

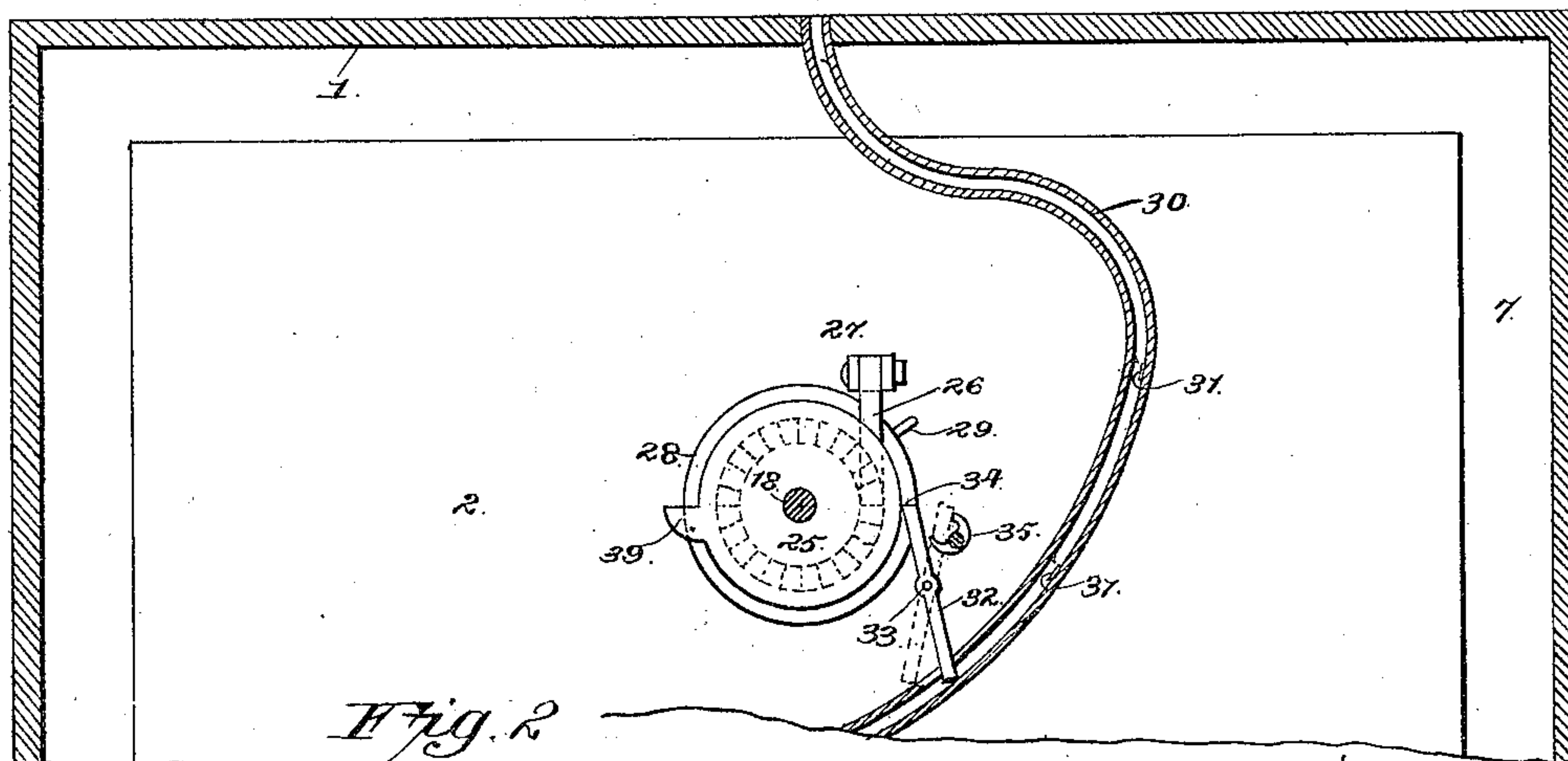
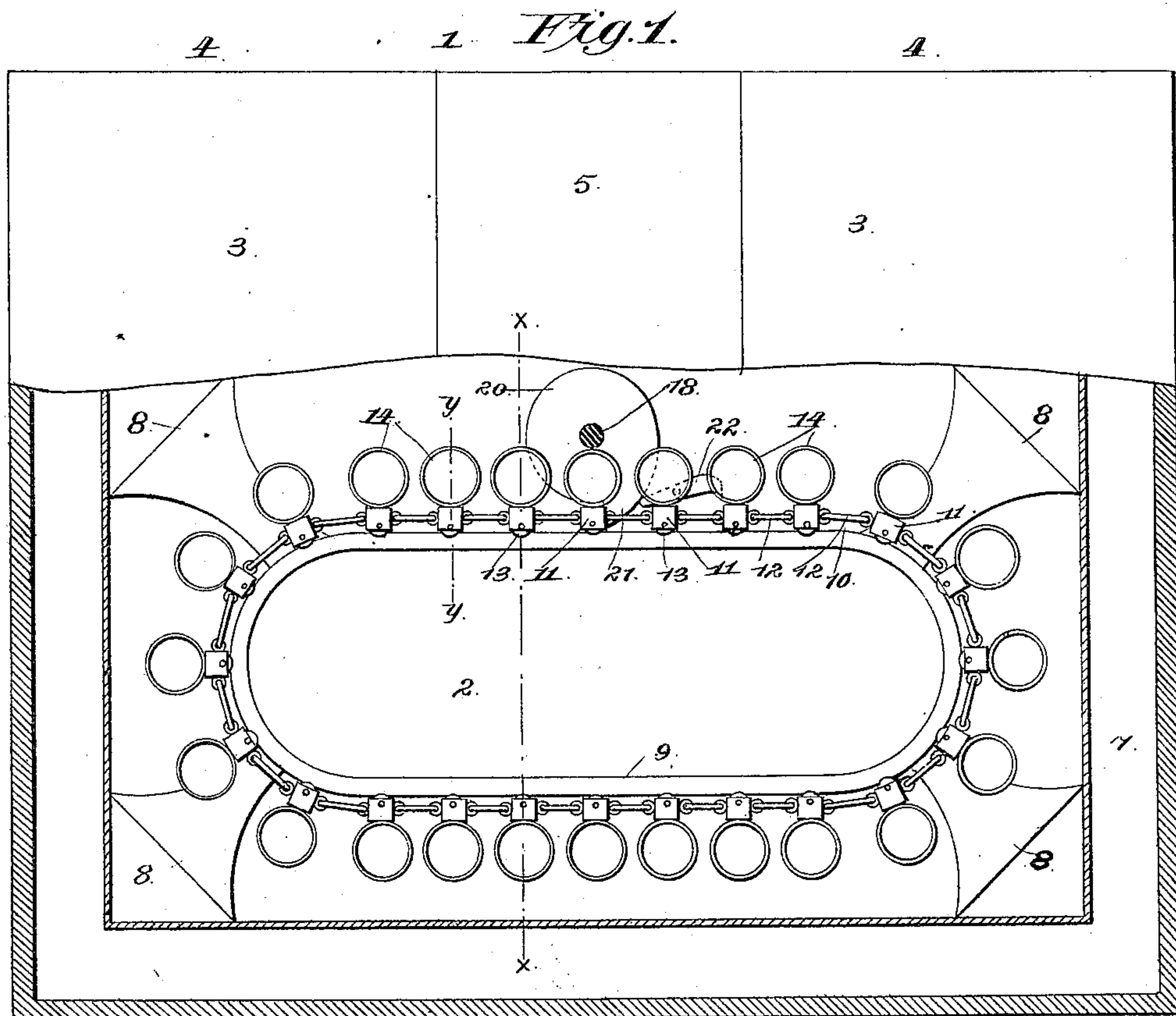
(No Model.)

3 Sheets—Sheet 1.

E. M. STATLER.  
BOTTLE VENDING MACHINE.

No. 427,806.

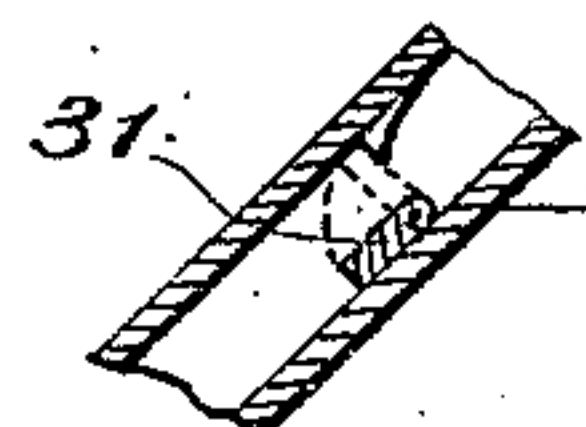
Patented May 13, 1890.



Witnesses

*M. S. Fowler*

*R. J. Marshall*



By his Attorneys,

Fig. 2.

*Hillsworth M. Statler*

Inventor

*C. A. Snow & Co.*

(No Model.)

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Fig. 3.

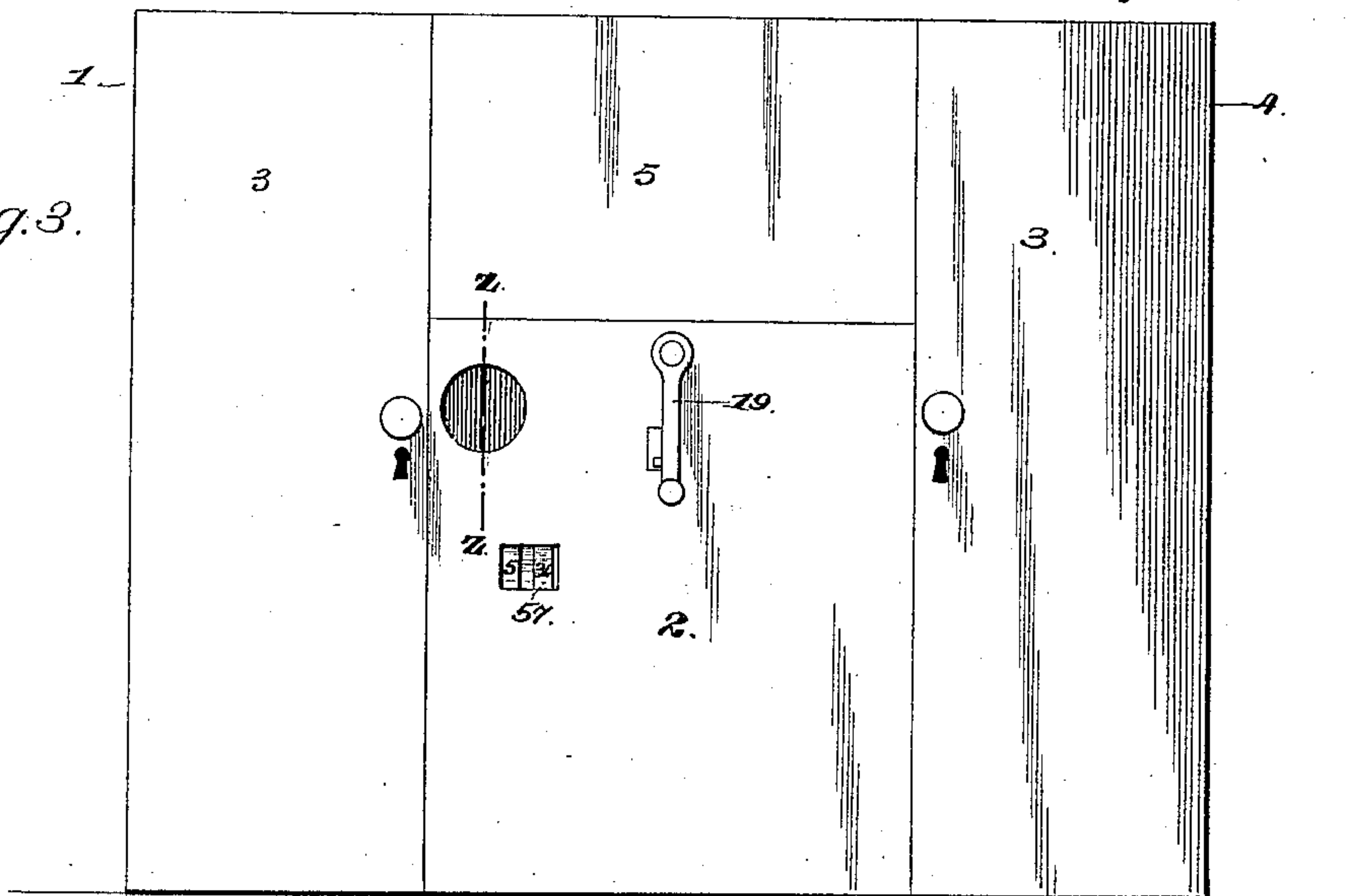


Fig. 6.

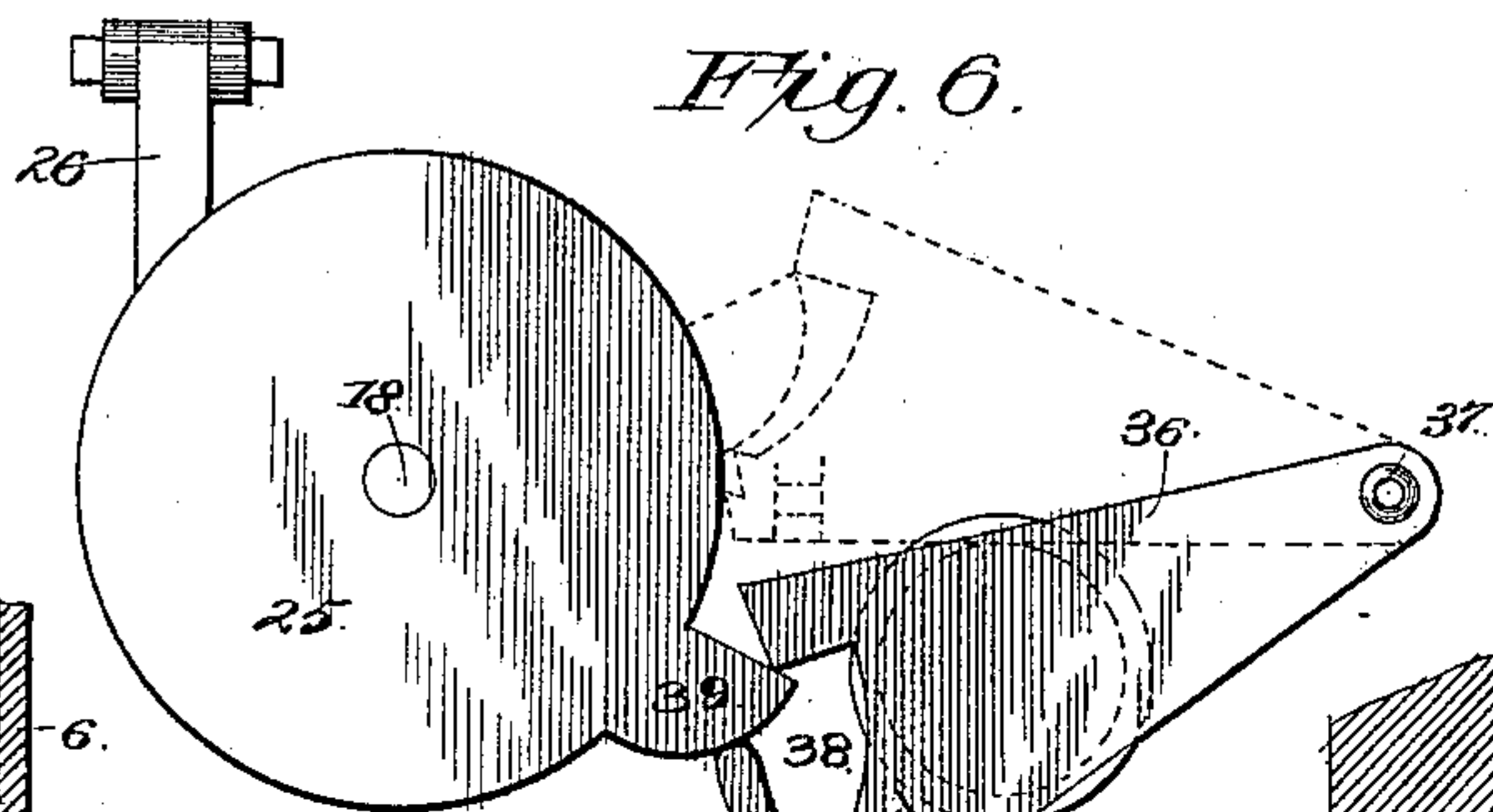


Fig. 7.

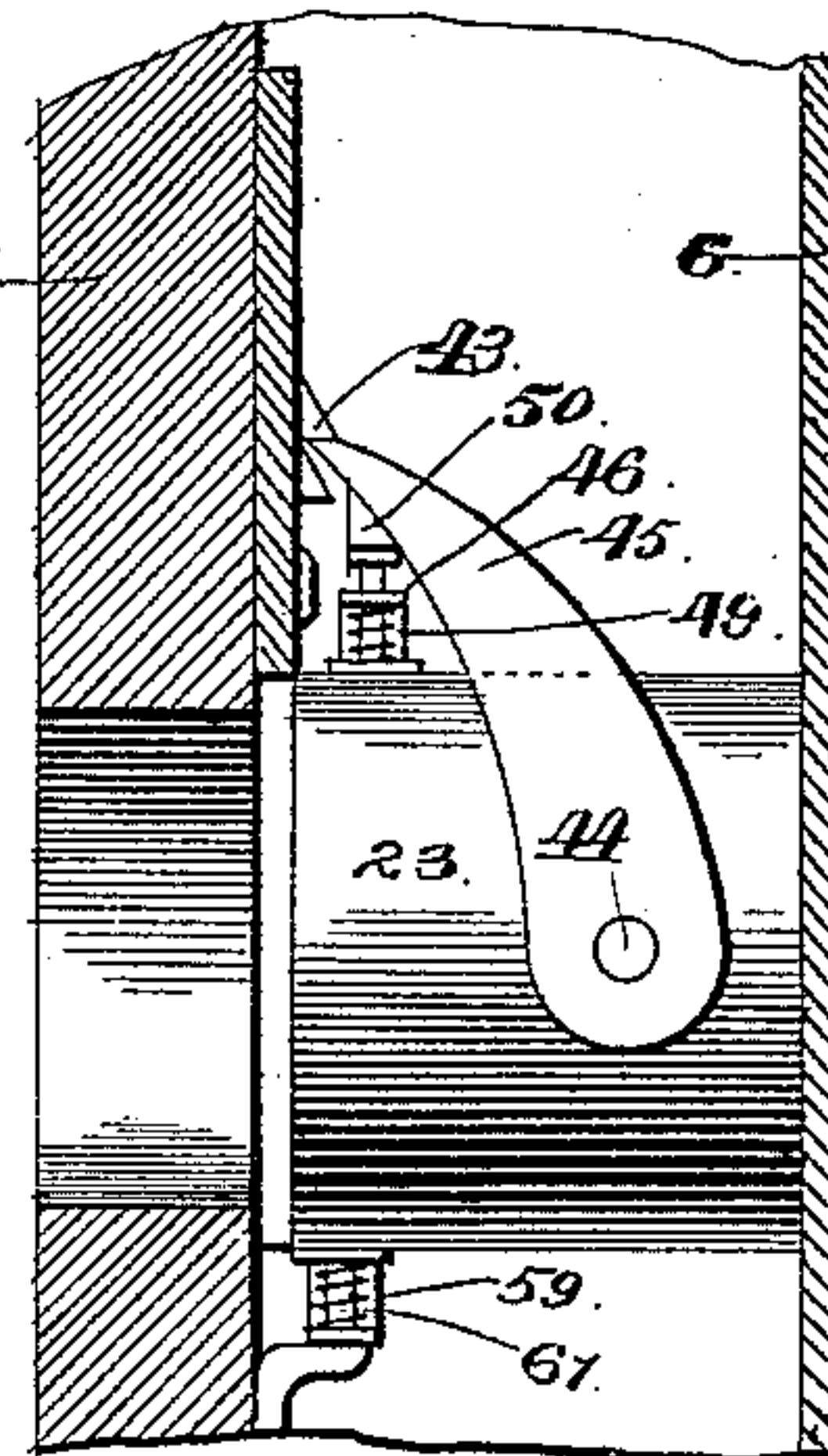


Fig. 5.

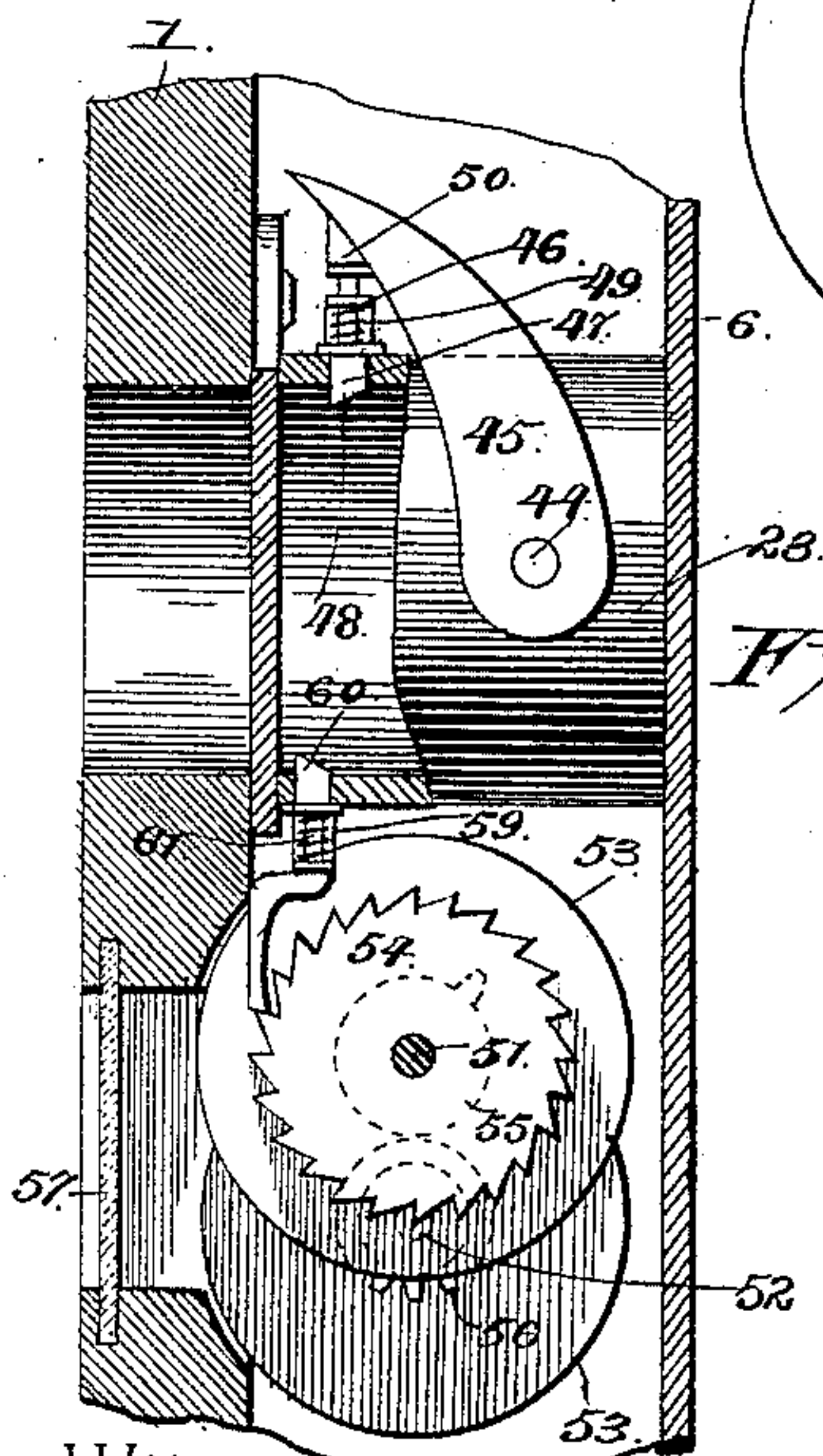
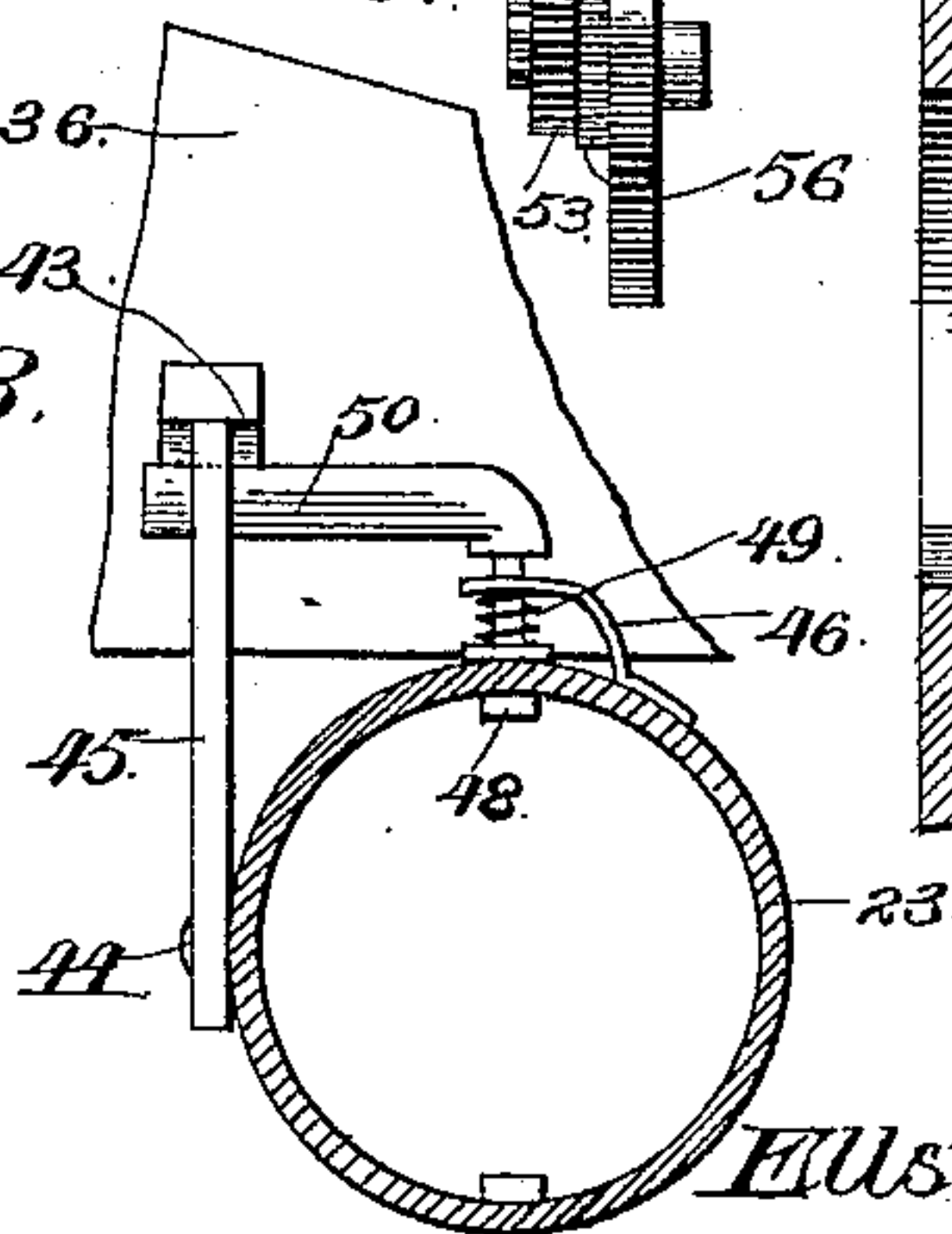


Fig. 8.



Witnesses

M. Fowler  
R. J. Marshall

By his Attorneys,

C. A. Snow & Co.

Inventor

Ellsworth M. Statler



(No Model.)

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Fig. 4.

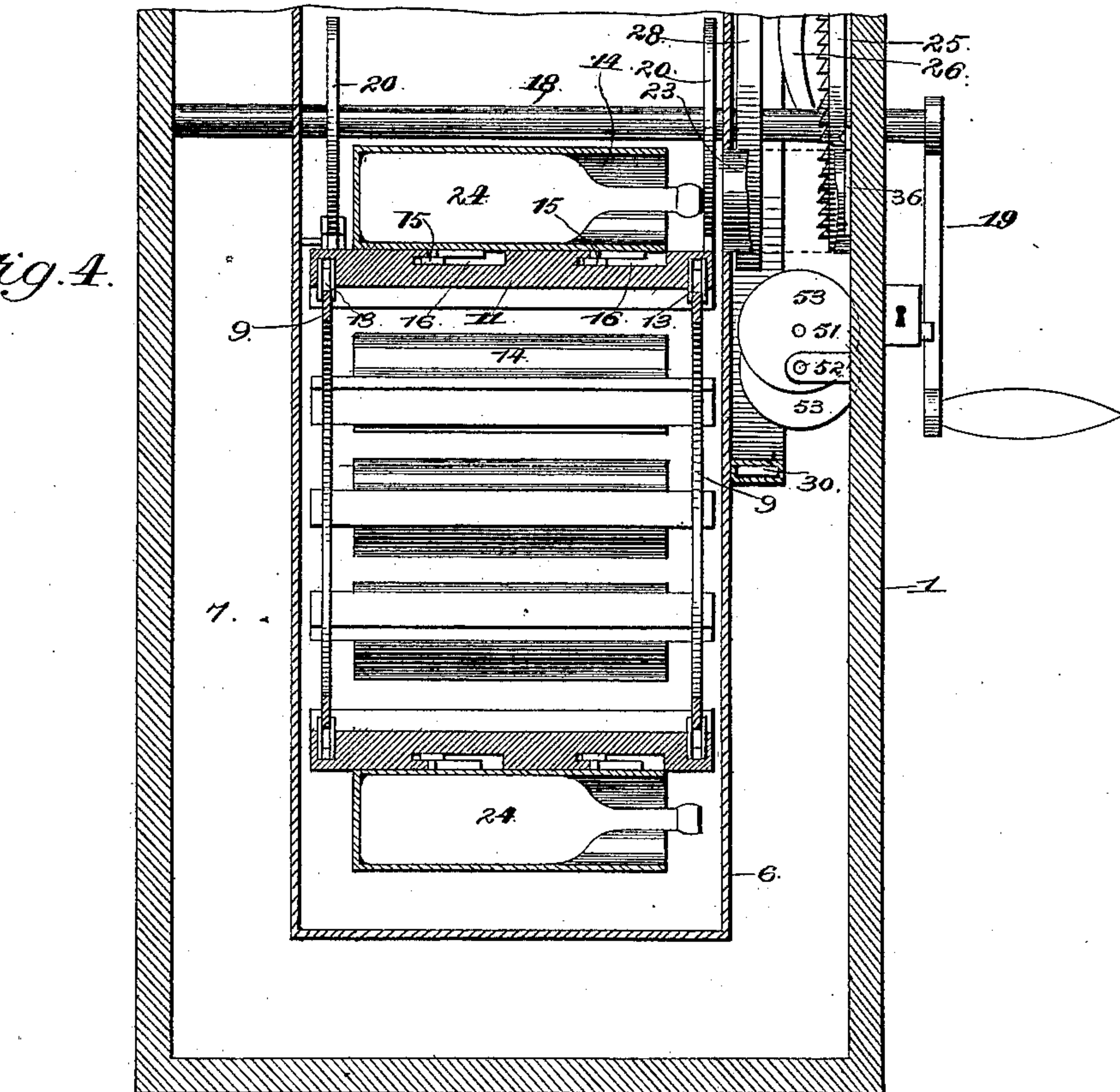
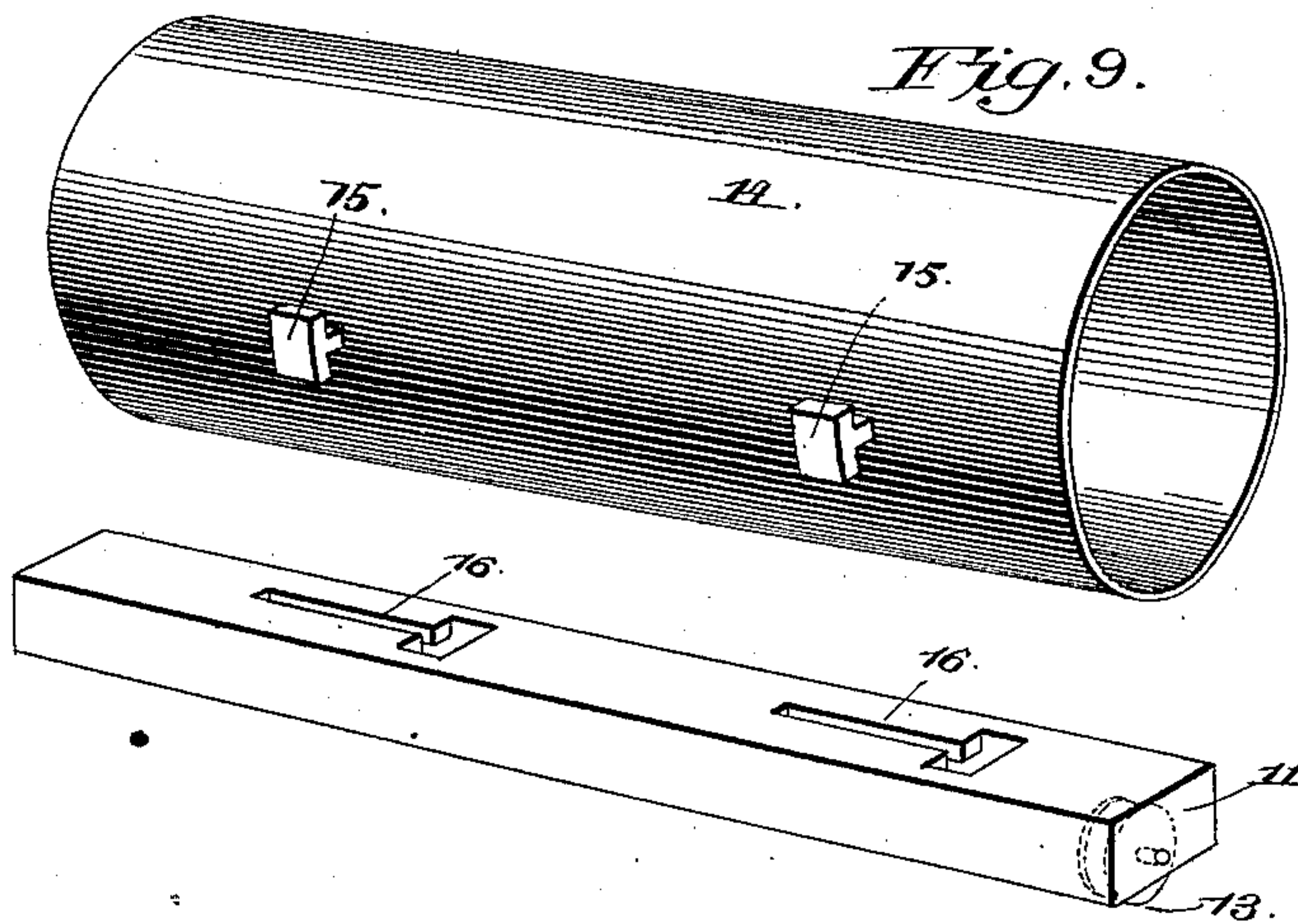


Fig. 9.



Witnesses

*E. M. Statler*  
*R. J. Marshall*

By his Attorneys,

Inventor

*Ellsworth M. Statler*

*C. A. Snow & Co.*



# UNITED STATES PATENT OFFICE.

ELLSWORTH M. STATLER, OF WHEELING, WEST VIRGINIA.

## BOTTLE-VENDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 427,806, dated May 13, 1890.

Application filed October 5, 1889. Serial No. 326,092. (No model.)

*To all whom it may concern:*

Be it known that I, ELLSWORTH M. STATLER, a citizen of the United States, residing at Wheeling, in the county of Ohio and State of West Virginia, have invented a new and useful Bottle-Vending Machine, of which the following is a specification.

This invention has relation to vending apparatus, and is especially adapted for the vending of bottled beer or other articles similar thereto; and among the objects in view is to provide an apparatus capable of storing and delivering successively the articles to be vended, the mechanism of which is to be operated by a coin of proper denomination.

A further object of the invention is to provide for a secure locking of the apparatus and to prevent operations thereof by fraudulent means, and to register the number of articles delivered therefrom.

With these general main objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a front elevation of a vending apparatus constructed in accordance with my invention, the lower front wall of the outer casing and the front wall of the inner casing being removed. Fig. 2 is a similar view showing the coin-slot and releasing-pawl and with a portion of the front wall only removed. Fig. 2<sup>a</sup> is an enlarged detail in longitudinal section of a portion of the coin-passage and one of the gravity-gates. Fig. 3 is a front elevation of the machine, the upper portion being removed. Fig. 4 is a vertical section on the line *xx* of Fig. 1. Fig. 5 is a similar view on the line *yy* of Fig. 1. Fig. 6 is a detail in rear elevation of the discharge-gate, its locking and unlocking mechanism. Fig. 7 is a vertical section on the line *zz* of Fig. 3. Fig. 8 is a rear elevation of a portion of the same. Fig. 9 is a detail in perspective of one of the bottle-cases and its supporting-strip.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing my invention I may form the casing of the apparatus in any desired shape best adapted for the articles vended or for the accommodation of the mechanism hereinafter described. In this instance, wherein I

desire to adapt the apparatus for the vending of bottled beer, the casing is divided into an upper and a lower compartment, the upper compartment 1 being designed for use as an ice-chamber and the lower compartment 2 isolated therefrom and designed for the accommodation of the goods and the vending mechanism. The ice-chamber is subdivided, forming compartments 3 at each end of the casing, to which access is had by means of lids 4, formed in the top of the casing, and between the compartments there is formed a cold-air chamber for the storing of other articles, or it may be for a fresh supply of beer to be employed to refill the vending apparatus when the supply in the lower compartment has been exhausted, and thus cold beer is always on hand for refilling purposes, and at the time that the lower compartment is refilled, and the upper compartment consequently wholly or partially emptied for the purpose, said upper compartment may be refilled, and so on, as will be readily understood.

6 represents an inner and preferably metallic casing depending within the outer casing and somewhat smaller in size, so that an air chamber or passage 7 surrounds the inner casing. Within the inner casing, and in this instance supported by diagonally-opposite standards 8, there is mounted an endless elliptical pair of tracks 9, a track being located near the front and rear walls of the metallic casing, and the tracks being parallel with each other. Mounted upon the tracks and completely encircling the same is an endless carrier 10, which comprises a series of alternately-arranged and transversely-disposed strips and links 11 and 12, (see Figs. 1, 4, and 9,) connected and forming an endless carrier. The strips 11 are provided at their opposite ends with grooved rollers 13, each of which is adapted to fit one of the tracks, and upon each of the strips there is mounted in this instance a cylindrical open-ended bottle-case 14, the case being provided with a pair of downwardly-projecting T-shaped lugs 15, designed to removably interlock with a corresponding pair of T-shaped recesses or grooves 16, formed in the strip. It will be apparent that other means than those described may be substituted for fastening the bottle-cases upon the strips, and that the bottle-cases may



be omitted entirely and other forms of devices substituted therefor, all in accordance with the nature of the articles to be vended.

18 represents a transverse shaft extending through the outer and inner cases and projecting beyond the front of the outer case, and there provided with an operating crank or handle 19. Upon the shaft 18, near the walls of the inner case 6 and at each side of the bottle-cases, there is mounted a front and rear cam-shaped feed-wheel 20, the cam 21 of which is adapted to take in the rear or to one side of the strips 11, and thus feed the carrier bottle by bottle or strip by strip.

22 represents a locking-pawl pivoted to the side of the inner case, the rear end of the pawl extending into the path of and adapted to be struck by the cam-face 21 and tilted, and the front end consequently raised from in front of and out of the path of a strip located in front of the same.

23 represents a cylindrical passage communicating with the inner casing 6 and with an opening of corresponding shape and size formed in the front wall of the outer casing, said cylindrical passage being of sufficient size to permit of the insertion of the hand and withdrawal of a bottle 24, registering therewith.

25 represents a wheel mounted on the shaft 18, the face of the wheel being provided with ratchet-teeth, in which there normally lies a gravity locking-pawl 26, pivoted in brackets 27, extending from the wall of the casing, which pawl prevents a wrong rotation of the shaft 18 by the crank 19, and yet permits of a proper rotation of the shaft through the medium of the crank under circumstances hereinafter described.

28 represents the locking-wheel, mounted rigidly upon the shaft 18 in rear of the wheel 25, and from the periphery of said wheel there projects a lug 29.

30 represents the coin-channel, the mouth of which for the reception of the coin may be located at any suitable point in the outer casing, and the opposite end of said channel may lead to any suitable and secure receptacle for the coin. At intervals throughout the channel are pivotally mounted at one side thereof loose gravity-gates 31, offering no obstruction to the downward passage of the coin, but designed to be engaged by the coin in any attempt of withdrawal, and thus close the gate, breaking the string or other device by which the coin may be connected.

32 represents a pawl pivoted, as at 33, to the case, the lower end of the pawl extending into the coin-passage 30 and into the path the coin must travel, and the upper end of said pawl being weighted and designed to normally engage with a notch 34, formed in the wheel 28, and adapted to be counterbalanced by the weight of a coin of proper denomination and disengaged from the notch 34 and thrown against a guide 35.

Referring more particularly to Figs. 2 and 6,

36 represents a gate adapted to close the cylindrical passage 23, said gate being pivoted, as at 37, to the inner surface of the front wall of the outer case. The free edge, or that end of the gate opposite its pivot-point, is provided with a recess 38, designed to be engaged by a lug 39, extending from the periphery of the wheel 25, whereby by the rotation of the wheel the gate is uncovered. 40 represents a pivoted gravity-pawl, the front end of which meshes with any one of a series of teeth 41, formed on the edge of the gate 36 and below the recess 38. The rear or weighted end of the pawl 40, when the pawl is in a locked position, rests against a stop-pin 42 and projects into the circular path traveled by the lug 39, so that it will be apparent that the wheel 25, traveling in the path indicated by the arrow, will first strike the pawl 40, thus unlocking the same from engagement with the gate 36, will pass by said pawl, and take into the recess 38, carrying the gate upward and from over the cylindrical passage 23, and permitting the introduction into said passage of the hand of the operator or buyer. As shown in Fig. 6, the rear face of the gate 36 is also provided with a rack or series of teeth 43, and, as will also be seen in Fig. 7, there is pivoted upon the side of the cylindrical passage, as at 44, a pawl 45, the end of which normally lies in the path of the teeth 43, so that when the gate is raised one of said teeth is engaged by the pawl, and thus the gate is supported during the withdrawal of the purchased article.

As shown in Figs. 5 and 7, there is mounted upon the upper end of the cylindrical sleeve 23 a bracket 46, and mounted for vertical reciprocation within the bracket is a bolt 48, the lower end of which is chamfered and projects downward through an opening in the casing and into the same. A spring 49 maintains the bolt at a proper elevation, and from the bolt there projects laterally a pawl-supporting bar 50, which is designed to support the pawl 45, as shown, and in the path of the teeth 43. A bottle withdrawn through the passage 23, it will be apparent, comes in contact with the chamfered end of the spring-bolt 47 and raises the same against the tension of its spring, and consequently raises the pawl 45 out of engagement with the gate, and thus permits the same to fall by gravity after a withdrawal of the article, and thus close the passage, in which position it is relocked by the gravity-pawl 40 engaging the teeth 41.

The above operation takes place or is permitted by the introduction in the coin-passage of a coin of a certain denomination and consequent weight. The lever 32, it will be understood, is withdrawn from engagement with the notch 34 and thrown over upon the guide 35. The crank, it will be apparent, may now be revolved one revolution, during which the operation described with relation to the unlocking and locking of the gate 36 takes place, and it will also be apparent that as the



crank is revolved the cam 21 serves to feed the carrier 10, one step bringing a fresh bottle, or what might be more properly termed a "filled case" 14, opposite the cylindrical passage 23. After the lever 32 has been disengaged from the notch 34 the lug 29, coming in contact with the upper end of the same, serves to throw the lever over to a locking position to again engage said notch 34 and lock the crank against rotation to the right, the holding-pawl 26 serving to lock the crank against a rotation to the left.

The operation of the device by the introduction of a coin will be readily understood from the above description, and I will now refer to a mechanism constructed to register the withdrawal of each bottle or article sold, and consequently indicate accurately the amount of money that should be contained in the apparatus from the sale of the stores.

51 and 52 represent two shafts mounted vertically opposite each other and directly under the cylindrical passage 23, and upon each of said shafts are mounted numbered disks 53. The shaft 51 is provided with a ratchet-wheel 54 and with a small gear 55, rigid with the wheel, which is also rigid with the disk 53, said gear meshing with a gear 56, rigid with the lower indicating-disk 53, both of said disks being opposite a sight-opening 57, formed in the front wall of the outer case. A bracket 59 is secured to the under surface of the cylindrical passage 23, and mounted for vertical reciprocation in the same is a bolt 60, the upper end of which projects into the passage 23, and the lower end of which engages the ratchet 54 and is sustained in its engagement by means of a spring 61. By this it will be apparent that in the act of withdrawing a bottle or other articles to be vended, of a size approximating that of the cylindrical passage, said spring-bolt 60 will be depressed and in its depression will operate the ratchet 54 one tooth, and when released will be again raised by the spring and engage the next succeeding tooth of the wheel. By a proper proportioning of the ratchet-teeth and the pinions, as is commonly accomplished in registers of various descriptions, it will be apparent that the entire revolution of the upper disk 53 will operate the lower disk one notch or step, and in this manner, the upper disk being the units-disk and the lower disk the tens-disk, or by any other relative proportioning and numbering, it will be apparent that the disks will display an accurate total of the number of times the apparatus has been operated, and consequently the number of coins will be apparent.

Having thus described my invention, what I claim is—

1. In a vending apparatus, the combination, with opposite tracks, of an endless carrier comprising in its make-up a series of transverse strips provided with article-receiving holders and with rollers mounted on the tracks, substantially as specified.

2. In a vending apparatus, the combination, with opposite elliptical parallel tracks, of a series of transverse strips, each provided with an article-receiving holder having opposite rollers engaging the track, and intermediate links connecting the strips and forming an endless carrier, substantially as specified.

3. In a vending apparatus, the combination, with a casing provided with an opening, of opposite endless elliptical tracks, an endless carrier mounted thereon, article-holders mounted on the carrier, and means for moving the carrier intermittently to bring the holders successively into register with the opening, substantially as specified.

4. In a vending apparatus, the combination, with an inner and an outer casing provided with aligning openings and opposite elliptical tracks located in said inner case, of an endless carrier mounted for movement on the tracks and provided at intervals with article-holders, and means for intermittently moving the carrier, whereby the holders are successively brought into alignment with the aligning openings, substantially as specified.

5. In a vending apparatus, the combination, with opposite tracks and a series of connected transverse strips mounted on the track, of a cam-wheel mounted above the strips and having a cam adapted to engage and move the series of strips at each revolution of the wheel, substantially as specified.

6. In a vending apparatus, opposite tracks and a series of connected transverse strips mounted on the tracks, in combination with a gravity locking-pawl pivoted above the strips and having its front end lying normally in the path of said strips, and a wheel located above the strips and having a cam adapted to successively move the strips and to strike the rear end of the gravity-pawl and withdraw the same from the path of the strips and subsequently come into contact with and move the strips, substantially as specified.

7. In a vending apparatus, a carrier comprising a series of strips having T-shaped recesses, in combination with a series of cylindrical bottle-cases having T-shaped lugs for removably engaging the recesses, substantially as specified.

8. In a vending apparatus, the combination, with an outer casing having a discharge-opening, of the inner fixed casing spaced from the outer casing and provided with a similar aligning discharge-opening, a cylindrical opening connecting the two, a carrier mounted in the inner casing and provided with bottle-receiving cases, and means for successively feeding the cases opposite the tube, substantially as specified.

9. In a vending apparatus, a coin-slot provided with a pivoted gravity-gate located below the entrance thereto and a stop for the gate, substantially as specified.

10. In a vending apparatus, a wheel provided with a peripheral notch and a lug, and means for rotating the wheel, in combination



with a weighted lever normally engaging the notch and arranged in the path of the lug, a coin-passage having an opening for receiving the opposite end of the lever, and a stop arranged at one side of the lever, substantially as specified.

11. In a vending apparatus, the combination, with the operating-shaft and wheel provided with a projecting lug and upon one of its faces with a series of teeth, of a locking-lever adapted to normally engage the teeth and prevent a backward rotation of the wheel, and a pivoted gate having a notch engaged by the lug of the wheel, whereby said gates may be raised by a partial rotation of the wheel, substantially as specified.

12. In a vending apparatus, the combination, with the casing having an opening, of a gate pivoted over the opening and provided with teeth, a gravity-pawl for engaging the teeth and locking the gate against rising, and a wheel having a lug adapted to come into contact with and oscillate the lever out of engagement with the teeth and elevate the gate, substantially as specified.

13. The combination, with the pivoted gate provided with a notched free end and with a series of teeth, of a weighted lever normally locking with the teeth, and a wheel having an outwardly-projecting lug adapted to come into contact with the lever and withdraw the same from mesh with the teeth, release the same, and take into the notch of the gate, and thus elevate the same, substantially as specified.

14. In a vending apparatus, the combination, with a pivoted gate having one of its faces provided with teeth and its free end

with a notch, and a rotatable wheel having a lug for engaging the notch, and means for rotating the wheel for raising the gate, of a pivoted pawl for engaging the teeth on the gate and supporting the same in a raised position, and means for liberating the pawl from mesh with the gate, substantially as specified.

15. In a vending apparatus, the combination, with the case having a front wall provided with an opening and a discharge-passage communicating therewith, of a gate mounted for movement between said wall and the end of the passage, means for raising the gate, a spring-bolt mounted in the passage and terminating within the same, and a pawl pivoted in the passage and having its free end maintained by the bolt in the path of the gate, substantially as specified.

16. In a vending apparatus, the combination, with the casing provided with a front wall having an article-discharge opening and a sight-opening, and a passage leading from the discharge-opening, of a spring-pressed bolt mounted in the passage and extending below the same, and register mechanism located opposite the sight-opening and provided with an actuating-ratchet, the teeth of which are in the path of the bolt, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ELLSWORTH M. STATLER.

Witnesses:

J. H. SIGGER,3,  
R. J. MARSHALL.