G. A. SEIB.

TYPE WRITING MACHINE.

APPLICATION FILED OCT. 17, 1917.

1,259,677.

Patented Mar. 19, 1918.

FIG. 4.

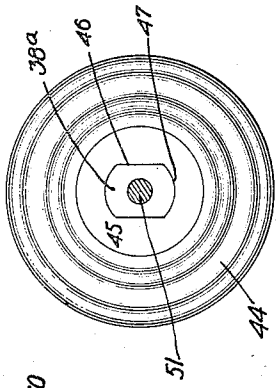


FIG. 5.

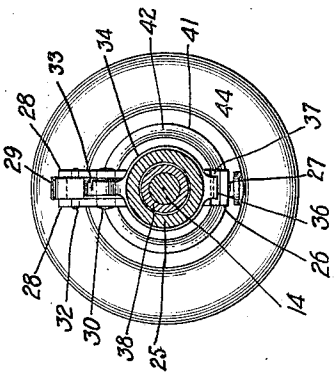


FIG. 1.

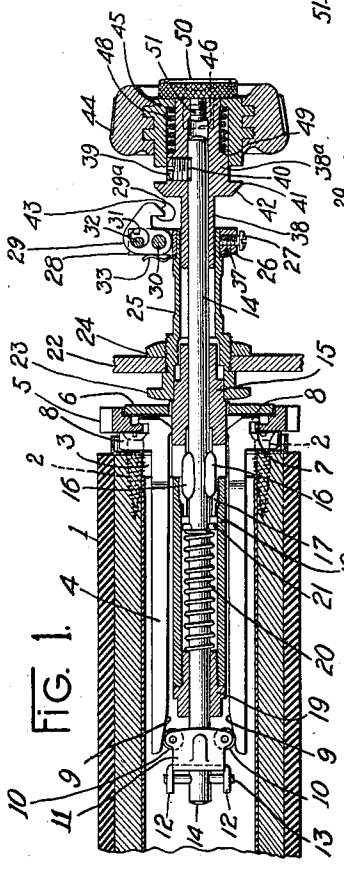


FIG. 2.

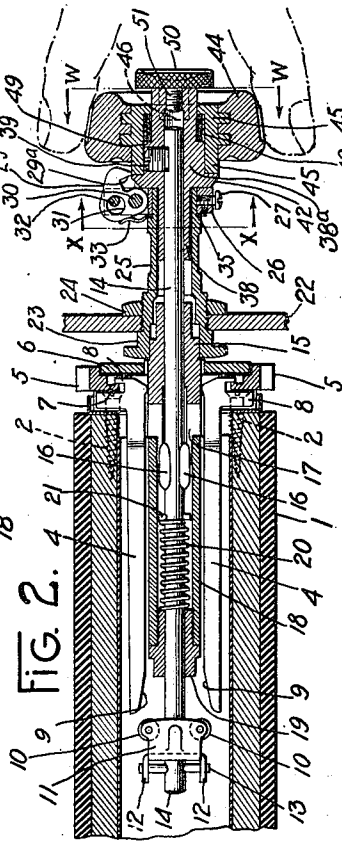
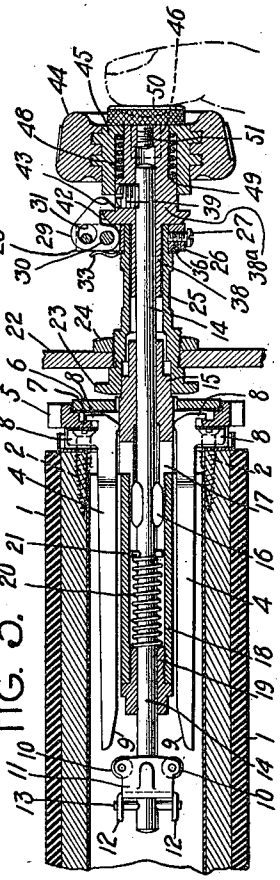


FIG. 3.



WITNESSES

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TYPE-WRITING MACHINE.

1,259,677. Specification of Letters Patent. Patented Mar. 19, 1918.

Application filed October 17, 1917. Serial No. 197,030.

To all whom it may concern:

Be it known that I, GEORGE A. SEIB, citizen of the United States, and resident of Ilion, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to typewriting machines and more particularly to a so-called platen clutch by which the platen and line spacing wheel are connected to turn together, the construction being such that the platen may be turned independently of the line spacing wheel for irregular spacing when the clutch is released.

The present invention relates more particularly to the means for controlling the clutch.

One of the main objects of the invention, generally stated, is to provide simple and efficient means of the character specified.

A further object of the invention is to provide means whereby the operator, in accordance with the exigencies of the work to be produced, may effect a temporary release of the clutch; the clutch remaining released only so long as pressure is maintained on the releasing means; or may effect a locking of the clutch in the released condition, the clutch remaining in this condition indefinitely, or until the operator releases the lock.

A still further object of my invention is to provide means of the character specified which may be readily combined with existing clutch structures without modifying such structures.

To the above and other ends which will hereinafter appear my invention consists in the features of construction, arrangements of parts and combinations of devices set forth in the following description and particularly pointed out in the appended claims.

In the accompanying drawings, wherein like reference characters represent corresponding parts in the various views,

Figure 1 is a fragmentary central longitudinal sectional view of a platen equipped with the devices of my invention, a portion only of the platen frame being shown and the parts being represented as they appear when in the normal position with the line spacing wheel clutched to turn with the platen.

Fig. 2 is a like view of the same except that the parts are represented as they appear when the clutch is released, by the temporary releasing means, for example.

Fig. 3 is a view that corresponds to Fig. 1 except that the parts are represented as they appear when the clutch is locked in the released position.

Fig. 4 is a detail transverse sectional view of the construction taken on the line *w—w* of Fig. 2 and looking in the direction of the arrows at said line.

Fig. 5 is a like view of the same taken on the line *x—x* of Fig. 2 and looking in the direction of the arrows at said line.

In the accompanying drawings I have shown only so much of the platen, the clutch construction, etc., as may be necessary to arrive at an understanding of my invention.

In the present instance I have shown the devices of my invention combined with a platen clutch such as is disclosed in the patent to Oscar Woodward, No. 784,369, dated March 7, 1905, and with which my said devices may be readily combined without modifying said clutch as it is now manufactured. It should be understood, however, that my invention may be as readily combined with other platen clutches and that hence I do not limit myself to the specific character of clutch here disclosed.

The platen, as a whole, is designated by the reference numeral 1. Secured by wood screws 2 to one end of the platen is a platen head 3, formed with slots or cut-outs which receive closely fitting oppositely disposed clamping members, each of which is designated as a whole by the reference numeral 4. A line spacing wheel 5 is mounted to turn on the platen head and is held in position thereon by a cover plate 6 which is detachably secured to the platen head as heretofore. An inwardly extending circular web or flange 7 on the line spacing wheel extends between the oppositely disposed clamping jaws 8 on each of the members 4. The inner

end portion of each member 4 is provided with a cam face 9 which is engaged by an anti-friction roller 10 carried by a controlling member 11. This controlling member has struck up ears 12 perforated to receive a pin 13 carried by and extending transversely of a releasing spindle 14. This spindle is arranged co-axially of the platen and is adapted to move longitudinally thereof in a centrally disposed sleeve or nipple 15 formed as a part of the platen head 3. Splines 16 formed on the spindle are received in spline grooves 17 formed in the sleeve 15, to enable the spindle to move longitudinally of the platen but prevent a relative turning movement between the spindle and platen head, and the platen secured to the latter. A tubular extension 18 is threaded onto the inner end of the nipple 15 and is interiorly threaded at its inner end to receive a cap or bushing 19. This bushing is apertured centrally to receive and guide the spindle 14. A coiled expansion spring 20 surrounds the spindle and bears at one end against the bushing and at its opposite end against a cross pin 21 carried by the spindle. The force of this spring is exerted to move the spindle outwardly to the position shown in Fig. 1 and to move the controlling member 11 between and against the cams 9 of the clamping members 4. The effect of this is to slightly tilt the binding jaws 8 and cause them to grip against the flange 7 of the line spacing wheel thus firmly clamping the wheel and causing it to turn with the platen. An inward longitudinal movement of the spindle against the power of the spring 20 to the position shown in Fig. 2, is effective to carry the controlling member away from the cams 9, thus releasing the clamping members from the force of said spring and releasing them from binding engagement with the line spacing wheel. The platen is at this time free to be turned independently of the line spacing wheel which is held by the ordinary roller detent, not shown.

For the purpose of the present invention any suitable platen clutch may be employed in lieu of that hereinbefore described.

In order that the clutch may be either temporarily held, or locked indefinitely in the released position shown in Figs. 2 and 3 I have devised simple and efficient means which I will now describe.

A portion of one of the end plates of the platen frame which supports the platen is shown at 22. This end plate 22 has a tapped opening in which a bushing 23 is threaded. A lock nut 24 is threaded on the bushing outside the end plate 22 and bears against the latter to hold the bushing firmly in place. This bushing is extended outwardly beyond the platen frame to form a supporting sleeve 25. A supporting bracket is provided with a circular portion 26 which surrounds the sleeve 25 and is fixed thereto by a set screw 27 received in a tapped opening in the part 26 and bearing at its inner end against the sleeve 25. The upper end of the bracket is bifurcated to form two parallel arms 28 between which a locking device, pawl, latch or catch 29 is pivoted at 30. An enlarged opening 31 in the catch receives a stop pin 32 which spans the opening between the arms 28 and is secured at its ends to said arms. A leaf spring 33 forms part of a sheet metal ring 34 which surrounds the sleeve 25 and is held in place thereon between a circumferential shoulder 35 on the sleeve 25 and the circular part 26 of the bracket.

An outwardly projecting tongue 36 is formed on the ring 34, this tongue being received in a recess 37 in the part 26, prevents the ring 34 from turning relatively to the bracket and maintains the spring 33 in proper position to engage the locking device 29.

A hollow spindle 38 is received in and supported by the sleeve 25 and surrounds the releasing spindle 14. This hollow spindle is tapped transversely to receive a set screw 39 which bears at its inner end against a flat face 40 formed on the spindle 14, to fixedly connect the hollow spindle 38 to the releasing spindle. The part 38 is formed with a circular flange or engaging member 41, beveled on its inner side at 42 to form a cam which is adapted to co-act with a bevel or cam face 43 on the locking device 29. A finger piece or wheel 44 is provided with a bushing, sleeve or hub 45 that surrounds and bears on the outer enlarged portion 38^1 of the sleeve 38. Opposite sides of the part 38^a are formed as flat faces 46 and the outer end of the bushing 45 is formed with an opening 47 that conforms to the shape of the outer end of the part 38^a and fits thereover so as to connect the finger wheel 44 and the member 38—38^a to turn together but to enable the finger wheel and its attached bushing to move on the part 38^a longitudinally of the platen. A coiled expansion spring 48 is received in the bushing 45 and surrounds the part 38^a. One end of this spring bears against a shoulder 49 formed on the member 38^a, the opposite end of the spring bearing against the outer head or end of the bushing 45. The force of the spring 48 is therefore exerted to normally maintain the finger wheel 44 in the outermost position on the part 38^a, as shown in Fig. 1. The finger wheel is limited in its independent movement in this direction by a knurled finger piece or button 50. This finger piece has a threaded stem 51 which is received in a tapped opening in the outer end of the member 38—38^a, to fixedly connect the finger piece 50 to said member. The axial move-

ment of the finger wheel 44 inwardly relatively to the finger piece 50 is limited by the inner projecting end of the bushing 45 engaging the flange 41, as shown in Fig. 2. It will be observed that the outer diameter of the inner projecting end of the bushing 45 is co-extensive with that of the flange 41. The construction is such that when the parts are in the normal position, shown in Fig. 1, with the clutch engaged, and pressure is exerted by hand axially on the finger piece 50, said finger piece, the finger wheel 44, the part 38—38ª and the releasing spindle 14 will move together as one part until they assume the positions represented in Fig. 3. This movement of the parts mentioned is limited by the flange 41 abutting the outer end of the sleeve 25 and the bracket 26. From an inspection of Fig. 3 it will be seen that the result of this movement of the parts in question is to bring the bevel face 42 of the circular flange 41 into contact with the cam face 43 of the latch, lifting the hooked end of the latter against the power of the spring 33 until the flange passes to the left of the engaging face 29ª of the latch. The spring 33 will then force the engaging end of the latch into the space between the inner end of the bushing 45 and the outer face of the flange 41, engaging the latter and locking the parts in the released position shown in Fig. 3, and against the power of the spring 20. The parts will remain in this position indefinitely or until they are released by an independent axial movement of the finger wheel 44, as will hereinafter appear. The finger wheel 44 is at this time effective to turn the platen independently of the line spacing wheel. Where irregular spacing of the platen is desired for filling in blanks, etc., it is often desirable to maintain the clutch thus released indefinitely, using the finger wheels instead of the line spacing mechanism to obtain a proper spacing of the platen. When the clutch is released with the aid of the finger piece 50 in the manner described this result may be readily attained.

In order to release the locking means, when the parts are locked as represented in Fig. 3, it is merely necessary to effect an independent axial movement of the finger wheel 44 from the position shown in Fig. 3 to the position represented in Fig. 2. The effect of this independent or relative movement of the finger wheel 44 is to bring the inner end of the bushing 45 into contact with the cam 43 on the locking pawl 29, forcing the latter up out of engagement with the flange 41, as represented in Fig. 2. From an inspection of this figure it will be seen that the space that normally exists between the flange 41 and the inner end of the hub or bushing 45 has been closed whereby the bushing prevents the pawl 29 from reëngaging the flange, the bushing and flange being of the same diameter and in contact at this time. It should be understood that the power of the spring 20 is considerably greater than the power of the spring 48, so that in the return movement of the parts from the Fig. 2 position, the flange 41 will be held against the end of the bushing 45 until the clutch is again engaged. The operator may then release the finger wheel 44 and it will be moved axially by its spring 48 relatively to the flange 41 until it again assumes the Fig. 1 position.

Should the operator desire to temporarily release the clutch and allow it to reëngage after a single adjustment of the platen has been effected, this result may be attained by grasping the finger wheel 44 and moving it first axially and then turning it and the platen until the desired adjustment has been obtained. The effect of this movement of the finger wheel 44 is to first move it axially relatively to the member 38—38ª until the inner end of the bushing 45 engages the flange 41 and closes the space that normally exists between the two. In the further axial movement of the finger wheel 44 to the left, the member 38—38ª, and the releasing spindle 14 secured thereto, will be taken up and these parts will travel together to the releasing position shown in Fig. 2, moving the locking pawl 29 to and maintaining it in the releasing position. The finger wheel may then be turned to obtain the desired adjustment of the platen, and when axial pressure on the finger wheel 44 is relieved, the parts will return to normal positions in the manner hereinbefore pointed out, without allowing the locking pawl to reengage the flange 41.

From the foregoing description it will be understood that I have provided two finger pieces 44 and 50 each of which is operative to release the clutch; that the locking means are effective only when the release of the clutch is effected through the actuation of the finger piece 50; that the actuation of the other finger piece 44 is effective to release the locking means; that the two finger pieces 44 and 50 are mounted for movement together when the release is effected by the finger piece 50, and that one of the finger pieces (namely, 44) is also mounted to move independently of the other for a limited distance; that the locking means are effective when both finger pieces are moved together from normal position, and are ineffective when the clutch is released through the finger piece 44, and an independent movement thereof is first effected; that the locking means operate automatically when the clutch is released by one finger piece; that the locking means are automatically prevented from operating when the clutch is released by an actuation of the other finger

piece; that the inwardly extending end of the hub or bushing 45 constitutes a controlling member that is movable into and out of coöperative relation with the engaging member 41 and thereby determines whether the catch 29 shall be effective to engage the member 41 and lock it against return movement, and is also effective to release the catch from said member 41 if the latter be locked by the catch; that this controlling member is effective on the catch only when said member has received a movement relatively to the releasing spindle 14 and the finger piece 50 connected therewith; that the power of the spring 20 is effective to hold the spindle 14 against a releasing movement until the finger wheel 44 has been moved axially against the pressure of the spring 48 and co-acts with the flange 41, and that the sliding connection between the part 45 and the engaging member 41 enables the gap between these parts to be closed and thus prevents the catch 29 from effecting a locking engagement with the member 41.

It will be seen that I have provided simple and efficient means for controlling the clutch, the controlling means being operative by one hand of the operator to temporarily release the clutch or lock it in the released condition as may be required; the locking being effected automatically at one time and rendered inoperative at another time in accordance with the release of the clutch by one or the other of the two finger pieces employed.

What I claim as new and desire to secure by Letters Patent, is:

1. In a typewriting machine, the combination of a platen, a line space wheel, a clutch for connecting the line space wheel and platen to turn together, two finger pieces each operative to release said clutch, and locking means for locking the clutch released, said locking means being effective only on the actuation of one of said finger pieces.

2. In a typewriting machine, the combination of a platen, a line space wheel, a clutch for connecting the line space wheel and platen to turn together, two finger pieces each operative to release said clutch, locking means for locking the clutch released, said locking means being effective only on the actuation of one of said finger pieces, and means whereby an actuation of the other of said finger pieces is effective to release said locking means.

3. In a typewriting machine, the combination of a platen, a line space wheel, a clutch for connecting the line space wheel and platen to turn together, two finger pieces each operative to release said clutch, said finger pieces being mounted for movement together and to move one independently of the other for a limited distance, and locking means for locking the clutch released, said locking means being effective when both finger pieces are moved together from the normal position and ineffective when the clutch is released through an actuation of said independently movable finger piece.

4. In a typewriting machine, the combination of a platen, a line space wheel, a clutch for connecting the line space wheel and platen to turn together, a finger piece operative to release said clutch, an automatically operating locking device operative to lock the clutch released, and a second finger piece operative to release the clutch and connected with means for preventing said locking device being effective.

5. In a typewriting machine, the combination of a platen, a line space wheel, a clutch for connecting the line space wheel and platen to turn together, a finger piece operative to release said clutch, an engaging member connected with said finger piece, a spring-pressed catch which is adapted to engage said engaging member when said finger piece is actuated, and a second finger piece operative to release the clutch and to prevent said catch from engaging said engaging member.

6. A platen-clutch release and lock comprising an engaging member, an automatically operating catch coöperative with said engaging member to lock the clutch released, and automatically operating means for preventing the catch from moving to locking position and thus rendering said catch ineffective to lock the clutch released.

7. A platen-clutch release and lock comprising an engaging member movable longitudinally of the platen, an automatically operating catch coöperative with said engaging member, and means movable with and also movable relatively to said engaging member to enable an engagement between said member and catch to be effected or to prevent such engagement as may be desired.

8. A platen-clutch release and lock comprising an engaging member in the nature of a circular flange, an automatically operating catch adapted to engage said flange, and a member that is movable into coöperation with the catch to prevent it from effecting a locking engagement with the flange.

9. A platen-clutch release and lock comprising a spindle that is mounted for movement longitudinally of the platen, a finger piece for thus moving the spindle, a circular flange movable with the spindle, an automatically operating catch adapted to engage said flange and lock the spindle against return movement, a second finger piece operable to move the spindle, and means controlled by said second finger piece for controlling the movement of the catch into and out of engagement with said flange.

10. A platen-clutch release and lock com-

prising a spindle that is mounted for movement longitudinally of the platen, a finger piece for thus moving the spindle, a circular flange movable with the spindle, an automatically operating catch adapted to engage said flange and lock the spindle against return movement, a finger wheel movable relatively to and also movable with said spindle, and means connected with said finger wheel and coöperative with said catch to control the movement thereof into and out of locking engagement with said flange.

11. A platen-clutch release and lock comprising a spindle that is mounted for movement longitudinally of the platen, a finger piece for thus moving the spindle, a circular flange movable with the spindle, an automatically operating catch adapted to engage said flange and lock the spindle against return movement, and a sleeve that is movable with and relatively to said flange and is operative to control the movement of the catch into and out of engagement with said flange.

12. A platen-clutch release and lock comprising an engaging member, a catch which is adapted to coöperate therewith, and a controlling member movable into and out of cooperative relation with said engaging member and thereby determine whether the catch shall be effective to engage and lock the engaging member against return movement.

13. A platen-clutch release and lock comprising an engaging member, a catch which is adapted to coöperate therewith, and a controlling member movable into and out of cooperative relation with said engaging member and into the path of movement of the catch in order at will to determine when said catch shall be effective to lock the engaging member and to release the catch from said member if the latter is locked by the catch.

14. A platen-clutch release and lock comprising a movable releasing spindle, an engaging member carried thereby, an automatically operating catch that is adapted to coöperate with said engaging member to prevent a return movement of said member and the spindle, and a controlling member that is movable with and relatively to said spindle and engaging member, said controlling member being effective to control the movement of the catch into and out of engagement only when said controlling member has received a movement relatively to the engaging member and spindle.

15. A platen-clutch release and lock comprising a movable releasing spindle, an engaging member carried thereby, an automatically operating catch that is adapted to coöperate with said engaging member to prevent a return movement of said member and the spindle, a controlling member that is movable with and relatively to said spindle and engaging member, said controlling member being effective to control the movement of the catch into and out of engagement only when said controlling member has received a movement relatively to the engaging member and spindle, and means other than said controlling member for moving said spindle.

16. A platen-clutch release and lock comprising a movable releasing spindle, an engaging member carried thereby, an automatically operating catch that is adapted to coöperate with said engaging member to prevent a return movement of said member and the spindle, a controlling member that is movable with and relatively to said spindle and engaging member, said controlling member being effective to control the movement of the catch into and out of engagement only when said controlling member has received a movement relatively to the engaging member and spindle, and a spring which returns said controlling member to normal position relatively to said engaging member.

17. A platen-clutch release and lock comprising a movable releasing spindle, a spring which holds said spindle in the locking position, an engaging member carried by the spindle, an automatically operating catch that is adapted to coöperate with said engaging member to prevent a return movement of said member and the spindle under the power of said spring, a controlling member that is movable with and relatively to said spindle and engaging member, and which is movable into and out of coöperative relation with said catch, and a second spring for returning said controlling member to normal position relatively to said engaging member and spindle, said second spring being weaker than the first mentioned spring so that the controlling member may be moved before the spindle is displaced from normal position.

18. In a typewriting machine, the combination of a platen, a line spacing wheel, a clutch for connecting the line spacing wheel and platen to turn together, a movable releasing spindle which extends longitudinally of the platen, an engaging member carried by said spindle, a catch carried by the platen frame and operative automatically to engage said member and lock the spindle against return movement, a finger piece for moving said spindle, a finger wheel mounted to move said spindle and also to move relatively thereto, and means carried by said finger wheel and brought into use by the said relative movement of the finger wheel for controlling the movement of the catch into and out of engagement with said engaging member.

19. A platen-clutch release and lock comprising a movable engaging member, an automatically operating catch coöperative with said member to lock the clutch re-

leased, and a controlling member normally spaced away from said engaging member but having a sliding connection therewith to close the gap between the two and prevent the catch from effecting a locking engagement with said engaging member.

Signed at Ilion, in the county of Herkimer and State of New York, this 10th day of October, A. D. 1917.

GEORGE A. SEIB.

Witnesses:
LINNIE F. BURNETT,
MARY C. GLEASON.