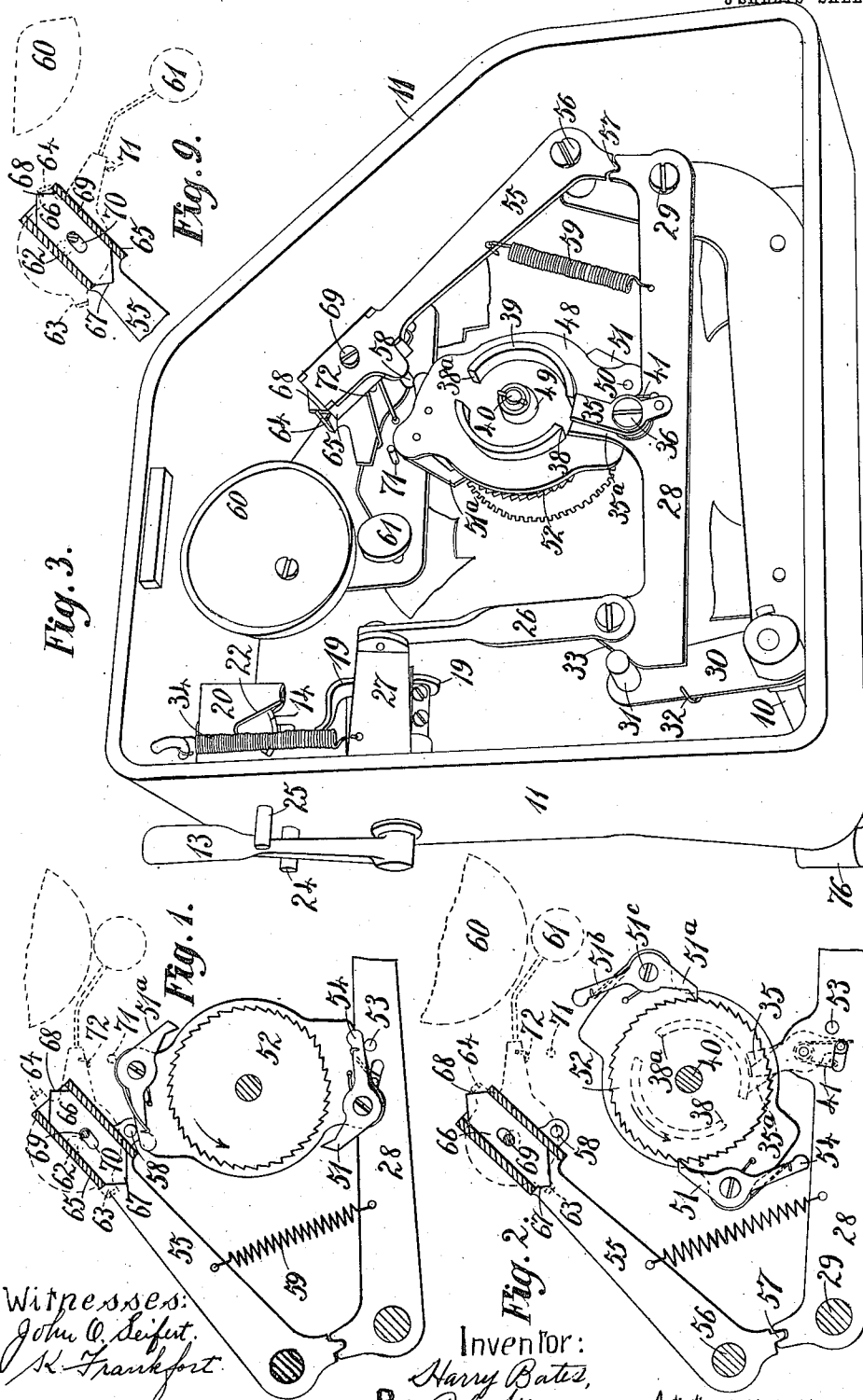


H. BATES.
 COIN AND TIME CONTROLLED TYPE WRITING MACHINE, &c.
 APPLICATION FILED JUNE 4, 1909.

949,816.

Patented Feb. 22, 1910.

3 SHEETS—SHEET 1.



Witnesses:
 John C. Seifert,
 R. Frankfort.

Inventor:
 Harry Bates,
 By D. B. Hickney, Attorney.

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Fig. 5.

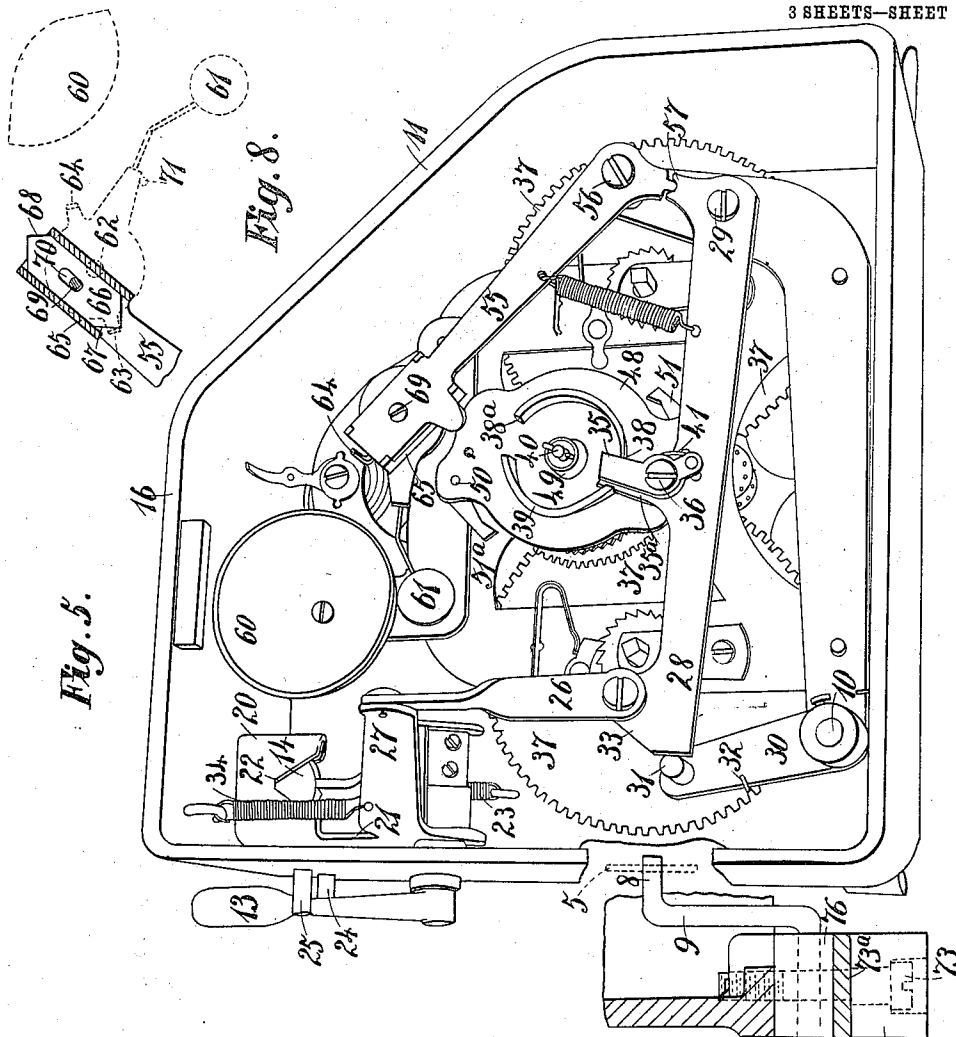
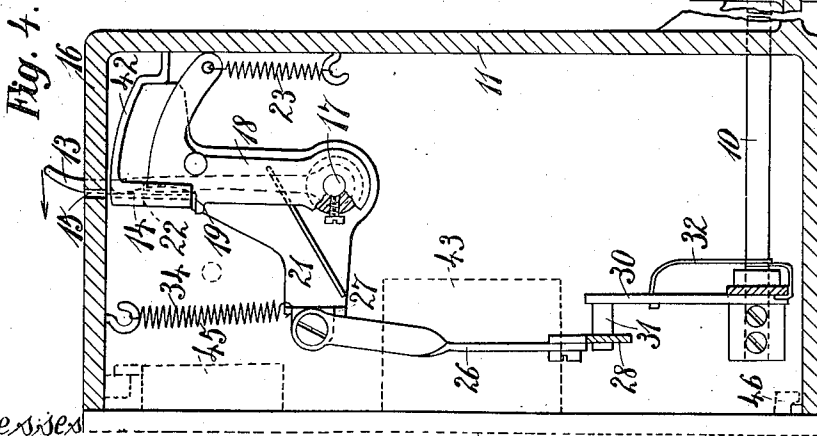


Fig. 4.



Witnesses
 John C. Seifert,
 R. Frankfort

Inventor:
 Harry Bates,

By B. B. H. Attorney.

H. BATES.

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3 SHEETS—SHEET 3.

Fig. 7.

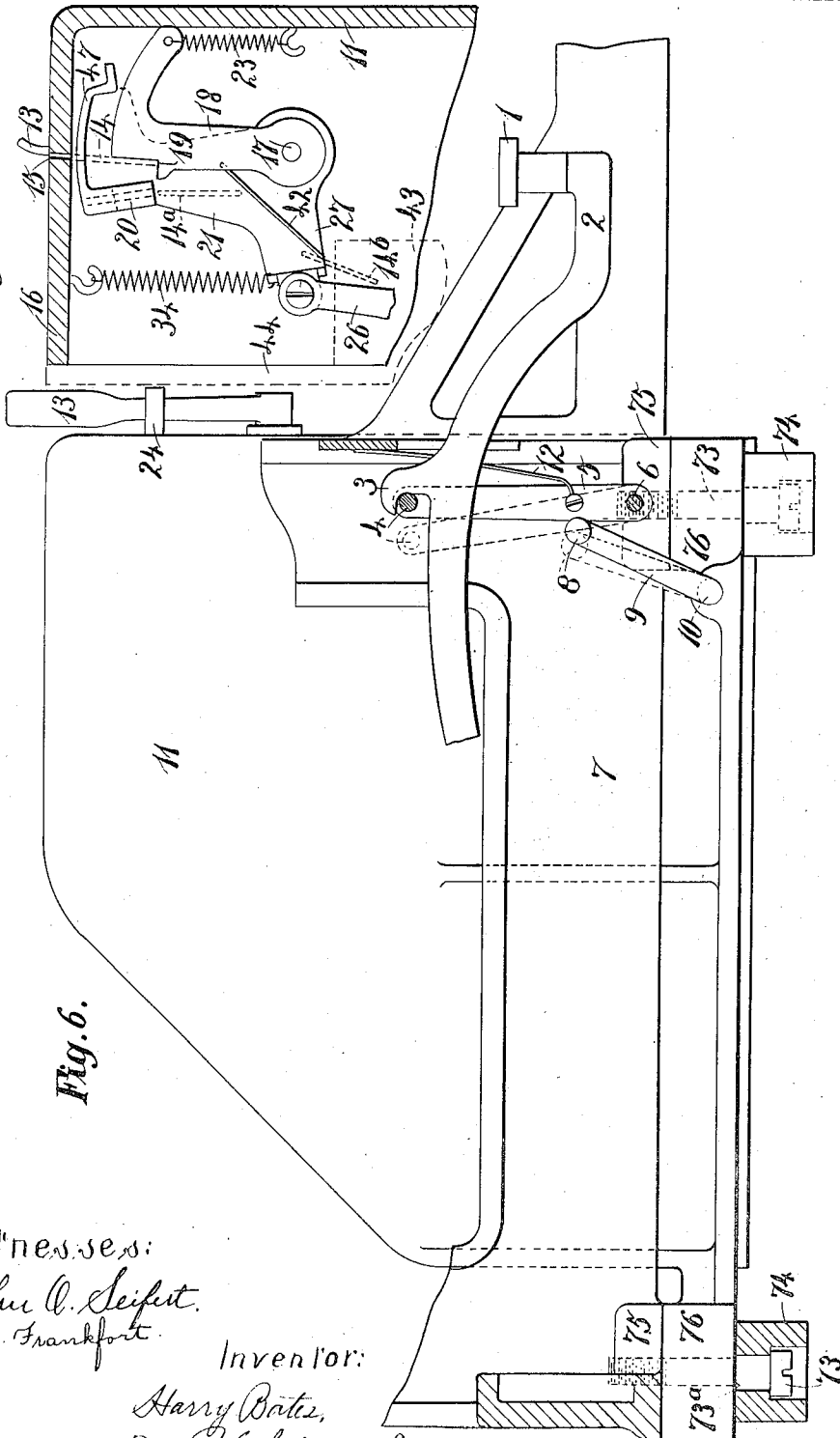


Fig. 6.

Witnesses:

John C. Seifert.
St. Frankfort.

Inventor:

Harry Bates,
By D. C. Stoney, Attorney

UNITED STATES PATENT OFFICE.

HARRY BATES, OF ALBANY, NEW YORK, ASSIGNOR TO UNDERWOOD AUTOMATIC TYPE-WRITER PAY STATION COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

COIN AND TIME CONTROLLED TYPE-WRITING MACHINE, &c.

949,816.

Specification of Letters Patent.

Patented Feb. 22, 1910.

Original application filed September 2, 1908, Serial No. 451,391. Divided and this application filed June 4, 1909. Serial No. 500,168.

To all whom it may concern:

Be it known that I, HARRY BATES, a citizen of the United States, residing in Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Coin and Time Controlled Type-Writing Machine, &c., of which the following is a specification.

This invention relates to coin-operated, time-controlled devices for limiting the use of typewriting and other machines or apparatuses, and is in the nature of an improvement upon the invention disclosed in United States Patent No. 883,854, dated April 7, 1908. Said patent discloses a typewriting machine normally out of condition for use, and means whereby by depositing a coin and operating a lever, the machine is put into condition for use for a period limited by a clockwork; and at the termination of said period, the typewriter or other machine is automatically locked or returned to normal condition, in which it cannot be manipulated.

The present application is a division of my application filed September 2, 1908, No. 451,391.

The principal object of the present invention is to simplify and improve the mechanism generally. The invention is shown as applied to a typewriting machine of the Underwood type, and as having an arm which normally holds in effective position the key-locking or line-locking bar of the Underwood machine, so as to prevent manipulation of the keys. This locking arm can be turned to ineffective position by means of a hand lever, after the deposit of a coin; and a simple latch connected to said hand lever is concomitantly withdrawn from a notch in a revoluble latching wheel operated by a clockwork. The typewriter therefore remains in condition for manipulation until said latch, owing to the turning of said wheel, drops again into said notch or into another like notch in said wheel; whereupon the parts are returned to normal condition and the typewriter is again locked. Said latching wheel is shown connected to said clockwork by means of a pivoted pawl, which

is automatically turned out of engagement with a ratchet of the clockwork at the termination of the period for which the machine is set; whereby the clock is permitted to run independently of the locking mechanism.

Another feature of the invention consists in providing mechanism to sound a bell, preferably at both the beginning and the end of the half-hour or other period for which the user is entitled to operate the machine upon the deposit of the coin. The clockwork and other mechanism is inclosed in a casing which lies alongside the typewriter and has lugs to underlie the typewriter base and to receive the screws which hold the usual rubber feet; whereby the casing is secured to the typewriter, there being no change required in the typewriter, and it being only necessary to slip the casing into position and attach it by means of the screws.

Another feature of the invention consists in means for preventing the insertion of an additional coin prior to the completion of the period for which the machine is set.

Other features and advantages will hereinafter appear.

In the accompanying drawings, Figure 1 is a sectional elevation taken from the rear or from the inner side, showing the clutch mechanism to connect the clock to the latching wheel, the parts being shown in the normal condition of disconnection; this view also illustrating the bell striking mechanism. Fig. 2 is a view similar to Fig. 1, but illustrating the clockwork connected to the latching wheel. Fig. 3 is a perspective side view showing the time-controlled coin-operated devices in the Fig. 2 position. Fig. 4 is a sectional elevation taken at the front end of the casing to illustrate the coin-operated devices and connections. Fig. 5 is a perspective side view of the clockwork and coin-controlled mechanism, showing the parts in normal positions. Fig. 6 is a sectional side elevation showing the casing which contains the time-controlled mechanism, etc., as secured to the base of an Underwood typewriting machine. The locking

device is shown in full lines in normal position to lock the typewriter keys. The abnormal or ineffective position of said locking device is indicated by dotted lines. Fig. 7 is a sectional elevation of the upper right hand corner of Fig. 4, but showing the coin-operated lever in Fig. 3 position. Figs. 8 and 9 illustrate the setting of the bell hammer for a strike.

The type keys 1 of the typewriting machine are mounted upon levers 2, which have hooks 3 beneath which is a stop bar 4. Said bar is supported on arms 5 rising from a shaft 6 mounted in the sides 7 of the typewriter base. The bar 4 forms part of a line-locking mechanism which locks the keys automatically at the completion of each line of writing in a well known manner, and it will be understood that it continues to perform its usual functions in the present case whenever the writing machine is put into condition for use by operation of the coin-controlled mechanism.

In the present instance, use is made of the line-locking mechanism to put the typewriting machine normally out of condition for operation; the locking bar 4 for this purpose being normally held in effective position by a projection 8 provided upon a locking arm 9, the latter carried upon a rock shaft 10 forming part of a coin and time controlled apparatus, and extending into a casing 11 which contains said apparatus.

Normally the locking arm 9 is in its forward full line position, Fig. 6, to hold the locking bar 4 beneath the hooks 3 of the key levers, so that the keys cannot be manipulated. Upon the deposit of a coin, the locking arm 9 may be swung back to the dotted line position, Fig. 6, to permit the locking bar 4 to be swung back on the arms 5 by means of a spring 12, thereby freeing the keys and putting the machine into condition for manipulation. It will be understood, however, that the locking arm 9 remains in the dotted line ineffective position during the usual vibrations of the locking bar 4 from dotted line to full line position, at the ends of the written lines to perform its usual function of locking the keys.

The movement of the locking device 9 from full-line to dotted-line position to release the typewriter for use, is effected by a finger-piece or hand lever 13, upon the operator depositing a coin 14 in a slot 15 formed in the top 16 of the casing 11. Before the coin is deposited, the finger-piece 13 may rock idly, without having any effect on the machine; but the deposited coin serves temporarily to effect a connection for transmitting the movement of said handle 13 to the general mechanism in the casing. Said handle 13 is fixed upon a rock shaft 17; and upon the inner end of the latter is secured an upstanding arm 18 having at its top a

notch or lip 19, upon which the deposited coin 14 rests for the purpose of performing its temporary function aforesaid. Directly over said arm 18 and beneath the coin slot 15 is a coin-chute 20, in which the coin reposes while it rests upon said lip 19 of the arm 18. This chute serves as a holder or bearing for the coin, and enables the latter to effect the desired connection between the arm 18 and a lever 21 upon which said chute is formed or mounted. Said lever 21 is loosely mounted, preferably upon the shaft or axis 17. When the handle 13 is pressed in the direction of the arrow, Fig. 4, it presses the coin and hence the chute 20, together with the lever 21, in the same direction. The reason that this movement of the lever 21 cannot be effected without the cooperation of the coin, is because the holder 20 is formed with an opening 22 in its face sufficient to permit the arm 19 to swing idly therethrough.

The handle 13 is normally held by a spring 23 against a stop 24; but after the deposit of a coin the handle is swung against a stop 25, and this movement swings the lever 21 from the position at Figs. 4 and 5 to the positions at Figs. 3 and 7; and during this stroke, a link 26, pivoted at its upper end to an arm 27 of the lever 21 and at its lower end to a horizontal lever 28, serves to depress the latter about its fulcrum 29. This lever 28 controls the typewriter locking device 9.

It will be seen that the shaft 10, carrying said arm 9, is provided within the casing with an upright crank 30 having at its top a wrist 31, which is caused by a spring 32 to press against the end of the lever 28, the latter hence normally locking the arm 9 in the full line position at Fig. 6. When, however, said lever 28 is swung down in the manner just described, the wrist 31 rides off from the end of the lever 28 and along a cam or beveled edge 33 thereon, so that the spring 32 is permitted to swing the locking arm 9 to the ineffective dotted line position at Fig. 6, thus releasing the typewriter for manipulation.

A spring 34, connected to the coin-controlled lever 21, tends constantly to return said horizontal lever 28 to normal position; but said lever is latched down in abnormal position by means of a latch 35, pivoted at 36 upon said lever; the period during which said lever is latched down (and during which the typewriting machine is in condition for manipulation) being limited by a clockwork 37, preferably capable of running eight days or more without rewinding, although other kinds of clockwork may be employed. Said latch 35 normally occupies a notch, or one of the two notches 38 and 38^a, formed in a latching wheel 39 which is mounted loosely upon an arbor 40 of the clockwork. At Fig. 5 the latch is

shown in normal position in the notch 38; while at Fig. 3, it is shown as pulled down from the notch and pressed by a spring 41 up against the periphery of the wheel 39, thereby latching down the lever 28. At this point it should be mentioned that upon the lever 28 being latched down, the finger piece 13 may be released and spring 23 may return it to normal position together with the arm 18 having the coin support or lip 19. The coin-operated lever 21, 27 of course remains stationary, because of its connection to the latched-down lever 28; and hence the support 19 for the housed coin 14 is withdrawn, and the latter falls out of the coin holder 20 as indicated at 14^a, and drops upon an incline 42, and from thence falls into a coin box 43, as seen at 14^b; said box being preferably fixed upon the inner face of a cover 44, which may be secured by a lock 45 at its top and a lug 46 at its bottom.

It will also be noticed that while the coin-operated lever 21 remains in the Fig. 7 position, it is impossible to put another coin into the depository 20 or through the coin-slot 15, because a plate 47 is provided upon the top of said lever 21, immediately beneath the slot 15, to close the same. A second coin cannot be inserted until the expiration of the period for which the machine is set to operate. Said notched latching-wheel may be formed upon a head 48, whose hub 49 is loose upon said arbor 40 of the clockwork. Upon said head is pivoted at 50 a spring-pressed pawl 51, which engages a ratchet 52 fixed upon said arbor 40. The last may correspond to the arbor of a clockwork which usually carries the hour hand, and which, in the present instance, is constantly revolving, making half a revolution in half an hour. It will be understood that upon the completion of half an hour the notch 38^a in the wheel 39 will arrive at the bottom of the wheel, and that the latch 35 will fall or rather rise into said notch by reason of the tension of the spring 34; and all of the active parts so far described will be returned to their normal positions and the typewriter become again locked against further use until the insertion of a fresh coin and re-operation of the finger-piece 13.

Projecting up from the latch lever 28 by the side of the latch 35 is a latch tooth 35^a, which may be a trifle shorter than the latch 35 and serves to let the nose of the latter dip into the notch in the wheel 39 a trifle in advance of the completion of the half hour period; the further movement of the wheel permitting both 35 and 35^a to snap into the notch. Said parts 35 and 35^a may be regarded as forming a compound latch, the latch 35 being of importance to catch immediately under the corner of the wheel when withdrawn from the notch 38, to pre-

vent the latch from returning said notch when pressure is relieved on the finger piece 13.

In the present form of the invention, the clock may continue in operation whether the typewriting machine is in use or not, and hence a disconnection is effected between the latch wheel 48 and the clockwork. This is done by means of a pin 53 projecting inwardly from the latch lever 28, to engage a releasing arm 54 of the pawl 51 at the return or up stroke of the latch lever 28, whereby said pawl 51 is withdrawn from the ratchet 52, as seen best at Figs. 1 and 5. Since said pawl 51 must be withdrawn twice in each revolution of the latch wheel head 48, there is provided an auxiliary lever or arm 55, pivoted at 56 upon the framework and preferably geared to the main latch-lever 28, as at 57. This auxiliary lever 55 has a pin or projection 58 to release the pawl 51, said pawl being released alternately by the main lever 28 and the auxiliary lever 55. If desired, a similar pawl 51^a, having a releasing arm 51^b, may be pivoted at 51^c upon the latch wheel head 48 diametrically opposite to the pawl 51, to be released alternately by the projections 53, 58; the two pawls being released simultaneously at each operation. It will be understood that the pawl 51^a may be omitted and that other clutch devices may be employed between the latch and wheel and the clockwork. A draw-spring 59 may be connected between levers 28 and 55, if desired.

To make a signal preferably at both the beginning and the termination of the half hour during which the typewriting machine is in condition for use, there is provided a bell 60 and a spring hammer 61 pivoted at 62. The hammer has diametrically opposite lugs 63, 64 operated alternately by the auxiliary lever 55. During the initial or up stroke of said lever, the lug 63 is operated to withdraw the hammer and release it to strike; while during the down or return stroke of said lever, the upper lug 64 is operated for the same purpose.

Fitted in a housing 65 provided upon the top of said lever 55, is a hammer-setting tongue 66, having at its lower end a cam 67 to engage the lug 63, and at its upper end a cam 68 to engage the lug 64. This tongue 66 is shiftable up and down in the housing, its movements being limited by a stop 69 fitted into a slot 70 in the tongue. The tongue is fitted in the housing with sufficient tightness to cause the necessary friction to hold it tightly at either end of its shifting stroke.

The setting of the hammer is illustrated in Figs. 8 and 9. When the lever 55 moves up from the Fig. 1 to the Fig. 2 position, the cam 67 of the tongue engages the lug 63 on the hammer, and turns the latter until it is arrested by a stop 71. As the arm 55

continues to rise, the lug 63, acting upon the cam 67, shifts the tongue upwardly so that its upper end projects from the housing. The apex of the cam finally passes lug 63, thus liberating the latter and permitting a spring 72, to throw the hammer up against the bell.

On the return or down stroke of the lever 55, at the close of the half hour, the cam 68 engages the upper edge of the lug 64, and presses the hammer down against the stop 71, whereupon the further downward movement of the arm 55 causes the tongue 66 to be cammed downwardly to the other end of its stroke, and the apex of the cam 68 passes the lug 64 and releases the hammer, which is again thrown up by the spring 72 to strike the bell.

The casing 11 has lug 76 whereby it is secured to the framework of the machine by means of shoulders 73^a on screws 73. These screws also secure rubber feet 74 to the under side of said lugs 76. The shoulders 73^a bearing against the under side of said lugs, and the screws are threaded as usual into lugs 75 formed upon the bottom of the machine base.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. The combination of a coin-controlled mechanism having a coin-depositary, a clockwork, a machine or apparatus normally unusable, means to enable said coin-controlled mechanism to render said apparatus usable and to put it under control of said clockwork to restore it to unusable condition, and means also controlled by the clockwork to prevent a deposit of a succeeding coin prior to the completion of the period for which the apparatus is to be used.

2. The combination with a machine or apparatus to be used for a predetermined period, of a coin-controlled mechanism having means to put said apparatus into use or into condition for operation and under control of said clockwork, said coin-controlled mechanism including a part having a slot or opening for the insertion of a coin, and means also controlled by said clockwork for closing said slot or opening to prevent the insertion of a succeeding coin prior to the completion of the period for which said machine is to be used.

3. The combination with a manipulable machine or apparatus, of a movable device normally preventing the use of such machine, a clockwork, a member connected to said movable device, coin-controlled mechanism having a coin-depositary and including means to couple said member to the clockwork when said movable device is

moved to ineffective position, a spring to return said movable device to effective position and uncouple said member from said clockwork after an interval determined by said clockwork, and a closure for said coin-depositary connected to said movable device to close the depositary.

4. The combination of a casing having a coin slot, a clockwork, a notched wheel connected thereto, a latch to ride upon the wheel and fall into the notch, an apparatus or machine the use of which is controlled by said latch, an arm connected to said latch and having a coin-holder, a hand-operated lever adjacent to said arm and having a notch to receive the coin, by which movement is transmitted through said arm to said latch, a spring to return the lever to normal position in advance of said arm, and a device upon the arm for closing the coin slot in the casing.

5. The combination of a casing having a coin slot, a clockwork, a notched wheel connected thereto, a latch to ride upon the wheel and fall into the notch, an apparatus or machine the use of which is controlled by said latch, an arm connected to said latch and having a coin-holder, a hand-operated lever adjacent to said arm and having a notch to receive the coin, by which movement is transmitted through said arm to said latch, a spring to return the lever to normal position in advance of said arm, a device upon the arm for closing the coin slot in the casing, a coin slide on said arm, and a box to receive the coin.

6. The combination with a typewriting machine having a line-locking device, of a casing containing both a clockwork and a coin-controlled mechanism, the latter including a lock for said line-locking device, which lock is controlled jointly by said clockwork and said coin-controlled mechanism; said casing having lugs, shoulder-screws passing up through said lugs to secure them to the under side of the base of the typewriting machine, and cushion feet also secured by said screws.

7. The combination with a typewriting machine having a line-locking device, of a casing containing both a clockwork and a coin-controlled mechanism, the latter including a lock for said line-locking device, which lock is controlled jointly by said clockwork and said coin-controlled mechanism; said casing having lugs, shoulder-screws passing up through said lugs to secure them to the under side of the base of the typewriting machine, and cushion feet also secured by said screws; said lock in the form of a shaft projecting from said casing and having an arm to bear against said line-locking device.

8. The combination with a clockwork having a ratchet, of a latching wheel having two notches and carrying a pawl to engage

said ratchet, a coin-controlled latch-lever having a projection to release said pawl at the dropping of the latch into one notch in the wheel, an auxiliary lever or arm connected to the latch lever and having a part to disengage said pawl at the dropping of the latch into the other notch in said wheel,

and a machine-controlling device held out of normal position by said lever.

HARRY BATES.

Witnesses:

JOHN O. SELFERT,
K. FRANKFORT.