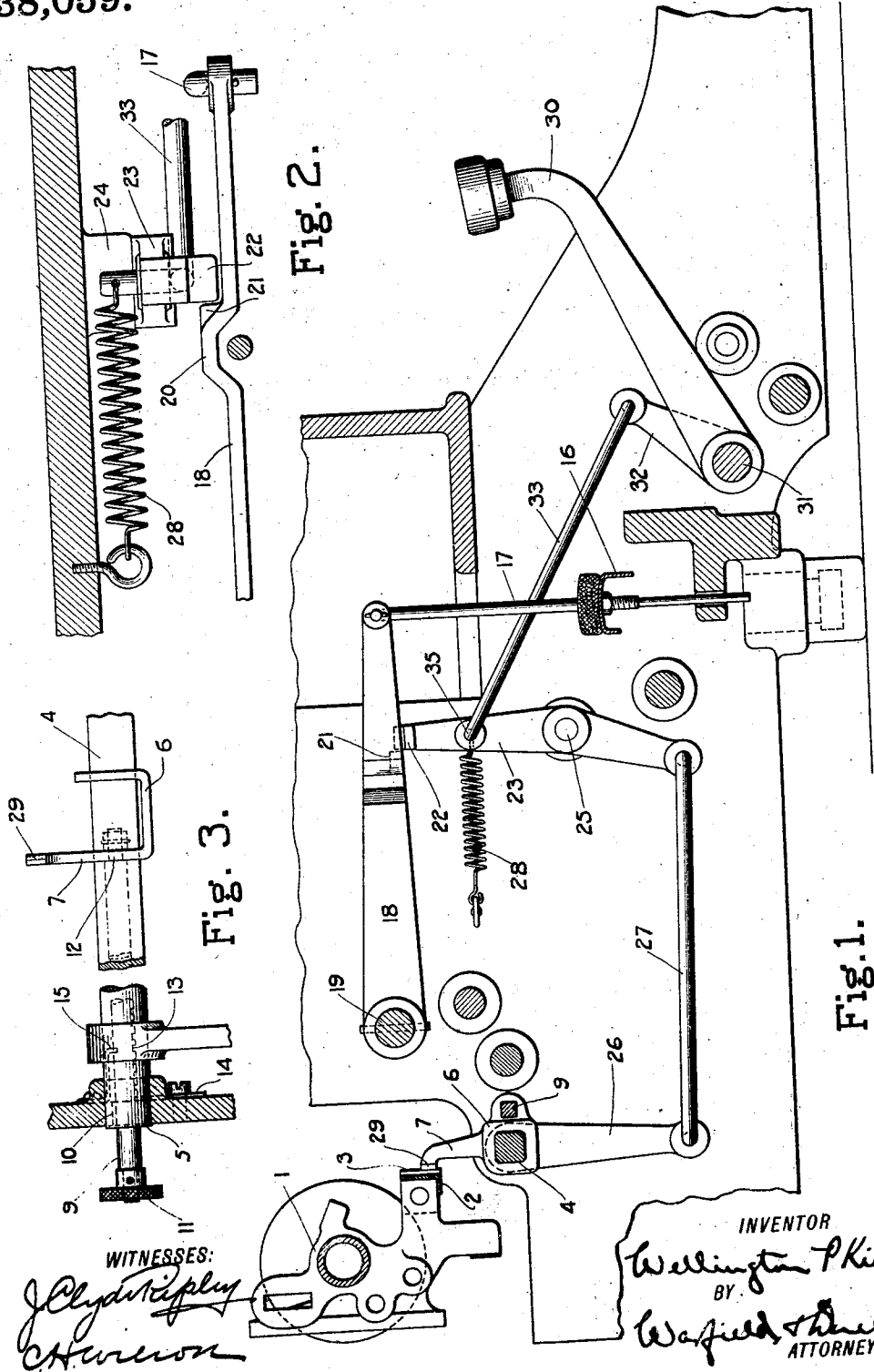


W. P. KIDDER.  
KEYBOARD LOCK FOR TYPE WRITERS.  
APPLICATION FILED JUNE 24, 1905.

Patented Oct. 26, 1909.

938,059.



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# UNITED STATES PATENT OFFICE.

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## KEYBOARD-LOCK FOR TYPE-WRITERS.

938,059.

Specification of Letters Patent.

Patented Oct. 26, 1909.

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*To all whom it may concern:*

Be it known that I, WELLINGTON PARKER KIDDER, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Keyboard - Locks for Type - Writers, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to typewriting machines and the like and, although capable of use in many other forms of machines, is especially adapted for use in those known as "silent typewriters", and has for one of its objects to provide means adapted automatically to prevent further movement of the carriage when the end of a line is reached.

Another object is to provide mechanism adapted to lock the universal bar against movement at a predetermined position of the carriage.

Other objects will be in part obvious, and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the mechanism hereinafter described, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawing, wherein is shown one of various possible embodiments of my invention: Figure 1 is an elevation of the same, partly in section. Fig. 2 is a detail view showing the locking means for the universal bar. Fig. 3 is a sectional view of another detail.

Similar reference characters refer to similar parts throughout the several views.

As aiding in a clearer understanding of certain of the various features of my invention, it may be here noted that, in typewriting machines, it is desirable to provide means operating to prevent a movement of the carriage when the end of a line is reached, and it is, moreover, essential to so construct the machine that the movement of the carriage may be automatically arrested in different positions to allow for different lengths of lines and different widths of paper. I have, therefore, found it desirable in "silent typewriters" to so construct the machine that the carriage may be automatically locked against movement in any desired

position and, in order that such operation may be performed without noise, I have provided mechanism adapted to lock the universal bar against movement, thereby preventing a movement of the key levers and carriage feeding mechanism controlled thereby, such operation being automatically determined by the position of the carriage. The above and other advantages are secured in constructions of the nature of that hereinafter described.

Referring now to the drawings, the carriage 1 is mounted to be reciprocated longitudinally in the frame of the machine and has secured thereto face plate 2 having near one end a slight wedge shaped depression 3. A preferably squared rock shaft 4 having rounded ends to form bearings extends transversely of the machine in a parallel relation with face plate 2 and is journaled in the frame at 5. A shoe 6 is slidably mounted upon said shaft and is provided with a locking finger 7 adapted to constantly engage face plate 2 of carriage 1. Operating rod 9 extending through an enlarged opening in the frame of the machine is provided with a knob or handle 11 and is connected to shoe 6 at 12, and is adapted to slide the same along shaft 4. Rod 9 is provided with a rack 13 adapted to be engaged by fixed pawl 14 secured to the frame of the machine and is maintained in engagement therewith by a leaf spring 15 secured to said frame and engaging the periphery of rod 9.

Universal bar 16 connected with the carriage feeding mechanism, and upon which rests the key levers and spacing bar, or other actuating device, is connected by link 17 to rock lever 18 positioned upon rock shaft 19. Rock lever 18 is provided with an offset portion 20 upon which is located a lug 21 adapted to be engaged by a co-acting lug 22 positioned upon the end of bell crank lever 23 pivoted at 24 to a stud 25 extending from the frame of the machine, the opposite end of which is pivotally connected by means of rod 27 with lever 26 carried by rock shaft 4. Retractable spring 28 connecting bell crank lever 23 with a fixed part of the machine is adapted constantly to maintain locking finger 7 carried by sliding shoe 6 in engagement with the face plate 2 of carriage 1 through the connecting means hereinbefore described. Locking finger 7 is provided with a substantially wedge-shaped end

29 which is adapted to enter the similarly shaped depression 3 in face plate 2 when carriage 1 by its longitudinal movement brings depression 3 into registry therewith, thereby operating to cause co-acting lug 22 of bell crank lever 23 to engage with lug 21, such operation being accomplished by the influence of spring 28. The universal bar 16 being connected with rock lever 18 is now locked against movement and further actuation of the impression levers or spacing bar is thereby prevented. By reason of shoe 6 being adapted to be projected along rock shaft 4 by means of rod 9, the longitudinal movement of the carriage may be arrested at any desired predetermined position.

Key board lock lever 30 journaled upon shaft 31 is provided with a lever 32, to which is pivotally secured a link 33 connected at its opposite end to bell crank lever 23 at 35 and in the event of the carriage 1 being arrested in the middle of a word, or should the operator desire to write additional matter in the same line, pressure on said key board lock lever 30 will operate to withdraw co-acting lug 22 of bell crank lever 23 from lug 21 carried by rocker lever 18 thereby releasing universal bar 16 and simultaneously withdrawing locking finger 7 from depression 3.

The operation of my invention, which should be largely obvious after the above description, is as follows: Sliding shoe 6 being set on rock shaft 4 in any desired position, depending on the width of paper or the desired length of line, will, when locking finger 7 enters depression 3 cause the lug 22 of bell crank lever 23 to engage with lug 21 of rocker lever 18, thereby locking the universal bar against movement and preventing a further movement of the carriage. On account of the wedge shaped end of finger 7 being engaged by the similarly shaped depression 3, the returning of the carriage to initial position by the operator will force said finger out of engagement with the walls of such depression, thereby withdrawing bell crank lever 23 from engagement with rocker lever 18 and releasing universal bar 16 through the connecting means above described, spring 28 maintaining said finger 7 in constant engagement with face plate 2. Accordingly it will be apparent that I have provided locking mechanism for the carriage feed well adapted to achieve the object sought and which is characterized by simplicity of structure and efficiency of operation and, moreover, one in which concussion or impact of the key levers or spacing mechanism against the universal bar is prevented when the carriage is in a locked position. By the provision of the lock acting substantially directly upon the universal bar, there is prevented the usual racking

and consequent strain upon the operating mechanism due to attempts to actuate the key levers or spacing mechanism when the carriage has reached the end of the line, and this, of course, results in a more silent operation.

While I have shown and described my invention in connection with a typewriting machine of the above type, I do not wish to be understood as being limited exclusively to such type nor in fact to any type of machine, it being adapted for use as to many of its features in other forms although of peculiar value in the relation herein shown.

As many changes could be made in the above construction and many apparently widely different embodiments of my invention could be made without departing from the scope thereof, I intend that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I desire it also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention, which as a matter of language might be said to fall therebetween.

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

1. In a typewriting machine, the combination with the traveling carriage and the universal bar, of a rocker member connected with said universal bar and adapted to be actuated thereby, a movable member adapted to engage said rocker member to lock the same against movement, spring means for urging said locking member to movement, a lock controlling member connected with said locking member adapted to engage a portion of the carriage, such engagement holding the locking member in ineffective position, and means upon the carriage adapted when the latter reaches a predetermined point in its travel to permit such movement of the lock controlling member as will permit a movement of the locking member to its locking position.

2. In a typewriting machine, the combination with the traveling carriage and the universal bar, of a swinging locking member for the universal bar which is spring-urged to movement to a locking position, a shoe connected with said locking member and engaging a portion of the carriage during the letter feeding movement thereof, such engagement operating to hold said locking member in an ineffective position against the tension of its spring actuating means, and means upon the carriage adapted to permit a movement of the shoe when the

carriage reaches a predetermined position in its travel whereby the locking member may move to its locking position.

3. In a typewriting machine, the combination with the traveling carriage and the universal bar, of a movable member for locking the latter, a shoe connected with said movable member and normally engaging a portion of the carriage, a spring adapted to urge said locking member to movement and adapted to hold said shoe in engagement with said portion of the carriage, such engagement operating to hold the locking member against movement, and means upon the carriage which permits a movement of said shoe when the carriage reaches a predetermined point in its travel whereby said spring may move said locking member to locking position.

4. In a typewriting machine, the combination with the traveling carriage and the universal bar, of a movable member adapted to lock universal bar against movement, an oscillatory rod extending in parallel relation with the carriage and journaled in a fixed portion of the frame of the machine, a shoe supported in non-rotatable engagement with said rod and adjustable longitudinally thereof, said shoe being adapted to engage a portion of the carriage, a spring connected with said locking member and urging the same to movement to a locking position, a connection between said oscillatory rod and said locking member whereby said spring normally holds said shoe in engagement with said portion of the carriage, such engagement operating to hold the locking member against movement, and means upon the carriage which permits a movement of the shoe when the carriage reaches a predetermined point in its travel, thereby permitting said rod to oscillate and said locking member to move to its locking position.

5. In a typewriting machine, in combination with a carriage having a recess, a universal bar, a movable member normally in contact with said carriage, and means actuated by said movable member for locking said universal bar when the carriage has reached a predetermined position in its travel and the recess is engaged by said movable member.

6. In a typewriting machine, in combination, a universal bar, a rocker lever connected therewith, a carriage, a rock shaft, an adjustable member positioned upon said rock shaft and held in engagement with the carriage, spring means adapted to actuate said member when the carriage reaches a predetermined point in its travel, and locking mechanism connected with said member adapted when the same is actuated to lock the universal bar against movement.

7. In a typewriting machine, in combination,

a universal bar adapted to support the key levers, a rocker lever connected therewith, a pivotally mounted lever adapted to lock said rocker lever against movement, a carriage, a rock shaft extending in parallel relation with the carriage and journaled in a fixed portion of the frame of the machine, a member adjustably positioned upon said rock shaft adapted to engage with a portion of the carriage, means connecting said rock shaft with the pivotally mounted locking lever, spring means for urging said latter member to movement toward a locking position, said spring means also operating to hold the member mounted upon the rock shaft in engagement with the carriage, and means upon the carriage which coacts with the adjustable member in engagement therewith to permit said spring to move said pivotally mounted lever to engage with said locking lever, whereby the universal bar is locked against movement.

8. In a typewriting machine, in combination, a universal bar adapted to control the movement of the impression levers and spacing mechanism, a carriage, means secured to the carriage and provided with a depression, a rock shaft, adjustable means positioned upon said rock shaft free from but constantly engaging with said means, a rocker lever connected with said universal bar, a bell crank lever adapted to engage with said rocker lever to prevent a movement thereof, connecting means between said rock shaft and said bell crank lever, and a spring extending between a fixed part of the machine and said bell crank lever adapted through the afore-mentioned connecting means to maintain said engaging means in contact with the carriage, said spring being adapted when said engaging means is in registry with said depression to force the same therein and simultaneously engage said bell crank lever with said rocker lever, thereby preventing a movement of said universal bar.

9. In a typewriting machine, the combination with the carriage and the universal bar, of locking means for the latter comprising a finger spring held in contact with the carriage, and locking means for the universal bar connected therewith, said finger being adapted to enter a depression formed in the carriage at a predetermined point in its travel whereby the locking means is actuated and caused to lock the universal bar against movement.

10. In a typewriting machine, the combination with the carriage and the universal bar, of locking means for the latter comprising a finger spring held in contact with the carriage, and locking means connected therewith adapted when actuated through a movement of the finger to lock the universal bar against movement, said finger when moved by its spring into a depression formed in the

carriage when the latter reaches a predetermined position in its travel operating to actuate said locking mechanism.

11. In a typewriting machine, the combination with the carriage and the universal bar, of locking means for the latter comprising intercepting means for the universal bar, and a finger connected therewith normally spring urged into engagement with the carriage, said carriage being formed with a depression adapted to be entered by said finger at a predetermined position in the travel of the carriage whereby the intercepting means will be caused to prevent a movement of the universal bar.

12. In a typewriting machine, the combination with the carriage and the universal bar, of locking means for the latter comprising a plate carried by the carriage provided with a depression, intercepting means for the universal bar, and a finger connected therewith normally spring held against said plate, said finger being adapted to enter the depression in said plate at a predetermined

point in the travel of the carriage whereby the intercepting means will be moved into a position to lock the universal bar against movement.

13. In a typewriting machine, the combination with the carriage and the universal bar, of locking means for the latter comprising a plate having a depression carried by the carriage, intercepting means for the universal bar, and a finger connected with said intercepting means and normally spring held in contact with said plate, said plate and said finger being relatively adjustable, said finger being adapted to enter a depression in said plate at a predetermined point in the travel of the carriage, thereby causing the intercepting means to lock the universal bar against movement.

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

WELLINGTON PARKER KIDDER.

Witnesses:

A. WHITE,

C. H. WILSON.