

C. B. CORCORAN.  
TYPE WRITING MACHINE.  
APPLICATION FILED MAR. 17, 1910.

976,124.

Patented Nov. 15, 1910.

Fig. 1.

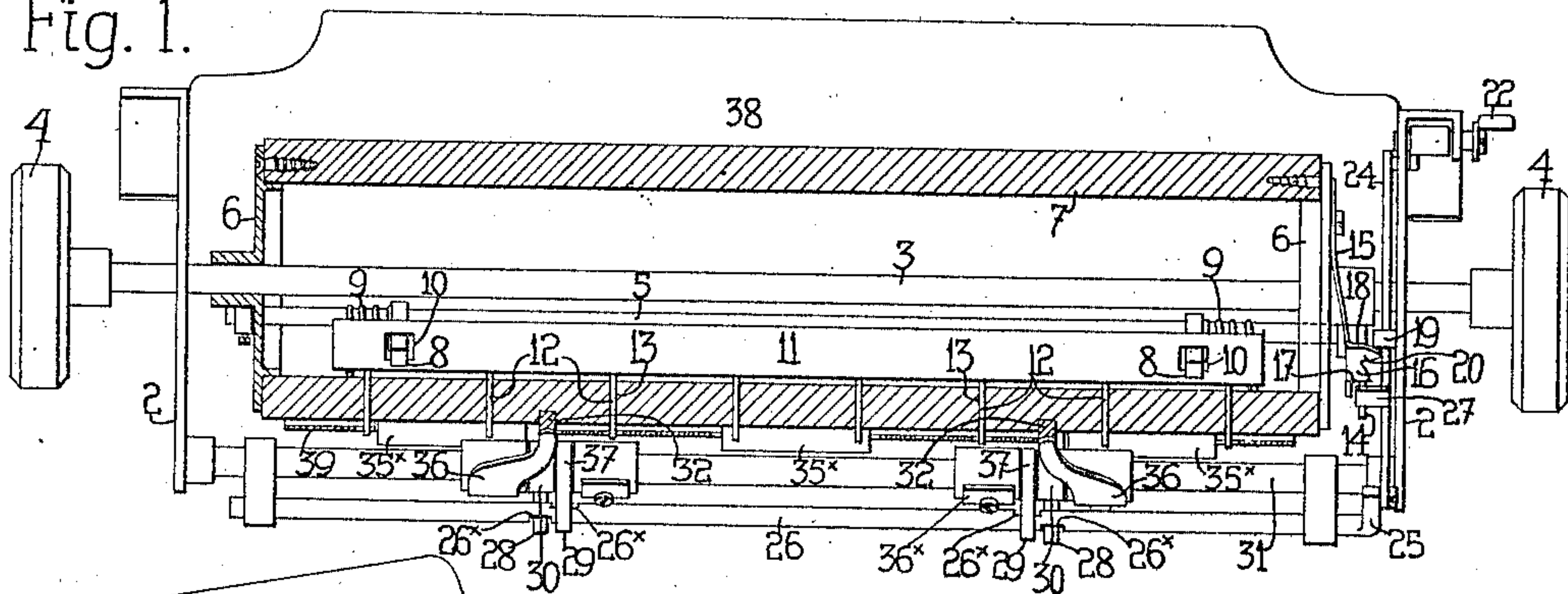


Fig. 2.

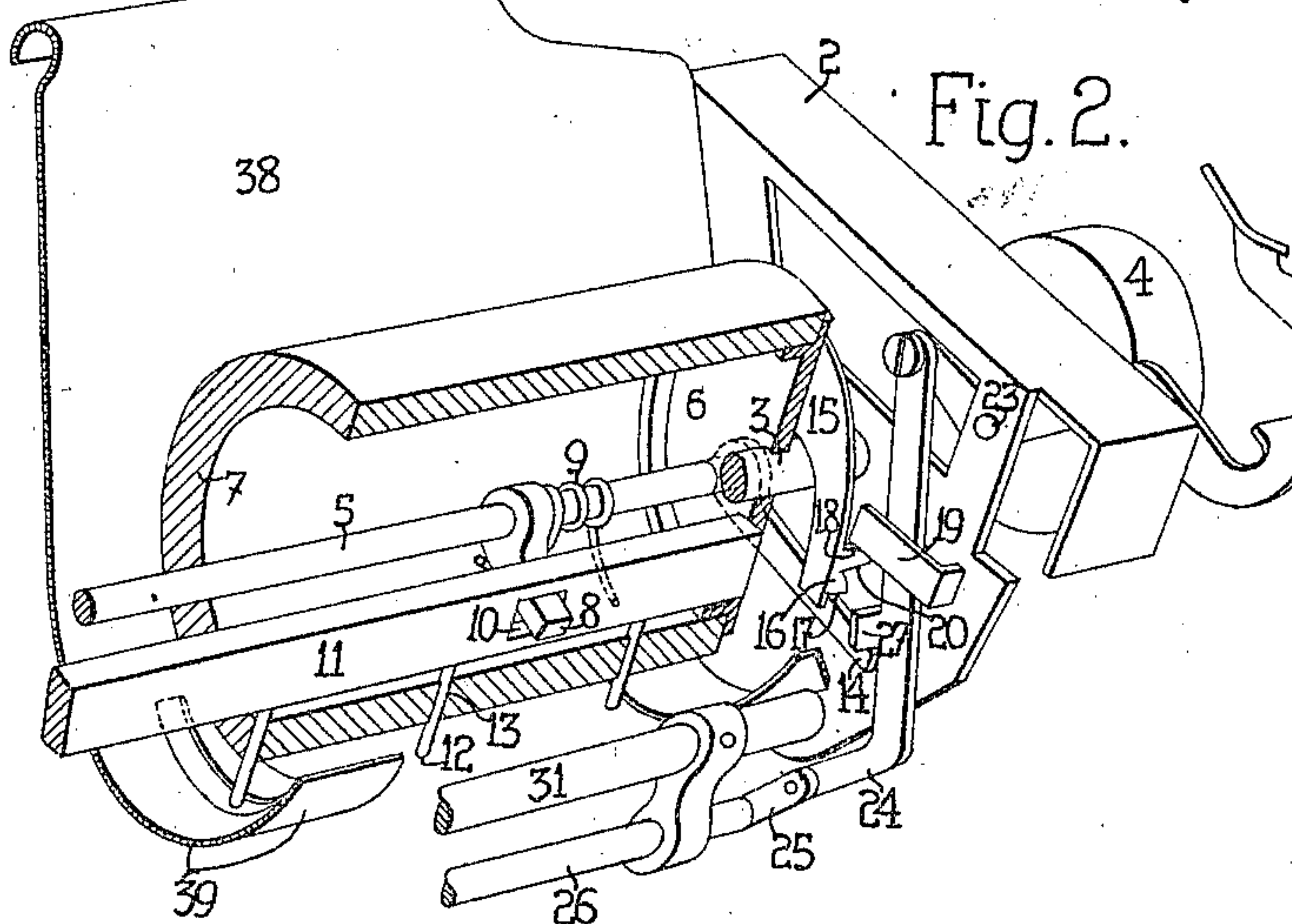


Fig. 3.

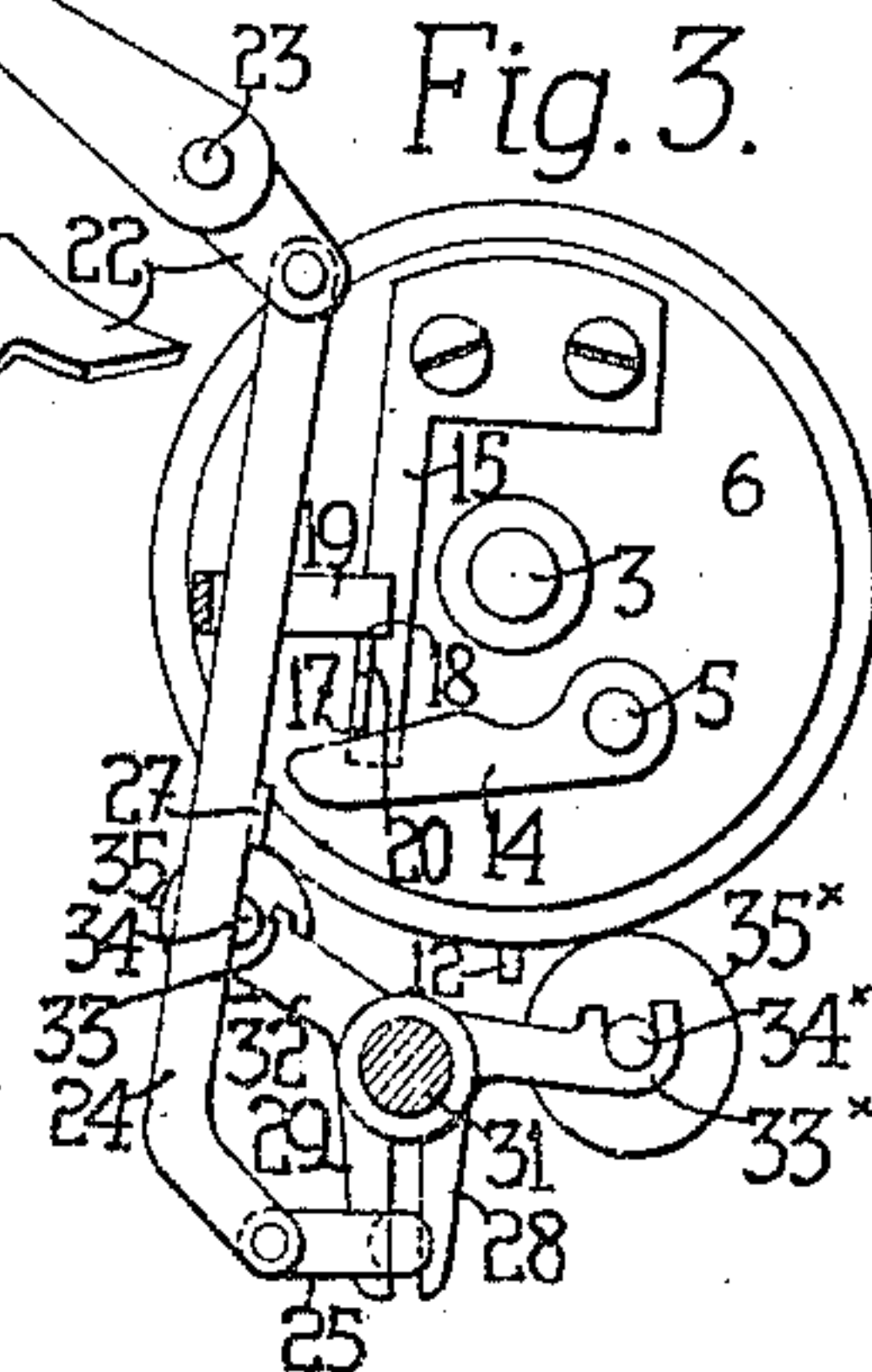


Fig. 4.

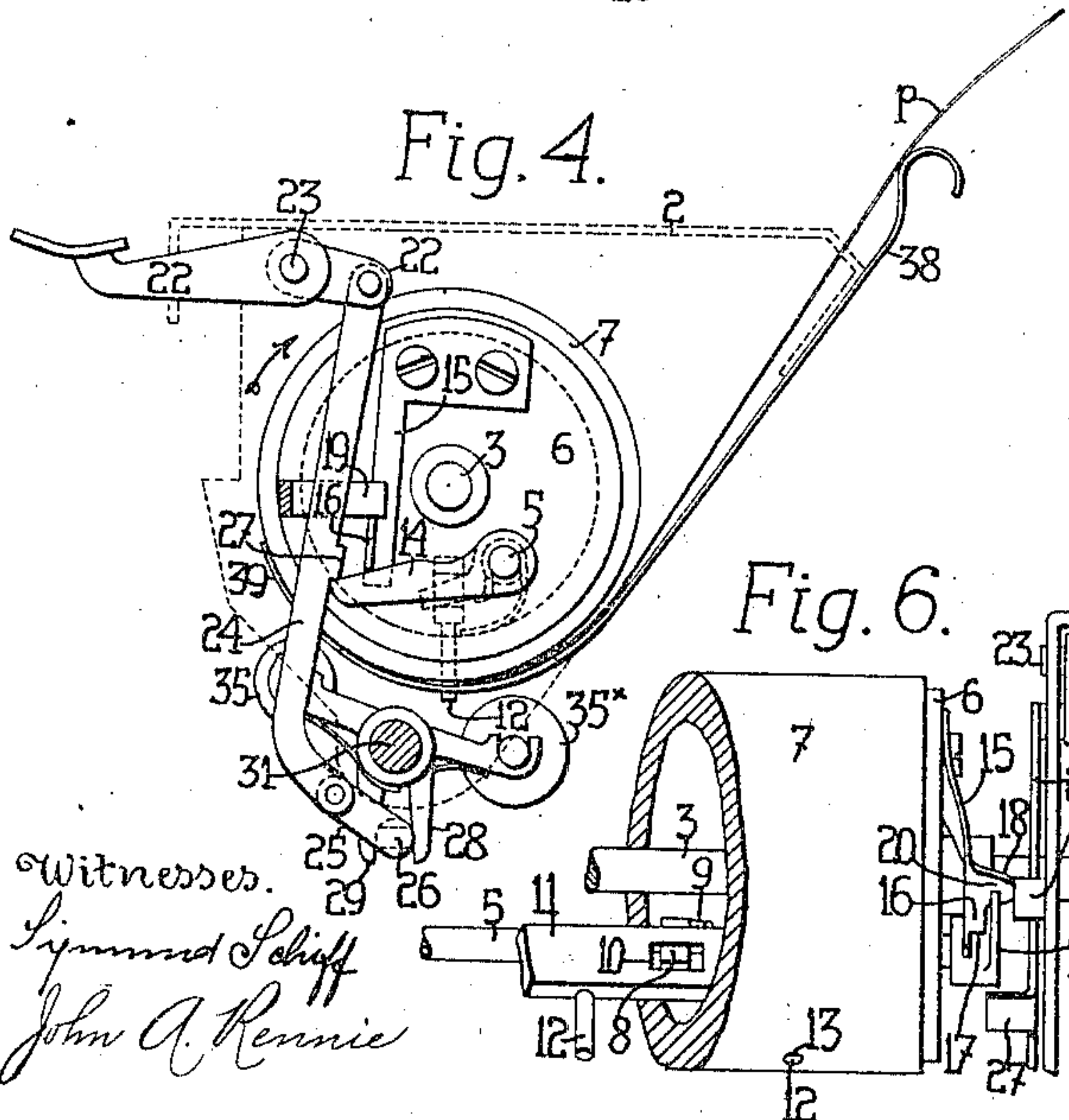


Fig. 6.

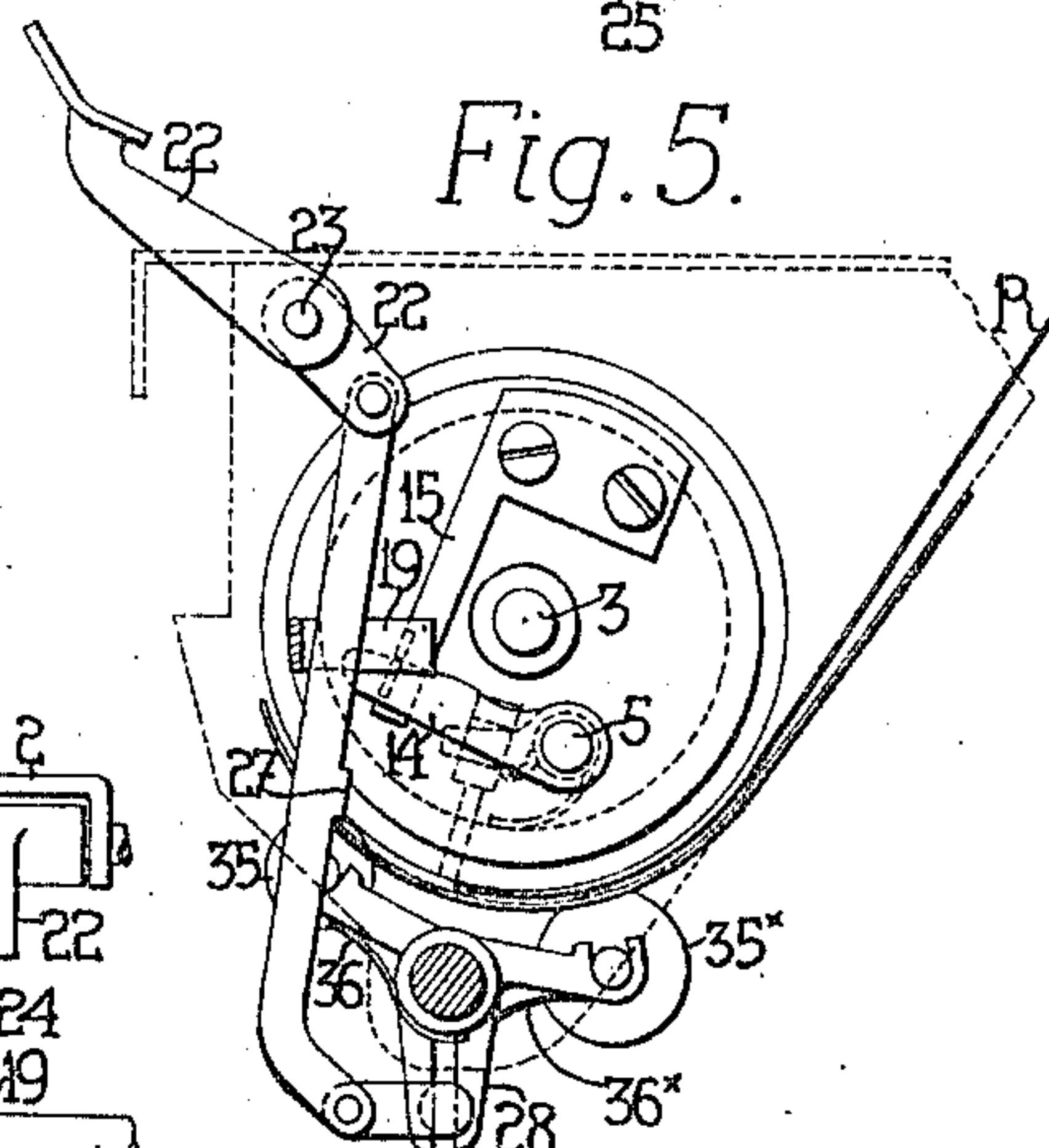


Fig. 5.

Witnesses.  
Lyman Schiff  
John A. Rennie

Inventor.  
Cornelius B. Corcoran  
By B. B. Stierney  
Attorney.



# UNITED STATES PATENT OFFICE.

CORNELIUS B. CORCORAN, OF NEW YORK, N. Y., ASSIGNOR TO UNDERWOOD TYPE-WRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

976,124.

Specification of Letters Patent.

Patented Nov. 15, 1910.

Application filed March 17, 1910. Serial No. 550,043.

*To all whom it may concern:*

Be it known that I, CORNELIUS B. CORCORAN, a citizen of the United States, residing in the borough of Bronx, city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

10 This invention relates to the platen and cooperating devices in a typewriting machine, for handling the sheets of paper, and particularly to means for enabling the operator to position the sheet accurately in the machine.

There is provided in the usual cylindrical platen a series of gage-pins which may project from the surface thereof, and may be withdrawn or caused to disappear so that their tips preferably will be flush with or form part of the writing surface of the platen, to permit the employment of the platen for the usual purposes. These pins may be caused to project at the proper time when the platen is in the proper position, and the operator may then introduce the sheet and set its leading edge against said pins. The pins are normally withdrawn; but by depressing the key, a trip or device is set, which causes the pins to project when the platen is turned to the proper point. Said key is preferably the same key that is usually provided for releasing the pressure rolls which run upon the platen. After the paper is introduced, the key is returned to normal position, the pressure rolls hold the sheet to the platen, and the projecting gage-pins are caused to disappear. A shaft is journaled within the platen and arranged to move the pins radially of the platen. Said shaft is provided with an arm at one end of the platen, with which a spring-lock cooperates to retain the pins protruded. A stop is arranged near the end of the platen to be moved into and out of position for arresting said arm as the platen is rotated, and thereby turning said shaft against the resistance of a spring to cause said shaft to protrude said pins to position such that they act as gage-devices for the squaring of the paper inserted, the spring-lock for said arm engaging therewith at the same time. The further turning of the platen brings the spring-lock against a fixed cam, which moves

the lock to release the said arm, and on releasing the stop, the said arm snaps back past its spring-lock to its normal position, and the pins are withdrawn into or flush with the surface of the platen.

In the accompanying drawings, Figure 1 is an elevation of a carriage with the platen in longitudinal section, and showing the invention applied thereto. Fig. 2 is a perspective view, partly in section, of the end of the carriage, platen and parts. Fig. 3 is an end view of the same, with the carriage omitted. Fig. 4 is an end view of the same, but with the parts in other positions. Fig. 5 is a similar view of the same, but in still other positions of the parts. Fig. 6 is a front elevation of one position of the platen and appurtenances.

The reference numeral 2 marks a carriage frame, in which the platen-shaft 3 is mounted for rotation as usual. Numeral 4 marks the usual "twirlers" on the shaft 3. A rod or shaft 5 is journaled in the ends or heads 6 of the platen between the rod 3 and the tubular platen body 7, and is provided with arms 8 fast thereon. A spring 9 is coiled about the shaft 5 and the ends thereof bear against the inner surface of body 7 and the arm 8, respectively, said spring being tensioned to press said arms 8 toward the shaft 3. The arms 8 set loosely into slots 10 in a movable bar 11 inside the platen. A series of pins 12 projects from the side of bar 11 nearest the platen body 7, said pins extending into perforations 13 in said body or sheath, as shown, and being movable by the arms 8. The parts are so proportioned and arranged, that when they are free to obey the bias of spring 9, the ends of the pins 12 are preferably flush with the outer surface of the body 7 to form parts of the writing surface thereof. The shaft 5 has an arm 14 fast thereon outside the platen, and the platen end 6 has a leaf spring 15, provided with a lock-lug 16 to engage arm 14 and the pins 12 protruded, as in Figs. 1 to 4. The lock-lug or part 16 has a face 17 to engage the upper edge (in Figs. 1 to 4) of the arm 14, for this purpose. Said spring 15 also has an inclined face or cam 18 for co-action with an arm or trip 19, fixed to the carriage frame 2, whereby, in the rotation of the platen in line-feeding direction, the arm 19 cams or springs the spring 15 toward



the platen end 6, to release arm 14, so that the latter may be swung by its spring 9, until arrested by the stop 20, on whose upper edge the incline 18 is.

5 The arm 14 is preferably operated automatically during the rotation of the platen, to protrude the pins 12, although it may be operated by hand direct for this purpose. It is preferred to operate the arm through a lever 22, which is in a more convenient position on the carriage frame 2, and is fulcrumed at 23, and connected by a link 24  
10 with an arm 25 fast on a shaft 26, which is usually journaled in the carriage 2, to release the usual pressure rolls 35, 35\*.

15 On the rear edge of the link 24 is a lug 27 normally out of the circular path of the arm 14, but which may be moved into such path by the operation of the lever 22, and when so moved, arrests the free end of said arm 14 as the platen is turned as in line-feeding, so that as the platen is further  
20 turned, the shaft 5 will rotate independently, projecting the pins 12, and the spring 15 will move from the position thereof shown in Figs. 5 and 6, to the position thereof shown in Figs. 1 to 4, and will lock the arm 14 in  
25 position for keeping the pins 12 in their protruded position, the rotation of the platen being arrested by the operator as soon as the spring 15 snaps over.

30 The shaft 26 aforesaid, is shown as notched at 26\*, so as to act as cams on the arms 28, 29. The arms 28 are integral with sleeves 30, which are loose on a rod 31, forming a part of the carriage frame, and 32 are other arms integral with or fast to said sleeves. The arms 32 are provided with bearings 33 for the journals 34 of a pressure-  
35 roller 35. Springs 36, fast to sleeves on rod 31, act to press said roller 35 against the platen. The arms 29 are integral with or rigidly attached to sleeves 37, loose on said rod 31, and are provided with bearings 33\*  
40 for the journals 34\* of a pressure roller 35\*, springs 36\* fast to said sleeves 37, acting to press said roller 35\* against the platen. The normal positions of these parts are shown in Fig. 5. On pressing down the lever 22  
50 from the position thereof shown in Fig. 5 to the position shown in Fig. 4, the shaft 26 is given a quarter turn, and its notched parts 26\* are turned from the vertical to the horizontal, thus forcing arms 28, 29 apart  
55 and removing the rollers 35, 35\* from contact with the platen, as shown in Fig. 4, and out of the paths of the pins 12. On the return of the lever 22 to its normal position, the shaft 26 is returned to the position there-  
60 of shown in Fig. 5, and the springs named return the rollers 35, 35\* to contact with the platen.

When it is desired to insert paper, the lever 22 may be depressed, as in Fig. 4, thus  
65 removing the rollers 35, 35\*, from contact

with the platen, and bringing the lug 27 into the circular path of the arm 14. The platen may now be turned in the direction of the line-feed motion thereof, until the  
70 lug 27 has stopped the arm 14 long enough relatively to the moving platen, for the spring 15 to snap lock lug 16 above the arm 14 as shown, whereby the pins 12 are protruded from the platen and are locked in  
75 such protruded position, when the rotation of the platen is stopped by the operator. Then the paper *p* is inserted as shown in Fig. 4, and its leading edge is brought against the gage-pins 12, and while the paper is in the described position, the lever  
80 22 is snapped up, and the rollers 35, 35\* are returned to their working positions, as hereinbefore set forth, and the paper is caught, ready for feeding by rotating the platen. Then the platen is turned forward in the  
85 direction of its line-feed motion until the trip-arm 19, co-acting with the cam-surface 18, forces spring 15 so far toward the end 6 of the platen, that the arm 14 is released from the control thereof, whereupon the  
90 arm 14 passes upward alongside the lock-lug 16 until arrested in normal position by the stop 20, and the pins 12 are withdrawn from their protruded positions. The paper shelf 38 and guide-fingers 39 integral there-  
95 with are of known construction and operation.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others. 100

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with the roller-platen, of gage-pins mounted therein and adapted to be pro-  
105 truded therefrom, a spring for withdrawing said pins from their protruded positions, a lever upon the platen frame, means connected with said lever for protruding said pins, and an automatic lock on the platen  
110 for holding said pins in their protruded positions.

2. In a typewriting machine, the combination with the roller-platen, of gage-pins mounted therein and adapted to be pro-  
115 truded therefrom, a rock-shaft within said platen and connected with and moving said pins, a spring for moving said shaft to withdraw said pins inwardly of the platen, an arm on said shaft outside said platen, and  
120 a spring-lock on the platen for co-action with said arm when the shaft is rocked to protrude said pins, to lock said arm with the pins in protruded positions.

3. In a typewriting machine, the combina-  
125 tion with a roller-platen, of gage-pins mounted therein and adapted to be protruded therefrom, a rock-shaft within said platen and connected with said pins to move them, a spring for operating said shaft, an  
130



arm on said shaft outside said platen, and means on the platen for locking said arm when said shaft is rocked to protrude said pins.

5 4. In a typewriting machine, the combination with a roller-platen on a platen frame, of gage-pins mounted therein and adapted to be protruded therefrom, a rock-shaft journaled in said platen for moving  
10 said pins in and out, an arm on said shaft for operating the same, and a lever upon the platen frame having means to cause the operation of said arm.

15 5. In a typewriting machine, the combination with a roller-platen on a platen frame, of gage-pins mounted therein and adapted to be protruded therefrom, a rock-shaft journaled in said platen for moving  
20 said pins in and out, a spring for moving said shaft to draw in the protruded pins, an arm on said shaft whereby it may be moved to protrude said pins, and a lever upon the platen frame having means to cause the operation of said arm.

25 6. In a typewriting machine, the combination with a roller-platen, of gage-pins mounted therein and adapted to be protruded therefrom, a rock-shaft journaled in said platen and moving said pins in and out, an  
30 arm on said shaft, and a lock on the platen for co-action with said arms to hold the pins in their protruded positions.

35 7. In a typewriting machine, the combination with a roller-platen, of gage-pins mounted therein and protrudable therefrom, a rock arm external to said platen and connected with said pins to move them in and  
40 out, and a spring-lock co-acting with said arm to retain said pins in their protruded positions.

45 8. In a typewriting machine, the combination with a roller-platen, of gage-pins mounted therein and protrudable therefrom, a rock-arm external to said platen, and moving  
50 said pins in and out, a spring for drawing in said pins, a lock on the platen co-acting with said arm to keep said pins protruded, and means dependent on the movement of the platen for releasing said lock.

55 9. In a typewriting machine, the combination with a roller-platen on a platen frame, of gage-pins mounted therein and protrudable therefrom, a rock-arm external  
60 to said platen and connected to said pins to move them, an automatic lock on the platen for co-action with said arm to retain said pins protruded, and means upon the platen frame to move said lock to release it.

65 10. In a typewriting machine, the combination with a roller-platen on a platen frame, of gage-pins mounted therein and protrudable therefrom, a rock-arm external  
to said platen and connected to said pins to move them in and out, a spring for drawing in said pins, an automatic lock on the platen

for co-action with said arm to retain said pins protruded, and means upon the platen frame to move said lock to release it.

11. In a typewriting machine, the combination with a roller-platen, of gage-pins  
70 mounted therein and protrudable therefrom, a rock-arm external to said platen and connected with said pins to move them, and an arm-operator movable into and out of the path of said arm.

75 12. In a typewriting machine, the combination with the roller-platen, of gage-pins mounted therein and protrudable therefrom, a rock-arm on but external to said platen and connected to said pins to move them, an  
80 automatic lock for holding said arm in position for protruding said pins, means for releasing said lock, and an arm-operator movable into and out of the path of said rock-arm.

85 13. In a typewriting machine, the combination with the roller-platen, of gage-pins mounted therein and protrudable therefrom, a movable pressure-roll spring-held against  
90 said platen, an arm on but external to said platen and connected with said pins to move them, an arm-operator movable into and out of the path of said rock-arm, and means for simultaneously moving said arm-operator  
95 into said path and said pressure-roll away from said platen.

100 14. In a typewriting machine, the combination with the roller-platen, of gage-pins mounted therein and protrudable therefrom, a rock-arm on but external to said platen  
and connected to said pins to move them, a spring-lock for said arm provided with a cam-surface, and a fixed member arranged to co-act with said cam-surface to move said  
105 lock to release said arm.

110 15. In a typewriting machine, the combination with the roller-platen, of gage-pins mounted therein and protrudable therefrom, a rock-arm on but external to said platen  
and connected to said pins to move them, a spring for moving said pins inwardly of the platen, a spring-lock for said arm provided with a cam-surface, and a fixed member arranged to co-act with said cam-surface to  
115 move said lock to release said arm.

120 16. In a typewriting machine, the combination with the roller-platen, of gage-pins mounted therein and protrudable therefrom, a spring-held pressure-roll for co-action  
to said platen and moving said pins, a spring for drawing in said pins, an arm-operator movable into and out of the path of said  
125 rock-arm, and means for simultaneously moving said operator into said path and moving said pressure-roll away from the platen.

130 17. In a typewriting machine, the combination with the roller-platen, of gage-pins mounted therein and protrudable therefrom,



a spring-actuated rocker-arm on said platen connected to and moving said pins, an arm-operator movable into and out of the path of said rocker-arm, a spring-lock for said  
5 rocker-arm, and means for releasing said lock.

18. In a typewriting machine, the combination with the roller-platen, of gage-pins mounted therein and protrudable therefrom,  
10 a spring-actuated rocker-arm on said platen and connected to and moving said pins, an arm-operator movable into and out of the path of said rocker-arm, a pressure-roll co-acting with said platen, a spring-lock for  
15 said rocker-arm, means for releasing said lock, and means for simultaneously moving said arm-operator into and out of said path and said pressure-roll away from said platen and releasing it.

20. 19. In a typewriting machine, the combination with the roller-platen, of gage-pins mounted therein and protrudable therefrom, a spring-actuated rocker-arm connected to and moving said pins, a spring-lock for said  
25 arm provided with a cam, said cam forming a stop for the motion of said arm in one direction, and a fixed member for co-action with said cam to move said lock to release said rocker-arm.

30. 20. In a typewriting machine carriage, the combination with the roller-platen, of gage-pins mounted therein and protrudable therefrom, a spring-operated rocker-arm connected to and moving said pins, and a flat  
35 spring secured to the platen-end and provided with an arm-lock and with an arm-stop at an angle thereto.

21. In a typewriting machine carriage, the combination with the roller-platen, of gage-  
40 pins mounted therein and protrudable therefrom, a spring-operated rocker-arm connected to and moving said pins, a flat spring secured to the platen-end and provided with an arm-lock, and a cam-face at an angle  
45 thereto, a cam-operator on the carriage-frame, and a rocker-arm operator movable into and out of the path of said rocker-arm.

22. In a typewriting machine carriage, the combination with the roller-platen, of gage-  
50 pins mounted therein and protrudable therefrom, a spring-operated rocker-arm connected to and moving said pins, a flat spring on the platen-end provided with an arm-lock and a cam-face at an angle thereto, a cam-  
55 operator on the carriage, a rocker-arm operator movable into and out of the path of said rocker-arm, a pressure-roll co-acting with said platen, and means for moving simultaneously said arm-operator into said  
60 path and said pressure-roll away from the platen.

23. The combination with a platen, of a gage carried thereby, a feed roll to run upon the platen, means to effect the release of the  
65 feed roll, and means to set the gage; said

gage-setting means including a part normally ineffective but connected to said roll-releasing means, to be moved to effective position at the roll-releasing operation.

24. The combination with a platen and a  
70 platen frame, of a normally ineffective gage upon the platen, a lever mounted upon the platen frame, a gage-setting member upon the platen, means movable by said lever into the path of said gage-setting member,  
75 a feed roll to run upon the platen, and means to enable said lever to release said feed roll.

25. The combination with a platen and a platen frame, of a settable gage upon the  
80 platen, a feed roll to run upon the platen, a lever mounted upon the platen frame, means to enable said lever to control the setting of said gage, and means also controlled by said lever to effect the release of said feed roll. 85

26. The combination with a platen and a platen frame, of a gage carried by the platen, means mounted upon the platen and connected to said gage to move the same to effective position, and a normally ineffective  
90 interceptor upon the platen frame movable to position to engage said means, to cause the operation of the latter.

27. The combination with a platen and a platen frame, of a settable gage carried by  
95 the platen, a lever mounted upon the platen frame, and means to enable said lever to control the setting of said gage.

28. The combination with a gage and a platen frame, of a gage carried by the  
100 platen, a gage-setter mounted upon the platen, a normally ineffective interceptor upon the platen frame, and a finger piece connected to said interceptor to move it into the path of said gage-setter to hold the same  
105 during the rotation of the platen and thereby cause said gage-setter to set the gage.

29. In a typewriting machine, the combination with a platen and a pressure roll to run thereon, of a lever, means connecting  
110 said lever to said pressure roll to release the same an interceptor moved by said lever at the roll-releasing operation, and a normally ineffective gage mounted upon the platen and connected to a part to be arrested by  
115 said interceptor, to cause the gage to be set during the rotation of the platen.

30. In a typewriting machine, the combination with a rotatable platen and a platen  
120 frame, of a feed roll to run upon the platen, a lever mounted upon the frame and connected to said roll to release the same, a settable gage, and means controlled by said lever and dependent upon the rotation of the platen, to set said gage to effective position. 125

CORNELIUS N. CORCORAN.

Witnesses:

K. FRANKFORT,  
RALPH S. WARFIELD.