

(No Model.)

J. ANDERSON.

TOOL FOR EXPANDING ENDS OF LEAD PIPES.

No. 559,763.

Patented May 5, 1896.

Fig. 1.

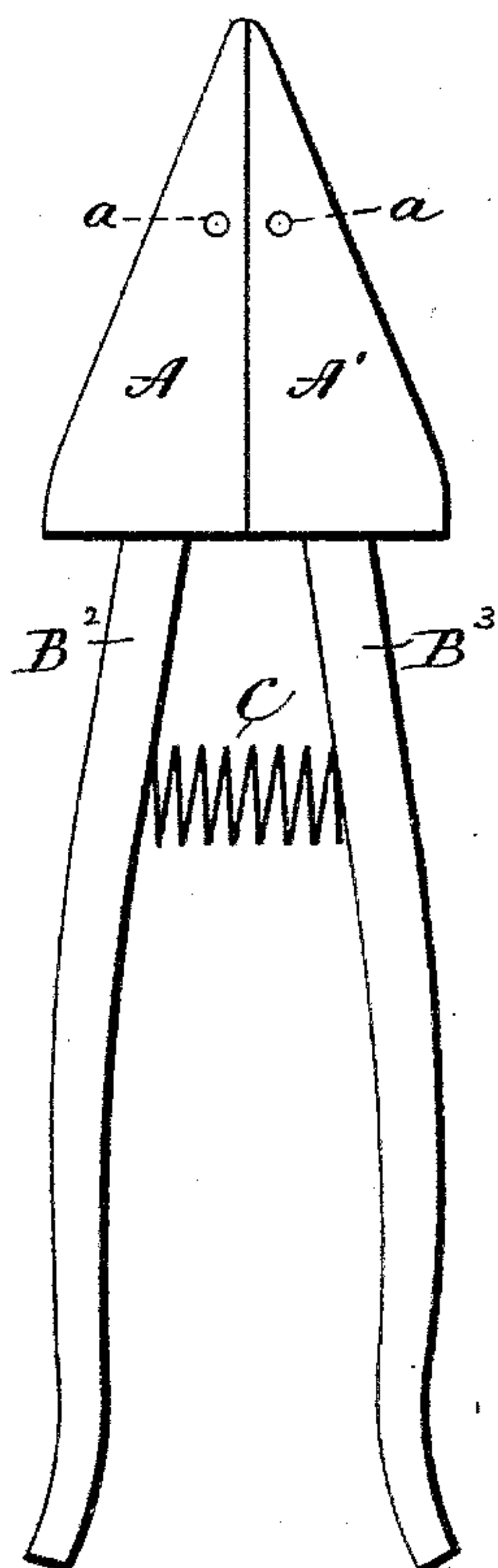


Fig. 2.

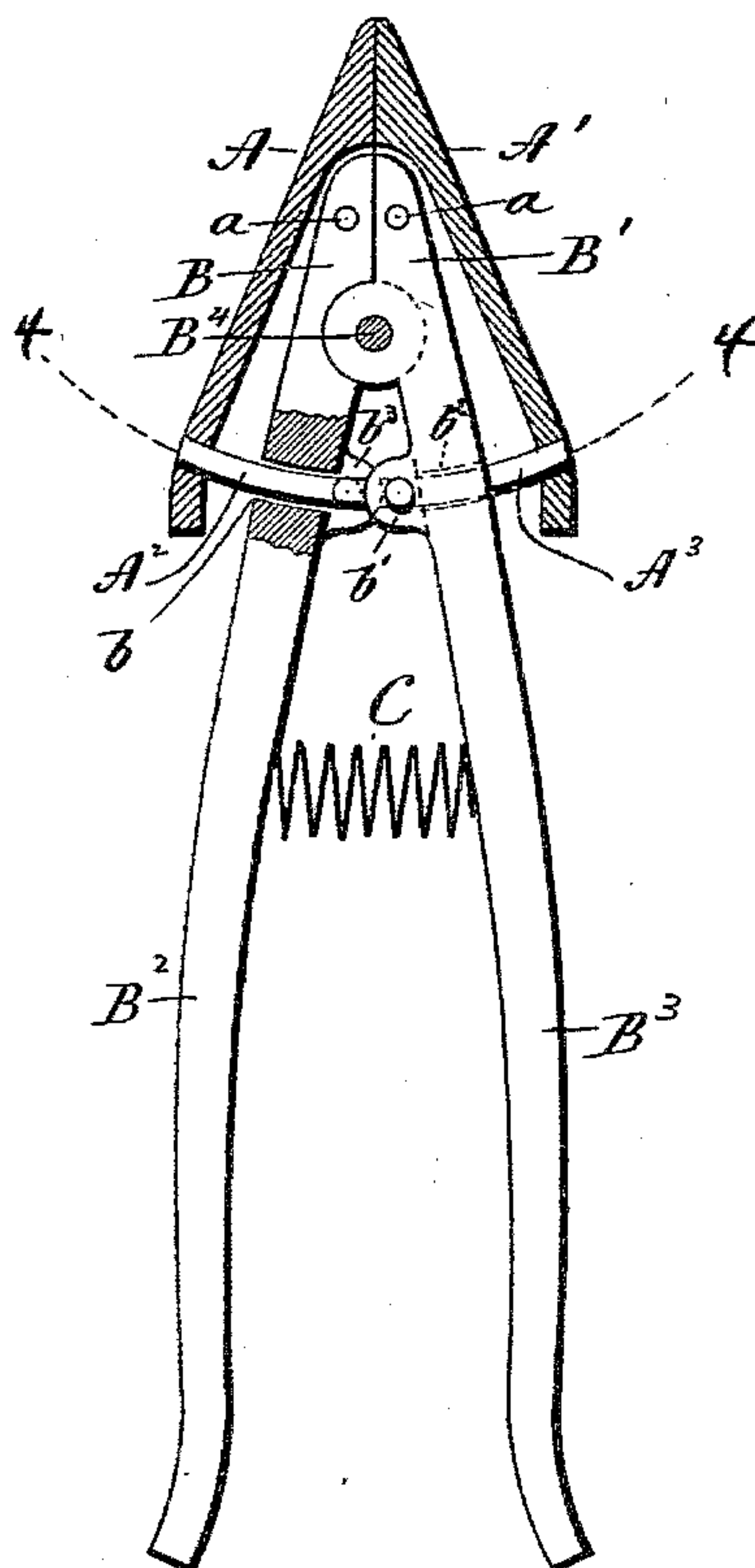


Fig. 3.

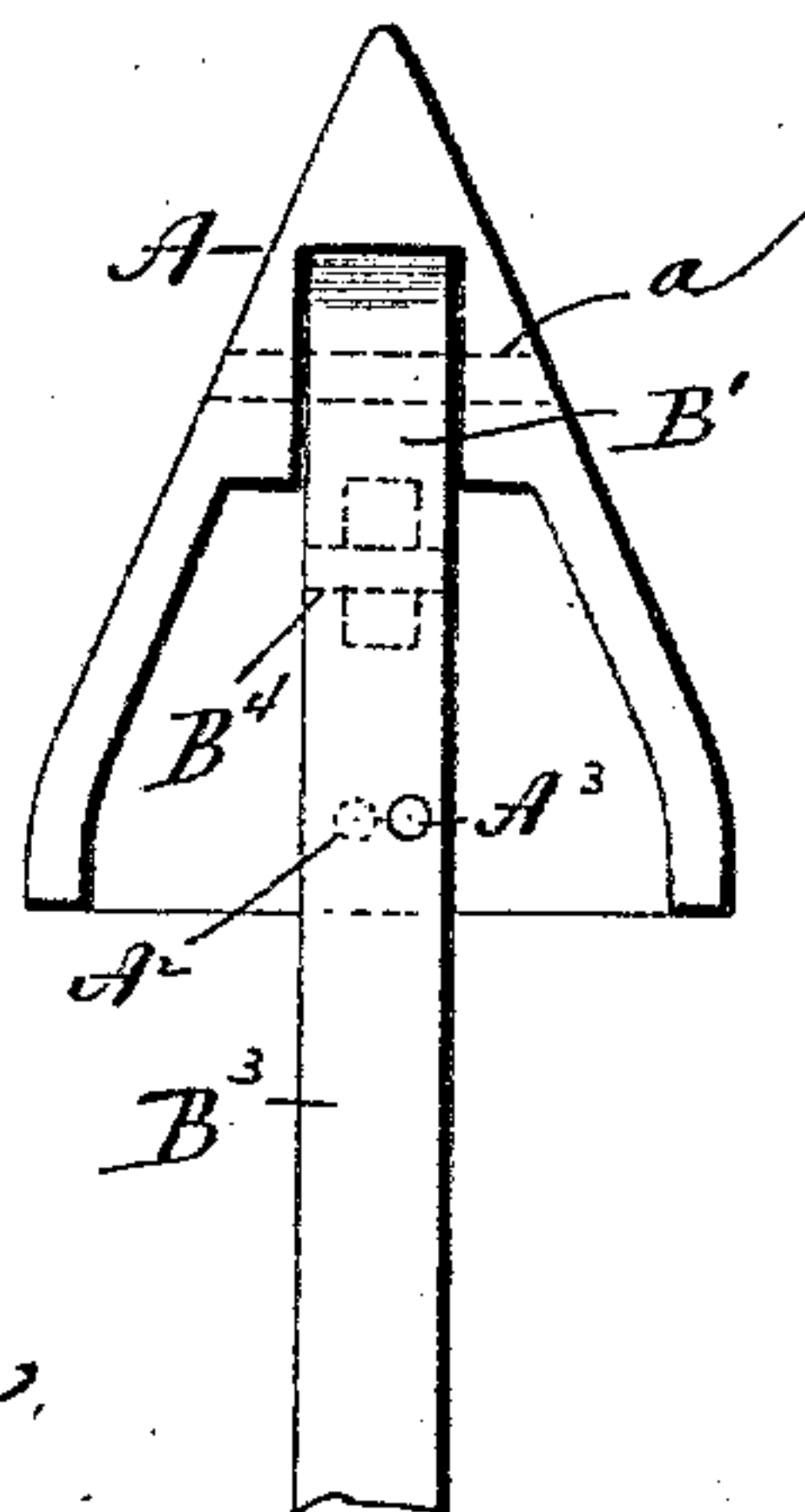
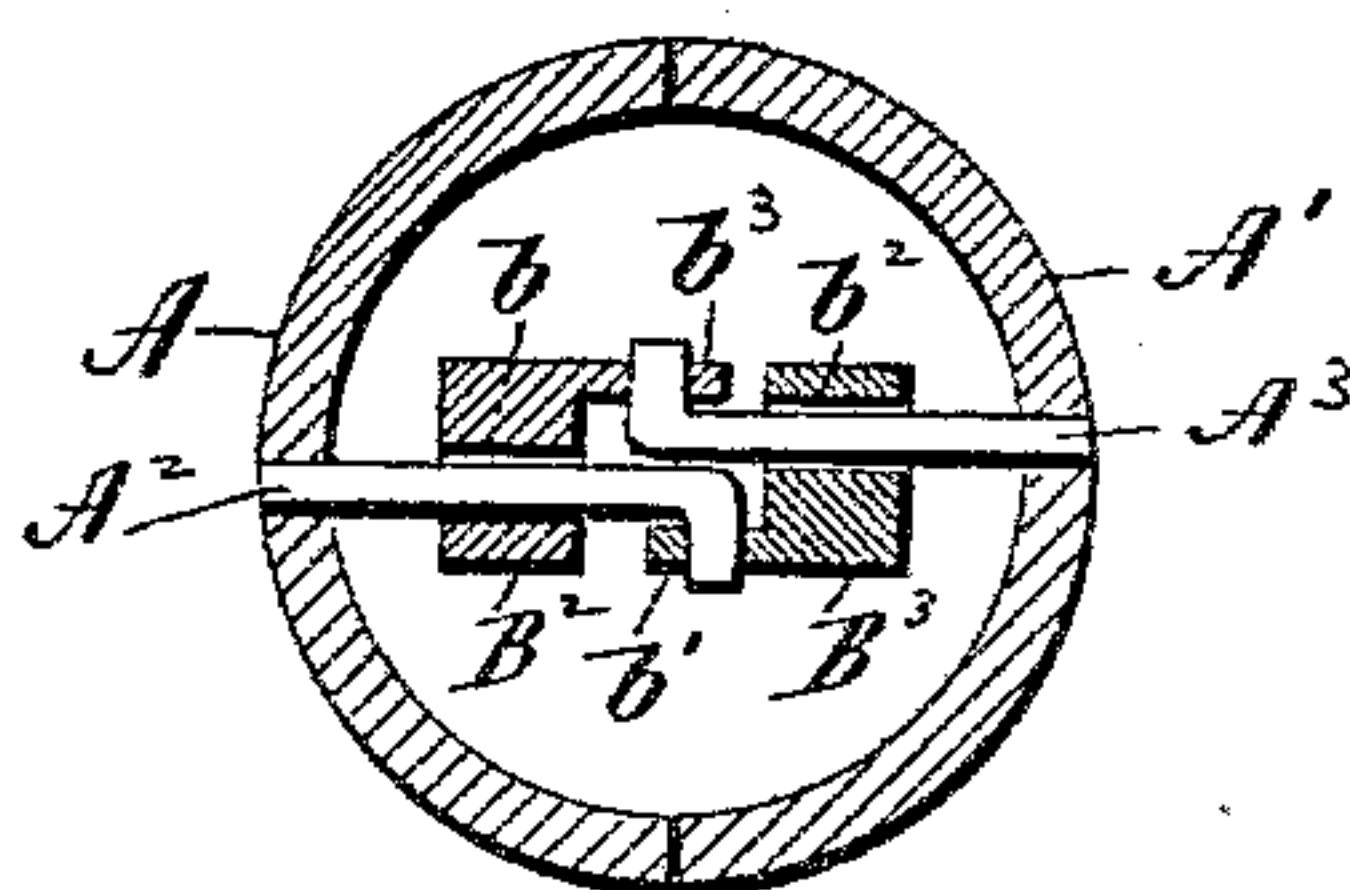


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN ANDERSON, OF PORTLAND, CONNECTICUT, ASSIGNOR OF ONE-HALF
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TOOL FOR EXPANDING ENDS OF LEAD PIPES.

SPECIFICATION forming part of Letters Patent No. 559,763, dated May 5, 1896.

Application filed February 17, 1896. Serial No. 579,614. (No model.)

To all whom it may concern:

Be it known that I, JOHN ANDERSON, of Portland, in the county of Middlesex and State of Connecticut, have invented a new Improvement in Tools for Expanding the Ends of Lead Pipes; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view inside elevation of one form which my improved tool may assume; Fig. 2, a view thereof in longitudinal section; Fig. 3, a detached broken view showing one of the dies and one of the levers in inside elevation; Fig. 4, a view of the device in transverse section on the line 4 4 of Fig. 2.

My invention relates to an improved tool for expanding the ends of lead pipes preparatory to coupling them, and particularly to their use in metal pipe-joints of the general class to which the pipe-joint shown and described in Patent No. 535,236, granted to me under date of March 5, 1895, belongs.

The object of my present invention is to produce a simple, compact, convenient, and accurate tool for expanding the ends of lead pipes for the general purposes described.

With these ends in view my invention consists in a tool having certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention, as herein shown, I employ two corresponding semiconical partially hollow dies A and A', respectively, pivoted forward of their longitudinal centers by means of pivots *a a* to the short outer ends B B' of two levers having long handle ends B² B³ and pivoted together by means of a pivot B⁴. The semiconical die A is provided at its rear end with an inwardly-projecting slightly-bowed hooked operating-rod A², which passes freely through a transverse hole *b*, formed in the outer end of the handle end B², and hooks into a perforated lug *b'*, formed at one edge of the inner face of the outer end of the handle end B³. On the other hand, the semiconical die A' is pro-

vided with a corresponding inwardly-projecting slightly-bowed hooked operating-rod A³, passing freely through a transverse hole *b*², formed in the outer end of the handle end B³, and hooking into a perforated lug *b*³, formed at one edge of the inner face of the handle end B³. These lugs are located upon opposite edges of the said handle ends, as shown in Fig. 4, so that the hooked rods will clear each other. A spiral spring C, interposed between the handle ends of the two levers, exerts a constant effort to throw them apart, whereby the flat faces of the dies are brought into contact. The rods A² and A³, it will be observed, are on the opposite side of the fulcrum-pivot B² from the pivots *a a*.

In using the device its semiconical dies are inserted into the end of the pipe to be expanded, after which the handle ends of the levers are drawn together against the tension of the spring C by closing the hand upon them, whereby the dies are forced apart through the medium of their operating-rods A² and A³. The expansion of the pipe will not be done all at once, probably, but by gradually working the dies into it, and repeating the operation by separating them by closing the hand upon the handle ends of the levers.

It is apparent that in carrying out my invention some changes from the construction herein shown and described may be made. I would therefore have it understood that I do not limit myself to the exact form set forth, but hold myself at liberty to make such changes as fairly fall within the spirit and scope of my invention.

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

1. In a tool for expanding lead pipes, the combination with two corresponding semiconical dies, of two levers to which the said dies are respectively pivoted, and means connecting the rear ends of the dies with the opposite levers respectively.

2. In a tool for expanding lead pipes, the combination with two corresponding semiconical dies, of two levers to the short outer ends of which the said dies are respectively pivoted, and two operating-rods respectively projecting inward from the inner ends of the

dies, and connected with the handle ends of the opposite levers so that each die is connected with the short end of one lever, and the handle end of the other lever at points 5 opposite the fulcrum of the levers.

3. In a tool for expanding lead pipes, the combination with two corresponding semi-conical dies, of two levers to the short ends of which the said dies are respectively pivoted, 10 and two operating-rods respectively extending inward from the inner ends of the dies,

and passing through the handle ends of the adjacent levers, and connected with the said ends of the opposite levers.

In testimony whereof I have signed this 15 specification in the presence of two subscribing witnesses.

JOHN ANDERSON.

Witnesses:

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