

E. H. BERRY.
 TYPE WRITING MACHINE.
 APPLICATION FILED FEB. 21, 1908.

997,537.

Patented July 11, 1911.

FIG. 1.

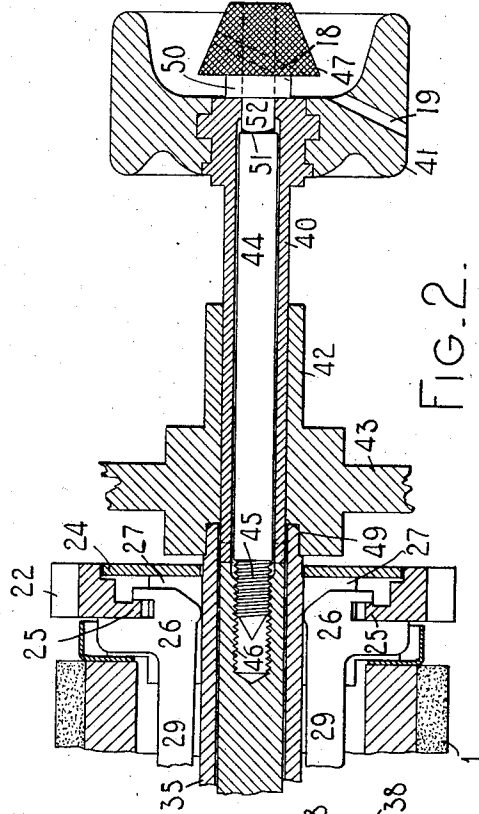
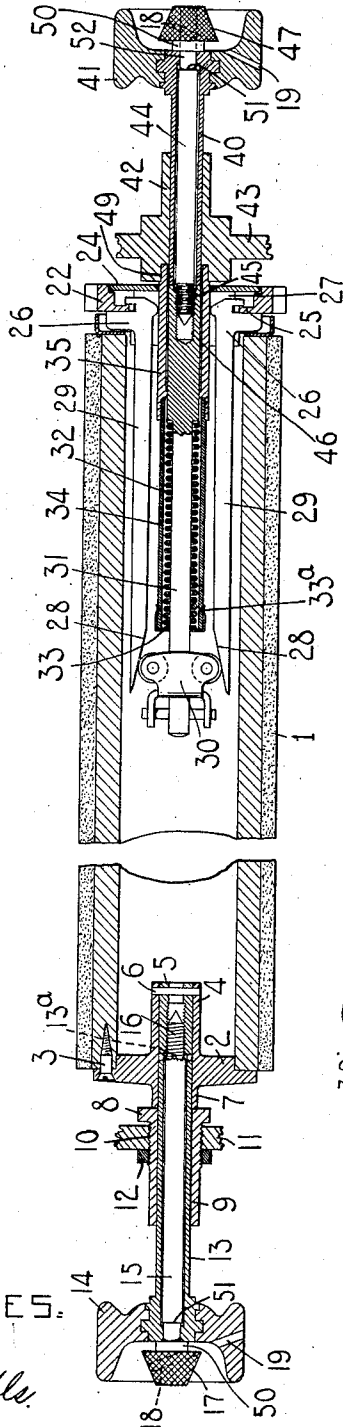


FIG. 2.

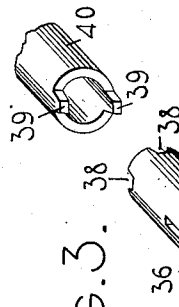


FIG. 3.

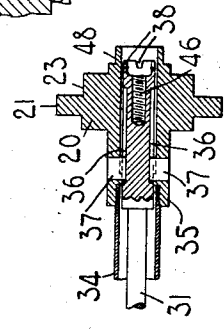


FIG. 4.

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UNITED STATES PATENT OFFICE.

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TYPE-WRITING MACHINE.

997,537.

Specification of Letters Patent. Patented July 11, 1911.

Application filed February 21, 1908. Serial No. 417,180.

To all whom it may concern:

Be it known that I, EDGAR H. BERRY, citizen of the United States, and resident of the borough of Brooklyn, city of New York, in the county of Kings 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 means for effecting a connection or disconnection between the line spacing wheel and platen, and to means for readily removing the platen from the platen frame when desired, and the object of said invention is to provide improved means of the character specified.

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

In the drawings, Figure 1 is a central longitudinal sectional view taken through a platen with the devices of my invention embodied therein. Fig. 2 is an enlarged detail sectional view corresponding to Fig. 1 and showing some of the parts illustrated at the right in Fig. 1. Fig. 3 is an enlarged detail perspective view of certain of the devices to be hereinafter more fully described. Fig. 4 is a detail fragmentary central longitudinal sectional view taken through the right-hand platen head, the section being taken at right angles to the plane of the section of Figs. 1 and 2.

The present invention from certain aspects thereof is in the nature of an improvement on the structure disclosed in the patents to Oscar Woodward, dated March 7th, 1905, Nos. 784,368 and 784,369.

A cylindrical platen 1 is provided at the left-hand end thereof with a platen head 2 secured to the core of the platen by wood screws 3. This platen head has an inwardly extending nipple 4 with an internally threaded sleeve, nipple or bushing 5 secured

therein by a pin 6. An outwardly extending hub 7 is formed on the platen head and bears at its outer end against a collar 8 formed on a sleeve 9 threaded at 10 for cooperation with a tapped opening in the left-hand end bar 11 of a platen frame. A lock nut 12 coöperates with the threads 10 on the sleeve on the opposite side of the end bar 11 of the platen frame, in order to secure the sleeve in its adjusted position. The collar or head 8 of the sleeve may be squared or of hexagonal form in order to afford an adjustment of the sleeve in the end bar. This adjustable sleeve takes the thrust of the platen toward the left and affords means for effecting an adjustment to prevent endwise movement of the platen in the platen frame and to compensate for wear. The sleeve 9 receives and constitutes a bearing for a hollow spindle or sleeve 13 having a finger wheel 14 secured to the outer end thereof. The inner end of the sleeve 13 is provided with projections 13^a (Fig. 1) similar to the projections 39 in Fig. 3 for coöperation with indentures formed in the outer end of the bushing or nipple 5 in order to form an interlocking engagement with said nipple to prevent the hollow spindle or sleeve 13 from turning relatively thereto so that when the sleeve 13 and bushing 5 are in interlocking engagement the finger wheel and platen will be locked to rotate together. A screw or rod 15 is threaded at its inner end 16 for cooperation with the internal threads of the bushing 5. This rod extends axially of the platen through the sleeve 13 and through the platen head and has a knurled head or thumb piece 17 secured thereto by a pin 18.

The parts are assembled by first inserting the screw or rod 15 into the sleeve 13 through the inner end thereof so that its outer reduced end will extend beyond the finger wheel. The knurled head 17 may then be mounted in place on the end of the rod, the reduced end of the rod projecting into a central opening in the knurled head. A drill may then be employed to form a hole 19 through the finger wheel and through the

knurled head and rod 15. The pin 18 is then inserted through the opening 19 and is forced into the alined openings in the knurled head and rod, thus locking the head and screw or rod together. In order to remove the left-hand finger wheel 14 from the platen and to disconnect the left-hand end of the platen from the platen frame it is merely necessary to unscrew the screw rod 15 from its nipple 5 and withdraw the sleeve or spindle 13 from the bearing in the platen head and from the bearing 9 in the platen frame and the left-hand end of the platen is no longer supported.

The right-hand platen head 20 is secured to the core by wood screws (not shown) which pass through holes in a flange 21 and into the core of the platen. A line spacing wheel 22 receives a bearing in a cylindrical surface 23 of the platen head and is held against removal by a cover plate 24 secured to the outer face of the platen head by machine screws. The line spacing wheel is provided with an inwardly projecting flange 25 which is engaged by clamping devices or jaws 26 received in slots 27 cut in the platen head longitudinally of the platen. The beveled faces 28 on the arms 29 of the clamping devices are acted upon by a controlling device 30 connected to a hand actuated spring-pressed releasing spindle 31. The clamping devices for connecting and disconnecting the line spacing wheel and platen are essentially the same as those disclosed in the Woodward patents hereinbefore referred to and further description thereof is deemed unnecessary. While I prefer to employ clamping means such as those shown, yet from certain aspects of the invention any suitable engaging means may be employed. The spindle 31 is surrounded by a coiled expansion spring 32 which bears at one end against an annular shoulder on the spindle 31 and at the other against a cap 33 secured to a cylindrical housing 34 by springing or compressing the sides of the sheet metal cap at 33^a into a circumferential groove in the housing 34. The housing is externally threaded at its outer end for coöperation with an inwardly projecting nipple 35 on the platen head. The spindle 31 has spline grooves 36 on opposite sides thereof (see Figs. 3 and 4) for coöperation with splines 37 which project inwardly from the nipple 35 to afford a longitudinal movement of the spindle in the nipple and through a central bearing opening in the platen head but to lock the spindle and platen head against relative rotation. The outer end of the spindle is recessed at 38 for coöperation with projections 39 on a sleeve 40 in order to form an interlocking connection between the sleeve and spindle to cause the two to rotate together. The sleeve 40, like the sleeve 13 at the other end of the platen, is connected

with a finger wheel 41 and is received in a bearing 42 in the right-hand end bar 43 of the platen frame. A rod or screw 44 passes axially through the finger wheel 41 and through the sleeve 40 and is threaded at its inner end 45 for coöperative engagement with a tapped opening 46 in the outer end of the spindle 31. The rod 44 is connected to its finger wheel 41 in a similar manner to the rod at the left-hand end of the platen and is also provided with a knurled head or thumb piece 47 by which it may be turned in order to disengage the screw from the actuating spindle 31. The platen head 20 has an outwardly projecting hub 48 which is received in a bearing 49 in the right-hand end bar of the platen frame.

In order to release the clutching devices 20 from engagement with the line spacing wheel, it is merely necessary to move the right-hand finger wheel 41 toward the platen and against the pressure of the spring 32, thus moving the controlling device 30 to the left and relieving the pressure of the spring 32 on the arms 29 of the clamping jaws which is effective to free the clamping or clutching devices from the line spacing wheel and the platen may at this time be rotated independently of said wheel either by the finger wheel 41 or the finger wheel 14. When pressure is released upon the finger wheel 41, the spring 32 will force the spindle 31 to the right, thus exerting the spring pressure through the controlling device 30 on the arms 29, which pressure is effective to connect the line spacing wheel to the platen through the clutching devices 26. In order to remove the platen from the platen frame, it is merely necessary to loosen the screws 15 and 44 and to effect an endwise withdrawal of the sleeves 13 and 40 from their bearings in the platen frame, when the platen may be removed.

From the foregoing description it will be seen that the screws 15 and 44 not only connect the finger wheels to the platen and maintain an interlocking engagement therewith through the connecting means 13^a, 38 and 39, but that they also constitute the sole means for preventing the platen from being removed or dismantled from the platen frame. The screw 44 likewise constitutes means for connecting the right-hand finger wheel with a spindle 31 and with the devices for releasing the connections between the line spacing wheel and the platen. It will likewise be seen that these screws 15 and 44 extend axially of the platen and pass through the finger wheels and the sleeves connected therewith and engage with means connected with the platen. The withdrawal of each screw from the finger wheel and the sleeve connected therewith is prevented by a collar 50 formed on each of the knurled heads of the spools and by a cir-

cumferential shoulder 51 formed on the screw by reducing the outer end of each of the screws at 52, the shoulder 51 cooperating with a shoulder formed by making the bore of the sleeve of less diameter near its outer end. This connection prevents, as hereinbefore stated, the withdrawal of the screws from the sleeves and finger wheels but enables the screws to be turned independently thereof.

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

1. In a typewriting machine, the combination of a platen, finger wheels therefor, a thumb screw carried by one of said finger wheels and mounted thereon so that it is free to rotate therein, said screw extending axially of the platen and adapted to be connected therewith to retain the platen in the platen frame, and means for retaining the screw in place in the finger wheel when said screw is loosened from the platen.

2. In a typewriting machine, the combination of a platen, a platen frame, a hollow spindle, locking means carried by the platen and with which said spindle is adapted to have an interlocking engagement to cause the spindle and platen to rotate together, and a screw that passes through said hollow spindle and engages a part carried by the platen and maintains the hollow spindle in interlocking engagement with its locking means and prevents the dismounting of the platen from its platen frame.

3. In a typewriting machine, the combination of a platen, a line spacing wheel, means for connecting and disconnecting said platen and line spacing wheel at will, said connecting means comprising clutch devices, a spindle for actuating said clutch devices, a finger wheel for turning the platen and for moving said spindle to actuate the clutch devices, a sleeve connected with said finger wheel, interlocking connections between the end of said sleeve and said spindle, and a screw which passes through said sleeve and engages in a tapped opening in said spindle.

4. In a typewriting machine, the combination of a platen, a platen head with a central opening therein, a line spacing wheel mounted to turn on said platen head, clutch devices for connecting the platen and line spacing wheel to turn together and to afford a rotation of the platen independently of the line spacing wheel, a spindle for actuating said clutch devices, said spindle moving axially of the platen in the central opening in said platen head, a sleeve separate from but having an interlocking connection with said spindle, a finger wheel connected with said sleeve, and a screw which passes through said sleeve and is threaded into the spindle and connects the sleeve therewith.

5. In a typewriting machine, the combination of a platen frame, a platen, sleeves

which receive a bearing in the platen frame, finger wheels, screw rods which pass through said sleeves and connect them with the platen, a line spacing wheel, and clutch devices for connecting the platen and line spacing wheel to turn together or to permit the platen to turn independently of the line spacing wheel, one of said screw rods connecting the associated finger wheel with said clutch devices.

6. In a typewriting machine, the combination of a platen frame, a platen, sleeves which receive a bearing in the platen frame, and screw rods that pass through said sleeves and connect them to the platen, said screw rods being connected against removal from but adapted to turn relatively to said sleeves.

7. In a typewriting machine, the combination of a platen, a platen head with a central opening therein, a line spacing wheel mounted to turn on said platen head and having an inwardly projecting flange, clutching jaws cooperative with said flange for connecting the platen and line spacing wheel to turn together and to afford a rotation of the platen independently of the line spacing wheel, a spindle for controlling said clutching jaws, said spindle moving axially of the platen in the central opening in said platen head, a sleeve separate from but having an interlocking connection with said spindle, a finger wheel connected with said sleeve, and a screw which passes through said sleeve and is threaded into the spindle and connects the sleeve therewith.

8. In a typewriting machine, the combination of a platen frame, a platen having one platen head formed with an internally threaded boss or nipple journaled in the platen frame and the other platen head formed with a central opening, hollow spindles projecting through the platen frame at opposite ends thereof and into said opening and threaded nipple, a finger wheel connected with each of said spindles, and a connecting device that passes through each of said finger wheels and spindles and connects the spindles to the platen and enables the platen to be removed from the platen frame when desired.

9. In a typewriting machine, the combination of a platen frame, a platen having one platen head formed with an internally threaded boss or nipple journaled in the platen frame and the other platen head formed with a central opening, hollow spindles projecting through the platen frame at opposite ends thereof and into said opening and threaded nipple, a finger wheel connected with each of said spindles, a connecting device that passes through each of said finger wheels and spindles and connects the spindles to the platen and enables the platen to be removed from the platen frame when

desired, and a bearing device carried by the
 platen frame and adjustable longitudinally
 of the platen, said bearing device cooperating
 with the platen head at the opposite end
 5 of the platen from that which carries the
 internally threaded boss or nipple.
 Signed at the borough of Manhattan, city

of New York, in the county of New York,
 and State of New York, this 20th day of
 Feb. A. D. 1908.

EDGAR H. BERRY.

Witnesses:

FRANCIS E. VAN BUSKIRK,
 CHARLES E. SMITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
 Washington, D. C."
