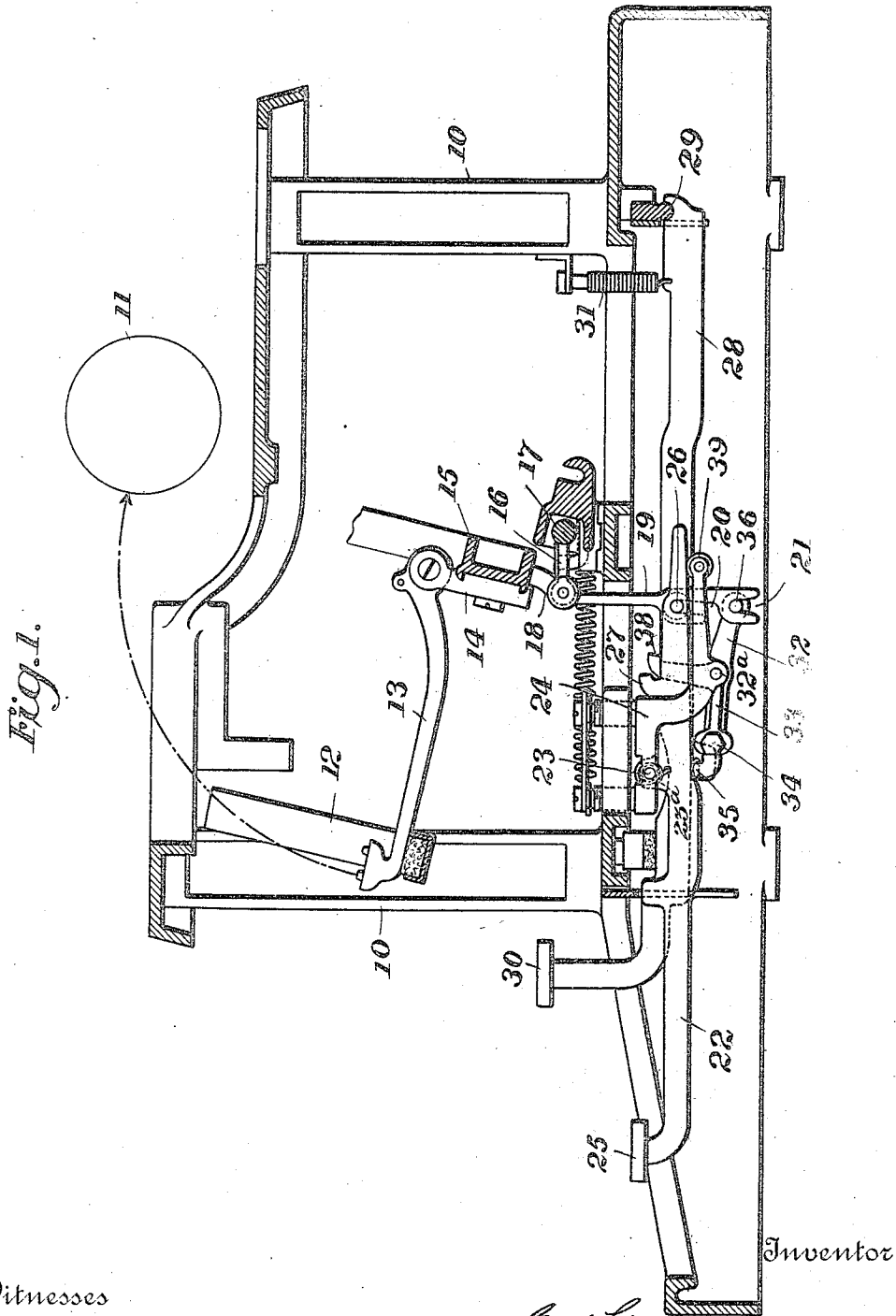


C. GABRIELSON.
TYPE WRITING MACHINE.
APPLICATION FILED APR. 8, 1909.

1,032,131.

Patented July 9, 1912.

3 SHEETS—SHEET 1.



Witnesses

J. J. Linskel
J. J. McCarthy

Inventor

Carl Gabrielson
By Foster Freeman Watson, Atty.
Attorneys

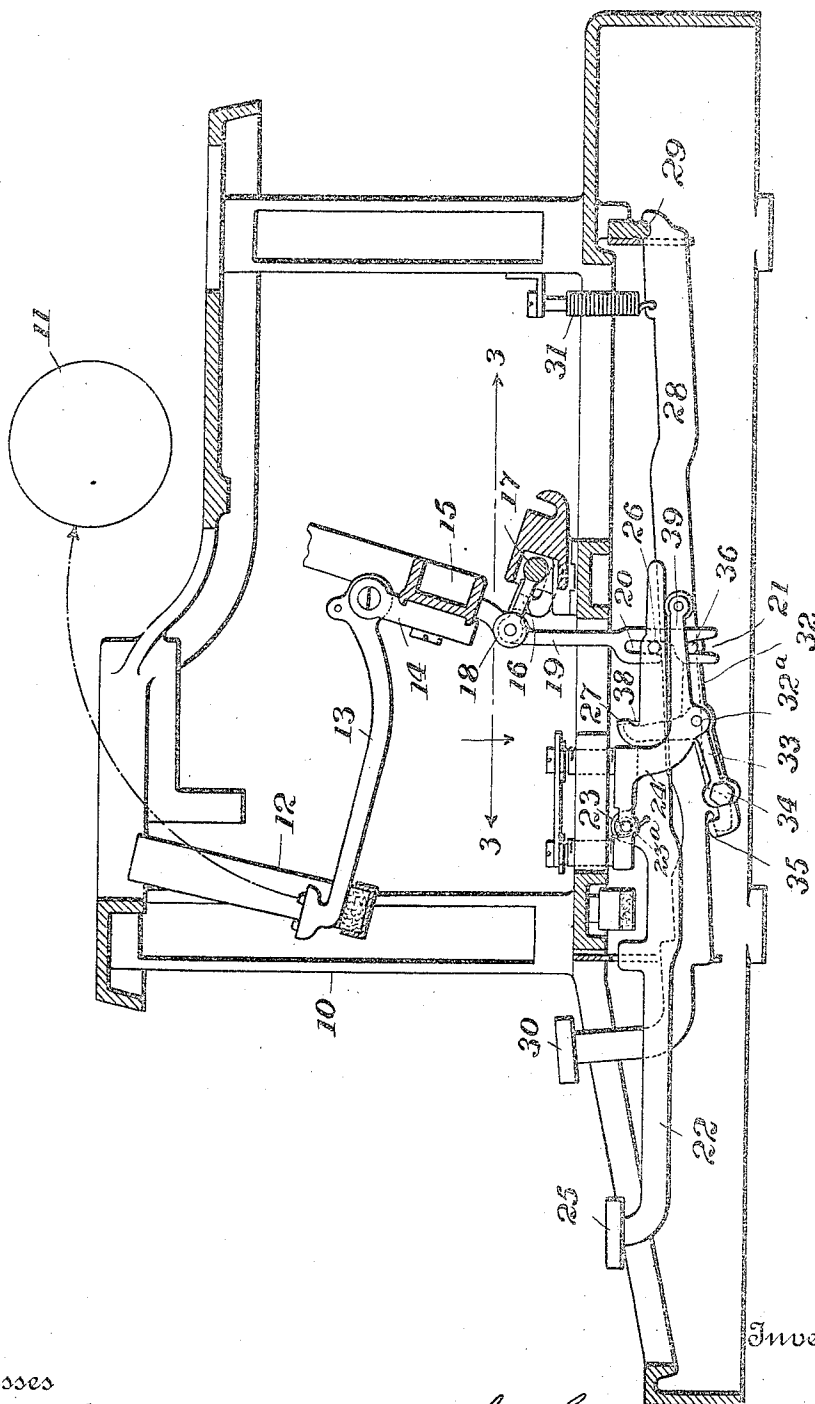
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3 SHEETS—SHEET 2.

Fig. 2.



Witnesses
Septimus L. J. M. Carthy

Inventor
Carl Gabrielson
By *Foster Freeman Watson* Attorneys

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Fig. 3.

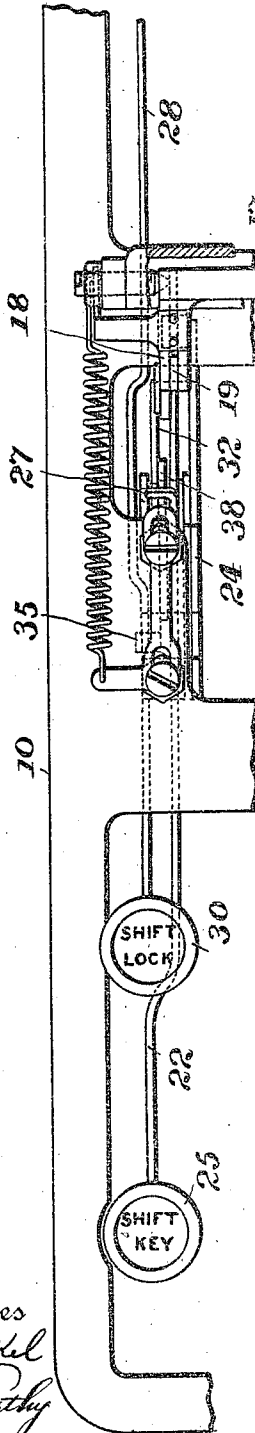


Fig. 4.

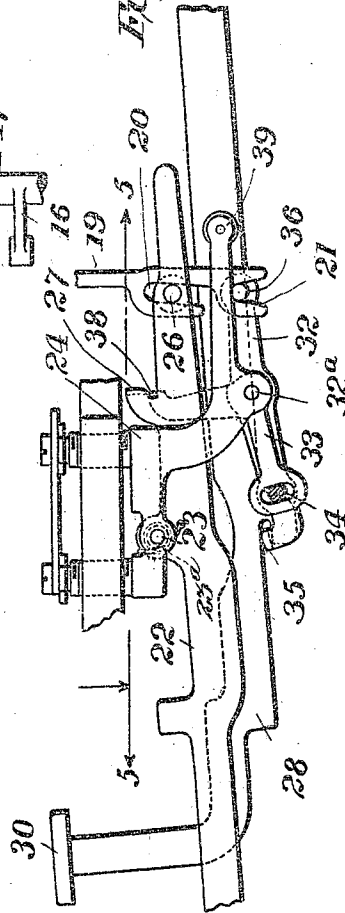
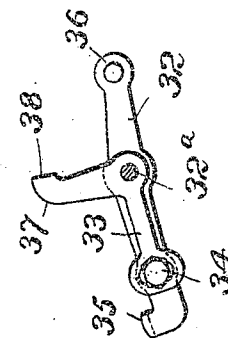


Fig. 5.



Fig. 6.



Witnesses
J. J. McCarthy

Inventor

Carl Gabrielson

By Foster Freeman & Co. Attorneys

UNITED STATES PATENT OFFICE.

CARL GABRIELSON, OF SYRACUSE, NEW YORK.

TYPE-WRITING MACHINE.

1,032,131.

Specification of Letters Patent.

Patented July 9, 1912.

Application filed April 8, 1909. Serial No. 488,744.

To all whom it may concern:

Be it known that I, CARL GABRIELSON, a citizen of the United States, residing at Syracuse, county of Onondaga, State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to typewriting machines and more particularly to what may be termed case shifting mechanism for effecting printing from either of two types upon a type bar.

In the preferred form of the invention, which is shown in the accompanying drawings, the type bar support or segment is shifted and a non-shifting platen is used, but it will be evident that the shifting mechanism herein described might be applied to shift the platen and thus used in conjunction with a stationary type bar support.

Referring to the drawing, Figure 1 is a sectional view of a typewriting machine; one of the type bars and the means for shifting the type bar support being shown in side elevation and in normal position; Fig. 2 is a similar view showing the segment raised and in position to effect printing by the inner type on the bar, which is usually the upper case type, the lower case type being adapted to move to the printing point when the shift mechanism is in normal position; Fig. 3 is a plan view of the shifting levers and their connections looking down from the line 3—3 of Fig. 2; Fig. 4 is a view of parts shown in Fig. 2 upon a larger scale; Fig. 5 is a plan view looking down from the line 5—5 of Fig. 4; and Fig. 6 is a detail.

Referring to the drawings, 10 indicates the fixed frame of the machine, 11 the platen, 12 the type bar rest, and 13 one of the middle type bars having two type at its free end. The type bars 13 are pivotally connected to hangers 14 which are suitably connected to a segment or support 15. The segment 15 is movable toward and from the platen in suitable guides and it is supported and moved by arms 16 of a transverse rock shaft 17. The rock shaft 17 has an arm 18 at its left end, to which is connected a depending link 19, having two slots 20, 21, which are as shown, open at their lower ends.

In case shifting mechanism it has been

customary to have one or more "shift" keys which are adapted to shift the platen or the segment temporarily and hold it in its shifted position so long as the operator holds the key down and also to use one or more "shift-lock" keys which are adapted to shift the platen or segment and lock it in its shifted position, holding it in this position after the finger of the operator is removed from the key. In the present instance I use both a shift and a shift-lock key at the left side of the machine and I may duplicate either or both of these keys at the right of the machine. It will only be necessary to illustrate and describe the keys and their connected mechanism at the left of the machine which are constructed and arranged as follows: The shift key lever 22 is pivoted at 23 in an adjustable bracket 24 and provided at its forward end with a key 25. Lever 22 is yieldingly held in its normal or horizontal position, as shown in Fig. 2, by a suitable spring 23^a coiled about its pivot and having one end connected with the lever and the other with a fixed support. Near its rear end this lever 22 carries a pin or stud 26 which operates in the upper slot 20 of the link 19. When the shift key is depressed it raises the link 19 and the type bar support or segment 15 by rocking the shaft 17 which carries the segment. Upon releasing the shift key the segment drops by its own weight and restores the key to normal position. The shift lever carries a shoulder 27 which serves as a latch for locking and releasing the shift-lock mechanism as will presently be described.

The shift-lock lever 28 has a fulcrum near the rear of the machine and a key 30 at its forward end, the lever being normally raised by a suitable spring 31. The shift lever and the shift-lock lever are parallel and adjacent and cooperate as presently explained. Upon the bracket 24 is pivotally mounted a shift-lock sub-lever 32 and adjustably mounted on this sub-lever is a latch 33. The latch 33 is in the form of an elbow mounted upon the pivot of the sub-lever and being connected with the sub-lever by a screw 34 which passes through a slot in the elbow and clamps the latter to the sub-lever in any desired adjustment. The sub-lever has a lateral projection lying under the shift-lock lever so that when the lever is depressed the forward

end of the sub-lever is also depressed. I preferably interlock the two levers by extending the lateral projection 35 through a slot in the main lever so that the sub-lever will be positively moved in both directions by the main shift-lock lever, as shown in the drawings. On the rear end of the sub-lever 32 is a pin or stud 36 working in the lower slot 21 in the link 19. The vertical arm of the latch 33 is cam shaped on its forward side at 37 and abrupt on its rear side at 38. This arm coöperates with the lateral projection or shoulder 27 on the shift lever, the latter serving to lock the sub-lever and hold the segment raised until released by the shift lever.

The operation of the shift-lock lever is as follows: On depressing the key 30 the lever 28 bears down the forward end of the sub-lever 32, turning the sub-lever about its pivot 32^a, and the stud 36 on the rear end of the sub-lever raises the link 19 and the segment 15, both of which are connected to arms of the rock shaft 17. At the same time the cam 37 on the latch raises the projection or arm 27 on the shift lever 22 and passes under it the said projection or arm being returned to its lower, normal, position by the spring 23^a and engaging the abrupt face 38 of the latch. This locks the sub-lever in its shifted position and holds the segment in its upper position. It is desirable that the shift-lock key be held in its depressed position as a signal or indicator to the operator that the segment has been shifted to print upper case type and this is effected by means of the engagement of the projection 35 on the sub-lever with the slot in the shift-lock lever. Upon depressing the shift key 25 the projection 27 will be raised and the latch released, thus freeing the shift-lock lever and its sub-lever, permitting them to return to normal position and permitting the segment to return to its lower position. The shift lever normally rests on an arm 39 of the bracket 24.

Having thus described the invention, what is claimed is:

1. In a typewriter, the combination with two key levers each adapted when depressed to independently effect a relative movement between the platen and printing devices to position the parts for printing upper case characters, of a latch connected with one of said levers and shiftable by the depression of said lever into engagement with the other of said levers to maintain the platen and printing devices in upper case relation.

2. In a typewriter, the combination with two key levers each adapted when depressed to independently effect a relative movement between the platen and printing devices to position the parts for printing upper case characters, of a pivotally mounted latch which is rocked by the depression of one

of said levers into engagement with the other key lever to maintain the first said lever depressed and the platen and printing devices in upper case relation.

3. In a typewriter, the combination with two key levers each adapted when depressed to independently effect a relative movement between the platen and printing devices to position the parts for printing upper case characters, of a latch connected with one of said levers and acting as said lever is depressed to bring a shoulder on the other lever into position to maintain the first said lever depressed and the platen and printing devices in upper case relation.

4. In a typewriter, the combination with two key levers each adapted when depressed to effect a relative movement between the platen and printing devices and position the parts for printing upper case characters, of a latch pivotally supported independently of said levers and movable about its pivot whenever one of the levers is depressed, said latch coöperating with a shoulder on the other key lever to maintain the platen and printing devices in upper case relation when it is thus rocked by the first said lever.

5. In a typewriter, the combination with a platen member and a supporting member for a type bar having a plurality of type, one of said members being shiftable to vary their relative positions to render an upper case type on the type bar operative, of two key levers, one having a direct connection with the shiftable member, a sub-lever connecting said shiftable member and the other key lever, and a latch movable by the sub-lever into engagement with the first said lever to lock the shiftable member in upper case position.

6. In a typewriter, the combination with a platen member and a member supporting printing devices, one of said members being shiftable relatively to the other, of means for varying the relative positions of said members comprising two key levers, one having a direct connection with a shiftable member, a sub-lever fulcrumed independently of but having one part connected with the other key lever, connections between another part of the sub-lever and said shiftable member, and a latch movable by the said sub-lever to lock the shiftable member in upper case position, said latch being released by operating the first said key lever.

7. In a typewriter, the combination with a platen member and a member supporting printing devices, one of said members being shiftable relatively to the other, of means for varying the relative positions of said members, comprising two key levers, one having a direct connection with one of said members, a sub-lever fulcrumed independently of but having one part connected with the other key lever, connections between an-

other part of the sub-lever and one of said members, and a latch movable by the sub-lever into engagement with the first said key lever to lock the shiftable member in
5 upper case position.

8. In a typewriter, the combination with two key levers each adapted to be depressed and effect a relative movement between the platen and printing devices to position the
10 parts for printing upper case characters, each of said levers occupying its normal po-

sition after the actuation of the other lever, of a latch movable by one of said levers into engagement with the other lever to maintain the platen and printing devices in upper 15 case relation.

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

CARL GABRIELSON.

Witnesses:

CHAS. F. PARSONS,
HENRY W. MERRITT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."