

No. 814,694.

PATENTED MAR. 13, 1906.

J. HENDERSON.

NOZZLE.

APPLICATION FILED DEC. 11, 1903.

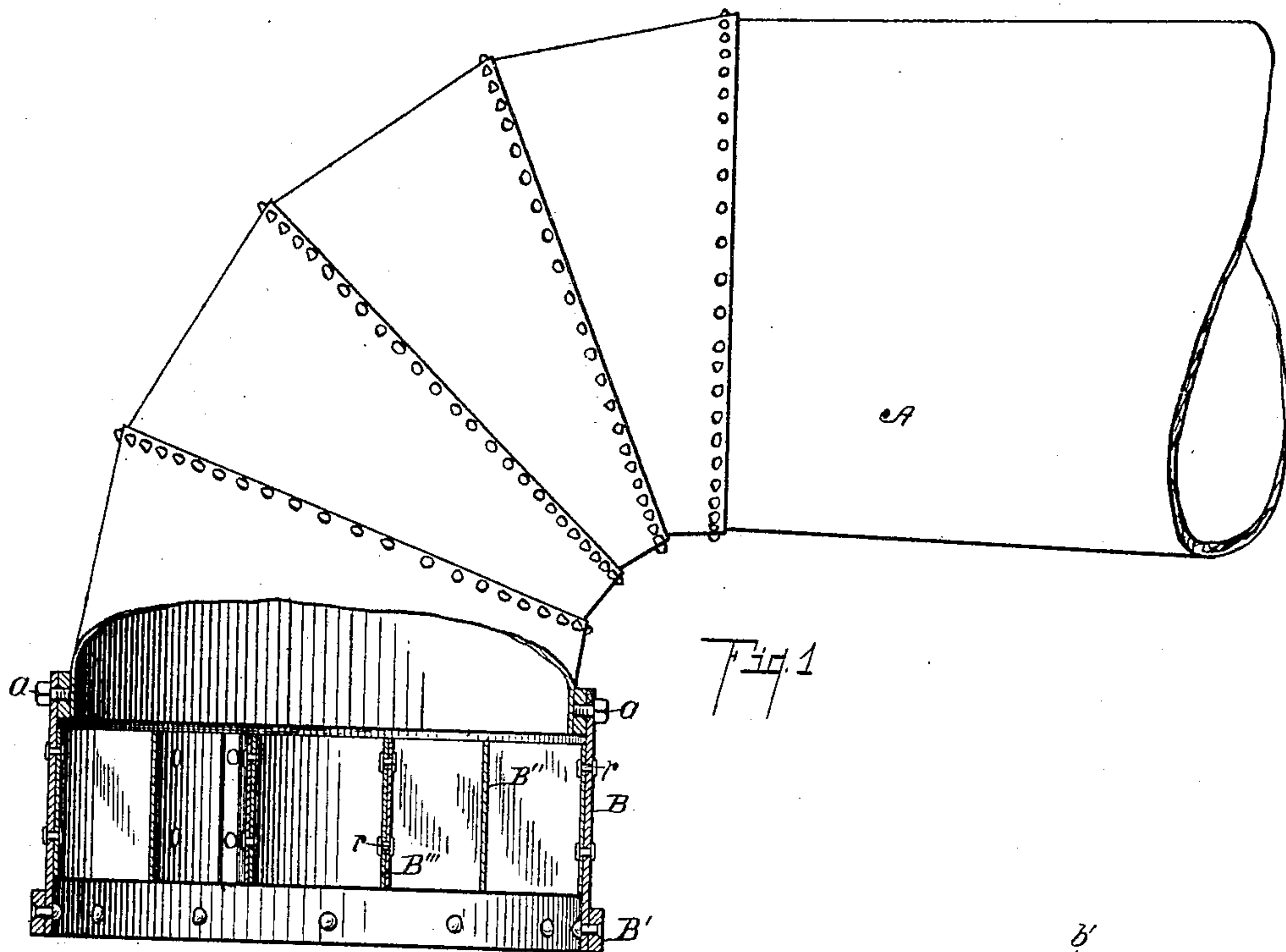


Fig. 1

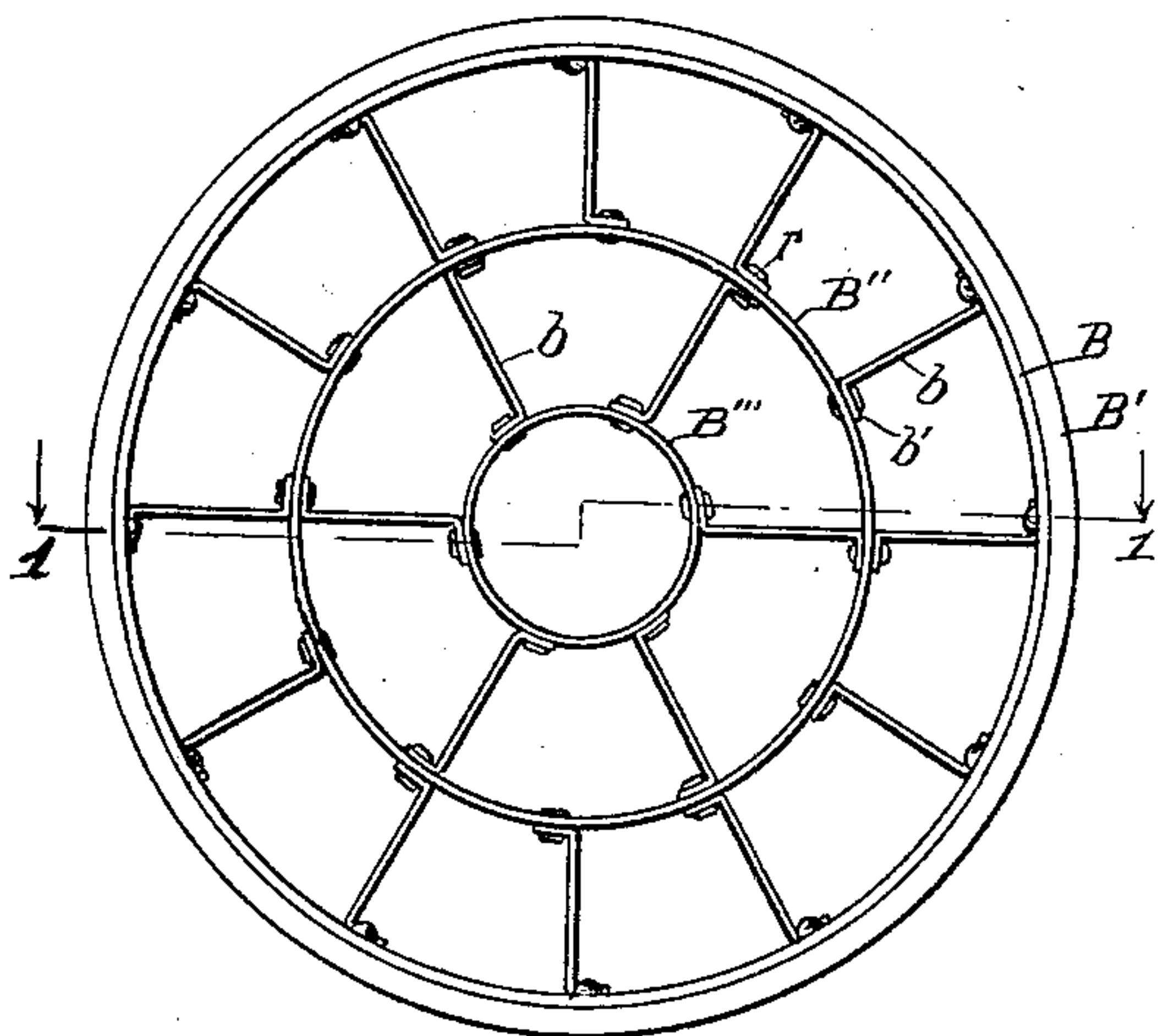


Fig. 2

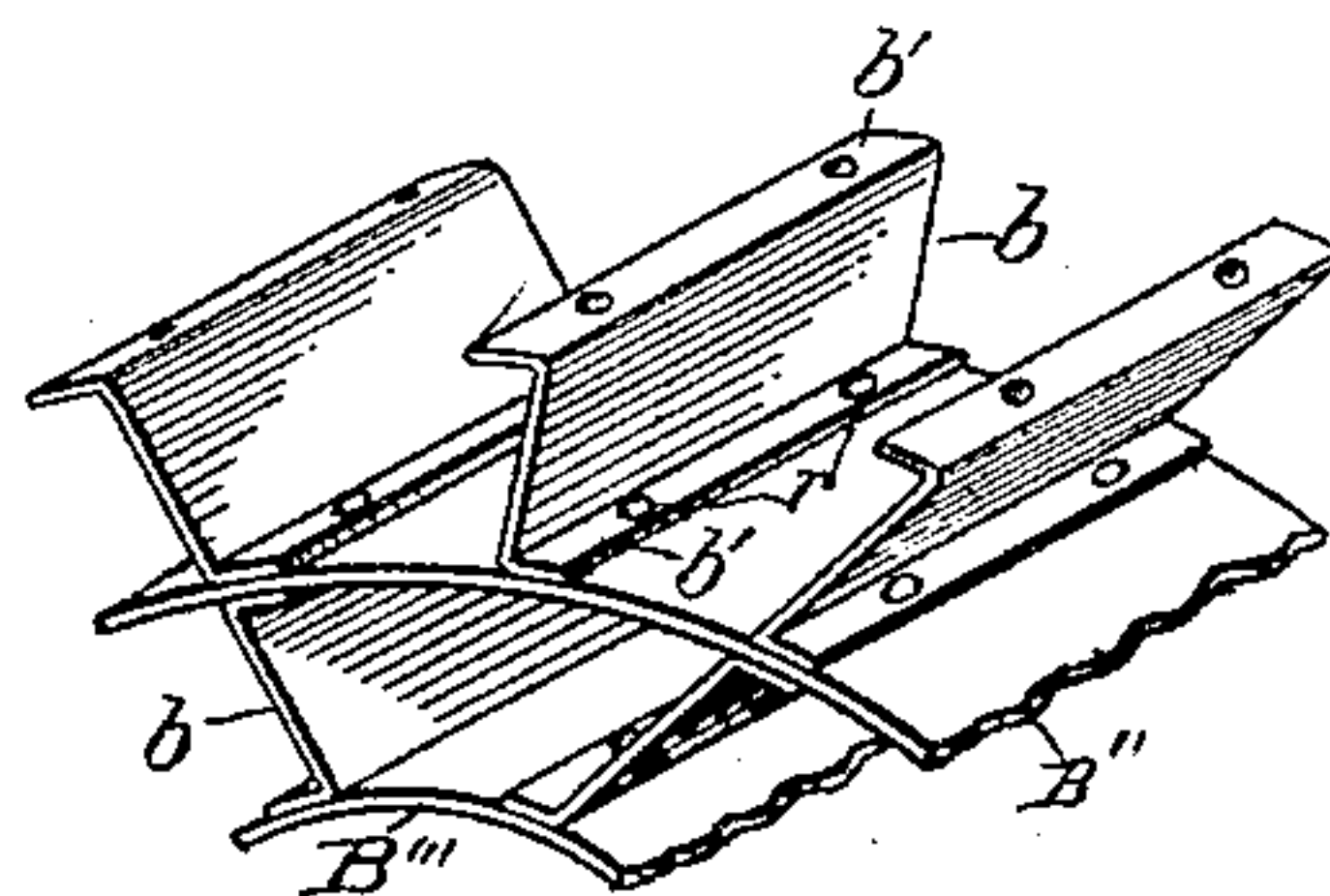


Fig. 3

Witnesses:

D. E. Wood.
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Inventor,

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By *Paul L. Chappell*
Att'y.

UNITED STATES PATENT OFFICE.

JAMES HENDERSON, OF THREE RIVERS, MICHIGAN, ASSIGNOR TO THE
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NOZZLE.

No. 814,694.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed December 11, 1903. Serial No. 184,785.

To all whom it may concern:

Be it known that I, JAMES HENDERSON, a citizen of the United States, residing at the city of Three Rivers, county of St. Joseph, State of Michigan, have invented certain new and useful Improvements in Nozzles, of which the following is a specification.

This invention relates to improvements in nozzles.

It relates particularly to improvements in nozzles for locomotive stand-pipes, although it is adapted and is desirable for use in other relations.

In stand-pipes for locomotives much difficulty, annoyance, and damage result from the splashing and spreading of the water as it is delivered from the nozzle of the stand-pipe, particularly if the same is delivered under pressure, as is usually done. Although this invention is particularly adapted for use in stand-pipes for locomotives, it is, as before remarked, applicable and desirable as a nozzle for use in other relations, particularly where a large column of water is delivered under high pressure and it is desirable that it be delivered in a solid stream or without splashing or spreading.

The objects of this invention are to provide an improved nozzle for stand-pipes for locomotives or other pipes which shall effectively prevent splashing or spreading of the water as it is delivered from the same.

Further objects will definitely appear in the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is fully illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a detail side elevation view, partially in a section, on a line corresponding to the broken line 1 1 of Fig. 2 looking in the direction of the little arrows at the ends of the section-line of a structure embodying my invention. Fig. 2 is an inverted plan view of my improved nozzle. Fig. 3 is a detail perspective view of the partition-plates, showing the arrangement of the same.

In the drawings similar letters of reference

refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A represents the end of the delivery-pipe of a stand-pipe for locomotives. This may be of any desired construction. The nozzle B is adapted to be sleeved upon the end of the delivery-pipe A and is secured thereto by suitable means, as tap-screws *a*. The outer end of the nozzle B is provided with a comparatively heavy protecting-ring B' for protecting the same from blows and the like. The nozzle B is partitioned off so that the water is delivered through a plurality of passages. The nozzle-partitions in the preferred construction are made up of the concentrically-arranged partition-walls B'' B''' and the cross-partition *b*. The cross-partitions *b* are flanged at their ends to fit against the walls B'' B''' and are secured thereto by rivets, as *r*. This forms a very strong structure and one which is economical to produce. These partition-walls are formed of sheet metal.

The partition-walls are so arranged in the nozzle that the nozzle-wall and protecting-ring project some distance beyond the same, thereby affording protection from blows and the like.

The partitions are of considerable depth, and the result is that the greater part of the lateral pressure of the water is overcome as it passes through the small passages, so that as it is delivered from the nozzle its tendency to spread is entirely overcome and it is delivered in a solid stream.

I have illustrated and described my improved nozzle in the form preferred by me on account of its simplicity and economy in manufacture. I am aware, however, that it is capable of considerable structural variation without departing from my invention.

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

1. In a stand-pipe, the combination of a horizontal pipe-section; an elbow at the end thereof; and a nozzle consisting of a sheet-metal casing, a comparatively heavy protecting-ring on the outer end of said casing, sheet-metal rings concentrically arranged in said casing, forming partition-walls therein, and cross-walls of sheet metal secured to said rings

and to said casing, whereby said rings are supported and said nozzle is divided into a plurality of delivery-passages, for the purpose specified.

- 5 2. In a stand-pipe, the combination of a horizontal pipe-section; an elbow at the end thereof; and a nozzle consisting of a sheet-metal casing, sheet - metal rings concentrically arranged in said casing, forming parti-
10 tion-walls therein, and cross-walls of sheet metal secured to said rings and to said casing,

whereby said rings are supported and said nozzle is divided into a plurality of delivery-passages, for the purpose specified.

In witness whereof I have hereunto set my 15
hand and seal in the presence of two witnesses.

JAMES HENDERSON. [L. s.]

Witnesses:

N. S. NOVEY,
CHARLES G. MAHANA.