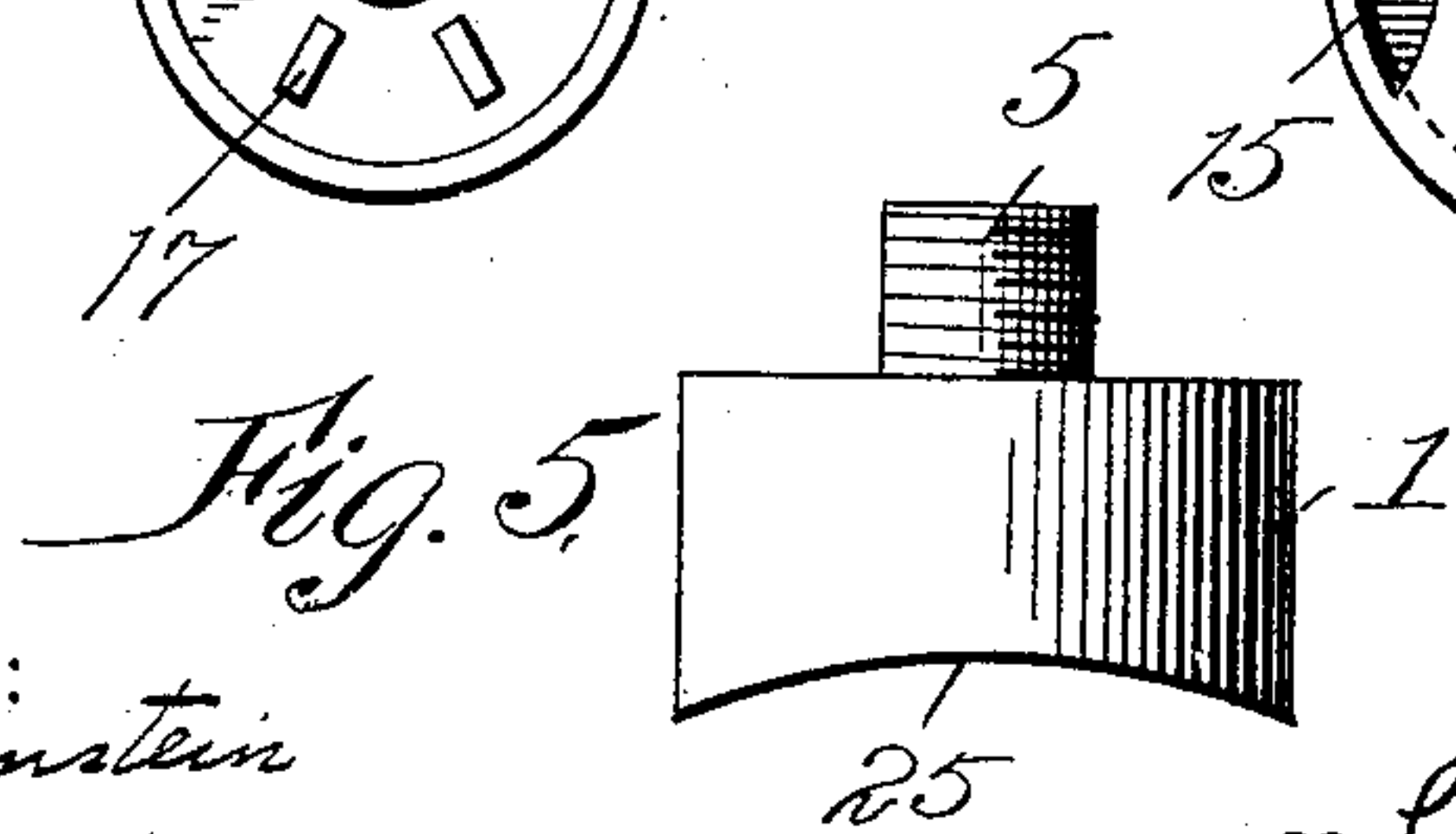
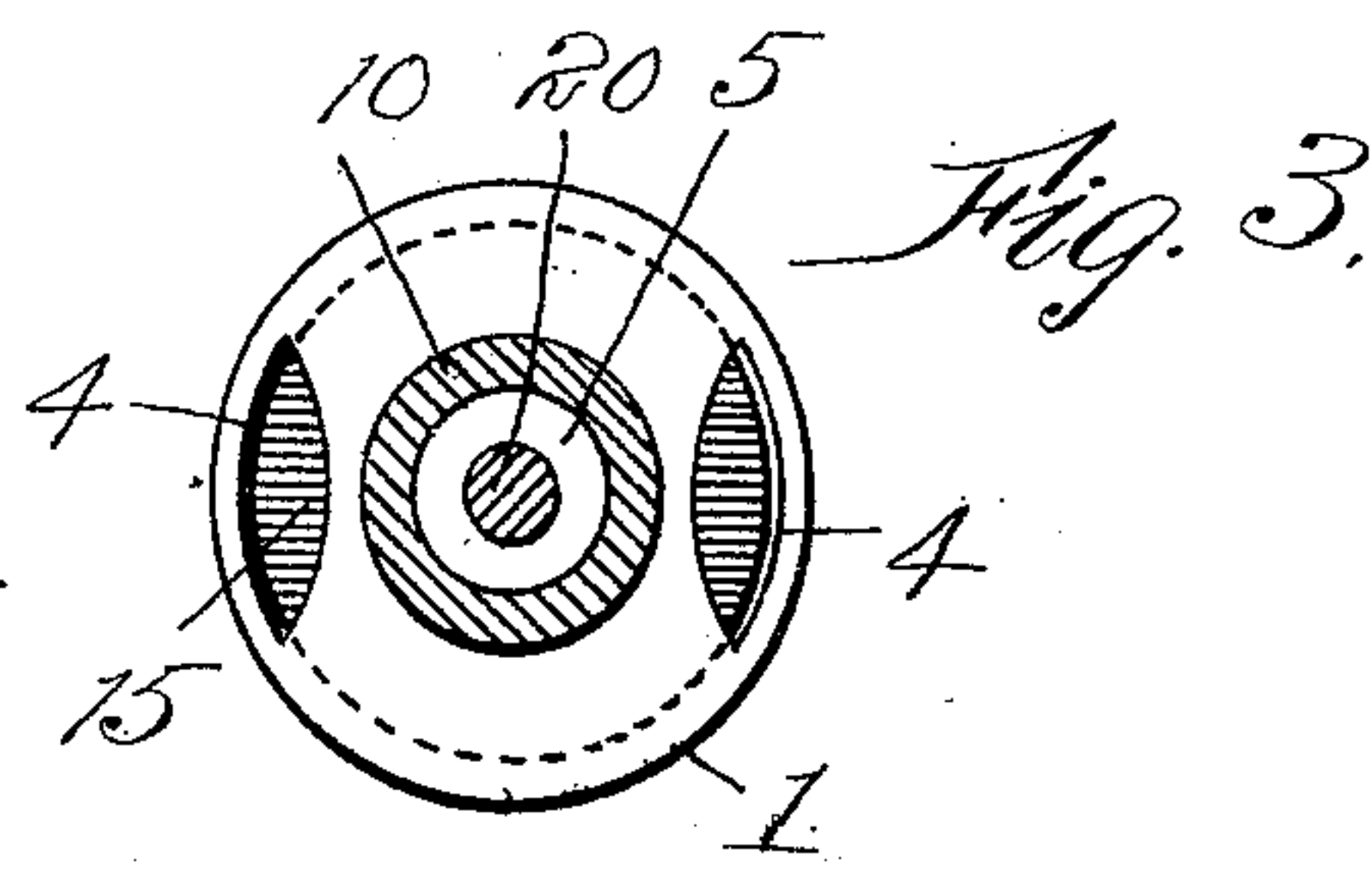
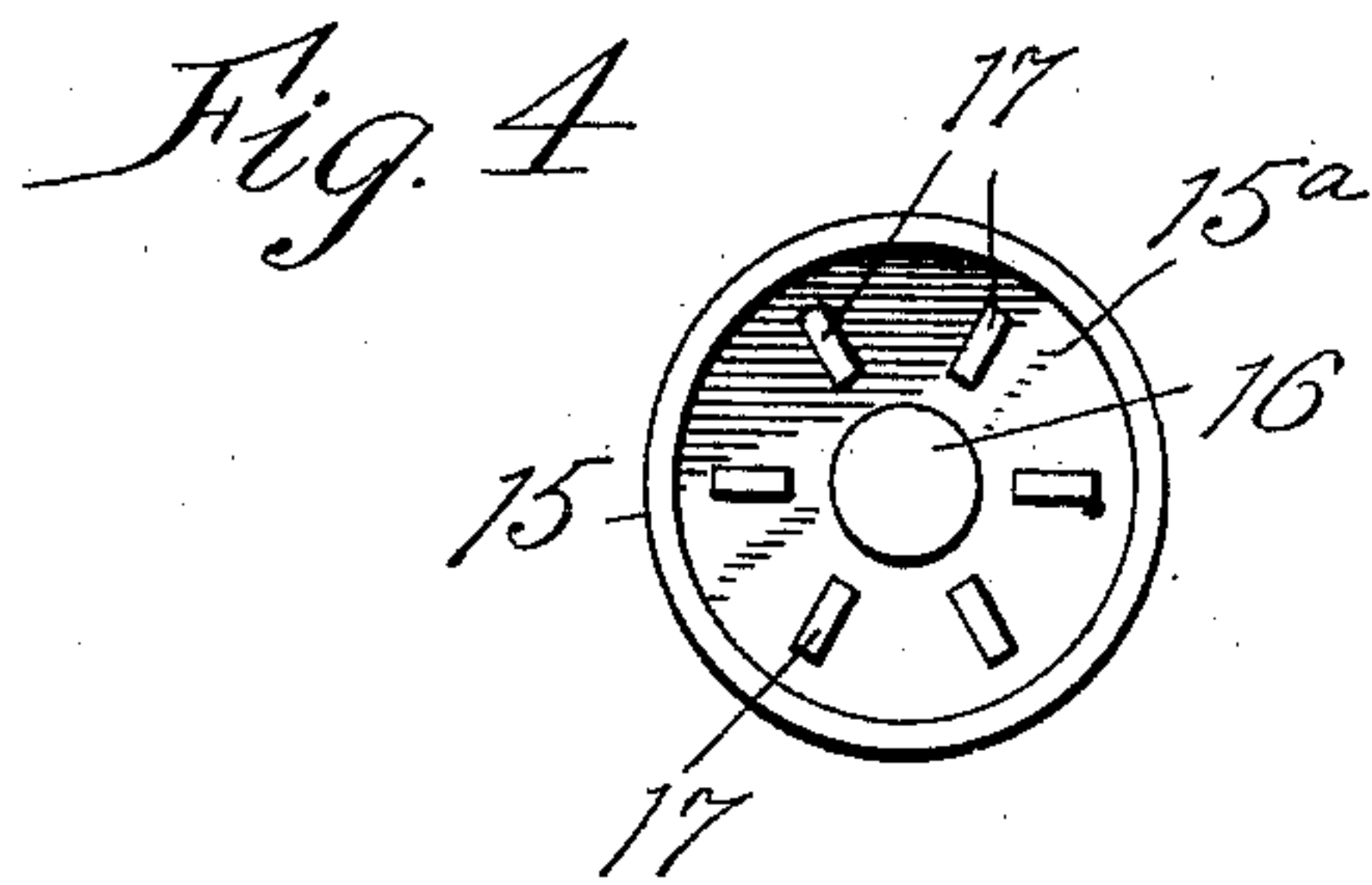
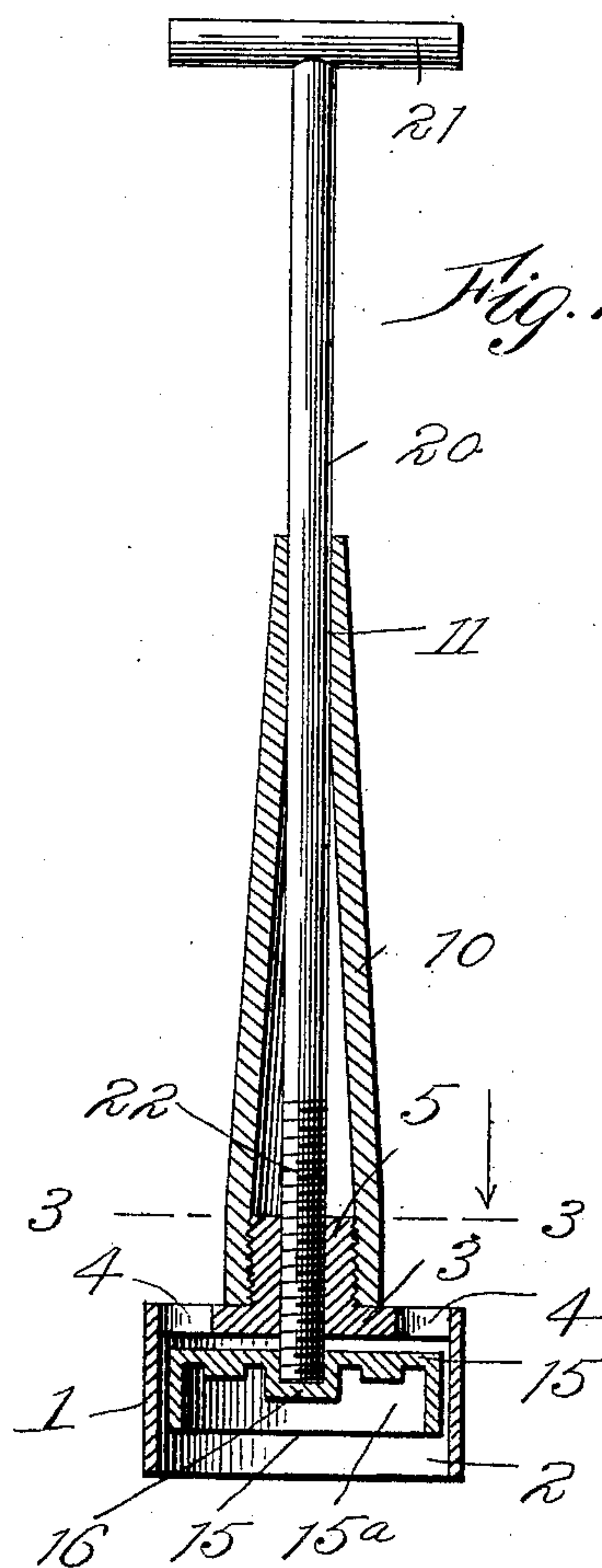
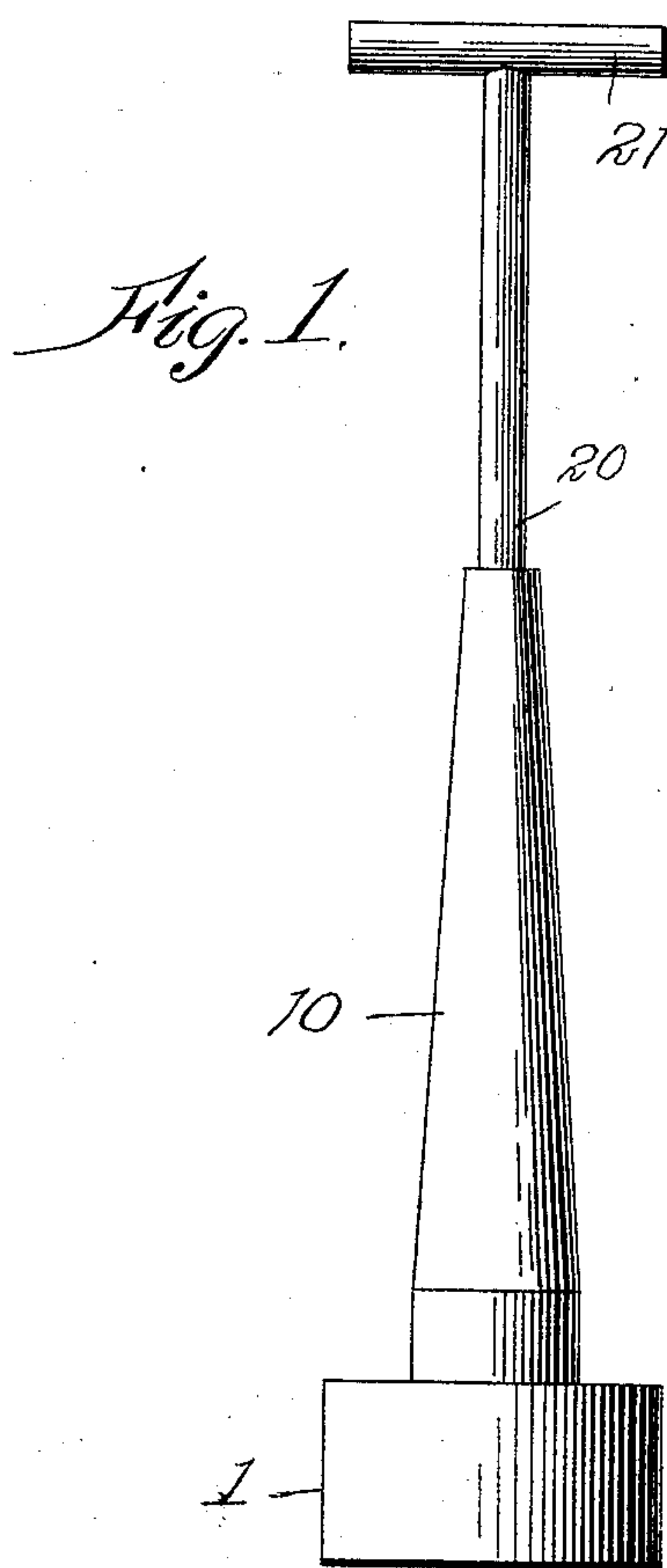


E. W. CONARTON.
 TOOL FOR STOPPING RUN-OUTS IN MOLDS.
 APPLICATION FILED MAR. 5, 1909.

924,740.

Patented June 15, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWARD W. CONARTON, OF JERSEY CITY, NEW JERSEY.

TOOL FOR STOPPING RUN-OUTS IN MOLDS.

No. 924,740.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed March 5, 1909. Serial No. 481,380.

To all whom it may concern:

Be it known that I, EDWARD W. CONARTON, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Tools for Stopping Run-Outs in Molds, of which the following is a specification.

In metal casting with sand or loam molds, great difficulty is experienced by reason of the molten metal breaking out of the mold between the sections of the flask. Such breaking out of the molten metal is called a "run-out". A small run-out is effectively stopped by taking a handful of sand or loam and pressing it over the run-out. This operation can only be successful in case of very small breaks in the mold. If a run-out is not stopped at once, it is apt to increase rapidly in size, many times resulting in the entire destruction of an expensive mold and the further loss incident to the time and expense of remelting of the metal.

I have devised a simple and effective tool for the use of a molder in stopping the run-outs of a mold.

My invention comprises an open-ended, cup-shaped member having a tubular handle or stem projecting rearwardly from it and a piston operating in said cup-shaped member and mounted upon the end of an operating rod or bar which passes through said tubular handle and is threaded in the wall of the cup-shaped member. The tool is adapted to have a charge of sand or loam packed into the cup-shaped member against the piston and be pressed directly over the run-out or break in the mold. While held firmly in this position, the operating rod or bar is rotated for forcing the piston forward in the cup-shaped member to crowd the sand or loam against the break in the mold. The tool is held in place over the break in the mold until the outer surface of the metal of the run-out is sufficiently chilled to stop it.

In order that my invention may be fully understood, I will first describe the same with reference to the accompanying drawing and afterward point out the novelty more particularly in the annexed claims.

In said drawing, Figure 1 is a side elevation of my improved tool. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a horizontal sectional view of the same taken on the line 3—3 of Fig. 2. Fig. 4 is a bottom

plan view of the piston. Fig. 5 is a side elevation of a slightly modified form of the cup-shaped member.

1 is a cylindrical open-ended, cup-shaped member having an open end 2 and a rear wall 3. The rear wall has suitable openings 4 to facilitate taking out any sand or dirt that may get behind the piston within the cup-shaped member.

Formed integral with the rear wall 3 of the cup-shaped member 1 is a boss 5 which is threaded externally and internally for the purpose which will presently appear.

10 is a tubular stem or handle internally threaded at its large end to screw upon the external thread of the boss 5, and formed at its outer end with a cylindrical bore or bearing 11 for the operating rod which will presently be explained.

15 is the piston formed preferably as shown with the forwardly presented annular rim 15^a making the piston of cup shape. This piston 15 has a central cylindrical boss or projection 16 and a plurality of radial lugs or cleats 17 for the purpose which will be hereinafter explained.

20 is the operating rod or bar formed at one end with a cross bar or handle 21. This operating rod or bar 20 passes freely through the cylindrical bearing 11 of the stem or handle 10 and is threaded at its forward end 22. The threaded portion of the rod or bar 20 passes through the internally threaded bore of the boss 5 and by its threaded engagement with the boss can be moved longitudinally through the stem or handle 10. The piston 15 is secured to the extreme forward end of the rod or bar 20 so as to rotate therewith. As shown in the drawing, the piston is screwed upon the threaded end of the rod or bar 20, but this attachment may be effected by any suitable means.

In Fig. 5, I have shown a cup-shaped head or member 1 with its cylindrical wall cut out or concaved as shown at 25 for the purpose of facilitating the fit of the tool against a cylindrical flask.

The operation will be clear from the following explanation: In the event of a run-out or break in a mold, the operator takes the improved tool and quickly fills the cup 1 and piston 15 with sand or loam and places the cup-shaped member of the tool directly over the run-out or break. In placing the tool over the break in the mold, it is desirable to

place the central projection or boss 16 of the piston directly over the run-out so as to impart the greatest pressure to the charge of sand at this point. The operator holds the tool in the described position and turns the handle 21, causing the operating rod or bar 20 to move in the threaded bearing in boss 5 and cause the piston 15 to move forwardly in the cylindrical, cup-shaped head or member 1 with the result that the charge of sand or loam will be compressed and forced firmly against the run-out. The cleats or lugs 17 cause the piston to carry the main body of the charge of sand around with it, thereby more effectively forcing the charge of sand into the opening through which the molten metal is escaping. When the piston has been advanced against the break as far as possible, the tool is held in position for a few moments or long enough to chill the outer surface of the escaping metal and effectively stop the run-out.

What I claim is:

1. In a tool for stopping "run-outs" in molds, the combination of a cup-shaped member having a suitable handle, a piston operating in said cup-shaped member, and an operating rod or bar secured to said piston.

2. In a tool for stopping "run-outs" in molds, the combination of a cylindrical cup-shaped member having a handle, a piston operating in said cup-shaped member, and an operating rod or bar secured to said piston and threaded in said cup-shaped member.

3. In a tool for stopping "run-outs" in molds, the combination of an open-ended, cup-shaped member having a tubular stem or handle projecting rearwardly therefrom, a piston operating in said cup-shaped member, and an operating rod or bar passing

through said tubular stem or handle and secured to said piston.

4. In a tool for stopping "run-outs" in molds, the combination of an open-ended, cylindrical cup-shaped member, having a rearwardly presented threaded boss, a tubular stem or handle secured upon said threaded boss, an operating rod or bar passing through said tubular stem or handle and threaded through said boss, and a piston secured to the inner end of said operating rod or bar and operating in said cup-shaped member.

5. In a tool for stopping "run-outs" in molds, the combination of an open-ended, cup-shaped member having a handle, a cup-shaped piston operating therein and an operating rod or bar for said piston.

6. In a tool for stopping "run-outs" in molds, the combination of an open-ended, cup-shaped member having a handle, a piston operating therein and formed with a central forwardly projecting boss, and an operating rod or bar for said piston.

7. In a tool for stopping "run-outs" in molds, the combination of an open-ended, cup-shaped member having a handle, a piston operating therein and formed with a plurality of forwardly presented lugs or cleats, and means for operating said piston.

8. In a tool for stopping "run-outs" in molds, the combination of an open-ended, cup-shaped member having a handle, a cup-shaped piston operating therein and formed with a plurality of radial lugs or cleats and a central forwardly presented boss or lug, and means for operating said piston.

EDWARD W. CONARTON.

Witnesses:

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