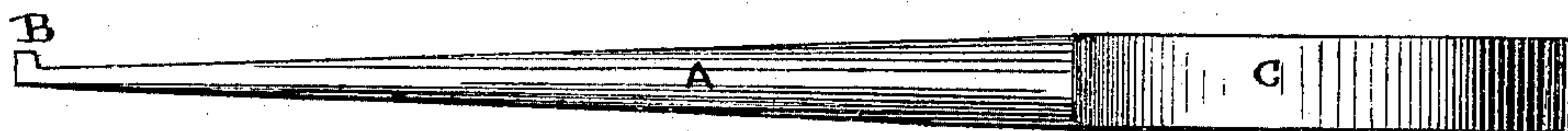
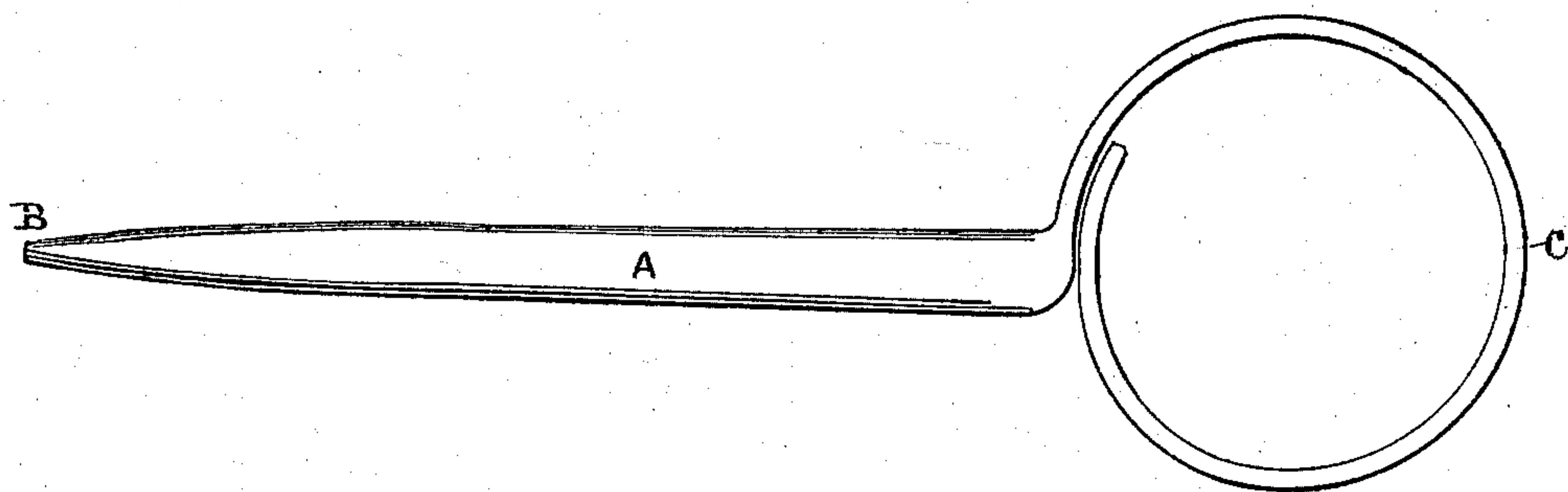


R. A. THOMPSON.  
Molders' Draw-Spikes.

No. 137,637.

Patented April 8, 1873.



Witnesses.  
D. G. Stuart  
C. H. Annay

Inventor.  
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# UNITED STATES PATENT OFFICE.

ROBERT A. THOMPSON, OF BEAVER FALLS, PENNSYLVANIA.

## IMPROVEMENT IN MOLDERS' DRAW-SPIKES.

Specification forming part of Letters Patent No. 137,637, dated April 8, 1873; application filed August 31, 1872.

*To all whom it may concern:*

Be it known that I, ROBERT A. THOMPSON, of Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Molders' Draw Spikes or Hooks; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

My invention relates to an improvement in the construction of the draw spikes or hooks used by molders to draw the patterns of stove-plates and other light or thin and ornamental castings from the sand.

These spikes or hooks are usually made from metal rods, with one end pointed and provided with a hook or with a screw or gimlet point, the other end being bent into a rigid ring or eye. This ring end of the draw-spike is used as a hammer for tapping the pattern, in order to disengage it from the sand of the mold previous to its being withdrawn therefrom. With thin or light castings, such as stove-plates, which have ornamental designs, delicate tracery, and fine lettering to be cast in relief, this tapping of the patterns to disengage them from the adhering sand of the mold is a very delicate operation, as the percussion resulting from the blow of a rigid hammer on the pattern tends to disintegrate the sand and break the mold in withdrawing the pattern, thereby necessitating a careful after manipulation by the hand or trowel in order to restore the broken portions of the

mold, or, as is frequently the case, necessitating an entirely new impression of the pattern.

My invention is designed to obviate this difficulty; and it consists in making the head or eye of the draw-spike in the form of a spring instead of rigid, as heretofore, so that when used as a hammer for tapping the patterns the concussion or force of the blow will be borne by the spring-ring or hammer end of the draw-spike, and the mold be thereby relieved from its disintegrating effect on the sand.

In the accompanying drawing, Figure 1 is a side elevation of my improved draw-spike. Fig. 2 is a plan view of the same, showing the hooked point.

A represents the body of the spike; B, the end provided with the drawing-hook; C, the end formed with the spring ring or eye to be used as a tapping-hammer.

This spring may be made of steel or any metal or material having sufficient strength and elasticity for the required purpose, and it may also be made of any shape, as found most convenient.

To those skilled in the art further description of the operation of my invention is deemed unnecessary.

What I claim as my invention is—

A molder's draw-spike having a spring-hammer head, substantially as described, and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of August, 1872.

R. A. THOMPSON.

Witnesses:

J. W. FORBES,  
J. G. HARBISON.