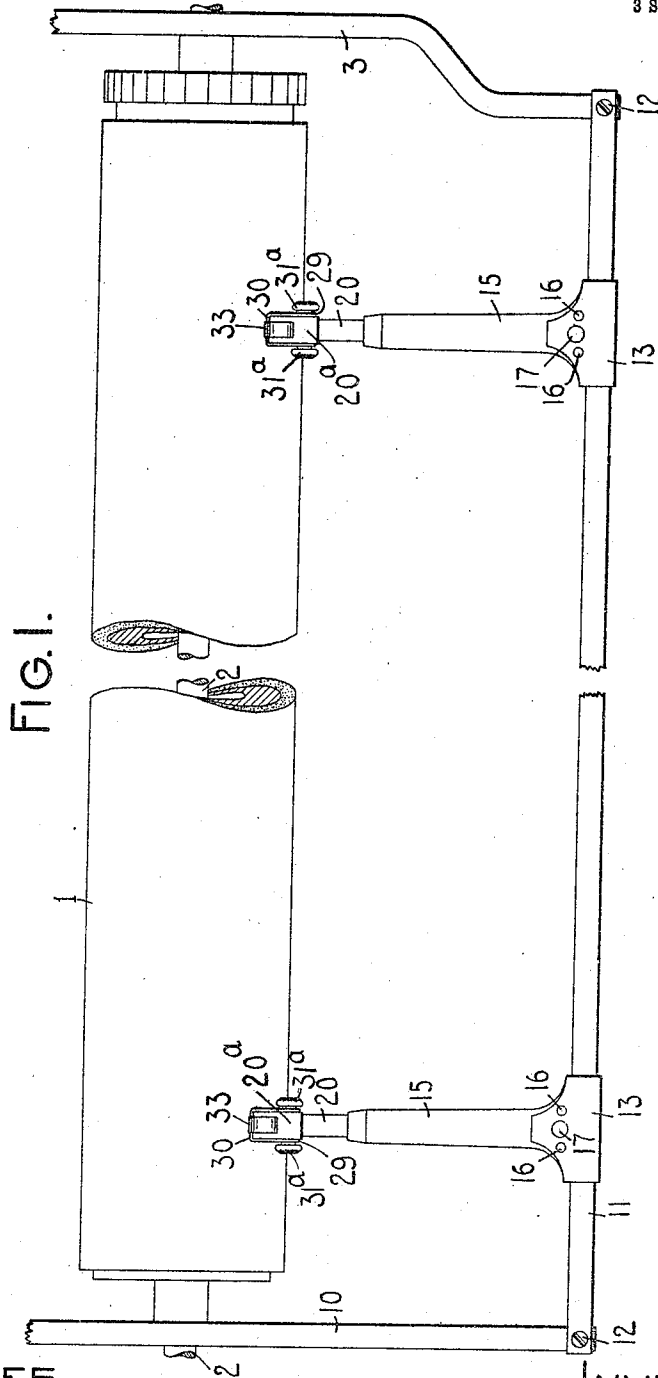


C. B. YAW.
TYPE WRITING MACHINE.
APPLICATION FILED OCT. 16, 1907.

945,895.

Patented Jan. 11, 1910.
3 SHEETS—SHEET 1.



WITNESSES:

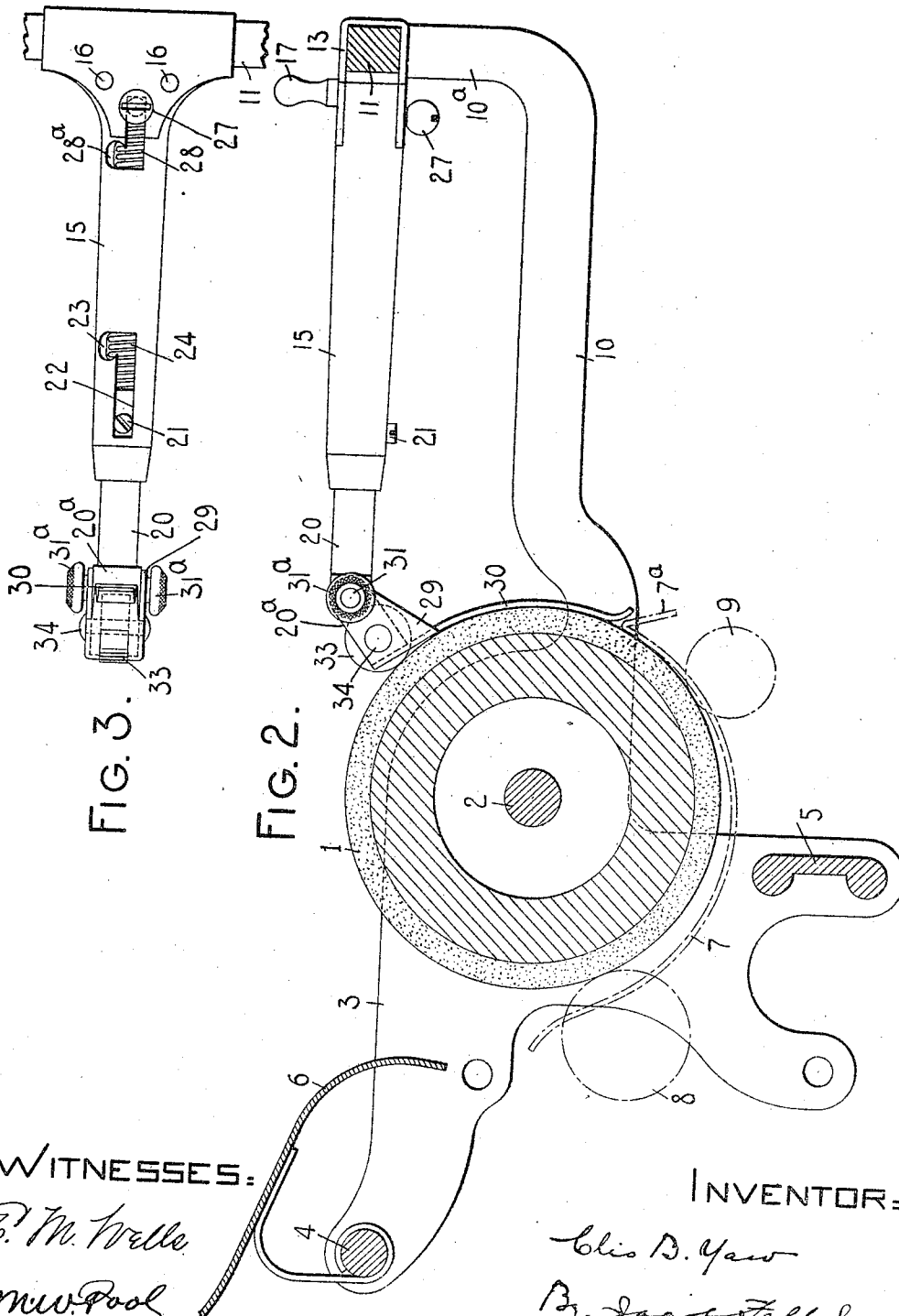
E. M. Wells.
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INVENTOR:

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HIS ATTORNEY

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3 SHEETS—SHEET 2.



WITNESSES:

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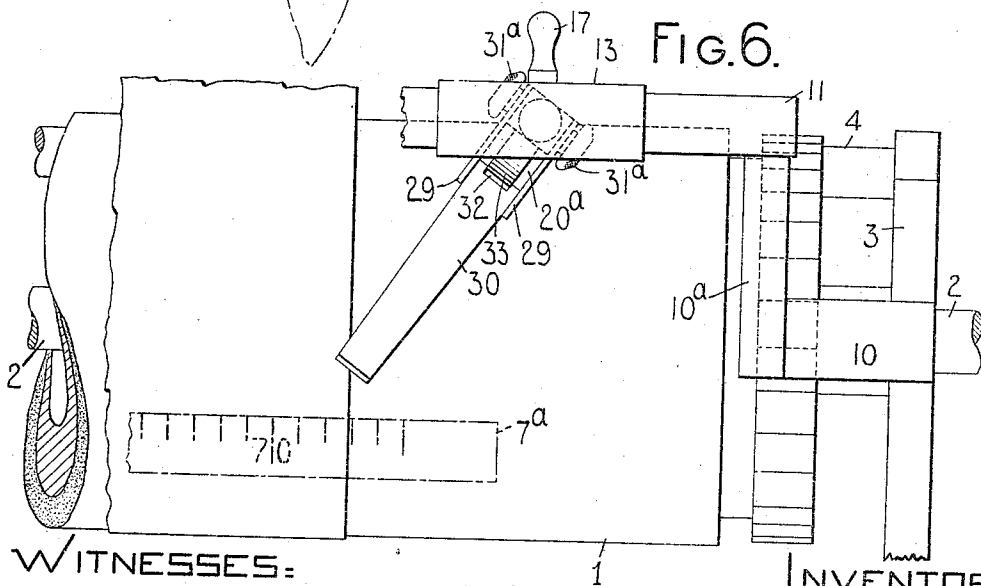
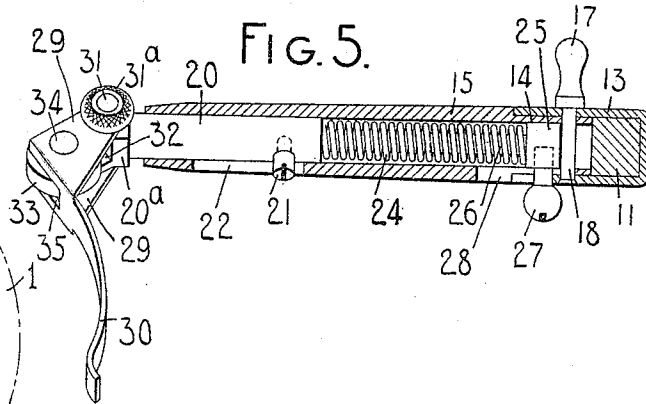
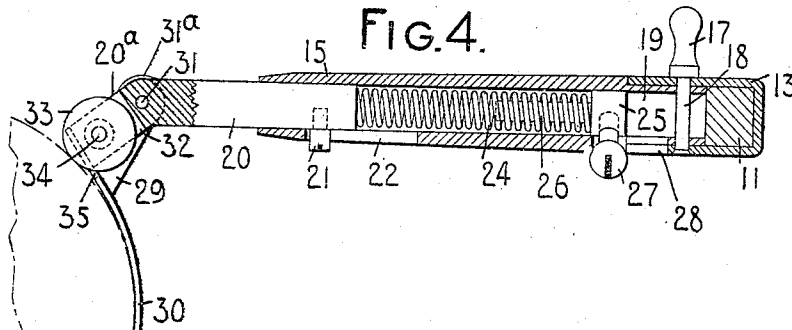
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C. B. YAW.
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WITNESSES:

E. M. Wells.
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INVENTOR:

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UNITED STATES PATENT OFFICE.

CLIO B. YAW, OF ARLINGTON, NEW JERSEY, ASSIGNOR TO WYCKOFF, SEAMANS & BENEDICT, OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

945,895.

Specification of Letters Patent.

Patented Jan. 11, 1910.

Application filed October 16, 1907. Serial No. 397,744.

To all whom it may concern:

Be it known that I, CLIO B. YAW, a citizen of the United States, and resident of Arlington, 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.

My invention relates to the paper feeding mechanism of typewriting machines and has for its object to provide improved devices of the class specified.

To the above and other ends the invention consists in the features of construction, combinations of devices and arrangements of parts, hereinafter described and particularly pointed out in the claims.

One form of the invention is illustrated in the accompanying drawings, wherein—
Figure 1 is a fragmentary top plan view of a platen and platen frame showing my invention in combination therewith. Fig. 2 is a sectional view taken transversely of the platen and showing the platen, parts of the platen frame and my improved paper feeding devices, said view being drawn to a larger scale than Fig. 1. Fig. 3 is a bottom plan view of my improved devices. Fig. 4 is a longitudinal sectional view of my improved devices. Fig. 5 is a view corresponding to Fig. 4 but showing some of the parts in different relations from those in which they appear in said Fig. 4. Fig. 6 is a fragmentary front elevation of the platen and platen frame and showing my invention, the parts thereof being in the same relations as those in which they appear in Fig. 5.

The drawings show the invention applied to a "visible" writing machine, but said invention may be adapted to other styles of machines.

A platen 1 is mounted on an axle 2 which bears at its ends in the side or end plates or bars 3 of a platen frame, the latter also comprising cross bars 4 and 5 connecting the end bars. The platen is provided with suitable line spacing mechanism and at its rear and under sides is or may be provided with paper controlling devices including a paper table 6, a paper apron 7 supporting a scale 7^a and feed rollers 8 and 9 (Fig. 2).

Extensions or arms 10 project forwardly of the platen from the end bars 3 and are bent upwardly at their front end portions as indicated at 10^a, the tops of the parts 10^a being connected by a cross bar 11 which is rectangular in cross section and may be suitably secured to the parts 10^a as by screws 12. The bar 11 is some distance in front of the platen and about on a level with the top thereof.

My improvements in paper controlling devices comprise what is usually called a paper finger, together with its supporting means. One or more of said paper fingers may be arranged on the rod or bar 11. The support for each paper finger is slidable lengthwise of the bar and comprises a U-shaped part 13 formed preferably of sheet metal and arranged to embrace the bar 11 closely at the top, bottom and front sides thereof. The top and bottom portions of the part 13 project rearwardly beyond the rear face of the bar 11 and receive between them the forward portion 14 of a supporting member 15, as shown clearly in Figs. 4 and 5. The portion 14 is cut down from the body of the supporting member 15 to fit between the sides of the member or part 13 and may be secured in a fixed relation with said member 13 by rivets 16. The forward end of the portion 14 abuts against the rear face of the bar 11, the construction being such that when the members 13 and 15 are assembled, they together embrace the bar 11 closely on its four sides and may be moved only lengthwise of said bar, being maintained by friction in adjusted position. A finger piece or handle 17 is provided with a shank 18 connecting the members 13 and 15. The finger piece 17 extends vertically upward from the member 13 and affords a convenient means for manipulating the paper controlling finger and its supporting means in a direction lengthwise of the platen. The member 15 extends horizontally rearward toward the platen and is in the nature of a socket being formed with a cylindrical opening or bore 19 which receives a cylindrical slidable member or plunger 20. The latter enters the bore at its open rear end and has a sliding fit therein. The plunger carries a paper finger proper, as will presently be described,

and is adapted to slide back and forth in the bore of the socket-like member 15, being normally prevented from rotary or turning movement by a projection or shouldered screw 21, which is secured in the underside of the plunger 20 and the head of which projects radially outward through and beyond a slot 22 cut in the under side of the member 15. As shown clearly in Fig. 3, the diameter of the head of the screw 21 bears such a relation to the width of the slot 22 that while the plunger 20 may be reciprocated back and forth in a right line it is prevented from turning or rotating by the contact of the screw 21 with the sides of the slot 22. Said plunger may, however, be moved bodily forward to the forward end of the slot 22 where the slot is provided with an angular or lateral extension 23 of sufficient width to receive the screw 21 and to afford a limited turning or rotary movement of the plunger 20 when it has been moved to this forward position. The slide or plunger 20 is constantly urged or pressed rearward toward the platen by a coiled spring 24 which is arranged within the bore 19 and abuts at its rear end against the plunger 20. The forward end of the spring bears against a short cylindrical abutment 25 slidable within the bore 19 and which is formed with a stem extending rearwardly some distance through the spring and serving as a guide therefor. This member or abutment 25 receives a projection or screw 27, the shank of which extends radially outward through a slot 28 cut through the underside of the members 13 and 15 and extending lengthwise of the member 15 as shown in Fig. 3. The head of the screw 27 is outside of the slot 28 and is rounded to provide a convenient means of manipulating the slidable abutment or plunger 25. The abutment 25 may be adjusted in two positions, illustrated in Figs. 5 and 4. In Fig. 5 the spring 24 is shown as pressing the abutment forward as far as it can go, the limit of forward movement being determined by the shank of the screw 27 abutting against the forward end of the slot 28. As has been said the head of the screw 27 serves as a finger piece and by means of this the abutment 25 may be forced rearwardly compressing the spring 24 until the shank of the screw 27 reaches the rear end of the slot 28 where said slot is formed with an angular or lateral extension 28^a (Fig. 3). The extension or notch enables the abutment 25 to be rotated until the shank of the screw 27 enters said extension, after which the handle may be released, the spring 24 thereupon forcing the screw 27 forward and locking it and the abutment against the forward curved face of the extension 28^a. This construc-

tion enables the tension or force of the spring 24 to be varied, thereby permitting the cooperation of the paper finger with the platen to be varied as will hereinafter be explained more fully.

The rear end portion or head 20^a of the plunger 20 is at an angle to the plunger proper, being inclined downwardly toward the platen. The head is embraced on two of its flattened sides by the ears 29 of the paper finger. The latter also comprises a guiding portion or finger proper 30, the ears 29 being bent at right angles therefrom and the part 30 extending downwardly over the front face of the platen, the finger being curved to conform thereto. The ears 29 are perforated to receive a pin 31 which passes through the upper end portion of the part 20^a of the plunger and at its ends has knurled heads 31^a by which the plunger and the paper finger may be manipulated conveniently. The head 20^a is slotted as indicated at 32 and arranged in the slot is a guide and feed roller 33 pivoted at 34 and projecting through a cut-out 35 at the upper end of the finger 30, the construction being such that the roller 33 may contact with the platen or the paper thereon. The pivot 34 may be a rivet which also passes through the ears 29 of the paper finger and is headed outside said ears. The paper finger is maintained in fixed relation with the head 20^a by the rivet 34 and pin 31 so that the paper finger bears a fixed relation to the plunger 20.

The spring 24, of course, presses the finger proper 30 and the roller 33 against the platen and enables them to guide and control the paper and cause it to pass upwardly and outwardly from the machine smoothly and evenly. The screw 21 engaging with the sides of the slot 22 maintains the axis of the roller 33 parallel with the platen axle, thus preventing the paper or work sheet from being guided crookedly. For ordinary paper the abutment 25 will be maintained in the position shown in Fig. 5, but when it is desired to write on a card or stiff paper, pressure on the finger 30 and roller 33 against the platen may be increased by increasing the pressure of the spring 24, this being done by adjusting the abutment 25 to its rear position as shown in Fig. 4.

When it is desired to render the paper finger inoperative the knurled heads 31 may be grasped and the paper finger and slidable member or plunger 20 pressed toward the front of the machine until the screw 21 reaches the forward end of the slot 22, after which the paper finger and plunger may be turned about the axis of the plunger until the screw 21 locks in the extension or notch 23 of the slot 22, thereby maintaining the

parts in inoperative position, which position is indicated in Figs. 5 and 6. In adjusting the paper finger and its support lengthwise of the platen it is preferable to first lock the paper finger in inoperative position as shown in the last mentioned figure so that the devices may be moved freely along the bar 11 without generating any friction between the platen and the paper finger.

It will be noted that the paper finger is mounted on a slidable member, which slidable member and its support are movable in directions at right angles to each other; and that the support or plunger carrying the paper finger is movable at right angles to the platen and platen axle.

Various changes may be made without departing from my invention. For example, the slots 22 and 28 shown as formed in the under side of the member 15 may be formed or provided at other sides of said member, as for instance on the top thereof, and the screws or members 21 and 27 may project from their associate parts upward through the slots instead of downward as shown.

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

1. In a typewriting machine, the combination of a platen, a paper finger, a slidable plunger on which said paper finger is mounted, a socket in which said plunger bears, and an expansible spring in said socket constantly tending to press said plunger toward the platen.

2. In a typewriting machine, the combination of a platen, a rod or bar extending lengthwise of the platen, a support slidable on said rod or bar and comprising a socket, a plunger in said socket, a spring tending to press said plunger constantly toward the platen, and a paper finger mounted on said plunger.

3. In a typewriting machine, the combination of a platen, a rod or bar extending lengthwise of the platen, a support slidable on said rod or bar and comprising a socket, a plunger in said socket, a spring tending to press said plunger constantly toward the platen, a paper finger mounted on said plunger, and a roller projecting through an opening in said paper finger.

4. In a front-strike typewriting machine, the combination of a platen, a rod or bar arranged parallel with and in front of the platen, a support slidable on said rod or bar and comprising a socket extending rearwardly toward the platen, a plunger in said socket movable at right angles to the axle of the platen, and a paper finger mounted on said plunger.

5. In a typewriting machine, the combination of a platen, a paper finger, a slidable member on which said paper finger is mounted,

and an adjustable support on which said member is slidable bodily toward and away from the face of the platen.

6. In a typewriting machine, the combination of a platen, a paper finger, a slidable member on which said paper finger is mounted, and a support on which said member is slidable toward and away from the platen, said support being itself slidable in a direction at right angles to the slidable movement of said member.

7. In a typewriting machine, the combination of a platen, a paper controlling device, a member on which said device is mounted, a second member supporting said first named member, one of said members being slidable in an opening in the other, and a spring constantly tending to press said members apart.

8. In a typewriting machine, the combination of a platen, a paper controlling device, a member on which said device is mounted, a second member supporting said first named member, one of said members being slidably seated in an opening in the other, and a coiled spring arranged in said opening and tending to press the seated member out of said opening.

9. In a typewriting machine, the combination of a platen, a support slidable normally toward and away from the platen, a paper finger rigidly secured to said support, a feed roller, and a bracket or bifurcated head for said feed roller forming a rigid part of said sliding support.

10. In a typewriting machine, the combination of a platen, a paper finger, a support on which said paper finger is mounted, and a roller pivoted in a slot or recess in said support, said support being slidable bodily toward and away from the platen.

11. In a typewriting machine, the combination of a platen, a paper controlling finger, a roller, a sliding member on which said paper finger and said roller are both supported, and a spring acting on said sliding member and tending constantly to press said paper finger and roller against the platen.

12. In a typewriting machine, the combination of a platen, a platen frame, a support adjustable on and lengthwise of said platen frame, a member slidably mounted on said support, a paper finger on said member, and a roller pivoted on said member.

13. In a typewriting machine, the combination of a platen, a rod or bar extending lengthwise of the platen, a support slidable on said rod or bar and comprising a socket, a plunger in said socket, a spring tending to press said plunger constantly toward the platen, a paper finger on said plunger, and a guide roller pivoted on said plunger.

14. In a typewriting machine, the combination of a paper finger, a support on which said paper finger is mounted, said support being slidable bodily toward and away from the platen, and means for locking the support in position where the paper finger carried by it will be in inoperative position.

15. In a typewriting machine, the combination of a platen, a paper finger movable bodily toward and away from the platen in a straight line and also rotatable in a plane parallel with the axis of the platen, and means for locking said paper finger in inoperative position after it has been moved away from the platen and rotated.

16. In a typewriting machine, the combination of a platen, a paper finger movable bodily toward and away from the platen in a straight line and also rotatable in a plane parallel with the axis of the platen, a spring constantly tending to press said paper finger into engagement with the platen, the paper finger being constructed and arranged to be rotated and locked in inoperative position after such rotation.

17. In a typewriting machine, the combination of a paper finger, a slidable plunger on which said paper finger is mounted, a socket in which said plunger bears, a spring tending constantly to press said plunger toward the platen, means for rotating said plunger, and means for locking said plunger, after it has been rotated, in a position in which the paper finger carried by it will be inoperative.

18. In a typewriting machine, the combination of a paper finger, a slidable plunger on which said paper finger is mounted, a socket in which said plunger bears, a slot in said socket, a guiding and limiting projection extending from said plunger through said slot, and a spring on said plunger and tending constantly to press said projection toward one end of the slot.

19. In a typewriting machine, the combination of a platen, a paper finger, a slidable plunger on which said paper finger is mounted, a socket in which said plunger bears, a compression spring in said socket tending constantly to press said plunger toward the platen, an angled slot in said socket and a

projection on said plunger engaging said slot, said projection and slot cooperating to guide said plunger and to maintain it in a position where the paper finger will be inoperative.

20. In a typewriting machine, the combination of a platen, a paper finger, a support on which said paper finger is mounted, an expansible spring operative to press said paper finger constantly toward the platen, and an adjustable abutment with which said spring cooperates at one end and by which its pressure may be varied.

21. In a typewriting machine, the combination of a platen, a paper finger, a slidable plunger on which said paper finger is mounted, a socket in which said plunger bears, a coiled expansible spring in said socket operative on the plunger, and an abutment movable in said socket and cooperative with one end of said spring.

22. In a typewriting machine, the combination of a platen, a paper finger, a slidable plunger on which said paper finger is mounted, a socket in which said plunger bears, a coiled expansible spring in said socket operative on the plunger, an abutment movable in said socket and cooperative with one end of said spring, and means for varying the position of said abutment and maintaining it in either of a plurality of positions.

23. In a typewriting machine, the combination of a platen, a paper finger, a slidable plunger on which said paper finger is mounted, a socket in which said plunger bears, a coiled expansible spring in said socket operative on the plunger, an abutment movable in said socket and cooperative with one end of said spring, and means for varying the position of said abutment and maintaining it in either of a plurality of positions, said means comprising an angled slot in said socket and a projection extending from said abutment through said slot.

Signed at Ilion, in the county of Herkimer, and State of New York.

CLIO B. YAW.

Witnesses:

I. D. ADAMS,

WILLIAM McANDREW.