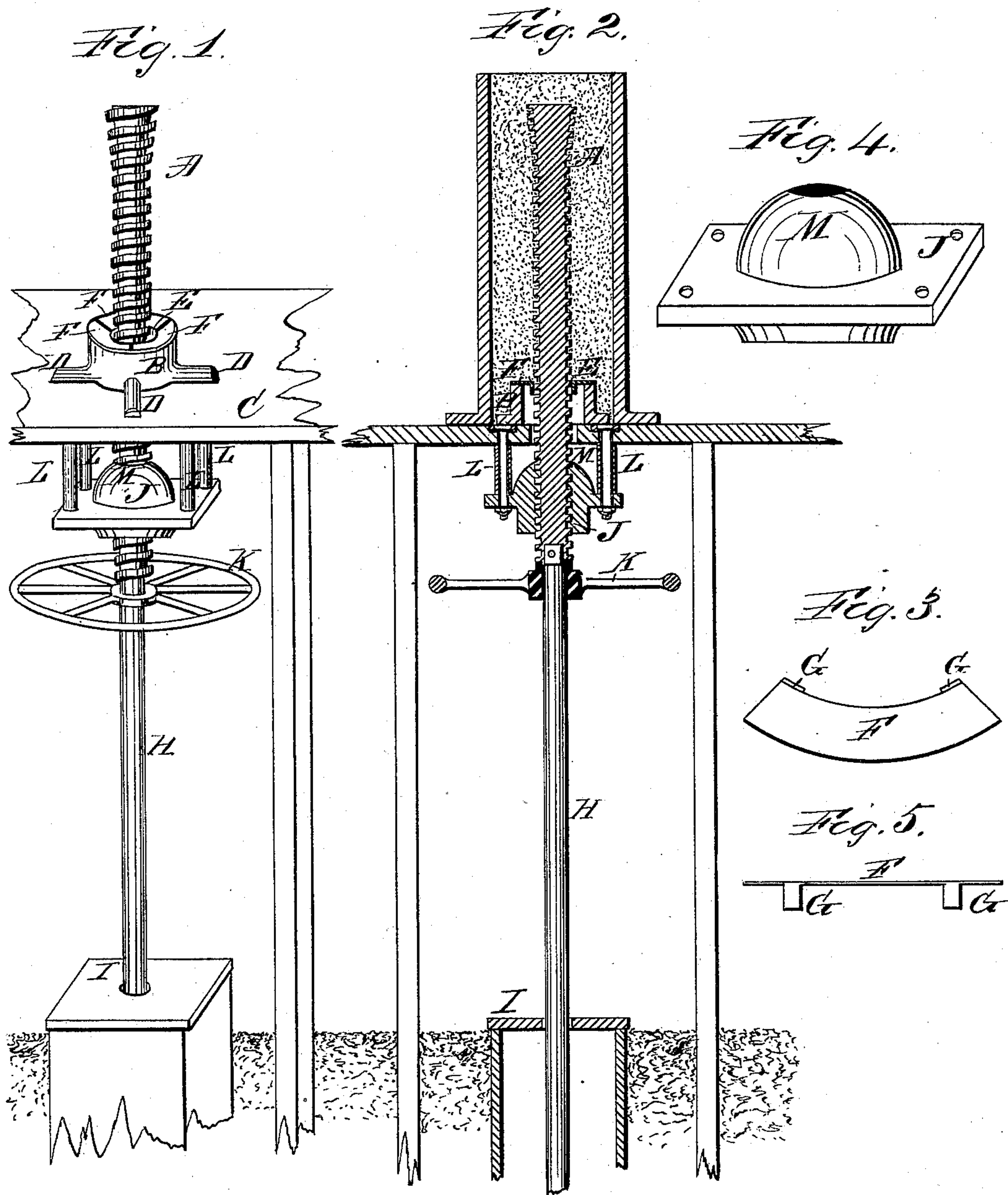


(No Model.)

E. W. SEEGER.  
DEVICE FOR MOLDING CAST SCREWS.

No. 257,246.

Patented May 2, 1882.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

EDWARD W. SEEGER, OF SPRINGFIELD, MASSACHUSETTS.

## DEVICE FOR MOLDING CAST SCREWS.

SPECIFICATION forming part of Letters Patent No. 257,246, dated May 2, 1882.

Application filed October 29, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD W. SEEGER, of Springfield, county of Hampden, State of Massachusetts, have invented a new and useful Improvement in Devices for Molding Cast Screws, which is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a perspective view of my device for molding cast screws. Fig. 2 is a longitudinal central section of the same, showing also the flask in which the screws are molded; Fig. 3, a top view of one of the thin metal guards; Fig. 4, a perspective view of the nut; Fig. 5, an edge view of the thin metal guard.

The nature of my invention consists in a new and improved means for producing cast screws for presses, stools, lifting-jacks, and other purposes, of better quality than has heretofore been attained, by casting them without scars, seams, or other flaws, which result from the imperfect joining of the parts of the patterns, flasks, or molds, or from the difficulty of properly ramming the sand into the threads of the pattern.

A represents the pattern-screw, made of iron or other suitable material, and which, for a part of its length only, is of the diameter and of the shape and pitch of thread that it is desired to have the casting. The remainder of the pattern-screw is smaller in diameter, both at the top and bottom of its threads, respectively, which threads are similar in shape and pitch to those upon the larger part of the pattern-screw. If desired, these threads upon the smaller part of the pattern-screw may be smaller than those upon the larger part, or may differ in shape.

The object of the peculiar shape of the pattern-screw is to produce a perfect impression in the mold, which is accomplished in the following manner: After the molding-sand has been properly tamped about it the pattern-screw is withdrawn from the mold by turning it in a nut or female screw, J. At the same time the larger part of the pattern-screw, following the smaller part, cuts a perfect thread in the sand and packs the sand closely about and into the threads of the pattern-screw, so that a perfect impression remains in the mold, having the diameter of the larger part of the

pattern screw and threads of like dimensions and pitch.

B represents one half of the pattern for the head of a jack-screw, which is placed upon a bench, C, to which it is attached by screws through the core-prints D D D. The half-pattern B is provided with a cylindrical aperture, E, through which the whole of the pattern-screw A may be withdrawn from the mold when desired. Upon this half of pattern B are placed guards F F F, which are movable pieces of metal or other thin material, circular in shape, and of suitable size to cover that part of the aperture E not filled by the pattern-screw and prevent particles of the molding-sand from dropping into it when the mold is being rammed or the pattern-screw withdrawn.

The guards F F F may, if desired, be attached to the pattern B by hooks, pins, or other suitable appliances, but which permit the guards to move toward and from the pattern-screw. They may be held in their proper places by gravity or by springs, or in any other suitable manner. When the pattern-screw is being withdrawn the guards remain in place above the space about the smaller part of the screw until they are pushed aside by the larger part. The guards may be dispensed with, if desired, when using a pattern-screw whose smaller part so nearly fills the aperture E that it is too small to admit particles of the molding-sand enough to damage the mold.

The guards F F F are provided with two lugs or projections, G G, upon their concave edges, bent at a right angle (more or less) with the rest of the guard. These projections G G may be altered in shape or number or dispensed with entirely in making certain kinds of screws. The object is to prevent the guard from being caught by the threads of the pattern-screw and displaced or drawn into the aperture E.

Other patterns may be substituted in place of the pattern B when screws are made with different-shaped heads; or, in case no pattern at all is used, in place of the pattern B, the guards F F F may be placed directly upon the mold-board or bench, or attached thereto instead of to the pattern B.

H represents a guiding-rod, of round iron or other suitably-shaped material, attached to the



end of the pattern-screw and running back and forth in a suitable support, I, as the pattern-screw is turned in its nut. The support I in this case is an iron plate with a hole in it  
5 attached to the top of a box in the ground.

The object of the guiding-rod H is to steady the pattern-screw while it is being withdrawn from the mold. If desired, the guiding-rod may be attached to the other end of the pattern-  
10 screw.

The nut J, through which the pattern-screw is withdrawn by means of wheel K, is fixed at a suitable distance below the bench C by bolts through the nut, bench, and collars L L L L.  
15 Upon the upper side of nut J there is a convex projection, M, to prevent particles of sand entering the thread of the nut in case they accidentally pass the guards F. The shape of projection M is such that the sand which may  
20 drop upon it is thrown off and away from the thread of the nut.

N is a flask in which the screws are molded. It may be made of any size or shape to suit the molder.

Having thus fully described my invention, 25 what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of guards F F F and screw-pattern A with half-pattern B, used in molding heads upon cast screws to prevent 30 sand from dropping out of the mold, constructed and operating together in the manner and for the purpose described.

2. The combination of guards F F F, pattern-screw A, guiding-rod H, and nut J, constructed 35 and operating together in the manner and for the purposes described.

3. In an apparatus employing, to mold screws, a pattern-screw of varying diameter, the thin circular guards F F F, of metal or other suit- 40 able material, constructed with or without projections upon their concave edges, and operating substantially as and for the purposes set forth.

EDWD. W. SEEGER.

Witnesses:

GEORGE LEONARD,  
CHARLES L. SEEGER.