Feb. 19, 1924. 1,484,203

E. E. BARNEY

TYPEWRITING MACHINE

Filed Dec. 30, 1922 2 Sheets-Sheet 1

Fig. 3

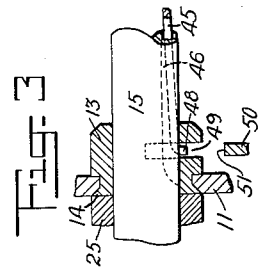


Fig. 4

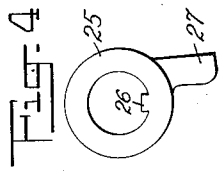


Fig. 2

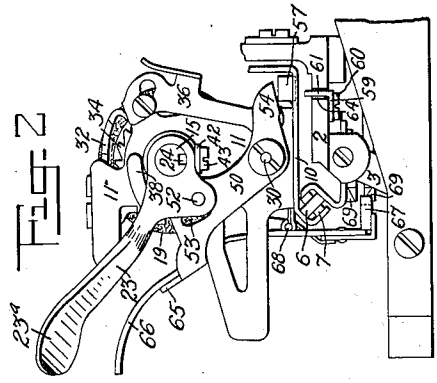
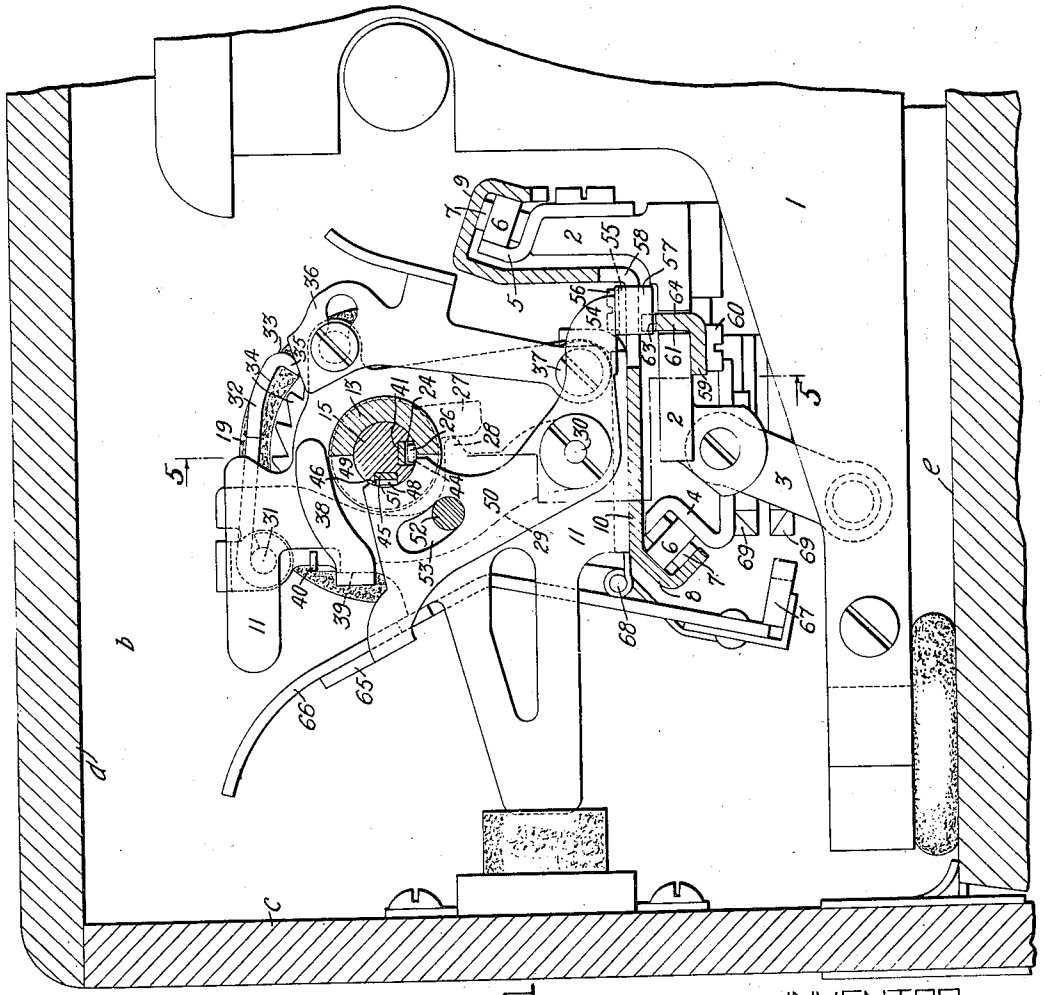


Fig. 1



WITNESSES

E. M. Wells.

Charles E. Smith

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By Jacob Felbel

HIS ATTORNEY

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2 Sheets-Sheet 2

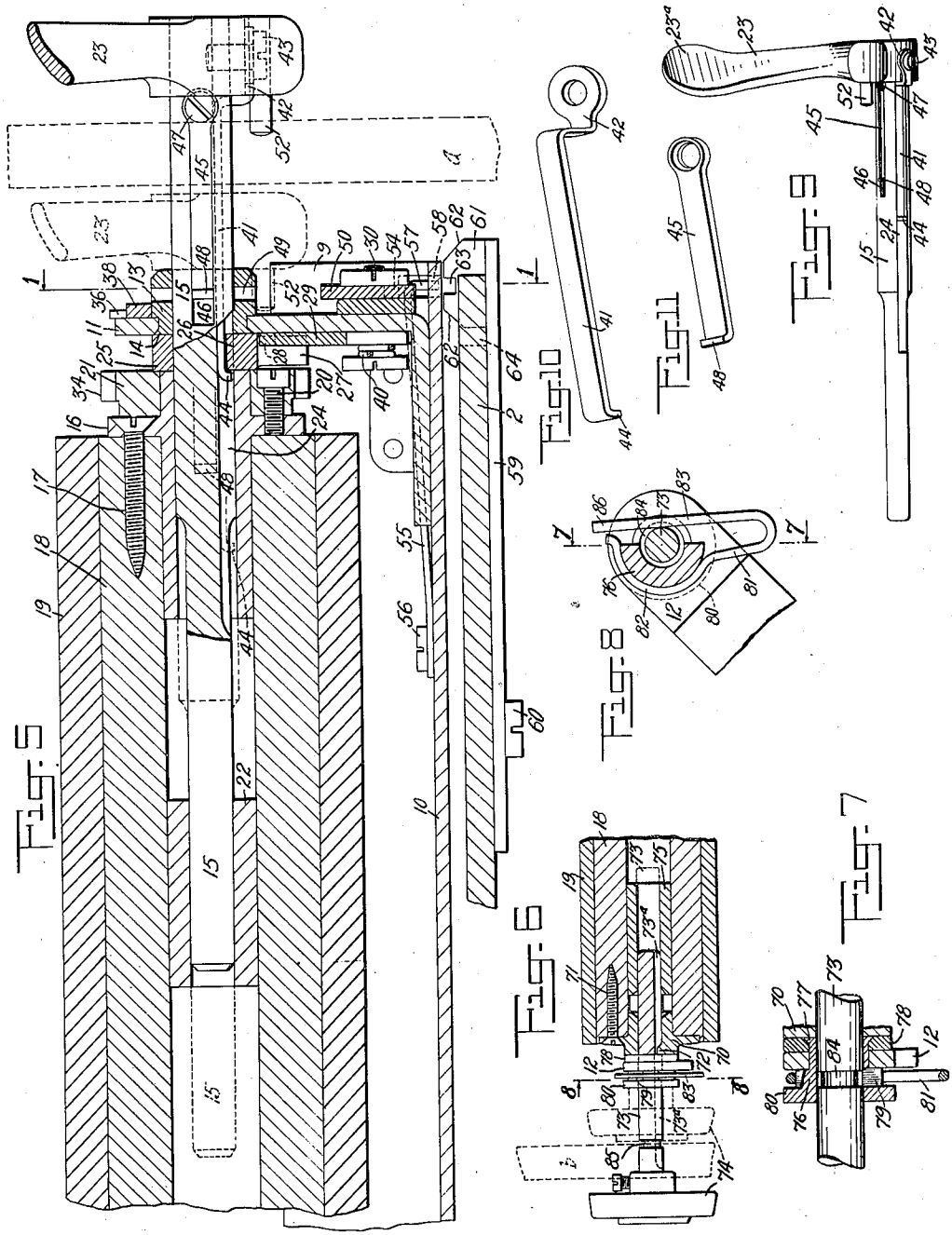


Fig. 5

Fig. 6

Fig. 7

Fig. 8

Fig. 10

Fig. 11

Fig. 9

WITNESSES

E. M. Wells.

Charles E. Smith

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Edwin E. Barney

By Jacob Felbel

HIS ATTORNEY

Patented Feb. 19, 1924. 1,484,203

UNITED STATES PATENT OFFICE.

EDWIN E. BARNEY, OF NEW ROCHELLE, NEW YORK, ASSIGNOR TO REMINGTON TYPEWRITER COMPANY, OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

TYPEWRITING MACHINE.

Application filed December 30, 1922. Serial No, 610,057.

To all whom it may concern:

Be it known that I, EDWIN E. BARNEY, citizen of the United States, and resident of New Rochelle, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Typewriting Machines, of which the following is a specification.

My invention relates to typewriting or like machines and more particularly to small compact machines of the so-called portable class.

The objects of my invention, generally stated, are to improve various features of such machines, as will hereinafter appear.

The invention consists in the features of construction, arrangements of parts and combinations of devices, as set forth in the following description and particularly pointed out in the appended claims.

In the accompanying drawings wherein like reference characters indicate corresponding parts in the different views.

Fig. 1 is an enlarged, fragmentary, detail left-hand end elevation of the machine and the closed carrying case, with parts in section, the section being taken on the line 1—1 of Fig. 5 and looking in the direction of the arrows at said line.

Fig. 2 is a corresponding end elevation of the machine, with the parts thereof conditioned for use.

Fig. 3 is an enlarged, detail horizontal sectional view through the center of the left hand bearing of the platen, showing the line spacing spindle locked in its extended position.

Fig. 4 is a detail side view of the line spacing actuating crank arm member.

Fig. 5 is an enlarged, detail, vertical fragmentary sectional view of the left hand portion of the carriage; the section being taken on the line 5—5 of Fig. 1 and looking in the direction of the arrows at said line.

Fig. 6 is a sectional detail taken centrally of the platen at the right hand end portion thereof.

Fig. 7 is an enlarged, fragmentary, detail, sectional view of the bearing for the right-hand end of the platen; the section being taken on the line 7—7 of Fig. 8 and looking in the direction of the arrows at said line.

Fig. 8 is an enlarged, detail, fragmentary, sectional view of the parts represented in Fig. 7, the section being taken on the line 8—8 of Fig. 6 and looking in the direction of the arrows at said line.

Fig. 9 is a detail rear elevation of the line spacing handle and spindle shown detached.

Figures 10 and 11 are detail isometric views of the stop member and spring detent respectively.

I have shown my invention in the present instance embodied in a Remington portable machine and from certain aspects the invention may be said to be in the nature of an improvement on features of construction of such machine disclosed in the application of Joseph B. Holden, Sr. No. 547,128, filed March 27, 1922. It should be understood, however, that the invention is not restricted to embodiment in such machines but may be employed wherever found available in typewriting or like machines.

In the Remington portable machine, and as disclosed in said Holden application, the carriage as a whole is mounted on a support secured to a case shift frame, and a carriage center lock is employed to lock the carriage in a centered position in its line of travel on said support. This is to enable the close fitting cover of the case to be placed over the machine and locked in its closed position. A finger wheel for the platen in such machine is mounted for movement from a compact to an expanded position and vice versa, and through intermediate devices coacts with the center lock and the carriage release and will prevent the cover from being placed on the machine unless the machine is properly conditioned to receive it.

By my present invention, I provide an improved line space mechanism including an actuating finger piece, arm or handle that is movable from a compact position to an expanded position for use where it may be operated with greater facility. Said finger piece coacts with a center lock to maintain it effective or render it ineffective, depending on the position of the finger piece, and likewise to maintain the carriage free from restraint of its feed mechanism, or enable the carriage to be held by its escapement mecha-

nism, depending on whether the center lock is maintained effective or ineffective. I also provide means whereby the construction in question contributes to the ready removal of the platen when desired.

In the accompanying drawings, I have shown only so much of the Remington portable machine as is necessary to arrive at an understanding of my invention in its embodiment therein. Such machine includes a frame 1 on which a carriage support 2 is mounted for fore-and-aft case shifting movement on parallel arms, one of the rear set of which is indicated by the reference numeral 3 in Fig. 1. The carriage support includes sheet metal guide rails 4 and 5 grooved to receive crossed rollers 6 and 7 that bear on tracks 8 and 9 formed in the main sheet metal body portion 10 of the carriage. End plates 11 and 12 of the carriage are secured to and project upwardly from the member 10 thereof; one (11) at the left-hand end of the carriage and the other (12) at the right-hand end thereof. A bearing member or bushing 13 is seated in an opening in the left-hand end plate 11 and is fixed therein by riveting the bushing as at 14. The bushing has a central bearing opening to receive and form a bearing for a line spacing spindle or shaft 15 that extends through said bushing and into a platen head 16, secured by screws 17 to the core 18 of a platen 19. Screws 20 secure a line spacing wheel 21 to the platen head 16. Within the core of the platen is mounted a bearing sleeve 22 in which the inner end portion of the spindle 15 receives a bearing. The outer end of the spindle has fixed thereto a finger piece or handle 23 which I prefer to make in the nature of a crank arm projecting laterally from the spindle 15 and shaped somewhat as shown, for reasons which will hereinafter appear. The spindle 15 is formed with a spline groove 24. A hub of an actuating member 25 shown in detail in Fig. 4, is supported on the spindle 15 intermediate the end plate 11 and the platen head 16, as shown in Fig. 5. This hub has an inwardly extending projection 26 that extends into the spline groove 24 in the spindle to cause the spindle and hub to turn together but permit the spindle to move longitudinally independently of the hub. Projecting from the hub of the member 25 is a downwardly extending crank arm 27 for actuating the line spacing pawl, as will hereinafter appear. This arm 27 coacts with a projection 28 extending forward from a sheet metal lever or pawl carrier 29 pivoted by a shouldered pivot screw 30 on the end plate 11. The upper end of the lever 29 carries a pivot 31 on which a line spacing pawl 32 is mounted, the hook-like engaging nose 33 of the pawl being adapted to engage the teeth 34 of the line spacing wheel 21. The line spacing pawl carries an off-set integral projection 35 that normally rests on a regulating device 36 pivoted at 37 on the end plate 11, and the adjustment of which regulating device determines the extent of line spacing movement transmitted to the line spacing wheel and platen as pointed out in the patent to Herbert E. Bridgwater, No. 1,375,772, dated April 26, 1921. The lever 29 which carries the line spacing pawl has a finger 38 bent to the left and then forwardly therefrom to embrace the end plate 11 and assist in guiding the arm 29, and also to coact with the end plate at 39 (see Fig. 1) to limit the movement of the lever arm 29 to normal position. A spring 40 is coiled around the pivot screw 30 and bears at one end against the lever 29 to return it to normal position.

The manner of mounting the left-hand end of the platen on the spindle 15 enables the platen and spindle to turn each independently of the other; although in the line spacing operation, a clockwise motion of the spindle as the parts are viewed in Fig. 1, effects an anti-clockwise movement of the line spacing wheel and platen. Moreover, as hereinbefore indicated, the spindle 15 with the attached handle 23 may be moved axially from a compact position close to the carriage, as shown in dotted lines in Fig. 5, to an expanded position, shown in full lines, where the handle may be operated with greater facility. It will be seen from an inspection of this figure that when the handle is in the compact dotted line position it may be received within the close fitting cover of the carrying case, one side wall *a* of which is indicated in dotted lines in this figure. On the other hand, when the handle and spindle is in the expanded full line position for use, the spindle will extend in the path of the cover and prevent it from being placed in position. The cover in addition to the side wall *a* includes an opposite side wall *b*, a rear wall *c*, a top wall *d* and a bottom wall or baseboard *e*.

In order that the spindle 15 may be limited in its outward movement to the full line position in Fig. 5, I have provided arresting means which in the present instance comprise an arresting member shown in detail in Fig. 10. This member is in the nature of a sheet metal strip 41 seated in the spline groove 24 in the spindle. The left-hand end portion of this strip 41 is bent to enable an eye 42 therein to pass beneath the hub of the handle 23 and be secured thereto by a headed screw 43. In the present instance, I also employ this screw 43 to secure the line spacing handle to the spindle. The inner end of the strip 41 is bent at right angles to the length thereof to form a stop projection 44 that remains in the groove 24. As shown in Fig. 5, this stop 44 will be brought into contact with the inwardly ex-

tending projection 26 on the actuating member 25 when the spindle is moved outwardly to the full line position, and prevent further outward movement thereof so long as the strip 41 remains fastened to the spindle by the screw 43.

I have provided an additional releasable means for locking the spindle, not only against further outward movement from the full line position but also against an accidental inward telescoping movement thereof in the platen to the compact dotted line position, shown in Fig. 5. Said means in the present instance comprises a catch, latch, spring detent or holding member 45, shown in detail in Fig. 11. This detent is received within a slot or groove 46 extending longitudinally of the spindle 15, and is secured at one end in said groove by a screw 47. The inner free end of the leaf spring which constitutes the detent is bent at right angles to provide a locking projection 48. This projection normally is confined within the slot 46 by the bearing walls in which the spindle is received and along which the projection is adapted to move longitudinally as well as to receive a turning movement therein with the spindle. However, when the spindle reaches the full line position shown in Fig. 5, the locking projection is free to spring into a registering locking recess or slot 49 in the spindle bearing 13, as best shown in Figs. 1 and 3. So long as the locking projection 48 remains in the locking recess 49, the spindle remains locked against longitudinal movement either outwardly or inwardly from its position of use, although said projection is free to move along the slot 49 so as not to interfere with a turning or oscillating movement of the spindle.

I have provided means whereby the locking detent 45 may be released at will to enable the spindle to be moved inwardly to compact position, from the full line Fig. 5 position, but not outwardly from said position, since this cannot be done without removing the screw 43 which holds the stop 44 in position, as hereinbefore explained. The releasing means for the detent 45, in the present instance, comprises a sheet metal plate 50 pivoted on the end plate 11 by the pivot screw 30, as best shown in Fig. 1. The thickness of this plate is slightly less than the width of the slot 49 so that it may enter said slot. A curved contact edge 51 of the plate is adapted to be brought to bear against the edge of the locking projection 48 and force it against the pressure of the spring of the body portion of the member 45 into the groove 46 in the spindle, where it clears the side walls of the locking slot 49, as shown in Fig. 1. As long as the releasing plate 50 is held in this position the locking projection 48 is prevented from entering the locking slot 49, and the spindle 15 is therefore free to be shifted back and forth from the full to the dotted line positions shown in Fig. 5.

In the present instance I have provided means for locking the releasing plate 50 in its releasing position, and have combined with it other devices which are dependent for operation on said plate. Thus, I provide the line spacing handle 23 with an inwardly projecting locking pin 52 parallel with the spindle 15. When the handle is moved into compact position this pin enters an arc-shaped slot 53 in the releasing plate, should said plate happen to be in the releasing position, shown in Fig. 1. Otherwise the handle 23 cannot be moved in far enough to clear the wall *a* of the cover. The full inward movement of the handle carries the pin 52 into the slot 53, as above explained, and clears the cover. This locks the releasing plate 50 against return movement from its releasing position and it remains thus locked until the handle 23 is moved outwardly to its position for use. An outward movement of the handle results in withdrawing the pin 52 from the slot 53 in the locking plate, and allows the latter to return to its normal position, so that by the time the locking projection 48 reaches the locking slot 49 and registers therewith, said projection will be forced by its spring into the slot 49 and lock the spindle against longitudinal displacement.

It will be seen that when the locking plate 50 is in the position shown in Fig. 1, the slot 53 therein is in an arc of which the axis of the spindle 15 is the center. It follows therefore that the pin 52 entering the lower end of the slot 53 will not prevent the spindle 15 from being turned in a clockwise direction, as the parts appear in Fig. 1, although the plate 50 will be held by the pin against return movement irrespective of the position of the pin along the slot. By reason of this construction, and the maintained connection between the spindle 15 and the line space actuating member 25 in either longitudinal position of the spindle 15, the line spacing handle is effective to line space the platen in either the contracted dotted line position, or in the expanded full line position of the handle shown in Fig. 5.

I have provided a center lock by which the carriage may be locked to its support in a centered position in the line of travel of the carriage. The effectiveness of this lock is controlled in the present instance by the plate 50 and the position of the line spacing handle. Thus, I extend the plate 50 forward beyond its pivot 30, as indicated at 54. This extension 54 constitutes a controlling arm that coacts with a separately mounted locking member in the nature of a leaf spring 55, anchored at one end of the body portion 10 of the carriage by a screw

56 and tensioned upwardly away from such body portion of the carriage at the free end portion of the spring, as indicated in Figs. 2 and 5. The free end of the spring is bent down to form a locking projection 57 received in a registering slot 58 in the carriage body. A companion locking member, designated as a whole by the reference numeral 59, comprises a strip of spring metal anchored at one end to the bottom of the carriage support 2 by a screw 60, and provided at its free end with an upwardly extending projection 61 having oppositely beveled edges 62 and an intermediate locking recess 63. The locking projection 61 extends upwardly through a slot 64 in the carriage support 2, and is normally maintained by the tension of its spring in its uppermost position, shown in Fig. 5, clear of the member 61. I have provided a finger piece 65 on the plate 50 by which said plate may be moved from the Fig. 2 to the Fig. 1 position. The effect of this movement is not only to release the locking detent 45, should the handle 23 be in the expanded position as hereinbefore explained, but also to depress the free end of the spring 55, moving the locking projection 57 into cooperative relation with the locking member 59. With the parts maintained in this condition, a movement of the carriage from an off-centered position at either right or left to a centered position will bring about an interlocking engagement between the locking projection 57 and the locking member 59, thereby locking the carriage against movement in either direction from its centered position. It will be understood that the only time that it is necessary to move the plate 50 from the normal position shown in Fig. 2, to the Fig. 1 position, is when the machine is to be conditioned for enclosure within the closely fitting cover of the carrying case. When this movement of the plate 50 is effected as explained, and while it is still held by hand in the Fig. 1 position, the line spacing handle 23 is shifted to the right towards the platen, and from the full to the dotted line position in Fig. 5 This results in moving the pin 52 into the slot 53 in the plate 50 as shown in Fig. 1; locking the latter against return movement, and maintaining the center lock effective so long as the line spacing handle is maintained in compact position.

I prefer to utilize this same movement of the plate 50 to release the carriage from the restraint of its feed mechanism. To this end the finger piece 65 is bent to the right so as to extend back in the rear of the usual hand actuated carriage releasing arm 66. This arm is fastened to the usual spring pressed feed rack 67 pivotally supported at 68 on the carriage, and cooperative with the usual feed dogs 69 actuated in the usual manner at each printing operation and also by the space key.

From this construction it follows that a movement of the plate 50 from the Fig. 2 to the Fig. 1 position, in addition to rendering effective the center lock and releasing the detent 45 to enable the line spacing handle to be moved to contracted position, also releases the feed rack and prevents injury to the escapement mechanism from shocks or jars to which the machine may be subjected while being transported in its carrying case.

In order to condition the machine for use so far as the parts thus far described are concerned, it is merely necessary to remove the cover and move the line spacing handle 23 out from the dotted to the full line position for use, shown in Fig. 5. When the handle reaches this last mentioned position it is automatically locked against accidental return movement by the spring detent 45, the pin 52 is withdrawn from the slot 53 in the plate 50, allowing the latter to be returned to normal position by the pressure of the spring returned carriage releasing arm 66 aided by the spring of the locking member 55; the feed rack 67 will move into engagement with the lowermost feed dog 69, and the locking projection 57 will be withdrawn by its spring from engagement in the locking recess 63 of the companion locking projection 61, thereby placing the machine in condition for operation.

I have made provision whereby the platen may be readily demounted from the machine when desired. The manner of demounting the platen at the left-hand end is to remove the screw 43 and move the plate 50 to the Fig. 1 position when the handle is in the expanded position, and hold the plate in such position, holding the detent 45 released while the finger piece 23 and its spindle is moved outwardly and entirely withdrawn from the platen and the bushing 13; neither the detent 45 nor the stop 44 preventing such movement of the spindle at this time.

The other or right-hand end of the platen is demountably mounted in the following manner:

A platen head 70 is fixed to the right-hand end of the platen by screws 71. The hub of the platen head is formed with an inwardly projecting spline 72 received in a spline groove 73ª of a spindle 73, to cause the platen and spindle to turn together but enable the latter to be shifted longitudinally relatively to the platen. The outer end of the spindle has a finger piece or wheel 74 secured thereto. The inner end portion of the spindle is received in a bearing sleeve 75 within the core of the platen, as well as in the platen head. The spindle also extends through and receives a bearing in a

bushing 76 seated in an opening in the end plate 12 of the carriage, and fixed in place therein by riveting the bushing at 77 (see Fig. 7) over a washer 78 against which the hub of the platen head 70 is adapted to bear. The spindle is thus fixed to turn with the platen and receive its support in the bushing to sustain or support the platen in place. A fore-and-aft vertical slot 79 is provided half-way through the bushing, the slot being bounded on one side by the end plate 12 and on the other side by the head 80 of the bushing, which is indicated in dotted lines in Fig. 8. A detent 81 formed from spring wire, and best shown in Fig. 8, comprises a curved portion 82 seated against a correspondingly curved portion of the bushing between the head 80 thereof and the end plate 12, and a straight engaging portion 83 that is received in the slot 79 in the bushing. This engaging portion 83 is adapted to be seated in one or the other of two circumferential transverse grooves 84 and 85 in the spindle 73 and prevent an accidental longitudinal displacement of the spindle in either direction. The force of the spring of the detent 81 is exerted to retain the locking portion 83 thereof in the groove 84 or 85 in which it may be seated. To release the detent the upper end 86 is moved rearwardly, or to the right as the parts appear in Fig. 8; removing the locking member 83 from the groove 84 or 85 in which it is seated. While the detent is thus held the spindle is moved slightly to bring an ungrooved portion thereof opposite the locking member 83. The detent may then be released and the spindle moved longitudinally until the other groove reaches the detent, when the latter will snap into place in such groove and prevent further longitudinal movement of the spindle. When the spindle 73 and finger wheel 74 are in the expanded, or full line position for use, as shown in Fig. 6, the spindle is interposed in the path of the side wall *b* of the cover, shown in dotted lines, and will prevent the cover from being placed in position to enclose the machine. When, however, the finger wheel and spindle 73 are moved to the contracted, or compact dotted line position shown in Fig. 6, they may be received within the cover and no longer form an obstruction that prevents a closing of the cover.

By releasing the detent 81 and entirely withdrawing the spindle 73 from the platen, and from its support in the end plate 12, the platen is relieved from all support at the right-hand end, and may be removed from the carriage after the left-hand spindle has been removed in the manner hereinbefore descibed.

The coaxially arranged spindles 73 and 15 may thus be caused to support the platen in place; may be shifted away from each other from contracted or compact positions to expanded positions for use, where they prevent the machine from being enclosed within its carrying case until properly conditioned for this purpose; may be locked against accidental displacement in either direction from their positions for use; and may, when desired, be shifted outwardly beyond said positions to disconnect them from the platen and permit a removal of the latter from the machine.

From an inspection of Figs. 2 and 9 it will be understood that the surface 23^a of the line spacing handle with which the fingers of the operator coact, is in a plane at an angle of approximately 45° to the line of travel of the carriage. The handle is thus shaped so that the operator may conveniently return the carriage to the right and effect a line spacing of the platen by one movement of the hand; such movement being exerted to the right on the handle as well as forwardly thereon.

By making the locking member 55 a part separate and distinct from the member 54 and the plate 50 by which it is controlled, the lateral strain or pressure exerted against the part 57 in cooperating with the companion locking member is better resisted, and cannot by such pressure interfere with the prompt return of the plate 50 to normal position when it is intended that it should be thus returned.

From certain aspects of my invention it is immaterial whether or not the line spacing finger piece 23 enters into cooperation with the center lock as set forth, or whether or not a center lock is employed in the machine. From certain other aspects of the invention it is immaterial whether or not the platen is detachably mounted in the carriage as shown, or whether the finger wheel 74 is mounted for movement to and from an expanded position. However, as shown, these various features coact to accomplish the results pointed out, and are claimed in combination, as well as separately. Obviously, therefore, various changes may be made in the construction and features thereof may be omitted without departing from the invention as it is defined in accompanying claims.

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

1. In a typewriting or like machine, the combination of a platen; a line spacing pawl; and means for actuating said pawl comprising a finger piece, and means whereby said finger piece may be moved bodily axially of and towards the platen from the position for use into a compact position where it may remain indefinitely and whereby while maintained in the position for use said finger piece is effective to actuate said line spacing pawl.

2. In a typewriting or like machine, the combination of a platen; a line spacing pawl; means for actuating said pawl comprising a finger piece, and means whereby said finger piece may be moved bodily axially of and towards the platen from the position for use into a compact position where it may remain indefinitely and whereby while maintained in the position for use said finger piece is effective to actuate said line spacing pawl; and means for locking said finger piece against being accidentally shifted to compact position.

3. In a typewriting or like machine, the combination of a platen; a line spacing pawl; and means for actuating said pawl comprising a finger piece, a supporting spindle on which said finger piece is mounted and which has a telescoping movement in the platen to enable said finger piece to be moved axially of the platen from an extended position for use to a compact position and which is operative while maintained in said extended position to actuate said line spacing pawl.

4. In a typewriting or like machine, the combination of a platen; a line spacing pawl; means for actuating said pawl comprising a finger piece, a supporting spindle on which said finger piece is mounted and which has a telescoping movement in the platen to enable said finger piece to be moved axially of the platen from an extended position for use to a compact position and which is operative to actuate said line spacing pawl; and means for locking said spindle against accidental axial movement from said extended position.

5. In a typewriting or like machine, the combination of a platen, a line spacing pawl, a spindle turnable and also shiftable longitudinally of the platen, a finger piece carried by said spindle for turning it and shiftable with the spindle in its longitudinal movement from an expanded position for use into a more compact position closer to the platen, and means whereby a turning of said spindle by the finger piece while the latter is maintained in its expanded position effects an actuation of said pawl.

6. In a typewriting or like machine, the combination of a platen, a line spacing pawl, a spindle turnable and also shiftable longitudinally of the platen, a finger piece carried by said spindle for turning it and shiftable with the spindle in its longitudinal movement from an expanded position for use into a more compact position closer to the platen, means whereby a turning of said spindle by the finger piece effects an actuation of said pawl, and means for holding said spindle against accidental longitudinal displacement from its expanded position for use.

7. In a typewriting or like machine, the combination of a platen, a platen support having a spindle bearing with a locking recess therein, a spindle extending into said bearing and into the platen and movable therein from a compact position to an expanded position for use, a finger piece connected with said spindle to turn it, and a spring detent carried by said spindle and co-acting with said locking recess to lock the spindle against longitudinal movement to compact position.

8. In a typewriting or like machine, the combination of a platen, a spindle mounted to turn and also to be shifted longitudinally from a compact position to an expanded position for use, an actuating member having an operative connection with said spindle to cause said member to turn with the spindle but enable the latter to be shifted longitudinally independently thereof, a finger piece connected with said spindle, and a line spacing pawl actuated by said actuating member.

9. In a typewriting or like machine, the combination of a platen, a spindle mounted to turn and also to be shifted longitudinally from a compact position to an expanded position for use, an actuating member having an operative connection with said spindle to cause said member to turn with the spindle but enable the latter to be shifted longitudinally independently thereof, a finger piece connected with said spindle, a line spacing pawl actuated by said actuating member, and releasable locking means for preventing an accidental longitudinal displacement of said spindle from its expanded position for use.

10. In a typewriting or like machine, the combination of a platen, a spindle mounted to turn and also to be shifted longitudinally from a compact position to an expanded position for use, a crank arm on said spindle and having a splined connection therewith, a pawl carrying arm with which said crank arm coacts, and a finger piece connected with said spindle.

11. In a typewriting or like machine, the combination of a platen, a spindle mounted to turn and also to be shifted longitudinally from a compact position to an expanded position for use, a crank arm on said spindle and having a splined connection therewith, a pawl carrying arm with which said crank arm coacts, a finger piece connected with said spindle, and a spring pressed releasable detent for holding said spindle in its position for use.

12. In a typewriting or like machine, the combination of a platen, a turnable spindle on which the platen is supported at one end to turn and which spindle also is shiftable longitudinally from a compact position to an expanded position for use, a finger piece on said spindle in the nature of an arm that ex-

tends laterally therefrom, a line spacing pawl, and means whereby a turning movement of said spindle by said finger piece effects an actuation of said pawl.

13. In a typewriting or like machine, the combination of a platen, a turnable spindle on which the platen is supported at one end to turn and which spindle also is shiftable longitudinally from a compact position to an expanded position for use, a finger piece on said spindle, a line spacing pawl, means whereby a turning movement of said spindle by said finger piece effects an actuation of said pawl, and releasable locking means for holding said spindle against accidental longitudinal displacement from its expanded position for use.

14. In a typewriting or like machine, the combination of a platen; and means for demountably supporting the platen in place comprising a turnable spindle on which the platen is supported at one end and which also is shiftable longitudinally from a compact position to an expanded position for use and also outwardly beyond said position of use to free the platen and permit a removal thereof, a finger piece on said spindle, and a releasable latch that locks said spindle against accidental longitudinal displacement either outwardly or inwardly from its position of use.

15. In a typewriting or like machine, the combination of a platen, a turnable spindle on which the platen is supported at one end to turn and which also is shiftable longitudinally from a compact position to an expanded position for use, and also outwardly beyond said position of use to free the platen and permit a removal thereof, a finger piece on said spindle, a releasable latch that locks said spindle against accidental longitudinal displacement either outwardly or inwardly from its position of use, a line spacing pawl, and means controlled by a turning movement of said spindle for actuating said pawl.

16. In a typewriting or like machine, the combination of a platen, a turnable spindle on which the platen is supported at one end to turn and which also is shiftable longitudinally from a compact position to an expanded position for use and also outwardly beyond said position of use to free the platen and permit a removal thereof, a finger piece on said spindle, a releasable latch that locks said spindle against accidental longitudinal displacement either outwardly or inwardly from its position of use, a line spacing pawl, a crank arm having a connection with said spindle that causes the two to turn together but enables the spindle to be shifted longitudinally independently of said arm, and means controlled by said arm for actuating said pawl.

17. In a typewriting or like machine, the combination of a platen, two coaxial spindles on which the platen is supported and which are movable outwardly away for each other to release the platen and permit a removal thereof, a line spacing pawl, and means controlled by one of said spindles for actuating said pawl.

18. In a typewriting or like machine, the combination of a platen, two coaxial spindes on which the platen is supported and which are movable outwardly away from each other to release the platen and permit a removal thereof, one of said spindles carrying a finger piece for turning it and which is shiftable with said spindle longitudinally from a compact position to an expanded position for use without releasing the platen for removal, and releasable means for holding the last mentioned spindle against accidental longitudinal displacement from said expanded position.

19. In a typewriting or like machine, the combination of a platen, two coaxial spindles on which the platen is supported and which are movable outwardly away from each other to release the platen and permit a removal thereof, one of said spindles carrying a finger piece for turning it and which is shiftable longitudinally from a compact position to an expanded position for use without releasing the platen for removal, releasable means for holding the last mentioned spindle against accidental longitudinal displacement from said expanded position, a line spacing pawl, and means controlled by said last mentioned spindle for actuating said pawl.

20. In a typewriting or like machine, the combination of a platen, two coaxial spindles on which the platen is supported and which are movable outwardly away from each other to release the platen and permit a removal thereof, one of said spindles being operatively connected to turn with the platen and having a finger wheel by which it may be turned and the other of said spindles turning independently of the platen and having a finger piece by which it may be turned, a line spacing pawl, and means controlled by said last mentioned spindle for actuating said pawl.

21. In a typewriting or like machine, the combination of a platen, two coaxial spindles on which the platen is supported and which are movable outwardly away from each other to release the platen and permit a removal thereof, one of said spindles being operatively connected to turn with the platen and having a finger wheel by which it may be turned and the other of said spindles turning independently of the platen and having a finger piece by which it may be turned, a line spacing pawl, means controlled by said last mentioned spindle for actuating said pawl, said last mentioned spindle being shiftable longitudinally from

a compact position to an expanded position for use without releasing the platen for removal, and releasable means for holding the last mentioned spindle against accidental longitudinal displacement from said expanded position.

22. In a typewriting or like machine, the combination of a platen, a spindle which supports one end of the platen and which is movable longitudinally from a compact position to an expanded position for use, a locking latch carried by said spindle and engageable in a locking recess in a relatively fixed part to lock the spindle against accidental longitudinal displacement from its expanded position, and a member movable in said recess to disengage said locking latch therefrom.

23. In a typewriting or like machine, the combination of a platen, a spindle which supports one end of the platen and which is movable longitudinally from a compact position to an expanded position for use, a locking latch carried by said spindle and engageable in a locking recess in a relatively fixed part to lock the spindle against accidental longitudinal displacement from its expanded position, a member movable in said recess to disengage said locking latch therefrom, a finger piece on said spindle and by which it may be turned, a line spacing pawl, and means controlled by said spindle for actuating said pawl.

24. In a typewriting or like machine, the combination of a platen, a spindle which supports one end of the platen and which is movable longitudinally from a compact position to an expanded position for use, a locking latch carried by said spindle and engageable in a locking recess in a relatively fixed part to lock the spindle against accidental longitudinal displacement from its expanded position, a member movable in said recess to disengage said locking latch therefrom, a finger piece on said spindle and by which it may be turned, a line spacing pawl, means controlled by said spindle for actuating said pawl, a crank arm connected to turn with said spindle but permitting a longitudinal movement of the spindle independently thereof, and means controlled by said crank arm for actuating said pawl.

25. In a typewriting or like machine, the combination of a platen, two coaxially arranged spindles on which said platen is supported and which are movable endwise away from each other to release the platen and permit a removal thereof, said spindles also being movable outwardly from a compact position to an expanded position for use, means for holding said spindles against accidental displacement from their expanded position for use, and a finger piece connected with each of said spindles.

26. In a typewriting or like machine, the combination of a platen, two co-axially arranged spindles on which said platen is supported and which are movable endwise away from each other to release the platen and permit a removal thereof, said spindles also being movable outwardly from a compact position to an expanded position for use, means for holding said spindles against accidental displacement from their expanded position for use, a finger piece connected with each of said spindles, a line spacing pawl, and means controlled by one of said spindles for actuating said line spacing pawl.

27. In a typewriting or like machine, the combination of a platen, two co-axially arranged spindles on which said platen is supported and which are movable endwise away from each other to release the platen and permit a removal thereof, said spindles also being movable outwardly from a compact position to an expanded position for use, means for holding said spindles against accidental displacement from their expanded position for use, a finger piece connected with each of said spindles, a line spacing pawl, and means controlled by one of said spindles for actuating said line spacing pawl, the other of said spindles being connected to turn with said platen.

28. In a typewriting or like machine, the combination of a platen, two coaxially arranged spindles on which said platen is supported and which are movable endwise away from each other to release the platen and permit a removal thereof, said spindles also being movable outwardly from a compact position to an expanded position for use, means for holding said spindles against accidental displacement from their expanded position for use, said means for one spindle including a spring detent carried thereby and adapted to engage in a locking recess in a relatively fixed part when the spindle that carries the detent is in the expanded position, a member movable at will into said recess and effective to release the detent, and a finger piece connected with each of said spindles.

29. In a typewriting or like machine, the combination of a carriage, a platen carried thereby, a center lock for locking the carriage in centered position in its line of travel, a line spacing pawl, a finger piece by which the pawl is actuated, and means controlled by said finger piece for maintaining said center lock effective.

30. In a typewriting or like machine, the combination of a carriage, a platen carried thereby, a center lock for locking the carriage in centered position in its line of travel, a line spacing pawl, a finger piece by which the pawl is actuated and which is movable from a compact position to an expanded position for use, and means whereby

said center lock may be maintained effective when the finger piece is in the compact position and is rendered ineffective when said finger piece is moved to the expanded position for use.

31. In a typewriting or like machine, the combination of a carriage; a platen carried thereby; a center lock for locking the carriage in centered position in its line of travel, said center lock comprising a hand actuated member operable at will to render the center lock effective; a line spacing pawl; a finger piece by which the pawl is actuated and which is movable from a compact position to an expanded position for use; and means whereby said member of the center lock may be engaged by said finger piece and locked in effective position when said member has been moved to such position and the finger piece is moved to contracted position, and whereby said member is released for movement to ineffective position when said finger piece is moved to expanded position for use.

32. In a typewriting or like machine, the combination of a carriage; a platen carried thereby, a center lock for locking the carriage in centered position in its line of travel; said center lock comprising a hand actuated member operable at will to render the center lock effective; a line spacing pawl; a finger piece by which the pawl is actuated and which is movable from a compact position to an expanded position for use; means whereby said member of the center lock may be engaged by said finger piece and locked in effective position when said member has been moved to such position and the finger piece is moved to contracted position, and whereby said member is released for movement to ineffective position when said finger piece is moved to expanded position for use; a spindle on which said finger piece is mounted and on which one end of the platen is supported; a second co-axially arranged spindle on which the other end of the platen is supported and by which the platen may be turned, said spindles being movable away from each other to disengage the platen and permit its removal; and a finger wheel on said second spindle.

33. In a typewriting or like machine, the combination of a carriage, a support therefor, and a center lock for locking the carriage to its support in a centered position in the line of travel of the carriage, said center lock comprising a leaf spring having a locking projection fixed thereto, a co-operative locking member, and means separate from but co-operative with said leaf spring to flex it and thereby move the locking projection thereon into co-operative relation with the co-operative locking member at any point in the travel of the carriage.

34. In a typewriting or like machine, the combination of a carriage, a support therefor, and a center lock for locking the carriage to its support in a centered position in the line of travel of the carriage, said center lock comprising a leaf spring having a locking projection fixed thereto at one end and anchored at the other end to the carriage, a co-operative spring supported locking member on the carriage support, and means operable at will at any point in the travel of the carriage to bring one of said locking members into co-operative relation with the other.

35. In a typewriting or like machine, the combination of a carriage, a support therefor, and a center lock for locking the carriage to its support in a centered position in the line of travel of the carriage, said center lock comprising a leaf spring having a locking projection fixed thereto at one end and anchored at the other end to the carriage, said leaf spring normally maintaining the projection thereon in ineffective position, a co-operative locking member on the carriage support, and means on the carriage for flexing said leaf spring and thereby move the projection thereon into effective position at any point in the travel of the carriage.

36. In a typewriting or like machine, the combination of a platen, a spindle adapted to telescope in the platen and to be moved from a contracted position to an expanded position for use and having a transverse notch or groove therein, a bearing in which said spindle is adapted to turn and to move longitudinally and provided with a slot therein, a latch movable in said slot and into said groove to hold the spindle against longitudinal displacement, and a finger piece mounted on the spindle.

37. In a typewriting or like machine, the combination of a platen, an oscillatory line spacing spindle on which the platen is adapted to turn, said spindle being shiftable longitudinally from a contracted position to an expanded position for use, a line spacing pawl with which said spindle when in operative position is operatively connected, and means for enabling the operative connection between said spindle and pawl to be broken by a longitudinal movement of the former beyond its position for use and the spindle to be then withdrawn from the platen to permit a removal of the latter.

38. In a typewriting or like machine, the combination of a platen, an oscillatory line spacing spindle on which the platen is adapted to turn, said spindle being shiftable longitudinally from a contracted position to an expanded position for use, a line spacing pawl with which said spindle when in operative position is operatively connected, means for enabling the operative connection between said spindle and pawl to be broken

by a longitudinal movement of the former beyond its position for use and the spindle to be then withdrawn from the platen to permit a removal of the latter, and a releasable latch for locking the spindle against accidental longitudinal displacement from its position for use.

Signed at the borough of Manhattan, city of New York, in the county of New York and State of New York, this 28th day of December, A. D. 1922.

EDWIN E. BARNEY.

Witnesses:
CHARLES E. SMITH,
E. M. WELLS.