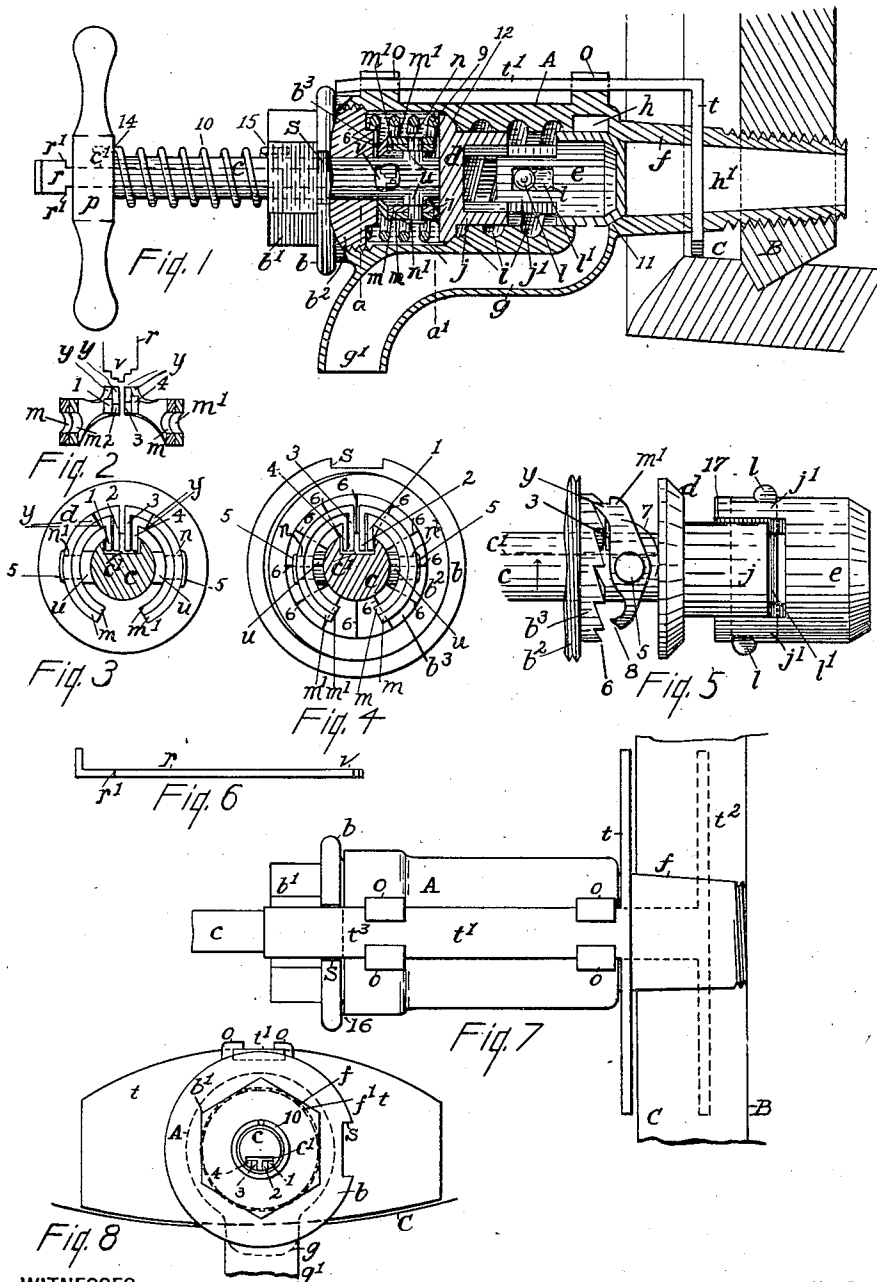


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VALVE SPIGOT.

APPLICATION FILED JUNE 15, 1911.

1,064,305.

Patented June 10, 1913.



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VALVE-SPIGOT.

1,064,305.

Specification of Letters Patent.

Patented June 10, 1913.

Application filed June 15, 1911. Serial No. 633,301.

To all whom it may concern:

Be it known that I, CHARLES E. FISHER, a citizen of the United States, and resident of Verplanck, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Valve-Spigots, of which the following is a specification.

This invention relates to spigots, and has for its object a packless, self closing and self locking valve operating mechanism.

The objects are attained by the means set forth in these specifications, which I declare to be a full and exact description of my invention, reference being made to the accompanying drawings, in which like letters and figures refer to like parts throughout the several views.

Figure 1 is a longitudinal section of the spigot partly in elevation. Fig. 2 is a detail relating to the valve locking mechanism. Fig. 3 is a plan of the tops of the locking dogs. Fig. 4 is a plan of the under sides of the locking dogs and related parts. Fig. 5 is a side elevation of the valves and locking devices. Fig. 6 is an edge view of the key for unlocking the valve. Fig. 7 is a plan of the top of the spigot. Fig. 8 is a front elevation of the spigot.

The main features of the spigot will first be described by reference to Fig. 1. The body A of the spigot is provided with the usual threaded extension *f* for screwing into a barrel head, as represented at B. The passage *h*¹ through the part *f* has an outlet through an annular chamber *h* which takes an ogee course out through the extension *g* and spout *g*¹. The annular chamber *h* is closed to the passage *h*¹ by the valve *e* seated as at 11. The chamber in the spigot body for the valve *e* is continued to receive, also, the inner end of the member *d*. Above the member *d* the chamber is enlarged to make room for a spring 9 and to accommodate the valve locking mechanism. The cap *b* has an outer threaded and ratchet notched extension *b*² and an outer hexagon head *b*¹. The valve stem *c* is provided with a handle *p* and is encircled by a stiff spring 10 that turns the handle in one direction.

The valve *e*, Figs. 1 and 5, is a cylindrical body, long enough to extend inwardly beyond the chamber *h*, as in Fig. 1, and has opposite sides cut away to form the lugs

*j*¹ *j*¹, Figs. 1 and 5. The member *d* has a similar cylindrical extension cut away to form lugs *j* *j*, and the lugs *j* *j* of the member *d* fit between the lugs *j*¹ *j*¹, making a sliding but not close connection, as shown in Fig. 5. The member *d* is fast to the valve stem *c*, so that, turning the member *d* also turns the valve *e*. A coarse thread *i* is provided in the valve chamber, and a removable key *l*¹, Figs. 1 and 5, having semi-spherical projections *l* *l*, is fitted through the lugs *j*¹ of the valve *e*, the projections or knobs *l* extending into the screw-thread *i*. These knobs, as a substitute for a thread made on the periphery of the valve, permit a very free movement of the valve on its seat. As the member *d* is turned the valve *e* is turned also, causing the knobs *l* to traverse the thread *i*, and the valve *e* to move to and from its seat 11. The member *d* is seated as at 12, and the object of this member is to prevent any outflow of liquid into the locking chamber. This member is kept seated by means of a stiff spring 9. Upon the valve stem *c* is a stout spring 10, with one end secured in the handle *p*, as at 14, and the other end secured in the hexagon head *b*¹ at 15. The twisting tension of this spring holds the valve *e* normally closed. The parts thus far described constitute the

valved spigot. The valve locking means are within the chamber between the cap *b* and the member *d*, Fig. 1, and are shown particularly in Figs. 1 2 3 4 and 5. The inner face of the part *b*³ of the cap *b* is provided with ratchet teeth encircling the valve stem, as particularly shown in Figs. 4 and 5. Just above the member *d*, the stem *c* is provided with trunnions or lugs *u* *u*, with reduced extensions *n* *n*¹. Upon each of these lugs is a pair of combined lock tumblers and ratchet pawls, which will be referred to as dogs. These dogs are shown in plan in Figs. 3 and 4, and a side view is given in Fig. 5. They rock on their respective lugs, where they are retained by heads 5 on the lugs, and are held in a normal position by springs 7, Fig. 5, also indicated in Fig. 1. One end of each of the dogs is turned inwardly toward the center as shown in Figs. 3 and 4, so that they lie within a slot or recess *c*¹ in the stem *c*. Upon the ends of the dogs, adjacent to the angular ends, are hook projections *y*, that drop as pawls into the

ratchet notches 6, as in Fig. 5. The opposite ends of the dogs are also provided with pawl terminations, also for engagement with the ratchet notches. Fig. 3 represents the plan of these dogs as they lie under the ratchet face, looking toward the member *d*. Upon the lug *n* are the dogs *m*¹, the outer dog having the inward projection 3, the inner dog the projection 4. Upon the lug *n*¹ are the dogs *m*, the outer dog having the inner projection 2, the inner dog having the inner projection 1. *y y* indicate the pawl hooks that normally lie in engagement with the ratchet teeth above them. Fig. 4 shows a reverse plan of the dogs, the view being toward the ratchet face *b*³.

The ends of the dogs that project within the slot in the stem *c* are shown as in the completed valve in Fig. 8. An elevation of a portion of the dogs is shown in Fig. 2, showing that the ends 1 2 3 4 do not have their top surfaces all in the same plane, while the pawl points *y* do lie all in the same plane. When the valve *e* is closed, these dogs will engage with ratchet teeth, and the dogs must all be disengaged from the teeth before the valve can be opened. A key *r*, Figs. 1 2 and 6, is provided for insertion in the slot *c*¹ in the stem *c*, to press upon the dogs as they are shown in Fig. 8, to disengage the dogs. In Fig. 1 the stem *c* is shown as cut away, disclosing the key in place to act upon the dogs. Fig. 2 shows that the key is adapted at its end *v* to engage with the dogs in a manner that will depress all the dogs simultaneously. The key is provided with shoulders *r*¹ to limit its movement, and prevent too great a movement of the dogs, as, unless the key is exactly fitted, one or more of the dogs either will not be disengaged, or will be moved so far that the rear ratchet hook 8 will engage with the ratchet, and so prevent movement of the valve.

On the top of the spigot body, as in Figs. 1 7 and 8 are grooved elevations *o o* that receive a bar *t*¹ that is integral with the plate *t*. The bar is slidable within its bearings in the elevations. The object of the plate and bar is to secure the spigot against removal from the barrel. When the spigot is to be inserted in a barrel as in Fig. 1, the cap *b* is to be slightly unscrewed, as in Fig. 7, at 16, causing the notch *s* in the edge of the cap to coincide with the position of the bar. This will allow the plate *t* to be moved close to the spigot body, as in Fig. 7, while the spigot is being screwed into the barrel head. When the spigot is placed the plate is moved toward the barrel, as in Fig. 1, and in broken lines in Fig. 7, and the cap *b* is screwed tightly to its place. When the cap is closed the bar *t*¹ can no longer be moved forward, and the spigot cannot be unscrewed from the barrel because of the width of the

plate and its nearness to the chime *C* of the barrel. The thread *i* being a right hand thread, and the thread on the cap *b* a left hand thread, or vice versa, the cap *b* cannot be unscrewed without the use of the unlocking key.

The Figs. 2 3 4 and 5 are made on a larger scale than the other figures in order to more clearly illustrate the parts shown. The ratchet face of the cap *b* may be divided into much finer teeth than are shown. The object of the play between the lugs of the member *d* and valve *e*, as at 17, Fig. 5, is to obviate the necessity for a too minute adjustment of the ratchet teeth to their engaging dogs. When the valve *e* is closed the handle will have a little movement toward opening the valve without affecting the valve, and this affords a little opportunity for the positive and unfailing engagement of the dogs.

Claims.

1. A valve spigot comprising a valve body with a screw threaded end, a valve chamber and locking device chamber in alinement with the spigot inlet, an elongated valve in the valve chamber to close the spigot inlet, an annular passage around the valve communicating with a stationary spout extended parallel with the body, lugs on the back of the valve, a screw thread in the valve chamber and removable knobs in the valve lugs to engage with said screw threads, a member in the locking chamber adapted to seat on the end of the valve chamber to close communication between said chambers and lugs on said member to engage with the lugs on the spigot valve, a spring to normally seat said member, a stem on said member and a handle on said stem, a slot longitudinally of the stem, a spring about the stem secured as a torsion spring tending to keep the valve closed, lugs on the stem within the locking chamber, combined lock tumblers and pawls rockable on said lugs, springs pressing on the said pawls, a spigot cap provided with a ratchet toothed inner face for engaging said pawls, the pawls provided with extensions into the slot in the stem, and a key adapted to be introduced into the slot in the stem for manipulating the pawls.

2. A valve spigot comprising a valve body with a screw threaded end, a valve chamber and locking device chamber in alinement with the spigot inlet, an elongated valve in the valve chamber to close the spigot inlet, an annular passage around the valve communicating with a stationary spout extended parallel with the body, lugs on the back of the valve, a screw thread in the valve chamber and removable knobs in the valve lugs to engage with said screw threads, a member in the locking chamber adapted to seat on the end of the valve chamber to close communication between said chambers and lugs

on said member to engage with the lugs on
the spigot valve, a spring to normally seat
said member, a stem on said member and a
handle on said stem, a slot longitudinally of
5 the stem, a spring about the stem secured as
a torsion spring tending to keep the valve
closed, lugs on the stem within the locking
chamber, combined lock tumblers and pawls
rockable on said lugs, springs pressing on
10 the pawls, a spigot cap provided with a
ratched toothed inner face for engaging said
pawls, the pawls provided with extensions
into the slot in the stem, a key adapted to
be introduced into the slot in the stem for
15 manipulating the pawls, grooved elevations
on the top of the spigot body, a plate

elongated laterally of the spigot body mov-
able on the end of the spigot body with an
extended arm slidable within the grooved
elevations and normally held from outward 20
movement by said cap, and a notch in the
cap of the spigot adaptable to be brought
into alinement with said arm to permit of
its outward movement.

Signed at Verplanck in the county of West- 25
chester and State of New York this 27th
day of April A. D. 1911.

CHARLES E. FISHER.

Witnesses:

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JOSEPH F. MARTIN.