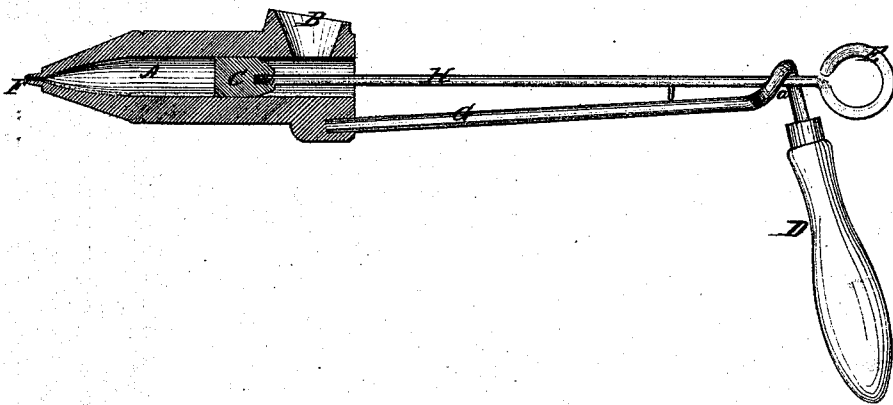


*J. W. Hallingsworth,*

*Metal Injector.*

*No. 103188.*

*Patented May 17, 1870.*



*Witnesses*  
*Henry N. Miller*  
*J. C. White.*

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*Pa.*  
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# United States Patent Office.

JOHN W. HOLLINGSWORTH, OF MOUNT VERNON, INDIANA.

*Letters Patent No. 103,188, dated May 17, 1870.*

## IMPROVEMENT IN METAL-INJECTORS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, JOHN W. HOLLINGSWORTH, of Mount Vernon, in the county of Posey and State of Indiana, have invented certain new and useful Improvements in Metal-Injectors; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of an instrument for injecting melted metal into small holes or crevices in which it is either inconvenient or impossible to simply pour the metal and do the work efficiently.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which represent a longitudinal vertical section of my machine.

A represents a cylinder of suitable dimensions, open at the rear end, and the front end funnel shaped, ending with a tube or apex, F.

On the upper side of the cylinder A, near the rear end, is an opening with a funnel, B, and from the rear end extends a rod, G, which, at its outer end, is bent downward, and provided with a handle, D.

The rod G, before being bent downward, is bent so as to form a loop, *a*, through which passes a rod, H, said loop answering for guide to the same.

The rod H is, at its outer end, formed into a ring, E, and its inner end is secured to a plunger, C, within the cylinder A.

To use the injector, place the metal to be ejected in the cylinder A, at the funnel B, while the plunger C is withdrawn to the outer or rear end of the cylinder. That part of the injector now containing the metal is now thrust into the fire until the metal is thoroughly fused. Now grasp the handle D with the hand and pass the thumb of the same hand through the plunger-ring E. Now place the tube or apex F of the cylinder to the cavity to be injected, and thrust the plunger in upon the fused metal, which is forced to escape through the tube F, and fill every minute part of the cavity to be filled.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The cylinder A, constructed as described, one end being funnel-shaped and ending with a tube or apex, F, and the other end open and provided on its upper side with a funnel, B, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

JOHN W. HOLLINGSWORTH.

Witnesses:

ELIJAH M. SPENCER,  
DAVID T. WEIR.