T. R. GANNON.

Meansfor Connecting Soldering-Irons to Gas-Pipes.

No. 151,772. Patented June 9, 1874.

Fig. 1

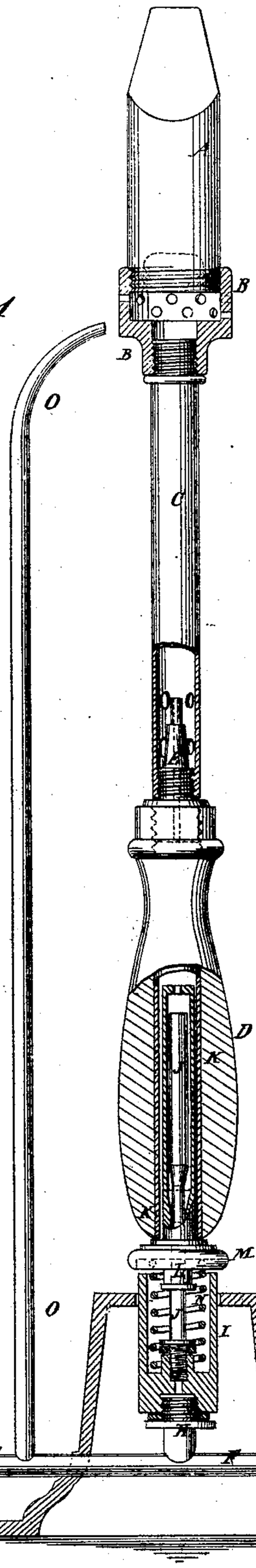
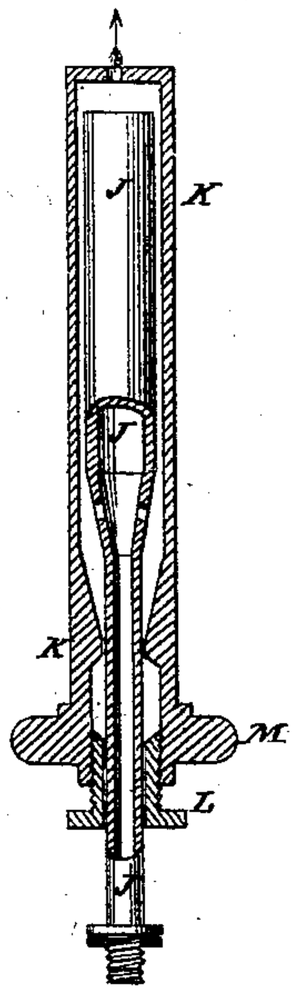


Fig. 2



Witnesses:

A. W. Almquist

C. Sedgwick

Per

Inventor:

T. R. Gannon

Attorneys.

UNITED STATES PATENT OFFICE.

THOMAS R. GANNON, OF NEW YORK, N. Y.

IMPROVEMENT IN THE MEANS FOR CONNECTING SOLDERING-IRONS TO GAS PIPES.

Specification forming part of Letters Patent No. **151,772**, dated June 9, 1874; application filed May 17, 1873.

To all whom it may concern:

Be it known that I, THOMAS R. GANNON, of the city, county, and State of New York, have invented a new and useful Improvement in Means for Connecting Soldering-Tools with Gas-Pipes, of which the following is a specification:

Figure 1 is a detail longitudinal section of my improved device. Fig. 2 is a detail view of the part of the same by means of which the gas is turned off and on.

Similar letters of reference indicate corresponding parts.

The invention will first be fully described, and then pointed out in the claim.

A represents the copper head of the soldering-tool, the base of which is screwed into the mouth of the socket B, and is slightly recessed or concaved to form a cavity or chamber for the gas. In the sides of the upper and larger part of the socket B are formed a number of small holes, through which the gas escapes when it is burned. In the lower and smaller part of the socket B is screwed the upper end of the pipe C, which serves as the stem or shank of the handle D, and into the lower end of which the upper end of the said handle D is screwed. The handle D is made hollow, or has a pipe, E, passed through it or attached to its upper end. The upper end of the pipe E is contracted, and projects into the lower part of the pipe or hollow stem C, to introduce the gas into said pipe. In the sides of the lower part of the pipe C, around the upper end of the pipe E, are formed a number of holes, to allow air to pass in and mingle with the gas before it is consumed. The lower end of the hollow or cavity of the handle D is made of such a size as to receive and fit an ordinary gas-burner, so that the soldering-tool may be heated by placing it upon an ordinary gas-burner and setting fire to the gas as it escapes from the holes in the sides of the socket B; but I prefer, for convenience, to use the apparatus hereinafter described. F is an ordinary gas-pipe, which passes horizontally through the lower part of the standard or pedestal G, which is designed to stand upon the work-bench. To the pipe F, within the pedestal G, is attached a short branch pipe or nozzle, H, upon which is screwed the lower end of the short tube I, which passes up through the top of the pedestal G. J is a small pipe, which passes down through the tube I, and its lower end screws into the bottom of the tube I or into the pipe H, so as to receive the gas from said pipe. The upper part of the pipe J is made flaring, or in the shape of an inverted cone, so as to fit into the tapering or conical valve-seat formed in the interior of the pipe K, through the lower end of which the lower part of the pipe J passes, the escape of gas being prevented by a stuffing-box, L. To the lower part of the pipe K is attached, or upon it is formed, a collar, M, to rest upon the upper end of the pipe I, when the pipe K is forced down. In the pipe I is placed a coiled spring, N, the lower end of which rests upon the bottom of the said pipe I. The spring N surrounds the lower end of the pipe J, and its upper end rests against the lower side of the collar M. The spring N should be of such a strength as to be compressed by the weight of the soldering-iron, and to raise the tube K when the weight is removed. In the inclined sides of the conical part of the pipe J are formed holes to allow the gas to escape when the pipe K is forced down, and which are covered, and the escape of gas is prevented, when the pipe K is raised by the spring N. To the pipe F, at the side of the pedestal G, is attached the lower end of a small pipe, O, of such a size as to allow only enough gas to escape from its upper end to support a sufficient flame to ignite the gas as it issues from the holes of the socket B. The upper end of the pipe O is curved inward to bring it into proper position to ignite the gas.

By this construction, simply placing the soldering-tool upon the pipe K, with its lower end resting upon the collar M, will open the valve, and allow the gas to escape and be ignited, heating the tool in a very short time. As the tool is removed the escape of the gas is stopped by the upward movement of the pipe K, caused by the action of the spring N.

I am aware that a stove has been provided with a wire-gauze cylinder, within which the soldering-iron may be located upon a plate, the weight of the iron depressing the plate, thereby moving a valve from its seat, and al-

lowing sufficient escape of gas to produce the flame and heat required. The valve closes as soon as the iron is removed.

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

The combination of pipe F H, tube I, pipe J, spring N, collared pipe K M, and stuffing-box L, as and for the purpose specified.

THOMAS R. GANNON.

Witnesses:
JAMES T. GRAHAM,
ALEX. F. ROBERTS.