J. F. MURDOCK & W. J. McFARLAN.

TYPE WRITER.

APPLICATION FILED JUNE 9, 1911.

1,048,854.

Patented Dec. 31, 1912.

2 SHEETS—SHEET 1.

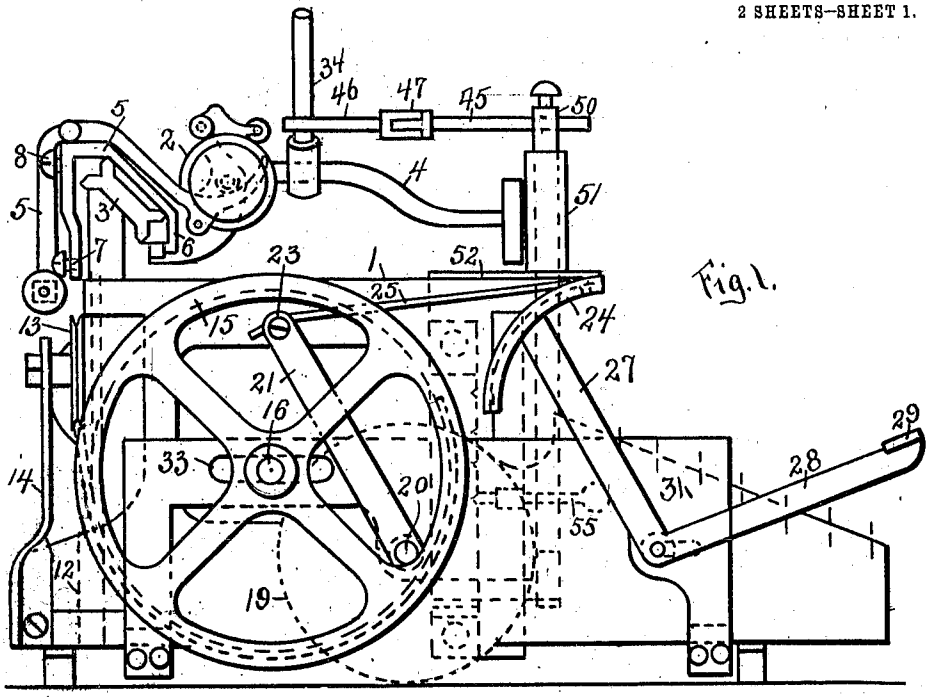

Fig. 1.

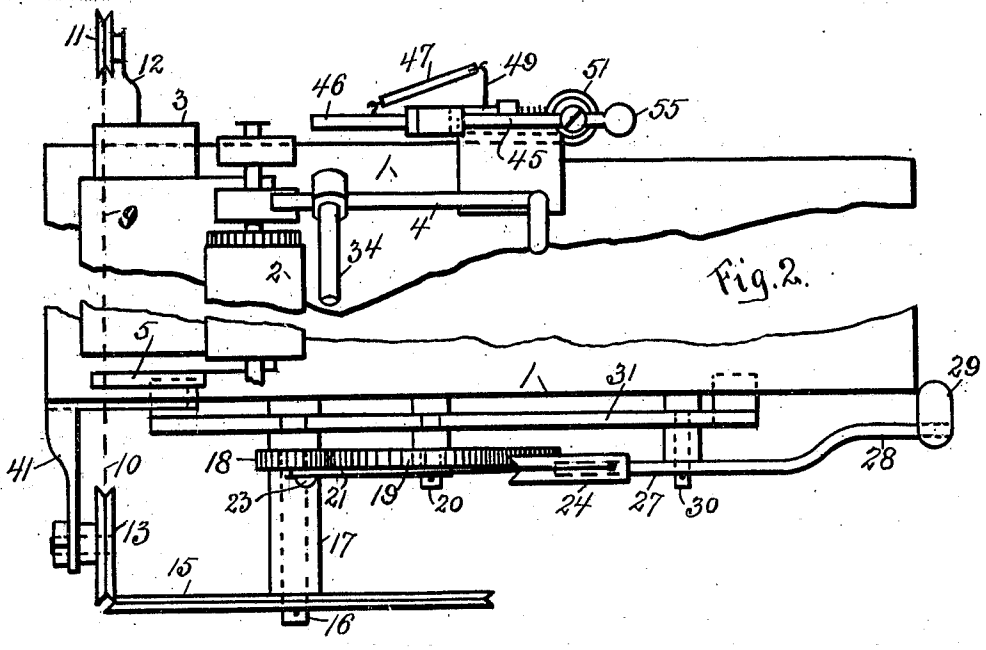

Fig. 2.

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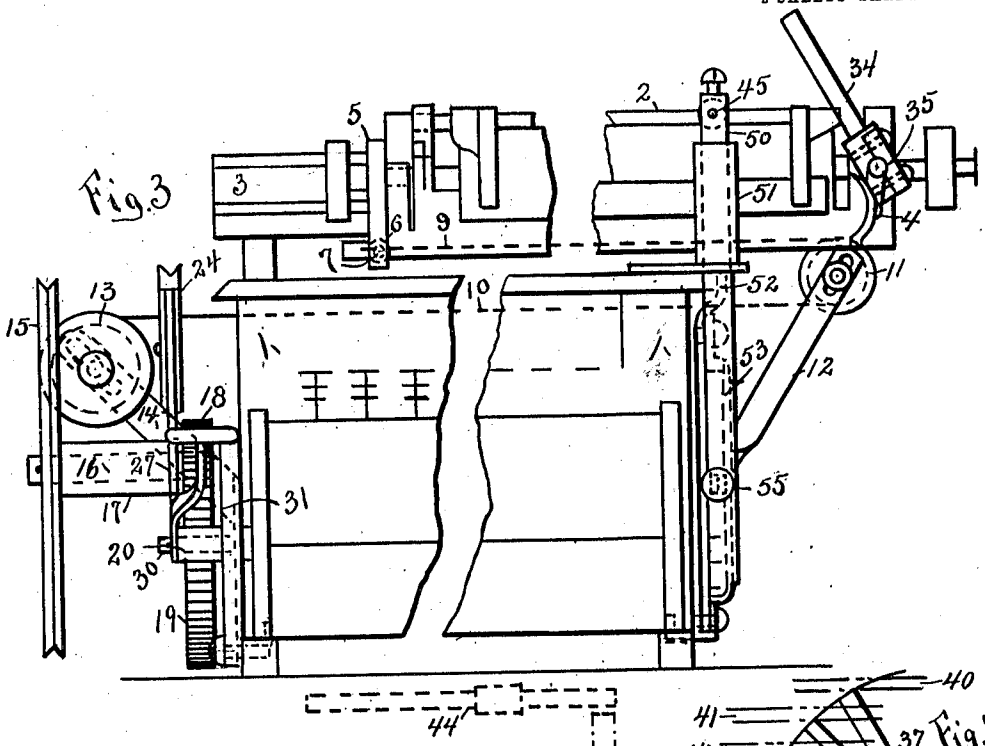
2 SHEETS—SHEET 2.

Fig.3



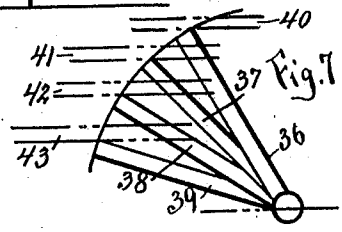
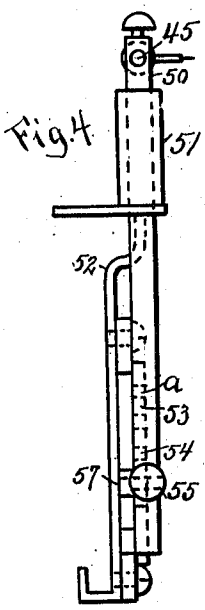


Fig.7

Fig.4



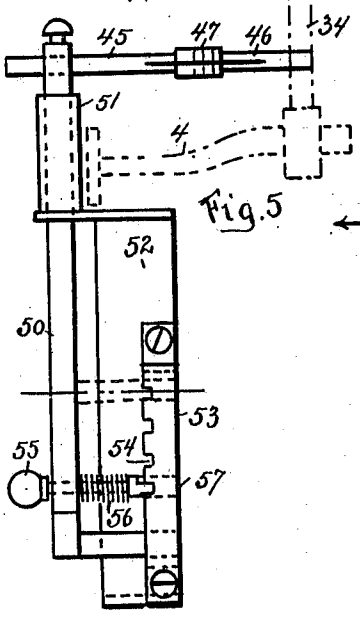


Fig.5

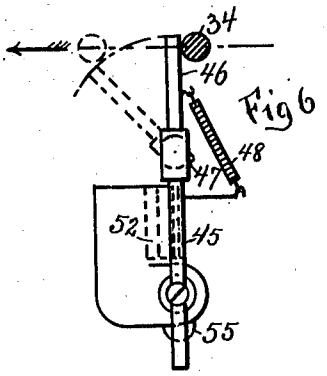


Fig 6

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UNITED STATES PATENT OFFICE.

JOHN F. MURDOCK AND WILLIAM J. McFARLAN, OF PATERSON, NEW JERSEY; SAID MURDOCK ASSIGNOR TO SAID McFARLAN.

TYPE-WRITER.

1,048,854. Specification of Letters Patent. Patented Dec. 31, 1912.

Application filed June 9, 1911. Serial No. 632,300.

To all whom it may concern:

Be it known that we, JOHN F. MURDOCK and WILLIAM J. McFARLAN, citizens of the United States, and residents of Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Type-Writers, of which the following is a specification.

Our invention relates to improvements in typewriters.

The objects of our invention, are first to provide a means for moving the platen of the typewriter across the machine by the pressure on a key, instead of making the hand to travel the full length of the movement as in the ordinary machine, as this movement is very unhandy in machines with an eighteen or twenty-four inch platen, where it is sometimes necessary to cross the hands to do it. Second to automatically, with the movement of the platen, space the work one, two or three lines. Third the construction of the device is such that it can be built as part of the machine or added as a separate attachment to any machine without making any additional holes or change in the original machine. We attain these objects by the mechanism as illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of an ordinary typewriter with our invention attached and forming a part thereof. Fig. 2 is a plan of our invention as shown in Fig. 1 showing only the ends of the machine. Fig. 3 is a front view of Fig. 2. Fig. 4 is a side elevation of the spacing attachment. Fig. 5 is a front view of the spacing attachment. Fig. 6 is a plan of Fig. 4. Fig. 7 is a diagram showing the different positions of the line spacing levers as acted upon by the regulating bar.

Similar numerals of reference indicate corresponding parts throughout the several views.

In the drawing 1 represents the body or frame of the typewriter, on which the platen 2 with the carriage is shown, which moves the required distance on the guide 3. These parts in connection with the line spacing lever 4, which is operated by the hand, are as they are on the ordinary typewriter.

In the ordinary machine in moving the carriage to the right or to operate the line spacing the operator does it through the lever 4. This is inconvenient in machines with long carriages, such as used on billing machines often necessitating the crossing of the hands in so doing. In our invention the line spacing and the moving of the carriage is within the range of the key board.

The invention is so constructed that the screws that are already in the machine together with other clamped portions are the means of attaching it to the machines that are in use or have been constructed without it; or the device can be incorporated in the construction of a new machine. A frame 31 having slots and holes for holding studs, on which the different wheels and levers are, is secured to the main machine by hooked clamps 32 and with screws in the same. A grooved wheel 15 with a pinion 18 on the hub of said wheel revolves freely on the stud 16 which is secured to the frame 31 in the slots 33. Secured to the frame 31 is the stud 20 on which the gear 19 which meshes with the pinion 18 revolves. To this gear 19 there is a lever 21 secured, by means of which it is operated. The angled lever or bell crank consists of two arms 27 and 28 connected by a hub which moves freely on a stud 30. The bell crank is secured to the frame 31, on the end of the arm 28 the piece or key 29 is located and by means of this key the carriage is operated, and the key 29 is adjacent to the plane of the key board. On the end of the arm 27 there is a grooved segment 24 with a hole 26 in one end to secure the cord, band or rod 25 which has its other end connected by a screw and clamp 23 at the end of the lever 21. On the left hand end of the carriage there is a bracket 5 with a hooked part 6 which secures it to the carriage by means of a screw 8, in the other end of the bracket 5, opposite the hooked part there is a hole 7 and a screw for securing one end of a band or cord of some durable and flexible material. This band or cord 9 passes along the back beneath the carriage and over a grooved wheel 11, secured to the main machine by the bracket 12 on the right side of the machine; from this point the band passes to the left of the machine and over the grooved pulley 13. This point on the cord is indicated by 10. The pulley is secured to the left side of the machine by the bracket 14, the band 10 passes over 13 onto the grooved pulley 15 and is secured through the hole 58 in its rim.

To operate the carriage from the left to

the right the key 29 is pressed downward and the movement is transmitted through the bell crank to the segment 24 and thence by means of the cord 25 to the lever 21, causing the gear 19 to revolve the gear pinion 18 and thus the cord is wound around the rim of the pulley 15 drawing the carriage to the right by means of the cord 9 and 10 over the pulleys 11 and 13. The spacing of the lines which acts in connection with the moving of the carriage is constructed as follows: The bracket 52 has a hooked portion 59 at its lower end which passes under the frame of the machine and is secured to the top of the said machine by means of screws which are in the construction of the machine. On the bracket 52 there is a sleeve 51 in which the bar 50 can be raised or lowered. On the lower part of the bar 50 there is a key 55 on which there is a spring and a catch 57, this catch enters the notches *a*, *b*, *c* and *d* in the piece 53; this piece 53 is secured by screws to the bracket 52. The catch 57 is held in the notches by the spring 56 when set to the desired position. There is a slide 60 secured to the bar 50, which slides between the pieces 53 and the lower portion of the bracket 52, for the purpose of keeping the upright bar 50 from turning when raised or lowered. In the upper part of the bar 50 there is secured a hinged rod 45, consisting of the portion 46 hinged to the piece 45 at the point 47, the said hinge working only in one direction, and remaining straight when drawn back by the spring 48, one end of which is secured to the part 46 and the other to 45 by the wire bracket 49. The bar 46 coming in contact with the lever 34 when the carriage is moved from the left to the right causes the work on the platen 2 to space one, two or three lines as desired. If it is desired to space three lines at every movement of the carriage from the left to the right, the position of the bar 50 is as shown in Fig. 5; when two lines are to be spaced the piece 55 is drawn out of the notch *d* and the bar 50 is raised until the catch 57 enters the notch *c;* and when the bar 50 is raised to the position as indicated by the dotted lines in Fig. 5 the rod 46 will then miss the lever 34 and be out of action. The different positions of the lever 34 to which it is pressed down to cause the spacing is shown in Fig. 7. When three lines are to by spaced the position of the rod 46 is indicated by 43 and the lever 34 must be pressed downward from its usual position 36 to the position as indicated by 39 by a sliding contact with the rod 34; the position 38 for a two line spacing and 37 for a one line spacing. When the carriage is moved from the right to the left the hinged rod takes the position as shown by the dotted lines in Fig. 6 and when the lever 34 has passed, the spring 48 draws the rod 46 back to its straight position. It can thus be seen that the spacing when set to the desired number of lines, acts automatically with the movement of the carriage. The lever 34 is attached by clamping with screws, the portion 35 over the lever 4.

Having thus described our invention what we claim and desire to secure by Letters Patent is—

In a typewriter attachment the combination with a supplemental frame attached to the machine, of a bell crank lever pivotally mounted on said frame; an operating key on one end of said bell crank lever and located adjacent to the keyboard; a grooved segment attached to the other arm of said bell crank lever; a gear rotatably mounted on said frame; a lever secured to said gear; a cord connecting said lever with said segment; a pinion and a grooved wheel connected at their hubs and pivotally mounted on said frame, said pinion meshing with said gear; a bracket secured to the carriage; a band connecting the bracket with the grooved wheel; and grooved idlers mounted on the main frame of the machine over which the band passes as set forth and described.

Signed at Paterson in the county of Passaic and State of New Jersey this twelfth day of May A. D. 1911.

JOHN F. MURDOCK.
WILLIAM J. McFARLAN.

Witnesses:
HERBERT GOBLE,
JOHN B. KANE, Jr.