

979,991.

Specification of Letters Patent.

Patented Dec. 27, 1910.

Application filed April 8, 1909. Serial No. 488,563.

To all whom it may concern:

Be it known that I, LOUIS NEX, 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 devices for releasably connecting the platen to the line space wheel of a typewriting machine, to permit the platen to be rotated independently of the line space wheel, when required.

The principal object of the invention is to provide, at low cost, a simple device of this character readily applicable to existing machines, conveniently manipulable, and not liable to become deranged.

In the form of the invention illustrated in the drawings, the line space wheel, which is loose upon the platen axle, is provided with a drum. A finger wheel, which is also loose upon the platen axle and revoluble relatively to the drum, is provided with a cam; and a lever operates between said cam and a split ring, which is inclosed in said drum. The lever is pivoted upon a collar, which is fixed upon the platen axle, and presses the split ring endwise to cause it to bite the inner periphery of the drum. The drum is separated from the line space wheel, and the finger wheel is in the form of a cap which incloses said drum, the whole forming a compact casing, convenient for manipulation, and generally resembling the finger wheel of the ordinary type. Said cam and lever coöperate not only to bind the line space wheel, but also to lock the finger wheel itself against accidental backward or releasing movement.

In the accompanying drawings, Figure 1 is a view of the platen and platen frame of an Underwood front strike writing machine with the present improvements applied thereto. Fig. 2 is a perspective view showing parts of the mechanism slightly separated. Fig. 3 is an end elevation partly in section, illustrating the manner in which the line-space wheel is locked to the platen. Fig. 4 is a similar view, but showing the line space wheel released from the platen. Fig. 5 is a sectional view of the line-space wheel and barrel seen at Fig. 2.

The usual cylindrical platen 1 is fixed to an axle 2, whereby it is journaled in a platen

frame 3, said axle having at each end the usual thumb wheel 4, for rotating the platen. Loose upon the platen axle, outside of the platen frame, is a notched line-space wheel 5, usually engaged by a yielding detent 6. Fixed to this line-space wheel is shown a ring or drum 7; within which is contained a clutching device comprising a collar 8 fixed upon the platen axle, a lever 9 pivoted upon said collar, and a split ring 10 confined at one end in a recess 11 in said collar, and at the other end engaged by said lever, whereby it is caused to expand to bite the inner periphery of the drum 7. Also loose upon the platen axle and rotatable independently of the line-space wheel is a finger-wheel 12 having a knurled periphery 13, and in the form of a cap to inclose the drum 7. Said finger wheel has a hub 14, which is eccentric or in the form of a cam, to engage an arm 15 of the lever and turn the same on its pivot, to force the split ring to expand. The lever is shown at Fig. 4 in its released position, from which it is moved by said hub 14 to the position at Fig. 3. A pin or projection 16, extending within the finger wheel 12, engages opposite stops or shoulders 17, 18 formed on the collar to limit the throw of the cam. Preferably the finger wheel is arrested after the crown of the cam has passed slightly beyond the point of contact with the lever, as at Fig. 4, so that the finger wheel is yieldingly detained in this position.

When the operator desires to release the platen from the line space wheel he simply turns the finger wheel 12 to the right or in the direction opposite to the usual line spacing direction, while he holds the platen against turning. When he desires to relock the platen with the line space wheel he turns said wheel to the left as far as it will go, while holding the platen against rotation. At any time the platen may be rotated by either thumb wheel 4.

It will be seen that the addition to the machine is all inclosed in the compact casing which intervenes between the line space wheel and the adjacent thumb wheel 4, and is preferably separated from both the thumb wheel and the line-space wheel, where it is conveniently manipulated. It will also be observed that the device is simple in construction and operation, cheaply applied to a machine, and not liable to get out of order.

It will be seen that the fixed end of the split ring bears against an adjustable abutment in the form of a screw 19 at said recess 11. By turning this screw in one direction or the other, the mechanic can regulate the clamping action of the split ring upon the line space wheel drum, and thereby insure that the line space wheel shall always be rigidly connected to the platen, as required.

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 revoluble platen, of a loose line-space wheel having a ring or drum, a split-ring confined within said drum, a finger-wheel revoluble about the platen axis relatively to the platen and line-space wheel, and a self-binding device controlled by said finger-wheel to expand said split-ring against the interior of the drum and also to bind said finger-wheel against accidental turning movement.

2. In a typewriting machine, the combination with a revoluble platen, of a loose line-space wheel having a ring or drum, a split-ring confined within said drum, a finger-wheel revoluble about the platen axis relatively to the platen and line-space wheel, and means controlled by said finger-wheel to expand said split-ring against the interior of the drum and also to lock said finger-wheel against accidental turning movement, said finger-wheel in the form of a cap fitting over said drum.

3. In a typewriting machine, the combination with a revoluble platen, of a loose line-space wheel having a ring or drum, a split-ring confined within said drum, a finger-wheel revoluble about the platen axis relatively to the platen and line-space wheel, and means controlled by said finger-wheel to expand said split-ring against the interior of the drum and also to lock said finger-wheel against accidental turning movement, said finger-wheel and drum forming a casing separated from the line-space wheel and mounted between the latter and a finger-wheel which is fixed on an axle, to which the platen is also fixed.

4. In a typewriting machine, the combination with a revoluble platen, of a loose line-space wheel having a ring or drum, a split-ring confined within said drum, a finger-wheel revoluble about the platen axis relatively to the platen and line-space wheel, a self-binding cam connected to said finger-wheel, and a lever operating between said cam and said split-ring to enable the finger-wheel by its revolution to expand said ring against said drum.

5. In a typewriting machine, the combination with a revoluble platen, of a loose

line-space wheel having a ring or drum, a split-ring confined within said drum, a finger-wheel revoluble about the platen axis relatively to the platen and line-space wheel, a self-binding cam connected to said finger-wheel, and a lever operating between said cam and said split-ring to enable the finger-wheel by its revolution to expand said ring against said drum; said cam being constructed to cooperate with said lever to bind the finger-wheel against accidental backward turning movement.

6. In a typewriting machine, the combination with a revoluble platen, of a loose line-space wheel having a ring or drum, a split-ring confined within said drum, a finger-wheel revoluble about the platen axis relatively to the platen and line-space wheel, a cam connected to said finger-wheel, a lever operating between said cam and said split-ring to enable the finger-wheel by its revolution to expand said ring against said drum; said cam being constructed to cooperate with said lever to lock or detain the finger-wheel against accidental backward turning movement, and an adjustable abutment being provided for said split-ring.

7. In a typewriting machine, the combination with a revoluble platen, of a loose line-space wheel having a ring or drum, a split-ring confined within said drum, a finger-wheel revoluble about the platen axis relatively to the platen and line-space wheel, a cam connected to said finger-wheel, a lever operating between said cam and said split-ring to enable the finger-wheel by its revolution to expand said ring against said drum; said cam being constructed to cooperate with said lever to lock or detain the finger-wheel against accidental backward turning movement, and means being provided independent of the rotation of said finger-wheel for regulating the pressure of said split-ring against said drum which is effected by said finger-wheel.

8. In a typewriting machine, the combination with a revoluble platen having an axle, of a line-space wheel loose upon the axle, a ring or drum connected to the line-space wheel, a split-ring within said drum, a collar fixed upon the axle, one end of said ring having a bearing against said collar, a lever pivoted on said collar to bear against the free end of said ring, and a finger wheel loose upon the axle and having a self-binding cam to engage said lever, for expanding said ring within said drum, and to bind said finger wheel against accidental backward or releasing movement.

9. In a typewriting machine, the combination with a revoluble platen having an axle, of a line-space wheel loose upon the axle, a ring or drum connected to the line-space wheel, a split-ring within said drum, a collar fixed upon the axle, one end of

said ring having a bearing against said collar, a lever pivoted on said collar to bear against the free end of said ring, and a finger wheel loose upon the axle and having
 5 a cam to engage said lever, for expanding said ring within said drum, and to lock said finger wheel against accidental backward or releasing movement, said finger wheel having means to engage stops on said collar to
 10 limit the throw of the finger wheel.

10. In a typewriting machine, the combination with a revoluble platen having an axle, of a line-space wheel loose upon the axle, a ring or drum connected to the line-
 15 space wheel, a split-ring within said drum, a collar fixed upon the axle, one end of said ring having a bearing against said collar, a lever pivoted on said collar to bear against the free end of said ring, and a finger wheel
 20 loose upon the axle and having a cam to engage said lever, for expanding said ring within said drum, and to lock said finger wheel against accidental backward or releasing movement, said finger-wheel in the
 25 form of a cap to inclose said drum.

11. In a typewriting machine, the combination with a revoluble platen having an axle, of a line-space wheel loose upon the axle, a ring or drum connected to the line-
 30 space wheel, a split-ring within said drum, a collar fixed upon the axle, one end of said ring having a bearing against said collar, a lever pivoted on said collar to bear against the free end of said ring, and a finger wheel
 35 loose upon the axle and having a cam to engage said lever, for expanding said ring within said drum, and to lock said finger wheel against accidental backward or releasing movement, said finger-wheel in the
 40 form of a cap to inclose said drum and mounted between said line-space wheel and a thumb-wheel which is fixed on the end of the platen axle.

12. In a typewriting machine, the combination with a revoluble platen and a loose
 45 line-space wheel, of a split-ring; a ring or drum in which said split-ring is confined, a finger-piece, and self-binding means between said finger-piece and said split-ring to press
 50 one end of the ring away from the other, to cause the same to expand and bind said ring or drum.

13. In a typewriting machine, the combination with a revoluble platen, of a loose
 55 line-space wheel, a ring or drum connected to one of said elements, a split-ring confined within said drum, a finger-wheel revoluble about the platen axis relatively to the platen and line-space wheel, and self-binding means
 60 controlled by said finger-wheel to expand said split-ring against the interior of the drum, said ring-expanding device including means to bind said finger-wheel against accidental releasing movement.

65 14. In a typewriting machine, the combi-

nation of a revoluble platen, a loose line-space wheel, a ring or drum connected to one of said elements, a split-ring confined within said drum, a support for one end of the split-ring, a revoluble finger-wheel, and
 70 means operated by said finger-wheel and operating at one end of said split-ring to press the ring circumferentially and cause it to expand against the interior of said drum, said support for the end of said ring being
 75 adjustable.

15. In a typewriting machine, the combination with a revoluble platen, of a loose line-space wheel having a ring or drum, a split-ring confined within said drum, a finger-
 80 wheel revoluble about the platen axis relatively to the platen and line-space wheel, a self-binding cam connected to said finger-wheel, a lever operating between said cam and said split-ring to enable the finger-wheel
 85 by its revolution to expand and lock said ring against said drum.

16. In a typewriting machine, the combination with a revoluble platen, of a loose line-space wheel having a ring or drum, a
 90 split-ring confined within said drum, a finger-wheel revoluble about the platen axis relatively to the platen and line-space wheel, a cam connected to said finger-wheel, a lever operating between said cam and said split-
 95 ring to enable the finger-wheel by its revolution to expand said ring against said drum, an adjustable support or abutment being provided for one end of said split-ring.

17. In a typewriting machine, the combination of a revoluble platen and a loose
 100 line-space wheel, of a split-ring, a ring or drum in which said split-ring is confined, a finger-piece, and means between said finger-piece and said split-ring to press one end of
 105 the split-ring away from the other, to cause the same to expand and bind said ring or drum, means being provided independent of the movement of said finger-piece for regulating the pressure of said split-ring against
 110 said drum, which is effected by said finger-piece.

18. In a typewriting machine, the combination with a revoluble platen having an axle, of a line-space wheel loose upon the
 115 axle, a ring or drum connected to the line-space wheel, a split-ring within said drum, a collar fixed upon the axle, one end of said splitting having a bearing against said collar, a lever pivoted on said collar to bear
 120 against the free end of said split-ring, and a finger-wheel loose upon the axle and having a self-binding cam to engage said lever, for expanding and locking said ring within said drum.

19. In a typewriting machine, the combination with a revoluble platen having an axle, of a line-space wheel loose upon the
 125 axle, a ring or drum connected to the line-space wheel, a split-ring within said drum, 130

a collar fixed upon the axle, one end of said split-ring having a bearing against said collar, a lever pivoted on collar to bear against the free end of said split-ring, and a finger-wheel loose upon the axle and having a cam to engage said lever, for expanding said ring within said drum, and means to limit the throw of said finger wheel.

20. In a typewriting machine, the combination of a platen, a loose line-space wheel, a drum, a split-ring confined therein, a support for one end of said split-ring, a lever mounted upon said support to engage the other end of said split-ring, a revoluble self-binding cam to engage said lever to expand said ring, and a finger-piece connected to said cam.

21. In a typewriting machine, the combination of a platen, a loose line-space wheel, a drum, a split-ring confined therein, a support for one end of said split-ring, a lever mounted upon said support to engage the other end of said split-ring, a revoluble self-

binding cam to engage said lever to expand said ring, and a finger-piece connected to said cam, said cam having a portion to bear against said lever at the completion of the expanding movement to lock the finger-piece against accidental releasing movement.

22. In a typewriting machine, the combination of a platen, a loose line-space wheel, a drum, a split-ring confined therein, a support for one end of said split-ring, a lever mounted upon said support to engage the other end of said split-ring, a revoluble cam to engage said lever to expand said ring, and a finger-piece connected to said cam, said support having a member adjustable to regulate the pressure of the split-ring within the drum, and a stop being provided for limiting the throw of the finger-piece.

LOUIS NEY.

Witnesses:

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