

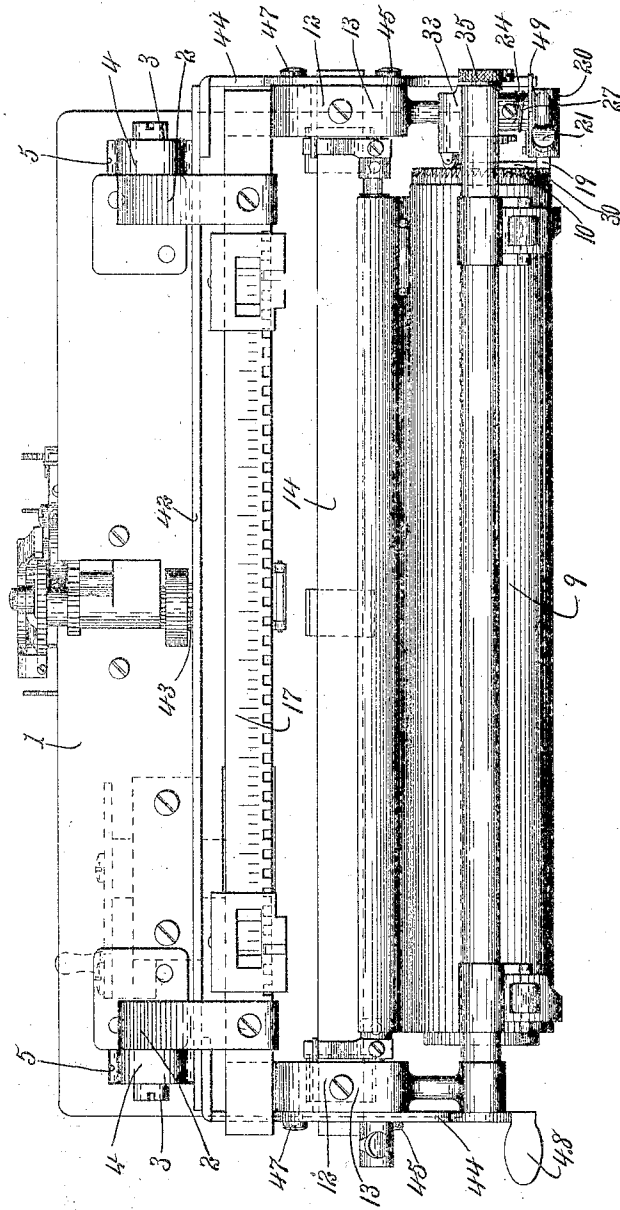
F. J. DYETT.
TYPE WRITING MACHINE.
APPLICATION FILED AUG. 12, 1905.

973,015.

Patented Oct. 18, 1910.

3 SHEETS-SHEET 1.

FIG. 1.



WITNESSES:
Chas. Foner.
Chas. D. Young.

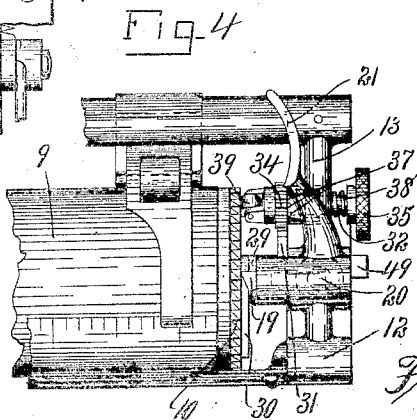
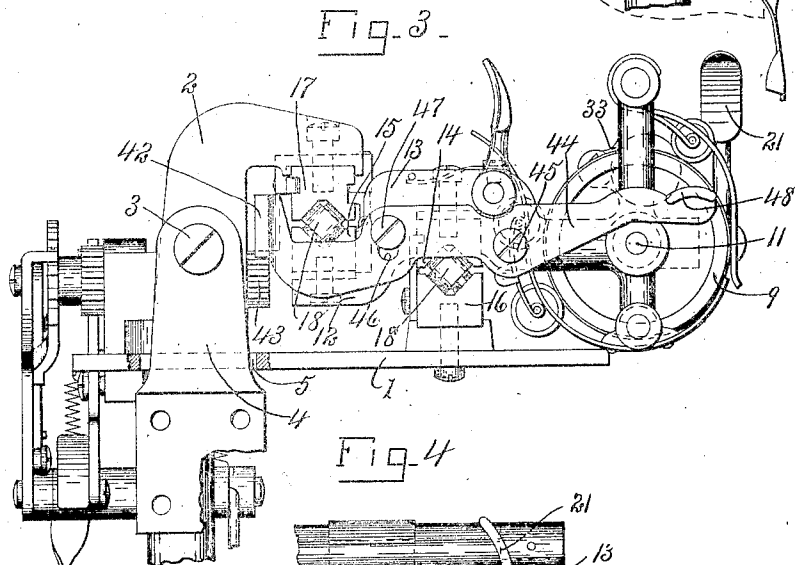
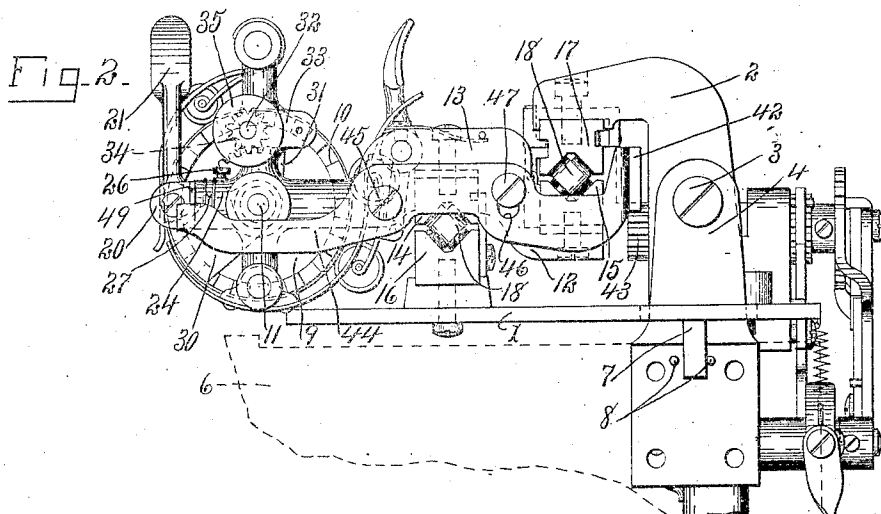
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BY
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3 SHEETS—SHEET 2.



WITNESSES:
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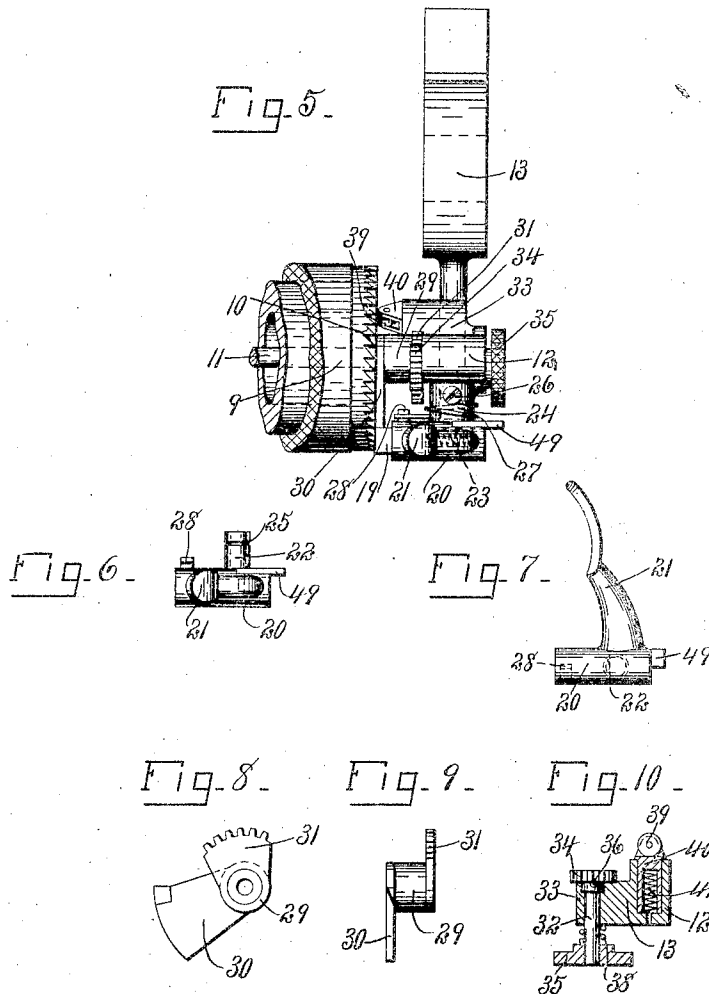
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3 SHEETS-SHEET 3.



WITNESSES:

Chas. Foner.
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INVENTOR

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UNITED STATES PATENT OFFICE.

FRANK J. DYETT, OF ILION, NEW YORK.

TYPE-WRITING MACHINE.

973,015.

Specification of Letters Patent.

Patented Oct. 18, 1910.

Application filed August 12, 1905. Serial No. 274,016.

To all whom it may concern:

Be it known that I, FRANK J. DYETT, of Ilion, in the county of Herkimer and State of New York, have invented a certain new and useful Type-Writing Machine, of which the following is a specification.

My invention relates to typewriting machines, and has for its object the production of a line spacing mechanism, which is particularly simple in construction and highly effective and durable in use; and to this end, it consists in the combinations and devices hereinafter set forth and pointed out in the claims.

In describing this invention, reference is had to the accompanying drawing, in which like characters designate corresponding parts in all the views.

Figure 1 is a top plan of a portion of a typewriter equipped with one construction of my platen-shifting mechanism. Figs. 2 and 3 are opposite end elevations of the parts illustrated in Fig. 1, a portion of the typewriter-frame being indicated by dotted lines in Fig. 2, and parts being broken away and shown in section in Fig. 3. Fig. 4 is a front elevation of the line-spacing means of the platen-shifting mechanism, and contiguous parts seen in the preceding figures. Fig. 5 is a top plan, partly in section, of parts illustrated in Fig. 4. Figs. 6 and 7 are, respectively, a plan and elevation of the lever carrying the line-spacing pawl. Figs. 8 and 9 are elevations taken at right angles to each other of the means for shielding a portion of the toothed ring of the platen. Fig. 10 is a sectional view of the means for adjusting the part shown in Figs. 8 and 9 variable distances, and for holding the same in its adjusted position.

1 is a top plate of any desirable form, size and construction, having the opposite sides of its rear portion provided with uprights or standards 2, pivoted at 3 to the upper ends of uprights 4, which extend vertically through openings 5 in the top plate 1, and are suitably secured at their lower ends to the typewriter-frame 6 shown by dotted lines in Fig. 2. The top plate 1 carries the platen, the carriage for the platen, the line-spacing means, the motor, as a spring, for feeding the carriage endwise in one direction, the escapement-mechanism for controlling the feed of the carriage by the motor, the ribbon-guide, and the ribbon-feeding mechanism, said escapement- and ribbon-feeding

mechanisms being arranged at the rear of the pivots 3, and substantially all of the balance of the devices carried by the top plate being supported in front of said pivots. A suitable key, not shown, is connected to the top plate 1 for rocking the platen upwardly when it is desired to print with the characters nearest the free ends of the type-bars, and any desirable stop, as a depending arm 7 coacting with shoulders 8, limits the movement of said top-plate on its pivots.

The motor and the escapement-mechanism for the carriage, the ribbon-guide and the ribbon-feeding mechanism, form no part of my present invention, and hence it is thought unnecessary to illustrate and describe the same herein. Said escapement-mechanism, ribbon-guide and ribbon-feeding mechanism are, however, fully set forth in my pending applications, Sr. Nos. 216,790, 218,458 and 204,166.

The platen 9 consists of the usual roller having at one end a ratchet-ring 10, and provided with a shaft 11 extending beyond its opposite ends. It will be understood, however, that this shaft 11, instead of passing longitudinally through the platen, may comprise trunnions projecting from the ends thereof. The carriage 12 for the platen 9 comprises side bars 13 disposed at an angle to the platen which is journaled therein, and a pair of longitudinal bars 14, 15 arranged one in advance of the other at the rear of the platen and secured to the side bars 13. Said longitudinal bars 14, 15 are opposed to corresponding bars 16, 17 supported by the top plate 1, the front bar 14 being arranged above the front bar 16, and the rear bar 15 beneath the rear bar 17. The bars 14, 16 and 15, 17 thus constitute the divisions of front and rear guides, opposing faces of the divisions of each guide being preferably formed substantially V-shaped. Within each of these guides are arranged antifriction means, as rollers 18, movable on axes disposed in intersecting planes, at right angles to the sides of the guide. The described arrangement of antifriction guides is particularly simple and efficient, and as will be apparent to those skilled in the art, the weight of the platen tends to force the carriage firmly against the antifriction rollers, and at the same time permits the desired movement of the carriage without any liability of the binding of the rollers.

The carriage is provided with the usual

guides, table and feeding rollers for the paper, which are not described herein, as they form no part of my present invention.

The illustrated construction of my line-spacing means comprises the ratchet-ring 10, a pawl 19 coacting with said ring, means for actuating the pawl 19, and means for shielding a portion of the ratchet-ring 10 from the pawl.

As best seen in Fig. 4, the pawl 19 is arranged at substantially a right angle to the end face of the platen 9 provided with the ratchet-ring 10, and is movable longitudinally toward and from said face, and also in a direction at an angle thereto.

The means for actuating the pawl 19 consists of a lever preferably having a uniform throw or movement, and forming a support or carrier for the pawl. Said lever or carrier comprises a barrel 20 in the bore of which the pawl is guided, an upwardly-extending finger-engaging arm 21, and a stud 22 projecting laterally from the barrel 20 intermediate of the ends thereof, at substantially a right angle to the axis of the platen. Suitable means, as a spring 23, indicated by dotted lines in Fig. 5, is arranged in the bore of the barrel 20 for moving the pawl 19 endwise into engagement with the teeth of the ratchet-ring 10. Said stud 22 is here illustrated as journaled in a substantially cylindrical portion or forward extension 24 of one of the side bars 13 of the carriage 12, and as provided at its rear end with an annular groove 25 which receives any desirable means, as a screw 26, for preventing detachment of the pawl-carrier from the part 24. A spring 27 is coiled about the substantially cylindrical portion 24 of the carriage and has one end fixed to said carriage by the screw 26, and its other end detachably engaged with a laterally-extending shoulder 28 provided on the end of the barrel 20 nearest the ratchet-ring 10. In the operation of the pawl-carrier, the upper end of the arm 21 is engaged by the finger and pressed outwardly, thus rocking upwardly the inner ends of the barrel 20 and the pawl 19 and advancing the platen 9.

The means provided for shielding a portion of the toothed ring 10 from the pawl 19, operates to prevent the engagement of said pawl with one or more teeth in register therewith during the first part of the movement of the pawl, and thus varies the effective throw or feed thereof. Said means preferably comprises a revoluble sleeve 29, arms 30, 31 projecting radially from the ends of the sleeve and rigid therewith, and means coacting with the arm 31 for moving said arm variable distances and holding the same in its adjusted position. The sleeve 29 is mounted on the shaft 11 between one of the side bars 13 of the carriage and the end face of the platen provided with the ring

10. The arms 30, 31 swing with the sleeve 29 on the shaft 11, the free end of the arm 30 being movable in between the pawl 19 and the ring 10.

As here illustrated, Figs. 5 and 10, the means for moving the sleeve 29 and the arms 30, 31 and holding the same in their adjusted position consists of a member movable revolubly and axially and comprising a stem 32 journaled in an arm 33 projecting upwardly from the side bar 13 provided with the cylindrical portion 24, a pinion 34 fixed on the inner end of the stem 32 and meshing with teeth on the free end of the arm 31, a hand-piece 35 on the outer end of the stem 32, and a stop-member, as a pin 36, fixed to the stem 32 and coacting with a plurality of stop-members, as notches 37, Fig. 4, in the inner face of the arm 33. The end of the stem 32 provided with the hand-piece 35 projects beyond the outer side of the arm 33, a sufficient space being interposed between opposing faces of the arm 33 and the hand-piece 35 to receive a spring 38 which is coiled about the stem 32 and normally holds the stop-pin 36 in engagement with the walls of one of the notches 37. In adjusting the position of the sleeve 29 and the arms 30, 31, the hand-piece 35 is moved toward the arm 33 against the action of the spring 38 a sufficient distance to carry the pin 36 out of the notch 37 formerly occupied thereby, whereupon the hand-piece is moved about its axis, and owing to the engagement of the pinion 34 with the arm 31, the parts 29, 30, 31 revolve about the shaft 11. After the desired adjustment of the arm 30, the hand-piece 35 is released and the spring 38 moves the stem 32 endwise and forces the stop-pin 36 into one of the notches 37.

My invention may be equipped with any desirable means for preventing undue movement of the platen, here shown, Fig. 10, as a friction-roller 39 which engages the end face of the platen provided with the ring 10 and is carried by a plunger 40 guided in the arm 33 and forced toward the opposing surface of the platen by a spring 41.

The carriage of my typewriting machine is preferably provided with a rack-bar 42 which coacts with a suitable pinion 43 of the escapement-mechanism for the carriage, and is formed with arms or rack-lifters 44 extending from front to rear of the carriage substantially parallel to the axis of the pawl-carrier and pivoted intermediate of their ends to the side bars 13 by pivots 45 extending substantially parallel to the platen 9. Said arms 44 are provided intermediate of their rear ends and the pivots 45 with slots 46 for receiving pins 47 projecting from the side bars 13. The front end of the left-hand bar 44 is provided with a thumb-piece 48 for facilitating downward movement thereof

by the operator when it is desired to disengage the rack-bar 42 from the pinion 43. The corresponding end of the right-hand bar 44 is engaged by a shoulder 49 provided on the outer end of the pawl-carrier or lever, so that when the line-spacing means is operated, the rack-bar 42 is disengaged from said pinion 43.

The construction and operation of my line spacing mechanism will now be readily understood upon reference to the foregoing description and the accompanying drawing, and it will be noted that more or less change may be made in the component parts thereof without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a typewriting machine, the combination with a carriage, and a platen journaled therein and provided with a ratchet-ring; of a feeding pawl having a uniform throw or movement, means for shielding a portion of the ratchet-ring from the pawl, a toothed part for moving said means variable distances to change the effective throw or feed of the pawl, and a pinion coacting with said toothed part, substantially as and for the purpose set forth.

2. In a typewriting machine, the combination with a carriage, and a platen journaled therein and provided with a ratchet-ring; of a feeding pawl having a uniform throw or movement, a pivoted arm movable in between the ratchet-ring and the pawl, means for moving said arm variable distances about its pivot to change the effective throw or feed of the pawl, said means including a pinion, and means interposed between the arm and the pinion for shifting the arm as the pinion is rotated, substantially as and for the purpose described.

3. In a typewriting machine, the combination with a carriage, and a platen having a ratchet-ring and provided with a shaft journaled in the carriage; of a pawl having a uniform throw or movement, a sleeve on the shaft of the platen, an arm extending from the sleeve and having a part thereof designed to be interposed between the ratchet-ring and the pawl, a second arm extending from the sleeve and provided with teeth, and a pinion coacting with said teeth, substantially as and for the purpose specified.

4. In a typewriting machine, the combination with a carriage having a bar provided with an upwardly extending arm, and a platen having a ratchet-ring, and provided with a shaft journaled in the carriage; of a pawl having a uniform throw or movement, a sleeve on the shaft of the platen between the bar of the carriage and the ratchet-ring, means on the sleeve movable in between said ratchet-ring and the pawl, and a pinion jour-

naled in said upwardly extending arm and connected to the sleeve for moving said means variable distances to change the effective throw or feed of the pawl, substantially as and for the purpose set forth.

5. In a typewriting machine, the combination with a carriage, and a platen journaled therein and provided with a ratchet-ring; of a feeding pawl having a uniform throw or movement, means for shielding a portion of the ratchet-ring from the pawl, a stop-member, and means for moving the first-named means variable distances to change the effective throw or feed of the pawl, said second-named means including a rotatable adjusting member, and a part revoluble with the adjusting member and coacting with the stop-member, the adjusting member being movable axially for carrying said part into and out of engagement with the stop-member, substantially as and for the purpose specified.

6. In a typewriting machine, the combination with a carriage, and a platen journaled therein and provided with a ratchet-ring; of a feeding pawl having a uniform throw or movement, means for shielding a portion of the ratchet-ring from the pawl, a stop-member, and means for moving the first-named means variable distances to change the effective throw or feed of the pawl, said second-named means including a rotatable adjusting member, and a part revoluble with the adjusting member and coacting with the stop-member, the adjusting member being movable axially for carrying said part into and out of engagement with the stop-member, and a spring for forcing the adjusting member axially in one direction, substantially as and for the purpose set forth.

7. In a typewriting machine, the combination with a carriage having a portion thereof provided with a plurality of stop-members, and a platen journaled in the carriage and provided with a ratchet-ring; of a feeding pawl having a uniform throw or movement, means for shielding a portion of the ratchet-ring from the pawl, and means for moving the first-named means variable distances to change the effective throw or feed of the pawl, the second-named means including a rotatable adjusting member journaled in said portion of the frame and provided with a part movable therewith, the adjusting member being movable axially for carrying said part into and out of engagement with the stop-members, substantially as and for the purpose described.

8. In a typewriting machine, the combination with a carriage having a portion thereof provided with a plurality of stop-members, and a platen journaled in the carriage and provided with a ratchet-ring; of a feeding pawl having a uniform throw or movement, means for shielding a portion of the

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ratchet-ring from the pawl, and means for moving the first-named means variable distances to change the effective throw or feed of the pawl, the second-named means including a rotatable adjusting member provided with a stem journaled in said portion of the frame, and with a part movable therewith, the adjusting member being movable axially for carrying said part into and out of engagement with the stop-members, and a spring mounted on the stem for moving the

same axially in one direction, substantially as and for the purpose specified.

In testimony whereof, I have hereunto signed my name in the presence of two attesting witnesses, at Ilion, in the county of Herkimer, in the State of New York, this 25 day of July, 1905.

FRANK J. DYETT.

Witnesses:

A. B. RUSSELL,
PETER MARHAVER.