

JAMES M. MEHARG'S

117908 "Improved Self Closing Spindle Cock"

PATENTED AUG 8 1871

Fig. I.

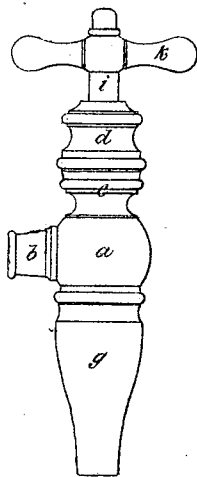


Fig. II.

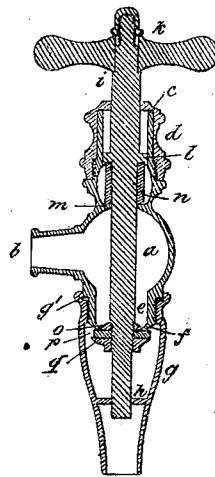
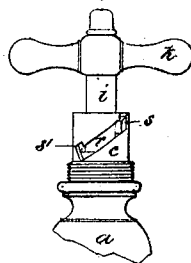


Fig. III.



WITNESSES

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INVENTOR

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IMPROVEMENT IN SELF-CLOSING COCKS.

Specification forming part of Letters Patent No. 117,908, dated August 8, 1871.

To all whom it may concern:

Be it known that I, JAMES METIER MEHARG, of the city of Montreal, in the district of Montreal in the Province of Quebec, plumber, have invented new and useful Improvements in Self-Closing Spindle-Cock; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, where—

Figure 1 represents an elevation of the cock. Fig. 2 represents a section of the cock. Fig. 3 represents a detail of the cock.

This invention has reference to an improved construction of self-closing spindle-cocks for rendering them more efficient as cocks generally and less liable to the deterioration of wear from use. These cocks may be made in two forms or modifications: First, one which at all times closes unless held open by the hand or otherwise secured in that position. Second, one which is provided with a notch, hereinafter described, by means of which the cock may be set open to a given amount.

In the drawing hereunto annexed similar letters of reference indicate like parts.

a is the body or shell of the cock, of the form indicated in the drawing, and provided with any suitably-formed nozzle, *b*, in front, for the fluid to escape by. The shell *a* is terminated upward in an extension, *c*, of cylindrical form, to which is attached a screw-cap, *d*, and in a downward direction by an extension, *e*, the bottom of which is formed in the shape of a valve-seat, *f*. To the extension *e* is screwed a thimble or further extension, *g*, (the joint between the two being made tight by a suitable washer, *g'*,) provided at a suitable distance within it with a spindle-guide, *h*. The spindle *i* passes through the center of *c*, *d*, *a*, *e*, and *h*, as shown in the drawing, and is provided with a handle, *k*, on the top for operating it by; also, on the part where it passes through the extension *e*, with a recessed collar, *l*, somewhat approaching to a fit with the inner bore of the cylindrical extension *e*, the top of the shell *a* forming the bottom *m* of the extension *e*. Through this the spindle passes, and on the part of it between the recessed collar *l* and bottom *m* a piece of India-rubber tube, *n*, is fitted. The bore of the projection *e* is at this point suitably enlarged, so that when the collar *l* is caused to descend within *e* the rubber *n* may have sufficient room

to expand sidewise, as will be hereinafter more particularly described. The spindle *i* continues its plain or parallel form until it reaches a little above the valve-seat *f*, where its diameter is reduced, forming a shoulder, its next further extension being screwed to receive upon it, first, the upper valve-guard *o*; next, the India-rubber valve *p*; and, lastly, the lower valve-guard *q*, as shown in Fig. 2. The further extension of the spindle *i* is again reduced in diameter, being somewhat smaller than the bottom of the thread on its screwed part, and passes through the guide *h*. To the bottom of *g* any suitable pipe for the fluid to be drawn off by the cock may be attached.

In Fig. 3, the means by which the valve *p* is opened is shown, and is as follows: In the upper part of the extension *e* an inclined or spiral groove, *r*, is cut, and on the spindle *i* a suitable projection or pin, *s*, is formed or made in one with it. The groove *r* may be provided with a notch, *s'*, at its bottom end for the pin to hook into, and by this means the valve may be secured open, or it may be made without the notch *s'*, when it will at all times close by the action of the India-rubber tube *n* together with the pressure of the fluid on the lower side of the valve-guard *q*.

The cock having been arranged substantially as described, its action is as follows: The handle *k* being turned in the proper direction to cause the pin *s* to descend in the groove *r* the spindle *i* also descends with it, opening the valve *p* a similar amount and allowing the fluid to flow into the shell *a*, escaping by the nozzle *b*. The India-rubber pipe *n* on the spindle *i* is compressed by reason of the recessed collar *l* being moved down nearer the bottom *m*, at once forming a spring to cause the valve *p* to return to its seat and at the same time forming a packing to prevent the fluid escaping into the upper extension *c* of the cock. The flow of the fluid will also assist the valve to close, and when shut the pressure on its under side will assist in keeping it tight. When the groove *r* is provided with the notch *s'* the valve may be opened and the pin *s* hooked into it to keep it so any required period, when, to close it, it is only necessary to unhook the pin *s* from the notch *s'*, and it will close itself, as hereinbefore described. The cap *c* not only forms a guide for the spindle *i*, but also a support and bond to that part of the extension *e* inclosed within it.

Having now described the construction and operation of my invention, to which I have given the name of "Meharg's Self-Closing Spindle-Cock," I beg to state that I disclaim all other forms of cocks now in use.

What I claim as my invention is, the new and useful improvements in self-closing spindle-cocks, as follows:

A cock of the described construction, provided with a spindle moving vertically through the

guide *h*, said spindle having a collar, *l*, bearing against the rubber tubing *n*, the slot *r* for the purpose of causing the spindle to be moved vertically by revolving the handle, and notch *s'* for holding the same down, when desired.

JAMES METIER MEHARG.

Witnesses:

CHARLES LEGGE,

CHARLES G. C. SIMPSON.