

(Model.)

J. M. MARTY.

INJECTOR.

No. 309,478.

Patented Dec. 16, 1884.

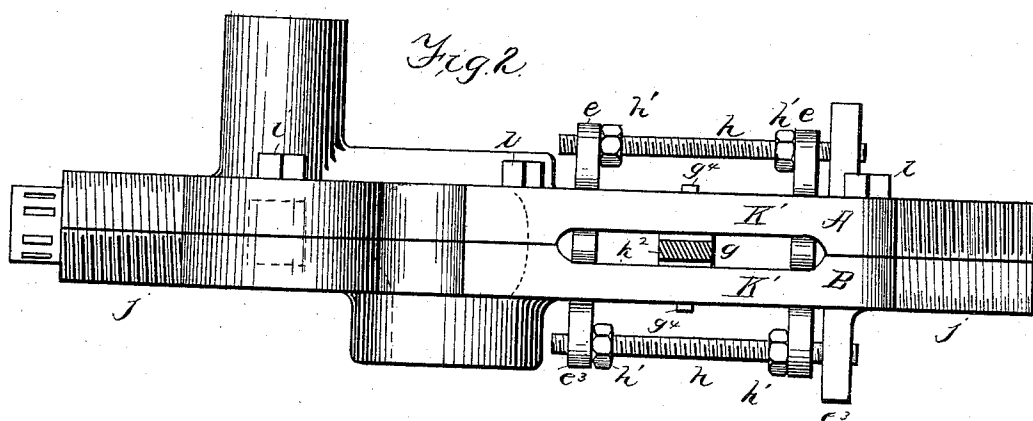
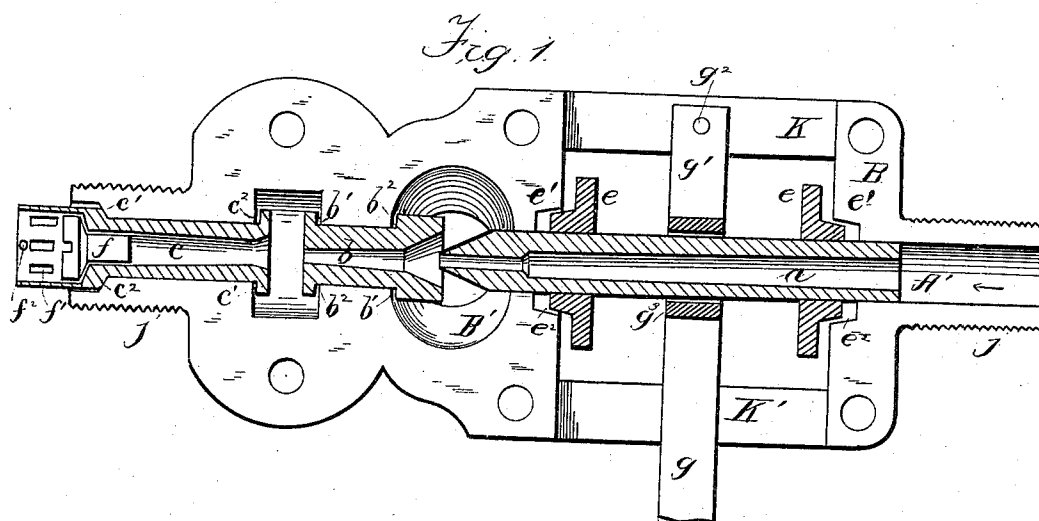


Fig. 3.

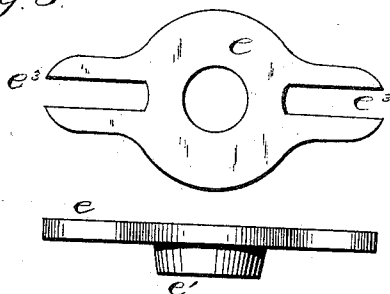


Fig. 4.



Witnesses:

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J. S. Duffie

Inventor
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Atty.

UNITED STATES PATENT OFFICE.

JOHN M. MARTY, OF CLARKSVILLE, ARKANSAS.

INJECTOR.

SPECIFICATION forming part of Letters Patent No. 309,478, dated December 16, 1884.

Application filed April 26, 1884. (Model.)

To all whom it may concern:

Be it known that I, JOHN M. MARTY, a citizen of the United States, residing at Clarksville, in the county of Johnson and State of Arkansas, have invented certain new and useful Improvements in Injectors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention has relation to improvements in injectors, as hereinafter fully described and set forth.

Figure 1 is an inner face view of the lower half, B, of the body of my injector and longitudinal sectional views of the tubes *a b c* and packing-glands *e e*, check-valve *f*, and lever *g*. Fig. 2 is an edge view of my injector, showing its upper and lower halves, A and B, its studs *h h*, packing-glands *e e*, and a cross-sectional view of lever *g*. Fig. 3 is a face view of one of the packing-glands *e*, and Fig. 4 is an edge view of the same.

My invention is described as follows: It is made in two halves, A and B, which are substantially joined together by screws or bolts and nuts *i i i* and by the pipe-connections on the threaded ends *j j*. The steam-tube *a* is fitted into its bed loosely, so that it can be worked backward or forward by the lever *g*. The mixer-tubes *b* and force-tube *c* have ground shoulders *b' c'*, to fit into their ground sockets *b² c²*. These tubes *b* and *c* also fit a little loosely in their beds, and are allowed room for a little play between their ground shoulders and the ground sockets *b² c²*, so that the injector will drain itself of water when not in use. The steam-tube *a* is provided with two stuffing-boxes, *e e*. The flanges *e'* of these stuffing-boxes *e* fit into their sockets *e² e²*, said sockets being first partially filled with any proper packing material. These stuffing-boxes are provided with arms having mouths *e³ e³*, which are arranged to grasp threaded studs *h h*. These threaded studs are provided with nuts *h'*, which turn against the outer

face of the stuffing-boxes *e e* and press them down into their sockets *e² e²*. The steam-tube *a* is long and cylindrical, and reaches from the steam-chamber A' to the mixer-chamber B'. This is for the purpose of keeping the water as cool as possible up to the very nozzle of the said steam-tube, and thus preventing any leakage of steam. Arms K K' unite the two chambers, the steam-chamber A', and the mixer-chamber B'. These arms K K' do not fit closely together, but have a space, *h²*, between them for the lever *g* to play in. One end, *g'*, of this lever is pivoted between the arms K at point *g²*, while the other end plays loose between arms K'. It has a hole, *g³*, in it, which loosely fits over the steam-tube *a*, and is pivoted to the tube by screws *g⁴ g⁴*. This lever *g* moves the steam-tube back and forth. The check-valve *f* fits into the outer end of pipe *c*, which is provided with perforations *f'* and pin *f²*. The injector is made in two parts, so that it may be taken apart by unscrewing the screws or nuts and bolts *i*. When so opened, the whole of the injector can be easily taken apart, as tubes *a*, *b*, and *c* fit loosely in their sockets, and packing-boxes *e e* will come out of their sockets at once, and the whole thing can be taken apart at little cost or trouble and cleaned, and, if necessary, repaired.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The two halves A and B of the body of the injector, each having beds for the pipes *a*, *b*, and *c*, arms K K', recessed to receive the lever *g*, sockets *e²*, for packing-glands *e*, and ground sockets *b²* and *c²*, said halves being adapted to be firmly held together by screws or bolts and nuts *i*, all substantially as shown and described.

2. The combination of lever *g*, pivoted at its end *g'*, between arms K, and grasping pipe *a*, and pivoted thereto by screws *g⁴*, with steam-pipe *a*, and packing-glands *e*, holding said pipe *a* in place, and at the same time serving to pack any stuffing material in sockets *e²*, substantially as shown and described.

3. In combination with halves A and B, threaded studs *h*, with packing-glands *e*, having mouths *e³*, grasping-studs *h*, and flanges

c' , adapted to fit into sockets c^2 , with nuts N , working on threaded stud h , and against the outer face of said packing-glands e , and adapted to press their flanges e' down into their sockets c^2 , substantially as shown and described.

4. The combination of halves A and B, as above described, having ground sockets $b^2 c^2$, with pipes b and c , having ground shoulders b' and c' , both fitting loosely into their respective beds and sockets, substantially as shown and described, and for the purposes set forth.

5. The combination of the halves A and B, and the pipe c , having ground should-

ders c' , adapted to fit into ground sockets c^2 , and having in its outer end perforations f' , with check-valve f , fitting in the outer end of said pipe c , and pin f^2 , passing horizontally across the opening in the end of pipe c , and adapted to prevent check-valve f from being blown out, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN M. MARTY.

Witnesses:

F. L. PENNINGTON,
J. W. COFFMAN.