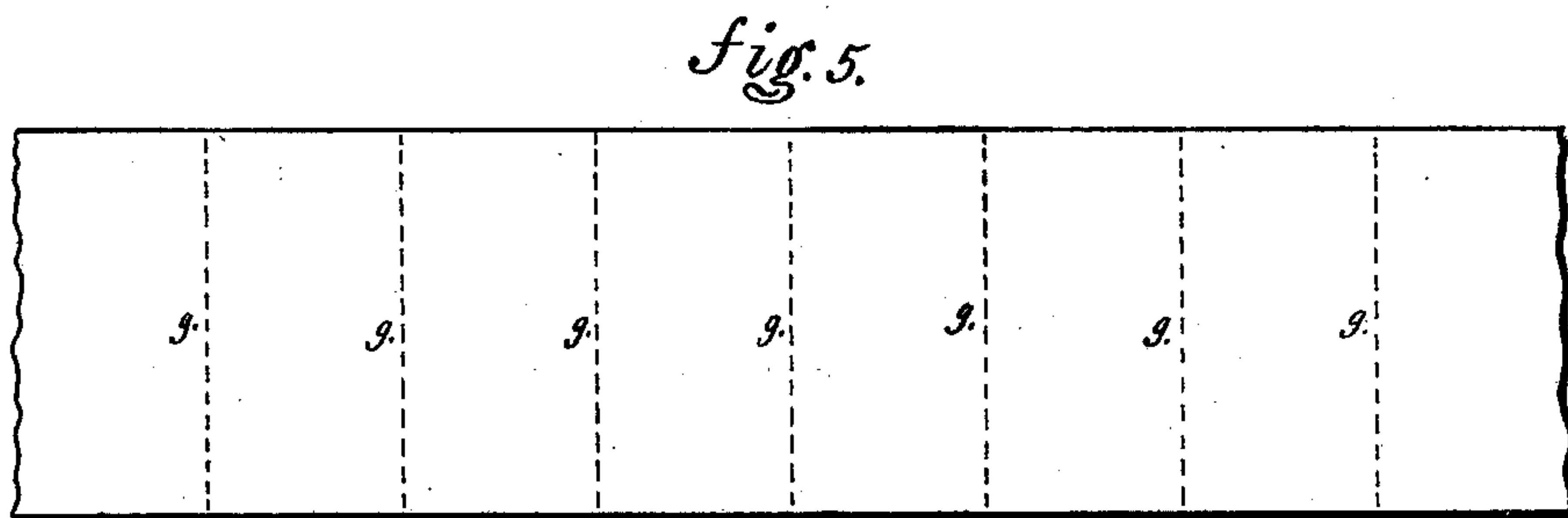
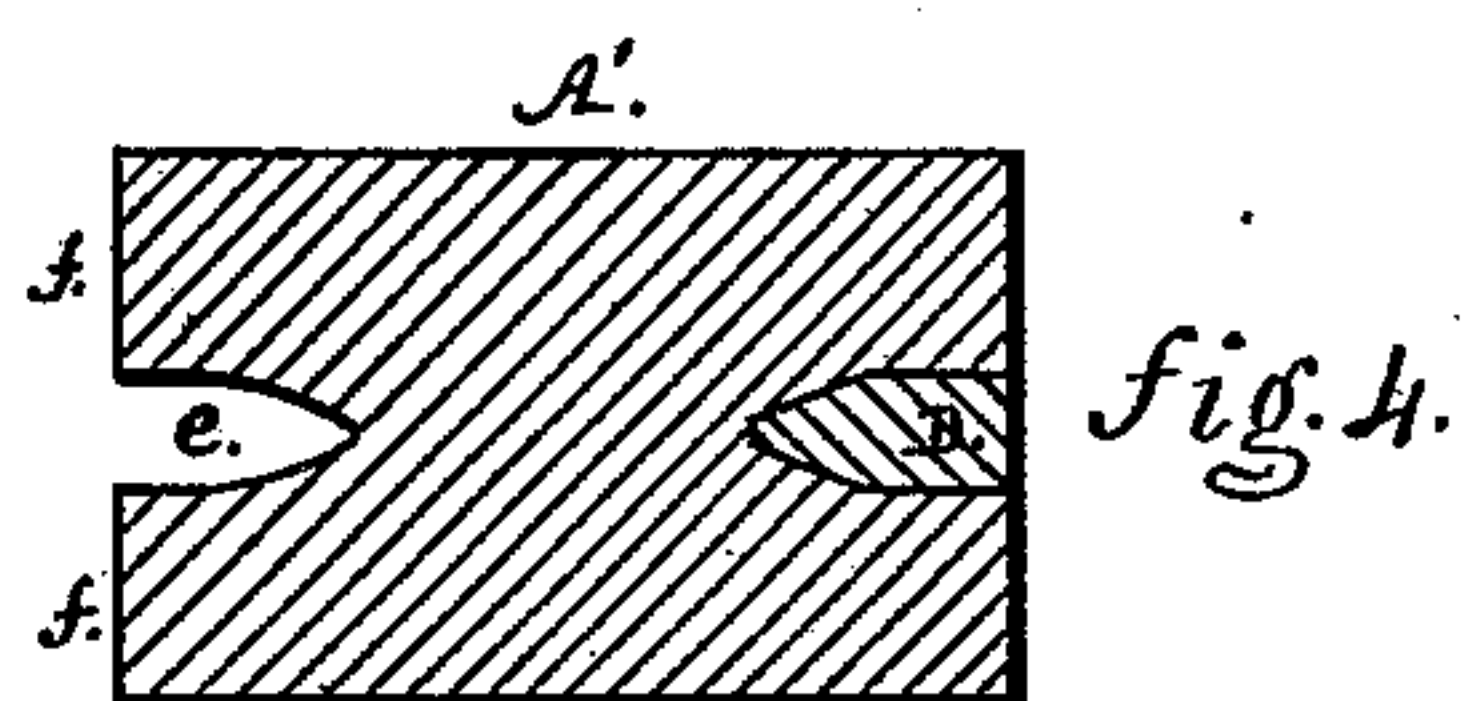
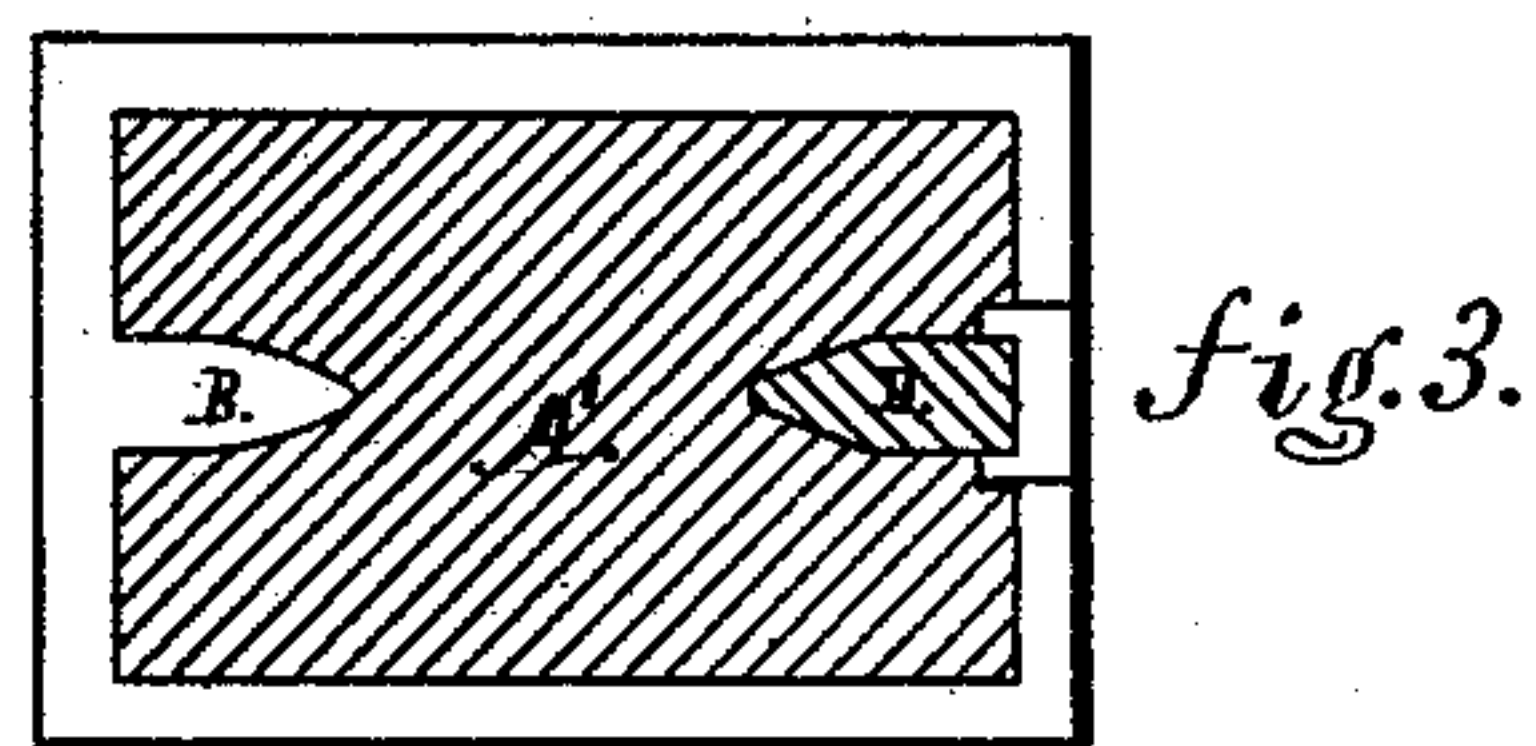
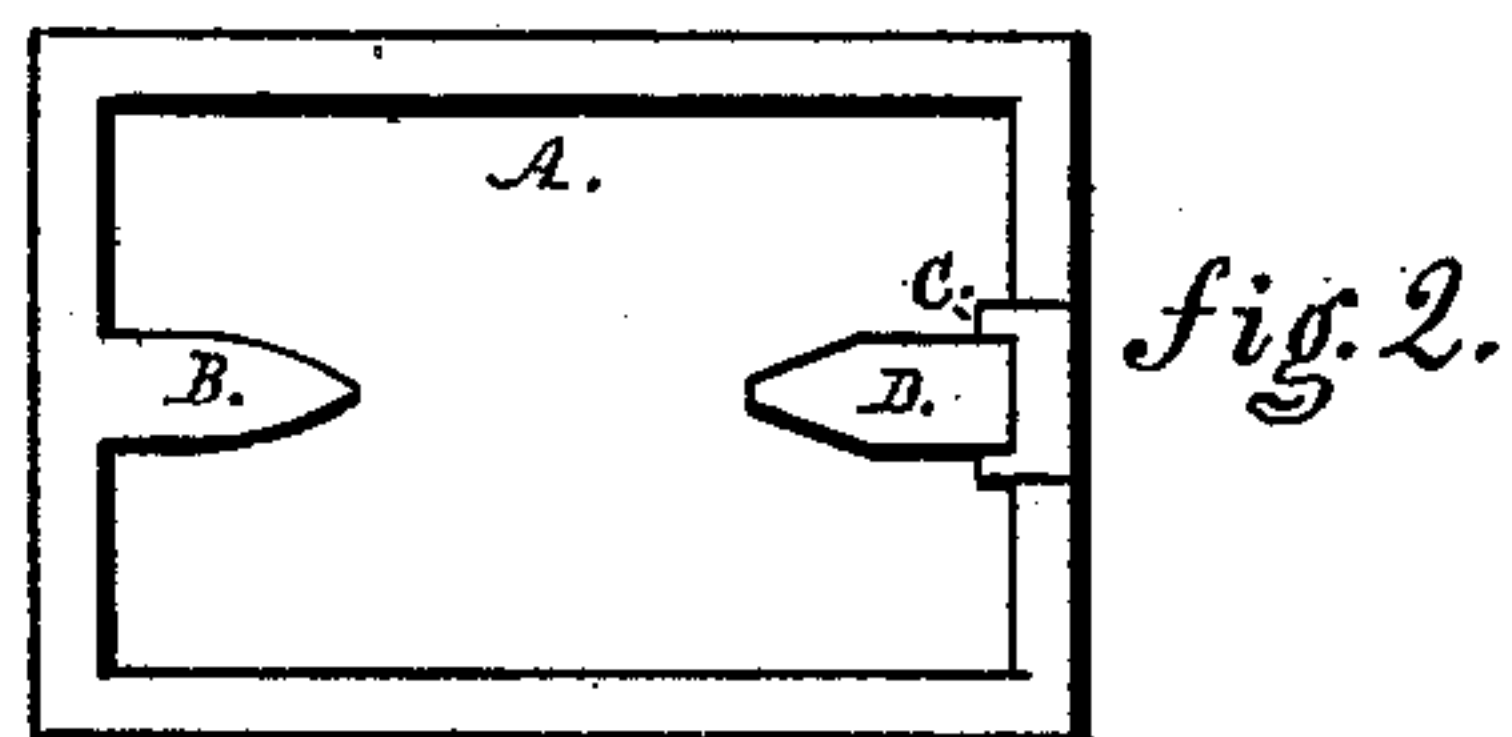
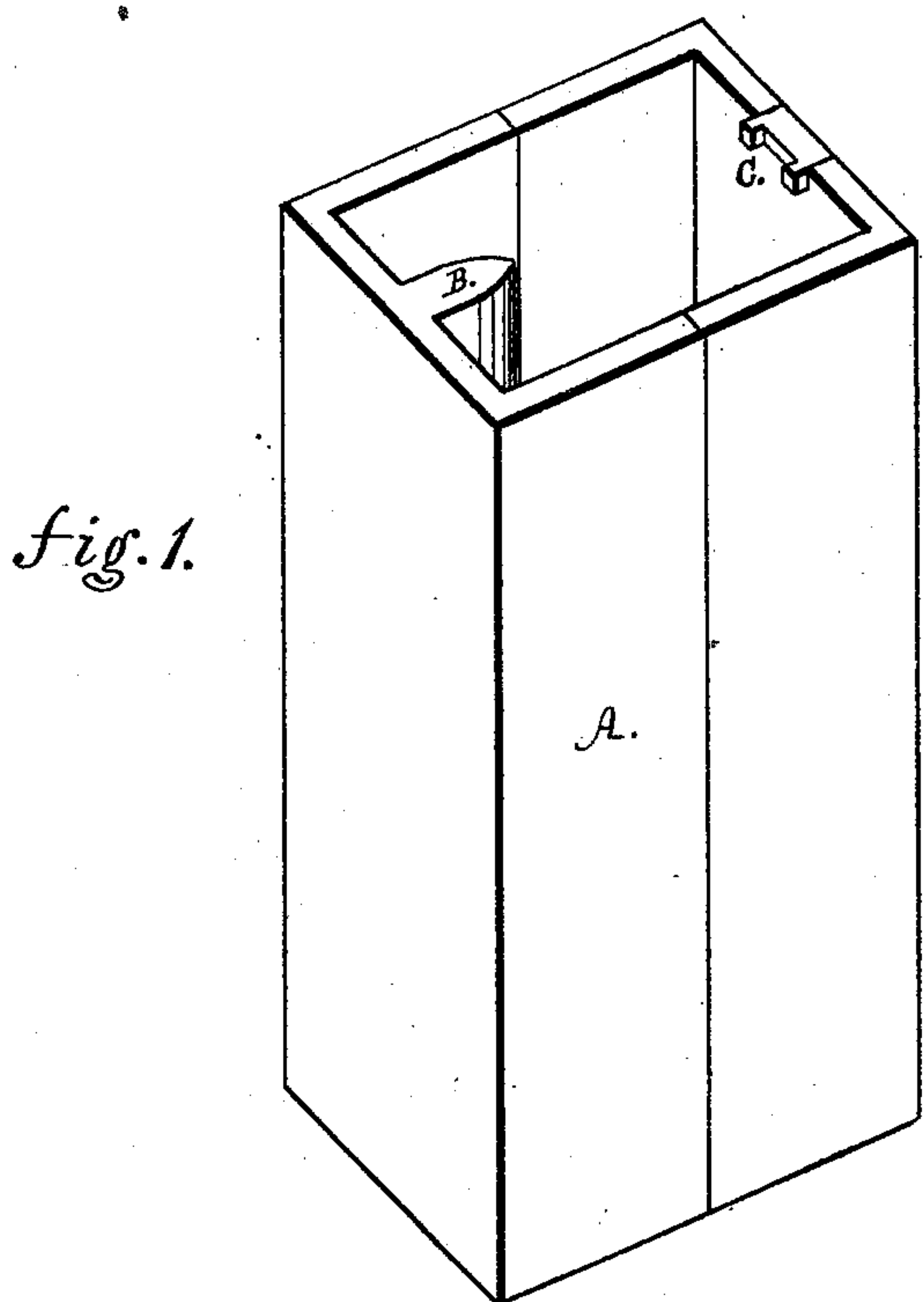


H. M. MYERS.
Manufacture of Shovel Blanks.

No. 229,550.

Patented July 6, 1880.



Witnesses
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Wm. Blakely

Inventor
Henry M. Myers.
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UNITED STATES PATENT OFFICE.

HENRY M. MYERS, OF BEAVER FALLS, PENNSYLVANIA.

MANUFACTURE OF SHOVEL-BLANKS.

SPECIFICATION forming part of Letters Patent No. 229,550, dated July 6, 1880.

Application filed March 31, 1879.

To all whom it may concern :

Be it known that I, HENRY M. MYERS, of Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented a new and useful Improvement in Making Shovel-Blanks; 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.

My invention relates to the manufacture of shovels; and it consists in casting the ingot with a bar of high-grade steel to form the cutting-edge and the longitudinal groove, and subsequently rolling the ingot into blank form, all as hereinafter fully described.

To enable others skilled in the art to make and use my improvement, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of my specification, Figure 1 is a perspective view of my ingot-mold. Fig. 2 is a top or end view of the same. Fig. 3 represents an end view of the ingot-mold and transverse section of the ingot in it. Fig. 4 is a transverse section of the ingot. Fig. 5 represents the ingot after being rolled or hammered into a bar for shovel-blanks. Fig. 6 is a transverse section of the bar or plate represented in Fig. 5.

The ingot-mold A is made of cast-iron, and is of the usual form for ingots of cast-steel, excepting that it has inward-projecting rib B, which extends from the top to the bottom of the mold. The mold A is also provided with recessed lug C, for supporting a bar in a vertical position against the side of the mold and directly opposite to the rib B.

In casting the ingot I take bars of high-grade steel and cut said bars into lengths corresponding to the length of the mold A. The bars of high-grade steel are subjected to an acid bath for the purpose of removing the

scale on the surface of the bars, and when dry and clean are placed in the mold A, as shown at D in Fig. 2. The mold is now ready for casting the body of ingot, which is made by pouring into the mold A molten steel of low grade, which low grade of steel will be welded to the bar D, of high grade, by the casting process.

The cast ingot in cross-section is shown in Fig. 4, in which D represents the part of the ingot which is formed by the bar of high steel, and A' represents the low-grade steel of the ingot, with a groove, e, lengthwise of the ingot.

The ingot, constructed as hereinbefore described, is reheated in a suitable furnace and hammered or rolled into bar, as represented in Fig. 5, and then cut into blanks by cutting the bar, as indicated at g.

By constructing an ingot in the manner described the blank for the shovel will have a hard-steel center, D, with parts f f for the formation of the handle-straps.

The shovel-blanks made from the ingot herein described are rolled, hammered, or plated and formed into the forms desired of shovels or spades.

Having thus described my improvement, what I claim as of my invention is—

The improvement in the art of manufacturing shovel-blanks, consisting in forming an ingot by casting soft steel in a mold that has a core, B, projecting inward from one of the walls, and a bar of steel, D, of high grade, projecting inward from the opposite wall, then rolling the ingot so formed into a plate or bar, as shown in Fig. 5, which may be divided into shovel-blanks, as described and shown.

HENRY M. MYERS.

Witnesses:

FRED. F. TURNER,
WM. BLAKELY.