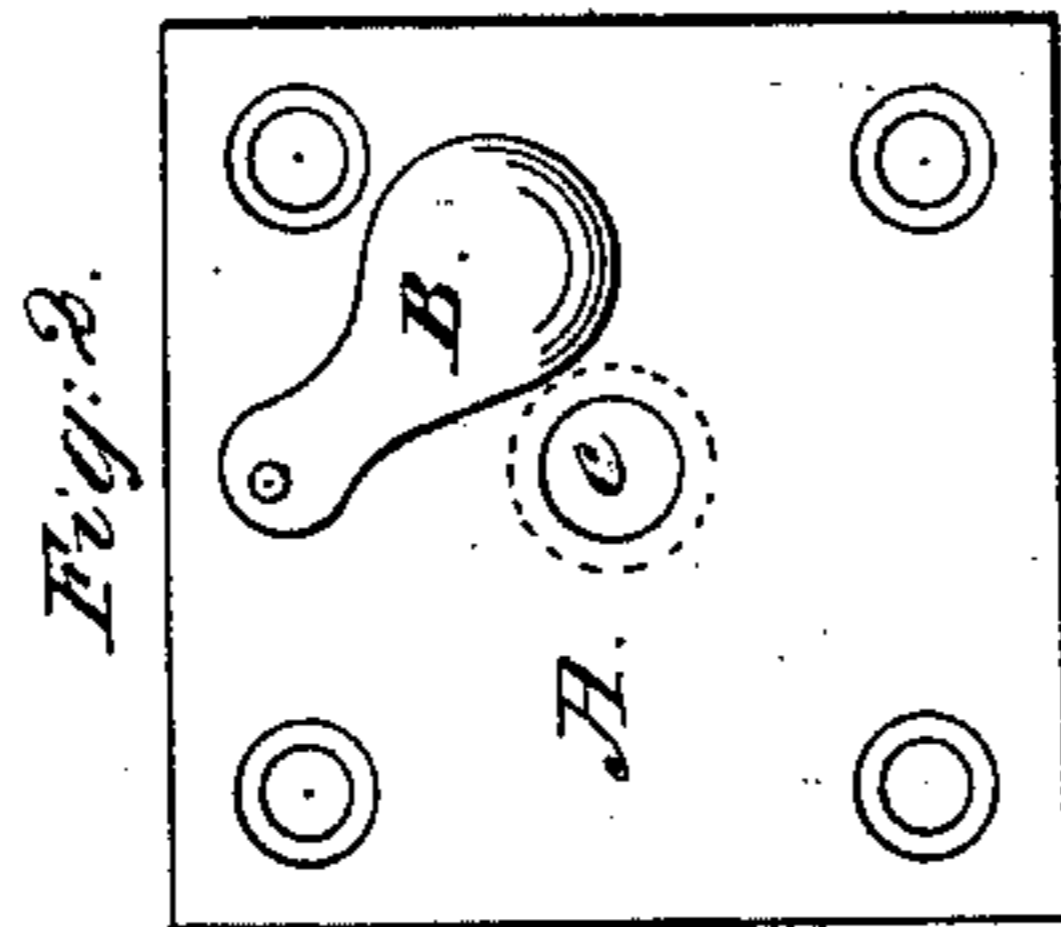
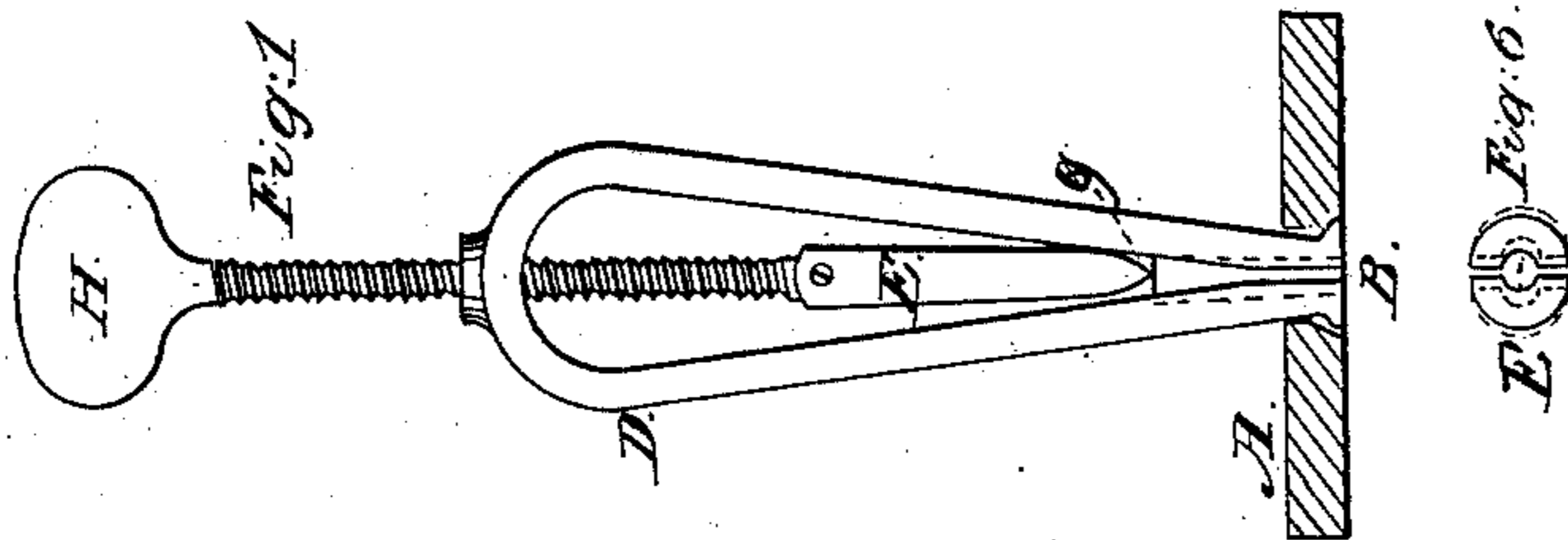
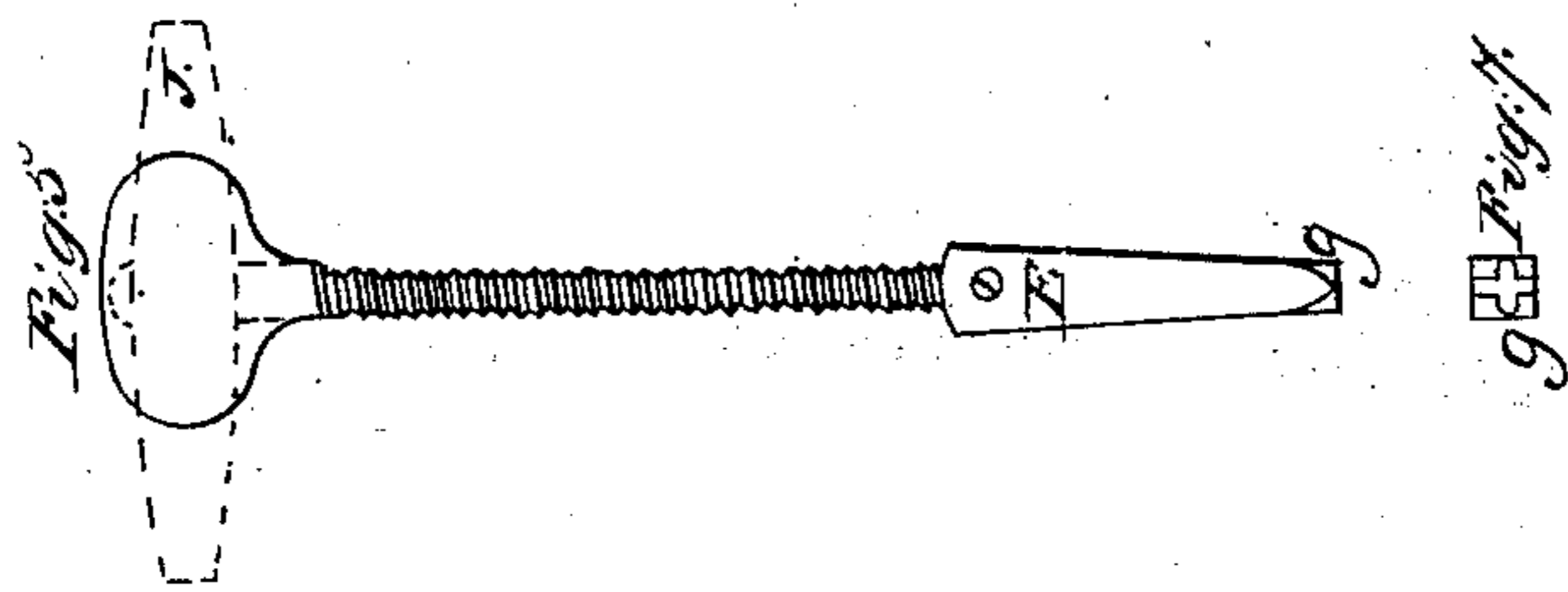


E. Card,

Pattern Lifter.

N^o 65,169.

Patented May 28, 1867.



Witnesses:
Harr Pitman
Livingston Scott

Inventor:
Edward Card

United States Patent Office.

EDWARD CARD, OF NORTH PROVIDENCE, RHODE ISLAND.

Letters Patent No. 65,169, dated May 28, 1867.

IMPROVED PATTERN-LIFTER.

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, EDWARD CARD, of North Providence, in the county of Providence, in the State of Rhode Island, have invented a new and useful Tool or Instrument for Withdrawing Patterns of Castings from the Mould, after said mould has been formed; also an adjunct to said tool to make its use more certain and complete, and at the same time to preserve the patterns from wear and tear.

The present tool or hand-screw, now in common use, is imperfect and unreliable, and soon wears out; also, said hand-screw is entered into the wood of the pattern, and is constantly enlarging and deepening the hole, and often has a feeble and uncertain hold, and much work is lost by having the screw give way and draw out while raising the pattern to be withdrawn; also, patterns are much damaged and need frequent repairs when the hand-screw is used each time in a new place.

To obviate these and other difficulties, I use a tool, as aforesaid, which I call a "Moulder's Pattern-Lifter," Figure 1, which is formed from a half-round steel rod, (or a rod of any other form,) in measure adapted to the size of the tool I wish to make, and varying in size from quite a small tool to such as are adapted to the withdrawing of patterns of the largest size. A medium tool is made from a rod about one-fourth of an inch in diameter, bent the flat side inward until the two arms meet, F, Figure 6. These two arms are laid the flat sides together, for the purpose of forming a round end or nose in two parts, F, fig. 6. Said nose is made to flare outward towards the end, in form to fit a countersink, B, fig. 1. The two arms (of said nose) on the inside are grooved, and a wedge of steel, E, Figure 5 and fig. 1, is made to fit said grooves, for the purpose of expanding said arms, which are allowed to expand by the elasticity of the steel; and when said nose is inserted in the hole of said adjunct C, Figures 2, 3, and 4, as aforesaid, and hereafter described, and by said expansion fits itself into the countersink C, figs. 3 and 4, aforesaid, by which the said tool obtains a firm hold, that will not draw out or let the pattern fall while it is withdrawing the same. The said wedge is moved by a thumb-screw, H, fig. 1, passing through the bow or head of said tool, said wedge and screw being connected by a set-screw and slot, and said screw having a convenient handle thereto, J, fig. 5.

This tool, as above described, makes a great saving in time and labor in the manufacture of castings of all kinds; in the withdrawing of large and heavy patterns, in connection with said plate A, it is valuable. It will wear many years without repair, (whereas the tool now in use requires constant renewal and repairs,) and its use avoids the destruction of the mould by not letting go its hold.

In connection with this tool I make a cast-iron plate, A, fig. 2, to be let into patterns for castings on a level with the surface of the pattern, and made secure by screws. Said plate I make about one-fourth of an inch in thickness and one and a half inch square, more or less, for the better preservation, by wear and tear, of said patterns. Said plate has a hole in the centre of the same, C, fig. 2, countersunk on the under side, C, fig. 3, and of a size to admit the nose of said tool, D, fig. 1, before its expansion, aforesaid, and when inserted therein to expand into said countersink, (or into a groove, as the case may be,) B, fig. 1, and thereby retain a firm hold, as aforesaid. Over said hole I place a drop, B, figs. 2, 3, and 4, attached to said plate by a rivet, upon which said drop moves, so as to cover said hole at the time of moulding the pattern, and be slipped aside when the pattern is to be withdrawn.

Claim.

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

The combination of the steel arms D D and screw spindle-wedge E, constructed as described.

And again, I claim the combination of the device above set forth with the plate A, having a hole through its centre, countersunk on one side, as herein described and set forth.

EDWARD CARD.

Witnesses:

LIVINGSTON SCOTT,
ISAAC PITMAN.