

J. H. DEAN.
VOTING MACHINE.
APPLICATION FILED SEPT. 17, 1908.

Patented June 13, 1911.

995,330.

2 SHEETS—SHEET 1.

Fig. 1.

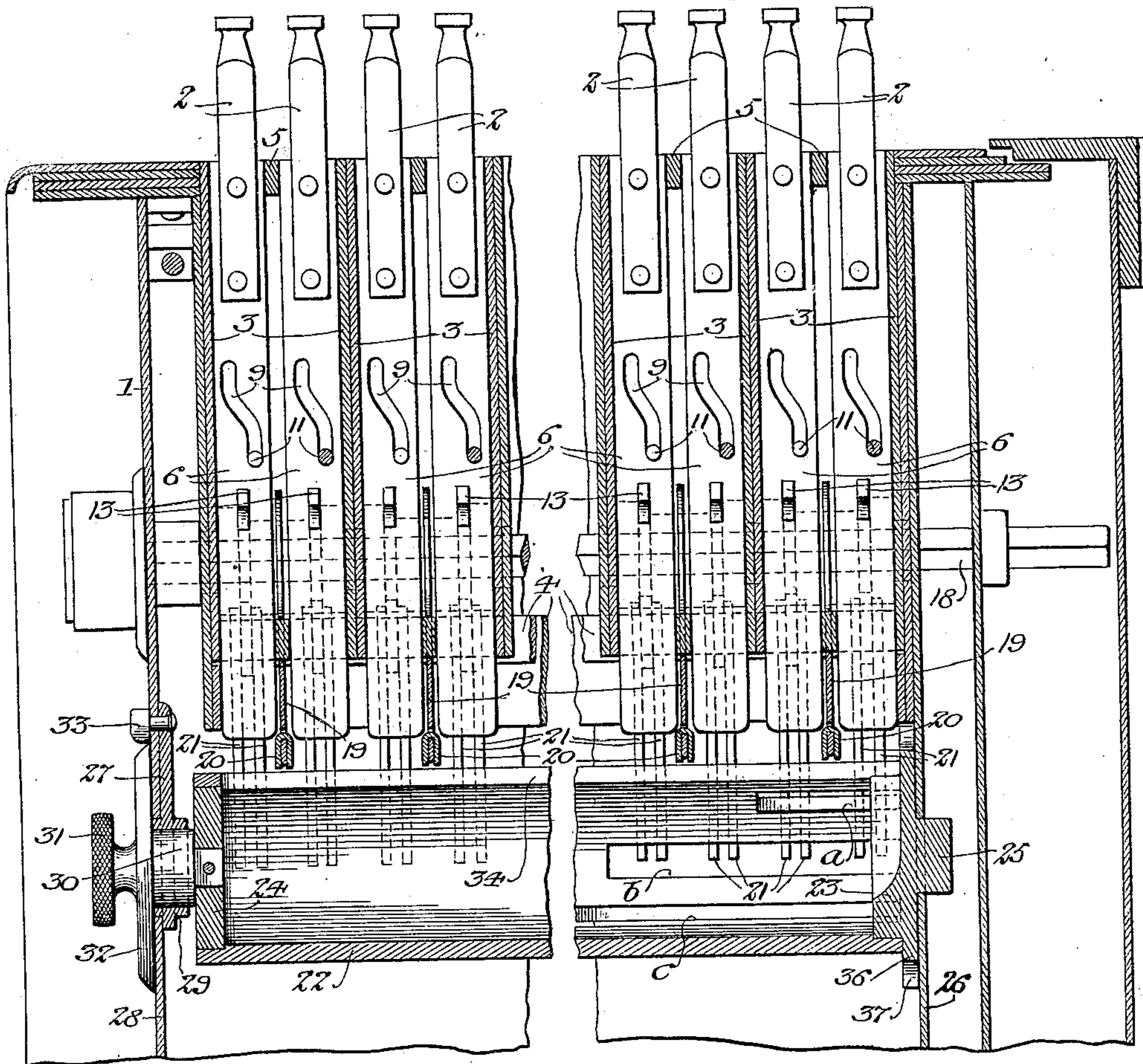
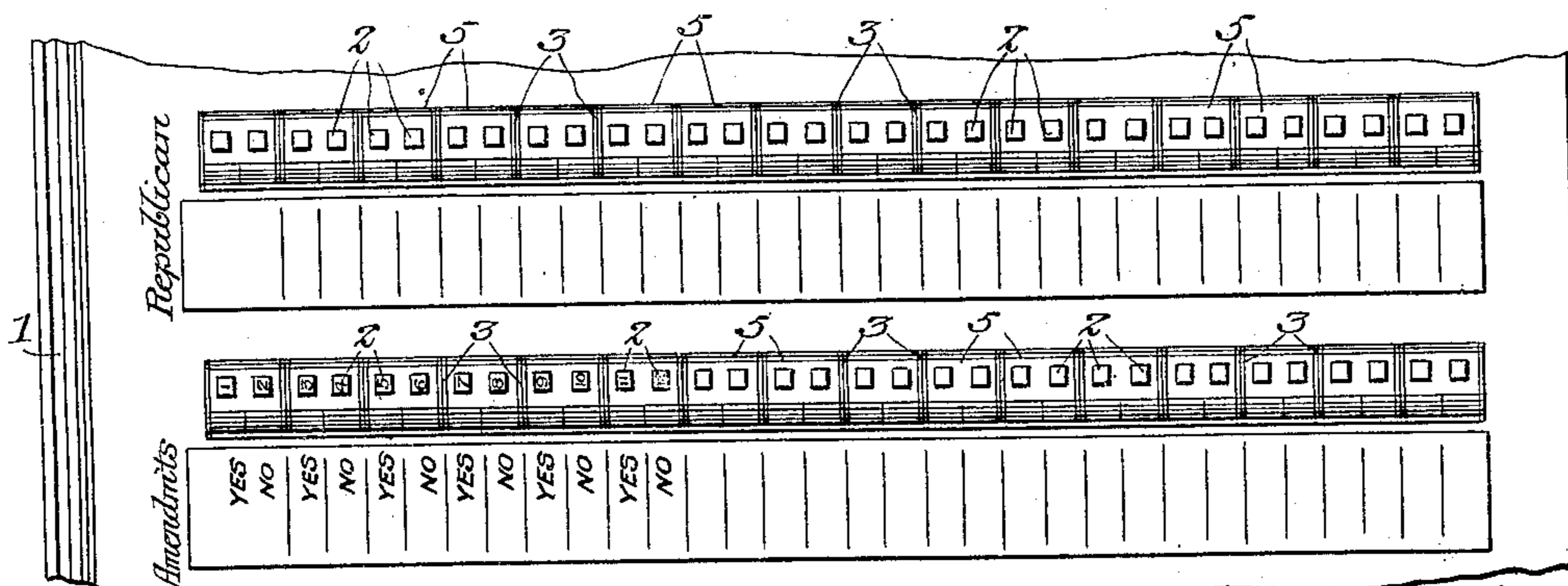


Fig. 2.



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2 SHEETS—SHEET 2.

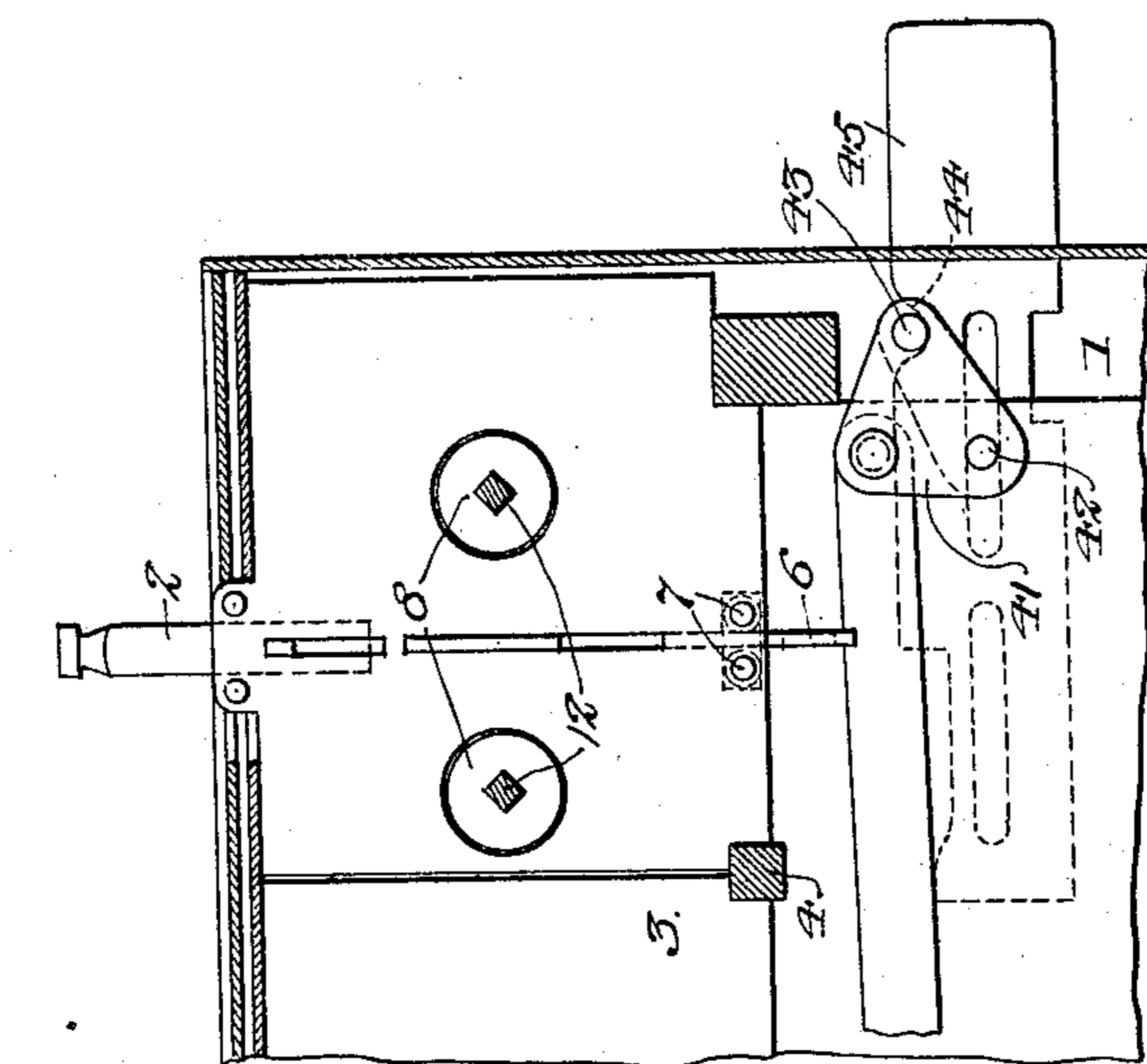


Fig. 3.

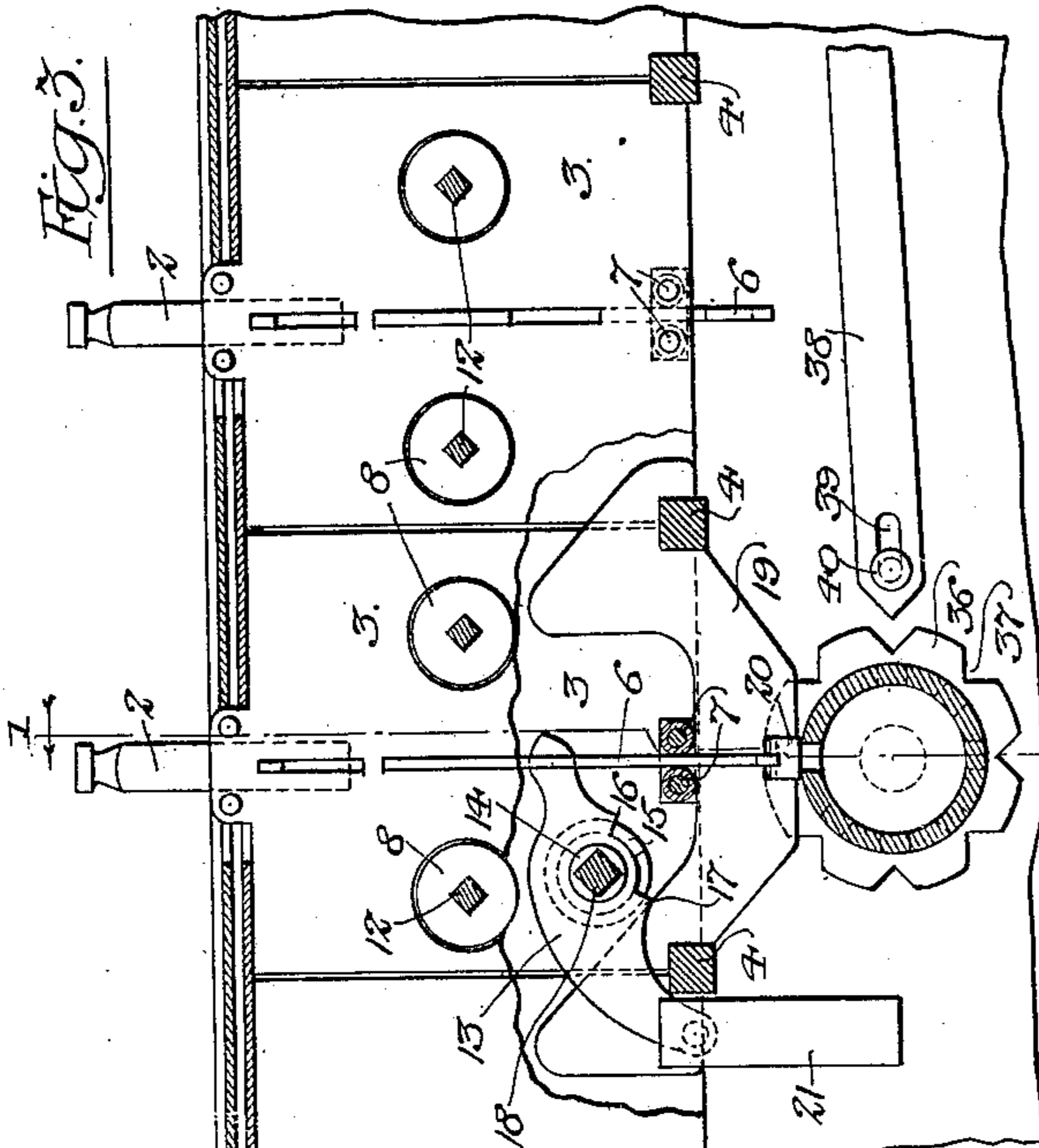


Fig. 4.

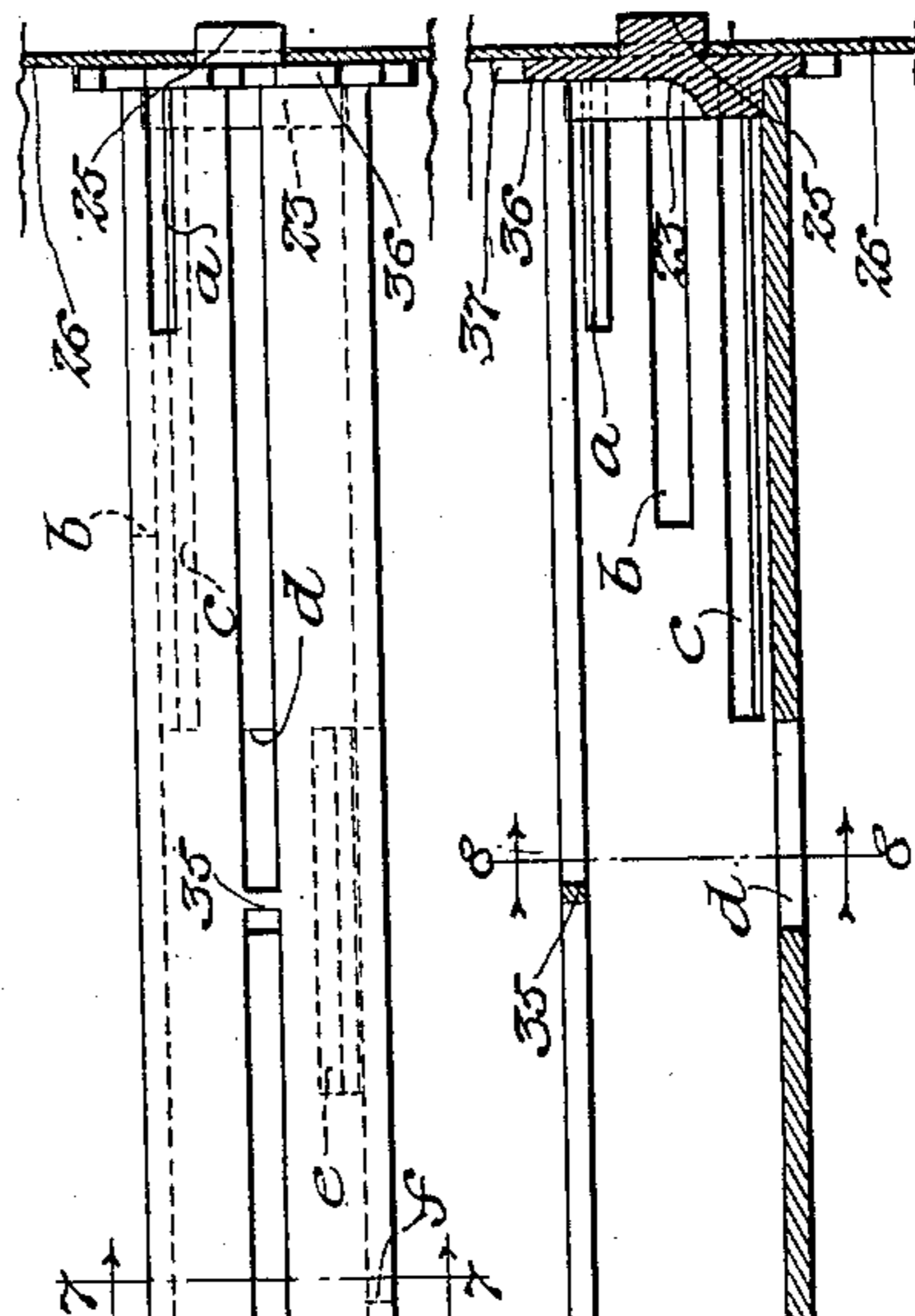


Fig. 5.

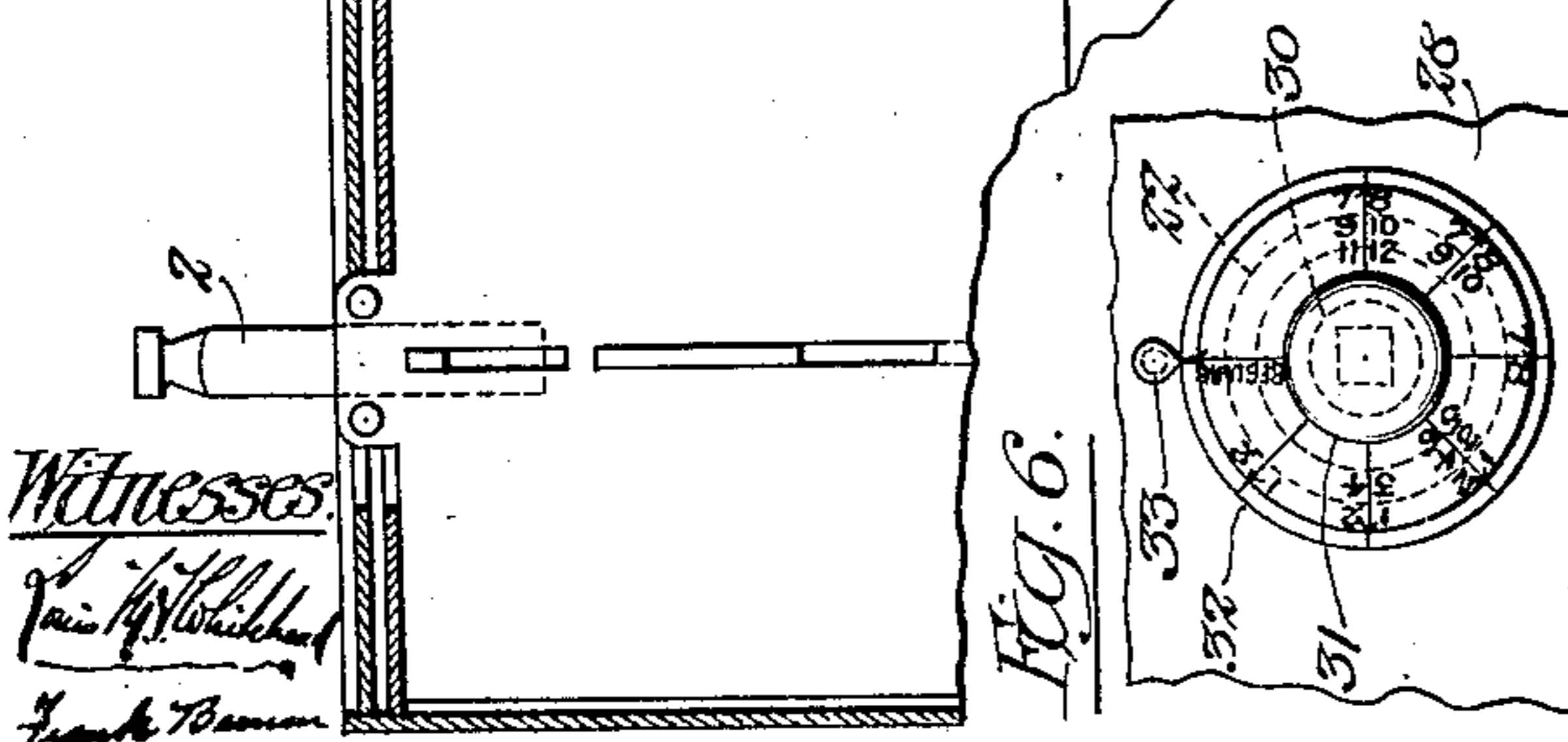


Fig. 6.

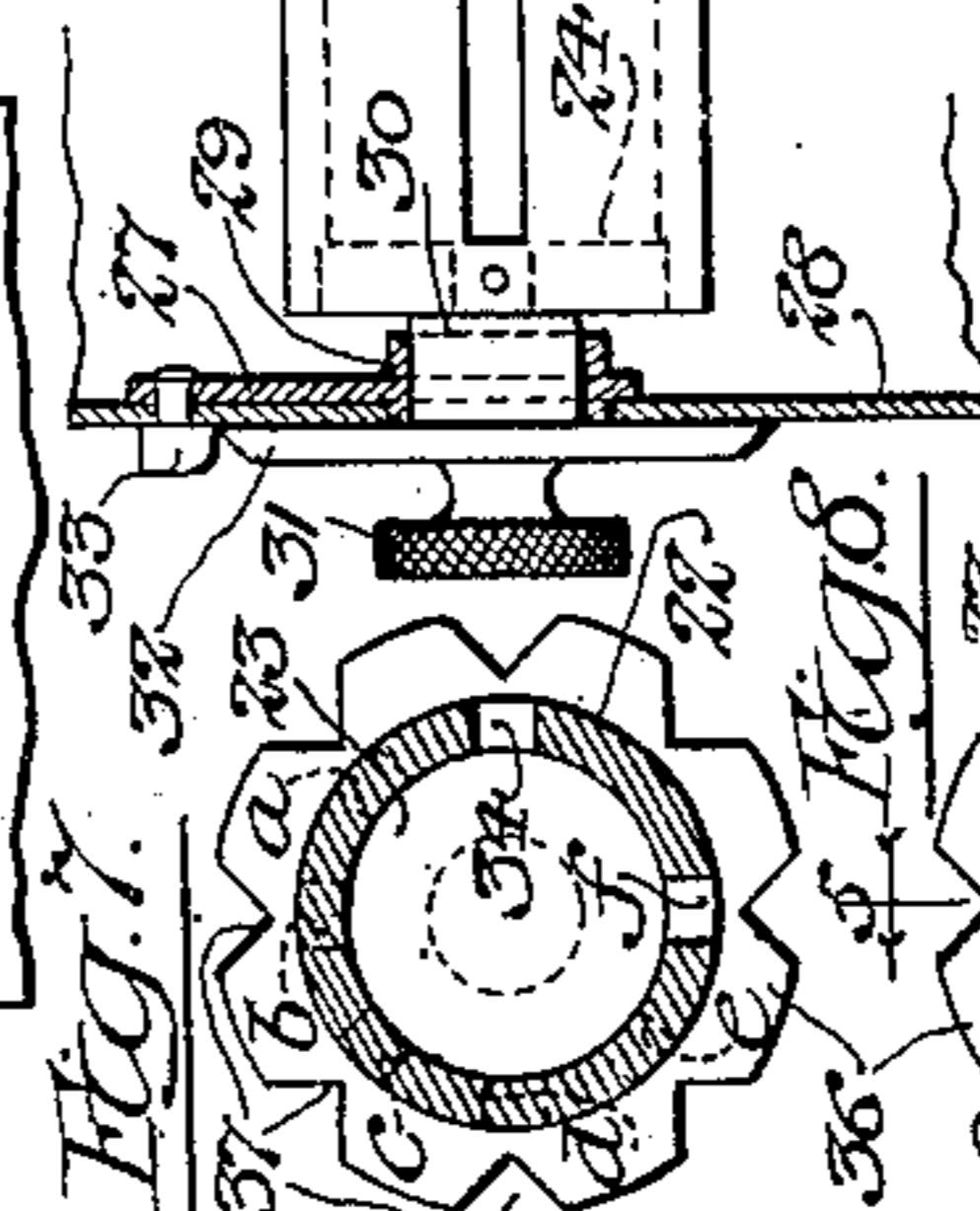


Fig. 7.

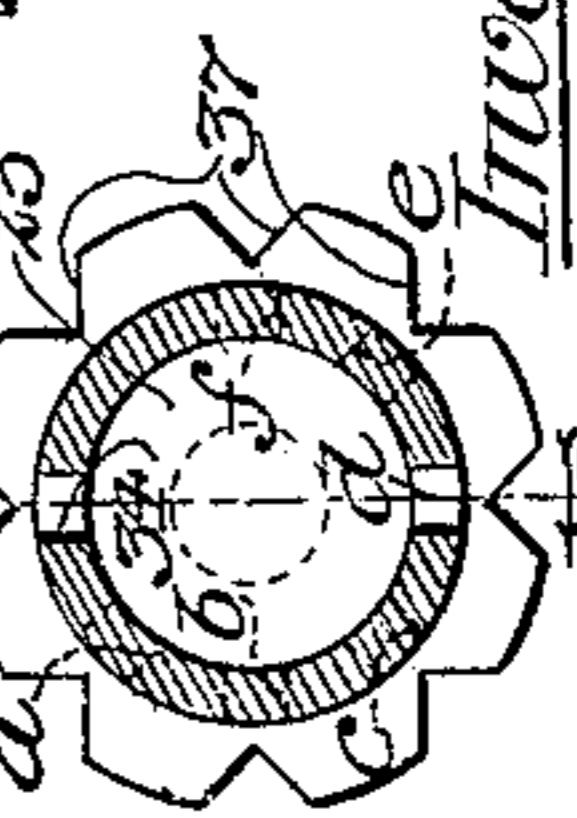


Fig. 8.

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UNITED STATES PATENT OFFICE.

JAMES H. DEAN, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
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VOTING-MACHINE.

995,330.

Specification of Letters Patent. Patented June 13, 1911.

Application filed September 17, 1908. Serial No. 453,478.

To all whom it may concern:

Be it known that I, JAMES H. DEAN, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification.

The invention relates to voting-machines and more particularly to mechanism for voting on amendments or questions.

The invention seeks to provide simple and effective mechanism for voting either "yes" or "no" on amendments or questions and to provide means whereby the different mechanisms for this purpose may be variably cut out of operation when the machine is used by different classes of voters and consists in the features of improvement, combinations and arrangements of parts hereinafter set forth, illustrated in the accompanying drawings and more particularly pointed out in the appended claims.

The invention is particularly adapted to and is shown as applied to the type of voting machine set forth in the prior applications filed by me December 27, 1902, Serial No. 238,388 and April 1, 1907, Serial No. 365,639, although certain features of the invention could be employed with other types of machine.

In the drawings Figure 1 is a section through the upper part of the machine from front to rear and showing the column of keys used for voting on amendments or questions. Fig. 2 is a partial view of the top of the machine. Fig. 3 is a cross-section taken from side to side of the machine. Fig. 4 is a view in elevation of the lock-out for the amendment voting mechanisms with the casing of the machine shown in section. Fig. 5 is a longitudinal section of the lock-out device on the line 5—5 of Fig. 8. Fig. 6 is a view of the operating knob for the lock-out device. Fig. 7 is a cross-section on the line 7—7 of Fig. 4 and Fig. 8 is a cross-section on the line 8—8 of Fig. 5.

As set forth in the prior applications referred to, the machine is provided with a box-like frame 1 with vertically movable keys or ballot indicators 2 projecting through the flat, horizontal top of the machine. The voting keys and the counters controlled thereby, are arranged in removable units or sections with two keys and two

counters in each section. Each section comprises a pair of connected side-plates 3 and are mounted at the upper part of the machine frame on supports 4 which extend from front to rear thereof. The ballot indicators or keys 2 are guided at their upper ends by a block 5 fixed to the side-plates of the counter-section. Each key is provided with a depending tail-piece 6 which extends at its lower end between a pair of guide rolls 7 that are carried by the plates 3 of the unit or section. A pair of counter actuators 8 are arranged in each section on opposite sides of the keys therein and are arranged to be shifted in axial direction by cam slots 9 in the tail portions of the keys which engage pins 10 that are connected to parts engaging the actuators. The actuators of each row of sections are arranged in line and a series of actuator shafts 11 extend there-through. These shafts are oscillated by the operating mechanism to advance the counters corresponding to the voted keys. This counter mechanism is fully set forth in the prior applications referred to and need not be more fully set forth here.

Each key is provided with a slot engaging one end of a rocker-arm 13 which is loosely mounted upon a hub 16 journaled between the side-plates 3 of the counter section. A laterally projecting lug 15 on the hub 14 extends between a pair of shoulders 16 and 17 on the rocker-arm 13. The hubs 14 of the several sections are arranged in line and a series of rocking and restoring shafts 18 extend therethrough. As set forth in the prior applications referred to, these shafts are controlled by the operating mechanism and are normally held in the position shown in Fig. 3 with the lug 15 on the hub 14 against the shoulder 16 on the rocker-arm 13 and holding the latter, and the key connected thereto, in normal, unvoted position. When the voter enters the machine, the shafts 18 are unlocked so that the voting keys may be depressed to voting position. At the end of the voting operation, the shafts are rocked to restore the keys and counter actuators. The lug 15 on the hub 14 is of less width than the space between the shoulders 16 and 17 on the rocker-arm, so that a lost-motion connection is provided between the keys and the restoring shafts and, although each column of keys is re-

stored by a single shaft, they may be shifted to voted position independently of one another. This restoring mechanism is fully set forth in the prior applications referred to.

In accordance with the present invention, means are provided whereby the two keys of any section may be employed for voting "yes" or "no" upon amendments or questions. This means comprises a thin, flat plate 19 having upwardly projecting end portions that are notched to fit over the supporting bars 4. Adjacent its lower edge, and on opposite sides, the plate 19 is provided with a projecting lug 20 which preferably consists of a short piece of metal inserted through an opening in the plate 19 adjacent its lower edge with the ends of the piece of metal bent downwardly over the opposite faces of the plate, as shown in Fig. 1. When one of the amendment devices 19 is placed in position upon the supports 4 and between the tail portions 6 of the keys carried by a section, the central part of the plate extends beneath the guide pins or rollers 7, as shown in Fig. 3, and the lug 20 is arranged between and just below the lower ends of the tail pieces 6. The lug 20 is somewhat wider than the distance between the two keys, so that both of the keys cannot be depressed to voted position. If one of the two keys, however, is depressed, the rounded corner at the lower end of the tail-piece 6 will engage the upper rounded surface of the lug 20 and press it and the lower edge of the plate 19 aside so that the key may be depressed fully to voted position. The shift of this key, however, will move the lug over into engagement with the other key of the section so that it is securely locked against movement. The key voted, however, may be retracted to normal unvoted position and the other key may then be voted. In this way, the two keys and the counters controlled thereby may be utilized for voting "yes" or "no" upon an amendment or question submitted to the voter. By removing the plate 19, the counter section thus utilized as an amendment voting device may be used for voting for candidates by connecting the keys to the interlocking mechanism of the machine.

The regular candidate keys are connected to the interlocking mechanism by providing the tail portions of the rocker-arms 13 with arrows or spreaders which engage the interlocking blocks. Where a section is used as an amendment voting device, counterbalancing weights 21 are connected to the tail portions of the rocker-arms 13 so that the keys 2 will remain in voted or unvoted position without requiring the use of friction springs or the like. The rounded corners at the lower ends of the tail-pieces 6 of the keys and the upper rounded end of the lug 20

act as cam faces to effect the shift of the locking lug and plate as one or the other of the keys is voted.

It frequently happens that women, non-tax payers and voters of other classes are restricted by law on voting on amendments or are permitted to vote on some amendments and not on others. In accordance with the present invention, means are provided whereby the amendment voting devices may be all or only partially locked against operation when the restricted or class voter is admitted to the machine. This lock-out device is associated with one of the columns of keys, usually the first column at the left of the machine face, which are employed for voting on amendments and each of the sections of which are provided with one of the amendment devices 19 between the two keys thereof. The arrangement of this column of keys is indicated in Fig. 2. The lock-out device comprises a hollow tube or cylinder 22 which is provided at its ends with heads 23 and 24. The head 23 is provided with a projecting stud 25 which extends through and rotatably engages an opening in the back plate 26 of the machine. A small plate 27 (see Fig. 4) is secured to the inner face of the front plate 28 of the machine and is provided with a bearing portion 29 that extends through an opening in the front plate. A stud 30 is adapted to extend through this opening and be secured to the head 24 at the front end of the lock-out cylinder or tube 22. The outer end of the stud 30 is provided with a knurled thumb-piece 31 by which the lock-out cylinder 22 may be rotated. The stud 30 is also provided with an indicator plate 32 arranged against the outer face of the front plate 28 and cooperating with a pointer 33 secured to the front plate.

The lock-out cylinder or tube extends, as shown, directly beneath the lower ends of the tail pieces of the column of keys devoted to amendments or questions, and it is provided with a long slot 34 extending from end to end thereof which, in the normal position of the lock-out device, is arranged immediately below the lower ends of the tail-pieces 6 so that it does not in any way interfere with the operation of the amendment keys. By rotating the cylinder to different positions, and by providing it at different points with variably arranged slots, it is obvious that different combinations of the amendment voting devices may be locked out or that they may be all locked out. In the form shown, the lock-out cylinder or tube 22 is adapted to occupy eight different positions and it is provided with six short slots *a, b, c, d, e* and *f*, located at different points around the circumference of the lock-out cylinder or tube and extending through different portions of the length thereof. In

the normal position, nominated "Regular" on the indicator, as shown in Fig. 6, the long slot 34 will be beneath the amendment keys, so that all may be voted. By shifting the lock-out device one-eighth of a turn to the right, all of the amendment voting mechanisms will be locked out except that employing keys 1 and 2, since then, a blank portion of the cylinder will be brought beneath all of the keys except keys 1 and 2 which will then be over the short slot *a*. In a similar manner, as indicated on the dial 32, by shifting the lock-out device through one-quarter of a turn all of the amendment devices except those employing keys 1, 2, 3 and 4, will be locked out, but the first four keys may be operated since then they will be over the slot *c*. By rotating the lock-out device through three-eighths of a turn, all of the amendment keys except the first six, which are then above the short slot *c*, will be locked out. Similarly the short slot *d* permits the operation of the amendment device employing 7 and 8 while the other keys will be locked out when the cylinder 22 is rotated through a half turn from normal position, and slots *e* and *f* cooperate in a similar manner, as indicated on the dial 32, with keys 7 to 10 inclusive and keys 7 to 12 inclusive. When the lock-out device is rotated through five-eighths and three-quarters of a revolution respectively from normal position, by rotating the lock-out device through seven-eighths of a revolution to the right from normal position, or one-eighth of a revolution to the left from normal, since the lock-out device may be rotated in either direction, all of the keys in the column devoted to amendments will be locked out. It is obvious that the lock may be variously arranged to lock out varying combinations of amendment voting devices. The long slot 34 is preferably bridged at intervals by portions 35 which strengthen the lock-out tube or cylinder but are so arranged as not to interfere with the operation of the voting keys.

Means are provided for holding the lock-out device against movement while the voter is in the booth. For this purpose, the head 23 is provided with a projecting flange 36 having series of notches 37. A locking rod or bolt 38 coöperates with the notched disk. This rod is mounted upon the inner face of the back plate 26 and at its inner end is provided with a slot through which extends a pin 40 that is fixed to the back plate 26. At its outer end the locking rod 38 is pivoted to the upper end of an arm 41 which is connected by a pivot pin 42 to the back plate 26. This arm is provided on one side with an offset having a projecting pin 43 which is arranged to engage a notch 44 in the upper edge of the judge's intervening bar 45. This intervening bar, as set forth

in the prior application No. 365,639 above referred to, controls the lock-out bar for the locking and restoring shafts 18, so that, after a voter is admitted to the machine, the bar 45 must be pushed inwardly from the position shown in Fig. 3, before the shafts 18 can be unlocked to permit the operation of the voters' keys. This inward shift of the bar 45 rocks the arm 42 through the engagement of the cam edges of the notch 44 with the pin 43 so that the locking bolt 38 is pressed into engagement with one of the notches 37 of the disk 36. It is then impossible for the voter to shift the amendment lock-out from the position to which it was set when he was admitted to the machine. At the end of the voting operation the judge's intervening bar 45 is restored by the operating mechanism to the position shown in the drawings. The end of the locking bolt 38 is pointed or provided with beveled cam faces, and the notches 37 are similarly shaped so that, when the judge's intervening bar 45 is restored, the lock-out device may be rotated, since the cam faces of the notch 37 will force the bolt 38 back to its disengaged position. Moreover, the cam faces of the bolt and notches 37 will serve to accurately position the lock-out device with the proper slot directly beneath the keys when the judge's intervening bar 45 is pushed in to unlock the voting keys.

It is obvious that numerous changes may be made in the details set forth without departure from the essentials of the invention.

I claim as my invention:—

1. In voting machines, the combination with amendment voting device comprising two keys, of an interlocking device between said keys, rock-arms connected at one end to said keys and counterbalances connected to the opposite ends of said arms.

2. In a voting machine, an amendment voting device comprising two keys, an interlocking device between said keys permitting the operation of one of them, rock-arms connected at one end to said keys, counterbalances connected to the opposite ends of said rock-arms and a restoring device connected to said rock-arms.

3. In voting machines, the combination with a series of amendment voting devices, of controlling keys therefor and a lock-out for said keys comprising a rotatable, slotted cylinder.

4. In voting machines, the combination with a series of amendment voting mechanisms, each comprising a pair of keys with an interlocking device between the keys for preventing the movement of one of them, of a lock-out for said keys comprising a rotatable, slotted cylinder and means for holding said cylinder against rotation while the machine is unlocked for voting.

5. In voting machines, the combination

with a series of amendment voting mechanism, of controlling keys therefor, a variable lock-out for said keys comprising a rotatable cylinder having a series of slots at
 5 different points around the circumference and throughout the length thereof.

6. In voting machines, the combination with a series of amendment voting devices comprising a column of keys with an interlocking device between each pair of keys in
 10 said column to prevent the operation of one of them, of a lock-out for said keys comprising a hollow cylinder arranged beneath them and having a series of slots at different points around the circumference and
 15 throughout the length thereof and means for securing said cylinder in position with any one of said slots in line with said keys.

7. In a voting machine, a series of amendment devices, each comprising a pair of
 20 keys, with an interlocking device between the keys for preventing the movement of more than one of them, with a lockout for said keys comprising a rotatable slotted cylinder, a toothed disk on the edge of said
 25 cylinder having recesses between said teeth, a dog engaging with said recesses, means connected to said dog for unlocking the keys of the machine, said disk preventing
 30 or permitting the operation of said means according to its position.

8. In a voting machine, the combination with an amendment voting device of a
 35 lockout therefor, said lockout being capable of locking against operation predetermined ones of said keys, means to prevent the movement of said lockout to release said keys while the machine is released for voting operation.

40 9. In a voting machine, the combination with an amendment voting device of a lockout therefor, said lockout being capable of

locking against operation predetermined ones of said keys, means to prevent the unlocking of the machine for voting operation
 45 without locking said lockout device in a locking position.

10. In a voting machine, the combination of a series of amendment voting devices, each comprising a pair of keys, a variable
 50 shiftable lockout device for preventing the operation of different combinations of said keys, said lockout device being capable of a plurality of locking positions, means compelling the locking of said lockout device in
 55 one of its locking positions and against movement therefrom before the machine can be unlocked for voting operation, said means holding it locked in said position while the machine is open for voting.

11. The combination in a voting machine of a series of amendment voting devices, each comprising a pair of keys, a variable
 60 shiftable lockout device for preventing the operation of different combinations of said keys, said lockout device being capable of a plurality of locking positions, means to prevent the unlocking of the machine for
 65 voting when the lockout is not in one of its locking positions.

12. The combination in a voting machine of a series of amendment voting devices, each comprising a pair of keys, a variable
 70 shiftable lockout device for preventing the operation of different combinations of said keys, said lockout device being capable of a plurality of locking positions, means to prevent the unlocking of the machine when the lockout is in a position intermediate of any
 75 of its locking positions.

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