W. Y. FORBES & W. H. ROTHWELL.

TYPE WRITING MACHINE.

APPLICATION FILED OCT. 31, 1908.

961,598. Patented June 14, 1910.

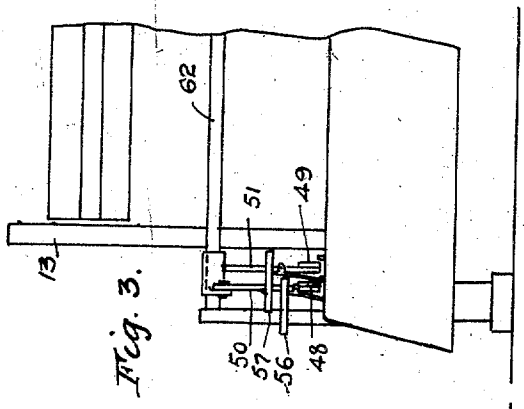

Fig. 3.

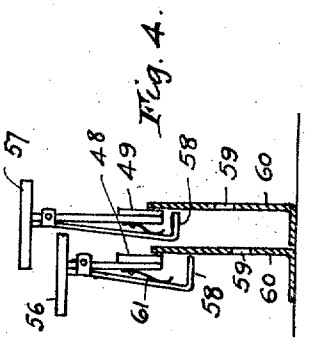

Fig. 4.

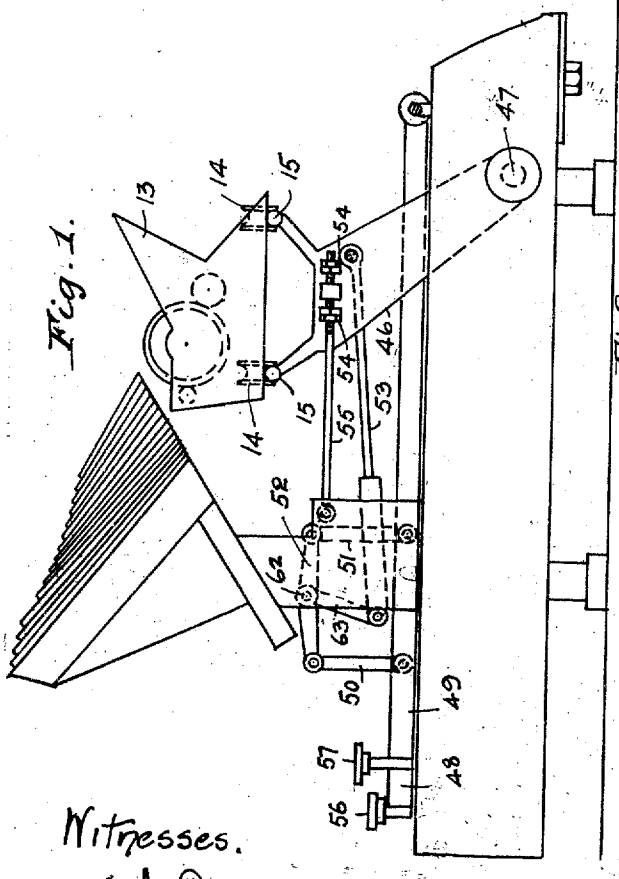

Fig. 1.

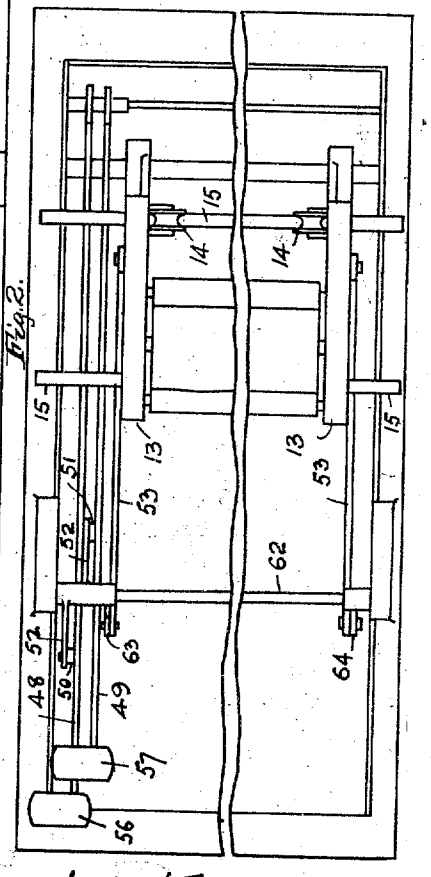

Fig. 2.

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UNITED STATES PATENT OFFICE.

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TYPE-WRITING MACHINE.

961,598. Specification of Letters Patent. Patented June 14, 1910.

Application filed October 31, 1908. Serial No. 460,557.

To all whom it may concern:

Be it known that we, WILLIAM YUILE FORBES and WILLIAM HASTINGS ROTHWELL, both subjects of the King of Great Britain and Ireland, residing at "Lynwood," Huyton, Liverpool, England, have invented a new and useful Improvement in Type-Writing Machines, of which the following is a specification.

This invention has reference to typewriting machines, and relates to certain arrangements of mechanism connected with shift-key mechanism for rocking the platen carriage frame about its pivots; and a shift-key locking arrangement, whereby a shift-key may be locked and unlocked.

In the annexed drawing:—Figure 1 is a side view showing the portions of a type-writing machine material to this invention. Fig. 2 is a part plan of Fig. 1. Fig. 3 is an end view of a portion of the mechanism shown in Fig. 1. Fig. 4 is a front view of the shift-key locking arrangement according to this invention, the scale of this figure being twice that of the other figures.

The platen carriage 13 travels upon grooved rollers 14 which run upon the two parallel traversing rods 15.

Small letters, capitals, and figures are borne by each type block, and in order that either of these may make an impression as desired the frame 46 carrying the rods 15 upon which the platen carriage travels, is caused to rock about its pivots 47 by means of the shift-key levers 48 and 49. These levers are coupled by the links 50 and 51, respectively, with the double bell lever 52 fixed on the spindle 62, the third limb 63 of this lever and a corresponding arm 64 at the other side of the machine being coupled by the adjustable rods 53 with such rocking frame 46. The travel of the rocking frame 46 is limited by the stops 54 on the yoke rod 55.

The shift keys 56 and 57, for capitals and figures respectively, are capable of being depressed momentarily or of remaining depressed, by the manner in which the key is touched. Each key, 56, 57, is arranged to rock upon its lever 48, 49, respectively, and depending from each key is a hooked finger 58. Accordingly as the touch is applied to one side or the other of the key, the hooked finger 58 will engage with or miss a notch 59, in a striking plate 60 on the base plate of the machine. That is to say, when touched toward one side thereof, the key will not rock upon its pivot, and the hooked finger 58 will not engage with the striking plate 60, but if touched toward the other side thereof, the key will rock on its pivot and the finger 58 will engage with the striking plate 60 and will hold such key and its lever in their depressed position. Similarly, when a key is locked in its depressed position, it is unlocked by touching it upon that side which will cause it to rock on its pivot. The foregoing description applies to both of the shift keys 56, 57. The hooked finger 58 is normally kept out of engagement with the striking plate 60 by the spring 61.

Having now described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. In a typewriting machine, in combination, a frame pivoted on the machine base and supporting the platen carriage, two shift-key levers for rocking said frame in either direction about its pivots, a double bell-lever and single lever mounted on the same spindle, and rods connecting the shift-key levers with such double bell-lever and connecting such double bell-lever and single lever with said frame, yoke rods connected to the machine frame and passing through lugs on said rocking frame, and adjustable stop pieces on said yoke rods for limiting the movements of said rocking frame, substantially as described.

2. In a typewriting machine, the combination with shift-key levers for rocking the platen carriage frame so as to produce different case lettering, of key tablets pivoted on the ends of said levers and arranged to rock sidewise thereon, hook-shaped finger pieces depending from said tablets, and notched striking plates standing on the machine base plate, whereby a touch applied

on one side of either of said tablets causes it to rock and so enter its hooked finger in the notch of one of said striking plates, so that the shift-key lever is retained in its depressed position and is released therefrom by a touch directed on the opposite side of said tablet, and springs for holding said hooked fingers normally out of engagement with said striking plates, substantially as described.

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