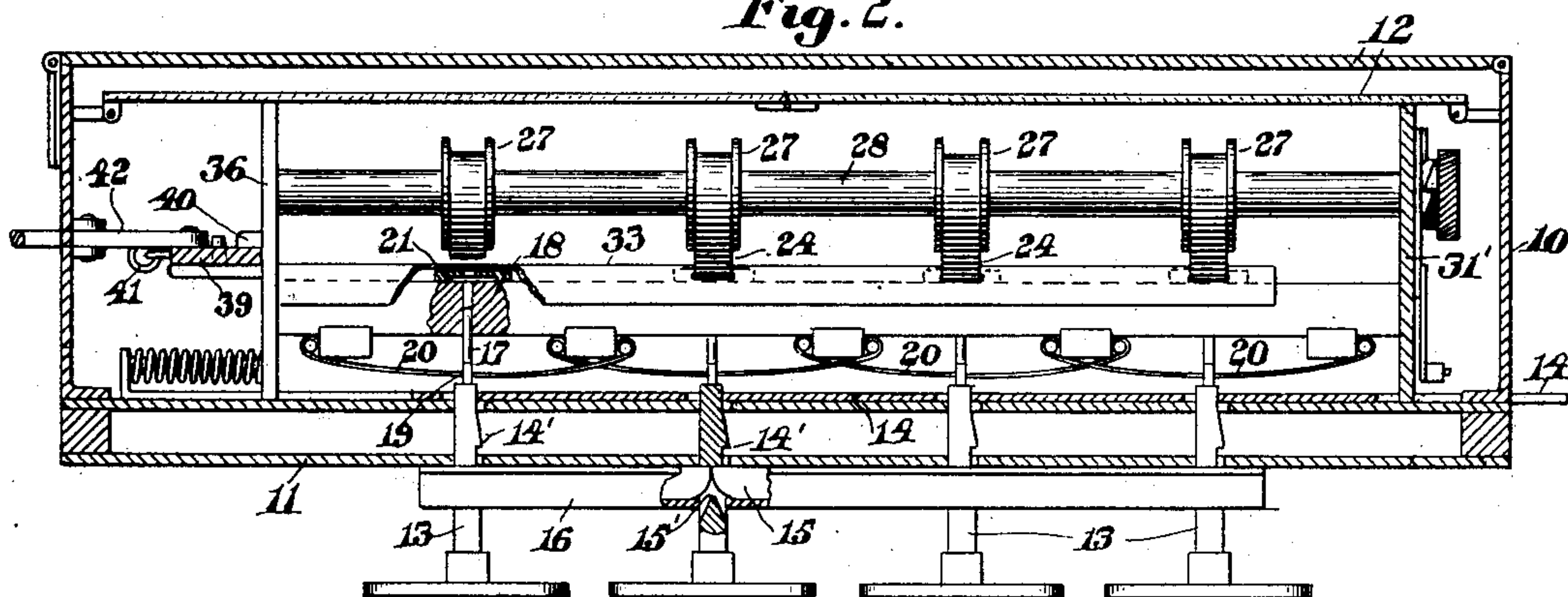
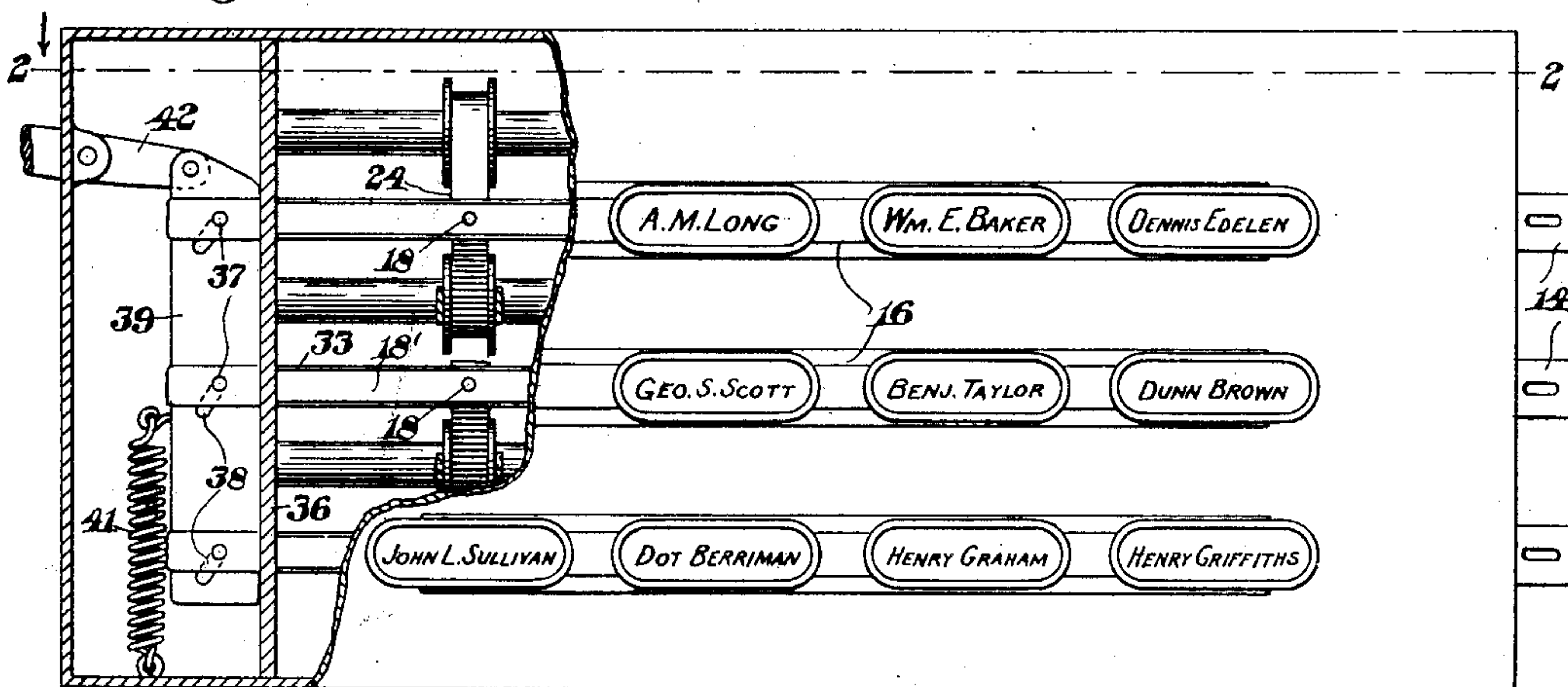
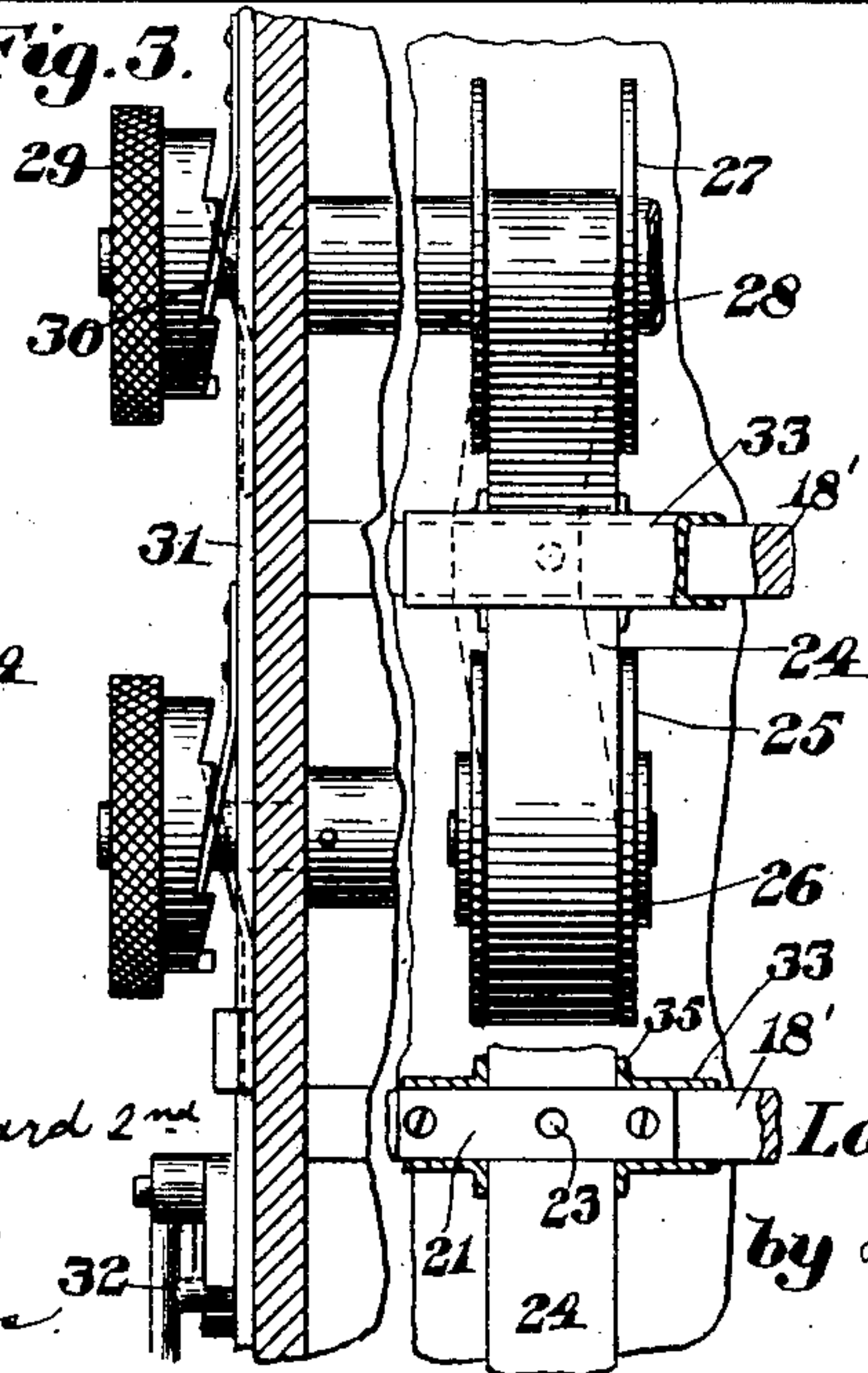
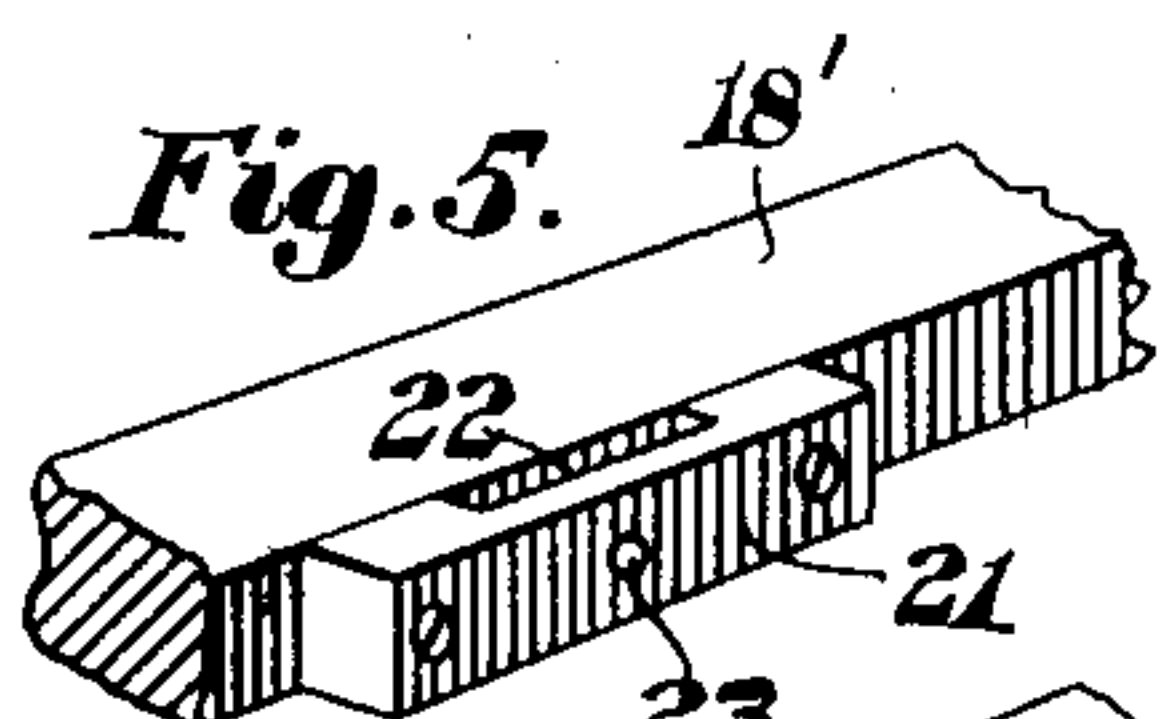
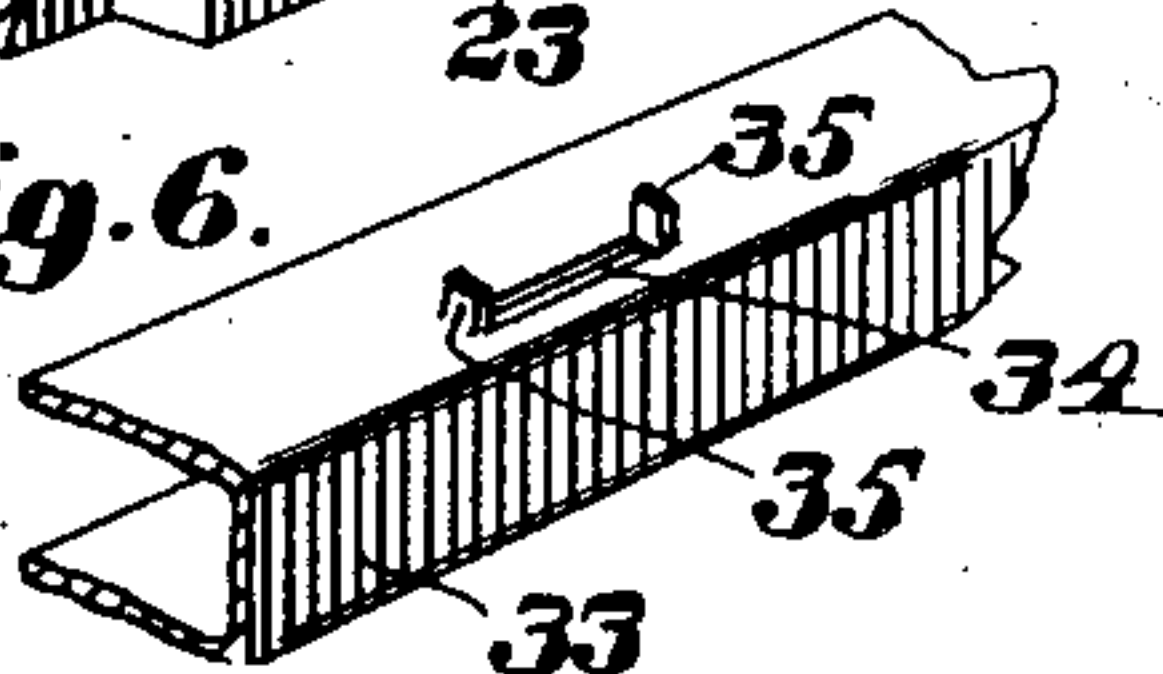
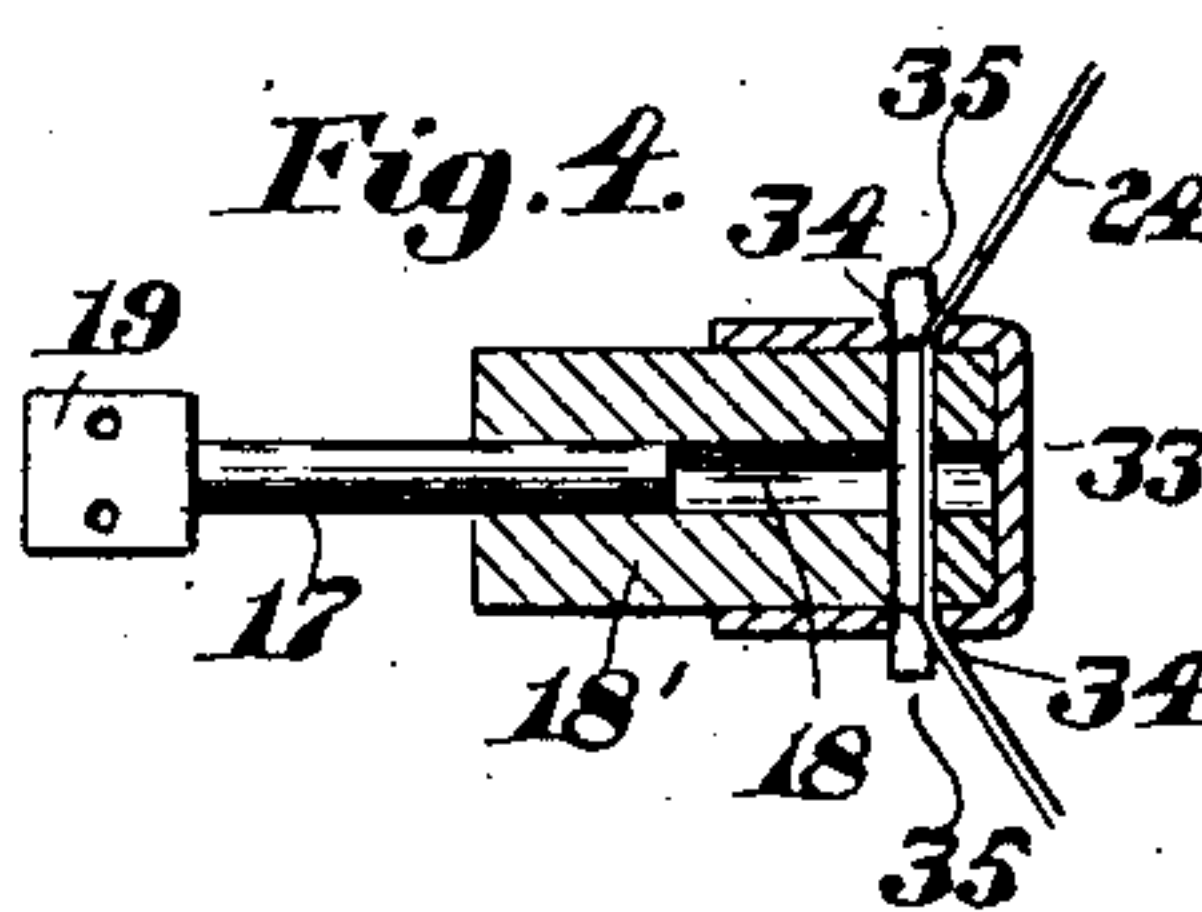


L. W. LUELLEN.  
VOTING MACHINE.

APPLICATION FILED JUNE 11, 1901.

NO MODEL.

*Fig. 2.**Fig. 1.**Fig. 3.**Fig. 5.**Fig. 6.**Fig. 4.*

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# UNITED STATES PATENT OFFICE.

LAWRENCE W. LUELLEN, OF OLATHE, KANSAS.

## VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 747,455, dated December 22, 1903.

Application filed June 11, 1901. Serial No. 64,090. (No model.)

### *To all whom it may concern:*

Be it known that I, LAWRENCE W. LUELLEN, a citizen of the United States of America, and a resident of Olathe, in the county of Johnson and State of Kansas, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification.

My invention relates to improvements in voting-machines, and more particularly to that type in which the candidate-keys serve, among other functions, to actuate a device marking upon a strip or ribbon of paper or other impression-receiving member the record of the vote cast by depressing said keys.

As is well known, a voter is sometimes "challenged" at the polls or the legality of his vote questioned, and it then becomes necessary to identify this vote, so that it may later be thrown out if proved illegal. This should, of course, be done in a manner to as nearly as possible preserve the secrecy of the ballot. To provide a means for thus identifying challenged votes is the object of the present invention.

In the accompanying drawings, Figure 1 is a front elevation of a voting-machine embodying one form of my invention, parts being broken away. Fig. 2 is a horizontal section thereof on the line 2-2 of Fig. 1 looking in the direction of the arrows. Fig. 3 is a detail in rear sectional elevation of a portion of the vote-recording mechanism and an actuating device for the ribbons thereof. Fig. 4 is a transverse vertical sectional detail through the punch and coacting ribbon, and Figs. 5 and 6 are respectively perspective views of a portion of a guide-strip with a die-plate and a shifting-bar.

Similar characters designate like parts throughout the several figures of the drawings.

A suitable casing (designated by the numeral 10) is provided at its front with a keyboard 11 and with rear doors or closures 12. In the keyboard are openings through which extend the shanks of keys 13, which are preferably arranged in a plurality of substantially horizontal rows or series, each series corresponding to an office to be voted for and each key in the series being designated by

the name of a candidate for that particular office. Each office-row is preferably provided with a spring-pressed locking-strip 14, serving to lock the keys in their vote-recording position, and thus prevent "repeating" by engagement with projections 14' on their shanks and with a series of locking-dogs 15, sliding in horizontal casings 16, preferably secured to the front of the keyboard and entering openings 15' in the keys, serving to prevent movement of more than one candidate-key in each office-row by the same voter. These locking devices are similar to those more particularly described in my Patent No. 651,874, dated June 19, 1900. To furnish a record of the votes cast, each key may be provided with a marking or recording device, here shown as consisting of a punch 17, preferably supported independently of the key in a suitable opening 18 in horizontal guide-strips 18', situated at the rear of the keyboard. Each punch is provided with a head 19, through openings in which extend springs 20, 20, mounted upon the guide-strips, serving to press the punch against the key and hold both normally outward. To the guide-strips at the rear of each punch is secured a die-plate 21, provided with a recess 22, forming a space between it and the strip, and through this plate is an opening 23, in alignment with the opening 18 in the guide-strip. Through each space 22 passes a record-receiving member, which may consist of a strip or ribbon 24, of paper or like material, each ribbon being carried by a roll 25, rotatably mounted in brackets 26 and delivering to a roll 27, the latter rolls being supported in series upon horizontal shafts 28. To advance the ribbons longitudinally to present a fresh surface for receiving the votes of successive voters, a device for rotating all the shafts 28 is provided. This may comprise a ratchet-wheel 29, mounted on each shaft, and spring-pawls 30, carried by a bar 31, sliding in guides upon a slide-wall 31' within the casing, the bar being reciprocated by a connection 32 with the floor of the booth containing the machine or some other element, adapted to be actuated at times other than when a voter has access to the keys, as by his entrance into the booth. As the shafts are rotated by this mechanism



the record-ribbons are gradually advanced under the punches, the center of each ribbon normally moving over the opening in the die-plate, and therefore receiving an impression or perforation when the key is operatively depressed, these records lying along a substantially straight line.

To identify the vote of a challenged voter, means are provided for moving the punch and ribbon relatively to each other to vary the position of the record with regard to the normal series, in this instance the ribbon being moved laterally to its direction of advance and independently thereof. To effect this, a shifting-bar 33, conveniently made of sheet metal bent to conform to the guide-strip 18 and mounted to slide thereon, is provided with pairs of oppositely-situated slots 34 34, through which each ribbon passes, lying in alinement with the spaces 22 between the die-plate and guide-strip, but of less length than this space, they being substantially equal to the width of the ribbon, while the space 22 allows a lateral movement of the ribbon therein. Ears 35 may, if desired, be turned up from the sheet metal at the end of the slots to give greater bearing-surface for the ribbons. The bars 33 are extended at one end through a slide-wall 36 within the casing and preferably carry pins 37 entering inclined slots 38 in a vertical bar 39, mounted to slide in contact with the wall and a guide 40 thereon. To this vertical bar is shown attached one end of a spring 41, having its other end fastened to the casing and exerting its force to hold the bar normally downward. A lever 42 is pivoted to the wall of the casing, extending through an opening therein, and, occupying a position where it is not operable by the voter, serves to raise the bar when desired.

The operation of the device is as follows: Voting goes on in the ordinary manner, the voter entering the booth containing the machine and depressing the desired keys, until a voter appears whose right to vote may be, for any reason, challenged. When this occurs, an attendant officer draws down the outer end of the lever 42, holding it in this position until the voter leaves the booth. The effect will be to raise the bar 39, causing the lower faces of the slots therein to contact with the pins 37 and move the bars 32 longitudinally, and these bearing against the ribbons simultaneously displace all the stretches between the rolls to one side. This will result in the punches of all the keys which are depressed acting upon the ribbon at one side of the center, rendering their record readily distinguishable from the other votes. To identify these questioned or irregular votes with the particular voter casting them, a consecutively-numbered list of the challenged voters will be kept by the attendants, which will enable the proper official after the election to act upon the legality of the vote with-

out the possibility of learning for whom the votes of the unchallenged voters were cast.

Having thus described my invention, I claim—

1. In a voting-machine, the combination with means operable by voters to produce a series of records, of means operable independently of the voting means for varying from the normal series the position of the record of any voter. 70

2. In a voting-machine, the combination with means operable by voters to produce a series of records, of means operable in advance of the production of the record for varying from the normal series the position of the record of any voter. 80

3. In a voting-machine, the combination with a record-receiving member, of a recording device operable by voters to produce a series of records thereon, and means operable independently of the recording device for moving the record-receiving member to vary from the normal series the position of the record of any voter. 85 90

4. In a voting-machine, the combination with a record-receiving member, of a recording device operable by voters to produce a series of records thereon, and means operable in advance of the production of the record for moving the record-receiving member to vary from the normal series the position of the record of any voter. 95

5. In a voting-machine, the combination with a key, of a recording device actuated thereby, rolls carrying a ribbon to receive the record, and a shifting device engaging the edge of the ribbon intermediate the rolls. 100

6. In a voting-machine, the combination with a key, of a punch actuated thereby, a die-plate coacting with the punch, a ribbon moving over the die-plate, and a shifting device situated adjacent to the die-plate and acting upon the ribbon to move independently of its support. 105 110

7. In a voting-machine, the combination with a plurality of keys, of a recording device actuated by each key, a record-receiving member coöperating with each recording device, means for advancing said members to present a fresh surface for the record, and means for simultaneously moving all the recording devices and record-receiving members relatively to each other and independently of the advancing movement of the members. 115 120

8. In a voting-machine, the combination with a plurality of keys, of a recording device actuated by each key, a record-receiving member coöperating with each recording device, means for advancing said members to present a fresh surface for the record, and means for simultaneously moving all the record-receiving members independently of their advancing movement. 125 130

9. In a voting-machine, the combination with a series of keys, of a recording device



actuated by each key of the series, a ribbon receiving the record of each device, and a shifting-bar acting upon all the ribbons.

10. In a voting-machine, the combination  
5 with a plurality of series of keys, of a recording device actuated by each of the keys, a ribbon receiving the record of each device, a shifting-bar acting upon all the ribbons of

each series, and means for simultaneously moving all the shifting-bars. 10

Signed by me at Boston, Massachusetts,  
this 10th day of June, 1901.

LAWRENCE W. LUELLEN.

Witnesses:

WALTER E. LOMBARD,  
SYLVANUS H. COBB.