

(No Model.)

2 Sheets—Sheet 1.

J. F. THAYER.

TOOL FOR NICKING HEADS OF SCREWS.

No. 397,208.

Patented Feb. 5, 1889.

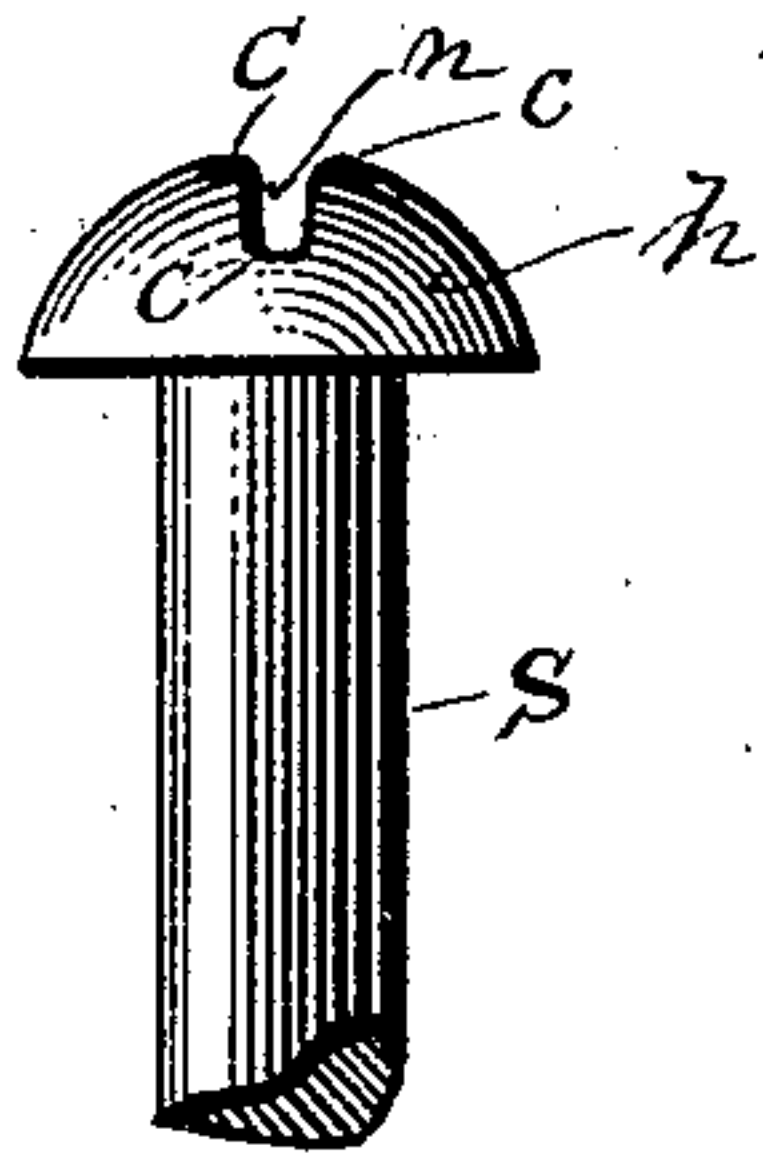


FIG. 3.

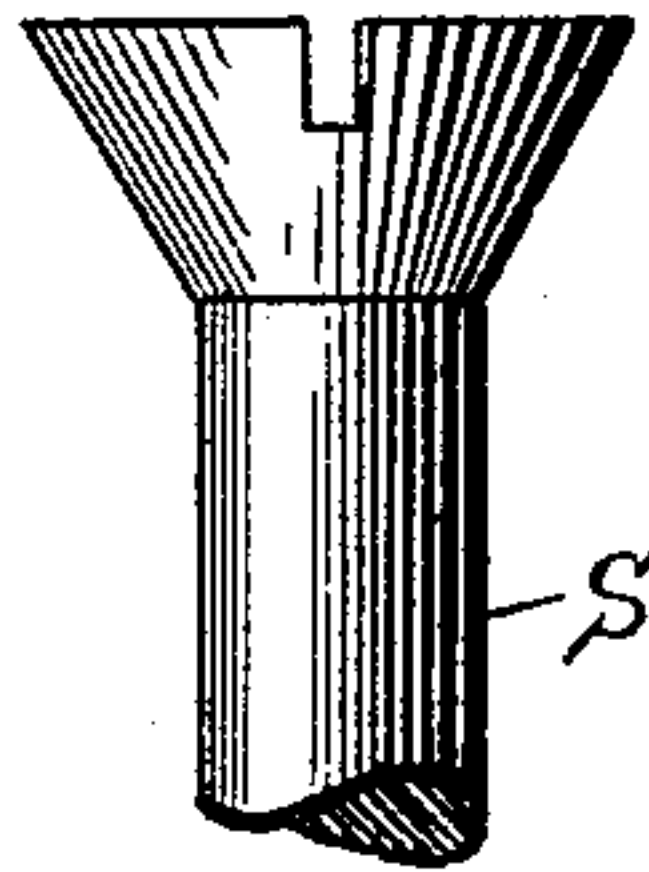


FIG. 1.

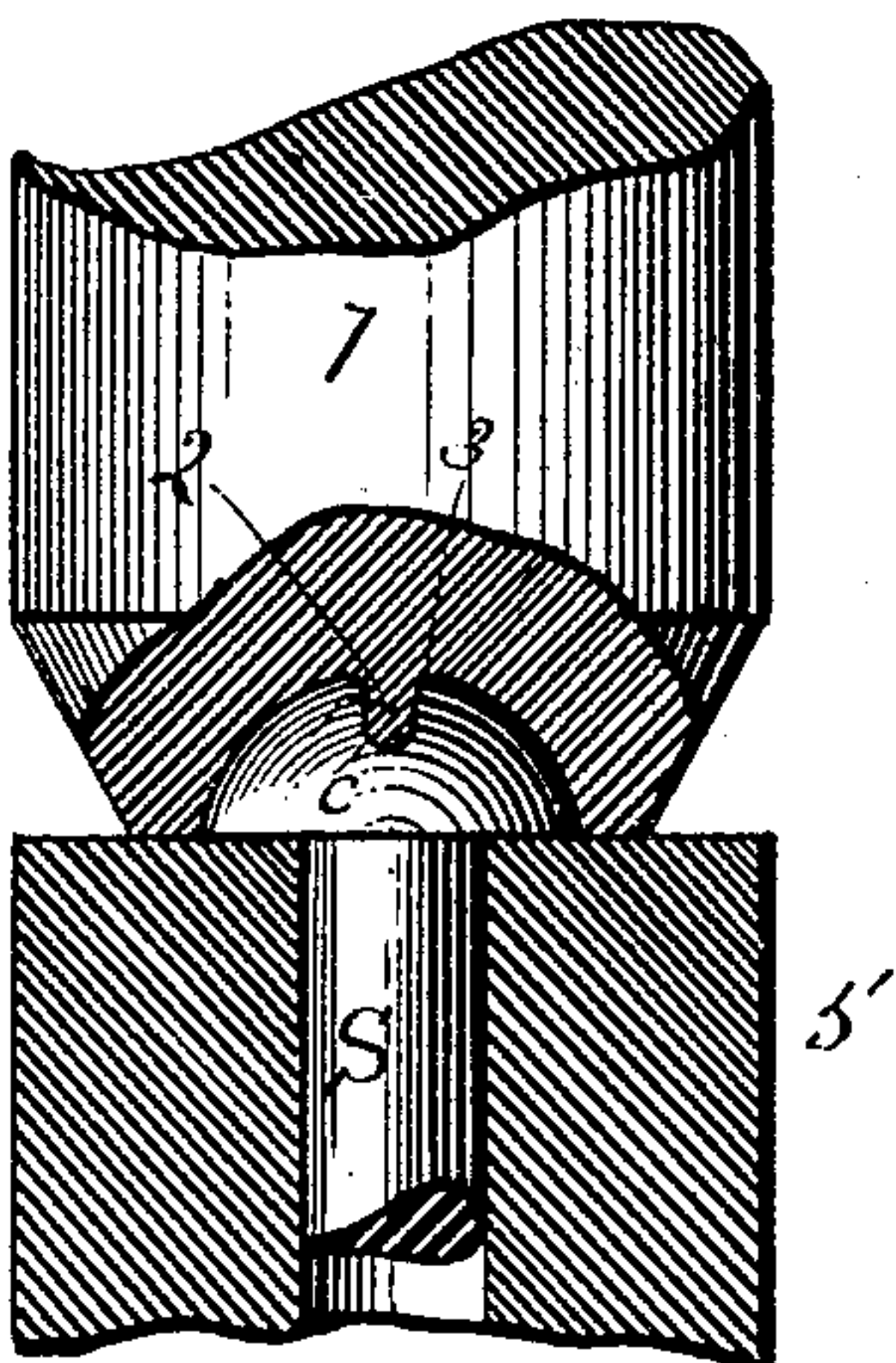


FIG. 4.

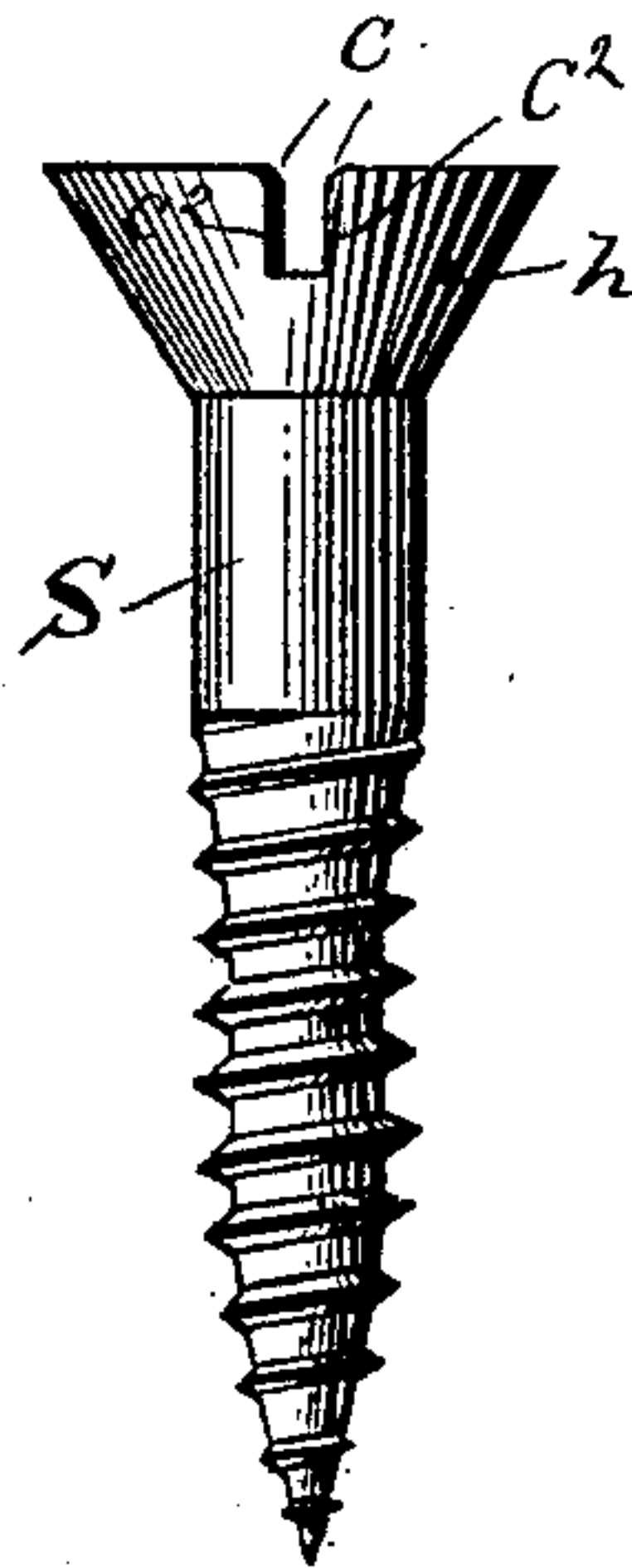


FIG. 2.

WITNESSES.

J. G. Smith

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INVENTOR.

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No Model.)

2 Sheets—Sheet 2.

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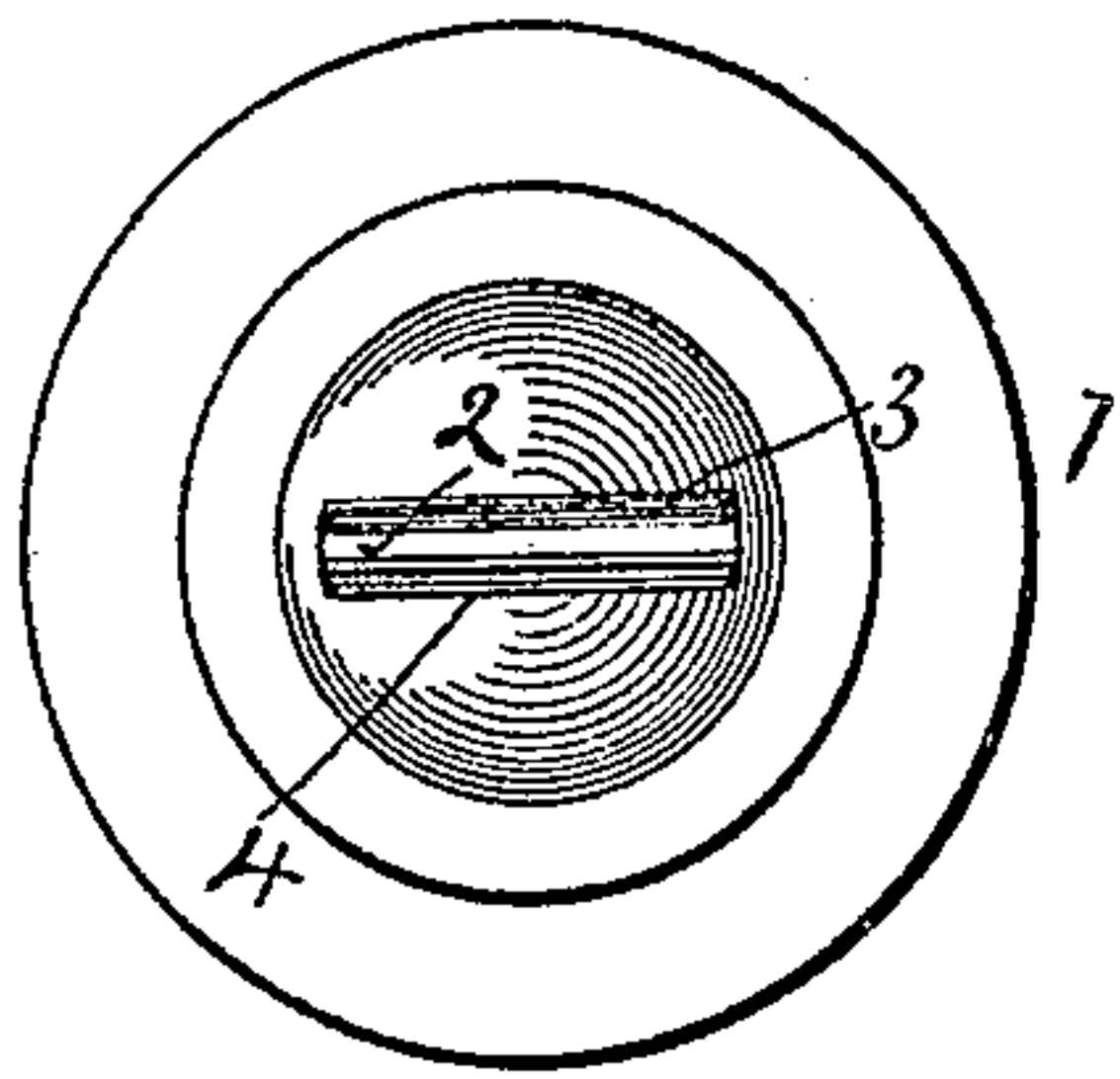


FIG. 7.

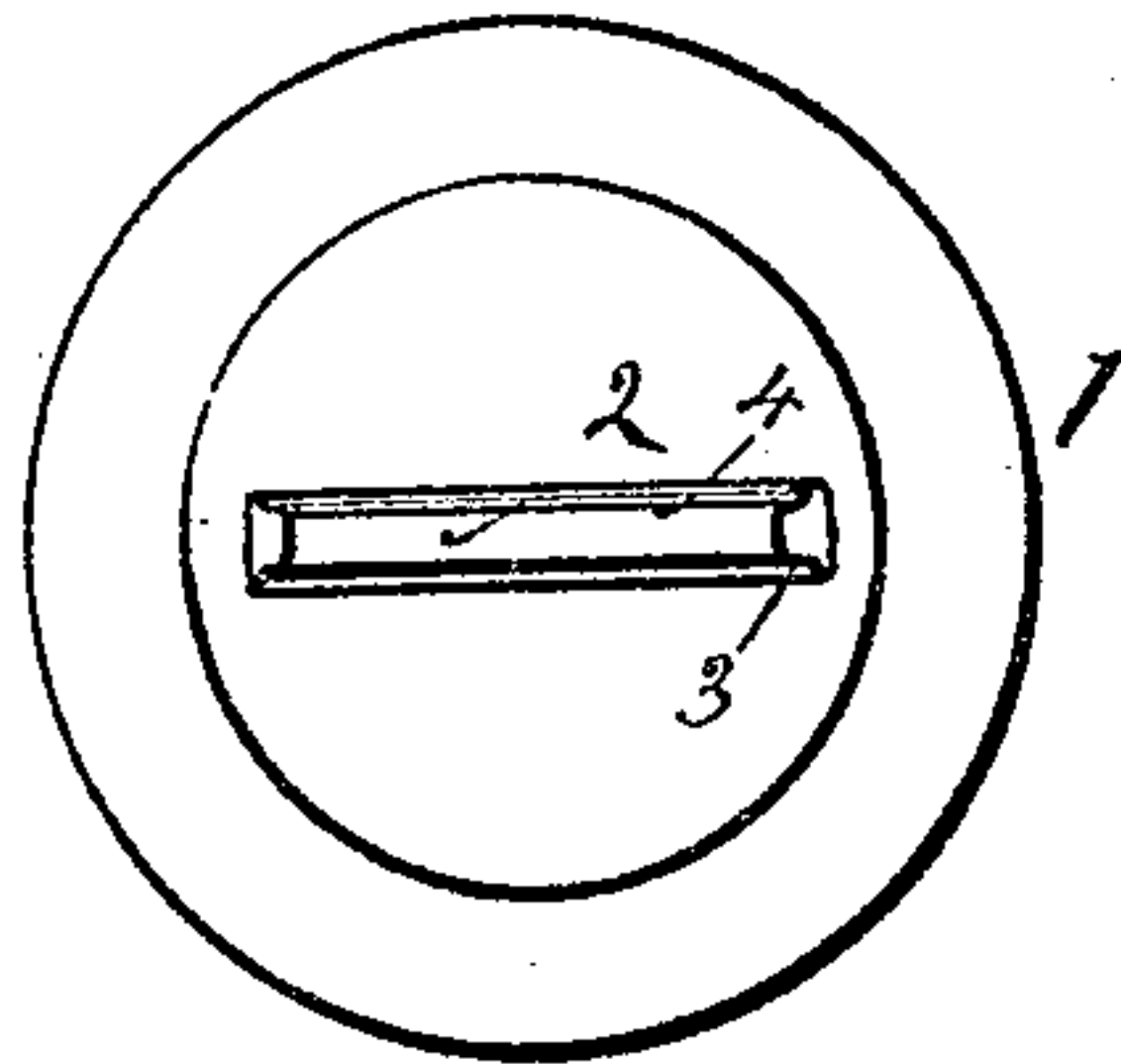


FIG. 10.

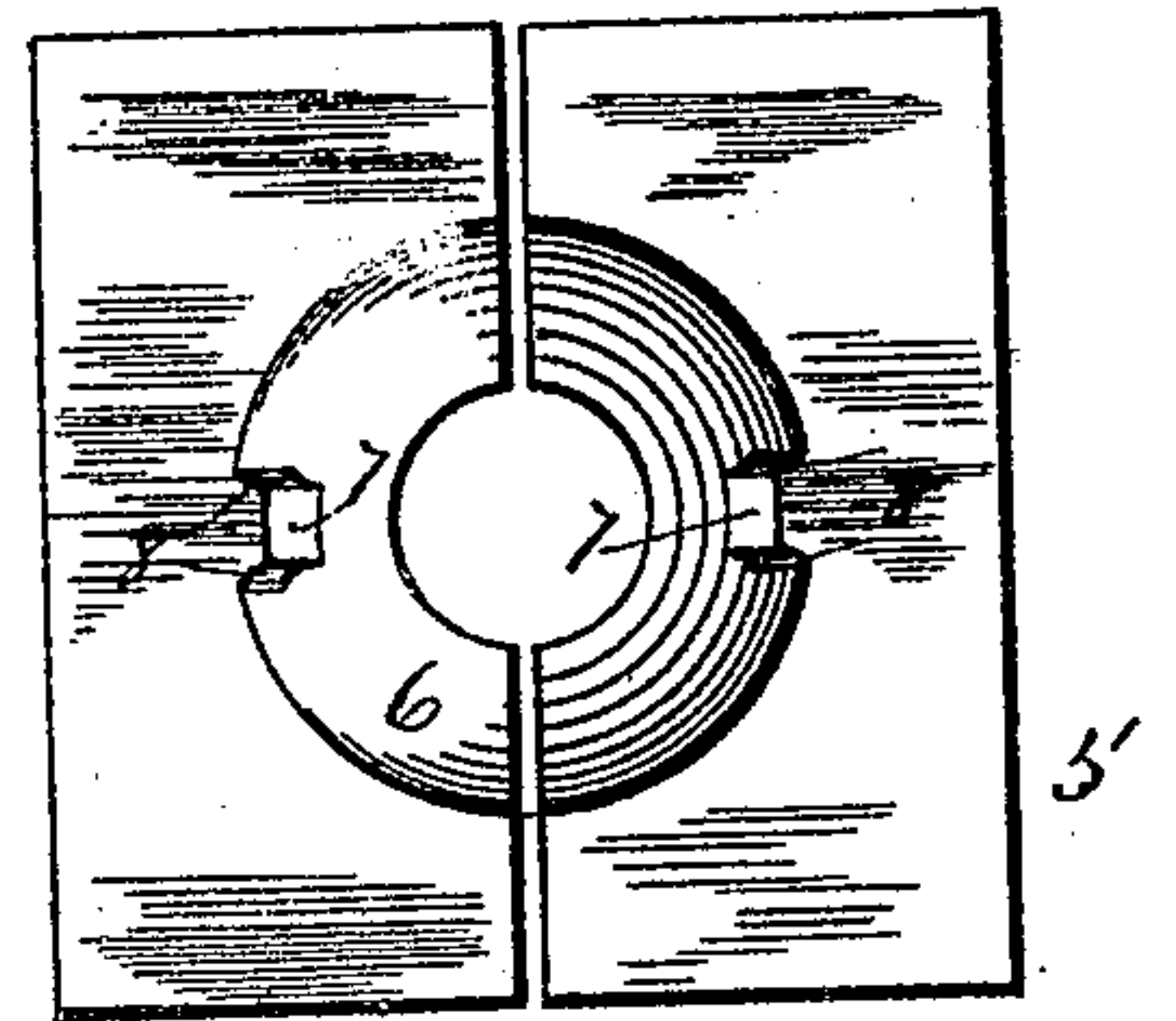


FIG. 12.

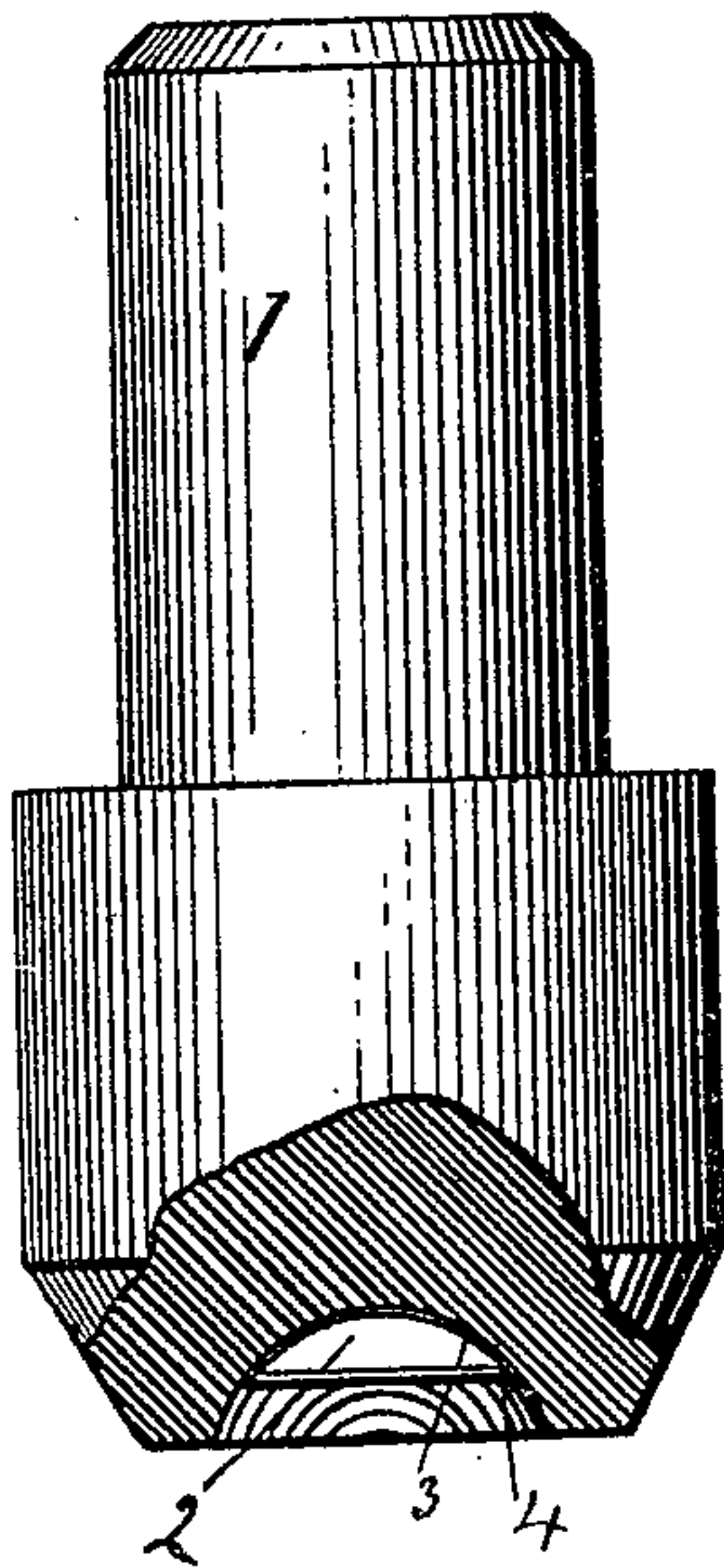


FIG. 5.

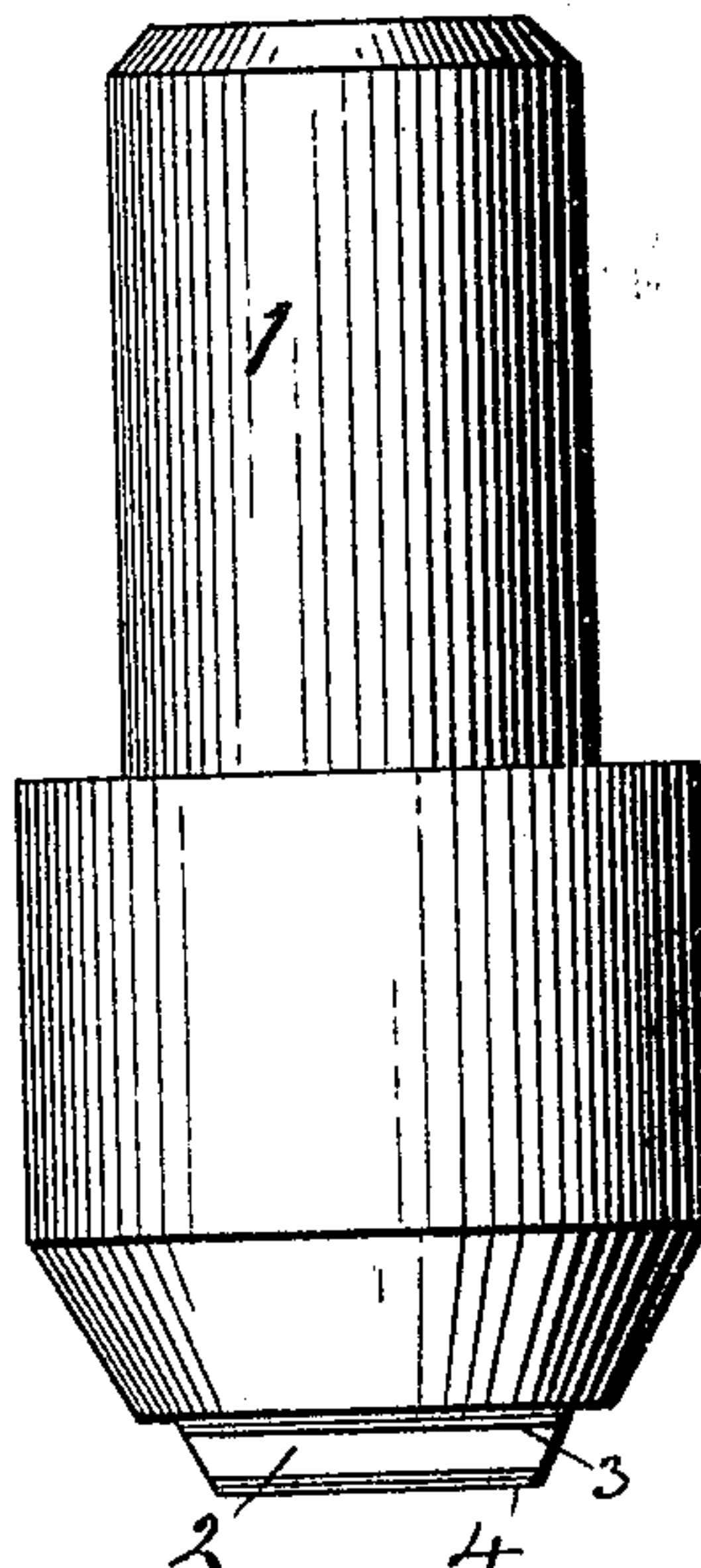


FIG. 9.

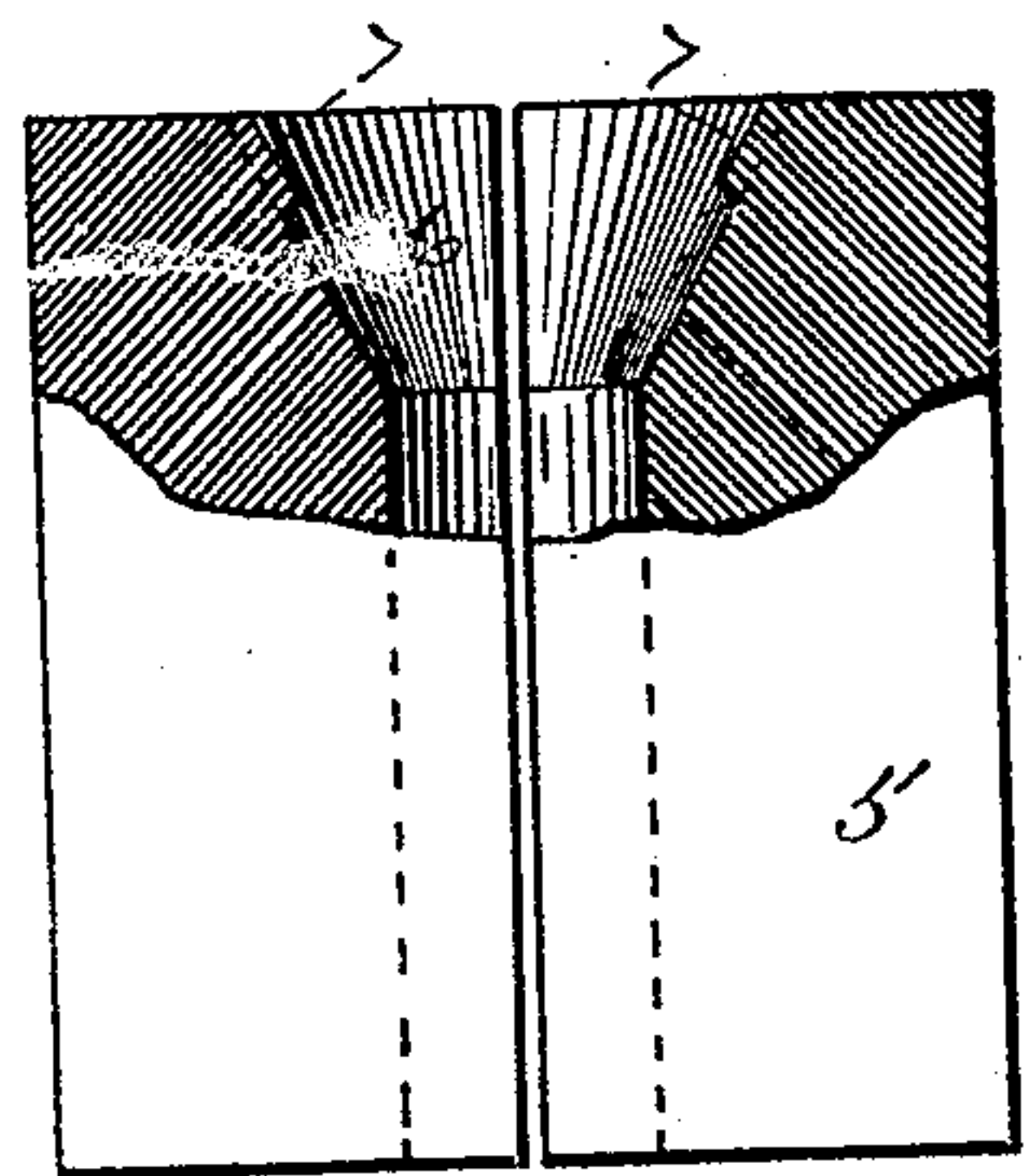


FIG. 11.

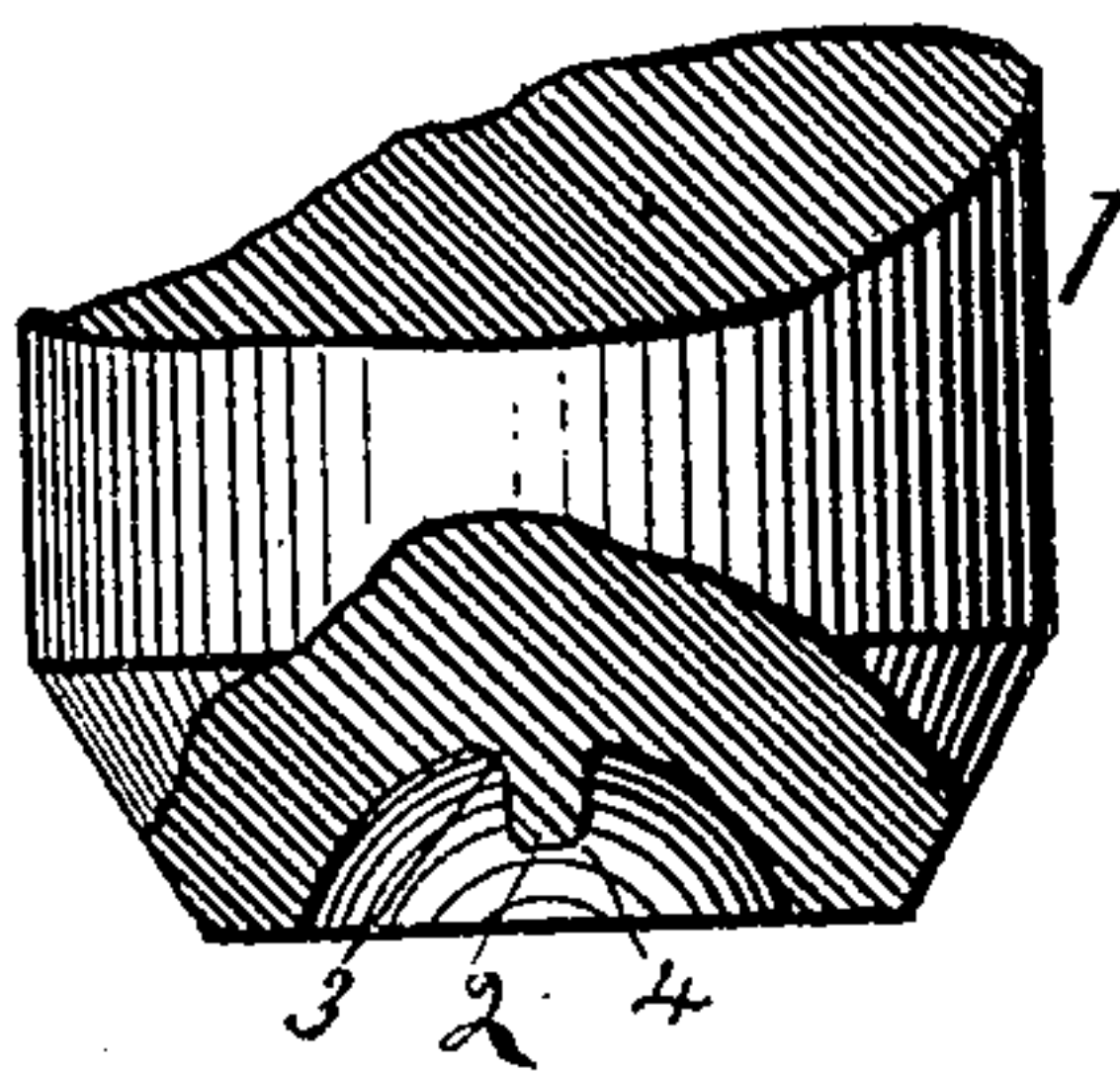


FIG. 6.

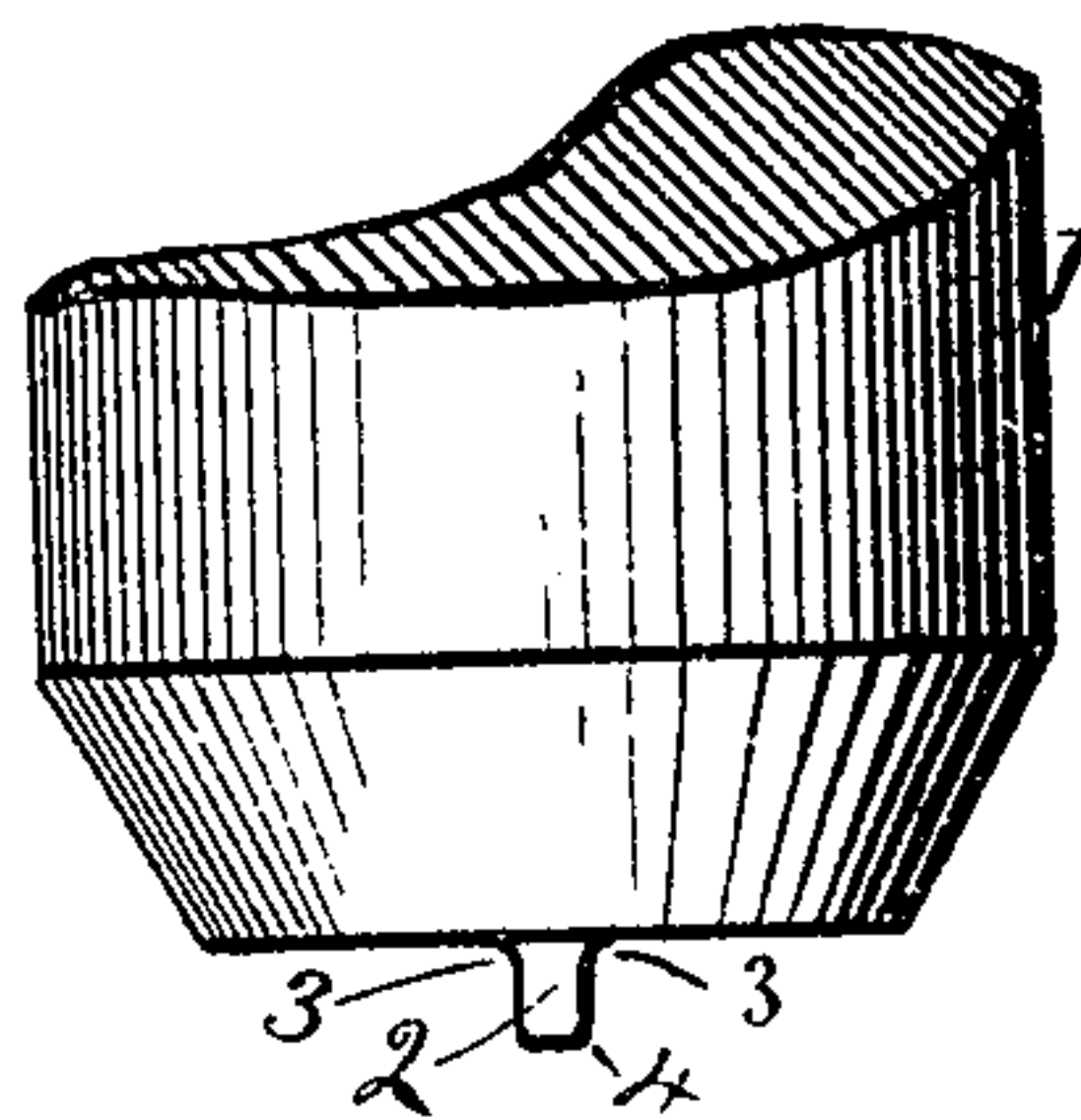


FIG. 8.

WITNESSES.

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UNITED STATES PATENT OFFICE.

JAMES F. THAYER, OF PROVIDENCE, RHODE ISLAND.

TOOL FOR NICKING HEADS OF SCREWS.

SPECIFICATION forming part of Letters Patent No. 397,208, dated February 5, 1889.

Application filed September 14, 1888. Serial No. 285,429. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. THAYER, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Tools for Forming Nicks in the Heads of Screws; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Screws as commonly made have their heads nicked or slotted for the insertion of a screw-driver. From the fact, however, that the outer edges of the nicks are square or angular, the action of the blade of the screw-driver in turning the screw soon produces a burr or roughness along such edges, which is removed by a subsequent operation of filing or grinding when deemed necessary. It is obvious, in the event of screws having finished and plated heads, that such roughness of the nick is undesirable because of the impossibility of its removal without injury to the finished surface. In my efforts to overcome this difficulty and disadvantage I provide the head of a screw with a nick having the outer longitudinal edges thereof chamfered or rounded off. By means of this novel feature in the construction of screw-heads the blade of the screw-driver is more readily guided into and centered in the screw-nick, and the action of the screw-driver, as in forcing the screw home, does not injuriously affect the nick or produce an unsightly appearance.

My present improvement consists in the novel construction of the "hammer," so called, by means of which the novel feature in the screw-nick above described is accomplished, one end of said hammer being adapted to be secured into a proper machine, as a screw-head-forming machine, the opposite end thereof corresponding in shape to the configuration of the face of the head of the screw to be nicked, said end being provided with a projecting tongue the salient angles of which

are chamfered or rounded and the re-entrant angles filleted, all as will be hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the head portion of a screw of usual construction, the nick being as common; Fig. 2, an ordinary wood-screw, but having the head thereof provided with a nick whose opposite corners or edges are chamfered or rounded. Fig. 3 represents the upper portion of a screw having a different form of head, provided with a nick having chamfered edges and corners. Fig. 4 represents a view in partial section of my improved hammer with die in the act of forming a nick in a round-headed screw. Fig. 5 is a front elevation in partial section of my improved hammer. Fig. 6 is a side view of the same. Fig. 7 is an end view of the same. Fig. 8 represents a side view of my improved hammer adapted for forming the nick in a flat-headed screw. Fig. 9 is a front elevation, and Fig. 10 an end view, of the same. Fig. 11 is a view in partial section of a die employed in connection with my improved hammer in forming the nick in a flat-headed screw, and Fig. 12 is a top plan view of the same.

As previously described, the lower end of the hammer 1 is formed correspondingly to the shape of the head of the screw to be nicked, which shape is usually rounded, as in Fig. 3, or flat, as in Figs. 1 and 2. The hammer for forming the nick in the former shape is shown in Figs. 4, 5, 6, and 7, and is provided with a half-round recess in one end thereof, having a tongue, 2, projecting from the bottom of said recess of the same width and depth as the nick desired to be formed, said tongue being provided with chamfered or rounded corners 3 and 4, as clearly shown in Fig. 6. The hammer for forming the nick in a flat-headed screw is shown in Figs. 8, 9, and 10, the lower end being correspondingly flat, but, however, provided with the tongue 2, having chamfered corners 3 and 4, as previously described.

In forming the nick in the screw-head *h* the shank *s* of the screw is confined in the usual heading-die, 5. The hammer 1 is then brought down with pressure onto said head. The tongue 2 of the hammer is forced into the

screw-head, forming the nick *n* therein, as illustrated in Fig. 4 of the drawings, leaving the corners *c* of said nick chamfered or rounded. If the vertical edges of the screw-nick are to be rounded, as at *c*² in Fig. 2, on a flat-headed countersunk screw, then the die 5 is provided on the sides of its countersink 6 with a projecting rib, 7, having rounded corners 8, as shown in Figs 11 and 12. These ribs enter the nick *n* of the screw, and when the hammer 1 (shown in Fig. 8) is brought down onto the face of the screw-head the pressure applied forms the vertical edges and corners *c*² correspondingly rounded or chamfered.

If desired, the nick complete, with the corners chamfered, may be formed simultaneously with the operation of heading the screw-blank, the rounded corners and end of the tongue of the hammer greatly facilitating the formation of the nick by this method. It is obvious, also, that the usual nick may be formed by sawing, and the corners and edges chamfered or rounded at a subsequent operation by means of my improved hammer, the tongue of the hammer entering said sawed nick, and a pressure applied to the hammer forces the corners and edges of the nick to conform to the shape of the tongue of the hammer.

Having described my invention, I claim—

1. The herein-described hammer for forming the nick hereinbefore described, the same comprising a shank provided with a projecting tongue, having the salient angles rounded and the re-entrant angles filleted, substantially as specified.

2. The hammer herein described, having a cup-shaped recess at one end provided with a projecting tongue, having the salient angles rounded and the re-entrant angles filleted, substantially as and for the purpose specified.

3. In combination with a screw-blank-forming die, a hammer for making a screw head and nick simultaneously, the same having one end thereof corresponding in shape to the face of the head of the screw to be formed, said end being provided with a projecting tongue the salient angles of which are chamfered or rounded and the re-entrant angles filleted, substantially as and for the purpose specified.

In testimony whereof I affix my signature in the presence of two witnesses.

JAMES F. THAYER.

Witnesses:

F. A. SMITH, Jr.,
CHARLES GREENE.