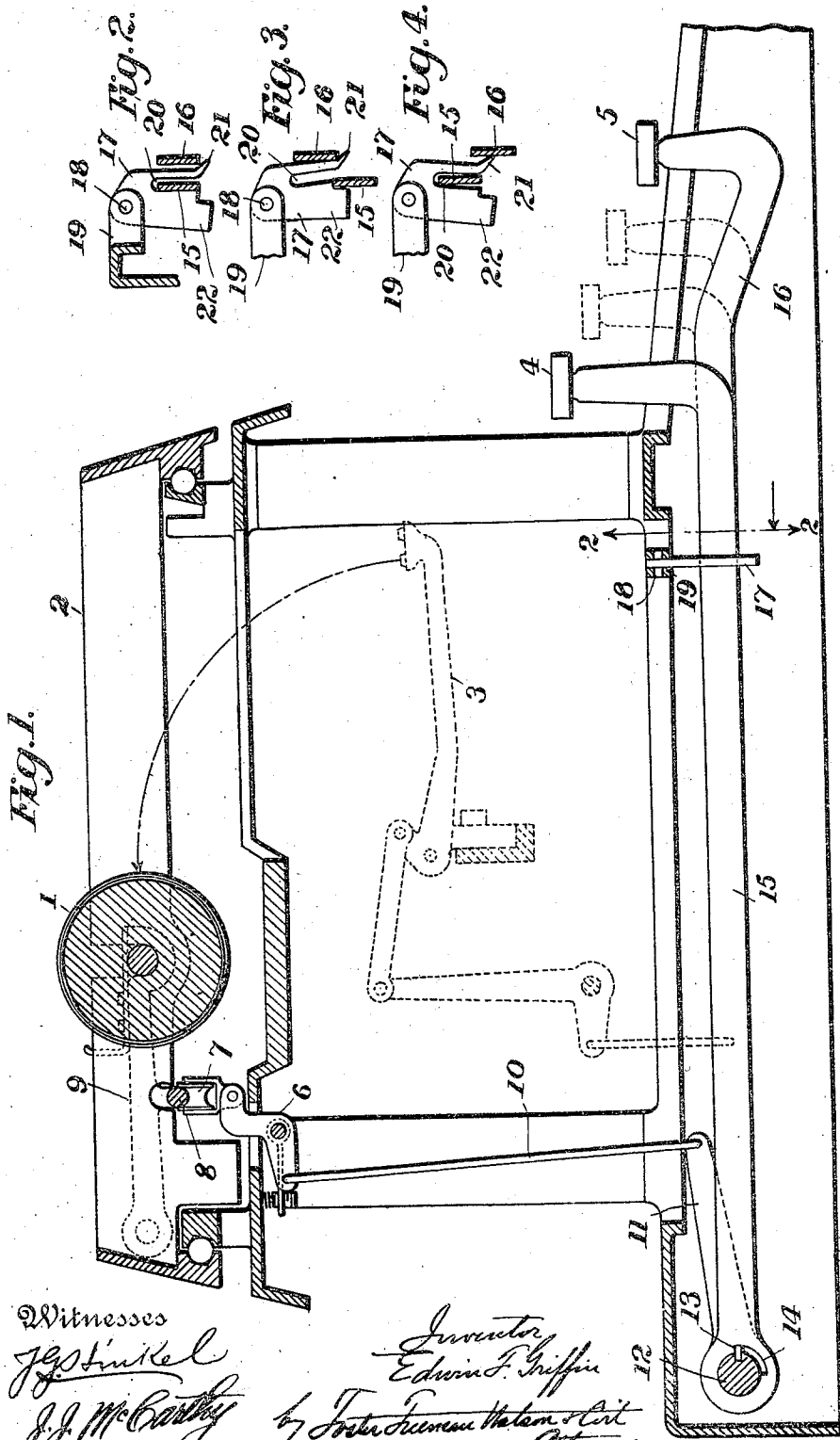


E. F. GRIFFIN.
TYPE WRITING MACHINE.
APPLICATION FILED DEC. 1, 1908.

Patented Feb. 11, 1913.

1,053,027.



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UNITED STATES PATENT OFFICE.

EDWIN F. GRIFFIN, OF SYRACUSE, NEW YORK, ASSIGNOR TO INTERNATIONAL TEXT BOOK COMPANY, OF SCRANTON, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

TYPE-WRITING MACHINE.

1,053,027.

Specification of Letters Patent.

Patented Feb. 11, 1913.

Application filed December 1, 1908. Serial No. 465,478.

To all whom it may concern:

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

The present invention relates to improvements in typewriting machines and particularly to the means employed for effecting a relative adjustment between the platen and printing devices to position said parts for writing "upper case" characters.

The object of the invention is to provide a simple but effective latch or locking means by which the parts of the typewriter will be automatically locked in "upper case" position when one of two shifting keys is actuated, said lock being automatically released by the actuation of the other shift key and the movements of the latter being ineffective to shift the locking member into operative position.

While the invention may be applied to various styles of typewriting machines, it is shown in the accompanying drawing as embodying a machine of the character in which the platen is shifted vertically relative to the printing devices for adjusting such parts to "upper case" position.

In the drawings, Figure 1 is a sectional view through a typewriter having the present invention applied thereto, the parts not constituting the invention being shown more or less conventionally; Figs. 2, 3, and 4 are detail views, partly in section on the line 2-2 of Fig. 1 and showing the several positions assumed by the latch plate or detent.

In the drawings, 1 designates a platen which is supported in the carriage 2 in such a manner as to be rocked in a substantially vertical direction to vary its relation to the type bars one of which is indicated in dotted lines at 3. The vertical movements of the platen are effected by depressing either of two shift keys 4, 5, which are connected with a bell crank lever 6 mounted in the frame of the machine and supporting on one arm a roller or wheel 7 which engages a rod 8 of the platen supporting frame. This rod 8 extends throughout the length of the carriage and connects two pivotally mounted arms in the upper edges of which are formed depressions or seats to receive the platen shaft. One of such arms is shown at 9.

The particular connection between the bell crank lever 6 and the shift keys 4, 5, illustrated in the drawing comprises a rod or link 10 which connects said bell crank with an arm 11 on a rock shaft 12 mounted in the lower portion of the frame of the machine. A key or rib 13 on the shaft 12 extends into slots 14 formed in two levers 15, 16, connected respectively with the keys 4, 5, and fulcrumed on the rod 12. Suitable means are provided for normally maintaining the rod 12 in the position shown in Fig. 1 with the rib or key 13 at the upper ends of slots 14 and by this construction it will be seen that either key lever 15, 16 can be depressed and the bell crank 6 thereby actuated to shift the platen without causing any movement of the other lever.

The key 5 is the key commonly termed the "shift key" and may be duplicated, one of such keys being arranged at each side of the machine, while the key 4 is the key known as the "shift lock" key. Means are provided whereby when the key 4 is depressed sufficiently to adjust the parts into "upper case" position it will be automatically engaged by a detent or latch and the parts be thus retained in adjusted position until said detent or latch is released by the operator.

In the present invention the latch or detent comprises a plate 17 which is pivotally supported at 18 on a lug or ear 19 extending inwardly from the side wall of the base of the machine frame. In said plate is formed a slot 20 which opens through the lower edge of the plate and in which the "shift lock" key lever 15 is received when said lever is in its normal inoperative position. The plate 17 is provided with a laterally projecting toe 21 which, as shown in Figs. 2 and 3, extends partially across the lower edge of the "shaft" key lever 16 when the latter is in its elevated position.

The slot 20, as shown more particularly in Fig. 3, is inclined and when the lever 15 is in position therein the latch plate 17 is rocked about its pivot so that when said lever 15 is depressed and moved from said slot the plate will automatically be shifted into the position shown in Fig. 3 in which it extends over and bears on the upper edge of said lever. By this means the platen and printing devices are so positioned that when the machine is operated only "upper case" characters will be printed. The

lateral rocking of the latch 17 following a depression of the key lever 15 causes the toe 21 to extend entirely across the lower face of the key lever 16 and if this lever be depressed slightly the latch will be rocked to bring the slot 20 over the lever 15 when the latter will be instantly raised by the action of the usual spring. It will be understood that both levers 15, 16, are provided with the usual springs which act to normally hold them in the elevated position shown in Figs. 1 and 2.

Referring to Fig. 2, it will be seen that the slot 20 is of such width that the latch plate 17 can freely move laterally, sufficiently to permit the lever 16 to be depressed. When this lever is depressed the platen will be adjusted vertically in the same manner that it is when the key lever 15 is actuated but the parts will not be locked in adjusted position. The position of the latch plate when the key lever 16 alone is depressed is shown in Fig. 4. The lateral locking movement of the plate 17 is limited by a downwardly projecting portion 22 which extends below the upper edge of the key lever 15 when the latter is in its lowermost position.

Having thus described the invention what is claimed is,

1. In a typewriting machine, the combination with two key levers arranged side by side and each adapted when depressed to effect a relative movement between the platen and printing devices to position said parts for writing "upper case" characters, of a movable latch or detent having in its lower edge a notch or slot, into which one of said levers extends, the latch being normally held in an inactive position by one of the shift levers, and being automatically moved to maintain said lever depressed when the latter is actuated, and having a member adapted to be engaged to rock the latch in the opposite direction when the other shift lever is depressed.

2. In a typewriting machine, the combination with two parallel key levers each adapted when depressed to effect a relative movement between the platen and printing devices to position said parts for writing "upper case" characters, of a pivotally supported latch plate constantly engaging one of said levers and adapted to automatically interpose a stop above said lever when the latter is depressed, said latch plate having a projection extending beneath the other lever by which the plate will be shifted when said lever is depressed.

3. In a typewriting machine, the combination with two key levers arranged side by

side and each adapted when depressed to effect a relative movement between the platen and printing devices to position said parts for writing "upper case" characters, of a latch plate mounted to move transversely of said levers, said plate having formed therein an inclined slot that extends through the lower edge of the plate and receives one of said levers when the latter is in its elevated, inoperative position, said plate automatically moving into position to positively maintain said lever depressed when the latter is moved from said slot, and means actuated by the other key lever for moving the plate in a reverse direction, the width of the slot in the plate permitting such movement when the first mentioned lever is elevated.

4. In a typewriting machine, the combination with two key levers arranged side by side and each adapted when depressed to effect a relative movement between the platen and printing devices to position said parts for writing "upper case" characters, of a latch plate mounted to move transversely of said levers, said plate having formed therein an inclined slot that extends through the lower edge of the plate and receives one of said levers when the latter is in its elevated, inoperative, position, and said plate automatically moving into position to positively maintain said lever depressed when the latter is moved from said slot, means for positively limiting such movement of the plate, and means actuated by the other key lever for moving the plate in a reverse direction, the width of the slot in the plate permitting such movement when the first mentioned lever is elevated.

5. In a typewriting machine, the combination with a "shift" key lever and a "shift lock" key lever arranged side by side, of a movable latch plate having therein an inclined slot that opens through its lower edge and which receives the "shift lock" key lever when the latter is in normal, inoperative, position, said lever when depressed passing below the open end of said slot and permitting the latch to automatically move over and retain it in such operative position, and means for causing said latch to move in a direction to release the "shift lock" key lever when the "shift" key is actuated.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN F. GRIFFIN.

Witnesses:

H. E. CHASE,
F. J. TANNER.