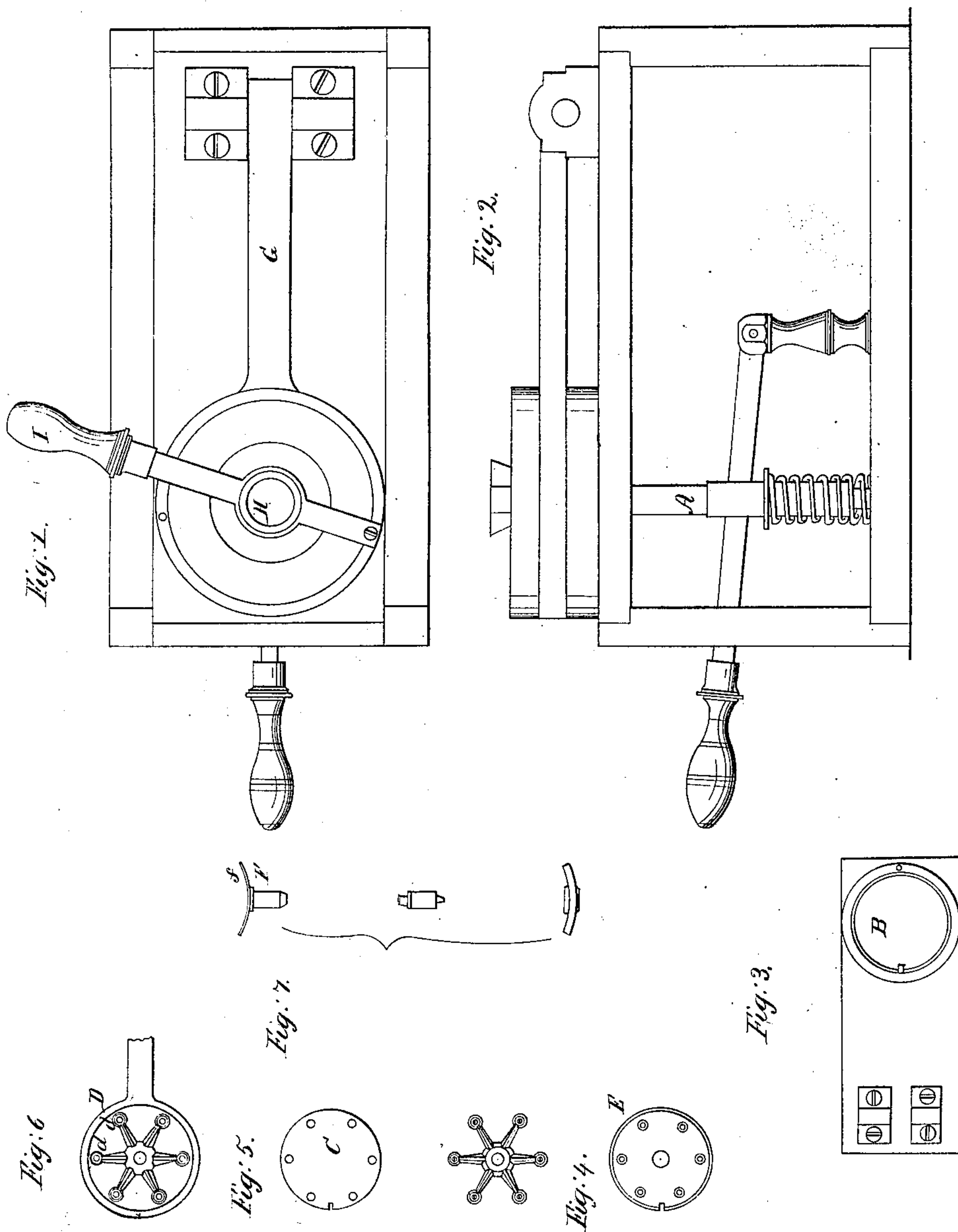


Nichols & Abbe,
Casting Screw Heads.

N^o 44,214.

Patented Sep. 13, 1864.



UNITED STATES PATENT OFFICE.

WILLIAM H. NICHOLS AND HORATIO H. ABBE, OF CHATHAM, CONNECTICUT.

IMPROVED MOLD FOR CASTING ORNAMENTAL HEADS TO SCREWS.

Specification forming part of Letters Patent No. 44,214, dated September 13, 1864.

To all whom it may concern:

Be it known that we, WILLIAM H. NICHOLS and HORATIO H. ABBE, both of Chatham, in the county of Middlesex, in the State of Connecticut, have invented a new and Improved Mold for Casting Ornamental Heads to Screws or Tacks; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

We use the socket B in which to set and operate three circular die-plates, E C D, these small dies or molds circularly arranged with gateways converging to the center, where the metal enters. The purposes of said socket are: First, when the power is applied to rod A to draw down the bottom plate, E, the socket B, by means of shoulders or other projections, is made to hold the other two plates, C D, in such relation that the cores of the lower plate, E, upon which the casting is made, are drawn out of the center plate, C, leaving the casting loose upon the top of this center plate, thus separating the casting from the mold; second, to keep the parts of the mold in place without the use of dowel-pins, and more perfectly to control the movement of the parts of the mold, permitting all its plates to be made movable to facilitate the work of separating the casting; third, to enable the operator to open his mold with less effort and with the greatest degree of suddenness without throwing the

center plate, C, out of place, thus saving much time in readjusting it.

We use movable slot-core pins or slot-cores F, setting them in sockets, so that the bottoms of the pins, with their slot-cores, form the upper parts of the dies or molds of the upper plate, D *d d*. These core-slot pins or core-slots, by means of springs *f* or other pressure, adapt themselves to screw-slots that vary in depth, and thus make clean and perfect screw-slots in the newly-cast ornamental heads. This principle also enables us to use the same mold in casting ornamental heads to screws or imitation screw-heads to tacks, which cannot be done with any other than movable slot-cores.

We use the upper die-plate with an arm, G, extending to a convenient length, with a hinge attachment to the same base with the socket B, to facilitate the raising and adjusting of this part of the mold.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The socket B and plates E C D, in combination with the spring-standard A, for the purposes herein specified.

2. Movable slot-core pins or slot-cores F D *d d*, in combination, for forming screw-slots, operating substantially as herein specified.

3. The hinged upper plate, G, in combination with the movable slot-cores F D, arranged and operating as described.

WILLIAM H. NICHOLS.
HORATIO H. ABBE.

Witnesses:

CLARK STRONG,
L. PARMELEE.