

No. 695,967.

Patented Mar. 25, 1902.

J. S. THURMAN.

BLAST NOZZLE.

(Application filed Dec. 17, 1901.)

(No Model.)

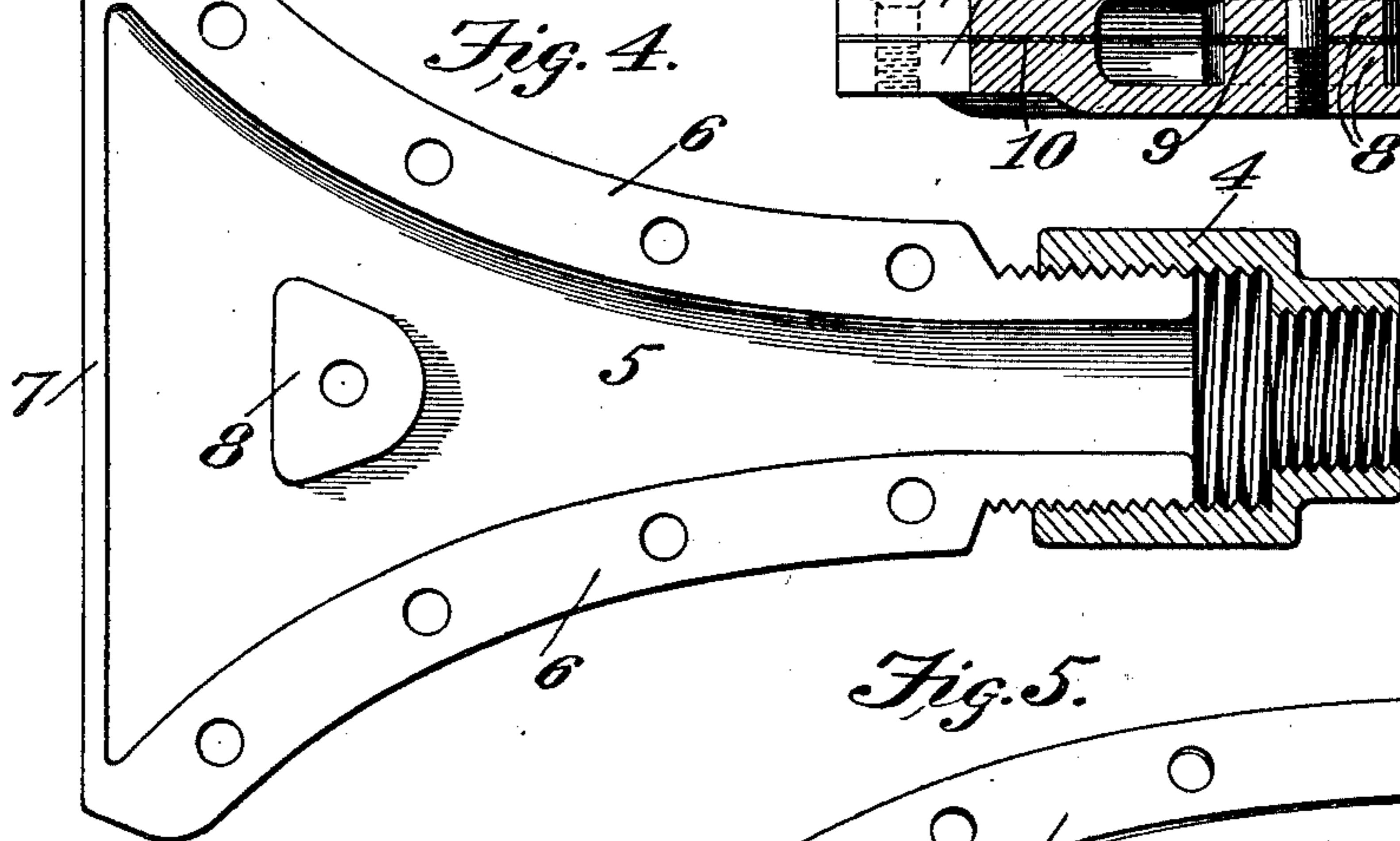
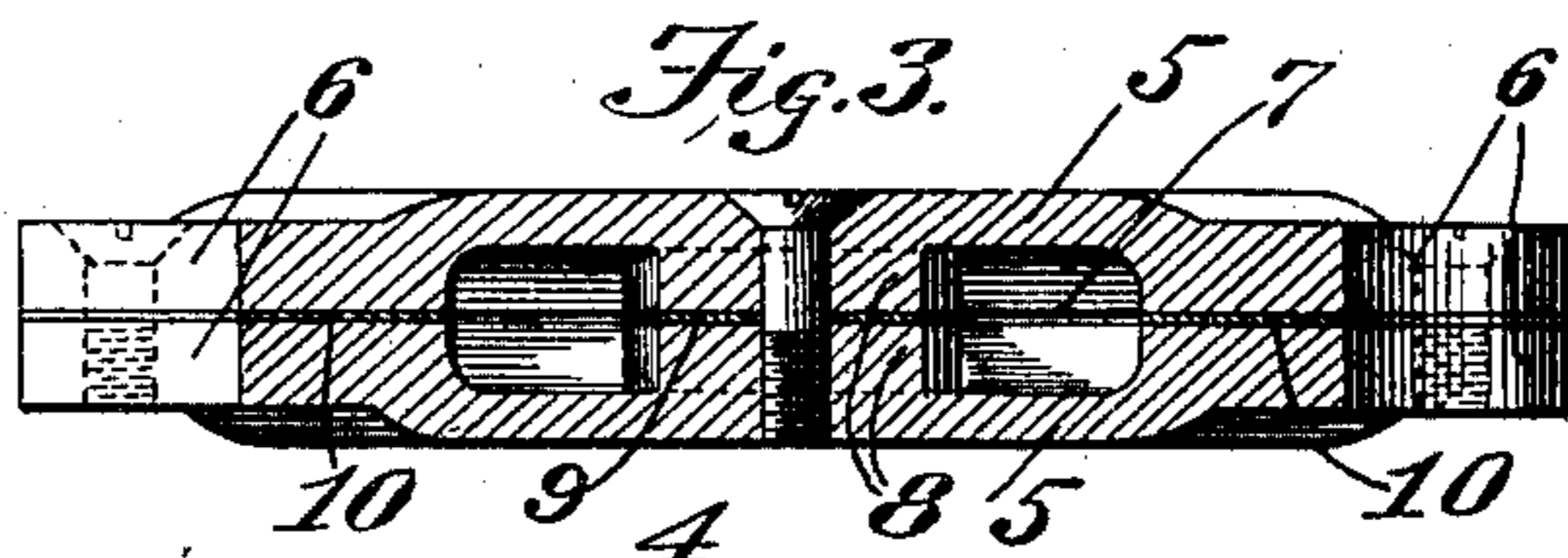
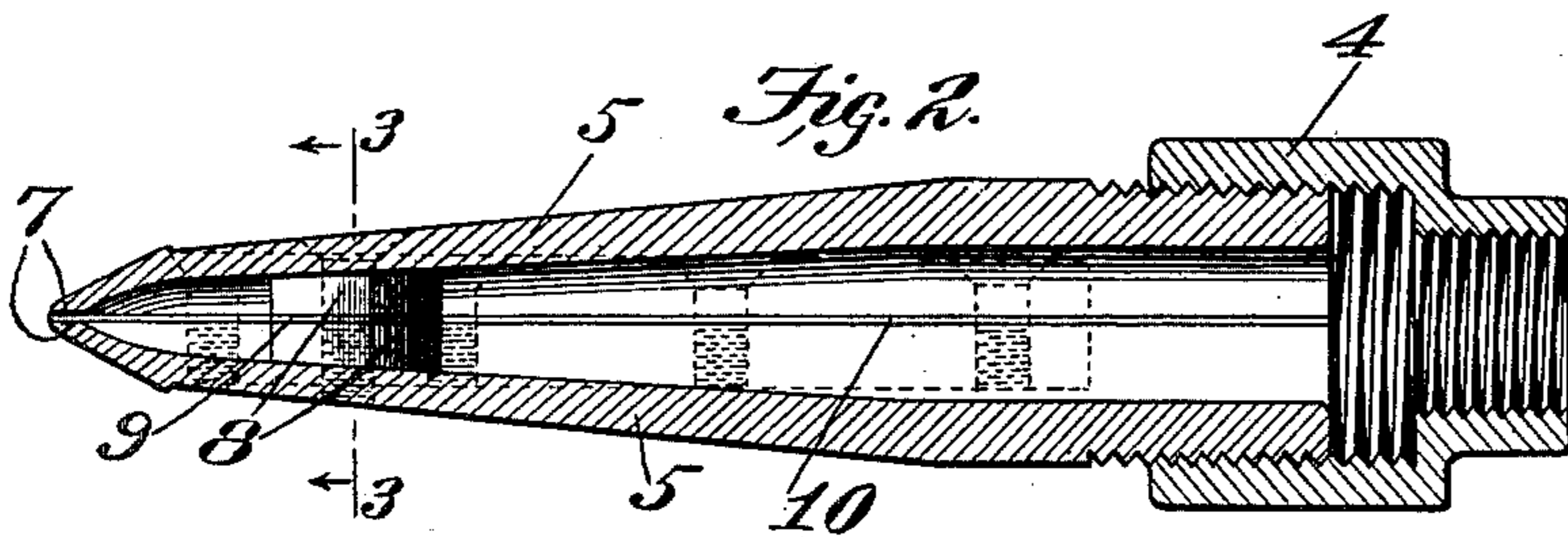
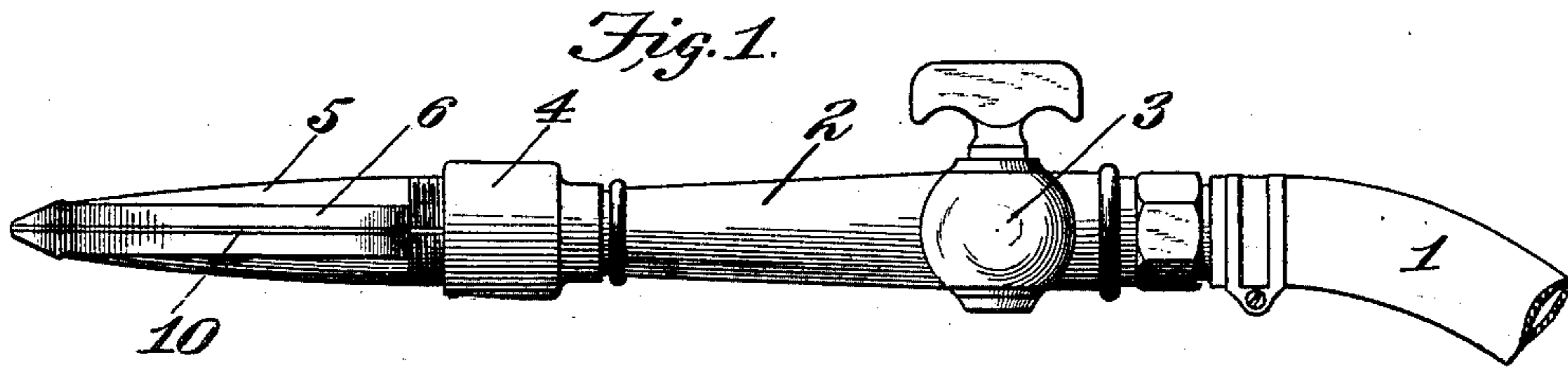
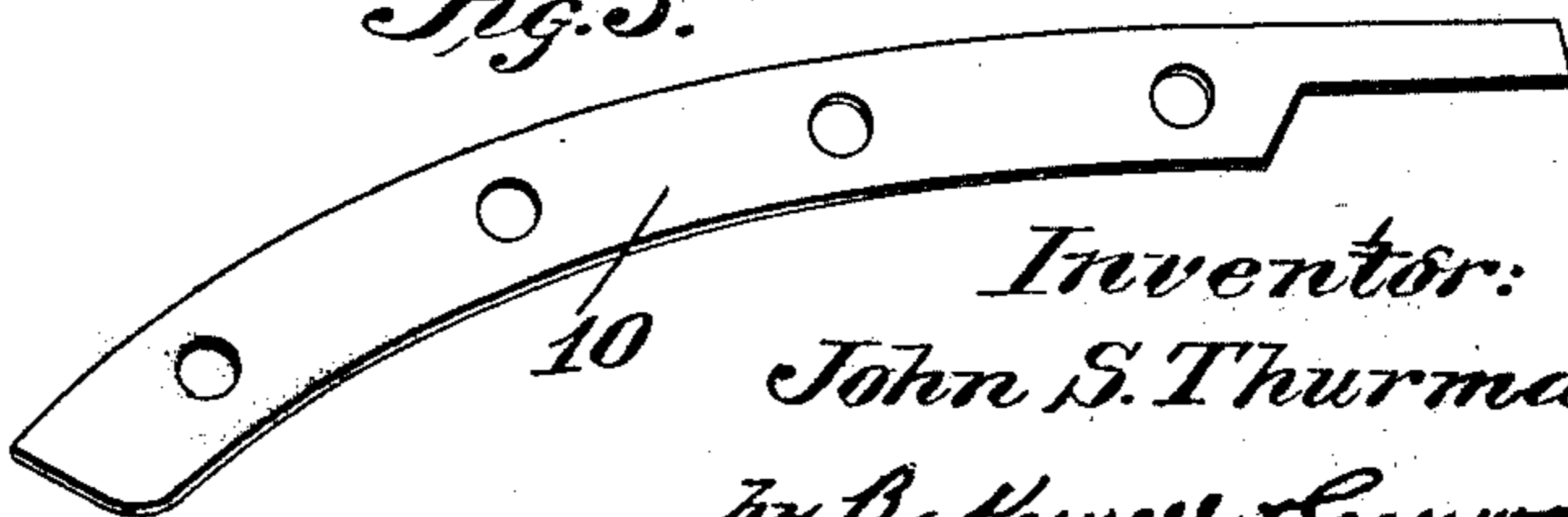


Fig. 5.



Witnesses:
G. A. Pennington
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UNITED STATES PATENT OFFICE.

JOHN S. THURMAN, OF ST. LOUIS, MISSOURI.

BLAST-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 695,967, dated March 25, 1902.

Application filed December 17, 1901. Serial No. 86,259. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. THURMAN, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Blast-
5 Nozzles, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had
10 to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevational view of my improved blast-nozzle. Fig. 2 is a vertical longitudinal sectional view therethrough. Fig.
15 3 is a cross-sectional view on line 3 3, Fig. 2. Fig. 4 is a plan view of one of the sections of which my improved nozzle is formed. Fig. 5 is a detail view of one of the spacing-washers, and Fig. 6 is a similar view of the spacing-washer employed in connection with the
20 central spreading-post.

This invention relates to a new and useful improvement in blast-nozzles designed especially for use in connection with a flexible
25 pipe through which is conducted compressed air from some suitable source for cleaning purposes. The blast-nozzle is so constructed that it emits a wide thin blast of air, which is desirable in cleanings walls, upholstery, and the
30 like.

My invention consists in the construction, arrangement, and combination of the several parts, all as will hereinafter be described, and afterward pointed out in the claims.

35 In the drawings, 1 indicates a flexible pipe leading from some suitable source of compressed-air supply, said pipe being connected to a metallic section 2, in which is located a suitably-controlled valve 3. On the end of
40 section 2 is a coupling-collar 4, the outer end of said collar being provided with female threads which inclose and hold together a sectional threaded boss projecting from the inner end of the divided blast-nozzle.

45 5 indicates a section of my improved blast-nozzle, which is provided with lateral flanges 6, suitably perforated and threaded for the reception of attaching-screws. The inner end has a semicircular threaded projection which
50 when assembled with its companion forms a threaded boss designed to be screwed into the

collar 4. The outer end has a lip 7 flush with the faces of flanges 6.

8 indicates a spreading-post preferably arranged about the center of the section, said
55 post being tapped for the reception of a securing-screw. The inner face of the section is hollowed out to form a chamber when the parts are assembled for the passage of air.

In manufacture the two sections or parts
60 of the nozzle may be made from the same pattern, the inner faces of the flanges 6, the lip 7, and the post 8 being finished flush with each other. In assembling the parts a washer
65 9 is introduced between the posts 8, and washers 10 are arranged between the flanges 6. These washers space the parts of the nozzle, and their thickness determines the width of the slot or opening between the lips 7. If it
70 is desired that the nozzle shall emit a thin blast, thin washers 9 and 10 are employed, while a thick blast will issue from the nozzle by increasing or doubling the thickness of the washers. After the parts of the nozzle
75 are assembled they are screwed under the collar 4, which collar assists in holding the parts together in addition to providing a coupling. The posts 8 divert the current of air and force it to both sides of the nozzle, and thus said posts serve to spread the blast.
80

I am aware that many minor changes in the construction, arrangement, and combination of the several parts of my device may be made and substituted for those herein shown and described without in the least departing from
85 the nature and principle of my invention.

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

1. A blast-nozzle composed of like sections
90 having spacing-washers arranged between them for determining the thickness of the blast, and means for securing said sections together; substantially as described.

2. A blast-nozzle composed of like sections
95 whose inner marginal faces are finished flush, spacing-washers for determining the thickness of the blast, and means for securing said sections together; substantially as described.

3. A blast-nozzle divided horizontally, the
100 two like sections thereof having flanges 6 and lips 7, washers between said flanges, and se-

curing means passing through the flanges; substantially as described.

4. A blast-nozzle composed of like sections each section having securing-flanges, a lip 7
5 and a spreading-post 8, and washers interposed between said flanges and posts; substantially as described.

5. A broad-mouthed blast-nozzle provided with a spreading-post adjacent the mouth
10 thereof and in the duct or passage; substantially as described.

6. A blast-nozzle composed of like sections,

each section having lateral flanges 6, a lip 7, and a spreading-post 8, washers interposed between the flanges and posts, securing de- 15
vices passing through said flanges and posts, and a coupling 4; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 14th day of December, 1901.

JOHN S. THURMAN.

Witnesses:

GEORGE BAKEWELL,
G. A. PENNINGTON.