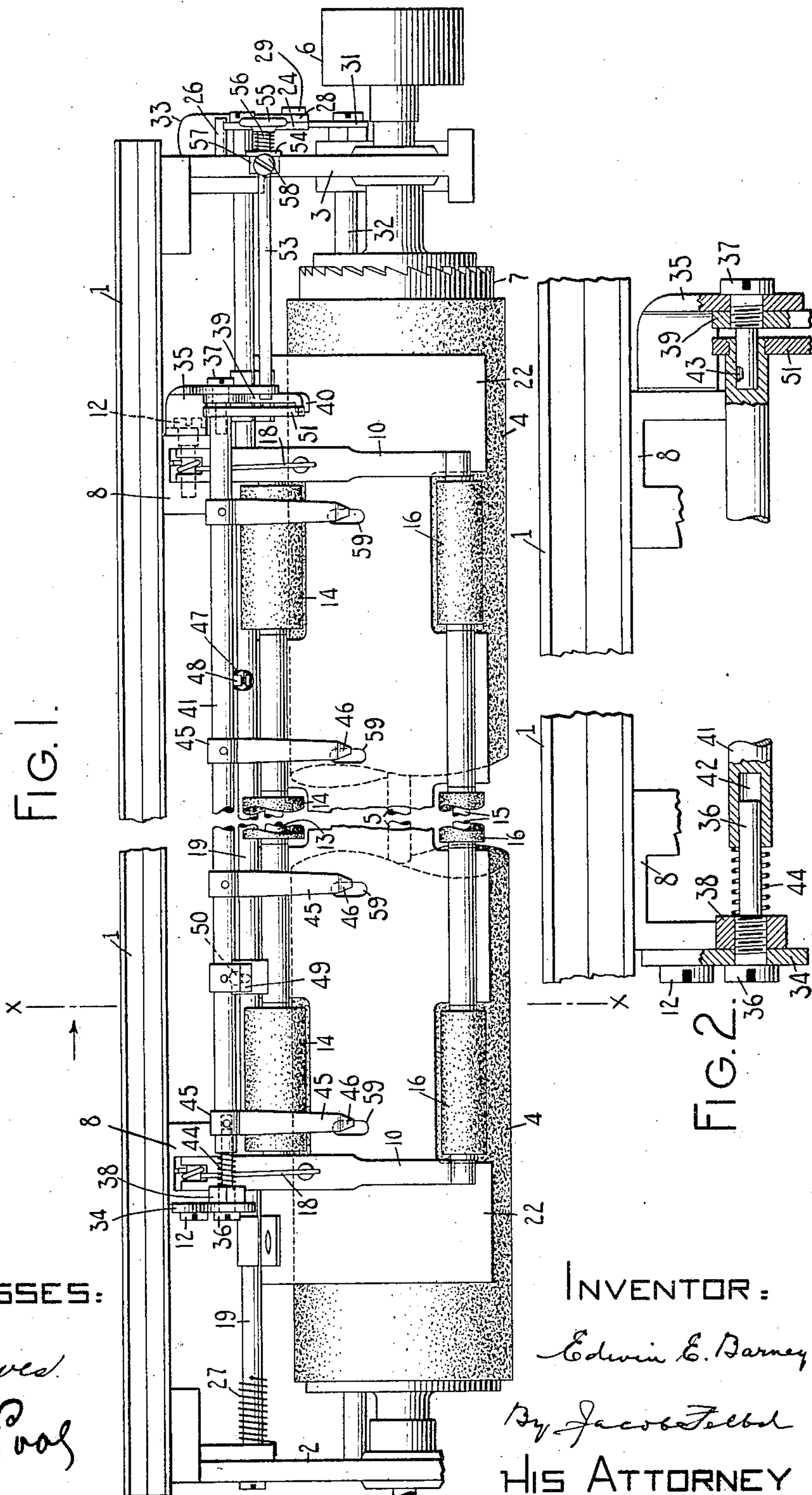


E. E. BARNEY.
TYPE WRITING MACHINE.
APPLICATION FILED APR. 12, 1909.

Patented Sept. 28, 1909.
2 SHEETS—SHEET 1.

935,575.



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2 SHEETS—SHEET 2.

FIG. 3.

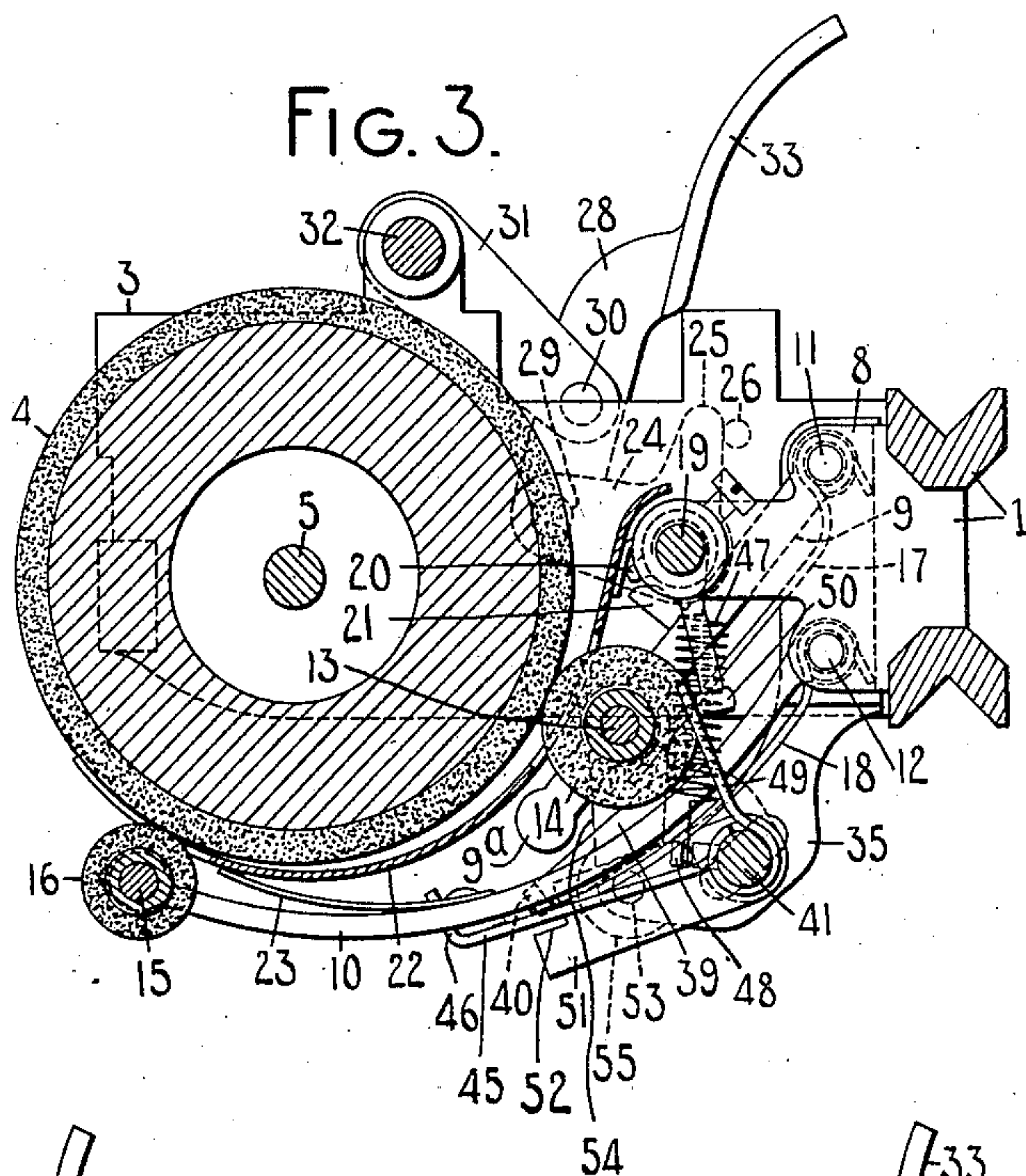
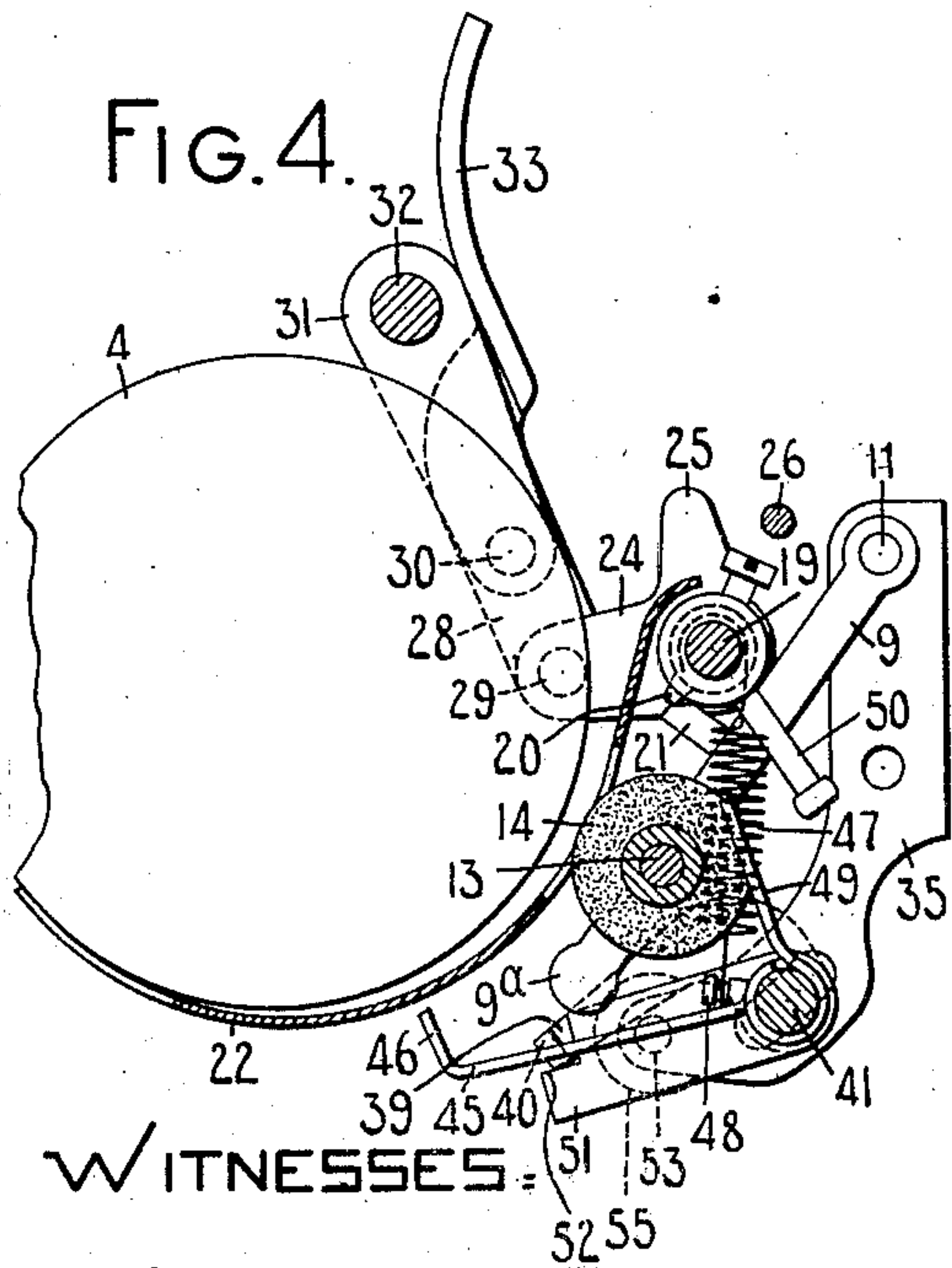


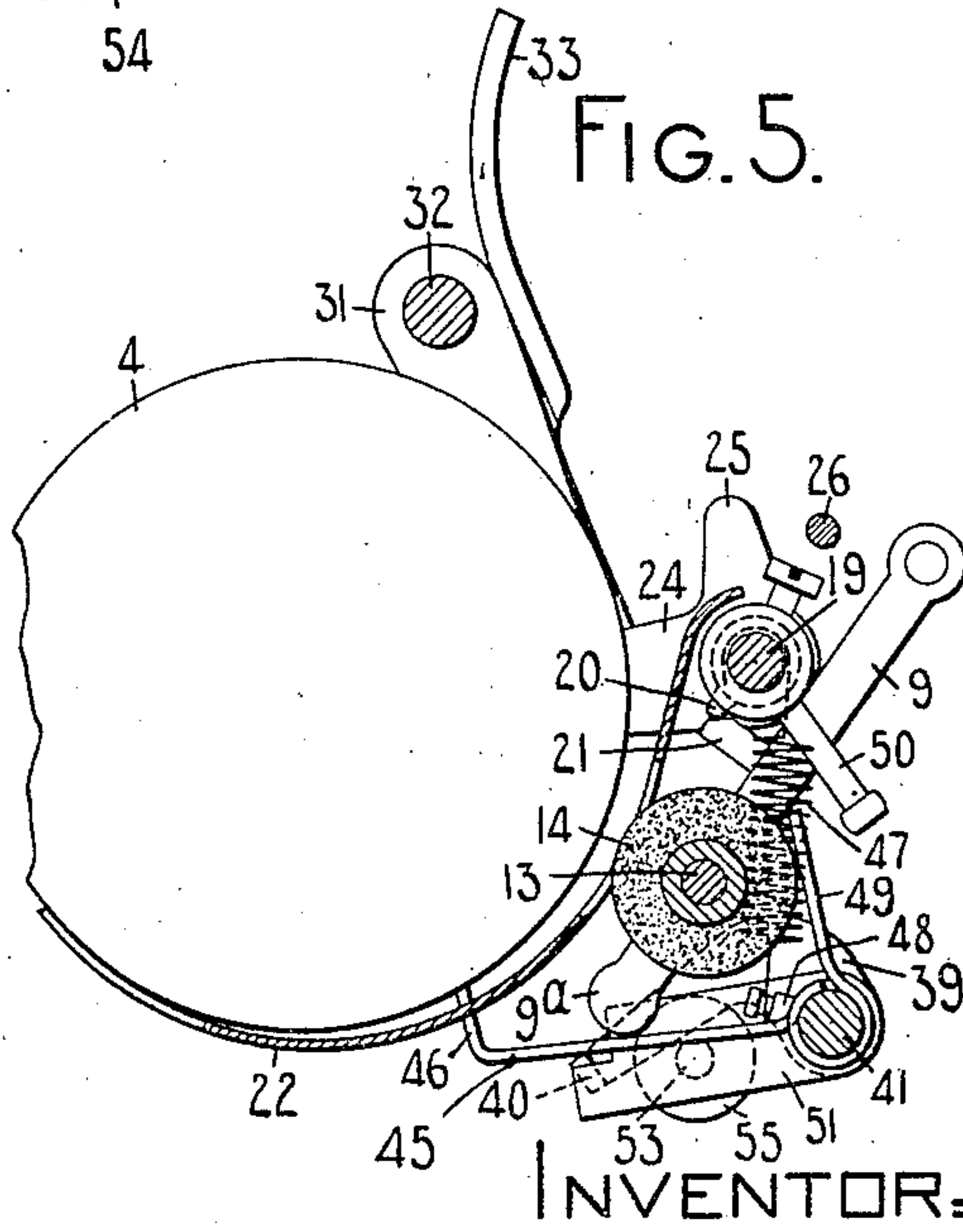
FIG. 4.



WITNESSES:

J. B. Kleeves.
m. w. Pool

FIG. 5.



INVENTOR:

Edwin E. Barney
By Jacob Felbel
HIS ATTORNEY

UNITED STATES PATENT OFFICE.

EDWIN E. BARNEY, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE MONARCH TYPE-
WRITER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

935,575.

Specification of Letters Patent.

Patented Sept. 28, 1909.

Application filed April 12, 1909. Serial No. 489,263.

To all whom it may concern:

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

My invention relates to paper feeding mechanism for typewriting machines and especially to leading edge stop devices for such machines.

The main object of the invention is 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.

My invention is designed as an improvement over the prior constructions shown in the applications of C. J. Bond, Sr. No. 482,678, filed March 11th, 1909, and Jacob Felbel, Sr. No. 486,210, filed March 27th, 1909. Like the Bond construction the present construction provides a leading edge stop device which is constantly spring pressed toward the platen but which is normally held away from the platen in a certain position by a stronger spring controlled by devices connected with the release key of the machine. In Bond when the release key is operated to swing the feed rollers away from the platen the leading edge stop spring is at the same time permitted to draw the leading edge stops into operative position. In the present construction, however, the leading edge stops move only a short distance toward the platen from normal position when the release key alone is operated, said stops being then arrested by an obstruction which can only be removed to permit further movement of the stops to the platen by the operation of a key separate from the release key and operative independently thereof. In this latter respect the present construction resembles that disclosed in the Felbel application. The present construction further resembles Felbel in that at a single operation the feed rollers and the leading edge stops may be restored to normal position.

I have shown my invention applied to a Monarch typewriting machine but said in-

vention may be adapted to other styles of writing machines.

In the accompanying drawings, Figure 1 is a fragmentary bottom plan view of the platen carrier and platen of a Monarch typewriting machine embodying my invention. Fig. 2 is a fragmentary bottom plan view showing details of construction of the shaft for the leading edge stops and its mounting parts being shown in section. Fig. 3 is a vertical sectional view taken on a plane represented by the dotted line $x-x$ in Fig. 1 and looking in the direction of the arrow at said line, Fig. 3 however showing the platen carrier turned over in its normal position. Figs. 4 and 5 are views corresponding to Fig. 3 but showing some of the parts in different relations and omitting other parts.

In the drawings, 1 designates the back bar of the platen carrier or carriage, which carrier further comprises side or end bars 2 and 3, said back bar being grooved at its top and bottom to cooperate with the usual anti-friction balls (not shown). A platen 4 is mounted on an axle 5 which bears in the end bars and is provided at its ends with finger wheels 6. A line spacing ratchet wheel 7 at one end of the platen is adapted to cooperate with other line spacing devices (not shown) to afford line space turning movements of the platen. Lugs 8 project forward from the back bar 1 and are slotted to receive pairs of arms 9 and 10 which are pivotally mounted on shouldered screws 11 and 12, said screws bridging the slots in said lugs. A rod 13 connecting the arms 9 carries the sections 14 of the main feed roller and a similar rod 15 on the arms 10 carries the sections 16 of the secondary feed roller. These feed rollers are spaced apart circumferentially of the platen, the main feed roller being arranged at the lower rear side of the platen and the secondary feed roller at the under side of the platen forward of the main feed roller and between it and the printing point which is at the front face of the platen. Normally the main and secondary feed rollers are respectively maintained in contact with the platen or the paper thereon by springs 17 and 18. A rock shaft 19 bearing in the end bars 2 and 3 is provided with lugs 20 which when the rock shaft is turned forward engage with the

beveled ends of pins 21 projecting from the arms 9 and overcoming the springs 17 and 18, swinging the arms 9 and 10 downward and releasing both feed rollers. The release of the secondary feed roller is accomplished by extensions 9^a of the arms 9, said extensions engaging with the arms 10 and swinging said arms 10 downward. A paper apron or deflector 22 is pivotally supported on the rock shaft 19 and curves downward around the platen, its forward end portion being normally pressed against the platen or the paper thereon by springs 23 secured to the arms 10. The sections of the main and secondary feed rollers protrude through openings in the deflector 22 to contact with the platen or the paper thereon. When the rock shaft 19 is turned to release the feed rollers the pressure of the springs 23 relaxes. The parts thus far described are usual in the Monarch machine.

The release rock shaft 19 may be turned or operated by any desired means, that shown in the drawings being disclosed and claimed in my prior application Sr. No. 403,531, filed November 23rd, 1907. Said means comprise a crank arm 24 suitably secured to the end of the rock shaft 19 outside the end bar 3. Normally a nose 25 on said crank arm is maintained against a stop pin 26 extending laterally outward from the end bar 3 by a spring 27 coiled around the opposite end of the rock shaft 19 and having one end secured thereto and the other end to the bar 2. The normal positions of the rock shaft, feed rollers and paper deflector are shown in Fig. 3. A releasing lever 28 is pivotally connected at 29 to the crank arm 24 and at 30 to a guide arm 31 which is pivoted on the usual paper finger rod 32. The free end of the lever 28 terminates in a finger piece 33 which is bent at right angles to the body of the lever and which is adapted to contact with the rear edge of the arm 31 to limit the forward movement of the lever 28. The parts 28 and 31 are toggle elements which normally are disposed at an angle to each other but when the finger piece 33 is pulled forward sufficiently said toggle elements are straightened as shown in Fig. 4 so that the crank arm 24 and the rock shaft 19, which have been turned forward by the finger piece 33, will be maintained in the abnormal positions (Fig. 4), thus locking the main and secondary feed rollers in released position away from the platen.

The leading edge or end stops and the devices which support and control them will now be described. Arms or brackets 34 and 35 are secured against the outer side faces of the lugs 8 by the screws 11 and 12. The arm 34 extends straight downward and is curved forward at its lower end while the arm 35 extends downward and is then lat-

erally off-set outward toward the adjacent end bar 3, said arm 35 again extending downward and then curving forward below the off-set. By this construction the lower end portion of the arm 35 is considerably nearer the end bar 3 than is the upper portion of said arm 35, as will be clearly understood from Figs. 1 and 2. At their lower end portions the arms 34 and 35 are formed with openings or slots which receive shouldered pivot screws 36 and 37 (Figs. 1 and 2), the shanks of both screws being smooth and cylindrical. The screw 36 is held in a fixed relationship with the arm 34 by a nut 38. The shank of said screw extends a considerable distance inward. The pivot screw 37 is somewhat shorter than the screw 38 and is held in a fixed relationship with the arm 35 by a member 39 which is in the form of a curved arm and combines the functions of a nut or clamping device and a stop. The arm 39 is formed with a threaded opening which engages the threaded portion of the screw 37 and operates to clamp said screws against the arm 35. From the screw 37 the arm 39 curves upward and forward and then downward and forward, as will be best understood from Figs. 3 to 5, and is bent inward at right angles at its forward end to provide a stop or abutment for purposes presently to be described. The screws 36 and 37 provide supports for a rock shaft 41, said rock shaft being formed with depressions or seats 42 and 43 which receive the shanks of said screws, the latter serving as bearings on which said rock shaft may be given rotary movements. That end of the rock shaft 41 which is adjacent to the nut 38 terminates normally some distance short of the inner face of said nut, being maintained in this normal position by a wire spring 44 which is coiled around the screw 36 and is confined between the end of the rock shaft and the nut as shown in Figs. 1 and 2. Said spring, it will be understood, normally maintains the bottom of the depression 43 in contact with the end of the screw 37, said screw serving as a stop to limit endwise movement of the rock shaft in one direction. In this normal position the bottom of the depression 42 is separated somewhat from the end of the screw 36 so that the rock shaft is capable of limited endwise movement from normal position toward the left as viewed in Figs. 1 and 2, or toward the right when viewed from the front of the machine. The means of accomplishing this endwise movement and the purpose thereof will presently be described.

The rock shaft 41 supports one or more leading edge or end stop members of suitable construction. Four such members are shown in the present case each being numbered 45. They are arranged at suitable intervals lengthwise of the rock shaft 41 and

secured thereto in any approved manner. These members in the present instance are in the form of arms which extend forward and slightly downward from the rock shaft 41 and terminate in upwardly bent ends 46 which serve as the stops proper, said ends or stops being somewhat pointed at their extremities. A coiled draw spring 47 has its lower end secured to a pin 48 fixed to and extending forward from the rock shaft 41. Said draw spring extends upward and its upper end is hooked around the rock shaft 19. The draw spring tends constantly to turn the shaft 41 and draw the leading edge stops 46 toward the platen, from which said stops are normally separated as shown in Fig. 3. A finger 49 is suitably secured to the rock shaft 41 and extends upward and forward therefrom. Coöperative with the upper end portion of said finger is a headed pin or finger 50 which is fixed to and extends downward from the rock shaft 19. The spring 27 is stronger than the spring 47 and the pressure of said spring 27 being communicated to the finger 50 causes said finger to push the coöperating finger 49 forward, thereby maintaining the rock shaft 41 and the stops thereon in the normal or Fig. 3 positions.

When the finger piece 33 is pulled forward from the Fig. 3 to the Fig. 4 position it turns the shaft 19 and swings the finger or pin 50 rearward, thus releasing the finger 49 from the control of said pin 50 and permitting the rock shaft 41 to be turned and the stops 46 to be moved toward the platen. At this time, however, the stops will move only a short distance, the full movement being prevented by a stop member or arm 51 which is suitably fixed to the left-hand end of the rock shaft 41 as shown in Fig. 2 and which is formed with a cut-away, the edge 52 whereof swings against the abutment or stop 40, thus limiting the initial upward movement of the stops 46.

In order to complete the upward movement of the stops and enable them to contact with the platen I provide means for moving the stop arm 51 laterally inward away from the abutment 40. Since the stop arm 51 is fixed on the rock shaft 41 said rock shaft must also participate in this lateral movement of said arm. The means for accomplishing the lateral movement of the arm 51 and the endwise movement of the rock shaft 41 comprise a push rod 53 which at its inner end bears in a hole in the lower end of the arm or bracket 35 which is extended forward for the purpose. The outer end of said push rod is slidably mounted on an arm or bracket 54 which is suitably secured to the end bar 3 and depends therefrom. Outside the end bar 3 the rod 53 is provided with a push button or key 55 (Fig.

1). A wire spring 56 is coiled around the push rod and confined between the supporting arm 54 and the key 55. This spring tends constantly to force the rod 53 outward. A collar 57 secured to the rod 53 by a screw 58 co-acts with the inner face of the arm 54 to limit the outward movement of the rod and maintain it in the normal position shown in Fig. 1. Normally the inner end of the rod 53 is separated from the outer face of the stop arm 51, but from Figs. 3 to 5 it will be apparent that the inner end of the push rod 53 is always opposite some portion of the face of the stop arm 51. Hence whenever the rod 53 is pushed in it will engage the stop arm 51.

Suppose that the releasing arm 28 has been pulled forward and locked, thereby throwing off and locking the main and secondary feed rollers, and permitting the edge 52 of the stop arm 51 to be drawn against the abutment 40 by the spring 47 as shown in Fig. 4. Thereupon, in order to bring the stops 46 against the platen the key 55 is pushed in, overcoming the spring 56 and causing the inner end of the rod 53 to press against the arm 51. This pressure forces the arm 51 inward, overcoming the spring 44 and moving the rock shaft 41 endwise. As soon as the arm 51 has been pushed past the abutment 40 the draw spring 47 will operate to move the stops 46 upward against the platen, at the same time swinging the arm 51 upward, said arm sliding over the end of the abutment 40. As soon as the arm 51 has been pushed inward past the abutment 40 the key 55 may be released, permitting the spring 56 to restore it and the push rod 53 to normal position. The rock shaft 41 and the parts it carries will however continue to be held in abnormal position by the abutment 40. During this last or final stage of the upward movement of the stops 46 they will pass through openings or slot ways 59 in the paper deflector 22. From Fig. 1 it will be seen that normally the stops 46 are not completely in register with the slots 59. However, the slight endwise movement communicated to the rock shaft 41 will bodily move the stop members 45 sidewise until at the moment of release the stops 46 are completely in register with the slots or openings 59 and will pass freely upward therethrough to contact with the platen. At this stage the parts will be in the positions shown in Fig. 5 so that a work sheet or bill sheet may be passed downward at the rear of the platen over the usual paper table (not shown) and the paper deflector 22 between the platen and the main feed roller 14, the advance of the sheet being arrested by the contact of its leading edge with the stops 46. As is well understood this enables work sheets to be properly squared or alined and to be

started forward each from the same position when the platen is turned after the return or reengagement of the feed rollers.

The return of the feed rollers and the retraction of the end stops 46 may be and preferably are accomplished at one operation. This operation, however, preferably and in the present instance comprises two stages during the first of which the feed rollers will be brought back to operative position, the main feed roller engaging the work sheet and clamping it to the platen. During this first stage the stops 46 remain against the platen, thereby preventing any disarrangement of the work sheet. This result is accomplished by so arranging and proportioning the parts that as the finger 33 is pushed rearward to unlock the feed rollers, said feed rollers will at once begin to move toward the platen and will reengage with the platen or the paper thereon prior to the engagement of the finger 50 with the finger 49. After the feed rollers have been returned to the platen, the arms 9 and the pins 21 will be arrested, so that as thereafter rearward movement of the finger piece 33 continues the lugs 20 will separate from the ends of the pins 21. It is during this movement of separation of the lugs 20 and pins 21 that the finger 50 engages the finger 49 and turns the rock shaft 41, restoring the stop members 45 to normal position and moving the arm 51 downward out of engagement with the face of the abutment 40. As soon as the arm 51 is lowered past the abutment 40 the spring 44 will operate to restore the rock shaft 41 endwise to its initial position, moving the arm 51 sidewise so that it will again require an operation of the push key 55 to enable the end stops to cooperate with the platen.

My construction provides means for accurately positioning and clamping work sheets on their introduction into the machine and said construction may be advantageously used in condensed record work, bill-and-charge work and other styles of commercial typewriting or billing. In the present case a spring-pressed push-button or key is provided upon which a slight touch or depression only is necessary in order to cause the leading edge or end stops to be brought to operative position against the platen. This mode of operation of my construction gives it advantages over prior constructions wherein it has been necessary to move the stop key or actuate the finger piece to a considerable extent and until the moment of contact of the stops with the platen. It will be observed that by the present construction the push button or key is not affected until after the prior operation of the finger piece 33 to release and lock off the feed rolls. This will be obvious from a consideration of Fig. 1 wherein it will be observed that the end

stops 46 are normally held away from the platen by the finger 50 and that the push key 55 has no effect upon this finger. It is only after the finger 50 has been moved back as in Fig. 4 and the arm 51 has been drawn up against the abutment 40 that the operation of the key 55 is effective, said key then operating to snap one of the interlocking parts off the other, thus operatively disconnecting said parts, although they may still be in contact at certain points. It will be seen therefore that normally there are two means or sets of devices which restrain the end stops 46 from operative position and against their spring 47; that neither of these restraining means is in itself alone operative to release the end stops but that both restraining means must be operated to permit of such release; that one of these restraining means comprising the finger 50 is removed or rendered ineffective automatically by the means for releasing and locking away the feed roller or rollers; that the other or main restraining means comprises parts adapted to interlock, that is, the arm 51 and the cooperating abutment 40; that this main restraining means may be rendered ineffective or its parts separated by means comprising a spring-pressed key or finger piece; that the operation of this key is independent of the locking away of the feed rollers, so that it is possible to release and lock off the feed rollers for adjustment of the paper or for other purposes without bringing the end stops into action, these end stops being controlled at will after such locking off of the feed rollers; and that during the return of the parts to normal position after the locking off of the feed roller or rollers and the bringing into action of the end stops, there are two stages, during the first of which the feed roller or rollers return into cooperation with the platen while the end stops remain in operation, and during the second of which the end stops are moved away from the platen to normal position while the feed roller or rollers remain quiescent.

Various changes may be made without departing from the spirit and scope of my invention.

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

1. In a typewriting machine, the combination of a platen, a normally inoperative paper stop, paper controlling devices, means for moving said devices to abnormal position, and separate means for moving said paper stop to operative position, the movement of said paper stop to operative position being dependent on the prior operation of the first recited means.

2. In a typewriting machine, the combination of a platen, a normally operative feed roller, a normally inoperative paper stop,

means for releasing said feed roller, and separate means for moving said paper stop into operative position, the movement of said paper stop into operative position being dependent on the prior operation of the releasing means.

3. In a typewriting machine, the combination of a platen, a normally operative feed roller, a normally inoperative paper stop, means for releasing said feed roller and locking it in released position, and separate means for moving said paper stop into operative position, the movement of said paper stop into operative position being dependent on the prior operation of said first recited means.

4. In a typewriting machine, the combination of a platen, a paper stop, paper controlling devices, means tending constantly to move said paper stop toward the platen, hand actuated means for moving said paper controlling devices away from the platen, restraining devices for said paper stop, certain of said restraining devices being movable by said hand actuated means, and separate means for moving certain other of said restraining devices.

5. In a typewriting machine, the combination of a platen, a paper stop, paper controlling devices, means tending constantly to move said paper stop toward the platen, hand actuated means for moving said paper controlling devices away from the platen, restraining devices for said paper stop, certain of said restraining devices being movable by said hand actuated means, and key controlled means operative subsequent to said hand actuated means to move other of said restraining devices and entirely free said paper stop so that it may be moved to the platen.

6. In a typewriting machine, the combination of a platen, a paper stop, paper controlling devices, means tending constantly to move said paper stop toward the platen, hand actuated means for moving said paper controlling devices away from the platen and for locking them in abnormal position, restraining devices for said paper stop, certain of said restraining devices being movable by said hand operated means, and separate means for moving other of said restraining devices.

7. In a typewriting machine, the combination of a platen, a paper stop, paper controlling devices, means tending constantly to move said paper stop toward the platen, hand operated means for moving said paper controlling devices away from the platen and for locking them in abnormal position, restraining devices for said paper stop, certain of said restraining devices being movable by said hand operated means, and separate means for moving other of said re-

straining devices and locking them out of operation.

8. In a typewriting machine, the combination of a platen, a paper stop, paper controlling devices, means tending constantly to move said paper stop toward the platen, hand actuated means for moving said paper controlling devices away from the platen, restraining devices for said paper stop, certain of said restraining devices being movable by said hand actuated means, and separate means for moving other of said restraining devices and locking them out of operation.

9. In a typewriting machine, the combination of a platen, a feed roller, a paper stop, means including a release key for releasing said feed roller and locking it, a spring tending constantly to move said paper stop toward the platen, and key controlled restraining means for said stop, said release key being operative to restore both said feed roller and said paper stop to their normal positions.

10. In a typewriting machine, the combination of a platen, a feed roller, a paper stop, means including a release key for releasing said feed roller and locking it, a spring tending constantly to move said paper stop toward the platen, and key controlled restraining means for said stop, the return movement of said release key to normal position operating to restore both said feed roller and said paper stop to normal position.

11. In a typewriting machine, the combination of a platen, a normally operative feed roller, means including a release key for rendering said feed roller inoperative, a paper stop constantly spring-pressed toward the platen, restraining devices controlled by said release key, and other restraining devices controlled by a separate key, said release key being operative to restore both said feed roller and said paper stop to normal position.

12. In a typewriting machine, the combination of a platen, a feed roller, releasing means therefor, a paper stop constantly spring-pressed toward the platen, restraining devices controllable in part by said releasing means and normally separated but so related as to prevent said paper stop from reaching the platen, and means for changing the relationship between said restraining devices so that movement of said paper stop to the platen may take place.

13. In a typewriting machine, the combination of a platen, a feed roller, releasing means therefor, a paper stop constantly spring-pressed toward the platen, restraining devices normally separated but so related as to prevent said paper stop from reaching the platen, and means for changing the relationship between said restraining

devices so that movement of said paper stop to the platen may take place, said last recited means comprising a key independent of said releasing means.

5 14. In a typewriting machine, the combination of a platen, a feed roller, releasing means therefor, a paper stop constantly
10 spring-pressed toward the platen, restraining devices in part controlled by said releasing means normally separated but so related as to prevent said paper stop from
15 reaching the platen, and means for changing the relationship between said restraining devices so that movement of said paper stop to the platen may take place, said restraining
20 devices comprising two interlocking parts constantly spring-pressed toward each other.

15. In a typewriting machine, the combination of a platen, a paper stop, restraining
20 devices normally separated but so related as to prevent said paper stop from reaching the platen, and means for changing the relationship between said restraining devices so that movement of said paper stop to the
25 platen may take place, said restraining devices comprising two interlocking parts constantly spring pressed toward each other, one part being movable in two directions at
30 angles to each other, movement in one direction causing interlocking engagement and movement at an angle to the first movement causing unlocking of said parts.

16. In a typewriting machine, the combination of a platen, a paper stop constantly
35 spring-pressed toward the platen, restraining devices normally separated but so related as to prevent said paper stop from reaching the platen, and means for changing the relationship between said restraining
40 devices so that movement of said paper stop to the platen may take place, said restraining devices comprising two interlocking parts constantly spring pressed toward each other, and a spring pressed key controlled slide rod
45 operative on one of said interlocking parts.

17. In a typewriting machine, the combination of a platen, a paper stop, a rock
50 shaft supporting said paper stop, a spring constantly tending to turn said rock shaft and move said paper stop to the platen, a locking part connected with said rock shaft, a cooperating locking part, and means independent of one locking part for moving the
55 other locking part out of the way of the first locking part.

18. In a typewriting machine, the combination of a platen, a paper stop, a rock
60 shaft supporting said paper stop, a spring constantly tending to turn said rock shaft and move said paper stop to the platen, a locking part connected with said rock shaft, a cooperating locking part, and means for operatively disconnecting said locking parts,
65 said means comprising a spring pressed push rod.

19. In a typewriting machine, the combination of a platen, a feed roller, key controlled releasing means for said feed roller, an endwise movable rock shaft, a paper stop
70 connected therewith, a spring constantly tending to turn said rock shaft to bring said paper stop against the platen, restraining means controlled by said key controlled means, a locking arm on said rock shaft, a
75 cooperating locking part, means for pushing said rock shaft endwise and operatively disconnecting said locking arm from said locking part, and means for restoring said rock shaft endwise.

20. In a typewriting machine, the combination of a platen, a feed roller, releasing
80 means for said feed roller, an endwise movable rock shaft, a paper stop connected therewith, a spring constantly tending to turn said rock shaft to bring said paper stop against the platen, restraining means controlled by said releasing means, a locking
85 arm on said rock shaft, a cooperating locking part, and means comprising a spring pressed push rod provided with a key operative on said locking arm to operatively disconnect it from said cooperating part and
90 move said rock shaft endwise.

21. In a typewriting machine, the combination of a platen, a feed roller, releasing
95 means for said feed roller, an endwise movable rock shaft, a paper stop connected therewith, a spring constantly tending to turn said rock shaft to bring said paper stop against the platen, restraining means controlled by said releasing means, a locking
100 arm on said rock shaft, a cooperating locking part, means comprising a key actuated rod operative on said locking arm to operatively disconnect it from said cooperating part and move said rock shaft endwise permitting said rock shaft to be turned by said
105 spring, and means for restoring said rock shaft endwise.

22. In a typewriting machine, the combination of a platen, a paper stop constantly
110 spring pressed toward the platen, normally disconnected locking devices for said paper stop, means for setting said devices in interlocking relationship, and means for unlocking said devices to permit said stop to move
115 to the platen.

23. In a typewriting machine, the combination of a platen, a paper stop constantly
120 spring pressed toward the platen, normally disconnected locking devices for restraining said paper stop, means for setting said devices in interlocking spring pressed relationship, and means controlled by a key for snapping said devices out of interlocking
125 relationship and permitting said stop to move to the platen.

24. In a typewriting machine, the combination of a platen, a paper stop constantly
130 spring pressed toward the platen, normally

disconnected locking devices for restraining said paper stop, means for setting said devices in interlocking spring-pressed relationship, and means controlled by a key for snapping said devices out of interlocking relationship to permit said stop to move into operation, said key and said devices being independently movable relatively to each other.

25. In a typewriting machine, the combination of a platen, a paper stop constantly spring pressed toward the platen, locking devices for said paper stop normally operatively disconnected, a feed roller, means for releasing said feed roller and for setting said devices in interlocking relationship, and separate means for unlocking said devices.

26. In a typewriting machine, the combination of a platen, a paper stop constantly spring pressed toward the platen, locking devices for said paper stop normally operatively disconnected, a feed roller, means for releasing said feed roller and permitting said devices to be spring pressed into interlocking engagement with each other, and separate key controlled means for snapping said devices out of interlocking relationship and permitting said stop to co-act with the platen.

27. In a typewriting machine, the combination of a platen, a paper stop constantly spring pressed toward the platen, locking devices for said paper stop normally operatively

disconnected, a feed roller, means for releasing said feed roller and permitting said devices to be spring pressed into interlocking engagement with each other, and separate key controlled means for snapping said devices out of interlocking relationship and permitting said stop to co-act with the platen, said feed roller and said paper stop being restored to normal position at a single operation.

28. In a typewriting machine, the combination of a platen, a normally inoperative paper stop constantly spring pressed toward the platen, normally disconnected locking devices for said paper stop, means for setting said devices in interlocking relationship, means for unlocking said devices and permitting said stop to move to operative position, a feed roller, and means for releasing said feed roller connected with said setting means, said feed roller and said paper stop being restored to normal position at a single operation, the feed roller returning to clamping engagement with the platen prior to the return movement of said paper stop.

Signed at Syracuse, in the county of Onondaga and State of New York, this 7th day of April A. D. 1909.

EDWIN E. BARNEY.

Witnesses:

H. H. STEELE,
W. C. HAY.