

(No Model.)

C. GREGORY.
TUYERE.

No. 363,819.

Patented May 31, 1887.

Fig. 1

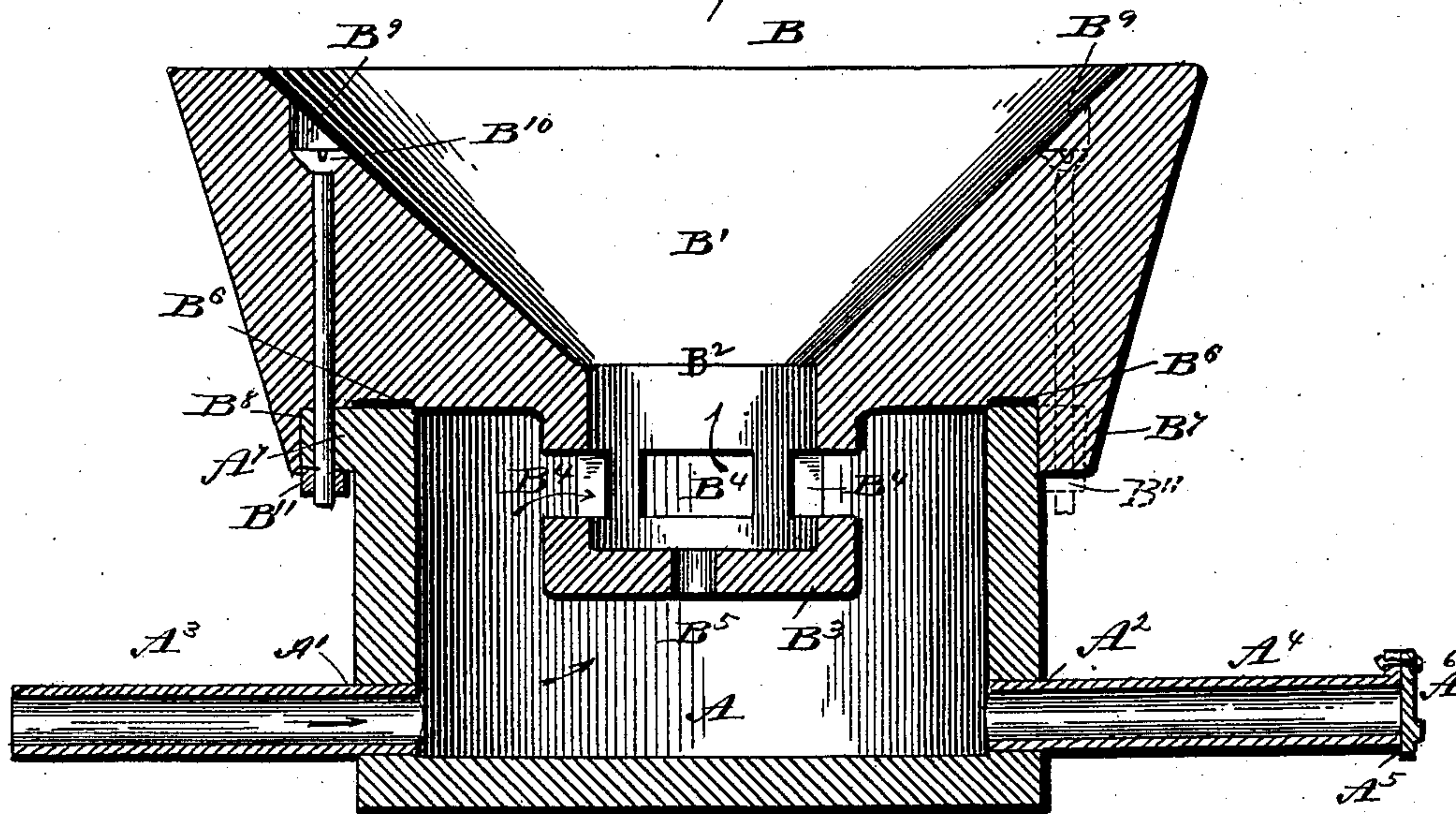
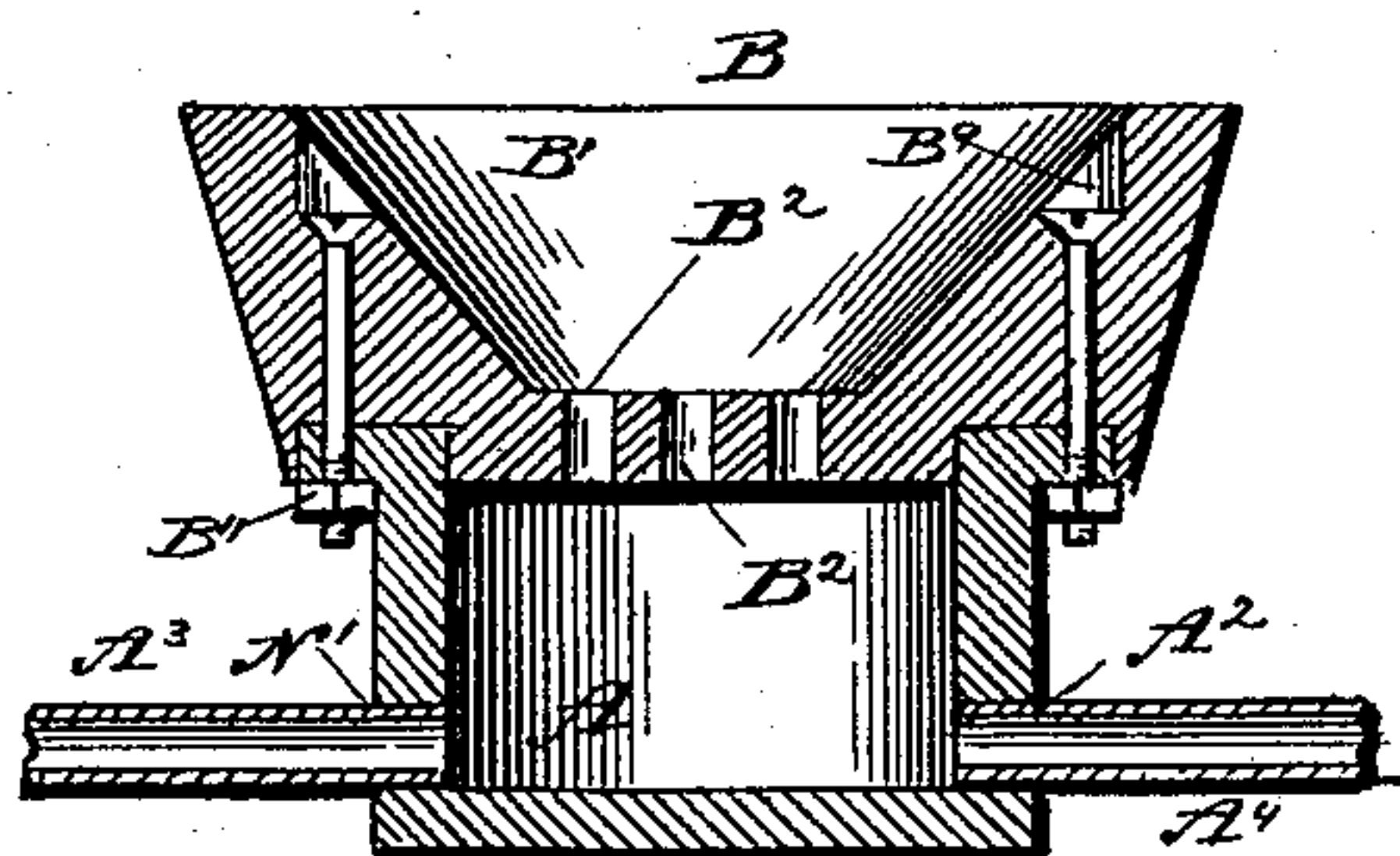


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES GREGORY, OF COUNCIL BLUFFS, IOWA.

TUYERE.

SPECIFICATION forming part of Letters Patent No. 363,819, dated May 31, 1887.

Application filed February 18, 1887. Serial No. 228,054. (No model.)

To all whom it may concern:

Be it known that I, CHARLES GREGORY, a citizen of the United States, residing at Council Bluffs, in the county of Pottawattamie, State of Iowa, have invented certain new and useful Improvements in Tuyeres, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to that class of tuyeres known as "duck-nest," and has for its object a decreasing of the number of parts comprising the same, to facilitate the manufacture thereof, and the provision of means for affording a direct and powerful blast upon the metal in the forge, and also to furnish means for blowing out dust, &c., accumulating within the same.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a central vertical section of a tuyere constructed in accordance with my invention. Fig. 2 is a similar view of a modification.

Like letters indicate like parts in both the figures.

A represents a cup-shaped cylindrical casting, forming the air-chamber, having openings A' A² near its bottom. From any suitable blower or bellows extends the air-induction pipe A³ into the opening A' of the casting A, and extending from the opening A² of said casting is an eduction pipe, A⁴, at the outer end of which is formed a valve-seat provided with a valve, A⁶.

Mounted upon the cylindrical casting A is a casting, B, formed with the truncated cone-shaped mouth or opening B', contracted as at B², communicating with a depending chamber, B³, extending down into the chamber A, and provided with side apertures, B⁴, and a central vertical port, B⁵.

The upper rim of the casting A rests inside of the flange B⁷, formed on the bottom of the casting B, and is prevented from rotary movement with the flange by radial lugs A⁷, diametrically arranged and seated in recesses B⁸, formed in the lower face of the flange B⁷. For the purpose of preventing vertical displacement, the connection, and also the ready removal of the casting B from the casting A, I form perforations B⁹, extending from the mouth or opening B' of the casting B to the

recesses B⁸, and corresponding with the apertures in the perforated lugs A⁷, and through the same I pass bolts B¹⁰, provided with nuts B¹¹.

Air forced into the chamber A through the pipe A³ is directed through the apertures B⁴ B⁵ of the chamber B³ up into the forge. Soot, dust, &c., from the fire will drop into the depending chamber B³, and from thence, through the opening B⁵, into the chamber A. When it is desired to clean this chamber from this accumulation, any suitable cover is placed over the opening B' of the casting B, and the valve A⁶ is opened, it being normally closed, and the blast of air from the pipe A³ is directed through the chamber A into the pipe A⁴, carrying with it all dust and dirt accumulated in the chambers.

In the construction shown in Fig. 2 I merely do away with the depending chamber B³, and open up communication directly through the openings B² thereof, the remaining features being the same.

I am aware that it is common to provide devices of this character with blow-off pipes or openings, and also that depending air-chambers have been used, and I do not broadly claim such as of my invention. By my invention I provide a device which, by its simplicity of construction and arrangement of its parts, is rendered cheap and extremely serviceable, as has been found by practical experience. The device consists principally of only two castings, which may be fitted without any special finishing by hand or machine tools.

Having described my invention and its operation, what I claim is—

The casting A, formed with the perforated lugs A⁷, and having the pipes A³ A⁴, the latter having the valve A⁶, in combination with the casting B, formed with the depending annular flange B⁷, having recesses B⁸ therein for the reception of the lugs A⁷, the perforations B⁹ and bolts B¹⁰, the contracted portion B', and the depending chamber B³, perforated as at B⁴ B⁵, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES GREGORY.

Witnesses:

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