

E. B. HESS.
TYPE WRITING MACHINE.
APPLICATION FILED AUG. 6, 1909.

958,702.

Patented May 17, 1910.
2 SHEETS—SHEET 1.

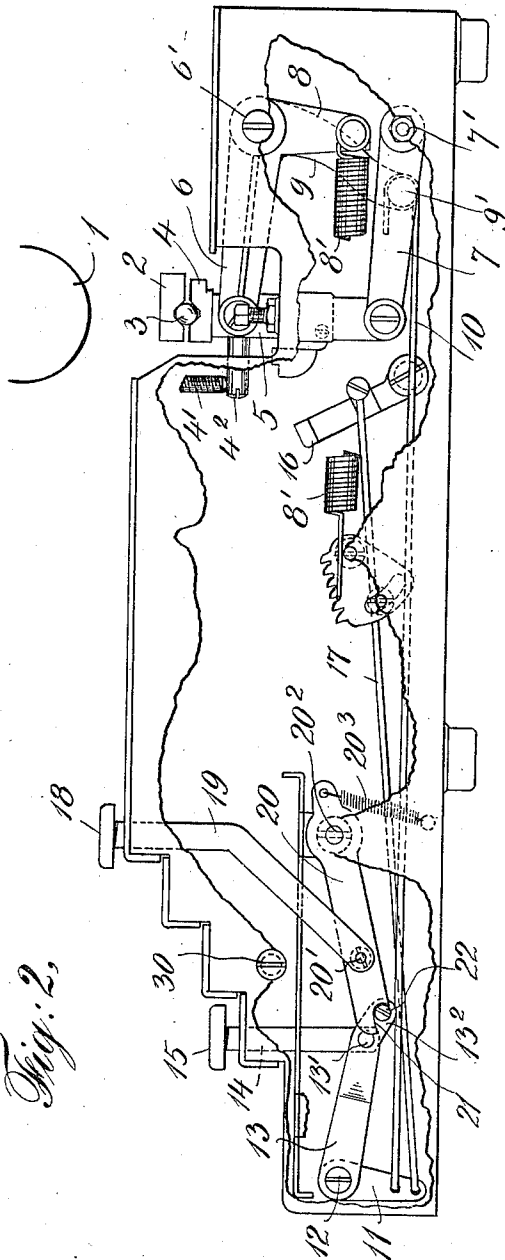


Fig. 2,

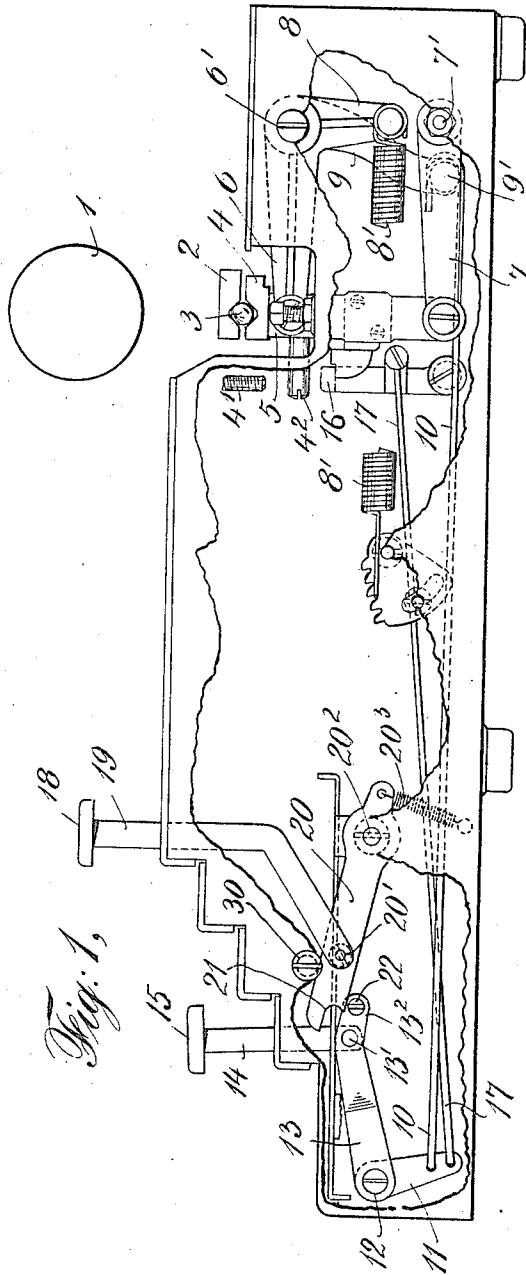


Fig. 1,

WITNESSES:
L. F. Browning
D. F. Crandall.

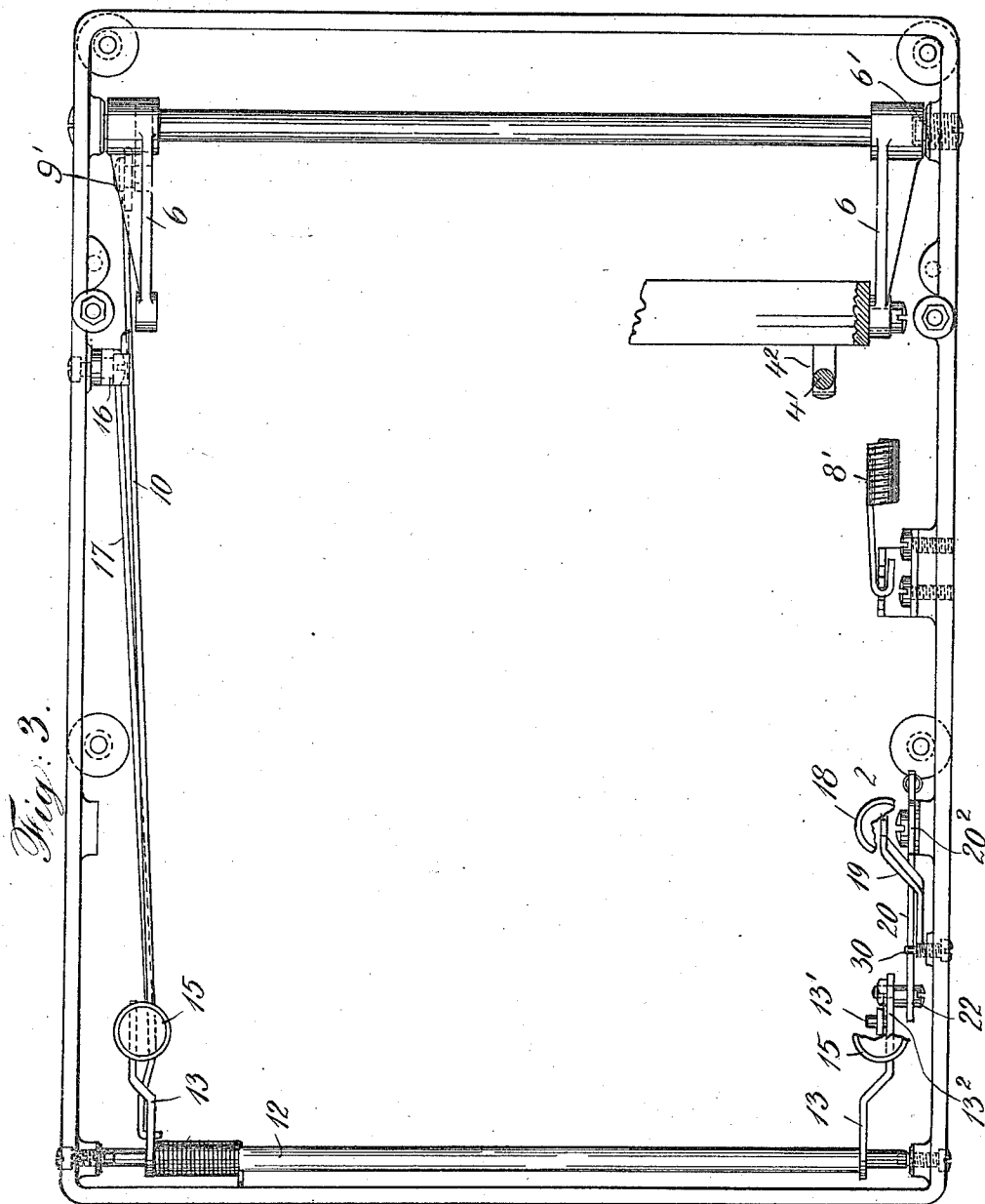
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WITNESSES:
L. J. Browning
D. F. Randall

INVENTOR
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UNITED STATES PATENT OFFICE.

EDWARD B. HESS, OF NEW YORK, N. Y., ASSIGNOR TO ROYAL TYPEWRITER COMPANY,
OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

958,702.

Specification of Letters Patent.

Patented May 17, 1910.

Original application filed December 28, 1907, Serial No. 408,354. Divided and this application filed August 6, 1909. Serial No. 511,501.

To all whom it may concern:

Be it known that I, EDWARD B. HESS, a citizen of the United States of America, residing in the borough of Brooklyn, city and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This application is a division of my application Ser. No. 408,354, filed December 28, 1907.

The invention relates to means for shifting the platen of a bar typewriting machine and comprises certain features of construction hereinafter described in detail.

In the accompanying drawings: Figure 1 is a side elevation with the frame plate broken away and the platen in normal lower case position; Fig. 2, a like view with the platen in shifted or upper case position; and Fig. 3, a plan with many parts removed.

The machine to which this invention is shown applied is the Royal "Standard." It is one in which the finger pieces of the key board are applied to vertically movable stems or push pins.

1 is the platen and 2 the rail of its traveling carriage running on balls 3 the race way for which is formed in the under face of the rail 2 and in the upper face of the carriage shift rail 4. The rail 4 is carried by downwardly extending arms 5 located at each side of the machine and connected to parallel links 6, 7, whose rear ends rock about axes 6', 7'. The axis 6' is a rock shaft from which, near the right hand side of the machine, there depends an arm 8 having applied to it one end of a coiled spring 8' which serves to counterbalance the weight of the carriage. At the left hand side of the machine there is also an arm 9 extending downwardly from the rock shaft and by means of which the latter may be rocked to raise the shift rail 4 to shift for upper case printing. The arm 9 is actuated by a hooked link 10 that extends horizontally forward to the front of the machine and is there connected (at the left hand side of the machine) with an arm 11 extending downwardly from a rock shaft 12 turning in bearings in the side plates of the frame. When this shaft is rocked and link 10 drawn forward, the carriage shift rail 4 is elevated until arrested by the cooperating stops 4',

4². Adjacent to each end, the rock shaft 55 has a rearwardly extending arm 13 in the rear end of which is pivoted at 13' the stem or push pin 14 of a carriage shift finger piece 15, such finger pieces being located at the left and right of the key board and both operating on depression to rock the shaft 12 to elevate the carriage. The carriage is locked in its lower position by a latch 16 operated by a link 17 connected to the downwardly extending arm 11 at the left hand side of the machine below the point at which the link 10 is connected and there is some lost motion between the link 10 and the stud 9' on the arm 9 engaged by the link so that on rocking of shaft 12 the latch 16 is first disengaged from the carriage and then the carriage is shifted. This construction is well understood by those familiar with the Royal machine.

In order to shift and lock the carriage in shifted position, the shift lock finger piece 18 preferably located at the right hand side of the key board is provided. The lower end of the stem 19 of this latter finger piece is angularly disposed and is pivoted at 20' to a forwardly projecting lever 20 pivoted at 20² adjacent its rear end on a stud-bearing on the right hand side plate of the carriage and having applied to its rear end back of said pivot a coiled spring 20³ the reaction of which normally tends to raise the forward end of the lever and maintain the shift lock finger piece in normal elevated position against a stop 30. The front end of edge of lever 20 is provided with a recess having a circular or concave wall 21 that coöperates with a laterally projecting pin 22 on the side of an extension 13² in rear of the point 13' of that one of the rock shaft arms 13 located at the right hand side of the machine. When in normal position, as in Fig. 1, the lower edge of lever 20 bears upon the pin 22 and consequently when the shift lock finger piece is depressed, the arm 13, and with it the shift finger piece stem 14, is carried downward, rock shaft 12 is rocked and the platen shifted; and, when the stroke of the stem 19 to effect the shift is completed, pin 22 passes into the notch in the end of the lever 20 and engages the concave or circular face thereof as shown in Fig. 2 thereby forming a toggle lock that holds the platen in elevated or upper

case printing position as long as may be desired. Release of the platen to permit it to return to normal position may be effected by pressure upon either of the shift finger pieces 15 located respectively at opposite sides of the key board. The effect of such pressure is to impose upon the rock shaft a strain tending to move it and to effect sufficient movement of arm 13 because of the elasticity or yielding of the parts to disengage pin 22 from the notch in the end of the lever 20, whereupon the lever 20 and stem 19 will be immediately thrown upward to normal position by the action of the spring 20^a and on release of the shift finger piece 15 the platen will immediately return to normal position.

I claim:

1. The combination of a vertically shiftable platen, a horizontally disposed shift link extending forward to the front of the machine, a transverse rock shaft at the front of the machine, an arm extending downwardly from the rock shaft and to which said shift link is connected, arms extending rearwardly from the rock shaft adjacent each end thereof, a vertically movable shift finger piece located in the key board at each side thereof and operatively respectively connected with such rearwardly extending arms whereby on depression of either such finger piece the platen is shifted, a vertically movable shift-lock finger piece located in the key board at a side thereof, a shift lock lever to which the latter finger piece is attached, and means whereby when said lever is depressed by the shift-lock finger piece the rearwardly projecting arm to which said shift finger piece is connected is depressed, the platen shifted and automatically locked in elevated position and whereby the platen may be released from such automatic lock by pressure applied to either of the shift finger pieces located respectively at opposite sides of the key board.

2. A vertically shiftable platen combined with a shifting link extending forwardly in a horizontal direction to the front of the machine, a transverse rock shaft turning in bearings at the front of the machine, two arms extending rearwardly from the rock shaft respectively adjacent its ends; shift finger piece stems pivoted respectively to said arms, an extension from one of said rock shaft arms extending rearwardly beyond the pivotal connection of said finger piece stem thereto and having a lateral projection, a lever pivoted on the frame and having its free end overlying said lateral projection and having a notch in its end adjacent said projection and a shift-lock finger piece stem pivoted to said lever whereby on depression of the last named finger piece stem said lateral projection is carried downwardly to effect a shifting of the platen

after which the said projection is engaged by the notch in the lever thereby automatically creating a toggle lock that holds the platen in shifted position, the organization being such that pressure applied to either of the said shift finger piece stems located respectively at opposite sides of the machine will release said toggle lock and permit the platen to return to normal or lower case position.

3. The combination with a vertical shiftable platen, of a shift link extending forward to the front of the machine, a transverse shaft turning in bearings at the front of the machine, an arm extending downwardly from the rock shaft at one side of the machine to which the shift link is connected, arms extending rearwardly from said rock shaft respectively adjacent its ends, shift finger piece stems respectively pivoted to said rearwardly extending arms whereby the platen may be shifted by depressing either of said stems, a third shift finger piece stem located at a side of the key board and means whereby on the depression of the last named stem, the platen is shifted and automatically locked in shifted position but may be released to return to normal position by pressure applied to either of the first named shift finger piece stems.

4. The combination of a shifting platen, two platen shifting finger piece stems located respectively at opposite sides of the key board and operatively connected with the platen to shift it when either stem is depressed, a third shift lock finger piece stem and means whereby on depression of the latter stem the platen is shifted and automatically locked in shifted position and may automatically be released to return to normal position by downward pressure applied to either of the first named finger piece stems.

5. The combination with a shifting platen, of means for shifting it by depression of either of two finger pieces, one at each side of the key board, a third finger piece and means for shifting and automatically locking the platen by means of said third finger piece and for releasing the lock by application of pressure to either one of the first named finger pieces.

6. The combination with a shifting platen, of means for shifting it by depression of either of two finger pieces, one at each side of the key board, a third finger piece and means for shifting and locking the platen by means of said third finger piece and for releasing the lock by application of pressure to either one of the first named finger pieces.

7. A shifting platen, means for shifting it by depression of either of two finger pieces, one at each side of the key board, a

third finger piece and means for shifting and automatically locking the platen by means of said third finger piece and for releasing the lock by application of pressure to either one of the first named finger pieces, combined with a latch acting to hold the carriage in lower case position and means for disengaging the latch when the carriage is to be shifted.

8. A shifting platen, means for shifting it by depression of either of two finger pieces, one at each side of the key board, a third finger piece and means for shifting and automatically locking the platen by means of said third finger piece and for releasing the lock by application of pressure to either one of the first named finger pieces, combined with a latch acting to hold the carriage in lower case position and means acting automatically on depression of any shift key to disengage the latch from the carriage.

9. The combination of a shifting platen,

means for shifting it by depression of either of two finger pieces, one at each side of the key board, which means comprise a rocking lever arm whose front end moves vertically, a third finger piece and means for not only shifting but also locking the platen in shifted position on the depression of said third finger piece and for releasing the lock by application of pressure to either one of the first named finger pieces, said means for shifting and locking the platen in shifted position comprising the aforesaid rocking lever arm and a rocking locking lever arm whose front end moves vertically and cooperates with the first mentioned rocking lever arm, the ends of the two rocking arms moving in opposed arcs.

In testimony whereof, I have hereunto subscribed my name.

EDWARD B. HESS.

Witnesses:

EDW. J. MANNING,
LEWIS C. MYERS.