

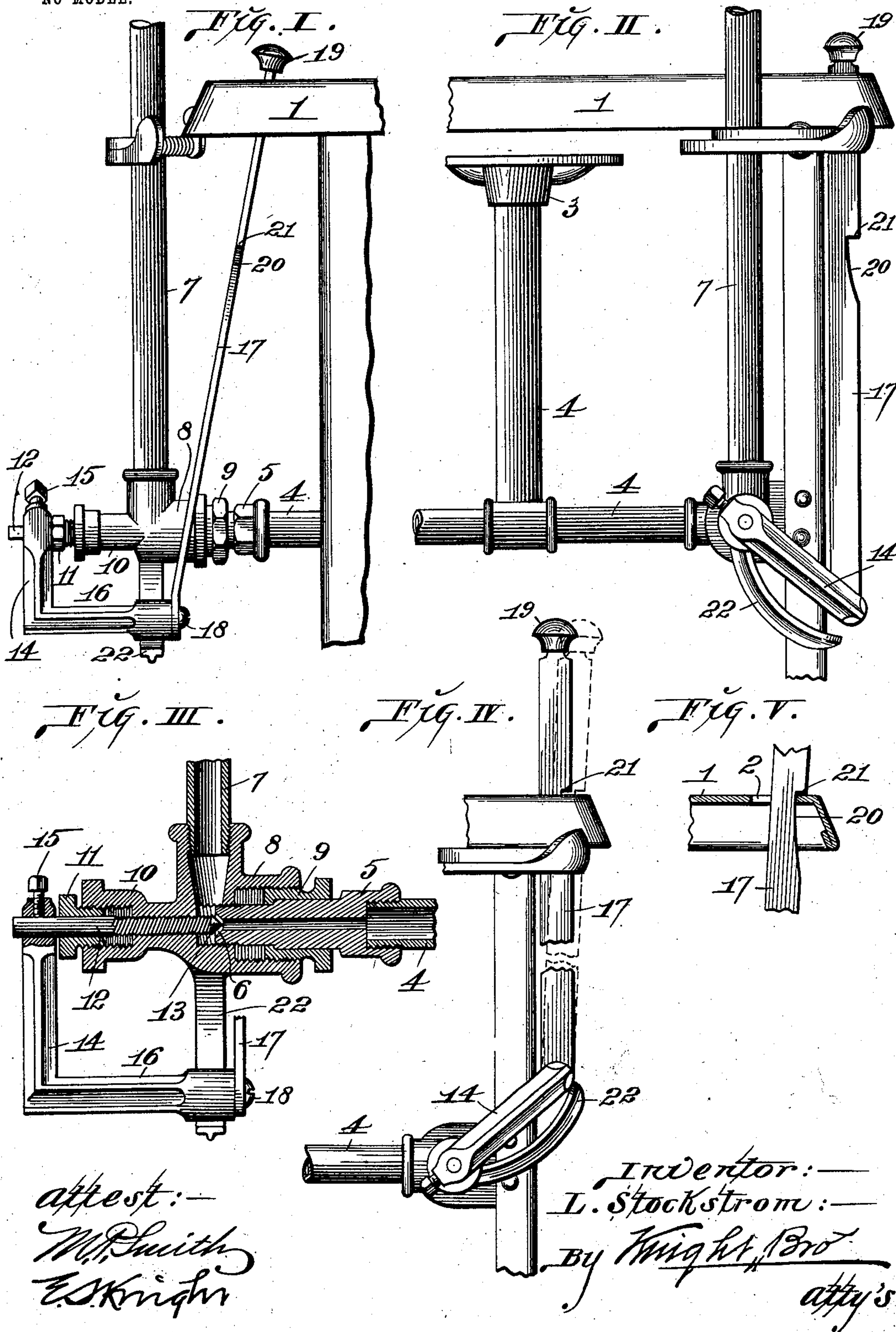
No. 747,798.

PATENTED DEC. 22, 1903.

L. STOCKSTROM.
CUT-OFF FOR VAPOR STOVES.

APPLICATION FILED FEB. 24, 1903.

NO MODEL.



UNITED STATES PATENT OFFICE.

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CUT-OFF FOR VAPOR-STOVES.

SPECIFICATION forming part of Letters Patent No. 747,798, dated December 22, 1903.

Application filed February 24, 1903. Serial No. 144,633. (No model.)

To all whom it may concern:

Be it known that I, LOUIS STOCKSTROM, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have
 5 invented certain new and useful Improvements in Cut-Offs for Vapor-Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of vapor-stoves in which the supply-tank is lowered into a horizontal position when being filled, and it has reference to means whereby the
 15 flow of oil to the burner of the stove is discontinued when the tank is lowered and whereby the feed of oil from the supply-tank is cut off after the tank is again elevated until a part of the mechanism of the construction
 20 is actuated subsequent to the raising of the tank.

The invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

25 Figure I is a side elevation of my cut-off. Fig. II is a rear elevation. Fig. III is a vertical section of the cut-off with the parts shown in the position assumed during the flow of oil to the burner. Fig. IV is a similar
 30 view to Fig. II, showing the parts in the position assumed when the tank is in lowered condition. Fig. V is a view showing the engagement of the valve lever-bar with the top of the stove, the position assumed by said
 35 part subsequent to the raising of the tank and previous to establishing flow to the stove-burner.

1 designates the top of a vapor-stove, which is provided at one end with an aperture 2.

40 3 is a burner to which oil is conducted through the feed-pipe 4.

5 is a nipple attached to the feed-pipe 4 and extending horizontally therefrom. In the outer end of said nipple is a valve-seat 6.

45 7 designates a supply-pipe which carries a supply-tank, (not shown,) which may be of any ordinary form.

8 is a coupling in which the supply-pipe 7 is fitted and which is rockingly positioned on
 50 the nipple 5 through the medium of a gland 9.

10 is a neck projecting from the coupling 8 and having seated therein a gland 11.

12 is a rotatable valve-stem passing through the gland 11 and neck 10 of the coupling 8 and bearing at its inner end a needle-valve 13. 55

14 designates a lever held to the valve-stem 12 by a set-screw 15 and having an arm 16, that extends at a right angle to the supply-pipe 7.

17 is a push-rod pivotally connected to the
 60 lever-arm 16 at 18 and provided at its upper end with a knob 19. The push-rod 17 extends upwardly through the aperture 2 in the top of the stove, as seen in Fig. V, and is provided intermediate of its ends with a notch
 65 20, having a shoulder 21, the latter of which is designed to engage the top of the stove when the push-rod is in elevated position for the purpose hereinafter mentioned.

22 is a finger carried by the coupling 8 and
 70 adapted to travel in a path corresponding to that occupied by the lever-arm 16 in the act of lowering the supply-pipe 7 when the supply-tank is to be filled.

In the practical use of my cut-off the parts
 75 operate as follows: During the use of the stove the parts of the cut-off are in the position seen in Fig. III, the valve 13 being unseated to permit free flow of oil from the supply-pipe to the feed-pipe past the valve-seat 6. 80
 When the supply-pipe is lowered from a vertical to a horizontal position for the filling of the tank, the finger 22, carried by the coupling 8, is rocked in a path corresponding to the position of the lever-arm 16 and by striking
 85 said lever-arm causes movement of the lever 14 to turn the valve-stem 12 and carry the coupling 8 and valve 13 with simultaneous movement, so that the valve remains unseated and the communication between the
 90 feed-pipe and supply-pipe remains undisturbed. The finger 22 carries the valve-lever 14 upwardly from the position seen in Fig. II to that seen in Fig. IV, and in such movement the push-rod 17 is elevated through
 95 the aperture 2 in the stove-top, and its notch-shoulder 21 engages the top of the stove by moving laterally, as illustrated in dotted lines, Fig. IV and as seen in Fig. V. When the supply-pipe is raised to a vertical position 100

after the tank carried thereby has been filled, the finger 22 moves away from the lever-arm 16, while said lever remains held in fixed position due to the engagement of the push-rod 17 with the top of the stove. It will be seen from the foregoing that as the coupling 8 is rotated on the raising of the supply-pipe the valve-stem 12 is held from rotation by the lever 14 remaining unmoved. The valve-stem is screwed inwardly in said coupling and moves to the valve-seat 6, thereby shutting off communication between the supply-pipe 7 and the feed-pipe 4, so that the oil in the tank and supply-pipe is prevented from flowing into the feed-pipe. After the supply-pipe has been raised and it is desired to start use of the stove-burner, the push-rod 17 is disengaged from the top of the stove and pushed downwardly to carry the lever 14 from its elevated position to its lowered position, and thereby the valve-stem 12 is rotated to unseat the valve 13 and renew communication between the supply and feed pipes, which can at such time be safely accomplished. The communication between the feed and supply pipes 4 and 7 remains open, as stated, after the supply-pipe has been lowered into horizontal position, and it will be seen that the oil contained by the feed-pipe is permitted to return to the empty supply-pipe when said pipe is lowered and is therefore completely removed from proximity to the burner of the stove during the act of filling the supply-tank. The advantage of this provision is manifest, for there being no oil close to the burner the filling operation can be safely conducted and the burner again lighted after the cut-off has been manipulated to renew the supply of oil fed to the burner through the supply-pipe.

I claim as my invention—

1. The combination with the feed and supply pipes of a vapor-stove, of a cut-off comprising a coupling and a screw-threaded valve-stem therein through which communication between said pipes remains established when said supply-pipe is lowered in the act of filling it, and means whereby said screw-threaded valve-stem is actuated to close communication between said pipes when said supply-pipe is again elevated, substantially as set forth.

2. The combination with a vapor-stove feed-pipe and a supply-pipe arranged to be lowered in the act of filling its tank of a rotatable coupling uniting said feed and supply pipes, a valve screw-mounted in said coupling and controlling communication between said feed and supply pipes and arranged to remain unseated when said supply-pipe is moved into lowered position, means for moving said valve to maintain it in unseated position during the

lowering of said supply-pipe, and means for retaining said valve from movement when the supply-pipe is again elevated, whereby the valve is brought to its seat, substantially as set forth.

3. The combination with the feed-pipe of a vapor-stove, of a supply-pipe, a rotatable coupling uniting said feed and supply pipes and containing a valve-seat, a valve-stem screw-mounted in said coupling and having a valve opposing said valve-seat, a lever fixed to said valve-stem, means carried by said coupling adapted to engage said lever to move said valve-stem simultaneously with the rotation of said coupling in one direction, and means for holding said lever to retain said valve-stem from movement when the coupling is rotated in the opposite direction, substantially as set forth.

4. The combination with the feed-pipe of a vapor-stove, of a supply-pipe, a rotatable coupling uniting said feed and supply pipes and containing a valve-seat, a screw-threaded valve stem rotatably positioned in said coupling and having a valve opposing said valve-seat, a lever fixed to said valve-stem, means carried by said coupling adapted to engage said lever to move said valve-stem simultaneously with the rotation of said coupling in one direction, and means for holding said lever to retain said valve-stem from movement when the coupling is rotated in the opposite direction, substantially as set forth.

5. In a cut-off for vapor-stoves, the combination of a feed-pipe provided with a nipple containing a valve-seat, a coupling rockingly mounted on said nipple, a valve screw-mounted in said coupling for movement to said valve-seat, a supply-pipe, a lever carried by said valve-stem, a finger carried by said coupling to engage said lever, and a push-rod connected to said lever and means whereby said push-rod is held from movement after said lever has been shifted, substantially as set forth.

6. In a cut-off for vapor-stoves, the combination of a feed-pipe provided with a nipple containing a valve-seat, a coupling rockingly mounted on said nipple, a supply-pipe seated in said coupling, a valve-stem screw-mounted in said coupling for contact with said valve-seat, a lever connected to said valve-stem, a finger carried by said coupling to engage and rock said lever to seat said valve, and a shoulder push-rod connected to said lever and arranged to engage means whereby said push-rod is held from movement after it has been rocked by said finger, substantially as set forth.

LOUIS STOCKSTROM.

In presence of—

E. S. KNIGHT,
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