No. 702,717. Patented June 17, 1902.

J. H. FOX.

SALTS INJECTOR FOR SIPHON FILLING MACHINES.

(Application filed Aug. 6, 1901.)

(No Model.)

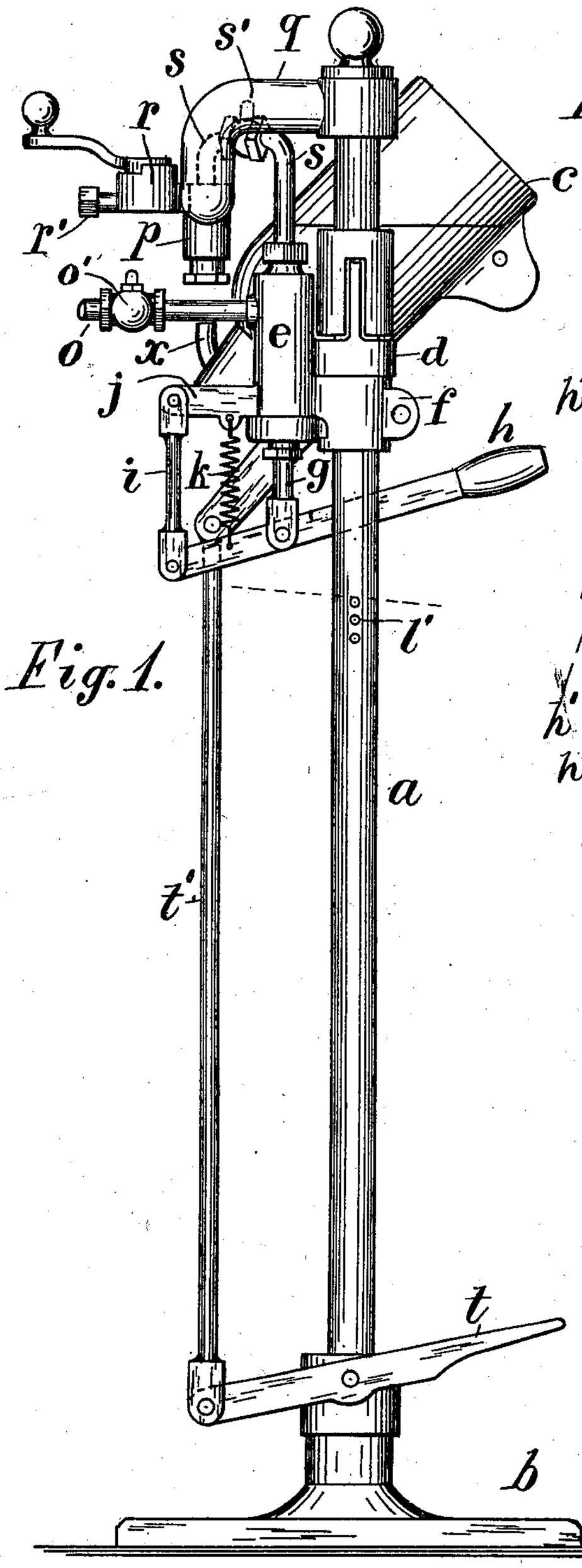

Fig. 1.

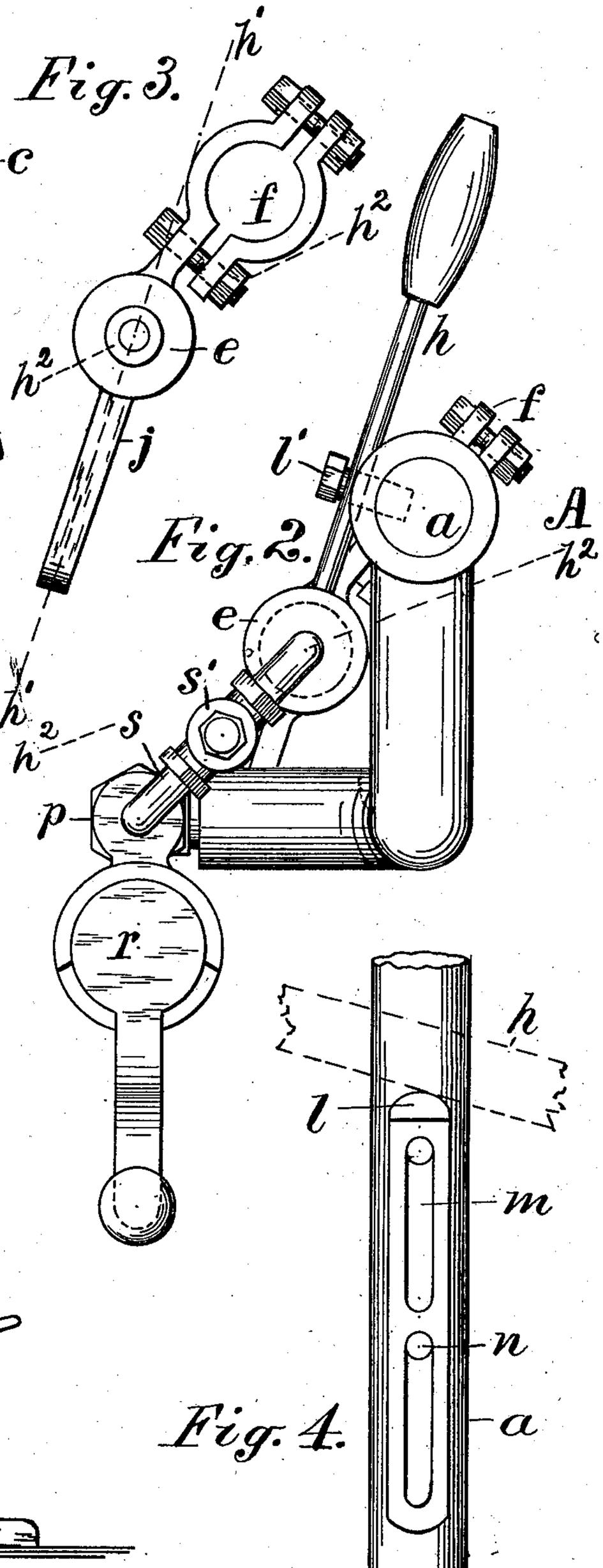

Fig. 2.

Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN H. FOX, OF NEW YORK, N. Y.

SALTS-INJECTOR FOR SIPHON-FILLING MACHINES.

SPECIFICATION forming part of Letters Patent No. 702,717, dated June 17, 1902.

Application filed August 6, 1901. Serial No. 71,061. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. FOX, a citizen of the United States, residing at 234 East Thirty-third street, New York, county of New York, State of New York, have invented certain new and useful Improvements in Salts-Injectors for Siphon-Filling Machines, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The present invention is an attachment for the siphon-filler and mineral-water charger patented to me December 18, 1900, with No. 664,351, and is adapted to be sold separately from the machines described in that patent and readily applied thereto by making a single pipe connection.

In the siphon-filler shown in my aforesaid patent means was provided for introducing a charge of salts into the siphon-bottle before filling the bottle with carbonated water, such means consisting of a small pump supported in a horizontal position near the top of the apparatus with a piston-rod having a cross-handle to be pulled and pushed by the operator. That construction was not adapted for convenient use, as the cross-handle of the pump projected directly into the position occupied by the operator and required him to move backward to operate the pump. In the present invention I attach the pump to the standard of the siphon-filling machine and operate it by a lever having a vertical movement, which lever is arranged directly within reach of the operator's hand, so that an upward pull of the handle may suffice to discharge the salts to the siphon when the siphon is adjusted in its holder.

To make the present attachment applicable to the machines heretofore constructed under my Patent No. 664,351, I construct the pump with a split clamp adapted to fit the post of the machine below the sleeve or collar which supports the siphon-holder, and I project a discharge-pipe from the top of my pump-cylinder in such a position that its end can be bent downwardly and connected with the top of the supply-socket, where an inlet is provided for the purpose of receiving the salts supplied by the pump.

The invention will be understood by reference to the annexed drawings, in which—

Figure 1 is an elevation of the siphon-filling apparatus viewed from the side occupied by the operator. Fig. 2 is a plan of the standard and salts-pump. Fig. 3 is a plan of the pump and its clamp for attachment to the post, and Fig. 4 is an elevation of an adjustable stop for the pump-lever.

Fig. 1 shows a siphon-filler like that illustrated in my said Patent No. 664,351 and having a post *a*, supported by a base *b*, with the siphon-holder *c* provided with a sleeve movable vertically upon the post above a fixed collar *d* by means of a treadle *t* and link *t'*. The neck *x* of the siphon is shown projected upwardly from the bottom of the siphon-holder, and a so-called "supply-socket" *p* is shown sustained above the same by a bent arm *q*, attached rigidly to the post near the top. The supply-socket *p* is connected with a valve-chamber *r*, which receives the carbonated water through a nozzle *r'* and suitable connections. Pressure upon the treadle forces the siphon-holder upward upon the post *a* and crowds the nozzle of the siphon into the supply-socket *p*, in which position the siphon can be charged with salts or carbonated water.

In the attachment comprising the present invention a vertical pump-cylinder *e* is supported at one side of the siphon-holder (by a clamp *f*, projected from one side of the cylinder) just below the collar *d* and provided, as shown in Fig. 3, with a removable cap, by which the pump is readily secured upon the post. The rod *g* of the pump-plunger is extended downwardly and a hand-lever *h* is pivoted thereto. An arm *j* is projected from the cylinder opposite to the clamp *f* and connected with the hand-lever by a link *i*, and the arm and hand-lever are also connected by a spring *k*, which holds the pump-plunger and hand-lever normally raised. A stop *l* is provided to limit the downward movement of the handle, and thus regulate the volume of the liquid drawn into the pump-cylinder. In Figs. 1 and 2 the stop is shown formed as a bolt *l'*, fitted removably in any one of several holes in the post *a*; but it may also be formed, as shown upon the stop *l* in Fig. 4, with a foot having slots *m* and bolts *n*, by which the stop may be adjusted vertically upon the post to vary the stroke of the hand-

lever and pump-plunger. The pump-cylinder *e* is shown with inlet-pipe *o*, having a check-valve *o'* opening toward the pump, and with outlet-pipe *s*, having a check-valve *s'*, the pipe *s* being bent downward to an inlet upon the top of the socket *p* to deliver the salts into the siphon when its nozzle is pressed into the supply-socket.

In Fig. 2, A designates the position of the operator, and the hand-lever *h* is extended by the side of the post *a* is such position as to be readily grasped by one hand of the operator below the siphon-holder *c*. With the particular construction shown the hand-lever extends by the right hand of the operator and can be readily reached by the operator as soon as the siphon has been inserted in the holder and the treadle depressed to force its nozzle into the supply-socket. The vertical arrangement of the cylinder *e* gives the hand-lever *h* a vertical movement by a direct connection with the plunger-rod *g*, and such movement is far more convenient for the operator than any motion in a horizontal direction.

The pump-cylinder is represented in Fig. 3 with the clamp *f* made in two halves for convenient application to the post *a*, one half being cast upon the pump-cylinder and the other half forming a removable cap secured by suitable bolts. The arm *j* is also shown cast upon the cylinder at a suitable inclination to the clamp to use a straight hand-lever *h* and project the same past one side of the post *a*, as shown in Fig. 2, the direction of the hand-lever being indicated by the dotted line *h'* in Fig. 3. If preferred, the handle may be extended on the opposite side of the post, as indicated by line h^2 in Figs. 2 and 3. In my prior patent the pump-cylinder was placed above the level of the siphon-holder in a horizontal position, which involved its attachment to the upper part of the post and brought it too close to the operator for convenient actuation. In the present construction the clamp of the pump is attached to the post below the siphon-holder, and the handle, operating at a still lower level, is in a position where the operator can lay his hand upon it without moving.

The pump-cylinder formed with a split clamp for application to the post of a siphon-filling machine constitutes an attachment which may be readily applied to the siphon-filling machine, and the addition of such an attachment to the machine enables the user of such a machine to deliver salts as well as carbonated water through the supply-nozzle. Reference to Figs. 1 and 3 shows that the pump and the hand-lever *h* and spring *k* are all united together in an operative relation, so that the mere application of the clamp *f* to the post of the siphon-filler and the connection of the pipe *s* with the supply-socket puts the attachment into suitable condition for immediate use, and I have therefore claimed the pump and the connections to the hand-lever as an attachment for such siphon-filling machines.

Having thus set forth the nature of the invention, what is claimed herein is—

1. In a siphon-filler having the post *a* with siphon-holder *c* movable vertically thereon and actuated by treadle *t* and link *t'*, the combination, with such parts, of the supply-socket *p* attached to the top of the post by bent arm *q*, the valve-chamber *r* connected with the nozzle *r'*, the pump-cylinder *e* attached to the post below the collar *d* by clamp *f*, and having an inlet-pipe *o*, and an outlet having the pipe *s* connected with the socket *p*, the rod *g* of the pump-plunger projected downwardly from the cylinder, and the hand-lever *h* connected to such rod and projected past the post *a*, as and for the purpose set forth.

2. In a siphon-filler having the post *a* with siphon-holder *c* movable vertically thereon and actuated by treadle *t* and link *t'*, the combination, with such parts, of the supply-socket *p* attached to the top of the post by bent arm *q*, the valve-chamber *r* connected with the nozzle *r'*, the pipe *s* provided with check-valve *s'* opening toward the socket, the vertical pump-cylinder *e* attached to the post below the collar *d* by the clamp *f*, and having the arm *j* projected from its lower end with link *i* hinged thereto, the cylinder being provided with inlet-pipe *o* having check-valve *o'* opening toward the cylinder and having its upper end connected with the socket *p* by the pipe *s*, the rod *g* of the pump-plunger projected from the lower end of the cylinder, the hand-lever *h* jointed to the rod and to the link *i*, and the spring *k* connecting the hand-lever and the arm to hold the pump-plunger normally raised, substantially as herein set forth.

3. The attachment herein shown and described for the siphon-filling machines having the post *a* with siphon-holder *c* movable vertically thereon and actuated by treadle *t* and link *t'*, and having the supply-socket *p* attached by the arm *q* to the top of the post, and provided with the valve *r*, the attachment comprising the vertical pump-cylinder *e* having the inlet-pipe *o* at the side and supply-pipe *s* at the top provided with check-valve *s'* and adapted for connection with the top of the supply-socket, and having at one side the clamp *f* adapted to embrace the post below the sleeve of the siphon-holder, and at the opposite side the arm *j* provided with link *i*, the pump-plunger rod *g* projected from the bottom of the cylinder, the hand-lever *h* pivoted to the link *i* and to the rod *g*, and the spring *k* connecting the hand-lever and the arm to hold the pump-plunger normally raised, substantially as herein set forth.

4. The attachment herein shown and described for the siphon-filling machines having the post *a* with siphon-holder *c* movable vertically thereon, and having the supply-socket *p* with inlet for salts at the top and

valve *r* at the side, and attached to the top of the post by the arm *q*, the attachment comprising the vertical pump-cylinder *e* having the inlet-pipe *o*, and the pipe *s* and check-valve *s'* connecting the top of the pump with the top of the supply-socket, the pump having the clamp *f* for securing it upon the post, the pump-plunger projected downwardly from a cylinder, the hand-lever pivoted by link to the cylinder, and a stop upon the post projected in the path of the hand-lever to vary its stroke and the volume of salts delivered to the supply-socket, substantially as herein set forth.

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

JOHN H. FOX.

Witnesses:
THOMAS S. CRANE,
L. LEE.