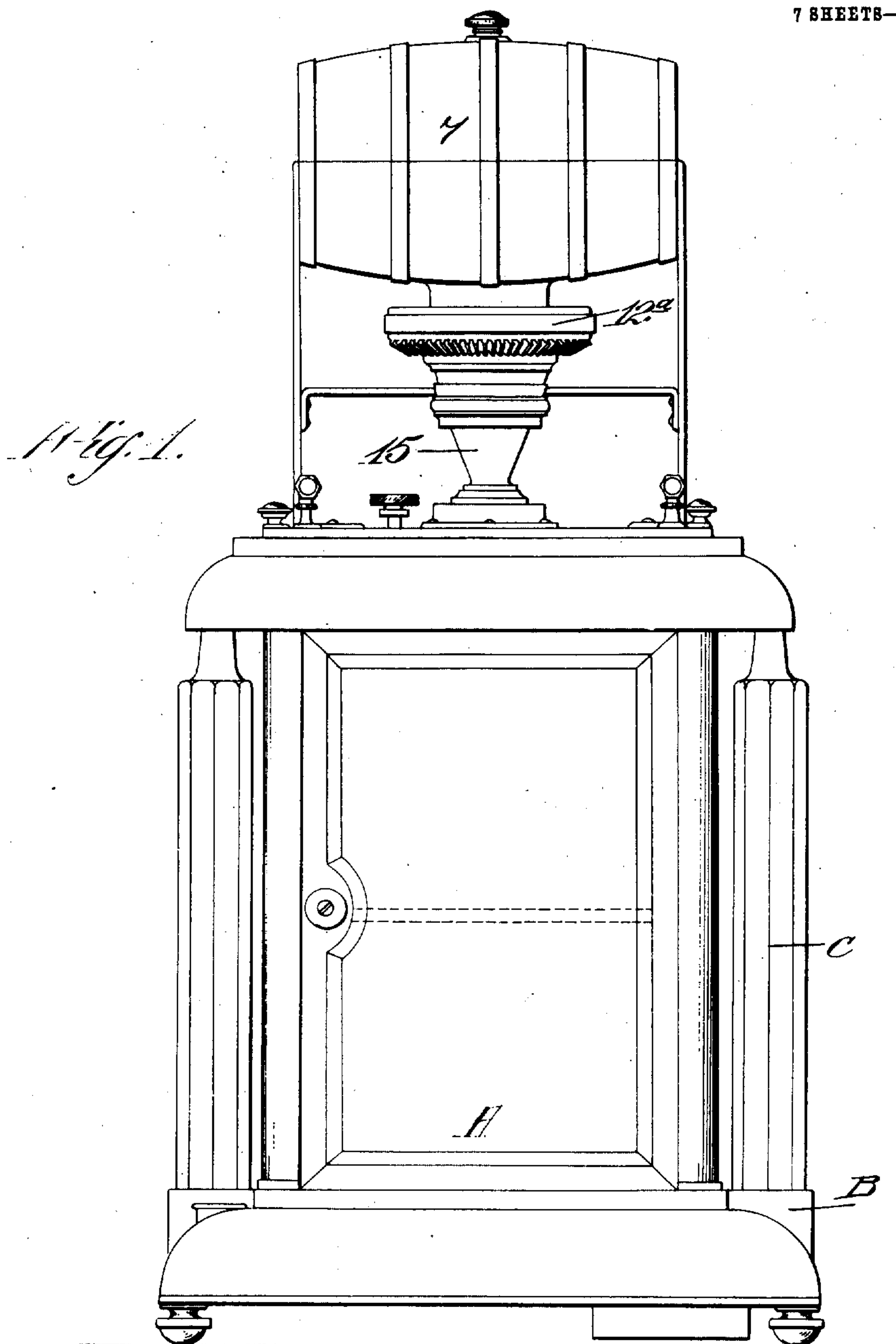


J. KRIWANEK.
POUSSE CAFÉ MACHINE.
APPLICATION FILED OCT. 29, 1907.

903,203.

Patented Nov. 10, 1908.

7 SHEETS—SHEET 1.



Witnesses:
J. Casberg.
J. H. House

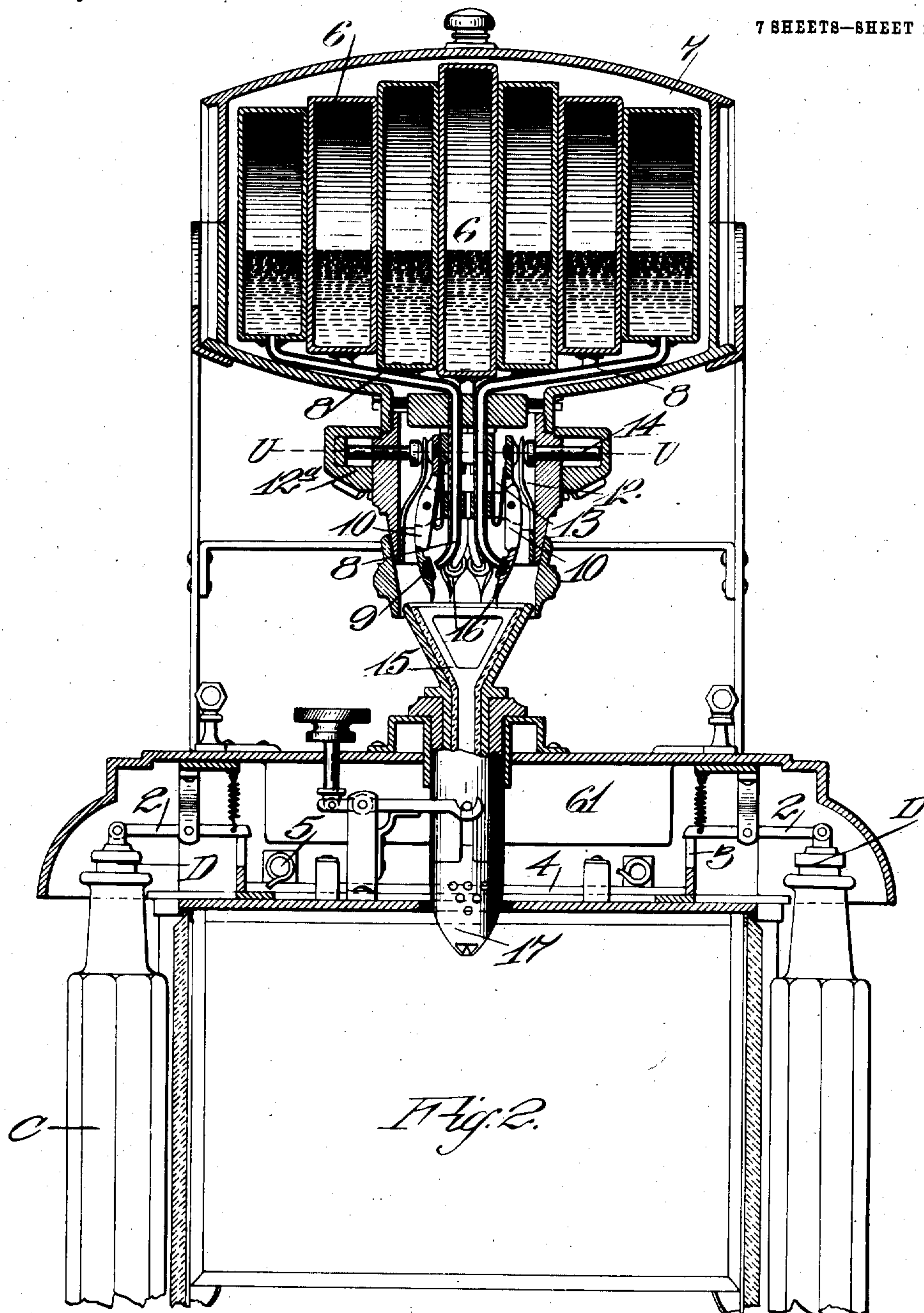
Inventor:
John Kriwanek.
By Geo. H. Strong. Atty.

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7 SHEETS—SHEET 2.



Witnesses.
J. H. H. H.
J. H. H. H.

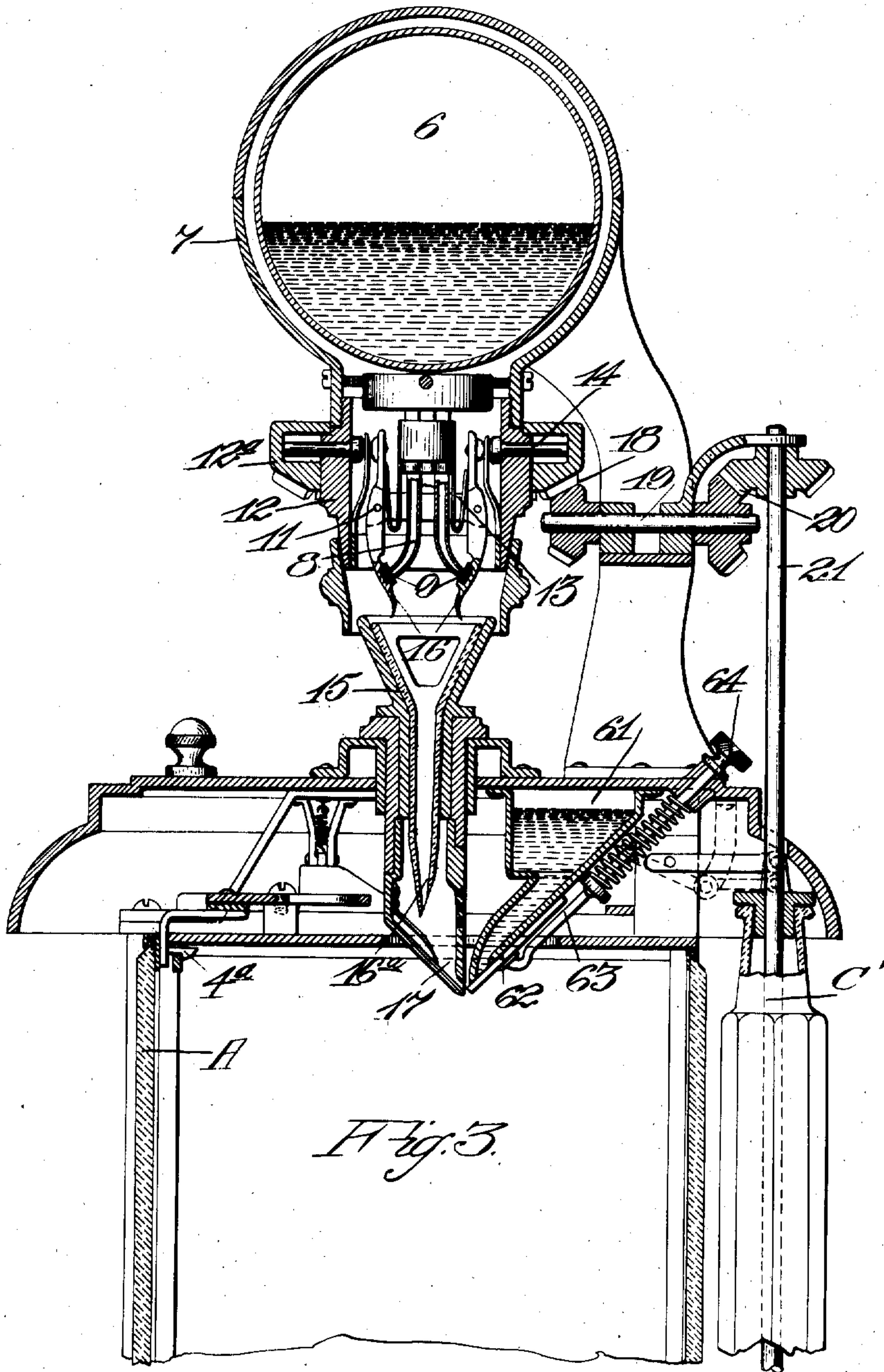
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7 SHEETS—SHEET 3.



Witnesses:
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7 SHEETS—SHEET 4.

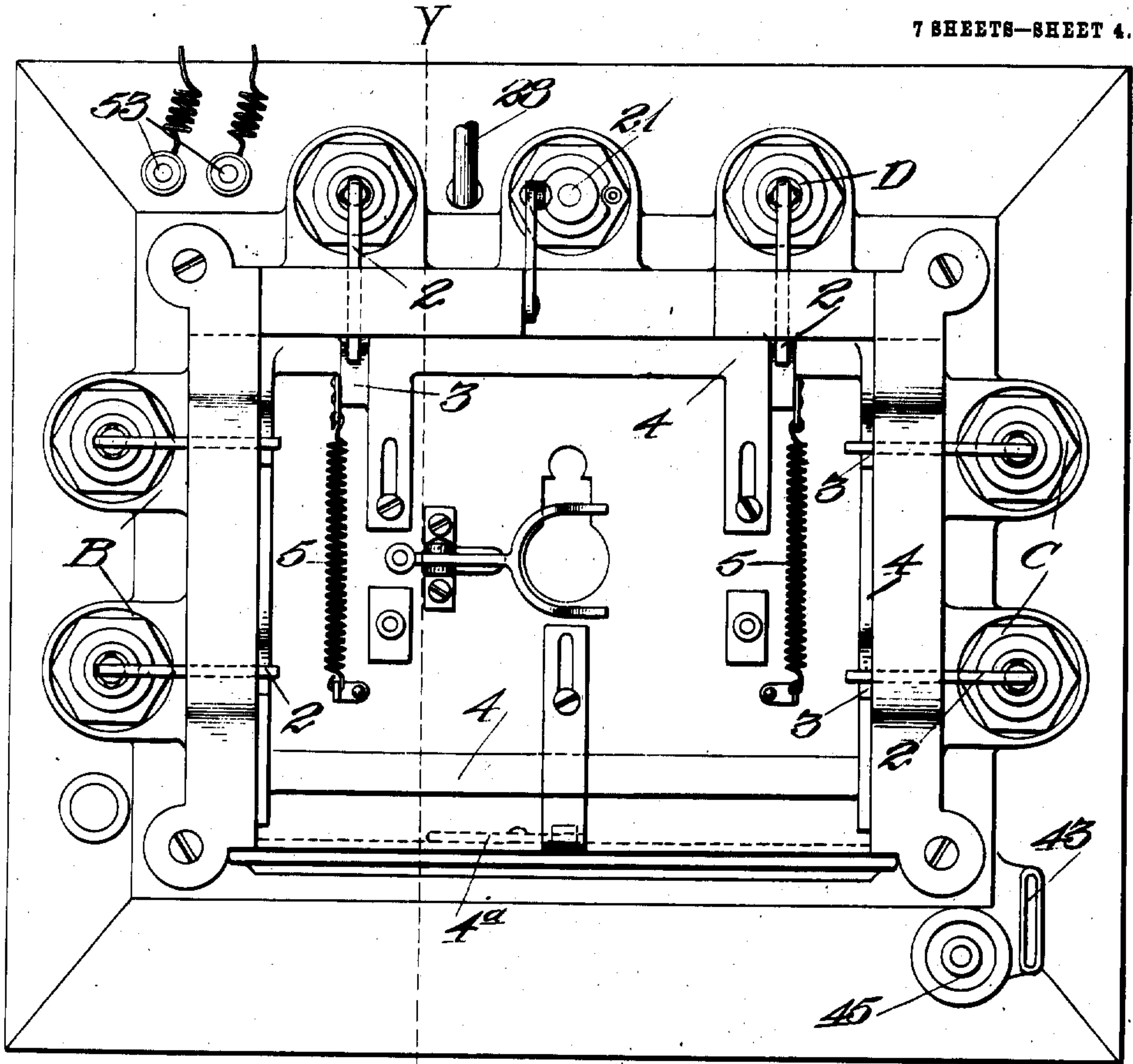


Fig. 4 Y

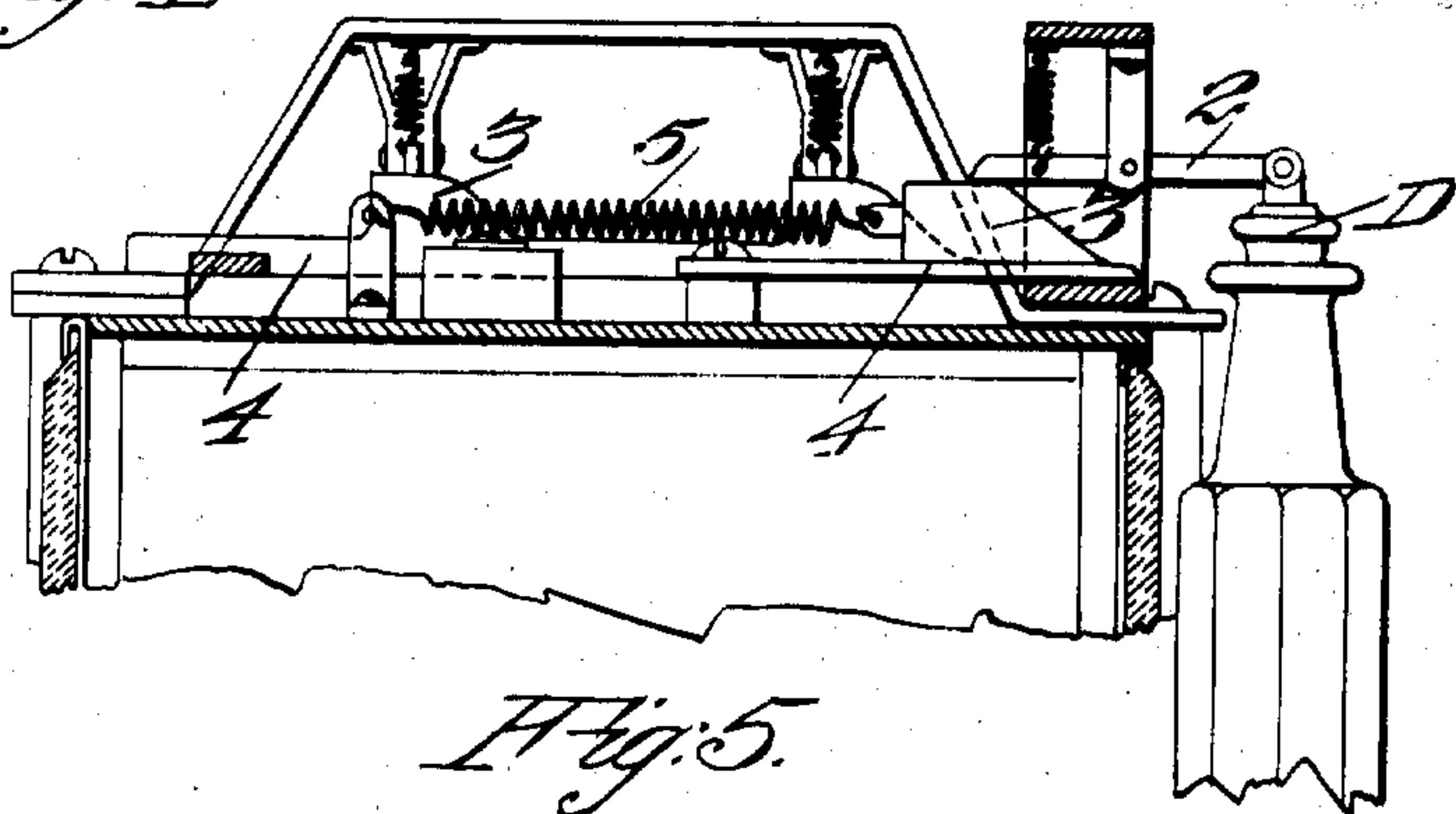


Fig. 5.

Witnesses.
J. Busberg
C. H. House

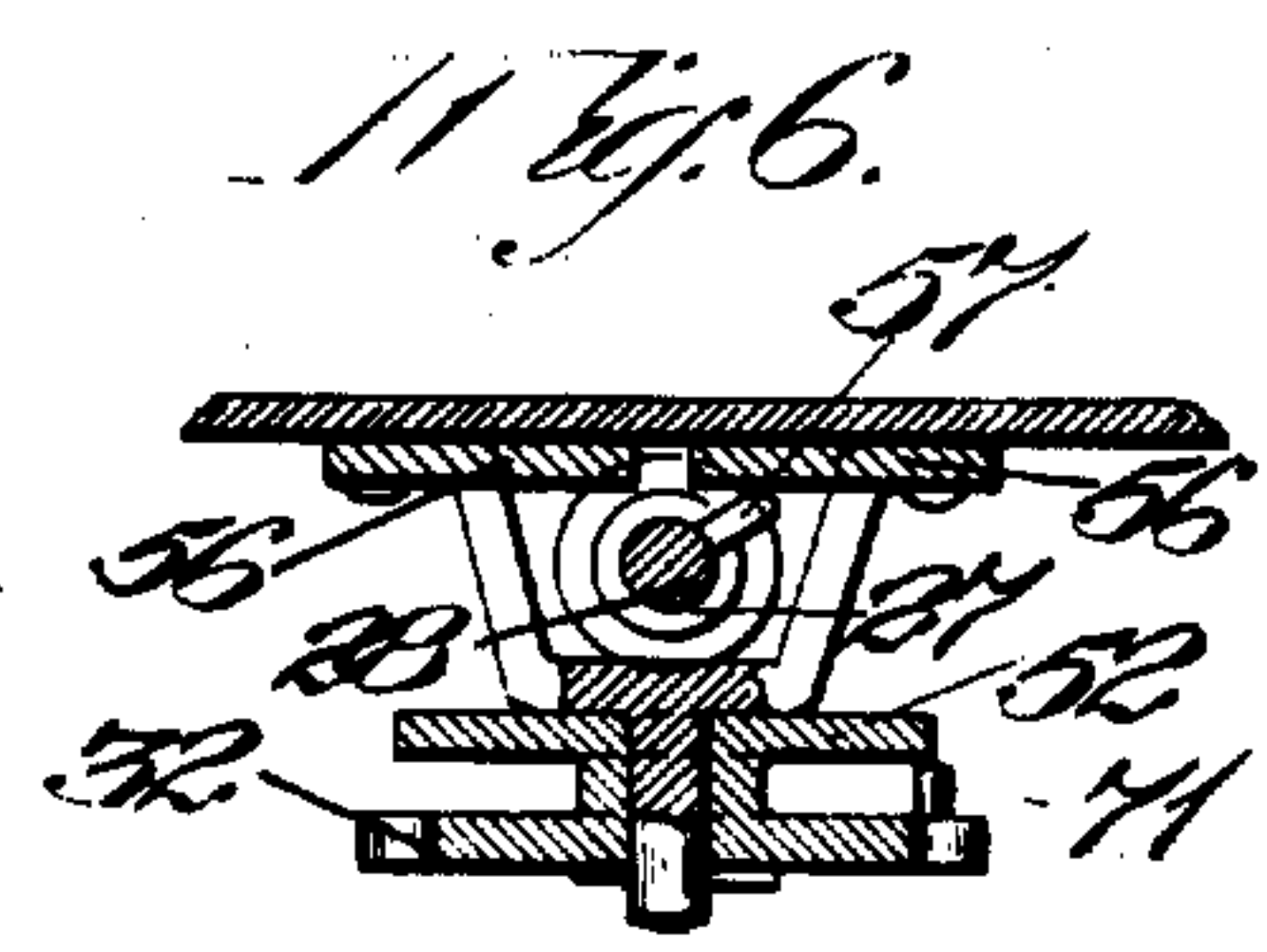
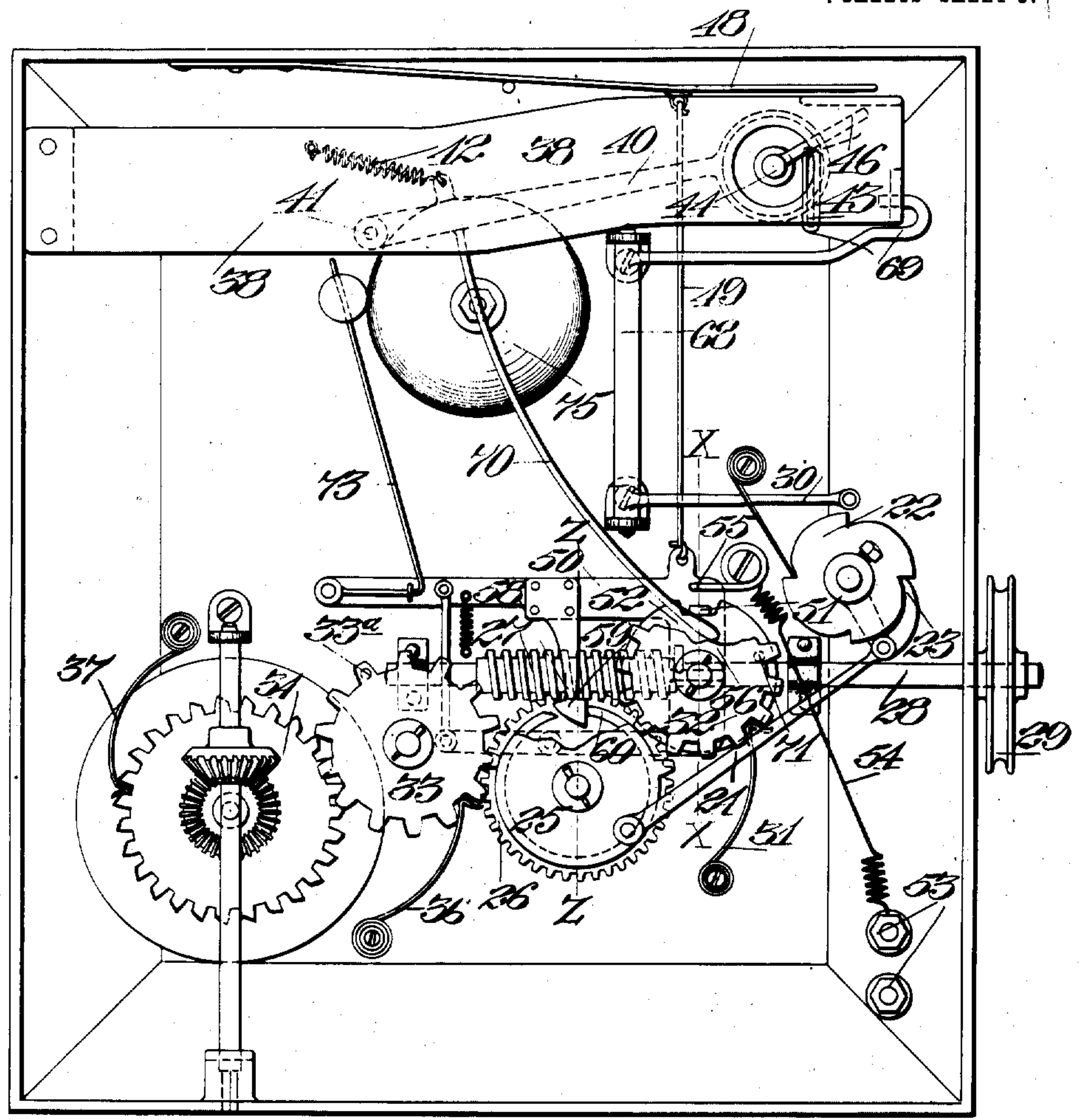
Inventor.
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POUSSE CAFÉ MACHINE.
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7 SHEETS—SHEET 5.



Witnesses.
E. Hasberg.
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Fig. 7.

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7 SHEETS—SHEET 6.

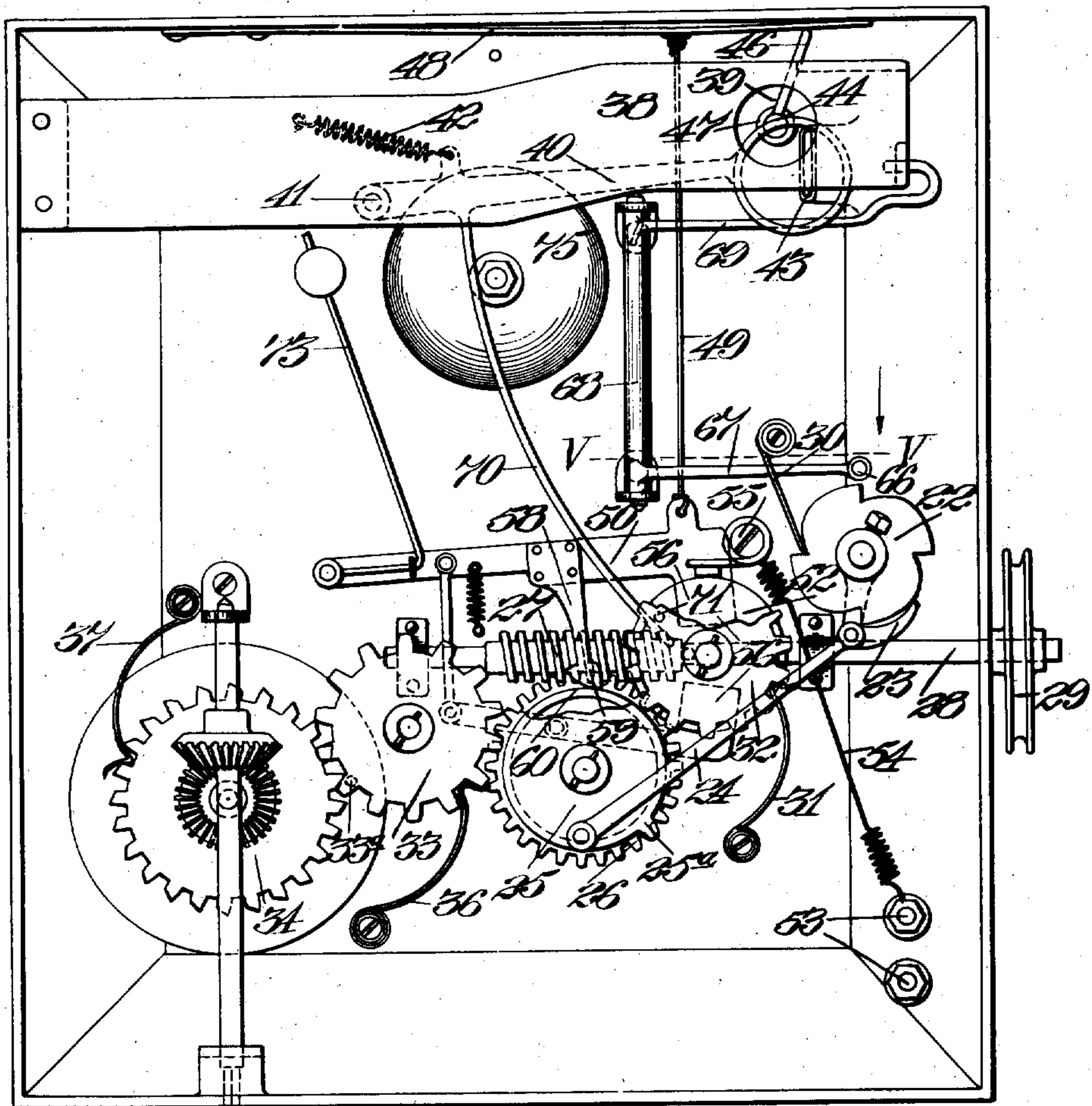


Fig. 8.

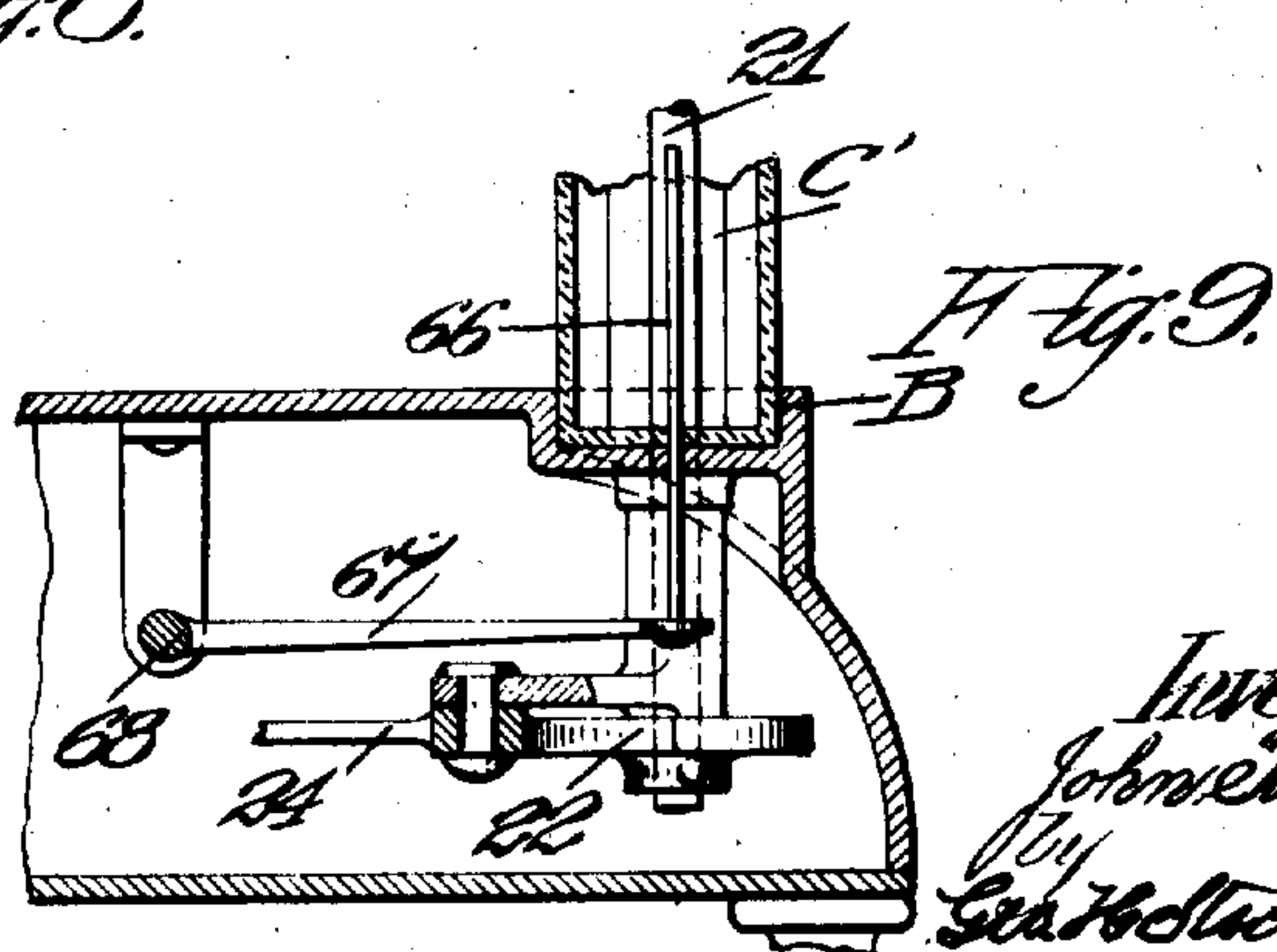


Fig. 9.

Witnesses:
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Geo. H. Kriwanek Atty.

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903,203.

Patented Nov. 10, 1908.

7 SHEETS—SHEET 7.

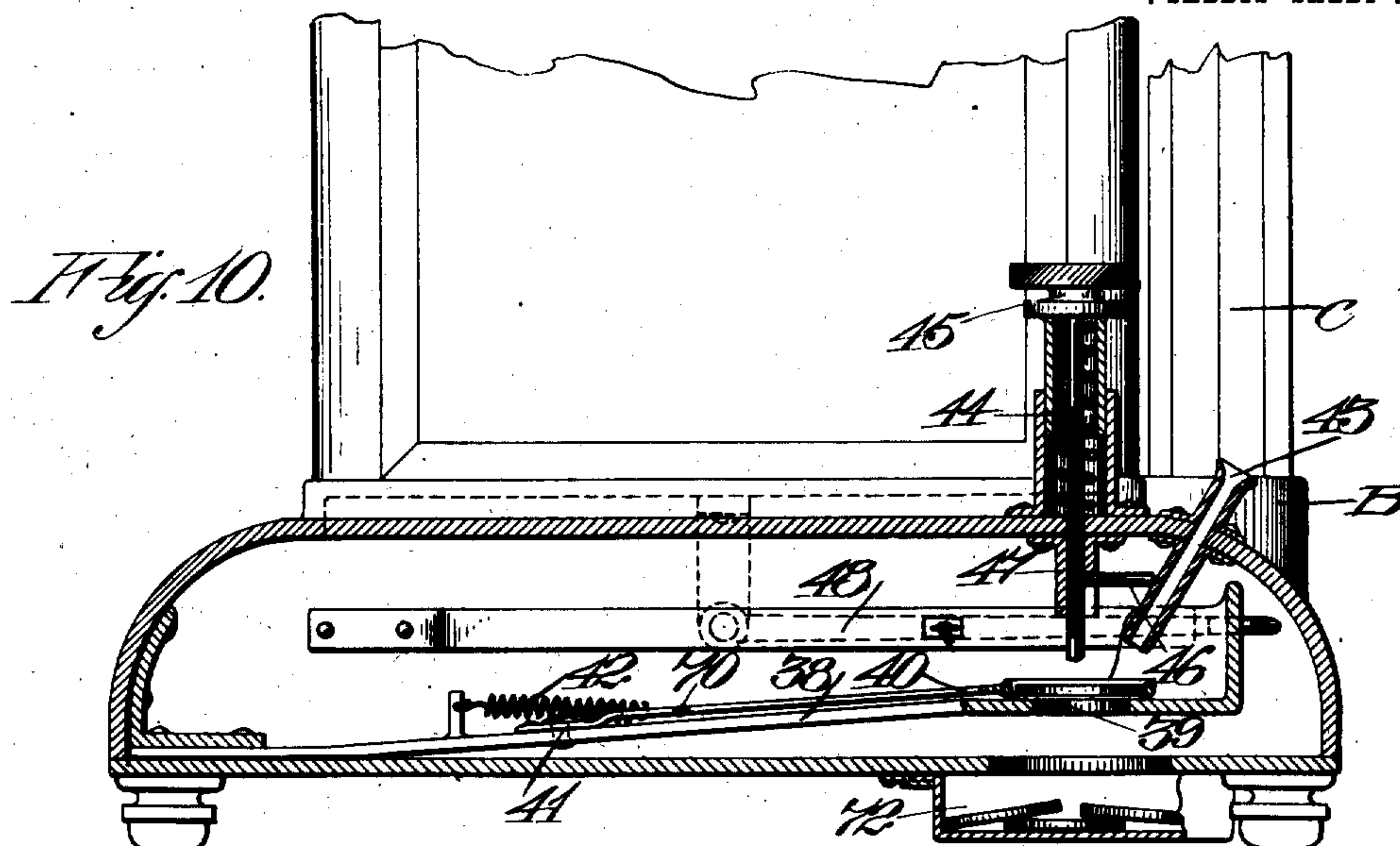


Fig. 11.

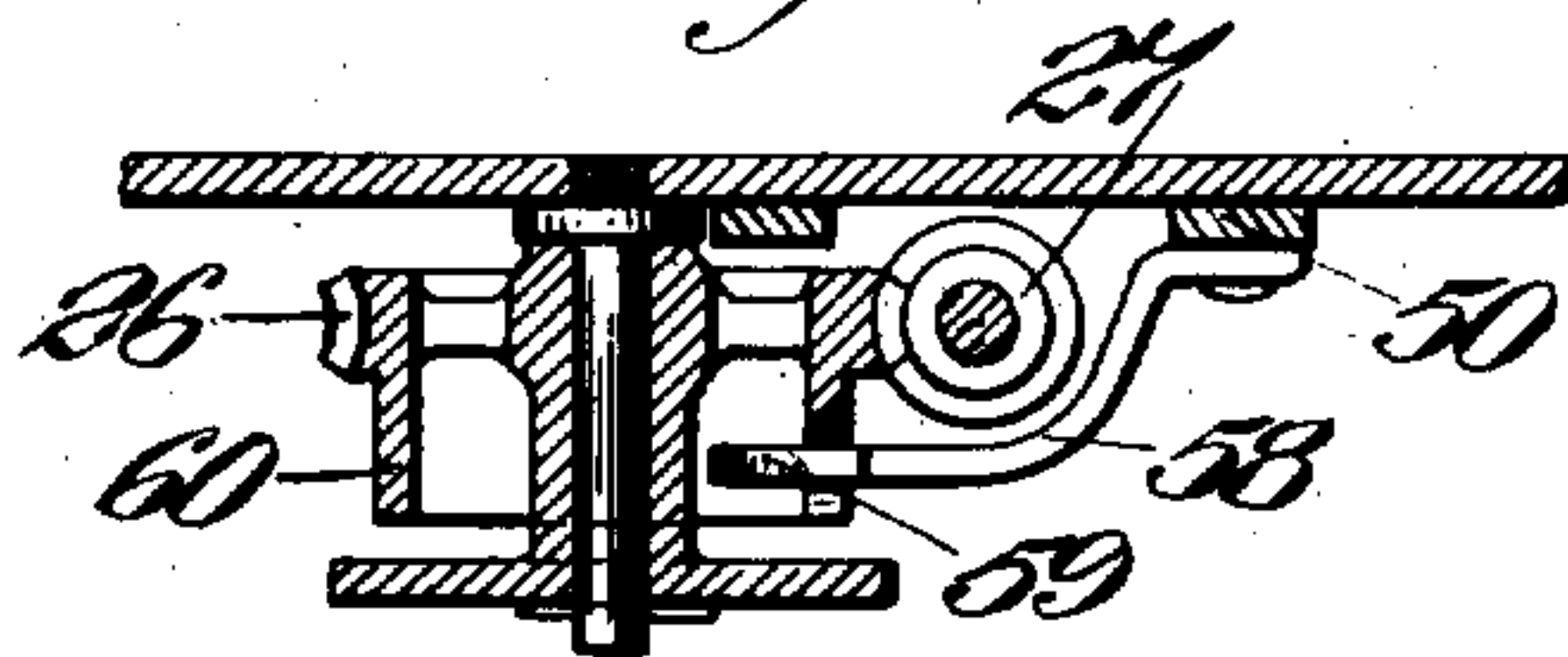


Fig. 13.

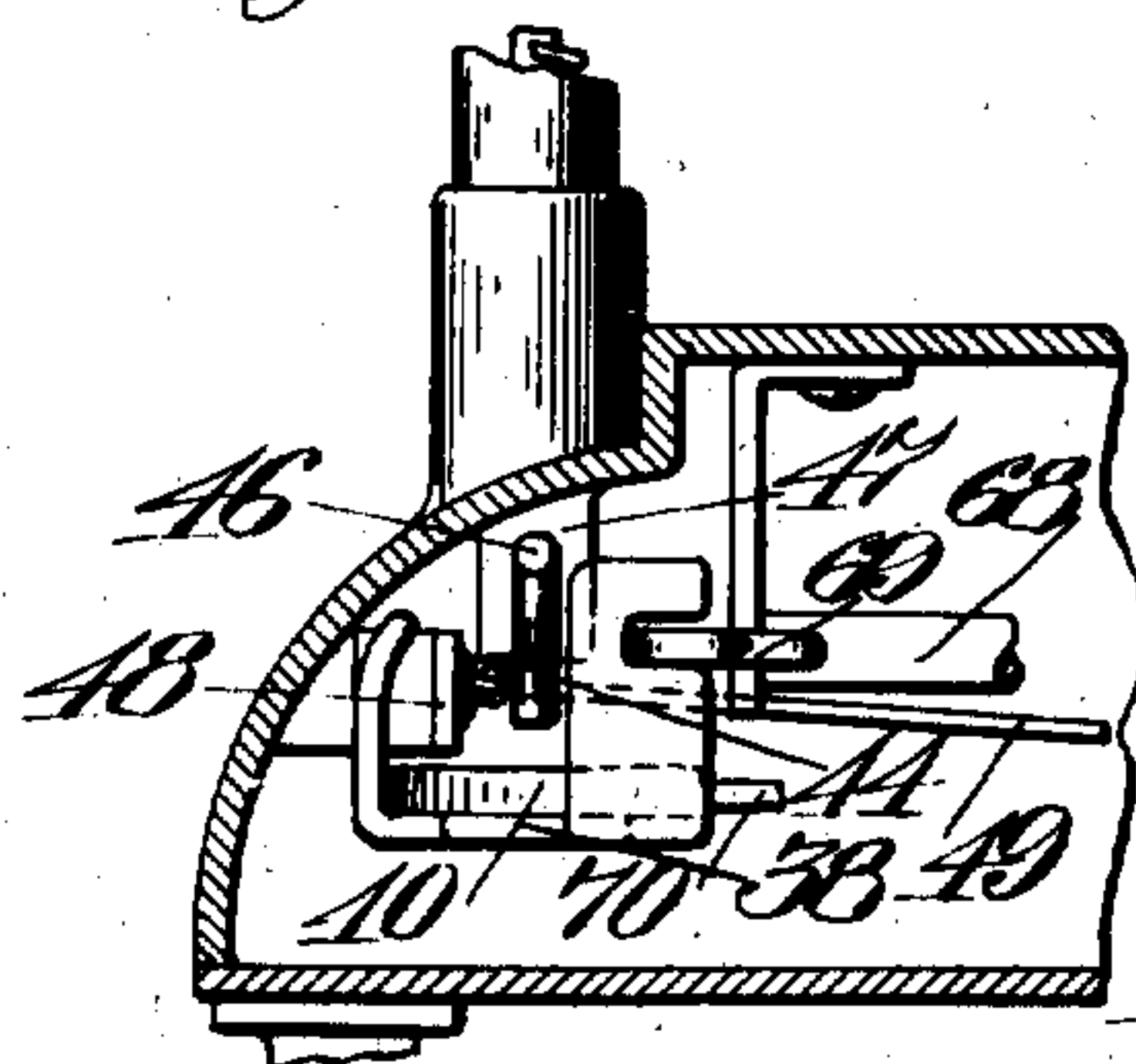


Fig. 12.

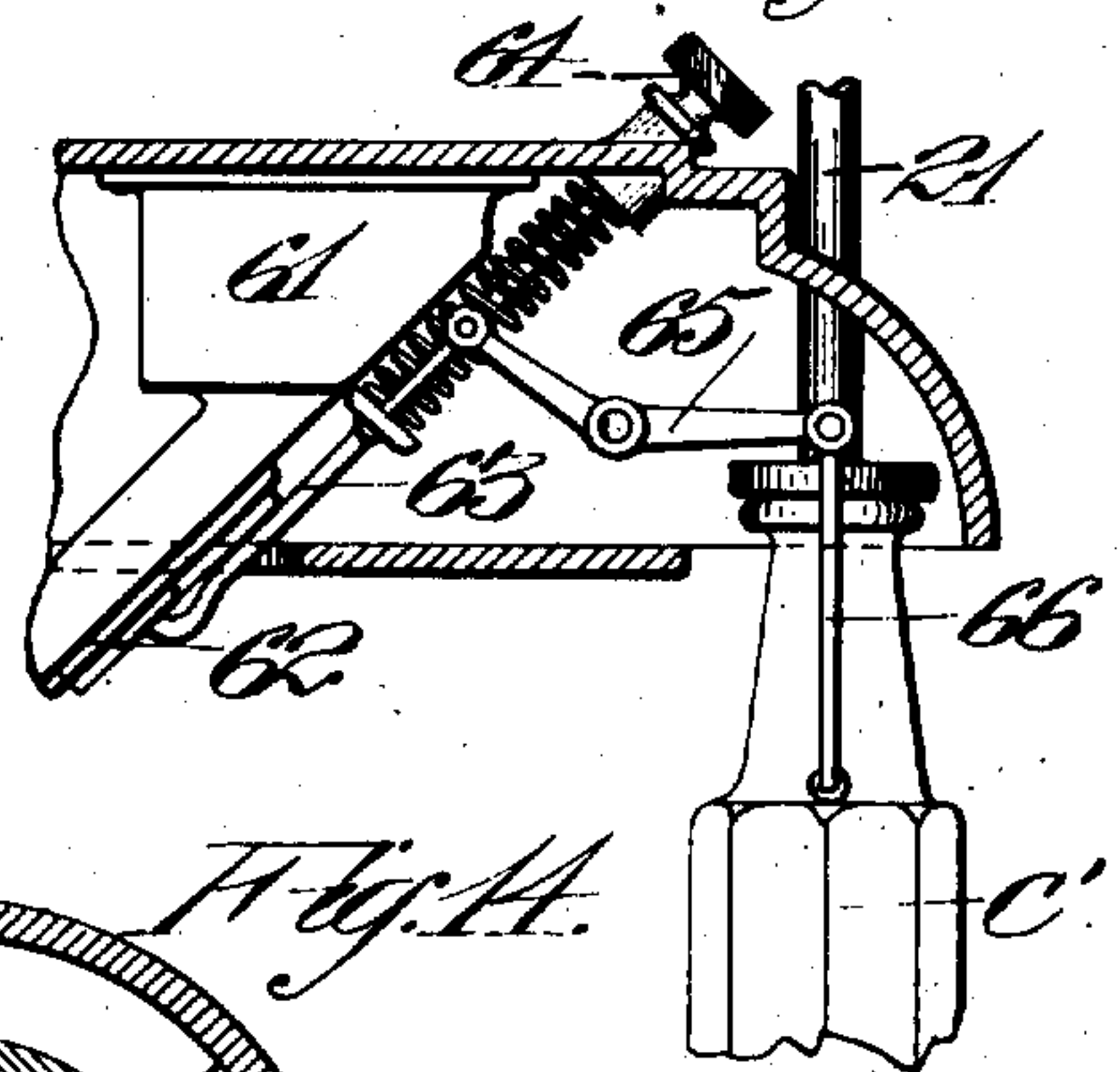
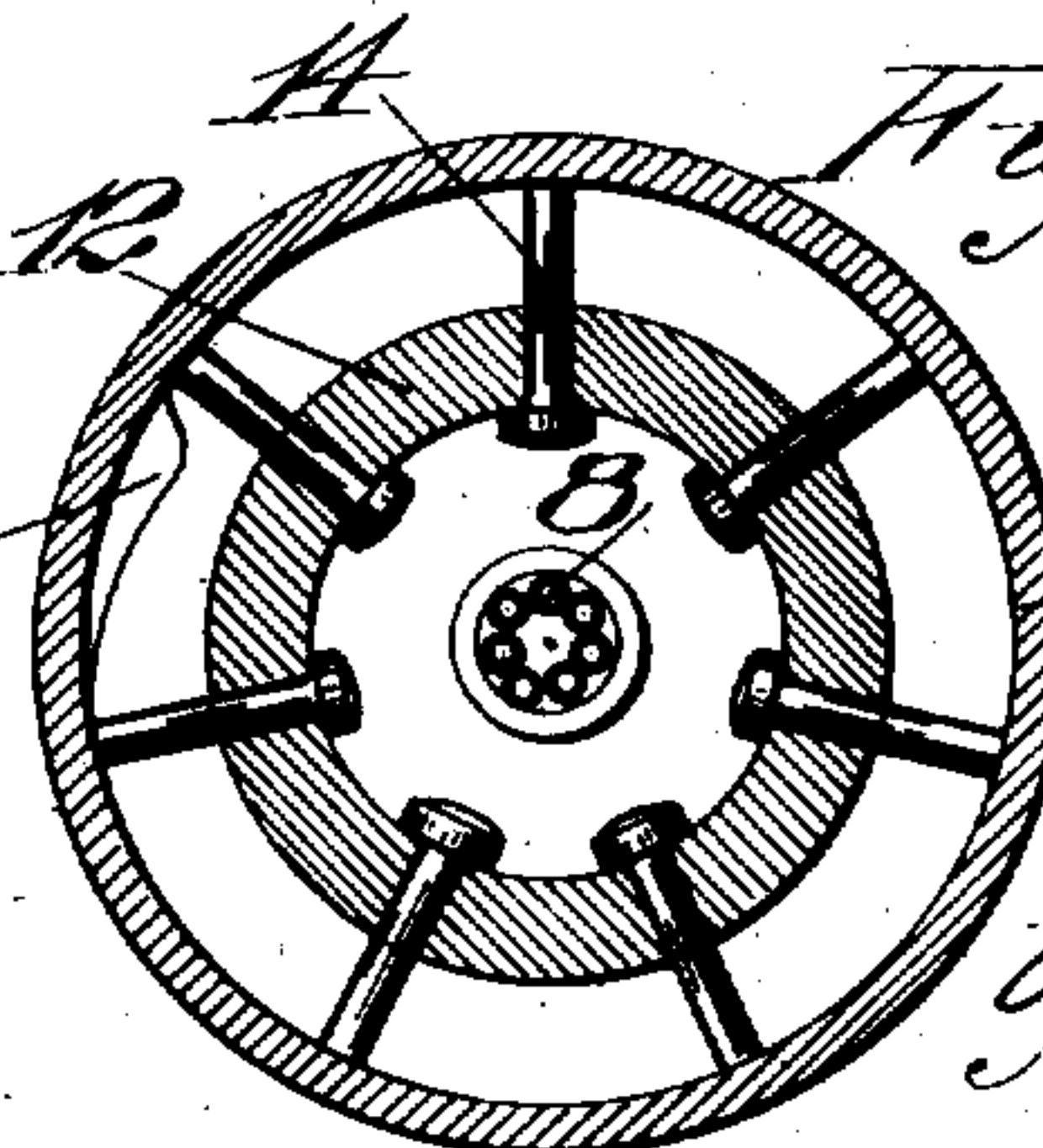


Fig. 14.



Witnesses:
J. H. Hestberg
J. H. Hestberg

Inventor:
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By Geo. D. Strong, Atty.

UNITED STATES PATENT OFFICE.

JOHN KRIWANЕК, OF SAN FRANCISCO, CALIFORNIA.

POUSSE-CAFÉ MACHINE.

No. 903,203.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed October 29, 1907. Serial No. 399,679.

To all whom it may concern:

Be it known that I, JOHN KRIWANЕК, citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Pousse-Café Machines, of which the following is a specification.

My invention relates to an apparatus which is especially designed for preparing after dinner drinks like "pousse café", which are prepared by superposed layers of different colored liqueurs or syrups.

It consists in the combination of parts, and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a front elevation of my machine. Fig. 2 is a vertical section of the top of the machine. Fig. 3 is a vertical section at right angles to Fig. 2. Fig. 4 is a plan view showing the bottle-stopper operating mechanism. Fig. 5 is a section on line Y—Y of Fig. 4. Fig. 6 is a bottom view showing the mechanism at the bottom. Fig. 7 is a section on line X—X of Fig. 6. Fig. 8 is a view similar to Fig. 6. Fig. 9 is a section on line V—V of Fig. 8. Fig. 10 is a vertical section of the lower part of the machine. Fig. 11 is a section on line Z—Z of Fig. 6. Fig. 12 is a side elevation of the upper part of the gum-tank valve-operating mechanism. Fig. 13 is an end view of the coin operating mechanism shown in Fig. 10. Fig. 14 is a section on line U—U of Fig. 2.

In carrying out my invention, I provide a series of receptacles, each of which contains a differently colored liqueur, these receptacles being carried in the upper part of a suitable frame-work or housing of ornamental structure; and beneath the receptacles is a space for the glass in which the drink is to be prepared. Valve controlled pipes or passages lead from each receptacle, and the mechanism is so contrived that one valve after another may be opened to deliver a stated amount of the contents of the particular receptacle into the glass, each remaining in its separate layer, and all being superposed from the bottom upward, to make an ornamental as well as palatable drink.

A coin controlled mechanism starts the apparatus, when desired, an indicator shows how many glasses have been drawn, and the whole may be driven by a motor or other suitable power installed for the purpose, the

movements of the apparatus being commenced when the coin is inserted, and ceasing when the glass has been filled.

The main structure A is here shown as a rectangular device having an ornamental, hollow, metallic base, within which the coin controlled and part of the operating mechanism is contained. The structure A has glass sides, and a hinged door upon one side through which, when opened, the glass may be introduced and placed centrally within the case. Around the sides of this case A are supports B for bottles C, which are made ornamental, and each contains one of the colored liqueurs which are to be employed, and from these bottles the working receptacles can be filled from time to time. These bottles are closed by stoppers D, which stoppers are suspended from the ends of levers 2 fulcrumed in the frame, the outer ends projecting so that the metal caps of the stoppers may be pivoted thereto, and the inner ends extending inwardly over the top of the case to such a point that they may be engaged by slidable cams 3 which are carried upon a yoke or frame 4, and this yoke or frame is suitably guided and slidable upon the upper part of the case, as shown. When the frame is moved into a certain position, the elevated portions of the cams 3 pass beneath the ends of the levers 2, and thus hold the stoppers within the bottles, so that the latter cannot be removed while this condition continues.

The sliding frame has a latch 4^a which normally holds it in the locking position, and this latch is so controlled that until it is released, the parts remain in the locked position previously described. In the present case, I have shown the latch located upon the side contiguous to the door, and when the door is closed the latch will be protected. When the door has been opened, the latching mechanism may be released to allow the yoke to slide so that the incline or cam surfaces will be disengaged from the levers 2, and will then allow the stoppers to be removed and the bottles to be taken out, as above described.

Springs 5 serve to impel the yoke in one direction, and it may be moved in the other direction by hand or other means.

The receptacles 6 for the different ingredients to be used may be cylindrical or any other suitable shape. In the present case I

have shown an outer containing case 7 in the resemblance of a cask. Each of the receptacles 6 has its independent pipe 8 leading toward a common center, and down into a conical or funnel-shaped discharge device below the casing 7, and within it these pipes are here shown with their mouths bent outwardly.

The mouth of each pipe is closable by a valve, as at 9. These valves are carried upon levers 10, which levers are fulcrumed, as shown at 11. The upper ends of these levers extend into a casing, as 12, and are normally closed by the pressure of springs 13 acting on the upper ends of these levers with sufficient pressure to normally close the valves 9 at the lower ends.

14 are pins slidable radially in the revolvable casing 12^a and having their inner ends contacting with the upper ends of the valve carrying levers 10. These pins are all radially arranged, as well shown in the section, Fig. 14. The inside of the casing 12^a has at one point the cam or raised portion 12^b, and this portion is so disposed with relation to the pins 14, that it successively contacts with each of the pins as they pass, and forces the pin contacted with, inwardly. This, acting upon the upper end of the spring-pressed lever arms 10, will force the upper ends inward, thus withdrawing the lower ends and the valves 9 successively. Thus, as the device is revolved, each of the valves being raised, a portion of the contents of each container will be allowed to pass through its pipe 8 and the valve, and drop into the directing funnel 15.

The tips of the valves from which the liqueur drops, are drawn to a point, as shown at 16. This prevents an undue drip, and directs it in a fine drop into the funnel 15; and the lower end of the funnel terminates in a similarly pointed or slender tip 16^a, through which the successive charges are delivered, and finally passing out through a nozzle 17, are delivered into the glass located beneath.

Motion is transmitted to revolve the cam device 12^a through bevel gears 18, one mounted upon the horizontally journaled shaft 19 carried upon a suitable standard or support in the upper part of the apparatus, and the other bevel gears 20 communicate motion to this shaft from a vertical shaft 21, upon which one of said last-named gears is fixed. This shaft 21 extends downwardly by the side of the case. In the present structure it is shown as passing down centrally through a bottle C', thence through the base into the interior thereof, where it has fixed to its lower end, a notched disk 22. A pawl 23 is mounted to turn about the center of the disk 22, and its point engages with the teeth upon the periphery of the disk. This pawl is connected by a rod or pitman 24

with a disk or wheel 25 mounted upon a shaft and turnable in unison with the gear wheel 26, this gear being driven by a worm or screw 27 upon a shaft 28, to which power is transmitted through a pulley 29, if the device is to be power driven; or it may be operated by hand, or other desired or suitable means. The motion thus transmitted to the wheel or disk 25 rotates it, and this transmits an intermittent rotary motion to the disk 22 through the connecting rod 24 on account of the reciprocating motion which is thus transmitted to the pawl 23, causing it to engage successive notches in the rim of the disk 22 and thus push the disk forward. A spring catch or latch 30 falls into one of these notches at the termination of a stroke of the pawl, and thus prevents the disk being turned backwardly when the pawl is retracted.

The periphery of the disk 25 has a single tooth or spur 25^a, and this spur engages one tooth of a toothed disk 32 journaled, as here shown, intermediately between the disks 22 and 25. A suitable spring latch 31 engages with the teeth of the wheel or pinion 32 to retain it at any point where it is released from the spur 25^a. Contiguous to the opposite side of the disk 25 is a toothed wheel or pinion 33, which is also moved forward by the engagement of the spur 25^a at each revolution of the disk 25, and this advances the wheel 33 one tooth. The wheel 33 carries upon its face a pin 33^a which at each complete revolution engages the teeth of a disk 34, and this will actuate an indicator to register the number of glasses which have been filled by the operation of the apparatus. Suitable spring latches 36 and 37 engage with the gear wheels 33 and 34 to prevent return movements of the same.

The apparatus may be set in motion by a coin controlled mechanism which allows an electrical circuit to be energized for the purpose, as follows:

38 is an elastic arm having one end fixed, and the other end free to rise and fall. This end of the elastic arm has a hole 39 made through it, and an arm 40 having a corresponding hole is fulcrumed to the arm 38, as shown at 41, so as to be turnable transversely to the arm 38. This arm 40 is normally retained in line with 38 by a spring, at 42. The opening 39 is smaller than the coinciding opening in the end of the arm 40, so that the coin of the proper value which may be introduced through the slot 43 will be deposited in the opening in the arm 40, but cannot pass through the opening 39, remaining in that position until it is discharged by the depression of the free end of the two arms. This depression is effected by means of a spring retracted pin 44 having a suitable push-button 45 upon its upper end, and the lower end of the pin 44,

striking upon the coin, will press the arm 38 downwardly. When the coin carrier has been thus depressed, the button 45 and its connected presser rod 44 may be turned a partial revolution.

The presser rod 44 has a pin 46 projecting from one side, and this pin is movable in a slot in the sleeve 47, so that as long as the presser rod is held in its elevated position by its spring, this pin 46 lies in a vertical slot in the sleeve 47, and the presser rod is thus prevented from being turned. When the rod has been depressed, as previously described, until the pin 46 is below the bottom of the sleeve 47, the rod 44 may be turned. The pin 46 being turned with the rod or stem 44 will contact with a spring arm 48 fixed to one side of the base, as shown. This arm has connected with it a rod 49, the inner end of which connects with a spring-pressed lever 50. This lever carries a lug 51 which normally engages with a notch in the disk 52, which disk is carried upon the same shaft with the toothed disk 32, previously described. As long as the lug 51 remains engaged with the notch in 52, the device is prevented from revolving.

53 are terminal posts having connections with a source of electrical energy.

54 is a conductor extending from one of these posts to an arm 55, which arm is located contiguous to the lug 51, but out of contact therewith, while the device is in the locked condition. When by the turning of the rod or stem 44 the arm 50 has been moved and the lug 51 withdrawn from the notch in the disk 52, this withdrawal will also withdraw a lug or spur 56 which projects from the end of the arm 50, and normally engages with a pin 57 upon the shaft of the worm 27, and thus prevents the mechanism from being turned. The withdrawal of this arm 50 disengages the lug from the pin, and at the same time completes an electrical circuit and ground through the point 55, previously described; and this will set the motor in motion through suitable or well known connections. As soon as the notch in the disk 52 has moved a short distance, the lug 51 will remain resting upon the rim of the disk 52, as shown in Fig. 8, and the circuit through the lug and the part 55 will remain closed until the full revolution of the disk and the filling of the glass have been completed.

58 is another arm extending transversely from the lever arm 50 and having a head 59, and this is at the same time lifted from a notch in the drum or barrel 60, which is mounted upon the same shaft with the disk 25, and this serves to retain the lever 50 and the locking parts carried thereby, out of operation until the full revolution has been completed; then the lug 51 will be supported upon the disk 52 and will so remain until this disk has completed one revolution, and

the drum 60 has made fourteen revolutions. The lug 51 then drops into the notch in the disk 52, and 59 at the same time falls into the notch in the drum 60, thus breaking the electrical circuit and causing the apparatus 70 to stop.

The operation of filling a glass consists in the first placing of a red gum solution in the bottom of the glass, then superposing upon it the various colored liquids to produce the desired result. I have here shown seven receptacles for these liquids, with means for discharging each one, as previously described. The gum solution is contained in an independent receptacle 61 at the top of the casing, and this has a valve 62 controlled by a spring-pressed rod or carrier 63 having a push-button 64 at the outer end. The discharge opening from the tank 61 is contiguous to the discharge opening from the containers 6, and this being first opened delivers a portion of the gum into the glass. This opening may be effected, as here shown, by means of a fulcrumed lever 65, one end of which engages the valve actuating rod 63, and the other is connected with a rod 66 which extends downwardly parallel with the gear shaft 21. At the lower end, this rod connects with the end of a lever 67, the opposite end of which is fixed to a turnable shaft 68 fulcrumed within the base of the apparatus. Connected with this shaft is a rod 69, the outer end of which connects with the outer movable end of the depression plate 38, so that when this plate is depressed by the presser rod 44, as previously described, it will first act to pull down upon the rod 66, and through the previously described mechanism will move the valve 62 to discharge a portion of the gum from the reservoir 61 into the glass. Upon the release and return of the parts to their normal position, this valve is closed, and the apparatus having been then set in motion by the completion of the electrical circuit, the remaining portions of liquid from the different containers will be successively placed in the glass until the filling is completed, when, the disk 52 having made a complete revolution, the stop lug 51 will fall into its notch in the disk 52, and the head 59 correspondingly dropping into its notch, the bar 50 will be moved by its spring so as to lock the apparatus, the electrical circuit being opened at the same time.

An arm 70 connected with the plate 40 has its end projecting into the space between the wheel 32 and the disk 52, and the latter has a pin 71 projecting from it so as to engage with the arm, at the termination of the glass filling operation. This acts to carry the coin off of the elastic carrier 38 and deposit it in any suitable receptacle, as at 72, and the lever arm 50 may carry the hammer 73, which, when the arm drops to its normal and lock-

ing position, will be caused to strike upon the bell 75 and indicate the completion of the operation.

The time necessary for the preparation of a glass of the liqueur in this apparatus is about a minute and a half or two minutes, while the preparation by hand in the usual manner takes upwards of ten minutes.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. A liquid mixing apparatus comprising the combination of a series of containing chambers, valves, mechanism by which said valves are actuated to successively deliver a liquid from each of the chambers into a glass or receiver, connections whereby the mechanism is actuated, means controlled by said mechanism whereby an electric circuit is completed, and means whereby the electric circuit is broken and the movements arrested upon the completion of the operation.

2. In an apparatus of the character described, valve controlled liquid containers, mechanism by which said valves are successively opened and closed, other mechanism whereby said first-named mechanism is actuated, a normally open electrical circuit, mechanism by which said circuit is closed, and means by which said circuit is again opened and the operation of the parts interrupted at the completion of a cycle.

3. In an apparatus of the character described, a series of liquid containers, pipes leading therefrom, valves, and spring-pressed levers upon which said valves are carried, to close the mouths of the discharge passages, plungers registering with said levers, a revoluble cam adapted to successively engage said plungers and open the valves, and a directing funnel into which charges from each of the containers are successively received, and from which they are delivered.

4. In an apparatus of the character described, a series of liquid containers, pipes leading therefrom concentrating to a common center, valves controlling the outlets of said pipes, spring-pressed levers upon which the valves are carried, and by which they are normally closed, radially guided plungers having their inner ends adapted to contact with the levers, a revoluble cam successively engaging the plungers and opening the valves to deliver a charge from each container, a funnel-shaped receiver and a discharge passage through which the charges are successively delivered into a glass, and mechanism whereby the cam is rotated.

5. In an apparatus of the character described, a series of containers with pipes leading therefrom to a common central discharge, valves normally closing said pipes, spring-pressed levers upon which the valves

are carried and by which they are normally closed, a revoluble cam and means associated therewith by which the levers are actuated, mechanism including shafts and intermeshing gears, whereby the cam is revolved, a ratchet disk connected with said mechanism, a pawl engaging said disk, and mechanism by which the pawl is reciprocated around the periphery of the disk to engage with its teeth and advance it substantially as described.

6. In an apparatus of the character described, liquid containing chambers with valve controlled pipes, mechanism by which said valves are successively opened and means for conveying the successive charges to the superposed within a glass, a shaft through which motion is transmitted to actuate the feed mechanism, a toothed cam fixed upon the lower end of the shaft, a pawl engaging said teeth, a revoluble crank disk, a connecting rod extending from said disk to the pawl, whereby the latter is reciprocated around the center of motion of the disk, a single tooth upon the crank disk, gears actuated by said tooth at each revolution of the disk, and a registering mechanism advanced by said gears at the completion of a cycle of movements.

7. In an apparatus of the character described, liquid containers, conducting pipes, mechanism by which the liquids are successively delivered superposed within a glass, actuating mechanism including a ratchet disk and pawl, means for reciprocating the pawl to advance the disk, a normally engaged locking device whereby movement is prevented, a spring-pressed reciprocating and turnable shaft, and intermediate mechanism by which the lock is disengaged to allow the rotation of the driving mechanism.

8. In an apparatus of the character described, liquid containers, pipes leading therefrom, mechanism whereby said pipes are successively opened to discharge the liquid and superpose it in layers successively in a glass, other mechanism consisting of a ratchet disk, a reciprocating pawl, whereby said first-named mechanism is operated, and mechanism by which the apparatus is normally locked, means for unlocking said mechanism, a normally open electrical circuit, and connections by which said circuit is closed and the mechanism set in operation simultaneously with the unlocking.

9. In an apparatus of the character described, liquid containers, passages and controlling valves therefor, mechanism by which the valves are successively opened, mechanism by which the apparatus is normally locked, an unlocking and releasing device, an electrical circuit, means for closing said circuit in unison with the unlocking movement, a motor driven shaft, and connections whereby motion is transmitted

therefrom to complete a cycle of movement, and to again lock the parts.

10. In an apparatus of the character described, liquid containers with passages and
5 controlling valves therefor, mechanism by which the valves are successively opened, mechanism by which the apparatus is normally locked, an unlocking and releasing device, an electrical circuit, means for closing
10 said circuit in unison with the unlocking movement, a motor driven shaft, and connections whereby motion therefrom is transmitted to complete a cycle of movement, and
15 a registering mechanism actuated in unison with the completion of each cycle.

11. In an apparatus of the character de-

scribed, a series of liquid containing receptacles, discharge passages therefrom with
controlling valves, mechanism by which said
valves are successively opened, to superpose 20
the liquids in a glass or receiver, an independent container for syrup, devices moved in unison with the said mechanism to first
open the syrup controlling valve, and to subsequently close said valve. 25

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN KRIWANEK.

Witnesses:

GEO. H. STRONG,
C. A. PENFIELD.