

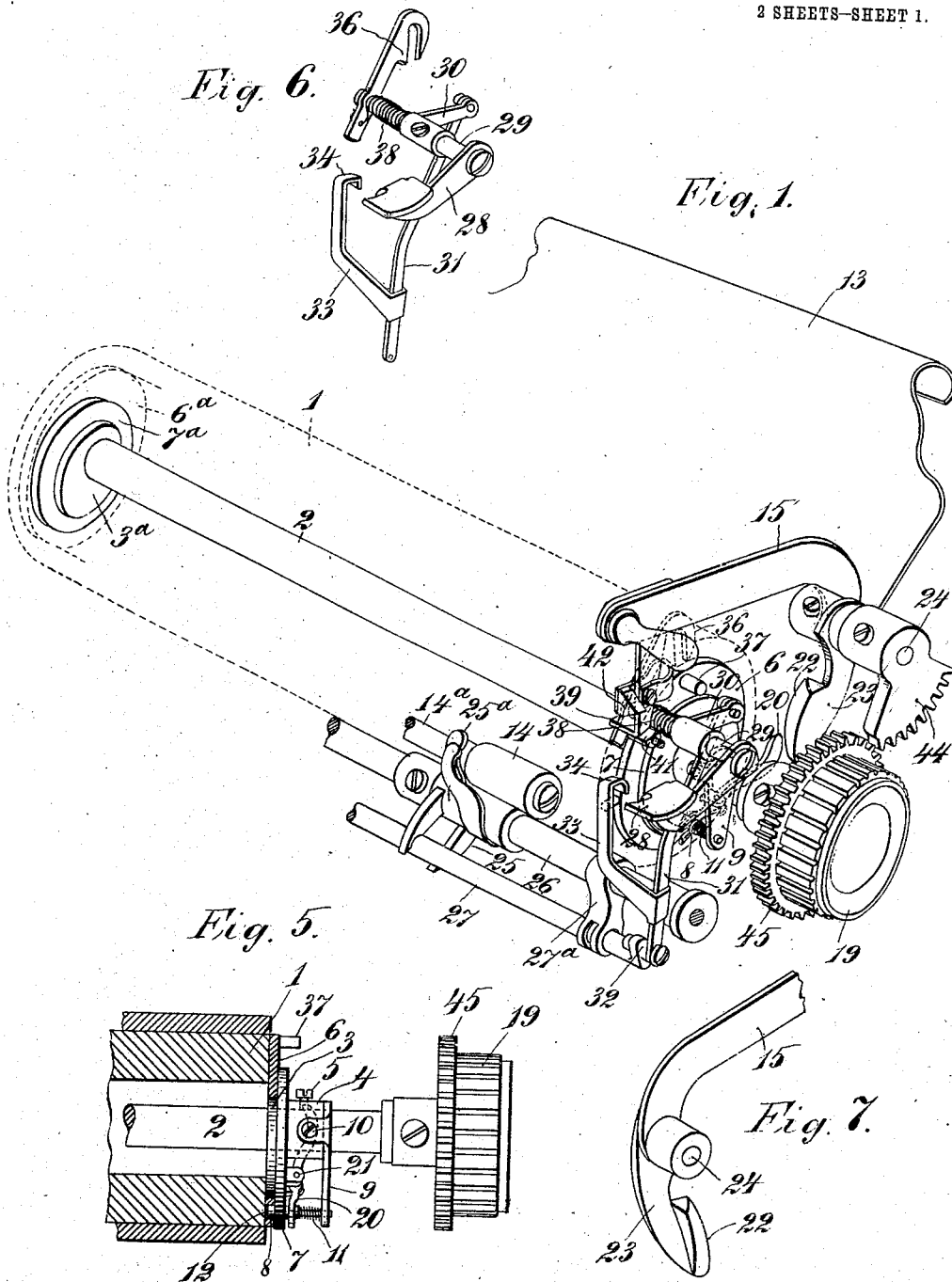
J. C. McLAUGHLIN,
TYPE WRITING MACHINE.

APPLICATION FILED FEB. 2, 1911. RENEWED SEPT. 5, 1911.

1,069,020.

Patented July 29, 1913.

2 SHEETS-SHEET 1.



Witnesses:
F. W. H. H. H.
J. D. H. H.

Inventor:
John C. McLaughlin
By B. H. H. H.
Attorney.

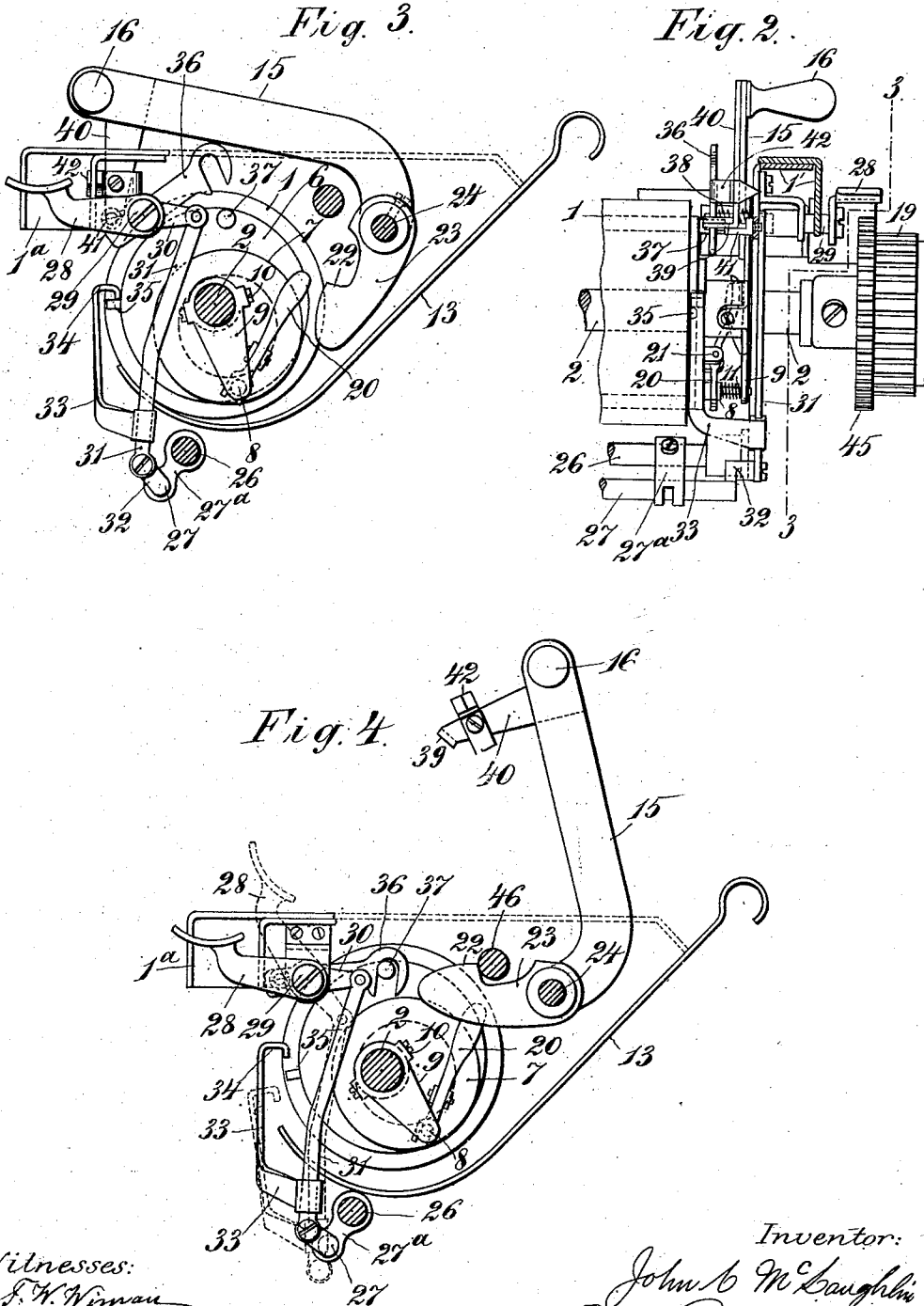
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Witnesses:

S. W. Wiman
F. D. Ammer

Inventor:

John C. McLaughlin
By *B. C. Stickney*
Attorney.

UNITED STATES PATENT OFFICE.

JOHN C. McLAUGHLIN, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

TYPE-WRITING MACHINE.

1,069,020.

Specification of Letters Patent.

Patented July 29, 1913.

Application filed February 2, 1911, Serial No. 606,107. Renewed September 5, 1911. Serial No. 647,714.

To all whom it may concern:

Be it known that I, JOHN C. McLAUGHLIN, a citizen of the United States, residing in Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

The present invention relates to an improved mechanism in a typewriting machine, for shifting or displacing the platen cylinder with respect to the paper guide and paper feed roll to permit of correct and easy introduction and positioning in the machine of considerable thicknesses of paper, or of paper with clasps and the like attached to it.

More particularly the invention relates to mechanism of the character stated, in which the platen cylinder is displaceable with respect to its shaft, or with respect to the bearings in which it normally rotates in the frame, so that the platen shaft and platen frame may be stationary during the shift of the platen and introduction of the paper.

In certain forms of this class of mechanism, the shift or displacement of the platen has been effected by means of eccentric disks, fast to the platen shaft, and fitted within the end plates of the platen cylinder. Such eccentrics and platen normally turn together, but when the shift is to be effected the platen is held against rotation while the eccentrics are rotated with the shaft, thus throwing the platen. In order that the platen may be thrown in the proper direction, that is to say, to and from the paper guide and not in some other direction, the eccentrics with the platen, must be rotated to some particular angular position before the shifting operation is attempted. The angular position has heretofore been visually indicated by some mark on the cylinder.

It is a feature of the present invention to provide mechanical means for ascertaining and determining the correct angular position to be assumed by the parts preliminary to the shifting operation. In the embodiment of the invention hereinafter shown, this mechanical means comprises a manually controlled stop or detaining device adapted to be set into the path of an element which rotates with the eccentrics and platen so

that, when the stop is set, only a limited, partial rotation of the eccentrics and of the platen can be effected, whereupon these parts are arrested at the angular position in which the shift is operative.

It is a feature of the present invention to set the above mentioned detaining device or stop by means of the mechanism heretofore commonly used to throw the paper feed rolls from the platen. The paper rolls are conveniently and preferably thrown from the platen before the platen is shifted, and it is this operation which is here utilized to set the stop to determine the operative shifting position of the platen.

Another feature of the invention is a novel device for automatically locking the platen cylinder against rotation during the shifting operation and for automatically releasing the cylinder when the shifting operation has been completed.

Another feature of the invention is an improved means for locking the platen to the eccentrics or their equivalent shifting means so that the same may rotate together without slip except when the platen is to be shifted; and for unlocking the platen from the eccentrics or their equivalent shifting means when a shift is desired, and when the parts are in position for the same.

It is a feature of the last mentioned locking device that it acts automatically to re-lock the parts after the shifting operation is over, and that its unlocking operation is effected from the same manually controlled means from which the shift of the platen is actually effected.

It is a feature of the present invention that the several locking devices mentioned and the means for turning the eccentrics to effect the shift may all be operated in proper order by a single movement of a single finger piece.

Other objects and advantages of the invention will hereinafter appear.

In the accompanying drawings, Figure 1 is a view in perspective showing the assembled platen-shifting, and other mechanism in operative relation to the platen cylinder of a typewriting machine. Fig. 2 is a view in front elevation of the assembled parts shown in Fig. 1. Fig. 3 is a view in vertical

section on the line 3—3 of Fig. 2, the parts being in position assumed preliminary to the shifting operation. Fig. 4 is a view similar to that of Fig. 3, except that the parts are shown with the platen shifted. Fig. 5 is a detail view, partly cross sectional, showing one end of the platen and platen shaft, and showing certain features of the shifting mechanism. Fig. 6 is a perspective detail view of certain of the paper roll actuating mechanism and other parts. Fig. 7 is a detail view showing the cam device for unlocking the eccentrics from the platen preliminary to shifting the platen.

The platen 1 is shiftable transversely of the platen shaft 2 from Fig. 3 to Fig. 4 position, thus providing the desired space between the platen and the paper guide 13, (see Fig. 4) and between the platen and the paper rolls 14, to permit of the introduction into the machine of papers, etc., in considerable thicknesses. The shift or movement of the platen between Fig. 3 and Fig. 4 positions is substantially up and down, or in a vertical plane, in a machine of the style shown, in order that the most effective spacing may be had with a minimum of movement. The platen shaft itself is not shiftable up and down with the platen; nor is the platen frame 1^a in which the shaft has its bearings. The platen is shifted with respect to the shaft by means of eccentric disks 3 and 3^a on hubs 4 fast by means of set screws 5 to the platen shaft; the eccentrics being closely fitted within the end plates 6 and 6^a of the platen cylinder. Under normal conditions one eccentric (see Fig. 5) is locked to the corresponding end plate 6 by means of a bolt 8, so that slip or relative turning movement of the platen on the eccentrics, such as would result in shift of the platen, cannot be had. The platen is held against longitudinal displacement on the eccentrics by means of disks 7, and 7^a integral with the eccentrics, and each bearing against one of the cylinder end plates. The bolt 8, in locking the platen to the eccentric 3, passes through the disk 7 and into the opposing end plate 6. The tail of the bolt is supported and guided in a plate 9 attached by means of screws 10 to the hub or sleeve of the eccentric 3. Under normal conditions, therefore, the shaft, the eccentrics, the plate 9 and the platen cylinder with the bolt 8 all turn as a unit.

The bolt, supported by the plates 7 and 9 is movable into and out of engagement with the end plate of the platen, in effecting the locking and unlocking of the platen and eccentrics. A coil compression spring 11 bearing at one end against the plate 9 and at the other end against a shoulder on the bolt holds the bolt in normal locking position and returns the bolt to locking position after each shifting operation. An unlock-

ing lever 20 pivoted at 21 to the end plate 7 is forked at one end to form a yoke (see Fig. 1) by means of which, it engages the bolt 8, so that when rocked in the proper direction, the lever 20 moves the bolt against the action of the spring 11 to withdraw the bolt from the platen; whereupon, if the eccentrics be rotated by the shaft, and the platen be held against rotation, the platen will be shifted from Fig. 3 to Fig. 4 position. The lever 20 is actuated by a cam 22 carried on a lever 23 which is pivoted at 24 and is integral with a hand lever 15 by means of which the platen shifting operation is effected.

In order that the shift of the platen may be in the proper direction, the eccentrics must be in a predetermined angular position before the shift is attempted. In other words the platen shaft with the eccentrics and plates still locked thereto must be turned, as by means of the hand wheel 19 which is fast to the shaft, until the predetermined angular setting of the parts is obtained. This setting may be ascertained by means of some visual indication on the cylinder, or by mechanical means. In the drawings there is shown a mechanical means for determining this preliminary setting of the cylinder. This mechanical means is in the form of an attachment to the mechanism heretofore employed to move the paper rolls from the platen. The paper rolls, one of which is shown at 14 (see Fig. 1), are carried in the usual manner as by means of a rod 14^a which in turn is carried in one arm of a lever 25 so as to be swung by the latter to and from the platen. The lever 25 is centrally pivoted on a fixed shaft 26, and engages a cross slot or groove in a rock shaft 27 supported in brackets 27^a, so that the bearing of the lever 25 on the shaft 27 provides a cam action to swing the lever 25 from the platen when the shaft 27 is rocked. Springs 25^a return the paper rolls and lever 25 to normal position.

The shaft 27 is rocked from a finger lever 28 by the following connections: Lever 28 is fast to a rock shaft 29 having bearing in the platen frame 1^a. Also fast to shaft 29 (see Fig. 6) is lever 30 pivoted at its end to link 31, the lower end of which link is pivotally connected to lever arm 32 on shaft 27. When finger lever 28 is depressed, link 31 is lifted and the shaft 27 rocked to throw off the pressure rolls 14 when the platen is to be shifted, yet it is preferable to do so because of the additional space thereby provided between the platen and the rolls 14. Accordingly, the finger lever 28 may advantageously be operated in advance of the operation of the platen shifting lever 15. When the lever 28 is operated, it sets a certain device for determining the angular position to which to bring the ec-

centrics and platen before the shift of the platen is actually effected. The device consists of an arm 33, attached to the link 31 so that when the link 31 is lifted by depression of lever 28, the arm 33 is also lifted, from the position shown in dotted lines in Fig. 4 to the position shown in full lines in Fig. 4. The arm 33 has an offset or hook 34 which in the dotted position is more or less removed from the platen, but which when in the full line position lies near enough to the periphery of the platen end plate to intercept the path of movement of a stop pin 35 which is attached to the end plate. If, after the lever 28 has been depressed and the arm 33 thereby lifted to full line, Fig. 4 position, the platen shaft be rotated clockwise by means of the hand wheel 19, the stop pin will move with the platen until it strikes the offset 34 on the arm 33. The rotary parts are thereupon arrested by the hook 34 as shown in Fig. 3, with the eccentrics in correct position for shifting the platen. The shifting lever 15 may now be thrown back from Fig. 3 to Fig. 4 position to effect the shift. During the shift of the platen it should be held against rotation; and, for so holding the platen, there is provided a hook 36 loosely pivoted on the shaft 29, and so positioned as to be adapted to engage a pin 37 on the end plate 6 of the platen when the platen has been turned to Fig. 3 position as described. A coil spring 38 tends to throw down the hook 36, but is normally prevented from so doing because the hook is held elevated by an offset 39 on an arm 40 forming part of the lever 15. The offset 39 rests normally upon a stop 41 on the platen frame, but projects beyond the stop as shown in Fig. 2 in such a way as to engage the end of the hook and hold the same elevated. The engagement of offset 39 and stop 41 determines the normal position of the shifting lever 15 and limits the return throw of the same. A spring detent 42 on the arm 40 of the shifting lever, by engagement with a nick in the opposing plate of the platen frame, holds the shifting lever in normal position against unintentional displacement.

Assuming now that the finger lever 28 has been depressed and the platen revolved so that the parts are in the position shown in Fig. 3, in readiness for the throw of the shifting lever 15; in lifting lever 15, first the offset on arm 40 is removed from the hook 36 and the latter, freed to the action of its spring 38, engages the pin 37 on the platen, locking the latter against rotation. Further movement of lever 15 with lever 23 brings cam 22 against the bolt releasing or unlocking lever 20, and the cam by wiping across the lever 20 rocks the latter, causing the bolt 8 to draw back and out of engagement with the platen. The eccen-

tries are then free to be turned independently of the platen: the platen cannot turn because of hook 36. Continued movement of the shifting lever 15 effects a corresponding rotation of the rock shaft 24 to which this lever is fast. Also fast on the rock shaft 24 is a segmental rack 44, which, after the lever 15 has been moved far enough to unlock the eccentrics from the platen, engages a pinion 45 fast to the platen shaft and rotates the latter. This rotation of the platen shaft is transmitted to the eccentrics; and the shifting or vertical movement of the platen is thereby effected. The movement of the lever 15 and connected parts is finally determined by the engagement of the lever 23 with the fixed rod 46, and the parts are then in Fig. 4 position. The papers having been inserted, the lever 15 is returned to normal position. During the first part of the return movement of lever 15 the eccentrics are revolved and the platen lowered until the bolt hole 12 in the platen end plate is brought around again to position opposite the head of bolt 8. Further return movement of lever 15 withdraws cam 22 from bolt lever 20, and permits spring 11 to throw the bolt into bolt hole 12 in the platen, thereby again locking the platen to the eccentrics. The return movement continues until offset 39 on arm 40 of lever 15 strikes the hook 36 and disengages the same from the pin 37 on the platen. The lever offset 39 finally strikes the stop 41, and detent 42 snaps into place. The paper roll lever 28 is then operated to return the paper pressure rolls to position, and so as to again remove the hook 34 from the path of the pin 35 on the platen. The machine is then ready for writing.

A simple and effective embodiment of the invention in its several features has been shown and described. It will be understood however that the structure may be considerably modified within the scope of the invention. For instance, the use of the paper roll-throwing mechanism, as a means for determining the shifting position of the platen, although convenient and preferable, is not essential to the successful operation of the shifting mechanism. Again the form of means for mechanically determining the angular position of the platen, preliminary to the shifting of the same, may be considerably varied. Other variations and modifications will occur to one skilled in the art.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination of a paper guide, a platen cylinder, an eccentric on which the platen is mounted, means whereby the eccentric is normally locked to the platen to rotate as a unit therewith, and a lever and means controlled thereby for unlocking the eccentric from the

platen and for rotating the eccentric relatively to the platen to cause the latter to be shifted with respect to the paper guide.

2. In a typewriting machine, the combination of a paper guide, a platen cylinder, an eccentric on which the platen is mounted, a platen shaft to which the eccentric is fast, means whereby the eccentric is normally locked to the platen to rotate as a unit therewith, and a lever and means controlled thereby for unlocking the eccentric from the platen and for rotating the eccentric relatively to the platen to cause the latter to be shifted with respect to the paper guide, transversely of the platen shaft.

3. In a typewriting machine, the combination of a platen shaft, an eccentric fast to the platen shaft, a platen cylinder engaged by the eccentric, a pinion fast to the platen shaft, and means for rotating the pinion to turn the shaft and eccentric relatively to the platen, whereby the platen is shifted transversely of the platen shaft.

4. In a typewriting machine, the combination of a platen shaft, an eccentric fast to the platen shaft, a platen cylinder engaged by the eccentric, a pinion fast to the platen shaft, and means controlled by a lever for rotating the pinion to turn the shaft and eccentric relatively to the platen, whereby the platen is shifted transversely of the platen shaft.

5. In a typewriting machine, the combination of a platen shaft, an eccentric fast to the platen shaft, a platen cylinder engaged by the eccentric, a pinion fast to the platen shaft, and a segmental rack for rotating the pinion to turn the shaft and eccentric relatively to the platen, whereby the platen is shifted transversely of the platen shaft.

6. In a typewriting machine, the combination of a platen shaft, an eccentric fast to said shaft, a platen cylinder engaged by the eccentric, means whereby the eccentric is normally locked to the platen to rotate as a unit therewith, a cam for releasing the eccentric from the platen to permit of rotation of the eccentric relatively to the platen, and means for operating said cam.

7. In a typewriting machine, the combination of a platen shaft, an eccentric fast to said shaft, a platen cylinder engaged by the eccentric, a spring bolt whereby the eccentric is normally locked to the platen to rotate as a unit therewith, a cam for operating the bolt to release the eccentric from the platen to permit of rotation of the eccentric relatively to the platen, and means for operating said cam.

8. In a typewriting machine, the combination of a platen shaft, an eccentric fast to said shaft, a platen cylinder engaged by the eccentric, means whereby the eccentric is normally locked to the platen to rotate as a unit therewith, a cam for releasing the eccentric from the platen to permit of rotation of the eccentric relatively to the platen, and means for operating said cam.

9. In a typewriting machine, the combination of an eccentric, a platen cylinder mounted on said eccentric, an element attached to the eccentric and having a bolt hole therein adapted to register with a bolt hole in the end of the cylinder, a bolt adapted to be passed through said holes to lock the platen and the eccentric against relative rotation, means for withdrawing the bolt from the platen to permit of rotation of the eccentric relatively to the platen, and means for rotating the eccentric when the bolt is withdrawn.

10. In a typewriting machine, the combination of an eccentric, a platen cylinder mounted on said eccentric, an element attached to the eccentric and having a bolt hole therein adapted to register with a bolt hole in the end of the cylinder, a bolt adapted to be passed through said holes to lock the platen and the eccentric against relative rotation, a lever on a pivot fixed to the eccentric for withdrawing the bolt from the platen to permit of rotation of the eccentric relatively to the platen, and means for rotating the eccentric when the bolt is withdrawn.

11. In a typewriting machine, the combination of an eccentric, a platen cylinder mounted on said eccentric, an element attached to the eccentric and having a bolt hole therein adapted to register with a bolt hole in the end of the cylinder, a bolt adapted to be passed through said holes to lock the platen and the eccentric against relative rotation, a lever on a pivot fixed to the eccentric for withdrawing the bolt from the platen, a cam for actuating said lever, to permit of rotation of the eccentric relatively to the platen, and means for rotating the eccentric when the bolt is withdrawn.

12. In a typewriting machine, the combination of an eccentric, a platen cylinder mounted on said eccentric, an element attached to the eccentric and having a bolt hole therein adapted to register with a bolt hole in the end of the cylinder, a bolt adapted to be passed through said holes to lock the platen and the eccentric against relative rotation, a lever on a pivot fixed to the eccentric for withdrawing the bolt from the platen, a hand controlled lever having a cam thereon for actuating said bolt withdrawing lever, to permit of rotation of the eccentric relatively to the platen, and means for rotating the eccentric when the bolt is withdrawn.

13. In a typewriting machine, the combination of an eccentric, a platen cylinder mounted on said eccentric, an element attached to the eccentric and having a bolt hole therein adapted to register with a bolt hole in the end of the cylinder, a bolt adapted to be passed through said holes to lock the platen and the eccentric against relative rotation, a lever on a pivot fixed to the eccentric for withdrawing the bolt from the platen, a hand controlled lever having a cam thereon for actuating said bolt withdrawing lever, to permit of rotation of the eccentric relatively to the platen, and means for rotating the eccentric when the bolt is withdrawn.

14. In a typewriting machine, the combination of an eccentric, a platen cylinder mounted on said eccentric, an element attached to the eccentric and having a bolt hole therein adapted to register with a bolt hole in the end of the cylinder, a bolt adapted to be passed through said holes to lock the platen and the eccentric against relative rotation, a lever on a pivot fixed to the eccentric for withdrawing the bolt from the platen, a hand controlled lever having a cam thereon for actuating said bolt withdrawing lever, to permit of rotation of the eccentric relatively to the platen, and means for rotating the eccentric when the bolt is withdrawn.

mounted on said eccentric, an element attached to the eccentric and having a bolt hole therein adapted to register with a bolt hole in the end of the cylinder, a bolt adapted to be passed through said holes to lock the platen and the eccentric against relative rotation, a lever on a pivot fixed to the eccentric for withdrawing the bolt from the platen, a hand controlled lever having a cam thereon for actuating said bolt withdrawing lever, to permit of rotation of the eccentric relatively to the platen, and means operated by said hand controlled lever for rotating the eccentric when the bolt is withdrawn.

14. In a typewriting machine, the combination of an eccentric, a platen cylinder mounted on said eccentric, an element attached to the eccentric and having a bolt hole therein adapted to register with a bolt hole in the end of the cylinder, a bolt adapted to be passed through said holes to lock the platen and the eccentric against relative rotation, a lever on a pivot fixed to the eccentric for withdrawing the bolt from the platen, a hand-controlled lever having a cam thereon for actuating said bolt withdrawing lever, to permit of rotation of the eccentric relatively to the platen, and a pinion fast to the eccentric operated by said hand-controlled lever for rotating the eccentric when the bolt is withdrawn.

15. In a typewriting machine, the combination of an eccentric, a platen cylinder engaged by said eccentric, a tooth or projection on the platen, a hook or detaining device adapted to engage said projection when the platen is in a predetermined angular position, and means for causing said detaining device to engage and hold the platen and for rotating the eccentric while the platen is so held.

16. In a typewriting machine, the combination of an eccentric, a platen cylinder engaged by said eccentric, a tooth or projection on the platen, a hook or detaining device adapted to engage said projection when the platen is in a predetermined angular position, and means for rotating the eccentric when the platen is held by the detaining device, said last-named means when in normal position, acting to hold said detaining device out of engagement with the platen.

17. In a typewriting machine, the combination of an eccentric, a platen cylinder engaged by said eccentric, a tooth or projection on the platen, a hook or detaining device adapted to engage said projection when the platen is in a predetermined angular position, a spring tending to throw said detaining device into engagement with said tooth, and means for rotating the eccentric when the platen is held by the detaining device, said last-named means when in normal position, acting to hold said detaining device out of engagement with the tooth.

18. In a typewriting machine, the combination of a platen cylinder, a platen shaft, means for shifting the platen transversely of the shaft, a hand-controlled device for operating said shifting means, and means for holding the platen against rotation while the same is being shifted, said last-named means being normally held inoperative by said hand-controlled device.

19. In a typewriting machine, the combination of a platen cylinder, a platen shaft, means for shifting the platen transversely of the shaft when the platen is in a predetermined angular position, a stop, and means for operating the stop to cause the platen when rotated to be arrested in the position in which the shifting means is operative.

20. In a typewriting machine, the combination of a platen cylinder, a platen shaft, means for shifting the platen transversely of the shaft when the platen is in a predetermined angular position, a tooth on the platen, and means movable into the path of rotation of said tooth, whereby the platen upon being rotated, may be arrested in the angular position in which the shifting means is operative.

21. In a typewriting machine the combination of a platen cylinder, a platen shaft, means for shifting the platen transversely of the shaft when the platen is in a predetermined angular position, a tooth on the platen, means movable into the path of rotation of said tooth, whereby the platen upon being rotated, may be arrested in the angular position in which the shifting means is operative, and hand-controlled means for setting said tooth engaging device.

22. In a typewriting machine, the combination of an eccentric, a platen cylinder engaged by the eccentric and normally rotatable as a unit therewith, means operative, when the eccentric is in a predetermined angular position, to rotate the eccentric relatively to the platen, thereby shifting the latter, and means adapted to be set to arrest the eccentric in the proper angular position for shifting.

23. In a typewriting machine, the combination of an eccentric, a platen cylinder engaged by the eccentric and normally rotatable as a unit therewith, means operative, when the eccentric is in a predetermined angular position, to rotate the eccentric relatively to the platen, thereby shifting the latter, a stop movable with the eccentric, and means adapted to be set into the path of the stop to arrest the eccentric in the proper angular position for shifting.

24. In a typewriting machine, the combination of a platen shaft, an eccentric fast thereto, a platen cylinder mounted on the eccentric and normally locked to move as a unit therewith, means operative when the eccentric is in predetermined angular posi-

tion, to unlock the same from the platen and to rotate the same relatively to the platen, thereby shifting the latter transversely of the shaft, and means adapted to be set to
 5 arrest the eccentric in the proper angular position for shifting.

25. In a typewriting machine, the combination of a platen shaft, an eccentric fast thereto, a platen cylinder mounted on the
 10 eccentric and normally locked to move as a unit therewith, means operative, when the eccentric is in predetermined angular position to unlock the same from the platen and to rotate the same relatively to the platen,
 15 thereby shifting the latter transversely of the shaft, a stop movable with the eccentric, and means adapted to be set into the path of the stop to arrest the eccentric in the proper angular position for shifting.

20 26. In a typewriting machine, the combination of a paper pressure roll, an eccentric, a platen cylinder engaged by the eccentric and normally rotatable as a unit therewith, means operative, when the eccentric is in a
 25 predetermined angular position, to rotate the eccentric relatively to the platen, thereby shifting the latter, a device for throwing the pressure roll away from the platen, and means actuated by said pressure roll throw-
 30 ing device to arrest the eccentric in the proper angular position for shifting.

27. In a typewriting machine, the combination of a pressure roll, an eccentric, a platen cylinder engaged by the eccentric
 35 and normally rotatable as a unit therewith, means operative, when the eccentric is in a predetermined angular position, to rotate the eccentric relatively to the platen, thereby shifting the latter, a device for throwing
 40 the pressure roll away from the platen, a tooth movable with the platen, and means actuated by said pressure roll throwing device to intercept the path of said tooth and thereby to arrest the eccentric in the proper
 45 angular position for shifting.

28. In a typewriting machine, the combination of a platen shiftable away from its normal bearings when turned to a certain
 50 angular position, a paper pressure roll, means for throwing the latter to and from the platen, and means controlled by said roll throwing means for arresting the platen in the proper angular position for shifting the same.

29. The combination of a platen, means
 55 bodily revoluble therewith for displacing the same, and stopping means for stopping the platen at a point where the displacement means may be operative.

30. The combination of a platen, eccen-
 60 trics rotatable for displacing the same, means for stopping the rotation of the platen in the position at which said eccen- trics become operative; said stopping
 65 means comprising a manually controlled

stop or detaining device adapted to be set into the path of an element which rotates with the platen, so that when the stop is set only a limited partial rotation of the platen can be effected, whereupon it is ar-
 70 rested at the point in which the displacement device is operative.

31. The combination of a platen, eccen-
 trics rotatable for displacing the same, means for stopping the rotation of the
 75 platen in the position at which said eccen- trics become operative; said stopping means comprising a manually controlled stop or detaining device adapted to be set into the path of an element which rotates
 80 with the platen, so that when the stop is set only a limited partial rotation of the platen can be effected, whereupon it is arrested at the point in which the displacement device is operative; said detaining de-
 85 vice or stop being connected to mechanism used to release the paper-feed roll from the platen, to be set thereby simultaneously with the release of the rolls.

32. The combination of a platen, means
 90 bodily revoluble therewith for displacing the same, means for stopping the rotation of the platen in the position at which said bodily revoluble means become operative, and a device for locking the platen cylinder
 95 against rotation during the displacement operation, and for releasing the cylinder when the displacement operation has been completed and while the platen is being returned to normal position.

33. The combination of a platen, means
 100 bodily revoluble therewith for displacing the same, means for stopping the rotation of the platen in the position at which said bodily revoluble means become operative; 105 means being provided for locking the platen to the displacement means, so that the same may rotate bodily together, and for unlocking the platen from the displacement device when the parts are in a position for
 110 displacement.

34. The combination of a platen, means
 115 bodily revoluble therewith for displacing the same, means for stopping the rotation of the platen in the position at which said bodily revoluble means become operative; means being provided for locking the platen to the displacement means, so that the same may rotate bodily together, and for un-
 120 locking the platen from the displacement device when the parts are in a position for displacement; said locking device operating automatically to relock the displacement device to the platen when the platen is re-
 125 turned to normal position.

35. The combination of a platen, means
 125 bodily revoluble therewith for displacing the same, means for stopping the rotation of the platen in the position at which said bodily revoluble means become operative; 130

means being provided for locking the platen to the displacement means, so that the same may rotate bodily together, and for unlocking the platen from the displacement device when the parts are in a position for displacement, and a single finger-piece connected to the unlocking and platen-displacement devices for effecting their operation in proper order.

JOHN C. McLAUGHLIN.

Witnesses:

H. F. BRIDGES,
C. G. IRVINE.

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