

Dec. 25, 1923.

1,478,600

L. CARDOSO

SILENT KEY TYPEWRITER ATTACHMENT

Filed June 17, 1922

2 Sheets-Sheet 1

Fig. 4.

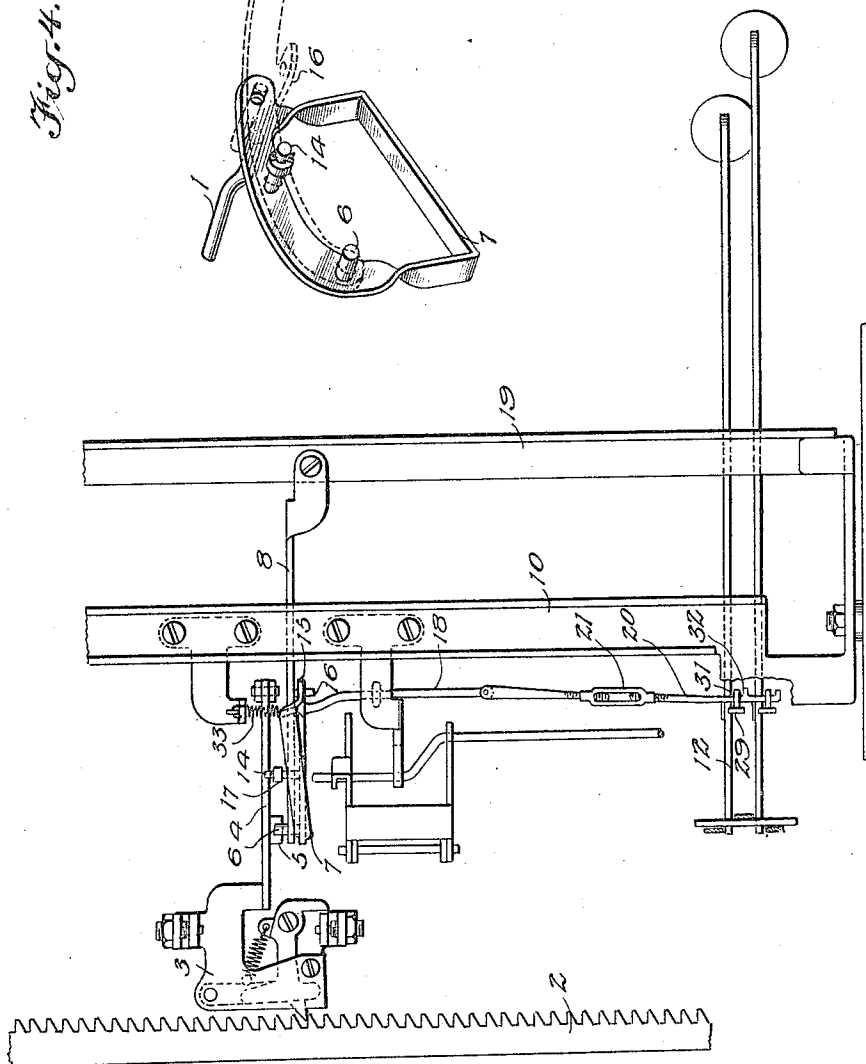
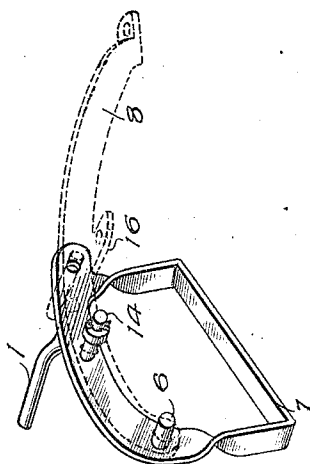


Fig. 1.

WITNESSES

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2 Sheets-Sheet 2

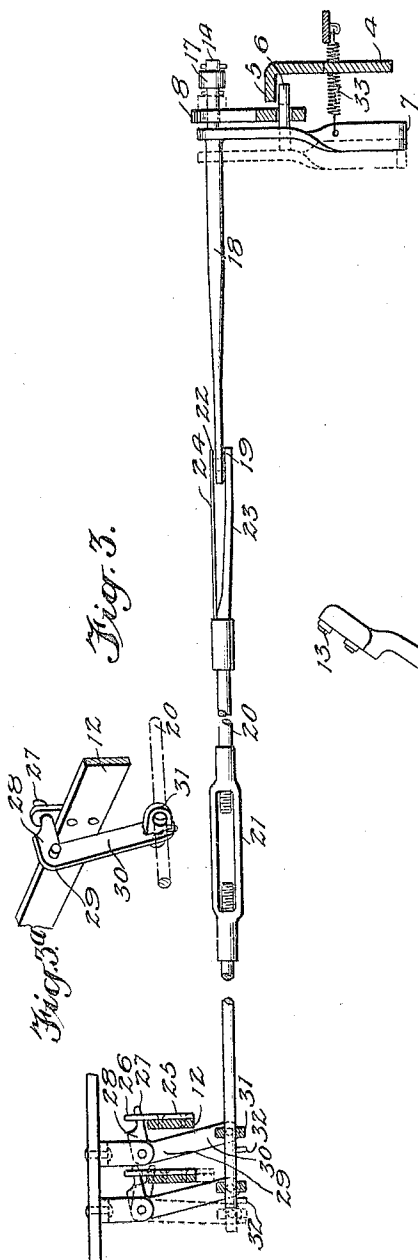


Fig. 3.

Fig. 3.

WITNESSES
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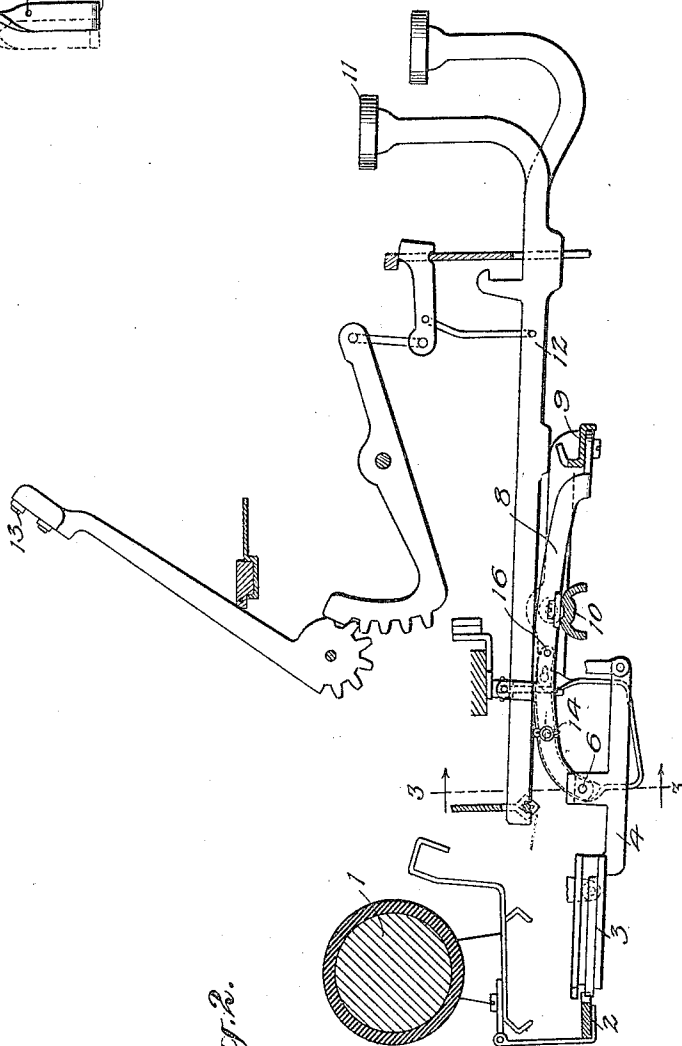


Fig. 2.

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UNITED STATES PATENT OFFICE.

LUIS CARDOSO, OF PUEBLA, MEXICO.

SILENT-KEY TYPEWRITER ATTACHMENT.

Application filed June 17, 1922. Serial No. 569,099.

To all whom it may concern:

Be it known that I, LUIS CARDOSO, a citizen of Mexico, and a resident of Puebla, State of Puebla, Mexico, have invented a new and Improved Silent-Key Typewriter Attachment, of which the following is a full, clear, and exact description.

This invention relates to typewriters and particularly to an attachment or arrangement wherein one or more dead keys may be provided without interfering with the operation of the remaining keys.

The object of the invention is to provide an improved construction which may be attached to any desired form of typewriter but particularly to a Remington portable typewriter and when operated will not actuate the escapement mechanism of the typewriter.

Another object in view is to provide an attachment for typewriters wherein any desired number of keys may be operated without actuating the typewriter escapement mechanism.

In the accompanying drawings—

Figure 1 is a fragmentary bottom plan view of a portable Remington typewriter with an attachment embodying the invention shown applied thereto.

Figure 2 is a longitudinal vertical section through a portable Remington typewriter with an attachment embodying the invention applied thereto.

Figure 3 is a longitudinal vertical section through the typewriter shown in Figure 2, the same being taken approximately on line 3—3.

Figure 3^a is a detail fragmentary perspective view showing a bell crank lever and certain other parts illustrated in elevation in Figure 3.

Figure 4 is an enlarged perspective view of the frame and associated parts embodying certain features of the invention.

Referring to the accompanying drawings by numeral, 1 indicates the platen of a typewriter which typewriter may be of any kind and which, for the purpose of illustration, has been shown as a portable Remington typewriter. The invention is to provide an attachment which will shift the pivotal pin or fulcrum used to operate the escapement mechanism so that when shifted any of the keys operated will not letter space the carriage. As the machine is an old and well known machine, a detail de-

scription thereof will not be given except where it is necessary to properly set forth the invention.

As indicated in Figures 1 and 2, there is provided the usual escapement rack 2 of escapement mechanism 3 operated by the arm 4. All of these parts are old and well known. The arm 4 carries a lug 5 which co-acts with the pivotal pin or fulcrum 6 carried by the frame 7. This pin is slid- ingly mounted in the arm 8 which is se- cured to the escapement bar 9 and rigidly secured to the pivotal support 10 so that the end through which the pin 6 extends may freely swing as bar 10 rocks. It will be noted that the various keys 11 are provided with levers 12 which strike the es- capement bar 9 and move the same where- upon the arm 8 is rocked. When any of the keys are struck to cause the type 13 to produce the desired impression, arm 8 will be rocked and pin 6 will be pulled where- upon it will move the projection 5, arm 4 and the escapement mechanism 3. In this way the carriage is allowed to move for- ward upon the operation of each key 11. The frame 7 in addition to having pin 6 project therefrom has also a guiding pin 14 projecting therefrom and an apertured extension 15 for receiving the pin 16 which is rigidly secured to the arm 8. A spring or collar 17 is mounted on the pin 14 to limit the reciprocatory movement thereof. The frame 7 is rigidly secured to a rod 18 which rod is pivotally connected at 19 to a second or pull rod 20. A turn buckle 21 is interposed in the rod 20 so as to provide a proper adjustment. The pivotal con- nection at 19 consists of a suitable pin 22 carried by member 23 and extending through a suitable aperture in rod 18. A spring 24 acts to prevent accidental disen- gagement of rod 18 from the pin 22 but permitting a disengagement when it is de- sired to disassemble the parts.

The rod 20 is adapted to be connected with one or more keys of the typewriter and any key of the typewriter connected with this rod will be a dead key or in other words, it will be permitted to operate to produce the desired impression but will not operate the escapement. When rod 20 is pulled longitudinally, the frame 7 will be pulled away from the arm 4 and, conse- quently, pin 6 will be pulled away from the shoulder or lug 5 so that when the arm 8

is rocked or moved motion will not be transmitted to arm 4 and, consequently, the escapement mechanism 3 cannot operate. It will thus be seen that the escapement
5 will not be operated by any key connected with the rod 20.

As shown in Figures 1 and 3, two keys have been disclosed as being connected with the rod 20, said keys preferably being keys
10 containing accent marks, which marks are very necessary in certain languages. As indicated in these figures, each of the levers 12 is provided with a plate 25 having a hook end 26 hooked over the projection 27
15 of the arm 28 of bell crank lever 29. The arm 30 of bell crank lever 29 is provided with a laterally extending member 31 having an aperture through which the rod 20 passes, said rod being comparatively loose
20 in said aperture so that the member 31 may freely slide along the rod when the bell crank lever is swung to the left as shown in dotted lines in Figure 3. A pin 32 is carried by the rod 20 for each of the mem-
25 bers 31 and is arranged so that when any one of the bell crank levers 29 have been swung to the dotted position shown in Figure 3, the extension 31 thereof will engage its adjacent pin 32 for shifting rod 20
30 longitudinally. The members 31 not operated will permit the rod 20 to slide loosely therethrough.

Upon the operation of any of the bell crank levers 29, frame 7 will be shifted
35 bodily in a direction longitudinally of rod 18 and, consequently, the pin 6 will move away from the lug or stop 5 so that the escapement is disconnected. Only two keys have been shown in the drawing as being
40 connected with the frame 7 but it will be evident that a greater number of keys may be connected therewith or a less number as desired. In order that the parts may quickly and readily assume their former
45 position after each operation, a spring 33 acts on the frame 7 to quickly move said frame and associated parts to the position shown in Figure 1 whenever permitted to do so.

50 What I claim is:—

1. In an attachment for typewriters, the combination with a typewriter provided with a shifting mechanism having an arm and a lug projecting from said arm, of a
55 frame, a pin extending from said frame for normally overlapping said lug, a rocking arm having an opening through which said pin projects, said arm being operable by the keys of the typewriter so that when oper-
60 ated movement will be transmitted to said pin for moving said lug and shifting

mechanism, a rod connected with said frame, and means for connecting said rod with certain of the keys of said typewriter whereby when said certain keys have been
65 actuated said rod will be pulled longitudinally and the frame together with said pin being moved away from said lug so that when said arm is rocked motion will not be transmitted to said escapement mechanism. 70

2. An attachment for typewriters of the character described, comprising a frame, a pin carried by said frame adapted to engage and operate the escapement mechanism of the typewriter, a swinging arm slidably
75 engaging said pin for operating the pin, a rod for shifting said frame and pin a sufficient distance to cause the pin to move out of operative relationship with the escape-
80 ment mechanism, and a bell crank lever structure connected to certain of the keys of the typewriter and with said rod for moving the rod when said certain keys have been actuated whereby the type operated by
85 said keys will function but the escapement mechanism of the typewriter will not function.

3. In an attachment for typewriters, the combination with a typewriter having a plurality of keys and a carriage, escape-
90 ment mechanism for the carriage operated by said keys, of means for causing the escapement mechanism and the carriage to become inoperative upon the actuation of cer-
95 tain of said keys, said means including a connecting pin, normally engaging said escapement mechanism, a pivoted guiding and supporting frame for said pin, a shift rod for shifting said frame and pin away from
100 said escapement mechanism, and means for connecting said shift rod with said certain keys, said last-mentioned means comprising stops integral with the rod and bell-crank pivoted levers engageable with said stops
105 for shifting said shift rods when either of said bell-crank levers are actuated by said keys.

4. In a typewriter machine, an attachment for rendering certain keys of the type-
110 writer inoperative as to the escapement of the typewriter, comprising a frame, a shift rod for actuating said frame, a pin secured to said frame, a pivotally mounted bell crank lever having one arm thereof connected to
115 said shift rod adjacent the end opposite said frame, and means carried by the shank of said key for engaging the other arm of said bell crank lever for moving said bell crank lever when one of said keys is oper-
120 ated for shifting said pin to an inoperative position.

LUIS CARDOSO.