No. 887,066. PATENTED MAY 12, 1908.

F. CHRYSLER.

CHECK CONTROLLED APPARATUS.

APPLICATION FILED OCT. 3, 1907.

3 SHEETS—SHEET 1.

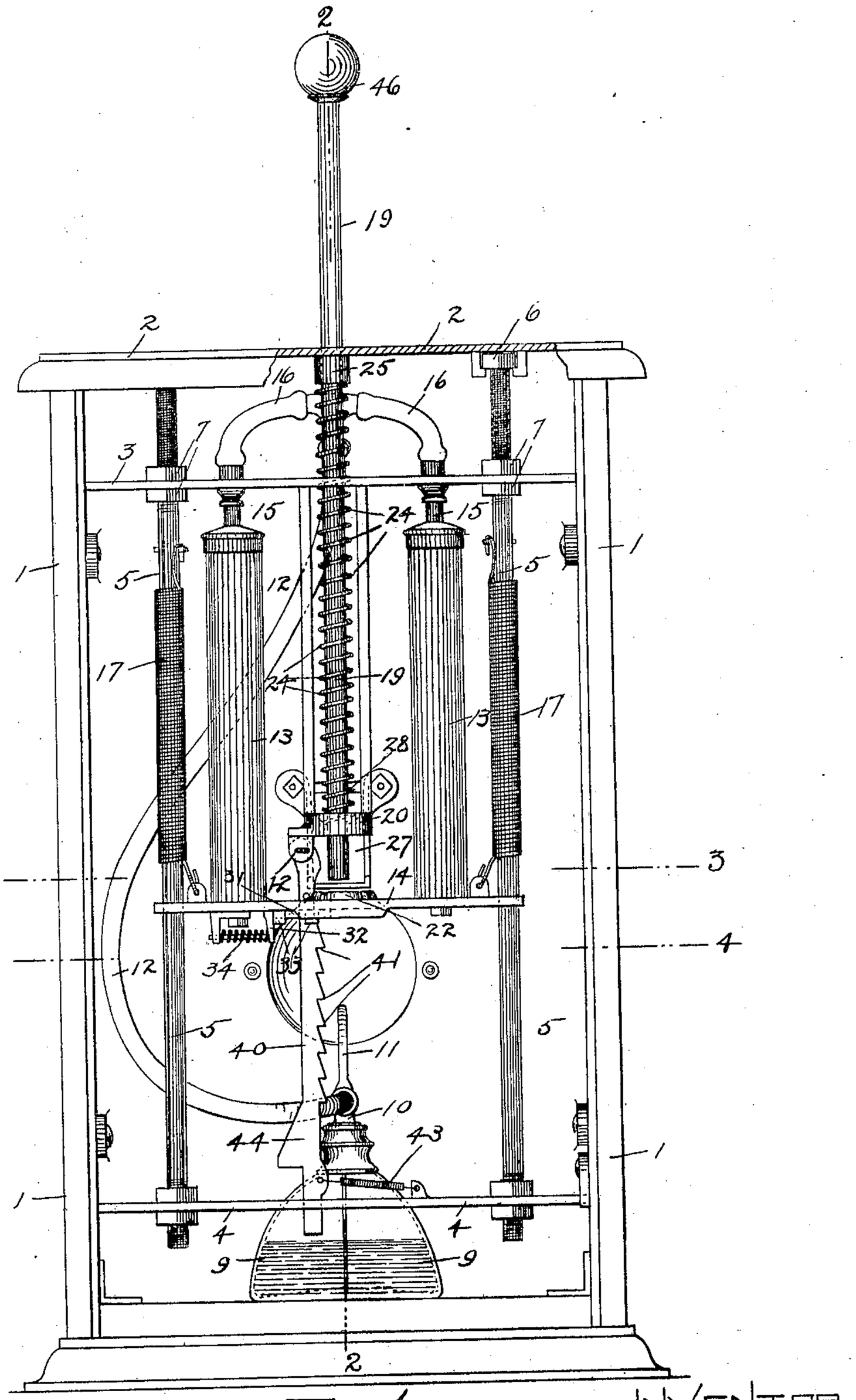

FIG. 1

WITNESSES
E. M. O'Reilly.
J. Dronsbach.

INVENTOR
Frank Chrysler.
By Mosher & Curtis
Attys.

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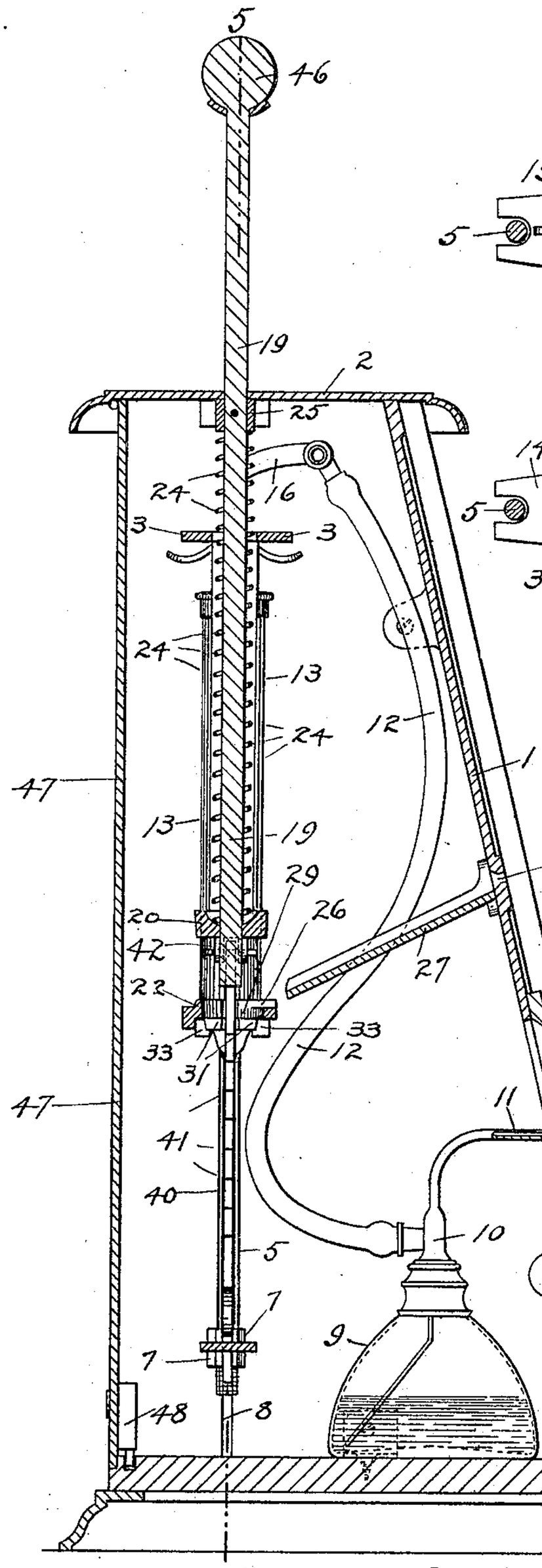

Fig. 2

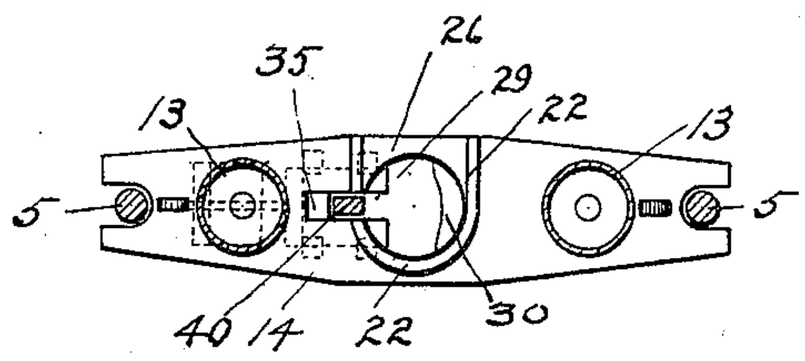

Fig. 3

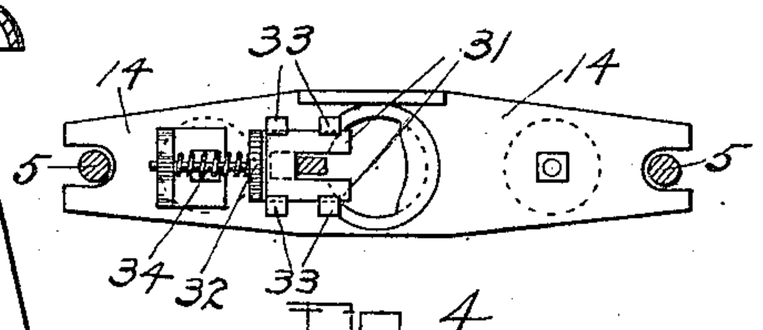

Fig. 4

WITNESSES

E. M. O'Reilly.

J. Donsbach.

INVENTOR

Frank Chrysler

By Mosher & Curtis

Attys.

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3 SHEETS—SHEET 3.

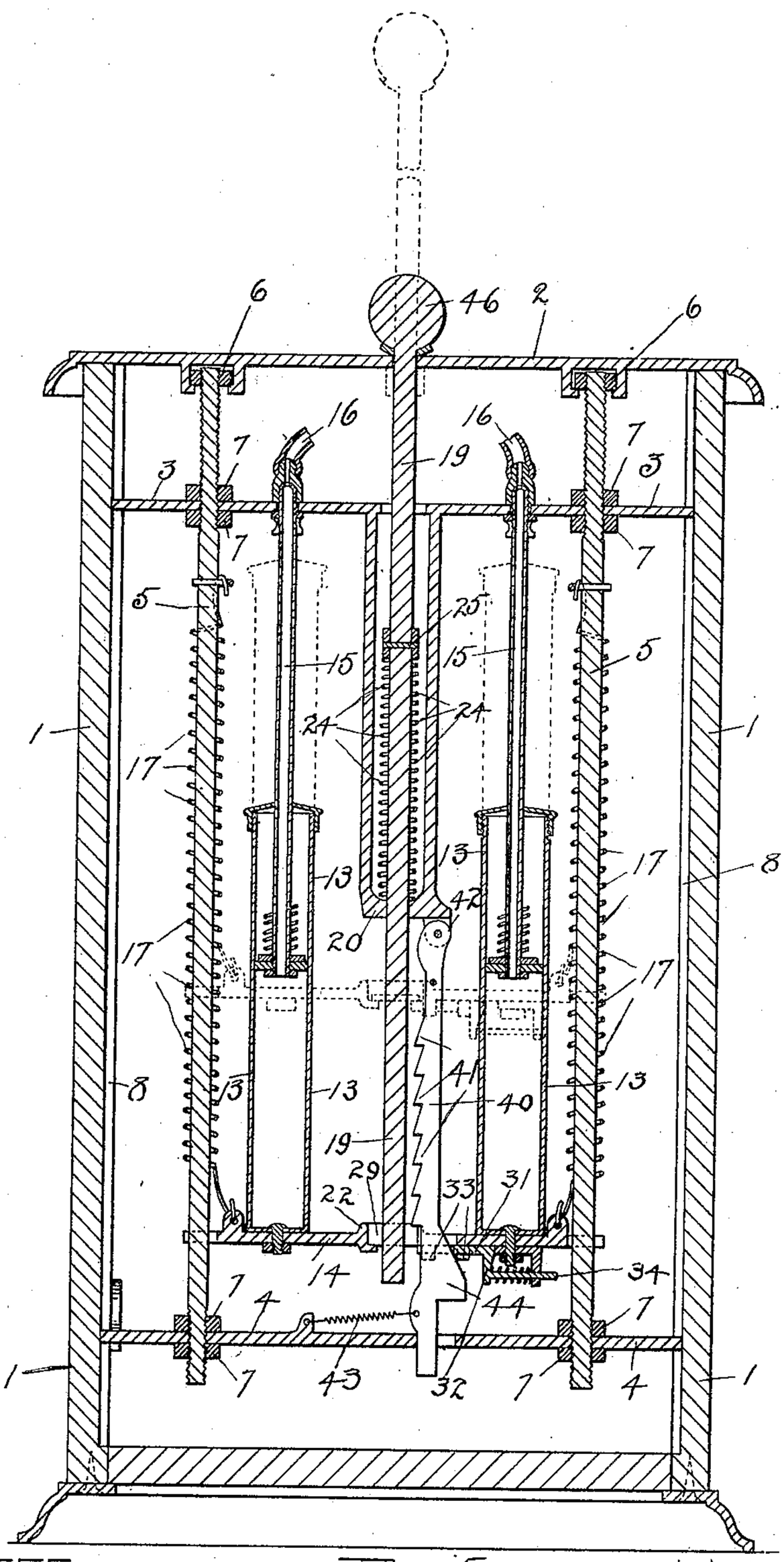

Fig. 5

WITNESSES

E. M. O'Reilly.

J. Donsbach

INVENTOR

Frank Chrysler.

By Mosher & Curtis

Attys.

UNITED STATES PATENT OFFICE.

FRANK CHRYSLER, OF ALBANY, NEW YORK.

CHECK-CONTROLLED APPARATUS.

No. 887,066. Specification of Letters Patent. Patented May 12, 1908.

Application filed October 3, 1907. Serial No. 395,716.

To all whom it may concern:

Be it known that I, FRANK CHRYSLER, a citizen of the United States, residing at Albany, county of Albany, and State of New York, have invented certain new and useful Improvements in Check-Controlled Apparatus, of which the following is a specification.

The invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a view in rear elevation of my improved check-controlled apparatus with the back cover of the case removed. Fig. 2 is a central, vertical, cross-section of the same taken on the broken line 2—2 in Fig. 1. Fig. 3 is a horizontal cross-section taken on the broken line 3—3 in Fig. 1 looking downwardly. Fig. 4 is a cross-section taken on the broken line 4—4 in Fig. 1 looking upwardly. Fig. 5 is a vertical cross-section taken on the broken line 5—5 in Fig. 2.

The principal object of my invention is to properly support and properly release a check or coin employed as a means whereby the ejecting mechanism of a check-controlled apparatus is adapted to be set in operation by movement of a hand-operated member.

Other objects of the invention will appear in connection with the following description.

The invention is especially applicable to check-controlled atomizers for delivery in atomized form of liquid, such as perfume, in limited quantities at the will of persons desiring the same, upon the deposit in a suitable receptacle therefor of a check or coin of stated denomination; and in the drawings I have shown the invention applied in its preferred form to such an atomizer. It may be employed, however, with various kinds of ejecting mechanism.

Referring to the drawings, 1, represents a case or inclosure from the top, 2, of which depends within the case a rigid frame comprising upper and lower cross-plates, 3 and 4, mounted upon a pair of vertical rods, 5, passing through suitable apertures formed in said plates, said rods being screwed into nuts, 6, anchored in suitable recesses or chambers formed on the underside of the cover, and said plates, 3 and 4, being severally secured between nuts, 7, fitting screw-threaded portions of the respective rods. The frame thus formed is adapted to support the various parts of the operating mechanism of my improved machine. The liquid to be delivered is contained in a bottle, 9, which rests upon the bottom of the case and is provided with an atomizer, 10, the nozzle, 11, of which opens through the front of the inclosure.

The atomizer may be of any known form adapted to be operated by an air-blast. Air under pressure is supplied to said atomizer, from time to time, through the pipe, 12, leading from a pair of air-pumps, 13, the cylinders of which are mounted upon a cross-plate, 14, adapted to slide up and down on the vertical rods, 5, which pass through apertures in said plate. The pistons of the air-pumps are maintained in a stationary position during the movement of said cylinders, being mounted upon the upper cross-plate, 3, by means of hollow piston rods, 15, connected at their upper ends with branch pipes, 16, leading to the main supply pipe 12. The apertures in the hollow pistons communicate with the compression chambers in the respective pumps. The cylinders of the air-pumps are normally retained in their upper position by means of coil-springs, 17, connected at their lower ends with said cross-plate, 14, and at their upper ends with the respective vertical rods 5.

Mounted upon the cover-supported frame, intermediately of the air-pumps, is a slideway, 20, for the vertically arranged plunger 19. Said slideway is preferably supported by a hanger, 21, integral with the slideway and with the upper cross-plate 3. The plunger, 19, passes through a closely fitting aperture in the cover, 2, which with the slideway, 20, serves to guide the plunger in its vertical movements. The plunger is normally supported in a raised position by means of a coil-spring, 24, inclosing the plunger and bearing at its lower end upon the slideway, 20, and at its upper end upon the collar, 25, fixed upon the plunger, which collar also serves by engagement with the underside of the cover to limit the upward movement of the plunger.

Fixed upon the cross-plate, 14, which carries the cylinders of the air-pumps, is a coin-holder, 26, adapted when said cross-plate

and cylinders are in their uppermost position to receive a coin from the coin-chute, 27, leading from a slot, 28, in the front of the case. The coin-holder is provided with an aperture in line with the plunger, 19, adapted to permit the lower end of the plunger to pass freely down therethrough when the holder contains no coin. The holder is so constructed that when a coin is inserted therein it projects over or closes said opening and extends across the path of the end of the plunger in position to be engaged thereby as the plunger is depressed, thereby causing the cross-plate, 14, and air-pump cylinders to be forced outwardly against the force of the springs 17.

The coin-holder is unobstructed on the side toward the coin-chute to permit a coin to freely enter the holder but is obstructed on the other sides by a raised rib or flange, 22, to prevent the escape of the coin.

The coin-holder is formed with an aperture, 29, of the same shape as, and slightly larger than, the check or coin to be used in operating the machine, and this aperture is provided on one side with a permanent bottom, 30, extending only partway to the middle of the aperture, and on the opposite side with a removable bottom formed by the forked ends, 31, of a slide, 32, mounted upon the underside of the cross-plate 14. The ends, 31, of the slide extend only partway to the middle of the aperture leaving the central part of the aperture free to permit the passage down therethrough of the plunger, 19, when there is no coin in the holder. The slide, 32, is movable in guideways, 33, and is yieldingly forced inwardly by means of a coil-spring 34.

When the slide, 32, is in its innermost position a coin inserted in the holder will be supported against the thrust of the plunger, 19, by means of the permanent bottom, 30, and the removable bottom formed by the ends, 31, of the slide; but when the slide is withdrawn, the coin, being supported by the permanent bottom, 30, on one edge only, will be tipped by the pressure of the plunger and forced down through the aperture 29.

The cross-plate, 14, is formed with a slot, 35, open to the aperture, 29, and adapted to receive the releasing lever, 40, and permit the same to engage the edge of the coin located in the holder.

The edge of the lever, 40, neighboring the coin-holder, is provided with a series of undercut teeth, 41, severally adapted to overlap the upper side of a coin located in the holder and to serve as a detent to temporarily prevent a return movement of the coin-holder, cross-plate, 14, and air-pump cylinders after operation has been begun. The lever, 40, is pendulous from a pivotal connection at, 42, with the slideway, 20, and is yieldingly forced toward the coin-holder by means of a coil-spring, 43, connecting the lower end of said lever with the lower cross-plate 4. The lever, 40, plays freely in the slot, 35, in the cross-plate, 14, and in the bifurcation or fork in the slide 32.

Near its lower end the lever, 40, has on its back or outer side a cam or wedge-shaped projection, 44, adapted when the slide, 32, is brought into engagement therewith to force said slide outwardly against the force of the spring, 34, until the ends, 31, of the slide are entirely withdrawn from beneath a coin located in the aperture 29. The plunger projects exteriorly of the case and is provided with a knob or hand-piece 46. The back of the case is closed by a door, 47, secured in position by a lock, 48, which may be of any known form.

The operation of the device is as follows:—A coin is inserted through the slot, 28, into the coin-holder, 26, and the plunger, 19, is forced downwardly by hand, the lower end of the plunger being thereby brought into engagement with the coin which rests within the aperture, 29, and is supported against the thrust of the plunger by the permanent bottom, 30, and the removable bottom, 31, of said aperture. The downward movement of the plunger is thus imparted to the cross-plate, 14, forcing the same downwardly and carrying therewith the cylinders of the air-pumps. The downward movement of said parts is continued until the slide, 32, by engagement with the cam, 44, is withdrawn from beneath the coin in the holder whereupon the pressure of the plunger tips said coin and forces the same down through the aperture, 29, thereby releasing the cross-plate, 14, and air-pump cylinders to the action of the springs, 17, which automatically return the cylinders to raised position and thereby force a supply of air through the tubes, 16, into the tube, 12, and thence through the atomizer. After the downward movement of the plate, 14, has begun a return movement is prevented so long as the coin remains in the holder by the engagement of the coin with the teeth, 41, on the lever, 40, so that a partial operation of the ejecting mechanism is prevented, even though the apparatus be carelessly operated.

What I claim as new and desire to secure by Letters Patent is

1. In a check-controlled apparatus, the combination with a vertically arranged plunger and ejecting mechanism comprising in part a horizontal coin-holder provided with an opening adapted to receive a coin or the like, and in the absence of a coin to permit the free passage therethrough of said plunger; of a removable coin-support subjacent to said opening at one side of the path of the plunger; a coin-support subjacent to said opening on the opposite side of the path of the plunger; and mechanism positively

actuated by the movement of said coin-holder for withdrawing said removable coin-support.

2. In a check-controlled apparatus, the combination with a vertically arranged plunger and ejecting mechanism comprising in part a horizontal coin-holder provided with an opening adapted to receive a coin or the like, and in the absence of a coin to permit the free passage therethrough of said plunger, and provided with a slot communicating with said opening; of a removable coin-support subjacent to said opening on one side of the path of the plunger; a coin-support subjacent to said opening on the opposite side of the path of the plunger; mechanism actuated by the movement of said coin-holder for withdrawing said removable coin-support; and a vertically arranged lever mounted upon a stationary support and movable in said slot, said lever having on its inner edge undercut teeth adapted to engage the edge of a coin supported in said opening.

3. In a check-controlled apparatus, the combination with a plunger and ejecting mechanism comprising in part a horizontal coin-holder provided with an opening adapted to receive a coin or the like, and in the absence of a coin to permit the free passage therethrough of said plunger, and provided with a slot communicating with said opening; of a removable coin-support subjacent to said opening on one side of the path of the plunger; a coin-support subjacent to said opening on the opposite side of the path of the plunger; mechanism actuated by the movement of said coin-holder for withdrawing said removable coin-support; and a vertically arranged lever mounted upon a stationary support and movable in said slot, said lever having on its inner edge undercut teeth adapted to engage the edge of a coin supported in said opening, and on its outer edge near its lower end a cam-surface adapted to engage and withdraw said removable coin-support.

4. In a check-controlled apparatus, the combination with a plunger and ejecting mechanism comprising in part a movable coin-holder provided with an opening adapted to permit the free passage of said plunger therethrough, said opening being adapted to receive a coin or the like; a slide mounted on the one side of said coin-holder with its inner end opposite said opening at one side of the path of the plunger in opposition to the thrust thereof; a coin-support opposite said opening on the opposite side of the path of the plunger in opposition to the thrust thereof; and slide-withdrawing mechanism whereby the slide is adapted to be actuated by the plunger-induced movement of the coin-holder.

5. In a check-controlled apparatus, the combination with a plunger and ejecting mechanism comprising in part a movable coin-holder provided with an opening adapted to permit the free passage of said plunger therethrough, and adapted to receive a coin or the like, and with a slot communicating with said opening; of a slide mounted upon the underside of said plate and provided with a bifurcation opposite said slot, and having its ends subjacent to said opening at one side of the path of the plunger; a coin-support subjacent to said opening at the opposite side of the path of the plunger; a lever movable in said slot and bifurcation, and having on its inner edge undercut teeth adapted to engage a coin supported in said holder; and slide-withdrawing mechanism whereby the slide is adapted to be actuated by the plunger-induced movement of the coin-holder.

6. In a check-controlled apparatus, the combination with a plunger and ejecting mechanism comprising in part a movable coin-holder provided with an opening adapted to permit the free passage of said plunger therethrough, and adapted to receive a coin-holder or the like, and with a slot communicating with said opening; of a slide mounted upon the underside of said plate and provided with a bifurcation opposite said slot, and having its ends subjacent to said opening at one side of the path of the plunger; a coin-support subjacent to said opening at the opposite side of the path of the plunger; a lever movable in said slot and bifurcation and having on its outer edge near its lower end a cam-surface engageable with said slide to withdraw the same when the coin-holder is operated by the plunger.

7. In a check-controlled apparatus, the combination with a plunger and ejecting mechanism comprising in part a movable coin-holder provided with an opening adapted to permit the free passage of said plunger therethrough, and adapted to receive a coin or the like, and with a slot communicating with said opening; of a slide mounted upon the underside of said plate and provided with a bifurcation opposite said slot, and having its ends subjacent to said opening at one side of the path of the plunger; a coin-support subjacent to said opening at the opposite side of the path of the plunger; a lever movable in said slot and bifurcation, said lever having on its inner edge undercut teeth adapted to engage the edge of a coin supported in said holder, and having on its outer edge near its lower end an inclined surface engageable with said slide to withdraw the same when the coin-holder is operated by the plunger.

In testimony whereof, I have hereunto set my hand this 30th day of September, 1907.

FRANK CHRYSLER.

Witnesses:
E. M. O'Reilly,
Frank C. Curtis.