(No Model.)

G. W. WISWELL.

INJECTOR FEED COCK.

No. 373,710. Patented Nov. 22, 1887.

Fig. 1.

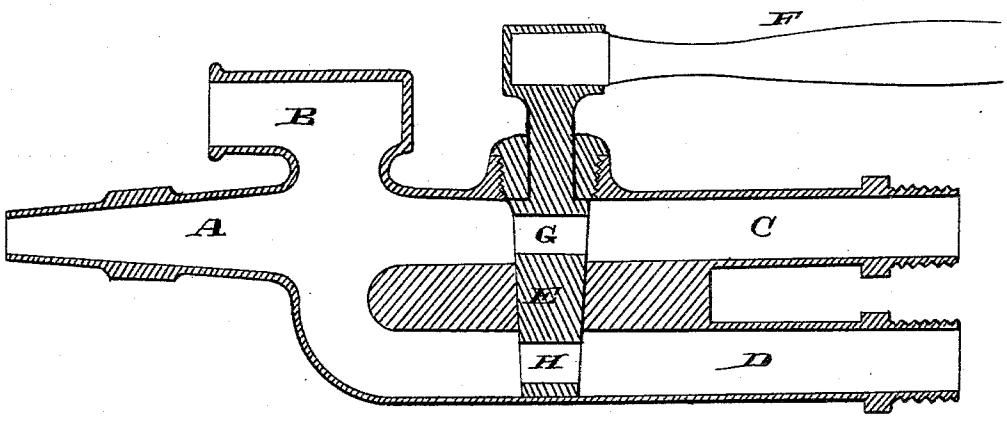


Fig. 2.

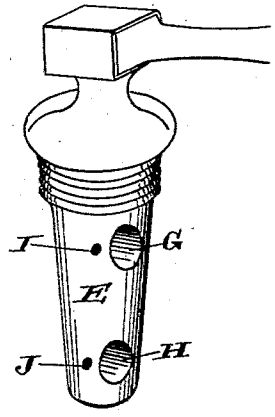


Fig. 3.

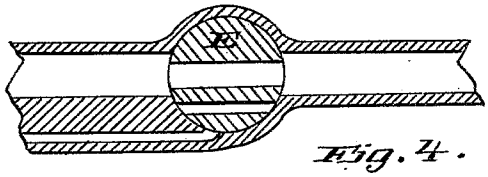


Fig. 4.

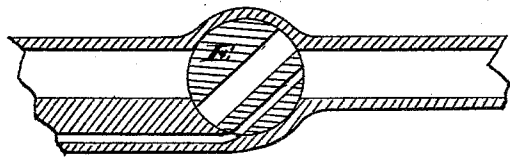
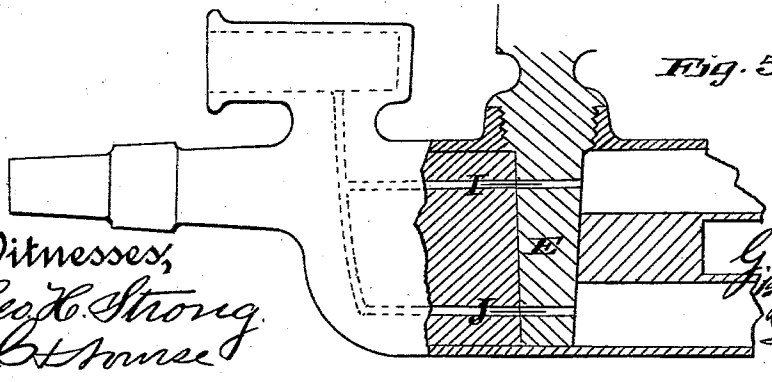


Fig. 5



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UNITED STATES PATENT OFFICE.

GREGG W. WISWELL, OF SAN FRANCISCO, CALIFORNIA.

INJECTOR FEED-COCK.

SPECIFICATION forming part of Letters Patent No. 373,710, dated November 22, 1887.

Application filed May 28, 1887. Serial No. 239,714. (No model.)

To all whom it may concern:

Be it known that I, GREGG W. WISWELL, of the city and county of San Francisco, State of California, have invented an Improvement in Injector Feed-Cocks; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a feed-cock for injectors; and it consists of a single cock or valve having passages whereby the steam and water inlets may be simultaneously opened by one movement of the cock, said cock also having a supplemental opening or passage which connects with the overflow, to be used in starting the apparatus.

Referring to the accompanying drawings for a more complete explanation of my device, Figure 1 is a longitudinal sectional elevation of the steam and water passages, showing the cock and its connection with the injector. Fig. 2 is a perspective view of the cock separated from the apparatus. Figs. 3 and 4 are transverse sections showing the supplemental passages to the overflow open and closed. Fig. 5 is a vertical section showing the supplemental passages to the overflow open.

Injectors are usually constructed with a water and steam pipe, each having a separate valve or cock, which is opened for the purpose of operating the machine; but these cocks, being independent, must be operated separately, which causes some difficulty in getting the injector properly started and in the variation of the feed.

In my invention, A represents the injector, and B the overflow connected therewith. The interior of these parts is not shown, being similar to that of all injectors.

C is the steam injecting pipe, and D the water-supply, these two pipes in the present case being shown horizontal and parallel with each other. Through these two pipes a vertical tapering or conical passage is made, into which the plug E of the cock is ground and fitted, so as to be steam and water tight. This cock has the handle F, by which it is turned at will. Through the cock, and in line with the steam and water passages C and D, are made openings G and H, respectively, so that when the cock is turned to bring the steam-passage in line with the pipe C the water-passage H in the lower part will be brought in line with the pipe D and the injector will commence its work at once.

In order to produce the proper vacuum and fill all pipes of the injector, it is customary to open passages which connect with the overflow B, so that a vacuum is produced by a small jet of steam, thus drawing water enough into the pipe D to fill it and prepare it for operation, and this necessitates two more cocks or valves.

In my device, I and J are small openings in the cock E, which, when brought in line with the pipes C and D, will open communication through exterior pipes, K, in the walls of the injector, so as to connect with the overflow B, and thus produce the necessary vacuum to fill the pipes, as before described. By this construction, all the passages being controlled so as to operate simultaneously, but one movement is necessary to open the cocks or valves so as to set the injector in operation or shut it off, and as the passages are properly proportioned any change of feed may be easily effected.

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

1. An injector having the steam and water inlet passages lying parallel with each other, as shown, in combination with the cock or plug passing vertically through said passages, having openings whereby it corresponds with these passages, so that both may be opened or closed simultaneously, substantially as described.

2. The injector having the steam and water inlet pipes connected therewith, and the overflow, as shown, in combination with the cock or valve having the inlet-passages to correspond with the steam and water pipes, and the supplemental passages or openings communicating with the overflow, whereby the injector may be primed or charged, substantially as described.

3. In an injector, the steam and water supply, the inlet-passage, and the overflow, in combination with a single cock or valve, with openings corresponding with the steam and water supply and also with the overflow, whereby the injector may be primed, started, and the feed regulated with a single valve, substantially as herein described.

In witness whereof I hereunto set my hand.

GREGG W. WISWELL.

Witnesses:

GEO. H. STRONG,

S. H. NOURSE.