

No. 621,326.

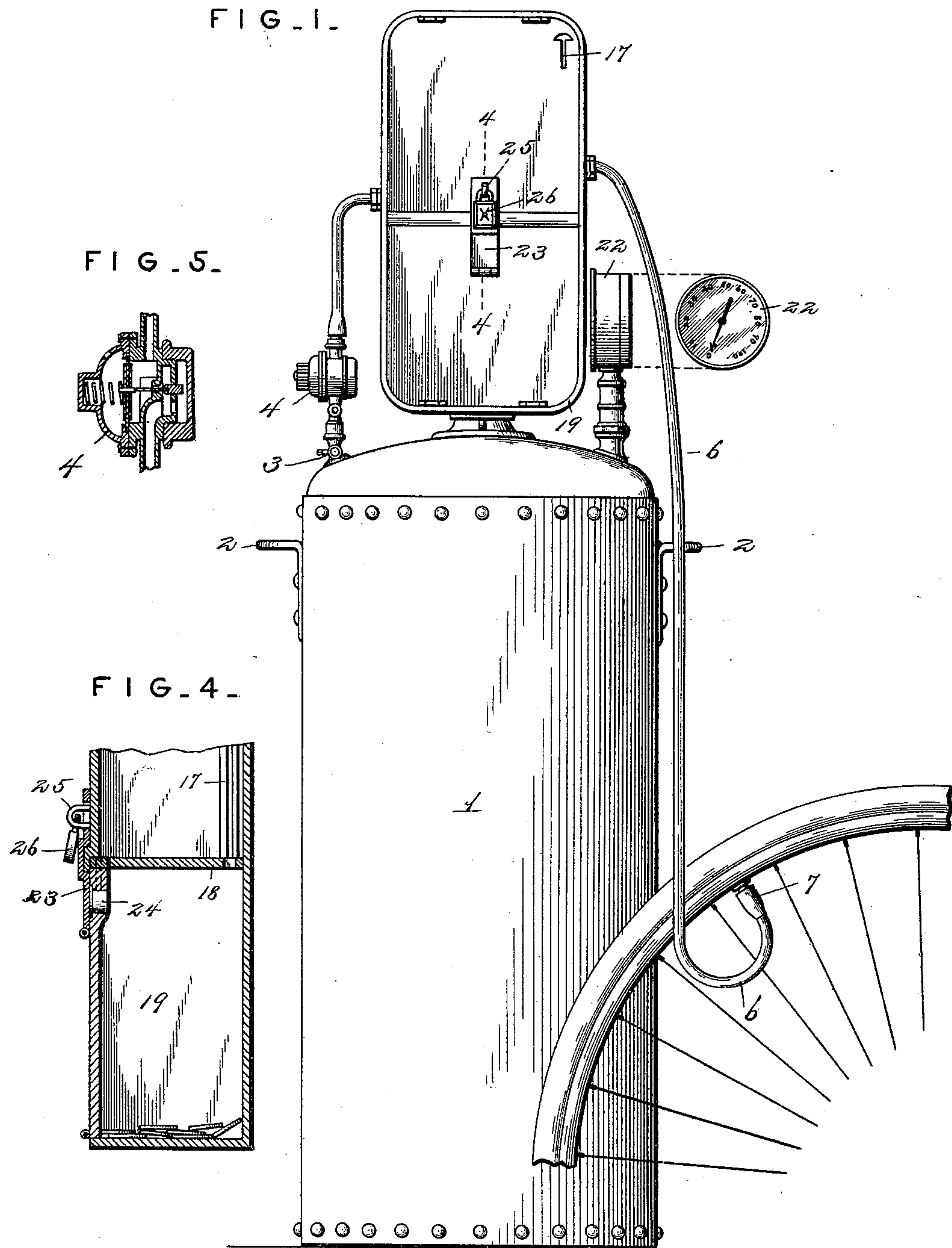
Patented Mar. 21, 1899.

M. D. COMPTON.
AUTOMATIC CYCLE INFLATER.

(Application filed Apr. 25, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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2 Sheets—Sheet 2.

FIG. 2.

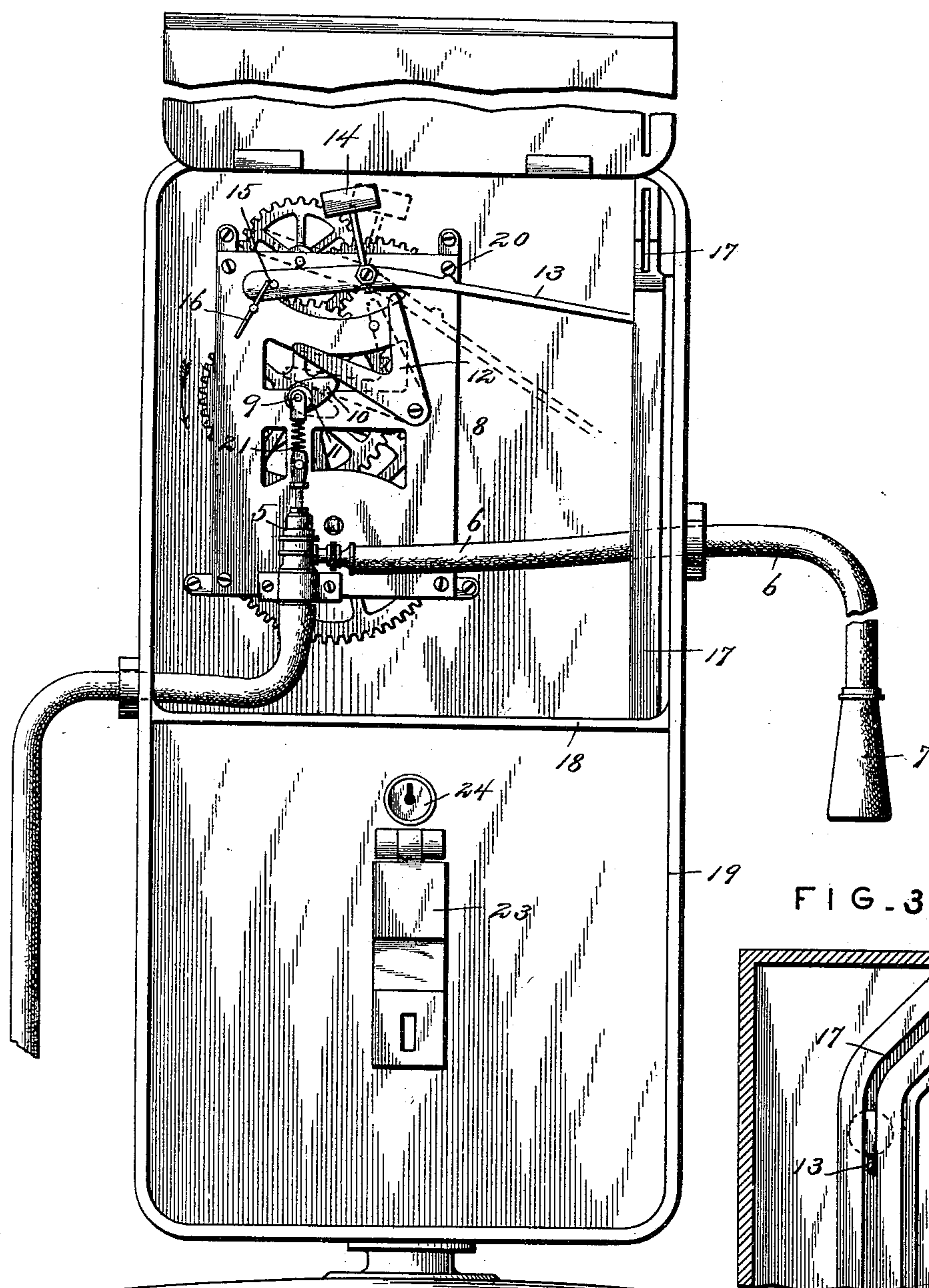
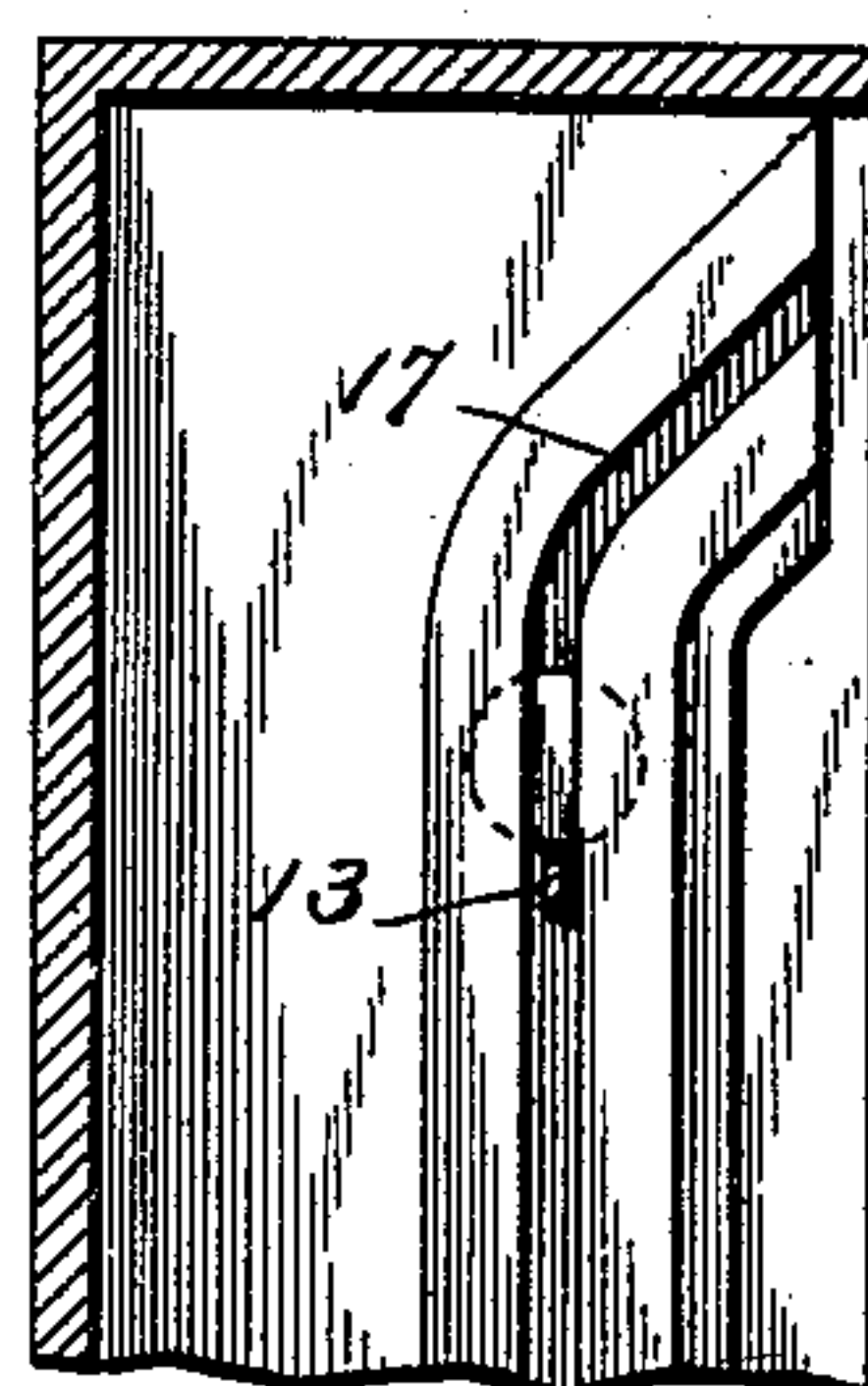


FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

MELVIN D. COMPTON, OF NEWARK, NEW JERSEY.

AUTOMATIC CYCLE-INFLATER.

SPECIFICATION forming part of Letters Patent No. 621,326, dated March 21, 1899.

Application filed April 25, 1898. Serial No. 678,768. (No model.)

To all whom it may concern:

Be it known that I, MELVIN D. COMPTON, a citizen of the United States, and a resident of the city of Newark, county of Essex, State of New Jersey, have invented new and useful Improvements in Automatic Cycle-Inflaters, of which the following is a specification.

This invention has general reference to a coin-operated fluid-vending apparatus.

10 The special object of the invention is to provide an apparatus whereby bicycle-riders may inflate their pneumatic tires without delay. For the purposes of this case, therefore, I have designated my new invention as an
15 "automatic cycle-inflater."

This invention contemplates particularly the provision of means whereby compressed air may be stored and kept on tap subject to draft in predetermined limited volume by the
20 introduction of a suitable coin or token, so that bicycle-riders may have their pneumatic tires automatically and quickly inflated without the labor of operating an air-pump or the inconvenience of waiting for another to do so.

25 The invention consists, essentially, in the combination of a tank or reservoir having an inlet and discharge, a regulating and reducing valve whereby a lower pressure than that in the tank may be discharged to the tire, a
30 valve for opening and closing the discharge-passage, a motor for operating the valve, and a coin-operated lever for throwing the motor into and out of active operation.

35 The invention also consists in certain other combinations and details of construction hereinafter fully described, and set forth in claims appended hereto.

In the drawings, Figure 1 is an elevation showing my improved apparatus, the same
40 being connected with the nipple of a bicycle-tire, as in the process of inflating a tire. Fig. 2 is an elevation showing the principal part of the operating mechanism inclosed within a casing, the door of the casing being open.
45 Fig. 3 is an elevation of the coin slot or conduit. Fig. 4 is a detail section on the line 4 4 of Fig. 1, showing my method of locking the cash-box or coin-receptacle. Fig. 5 is a ver-
50 tical section through the reducing-valve.

1 is a strong tank or receptacle provided with handles 2 2 for convenience in moving the same from place to place. The discharge-

passage is provided with a cock 3, outside or beyond which is arranged a pressure-regulating and pressure-reducing valve 4 of any ap- 55 proved character or construction, such that it will automatically regulate and discharge compressed air at a lower predetermined pressure than that within the tank. In advance of or beyond the pressure-regulator and 60 within the casing I arrange a discharge-valve 5, and leading from the valve out through the casing is a discharge-tube 6, that part outside the casing being flexible and provided with a mouthpiece 7, adapted to coö- 65 operate with the nipple on the bicycle-tire. The discharge-valve 5 may be of any suitable character. I have found that a conical valve which is adapted to be operated in one direction by a crank or eccentric on a driven shaft 70 and by the pressure of the air within in the other direction answers my purpose.

8 represents a motor, which may be of any suitable character, operated by weight, spring, or other power. The motor is provided with 75 or carries a rotary shaft 9, upon which are mounted a cam 10 and an eccentric or crank 11. The function of the crank is to open or depress the valve and permit the escape of air through the tube 6. Pivoted on the out- 80 side of the frame of the motor 8 is a fork or triangular-shaped rocking arm 12, and above the extremity of this rocker-arm is a vibrating coin-operated arm 13. This coin-operated arm is provided with a weight or coun- 85 terbalance 14, adapted to tumble to opposite sides of a vertical plane, and with a pin or stop 15 for engaging an arm of a fly or governor 16 to stop the motor.

17 is a coin-slot leading through the side of 90 the casing for the mechanism and discharging through a diaphragm 18 into a coin-receptacle 19. The coin-operated lever 13 extends athwart or through the coin-slot 17, and when a penny is inserted in the slot its weight 95 tilts the lever until it reaches the nose or angle of the rocking arm 12, where it is sustained, while the motor-shaft 9 moves through more than half a revolution, when the rock- 100 ing arm 12 permits the lever 13 to fall and deliver the coin through the chute into the cash-box, the lever 13 being maintained in its depressed position by reason of the weight 14. As the shaft continues its revolution

the cam 10 carries the rocker-arm back approximately into the position shown in full lines in Fig. 2, and the rocker-arm throws the lever 13 into its substantially horizontal position, where it is held by means of its weight 14, in which position the stud or projection 15 engages the wing of the fly or governor 16 and arrests the motor. The upward movement of the coin-operated arm 13 is arrested by coming in contact with a stop 20. For the purpose of providing for slight lost motion between the crank or eccentric 11 and the valve-stem I have interposed between the parts of the valve-stem a stiff spring 21. Connected with the tank or reservoir is a pressure-gage 22 to indicate the pressure within the tank.

In the use of my machine I contemplate placing the same with suitable care-takers, and as compensation for such care it is proposed to allow such persons a given per cent. of the receipts or deposits in the cash-box. To facilitate the carrying out of this plan and to make the arrangement entirely open and fair, I provide the cash-box with a double lock and place a key of one of the locks in the hands of the care-taker and the other in the hands of the agent for the machine, so that it will require the presence of two persons in order to open the cash-box, when an agreed division of the contents can be made. In order to carry out my purpose, I provide the door of the cash-box with a hasp 23, and in the range of this hasp in the door is a keyhole 24, leading to a lock for the door. After the door is locked by means of the regular door-lock the hasp is swung into position over the keyhole 24 and the staple 25 and is secured there by means of a padlock 26, to which the agent or care-taker, as the case may be, holds the key.

It should be understood that I do not claim

herein the double-locking mechanism described, the same being reserved for a separate application.

It is important to keep the coin-operated lever or trip out of range with the fly or the means of stopping the motor for a period long enough to discharge a volume of air sufficient to fill the tire. This is accomplished by the novel arrangement of lever with relation to the coin-slot, the rocker-arm with relation to the lever, and the cam 10 with relation to the rocker-arm. Under this arrangement the lever remains depressed the period or time in which a complete revolution of the shaft 9 is made.

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

1. In a fluid-vending apparatus having a motor for opening and closing the valve, the combination with such motor, of a coin-operated lever to trip the motor into and out of active operation, a rocker-arm, and a cam connected with the motor for throwing the lever back to normal position to stop the motor, substantially as described.

2. In a fluid-vending apparatus having a motor for operating the discharge-valve, the combination with said motor, of a coin-operated lever having a weight adapted to swing on opposite sides of the vertical plane, a rocker-arm for controlling the movement of said lever, and means for operating the rocker-arm, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 22d day of April, 1898.

MELVIN D. COMPTON.

Witnesses:

C. H. POWELL,
HENRY J. MCCORMICK.