

(No Model.)

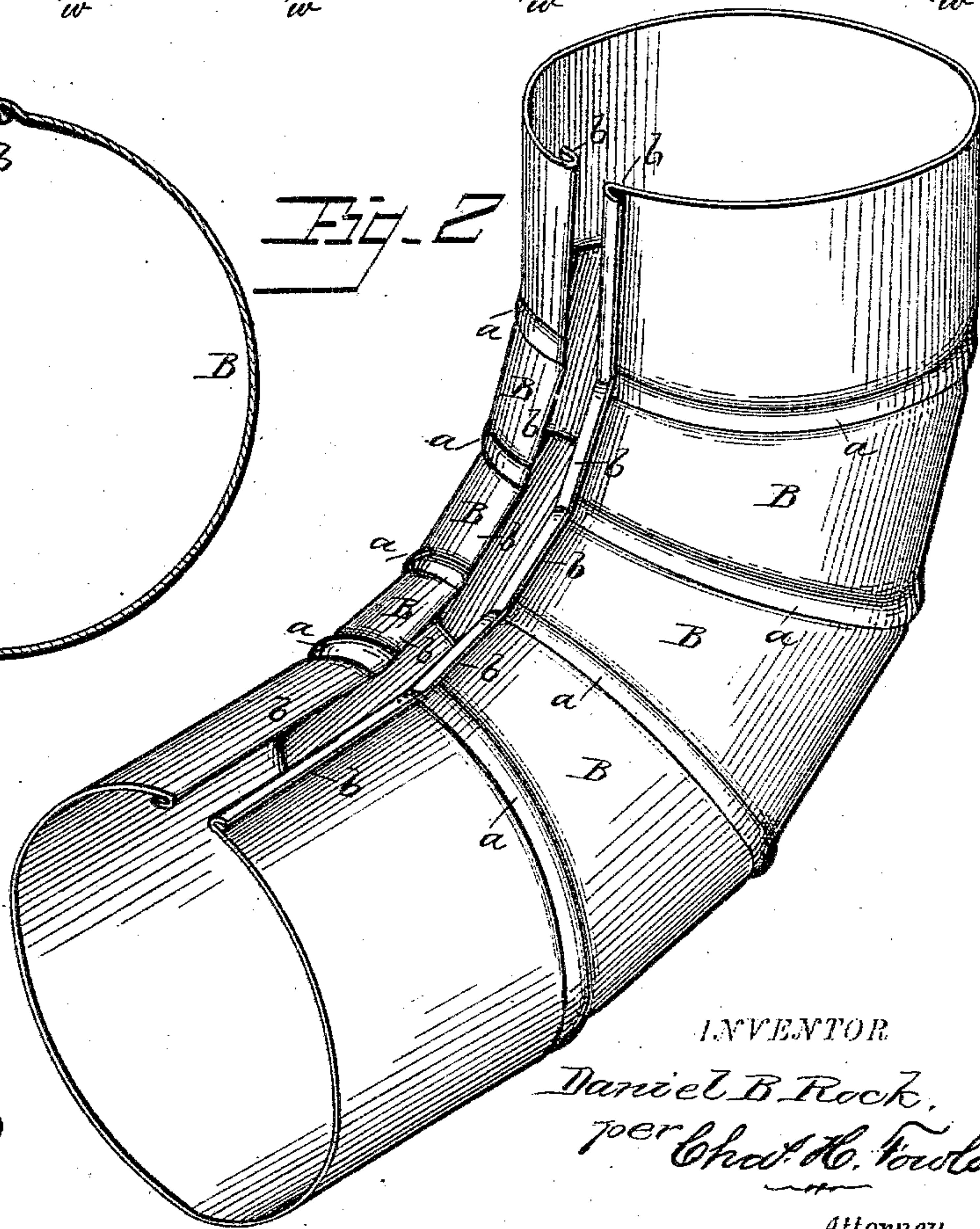
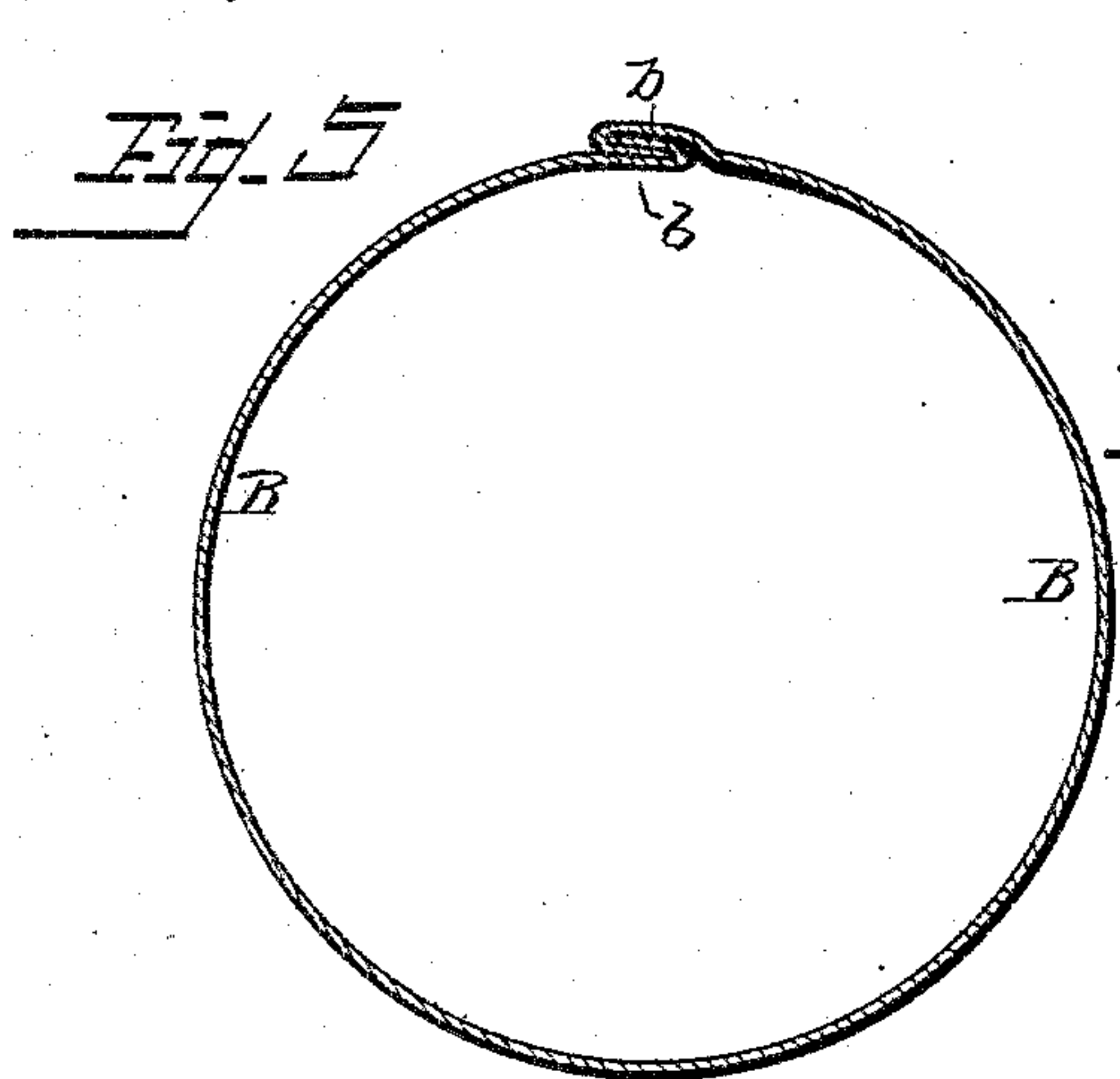
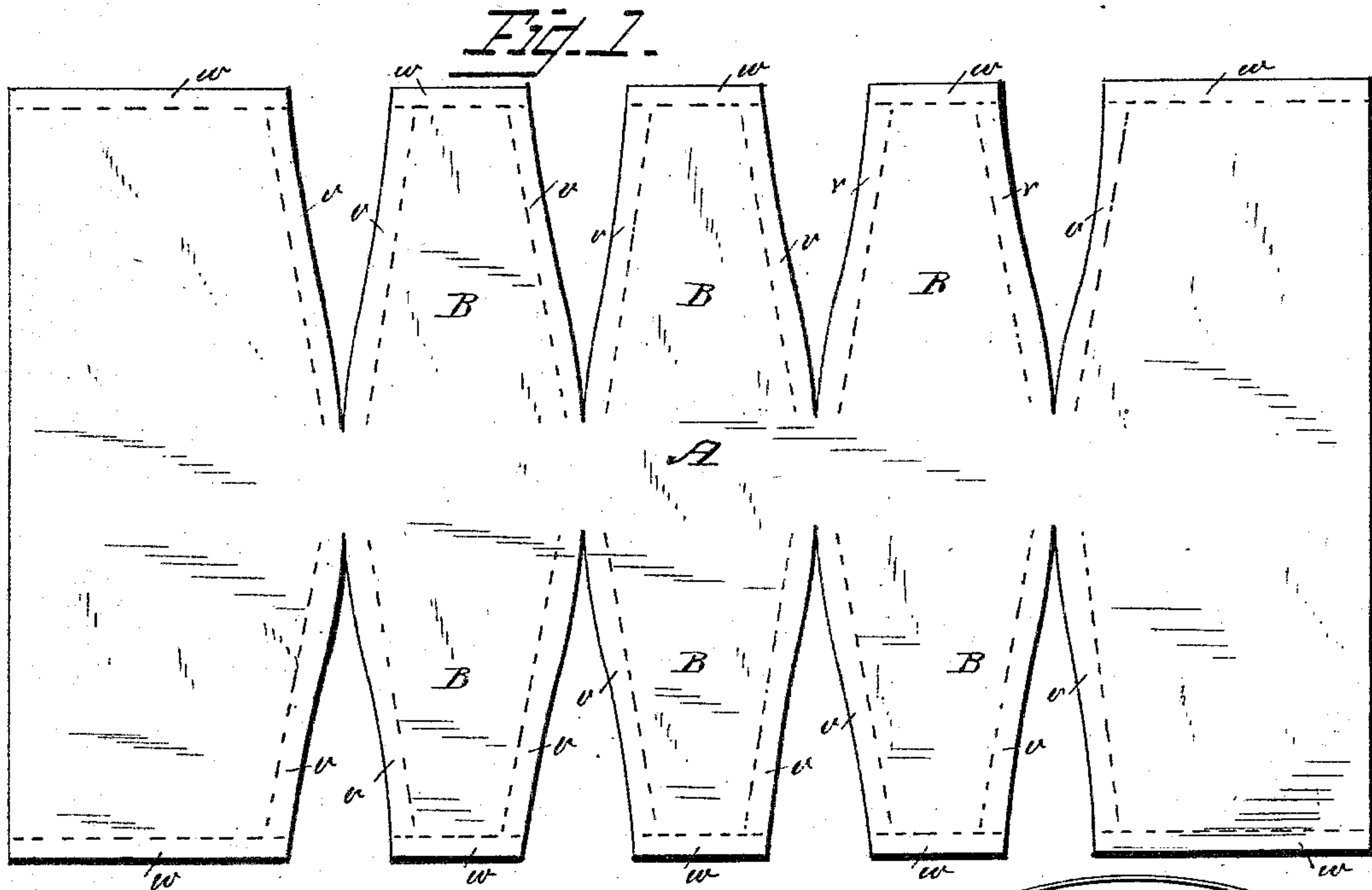
2 Sheets—Sheet 1.

D. B. ROCK.

ELBOW FOR SPOUTING.

No. 296,786.

Patented Apr. 15, 1884.



WITNESSES
J. L. Ourand
N. E. Oliphant.

INVENTOR
Daniel B. Rock,
per Chas. H. Fowler,
Attorney

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

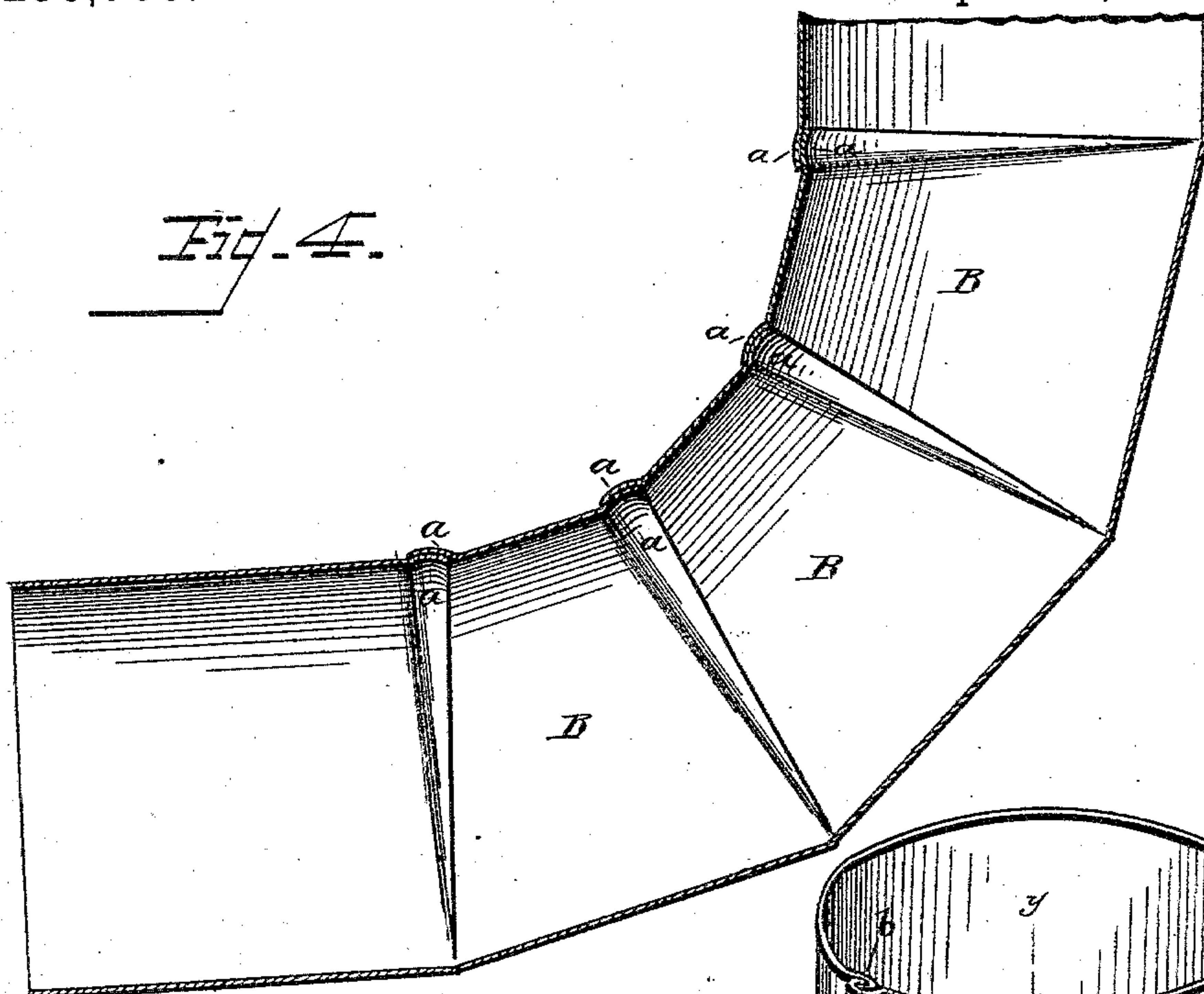
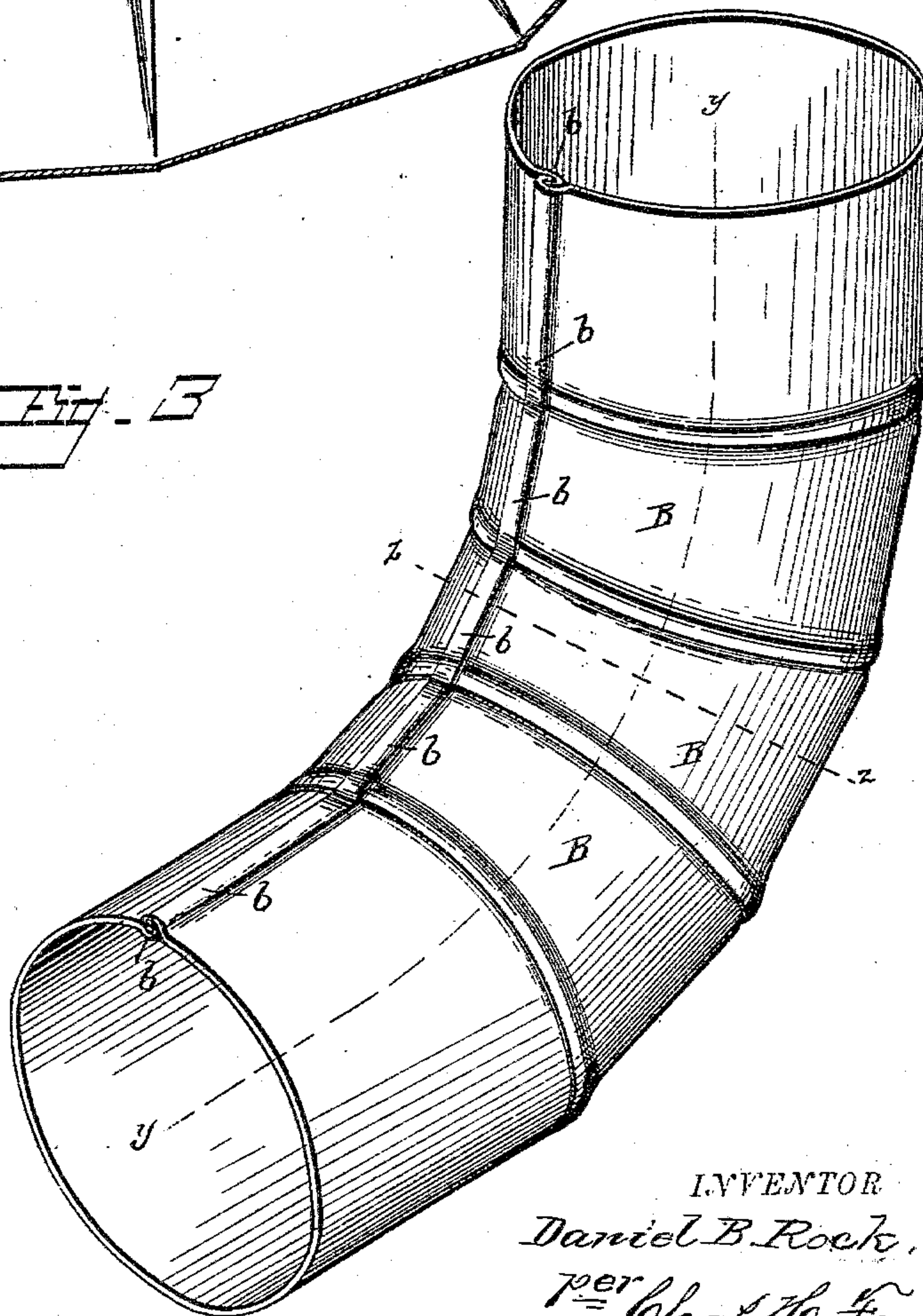


Fig. 5.



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UNITED STATES PATENT OFFICE.

DANIEL B. ROCK, OF FAIRFIELD, PENNSYLVANIA.

ELBOW FOR SPOUTING.

SPECIFICATION forming part of Letters Patent No. 296,786, dated April 15, 1884.

Application filed October 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, DANIEL B. ROCK, a citizen of the United States, residing at Fairfield, in the county of Adams and State of Pennsylvania, have invented certain new and useful Improvements in Elbows for Spouting; and I do hereby declare that the following is a full, clear and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a plan view of a sheet-metal blank from which the elbow is constructed; Fig. 2, a perspective view of an elbow bent into form and the sections composing the sides thereof connected together and ready for double seaming longitudinally of its length; Fig. 3, a similar view of the elbow complete; Fig. 4, a longitudinal section taken on line *y y* of Fig. 3, and Fig. 5 a cross-section taken on line *z z* of same figure.

The present invention has relation to that class of sheet-metal elbows formed from a rectangular piece of metal.

Previous to my invention it was common to construct a stove-pipe knee or elbow from a single piece of metal by cutting from a rectangular sheet upon each side of a central longitudinal strip a series of triangular pieces, and afterward bringing together the parts in the form of a curved tube and riveting them together.

The object of the present invention is to improve the means heretofore employed in the manufacture of sheet-metal elbows, whereby the riveting of the parts is entirely dispensed with, the production of the elbow rendered less troublesome, and, when completed, providing an elbow for spouting and other tubing that will possess great strength and durability. These objects I attain by the construction substantially as shown in the drawings, and hereinafter described and claimed.

In the accompanying drawings, A represents a rectangular sheet of metal of suitable length and width necessary to form the elbow. This sheet A is cut by machinery or otherwise to form a series of angular sections, B, upon each side thereof, thereby providing

a sheet-metal blank, as shown in Fig. 1, from which the elbow is made, the edges of the sections being preferably curved, as shown, so that when brought together to overlap each other a nice seam is obtained. After the rectangular metal sheet A has been cut to form a blank, as above described, the inner or side edges are bent by suitable tools or machinery to form beaded edges *a*, as shown in dotted lines *v*, Fig. 1, and in section, Fig. 4. The grooved or beaded edges *a* overlap each other when the sections B are brought together, and are afterward permanently secured together by soldering. The beaded edges not only strengthen the elbow, but render the sections more readily and effectually joined together. The outer edge of each one of the sections B is bent to form a lock-flange, *b*, the flanges on one of the series of sections interlocking those of the opposite series, as shown in Fig. 5. After the sides of the elbow are sprung together and the flanges *b* interlocked, the elbow is passed through suitable seaming-rollers to press the flanges together, and thus make a double seam longitudinally throughout the length of the elbow, the position of these flanges in the sheet-metal blank being shown by dotted lines *w*, Fig. 1. These flanges *b* may be made either by hand or machinery, as may also the grooved or beaded edges *a*, and the flanges may be pressed together to form the double seam by hammering or by machinery suitably constructed for the purpose. The double seam gives strength and rigidity to the elbow in the direction of its length, and the grooved or beaded edges of the sections, when secured together, give strength and stiffness or rigidity to the elbow circumferentially, or in a direction at right angles to that of the seam. It will therefore be seen that a sheet-metal elbow is constructed of a single piece without the use of rivets or strips of metal to secure the sections B together, and there being no projecting edges upon the interior of the elbow, it will not as readily stop or clog up with leaves or dirt as the ordinary or right-angle elbow.

The sheet-metal blank, as shown in Fig. 1, may be cut so as to provide a greater or less number of sections B, as found desirable.

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

5 An elbow for spouting or other uses, composed of a rectangular piece of metal having angular sections extending laterally from its sides, each section having grooved or beaded sides and flanged ends, said sections being bent into form and connected together substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DANIEL B. ROCK.

Witnesses:

J. H. CUNNINGHAM,
WM. H. LOW.