C. F. LOMB & W. J. LAUSTERER.

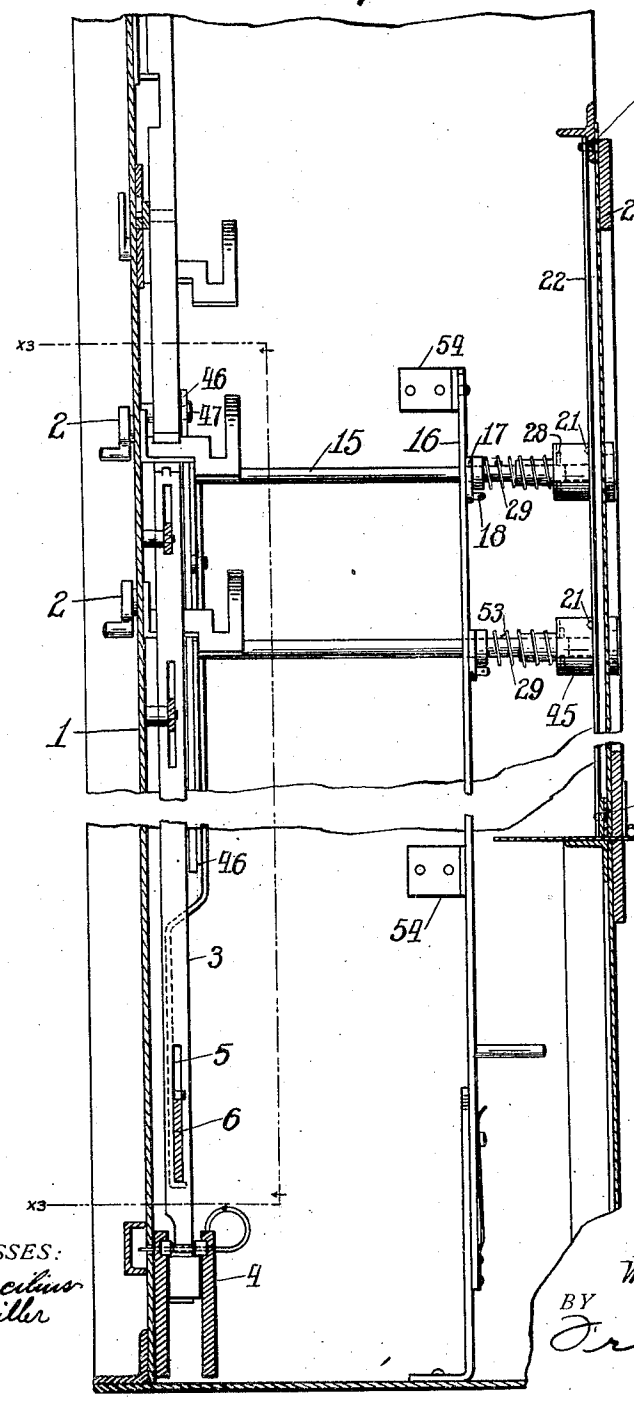
LOCK OUT FOR VOTING MACHINES.

APPLICATION FILED AUG. 13, 1908. RENEWED DEC. 6, 1909.

**950,157.** Patented Feb. 22, 1910.

3 SHEETS—SHEET 1.

Fig. 1.



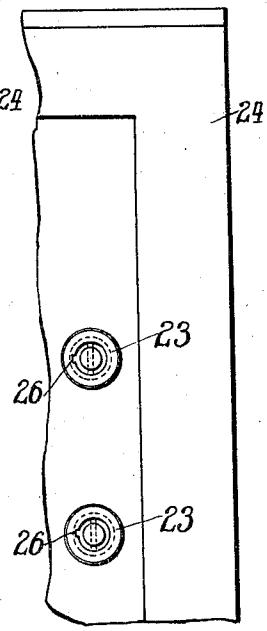




Fig. 2.

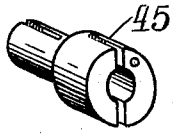



Fig. 8.

WITNESSES:
A. B. Cosellius
Ethel C. Miller

INVENTORS
William J. Lausterer
and Carl F. Lomb
BY Frank Reiter
their ATTORNEY.

C. F. LOMB & W. J. LAUSTERER.

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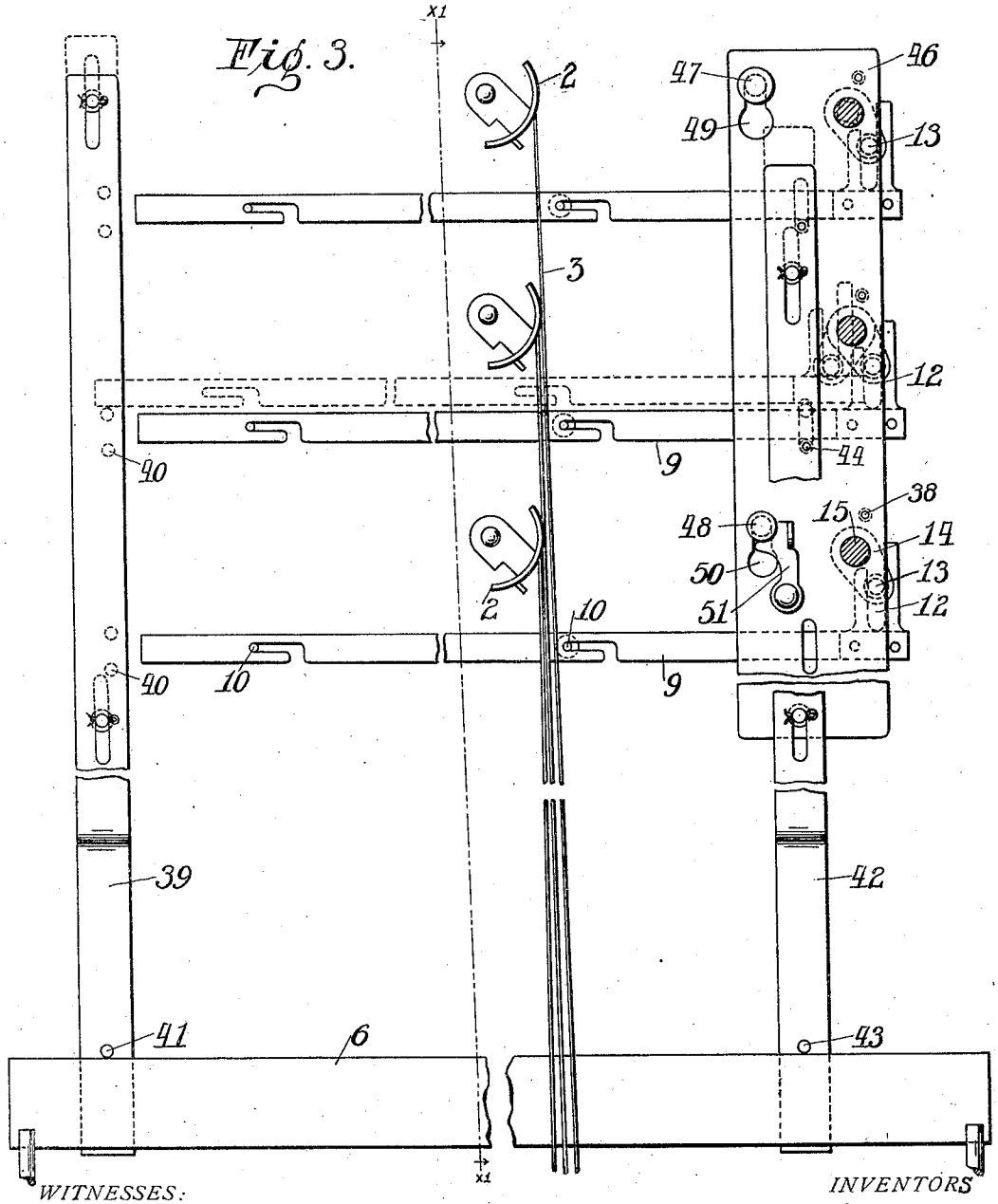
3 SHEETS—SHEET 2.

Fig. 3.




WITNESSES:

A. B. Corcilius

Ethel C. Miller

INVENTORS

William J. Lausterer

and Carl F. Lomb

BY Krouse & Kieker

their ATTORNEY.

C. F. LOMB & W. J. LAUSTERER.

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3 SHEETS—SHEET 3.

Fig. 4.

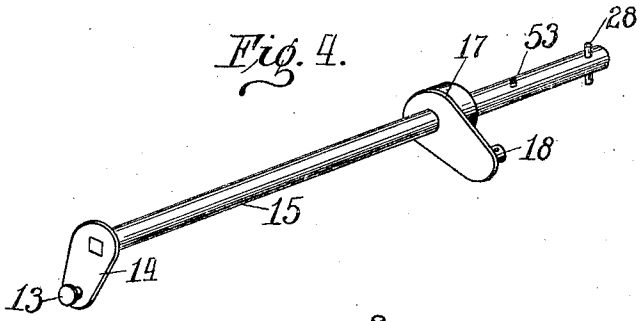



Fig. 5.

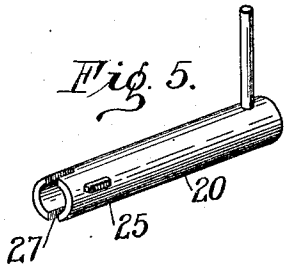



Fig. 6.

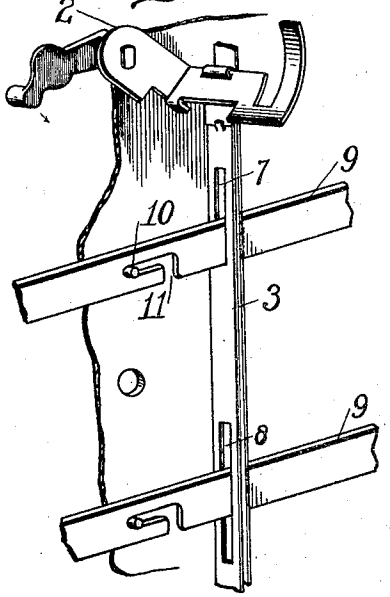
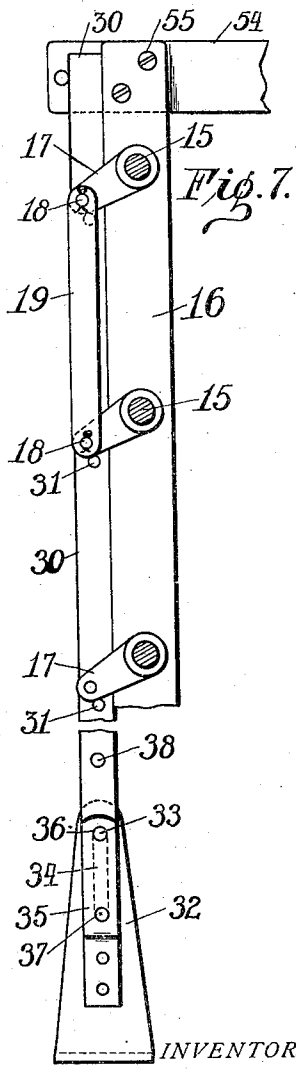



Fig. 7.

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A. B. Corcilius

Ethel C. Miller

INVENTORS

William J. Lausterer

BY and Carl F. Lomb

their ATTORNEY.

# UNITED STATES PATENT OFFICE.

CARL F. LOMB, OF ROCHESTER, AND WILLIAM J. LAUSTERER, OF JAMESTOWN, NEW YORK, ASSIGNORS TO EMPIRE VOTING MACHINE COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

## LOCK-OUT FOR VOTING-MACHINES.

950,157. Specification of Letters Patent. Patented Feb. 22, 1910.

Application filed August 13, 1908, Serial No. 448,430. Renewed December 6, 1909. Serial No. 531,694.

*To all whom it may concern:*

Be it known that we, CARL F. LOMB, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, and WILLIAM J. LAUSTERER, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Lock-Outs for Voting-Machines, of which the following is a specification.

Our invention relates to improvements in voting machines, said improvements being applied to machines of the type described in the patent to W. J. Lausterer, No. 820,802 issued May 15, 1906, and has for its object to provide a lockout that forms a permanent part of the machine, by means of which the keys of the machine may be locked out by party rows so that the machine may be adapted for use in primary elections.

The lockout is also capable of being rendered inert without being removed from the machine so that the machine may otherwise be used in a general election.

In primary elections it will be understood that the primaries of all the parties are held at the same time and place and that one machine is adjusted to carry the names of all the candidates of all the parties. If the ordinary machine capable of use for general elections were labeled with the names of the candidates of the various parties that participate in a primary election, any voter belonging to one party might vote for some of the candidates of one party and for other candidates of another party. This, however, is strictly forbidden by the primary election laws of many of the States, such laws providing that the voter must announce his party affiliations at the polls of the primary to the election officers before he will be allowed to vote and then he will be allowed by the election officers to vote only on the candidates of that particular party. It is understood, of course, that the object of the primary election is to select those candidates which will make up the party ticket in the regular election following thereafter. In order to restrict the voter to candidates of his own party in primary elections, we have devised certain additions to the machine, the practical effect of which is to permit the election officers to release the voting devices belonging to the candidates of one party, at the same time holding locked all of the voting devices of all of the candidates of all the other parties.

The object of our invention is to restrict the successive voters in their operation of the machine to the particular parts of the machine which their party affiliation entitles them to vote on.

The various features of the invention will be more particularly described in the specifications and pointed out in the claims at the end of the specification.

In the accompanying drawing, Figure 1 represents a vertical transverse section of the machine equipped with our improved lockout, the section being taken on the line $X^1$, $X^1$ of Fig. 3. Fig. 2 is a detail of a portion of the back door of the voting machine. Fig. 3 is a vertical longitudinal section of the machine on the line $X^2$, $X^2$ in Fig. 1. Fig. 4 is a detail perspective of one of the crank shafts for operating the locking bars. Fig. 5 is a perspective view of the key or handle for operating the crank shaft shown in Fig. 4. Fig. 6 is a perspective view of the voting key and its interlocking strap and an active and an idle locking bar passing therethrough. Fig. 7 is a detail showing in elevation the couplings for connecting the crank shafts of two or more party rows and the connections for locking them out of operation in a general election. Fig. 8 is a detail of the collar 45.

In the accompanying drawings, like reference numbers refer to like parts.

In Fig. 1 reference numeral 1 indicates the front plate of the voting machine, on which are pivoted voting keys 2, 2, similar to those shown in the patent above referred to. To each of these keys in the rear of the plate is pivoted an interlocking strap 3, which interlocking strap extends down and terminates in the interlocking channel 4. These interlocking straps as illustrated in previous patents are slotted at 5 to receive therein the resetting bar 6.

In our present invention we have also slotted these interlocking straps as shown at 7 and 8 in Fig. 6, so that other locking bars 9, 9, might be passed therethrough. As shown in Fig. 6, slot 7 which occurs at the top of

every strap is shorter than the slot or slots 8 that occur below it in each strap, except the shortest strap, and the locking bar 9 normally rests against the bottom of slot 7 in strap 3, while the bar 9 shown in the lower part of said figure is supported midway in the slot 8 of said interlocking strap 3, so that it normally does not touch either the bottom or the top of said slot. As shown in said Fig. 6, the key when voted will be moved in the direction of the arrow. This will cause the strap 3 to be lifted. If now the locking bar 9 be held in locked position, as is shown in Fig. 6, the strap 3 cannot rise owing to the contact of said bar with the bottom of the slot 7 in said strap 3. In other words, the strap cannot rise unless it carries the upper bar 9 with it. If the upper bar be moved to the left so that the stud 10 stands in the vertical part of the slot 11 in said bar 9, then the bar 9 will be free to rise and the strap 3 can carry the bar 9 up with it, when the key is voted. By thus moving the upper bar 9 to the left, it will be seen that the key shown in Fig. 6 will be unlocked and that to secure this result it is not necessary to move the second or lower bar 9, for, as will be seen on inspection of Figs. 3 and 6, the slot 8 is of sufficient length, and extends below the bar sufficiently to permit the strap 3 to rise without moving the lower bar 9, and is not interfered with thereby in its longitudinal movement, although it is laterally in engagement therewith. Fig. 6 shows an interlocking strap with two slots therein, which strap is engaged by two of the bars 9 passing through said slots, by the upper one of which bars the strap and its key can be locked and by the lower one of which bars it cannot be locked.

The key 2 controlled by the lower bar 9 is omitted from Fig. 6. One of these bars 9 is provided for each horizontal row of keys, which row of keys is referred to for convenience as a party row according to the use of the machine in a general election. The straight ticket voting device, by which all the keys of a party row may be simultaneously voted is omitted from the drawings as it constitutes no necessary part of this invention. Each of these bars 9 is intended to lock the horizontal row of keys next above it and for this purpose the first slot in each of these interlocking straps is made shorter than the rest, so that the locking bar 9 that passes through the short slots of the straps can control said straps and their keys, while all of the slots below in the straps are made longer, so that the locking bars 9 that pass through such slots will not control the operation of the keys thereby.

In a voting machine having seven horizontal lines of keys there would be seven locking bars 9, and in each office line of keys there will be seven or eight interlocking straps 3 extending to the interlocking channel 4. The eighth interlocking strap, if present, being used to interlock the blank column or irregular slide voting devices at the top of the machine, which voting devices are not shown as part of our present invention, as they are not generally used in primary elections and do not constitute any necessary part of our invention. Where there are seven horizontal rows of voting devices in the machine and no blank column, the bar 9 below the lowest horizontal row of voting devices will extend through the slots 7 and 8 of seven interlocking straps for each office line. Six of these straps, being connected to keys controlled by other locking bars above it, will at that place be provided with long slots similar to the slot 8 in Fig. 6, while the seventh strap, being connected to the key immediately above the locking bar 9, will have a short slot 7 therein so that the movement of said strap can be controlled by said locking bar. In the same way the next to the lowest locking bar 9 will pass through the slots of six interlocking straps, five of these straps having at that place the long slots 8, and the sixth strap having the short slot 7 as shown in Fig. 6. This arrangement of the bars 9 and their connection with the interlocking strap is continued to the top row of voting devices. From this it will be understood that the first locking bar passes through but one interlocking strap for each office line of the machine, and is capable of locking all of those interlocking straps against movement. The second bar 9 passes through two interlocking straps for each office line on the machine and is capable of locking but one of the interlocking straps of each office line. In this manner each locking bar 9 is made to control the movement of the interlocking straps of the row of keys immediately above it, but cannot interfere with the movement of the voting devices in the second and third or any other of the horizontal rows above it. It will now be seen that by locking all of the locking bars 9 against being lifted, all of the horizontal rows of voting keys on the machine will be locked against operation, and by moving any one or more of these bars 9 to their unlocked position, the horizontal row or rows of keys controlled thereby will be released for voting operation. All of these bars 9 are of the same construction throughout the machine. As shown in Fig. 3 each of these bars terminates at the right in a yoke 12, with which engages the crank pin 13 carried on the crank arm 14 mounted on the shaft 15. Each of these shafts extends through a supporting standard 16 in which it has a bearing. Adjacent to the standard 16 each of these shafts carries a crank arm 17 having crank pins 18

thereon. Connecting links 19 may be used to connect any two or more of these cranks 17 together for simultaneous movement. The shafts 15 terminate just inside of the casing of the machine, so that they are accessible for the key 20 shown in Fig. 5, which key may be inserted through openings 21 in the plate 22, which openings are concentric with the shafts 15. Similar openings 23 are provided in the back door 24 as shown in Fig. 2, so that when the back door 24 is closed, as shown in Fig. 1, the key 20 may be inserted through any one of the openings 23 therein, and through the corresponding openings 21 in the plate 22 until it engages the pin 28 on the shaft 15 with the recesses 27 on the key. If the key is then given a partial turn it will correspondingly rotate the shaft 15 and the cranks mounted thereon. The key is provided with the lug 25 thereon, which must pass through the corresponding groove 26 in the key hole opening 23 in the back door 24, the object of which grooye is to prevent the removal of the key from the machine unless it leaves the shaft 15 on which it was operating in a position that will lock the locking bar 9 operated thereby, which bar will in turn lock the keys controlled thereby. It is the intention to furnish but one of these keys 20 with each machine, and as long as the election officers do not have but one of these keys 20, they will not forget and leave the voting devices of two or more parties unlocked for voting operation at the same time. The key 20 has the recess 27 cut across the end of it by which recess it engages the pin 28 on the end of the shaft 15, by which engagement it compels the rotation of the shaft 15 as above described.

Mounted on each of the shafts 15 is the collar 45. This collar 45 is pierced centrally to engage the shaft 15 along which it is free to slide to a limited extent, and is also slotted lengthwise to engage with the pin 28 with which it is normally held in engagement by the spring 29. At one end the collar 45 is made of reduced diameter, at which place it is encircled by the spring 29, which spring presses against the shoulder formed on the large end of the collar, and normally holds the collar pressed against the plate 22. The reduced end of the collar is slotted at 60 to engage with the pin 53 on the shaft 15. With either the pin 53 or the pin 28 the collar 45 is always in engagement, so that while it may slide along the shaft 15 it must always rotate with it. When the key 20 is inserted in the keyhole 23, it presses back the collar 45, compresses the spring 29, so that the key 20 engages the pin 28 on the shaft 15. By turning the key 20 after it has engaged with the pin 28 on the shaft 15, the shaft 15 will be rotated and the locking bar 9 connected to said shaft will be moved to the left from the position shown in Fig. 3, thus placing the bar 9 in the position to release the keys controlled thereby.

If two or more shafts 15 are connected by the link 19, the rotation of one shaft 15 by the key 20 will cause the simultaneous rotation of all the shafts so connected and the unlocking of all of the keys on the party row controlled thereby.

When it is desired to use the machine in a general election all of the locking bars 9 must be placed in an unlocking position and held there continuously throughout the election. This is secured by means of the bar 30 shown in Fig. 7. This bar 30 has thereon studs 31, one for each of the cranks 17 so positioned with reference thereto that when the bar 30 is lifted each stud 30 will engage with its respective crank arm 17 and lift it the same as it would be lifted by the operation of the key 20. In such case irrespective of the connections 19 that might be made between two or more consecutive shafts 15, all of the shafts would be placed in position to place in turn their locking bars in unlocking position so that none of the keys would be locked against operation by the several bars 9. To hold this bar 30 in either its up or down position a standard 32 is provided in the bottom of the machine having a stud 33 thereon which passes through a slot 34 in the bar 30. On this standard 32 is carried a leaf spring 35 having a hole 36 therein positioned at the top of the spring, and another hole 37 positioned at the bottom of the spring, each of said holes being large enough to engage with the stud 33. By drawing the leaf spring 35 away from the stud 33 and raising the bar 30 by the handle 38 provided thereon, the bar 30 may be moved to either up or down position, in either of which positions the leaf spring 35 will engage with the stud 33 on the standard 32 and hold it. The stud 33 also engages with the slot 34 in the standard 32. In its up position the bar 30 will hold all of the locking bars 9 in unlocking position, and in its down position all of said bars 9 will be free to be moved into or out of locking position as may be desired, subject to the control of the key 20 when used in the manner above described.

Means have also been provided which prevent the election officers, after the voter has begun to vote, from resetting and locking one bar 9 and unlocking some other bar 9. As shown in Fig. 3, when one of the bars 9 moves to the left, the yoke 12 passes beyond the stud 38, and when the bar 9 is lifted the yoke 12 rises on the left of this stud 38, which prevents its being drawn to the right again unless the bar 9 has been drawn down on the studs 10 again. This not only prevents the election officer resetting these bars prematurely but it also prevents the bars 9

being shifted to the right improperly, in which case they might rest on top of the studs 10 so that in the subsequent resetting of the machine by the resetting bar 6, a strain would be thrown on the studs 10 through the straps 3 and the bars 9, which might damage the bars 9 or break the studs 10 or the straps 3.

At the left in Fig. 3, we have shown the bar 39 with the studs 40 thereon, one stud for each of the bars 9 and positioned to engage therewith when any of the bars 9 are moved to the left. When the resetting bar 6 raises when the machine is unlocked for voting, the resetting bar 6 engages the bar 39 through the stud 41 and causes it to raise, carrying up with it any of the bars 9 that have become engaged therewith, by having been moved to the left. A bar 42 having a similar purpose engages with the resetting bar at the right through the stud 43. This bar carries thereon studs 44 which will engage with the yokes 12 when the bars 9 are moved to the left, the studs being only long enough to engage with the yoke 12 and not long enough to engage with the bar 9 except where the thickness of the yoke 12 is added to it. In this way by the resetting bar 6 all of the bars 9 that have been moved to the left will be lifted so as to take their weight off of the interlocking straps, which in turn will make the voting of the keys very much easier. The ends of the shafts 15 nearest the front plate of the machine are supported by the plate 46 shown in Figs. 1 and 3. This plate is removably mounted on studs 47 and 48, with which it has a sliding engagement through the slots 49 and 50. A latch 51 is provided on the plate 46 which engages with the stud 48 locking the plate 46 in the machine. By disconnecting the bar 42 the plate 46 and all of the primary lockout mechanism except the bars 9 can be readily removed from the machine. The bars 9 are inserted in the slots in the straps 3 after the keys and interlocking straps have been assembled on the front plate and before the front plate has been set in the machine.

The plate 16 is removably held by the brackets 54, to which brackets it is fastened by screws 55. The brackets 54 are riveted to the side of the machine casing. The plate 22 is held in place by the screws 56. By having the parts positioned and fastened in the manner above described, they are all held readily accessible so as to be easily removed from or added to the machine.

Interlocking devices can be applied to the cranks 17 and the connecting links 19, so as to prevent thereby the unlocking of the voting devices of more than one party at a time, but this result is sufficiently secured in the manner above described and changing the machine to general elections is made with greater ease by the above described construction with the interlocks omitted.

Instead of making two or more separate slots 8 in each strap of the upper rows of keys, we may make one continuous slot extending from below slot 7 to and below the lowest locking bar, which slot will contain all the locking bars 9, past which each strap must extend without interference therewith. A series of slots 8 is preferred, however, as it leaves the straps somewhat stronger and stiffer.

Having thus described our invention, what we claim as new and patentable is as follows:

1. The combination in a voting machine of voting keys movable into and out of voting position, said keys being arranged in a plurality of parallel rows, straps connected to each of said keys, each of said straps being slotted, locking bars passing through said straps, one bar for each row of keys and adjacent thereto means for locking each of said bars separately against movement to prevent the movement of the keys and straps of its row, whereby said keys are locked against voting movement.

2. The combination in a voting machine of pivoted voting keys, movable into and out of voting position, said keys being arranged in a plurality of parallel rows, a locking bar for each row of said keys and placed parallel and adjacent thereto, each of said bars being independently movable toward or away from its keys to release or lock them.

3. The combination in a voting machine of keys arranged in a plurality of parallel rows, interlocking straps connected to said keys, said straps carrying wedges interlocked in a single channel, slots in said straps, locking bars passing through said slots, one for each row of keys, each bar being capable of locking its row of keys, means for separately locking each of said bars in place, thereby locking the keys controlled thereby.

4. The combination in a voting machine of a plurality of keys arranged in an office line, interlocking straps connected to each of said keys and extending nearly parallel to said line of keys to an interlocking channel, a short slot in each strap near its key, a separate locking bar extending through said slot, longer slots below the first slot in each strap, except the last strap, said long slots in each strap being so positioned to contain therein the bars more remote from the key without the key or strap being interfered with thereby.

5. The combination in a voting machine of a plurality of keys arranged in an office line, interlocking straps connected to each of said keys and extending nearly parallel to said office line of keys to an interlocking channel, slots in said straps, a bar through all of said slots, one of said slots being shorter

than the rest whereby the strap containing said slot will engage with said bar, and the remaining straps will be free to move without engaging therewith.

6. The combination in a voting machine of keys arranged in parallel office lines and parallel party rows, straps connected to each of said keys, the strap of each key extending past all the party rows below it, each of said straps being slotted below each party row, the first slot in each strap being shorter than the rest, a locking bar for each party row passing through all of the slots of all of the straps adjacent to said party row, said bar when held in locking position engaging with the straps having short slots to hold them against movement, leaving the straps with longer slots free to move.

7. An interlocking strap having a series of slots cut therein of more than one length, a locking bar passing through each of said slots, and being movable into and out of locking position, said bars being positioned with respect to their slots so that a bar passing through a short slot can control the operation of the strap, while a bar that passes through a long slot is incapable of locking said strap.

8. An interlocking strap having a short slot and one or more long slots cut therein, a locking bar passing through each of said slots, each of said bars being movable a uniform distance into and out of locking position, said bars being positioned at a uniform distance from the top of their respective slots, so that a bar passing through a short slot can control the operation of the strap, while a bar passing through a long slot is incapable of locking said strap.

9. The combination in a voting machine of a plurality of keys, a locking bar therefor, said bar having a normal position from which it can move longitudinally to lock its keys or sidewise to release the keys.

10. The combination in a voting machine of a plurality of keys, a locking bar therefor, said bar having L shaped recesses cut therein, studs for engaging with said recesses, said bar having an endwise movement on the studs to lock the bar, and a sidewise movement away from the studs to release the bar.

11. The combination in a voting machine of a series of keys, a locking bar and a resetting bar for said keys, a key for operating said locking bar, said key moving the bar longitudinally to and from locking position, means operating with the resetting bar for moving said bar sidewise to and from unlocking position.

12. The combination in a voting machine of a series of keys, a locking bar for said keys, a yoke carried on said bar, a shaft having a crank thereon for engaging with said yoke, a key for operating said shaft.

13. The combination in a voting machine of a series of keys, a locking bar for said keys, a crank shaft for driving said bar, a key for operating said shaft, a keyhole in which said shaft is centered and through which said key must reach its shaft, means on said key and keyhole to prevent the withdrawal of the key unless the bar is in locking position.

14. The combination in a voting machine of a series of keys, a locking bar for said keys, a crank shaft for driving said bar, a key for operating said shaft, a keyhole in which said shaft is centered and through which said key must reach its shaft, means on said key and its keyhole to compel placing the bar in locking position before the key can be withdrawn from the machine.

15. The combination in a voting machine of a plurality of series of keys, a locking bar for each series, a crank shaft for driving each of said bars, a key for operating any of said shafts, means for coupling two or more of said shafts for simultaneous operation, whereby the locking bars of two or more rows of keys may be simultaneously placed in locking or releasing position.

16. The combination in a voting machine of a plurality of series of pivoted keys, a locking bar for each series, a crank shaft for driving each of said bars, a key for operating any of said shafts, means for coupling two or more of said shafts for simultaneous operation through any of the respective crank shafts, whereby the locking bars of two or more rows of keys may be simultaneously placed in locking or releasing position.

17. The combination in a voting machine of a plurality of series of keys, a locking bar for each series, a crank shaft for driving each of said bars, a key for operating any of said shafts, said bars standing normally in locking position, means for simultaneously placing and locking all of said bars in unlocking position.

18. The combination in a voting machine of a plurality of series of keys, a locking bar for each series, a crank shaft for driving each of said bars, a key for operating any of said shafts, said bars standing normally in locking position, means for simultaneously placing and locking all of said bars in unlocking position, said means comprising a crank on each shaft, a universal bar common to said cranks, a stud on said bar for each crank, a fixed support and a stud thereon, a slot in said universal bar engaging said stud, a leaf spring on said bar to engage with said stud in either of two positions.

19. The combination in a voting machine of a plurality of series of keys, a locking bar for each series, each of said bars being independently movable, a pair of universal lifting bars for said locking bars, each of

said locking bars when in unlocking position engaging with said lifting bars to be lifted thereby.

20. The combination in a voting machine of a plurality of series of keys, a locking bar for each series, each of said bars being independently movable, a pair of universal lifting bars for said locking bars, each of said locking bars when in unlocking position engaging with said lifting bars to be lifted thereby, each of said locking bars when in locking position remaining disengaged from said lifting bars, so as not to interfere with or be interfered with thereby.

21. The combination in a voting machine of a series of locking bars, a crank shaft for operating each bar, a key for operating said shafts, a plate or covering having key holes or openings therein, said shafts being concentric with said openings and spring pressed collars concentric with said shafts that normally fill said openings.

22. The combination in a voting machine of a series of locking bars, a series of crank shafts for operating said bars, a pair of plates for supporting said crank shafts, said plates and the crank shafts being detachably mounted in the machine.

23. The combination in a voting machine of a series of locking bars, a series of crank shafts for operating said bars, a pair of plates for supporting said crank shafts, studs on the machine for supporting one of said plates, slots in said plate for engaging with said studs, a latch on the plate for engaging with one of said studs, and means for supporting the second plate.

24. The combination in a voting machine of a plurality of keys arranged in an office line, interlocking straps connected to each of said keys and extending nearly parallel to said office line of keys, a slot in each of said straps, a bar through all of said slots, said bar and said slots being so related as to render said bar effective to lock one of said keys, and incapable of locking the rest of said keys when said bar is in locking position.

25. The combination in a voting machine of a plurality of keys arranged in an office line, interlocking straps connected to each of said keys and extending nearly parallel to said office line of keys, a slot in each of said straps, a locking bar in engagement with all of said straps, said bar controlling but one of said straps, and being idle as to the balance of said straps.

26. The combination in a voting machine of a plurality of keys arranged in an office line, interlocking straps connected to each of said keys and extending nearly parallel to said office line of keys, one or more slots in each of said straps, a plurality of locking bars, each of said bars engaging with one or more of said straps, said parts being so arranged that each bar will lock but one strap in each office line, and will be idle as to the rest of the straps with which it is engaged.

In testimony whereof, we do hereby affix our signatures, in the presence of two witnesses.

CARL F. LOMB.
WILLIAM J. LAUSTERER.

Witnesses:
ETHEL C. MILLER,
ALEXANDER B. CORCILIUS.