

HERMANN SEYTER.

Improvement in Feed Regulators for Liquids.

No. 121,010.

Patented Nov. 14, 1871.

Fig. 2.

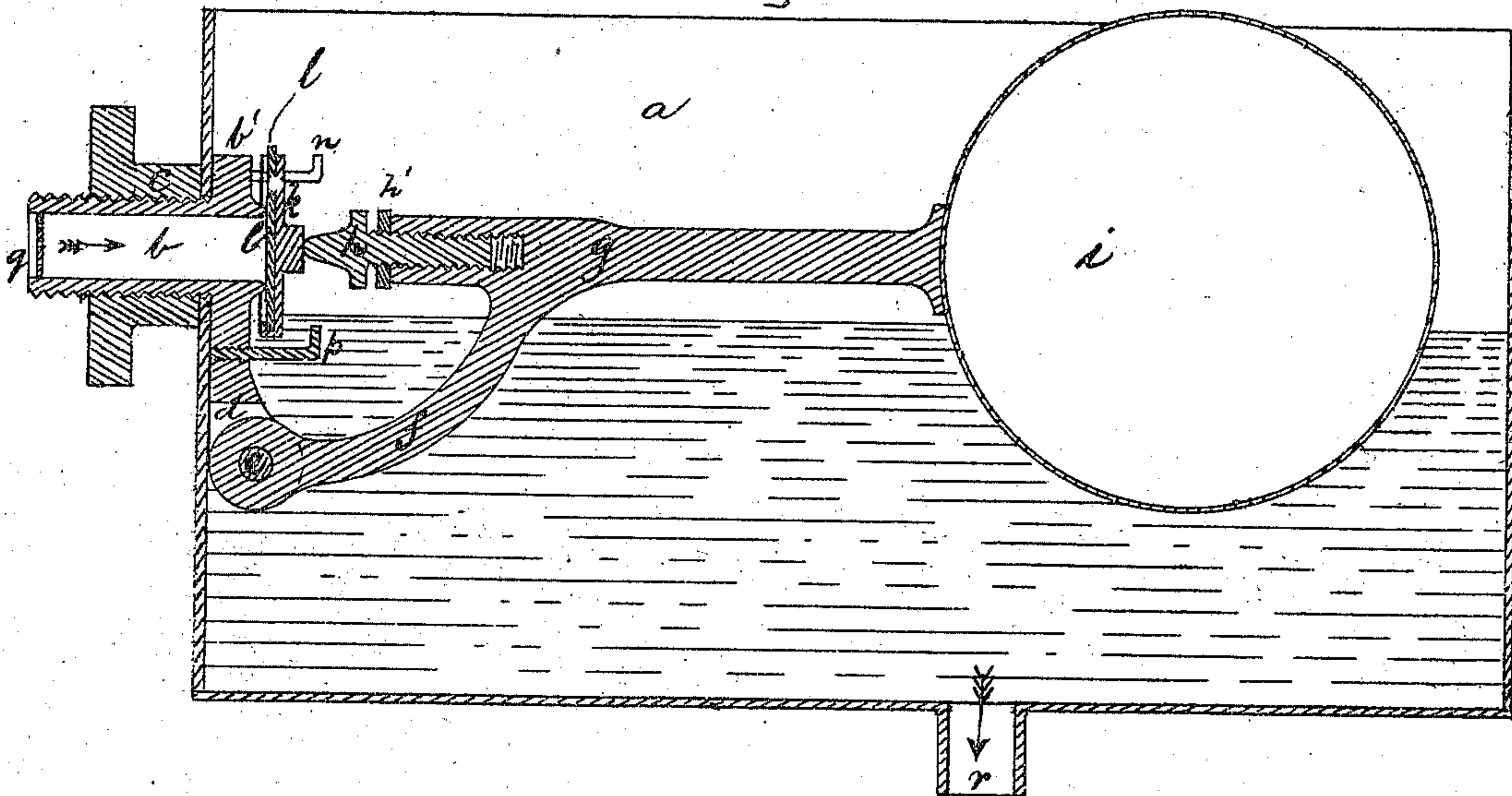


Fig. 1.

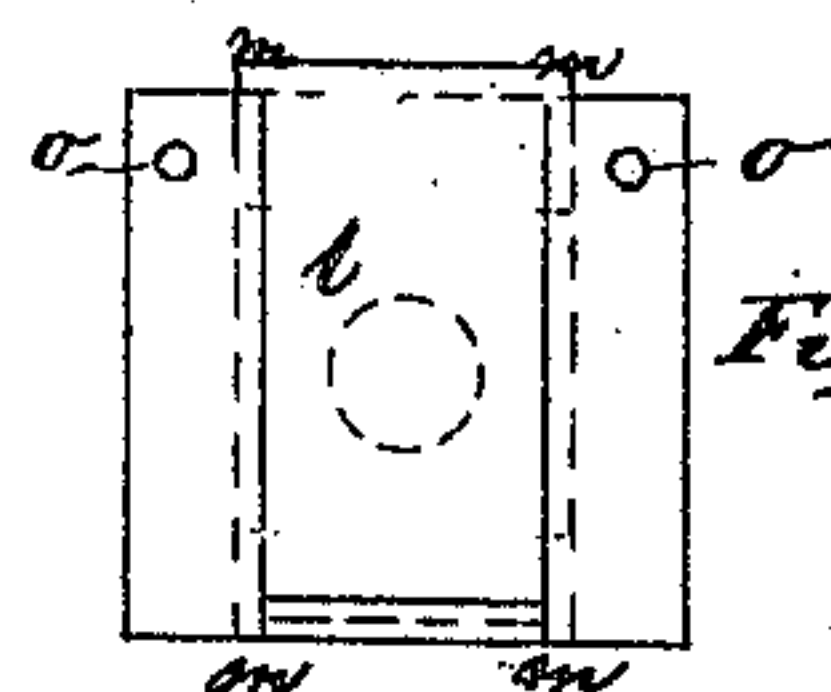
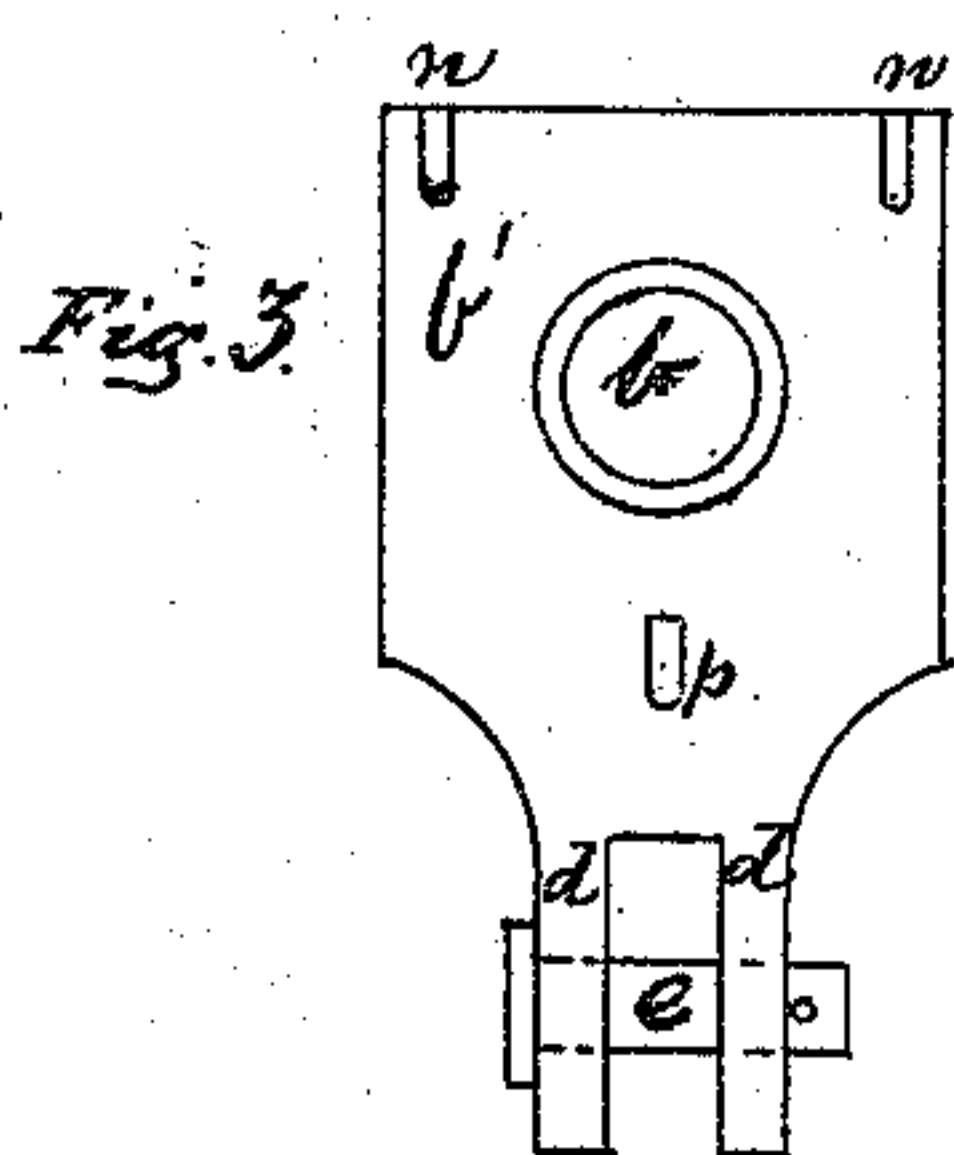
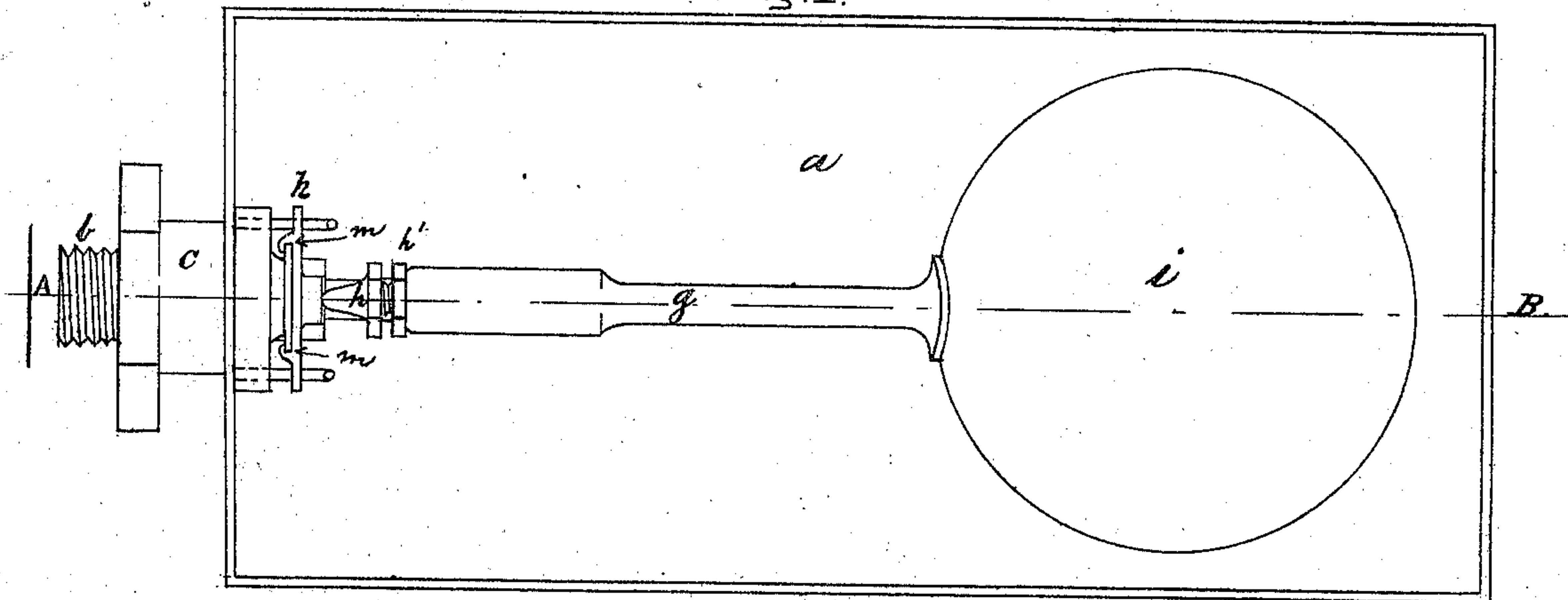


Fig. 4.

Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

HERMANN SEYTER, OF VAIHINGEN, WURTEMBERG.

IMPROVEMENT IN FEED-REGULATORS FOR LIQUIDS.

Specification forming part of Letters Patent No. 121,010, dated November 14, 1871.

To all whom it may concern:

Be it known that I, HERMANN SEYTER, of Vaihingen, in the Kingdom of Wurtemberg, have invented certain new and useful Improvements on Automatic Feed-Regulators for Liquids, of which the following is a specification:

The nature of my invention relates to improvements in the valve-gears for regulating apparatus, for the purpose of regulating the supply of liquids automatically, as will now be fully shown and described.

On the drawing, Figure 1 is a ground plan. Fig. 2 is a central longitudinal section over the line A B taken on Fig. 1. Fig. 3 is a front view of the valve-seat. Fig. 4 is a front view of the valve, and Fig. 5 is an end view of the supply-pipe.

Similar letters refer to similar parts wherever they occur on the drawing.

a is a cistern or receiver, in which the liquid is kept and regulated. The pipe *b* is secured to one side of the box *a* by means of the nut *c* screwed over the projecting end of the pipe *b*, as shown in Fig. 2. The inner end of the pipe *b* is provided with a flange, *b'*, on which a seat for the valve is turned. The lower end of the flange *b'* terminates as hinges *d d*, through which the pin *e* is inserted. An arm, *f*, cast in one piece with the horizontal one *g*, is made to swing around the hinge-pin *e*, as shown in Fig. 2. A float, *i*, is securely attached to the rear end of the arm *g*, as shown. The arm *g* is bored out and tapped in its forward end to receive the adjustable stud *h*, by the turning of which the length of the arm *g* can easily be regulated. A check-nut, *h'*, is made for the purpose of locking the stud *h* firmly to the arm *g* when in place. Two hooks, *n n*, are screwed in the upper end of the flange *b'*, and two corresponding holes, *o o*, are made in the plate *k*, by which means the plate *k* is hung on the hooks *n n*, and thus made to operate easily without friction. The plate *k* is provided with guides *m m m* on the sides and the bottom, between which the valve or packing *l* is held. Said packing projects a little above the upper end of the plate *k*, as shown in Fig. 2, whereby I am able to draw the packing out by means of a pair of tongs or otherwise, as required, when the packing is worn out or damaged. A third hook, *p*, is screwed in the flange *b'* below the under side of the plate *k*, by which

arrangement the plate *k* is prevented from going too far from the valve-seat. The back of the plate *k* is provided with a small hub, as shown, whereon the extreme end of the stud *h* is pressing.

My feed-regulating apparatus is automatically operated as follows: Any liquid being forced through the supply-pipe *b* would instantly open the valve *l*, provided no pressure acted on the back of said valve. As long as the box *a* is filled with any liquid to a height, as shown in Fig. 2, the buoyancy of the float *i* swings the arms *f g* around the fulcrum *e*, whereby the extreme end of the piece *h* is pressed hard against the plate *k*, thus effectually closing the opening *b*, when no liquid can enter. But as soon as the liquid from the receiver *a* is drawn off through an opening, *r*, or otherwise discharged, the weight of the arms *f g* and the weight of the float *i* swing these parts automatically around the fulcrum *e*, in which case the pressure of the piece *h* on the valve-plate *k* is relieved, and the liquid is now allowed to run through the pipe *b*. As soon as more liquid is supplied through the pipe *b* than what is discharged through the opening *r* the float is gradually lifted up by the liquid, and when of a height as shown in Fig. 2, the valve is again closed by the pressure of the stud *h* on the valve-plate *k*. The liquid may be drawn direct from the box *a* to the use for which it is intended, or it may be drawn into a second or larger receiver, as circumstances may require. The outer end of the pipe *b* is provided with a sieve, *q*, Fig. 5, whereby grit and dirt are prevented from passing the valve *l*.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent, and claim—

1. In combination with the float *i*, the arm *f g* with its regulating-screw *h* and check-nut *h'*, movable around the hinge *e*, as and for the purpose set forth.

2. The combination of the valve-plate *k*, guides *m m*, valve *l*, holes *o o* with the supporting hooks *n n* and guiding-hook *p*, as and for the purpose set forth.

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Witnesses:

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(148)