

No. 685,843.

Patented Nov. 5, 1901.

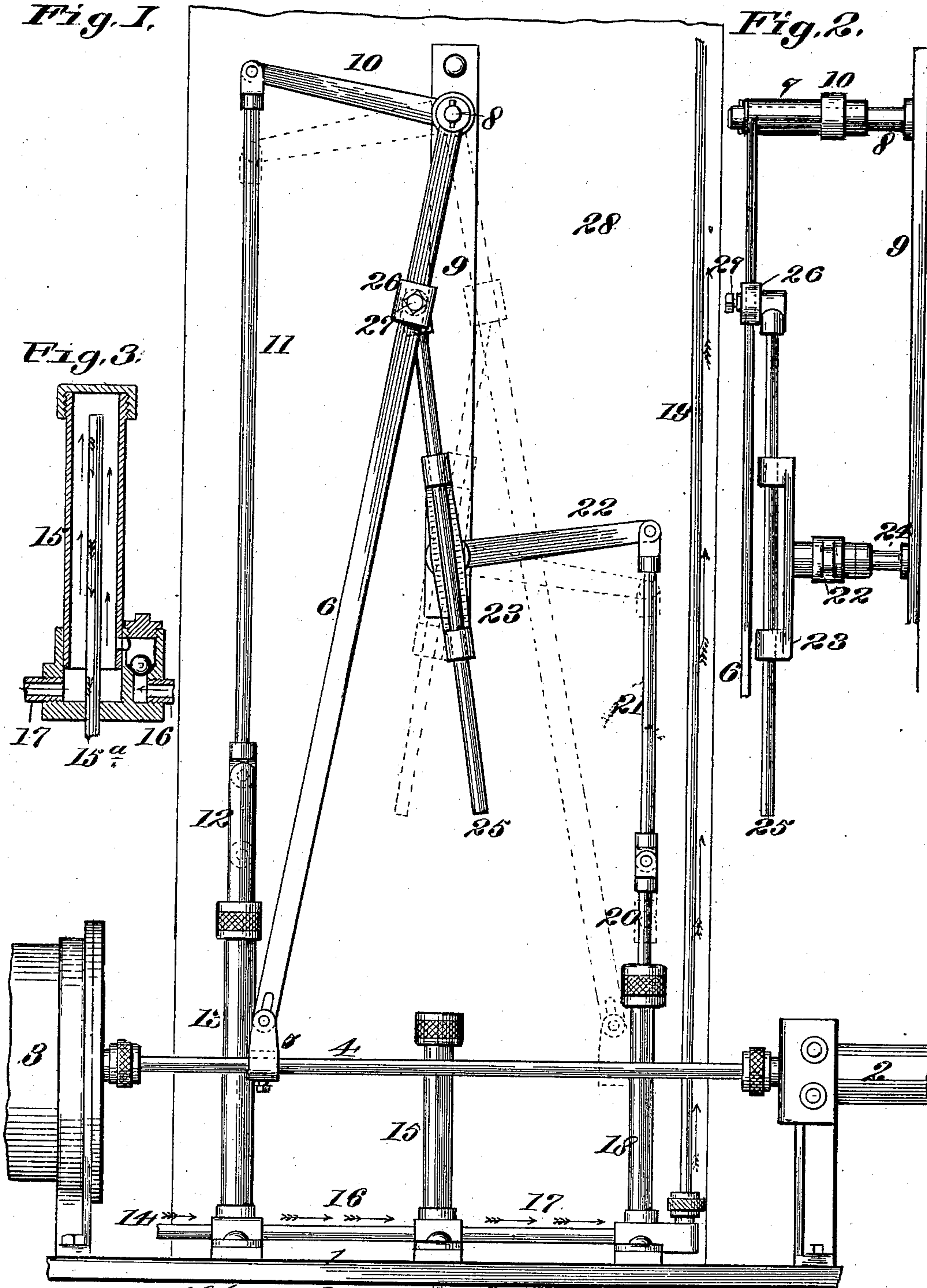
C. J. JOHNSON.
GASOLENE PUMP.

(Application filed Apr. 6, 1901.)

(No Model.)

Fig. 1.

Fig. 2.



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UNITED STATES PATENT OFFICE.

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GASOLENE-PUMP.

SPECIFICATION forming part of Letters Patent No. 685,843, dated November 5, 1901.

Application filed April 6, 1901. Serial No. 54,575. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. JOHNSON, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Gasolene-Pumps, of which the following is a specification.

My invention relates to an apparatus for pumping gasolene into a proper reservoir in which it is mixed with air before being distributed for lighting and heating purposes. It is an improvement upon the device described in an application for United States Letters Patent filed by me on September 28, 1900, Serial No. 31,463, and allowed October 25, 1900, patent for which has not yet issued. It has for its specific purpose the construction of a device capable of being so regulated that gasolene stored in a tank below the level of the main pump is pumped into a reservoir, from which it is again pumped with an almost absolutely uniform regularity. It has specific features of novelty hereinafter pointed out and claimed.

Referring to the drawings which form a part of this specification, Figure I shows a detail front elevation. Fig. II shows a detail side elevation of the device, and Fig. III shows a vertical section of the reservoir into which the gasolene is pumped before being pumped for a second time into the reservoir for mixture with air.

1 is the base on which the device stands, and 2 is the motor-cylinder, operated by any suitable source of power—as, for instance, a water-motor.

3 is an air-pump, and 4 is a piston-rod which vibrates back and forth, being controlled by the motor 2.

5 is a tappet secured by set-screws to the piston-rod.

6 is an oscillating connecting-rod rigid with the hub 7 and which is pivoted on the stud 8.

9 is the stud-plate, to which is secured the said stud 8.

11 is a pitman pivoted to the arm 10 at its end and which operates the pump-plunger 12.

13 is a primary pump, and 14 is a source of supply leading to the same.

15 is a receiving chamber or reservoir con-

nected by pipe 16 with the pump 13 and into which the gasolene is first pumped. This reservoir 15 receives a supply of gasolene from the supply-pipe 14 by means of the primary pump 13, so that there will always be a constant supply in the said reservoir 15 from which the secondary pump (hereinafter described) can draw its supply. Thus if the primary pump 13 should miss a stroke or the valve in the reservoir 15 should become dislodged no interference will occur. This reservoir 15 is furnished with the stand-pipe 15^a, so adjusted that after the gasolene reaches a certain height any excess will overflow into it and be conducted back into the primary source of supply. It is furnished with an ordinary check-valve, as shown in Fig. III.

17 is a pipe leading from the reservoir 15 to the secondary pump 18, and 19 is a discharge-pipe leading to the main reservoir, where the gasolene is mixed with air preparatory to its consumption, as described in the application above referred to.

20 is the plunger of the secondary pump 18, and 21 is a pitman pivoted to the arm 22 at its end, said arm 22 being rigid with the vibrating guide 23.

24 is a stud secured to the plate 9 and on which the arm 22 pivots.

25 is an operating-rod which rides in the ends of the vibrating guide 23, and 26 is an adjustable clamp fastened to the arm 6 by set-screw 27.

28 is the main tank.

The operation of the device is as follows: The piston-rod 4, operated by the motor 2, reciprocates between the positions shown in full and dotted lines. The arm 6, pivoted on 8, operates the plunger 12 to the primary pump 13, which draws the gasolene through the said pump and forces it into the reservoir 15. By reason of the overflow-pipe 15^a gasolene in this reservoir will never exceed a certain amount; but that amount will be constant. The secondary pump, it will be readily seen, is operated by the same motion that operates the primary pump. The stroke of the arm 22, which controls the secondary pump, is regulated by the position of the adjustable clamp 26 on the arm 6. If this clamp is raised

toward the pivot 8, the stroke of the arm 22 will be shortened. If the said clamp is lowered or placed nearer the tappet 5, the stroke of the said arm 22 will be lengthened and the efficiency of the pump 18 thereby increased. This allows a complete regulation of the amount of gasoline pumped into the tank 28, which is controlled by the same motion that pumps the air into the said tank. Thus different grades of gasoline may be used and still the proper proportion of air and gasoline mixed for consumption.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In a gasoline-pump, the combination of a motor, a piston-rod, an arm secured to said piston-rod, a pump operated by said arm, an operating-rod secured to said arm and controlled by it, and a second pump operated by said rod, substantially as described.

2. The combination consisting of a primary

pump, means to operate same, a receiving-chamber in communication with said primary pump, an overflow-pipe in said receiving-chamber, a secondary pump in communication with said receiving-chamber, and a means of operating said secondary pump consisting of an arm adjustably secured to the arm of said primary pump, substantially as described.

3. The combination consisting of a motor, a primary pump, a piston-rod, an arm secured to said piston-rod and adapted to operate said primary pump, an operating-rod adjustably secured to said arm and controlled by it, a second pump operated by said arm, and a receiving-chamber in connection with said pumps, substantially as described.

CHAS. J. JOHNSON.

In presence of—

GEORGE T. WEITZEL,
STANLEY STONER.