

No. 750,607.

PATENTED JAN. 26, 1904.

E. COOK.
BOILER BRACE.

APPLICATION FILED SEPT. 21, 1903.

NO MODEL.

Fig. 1.

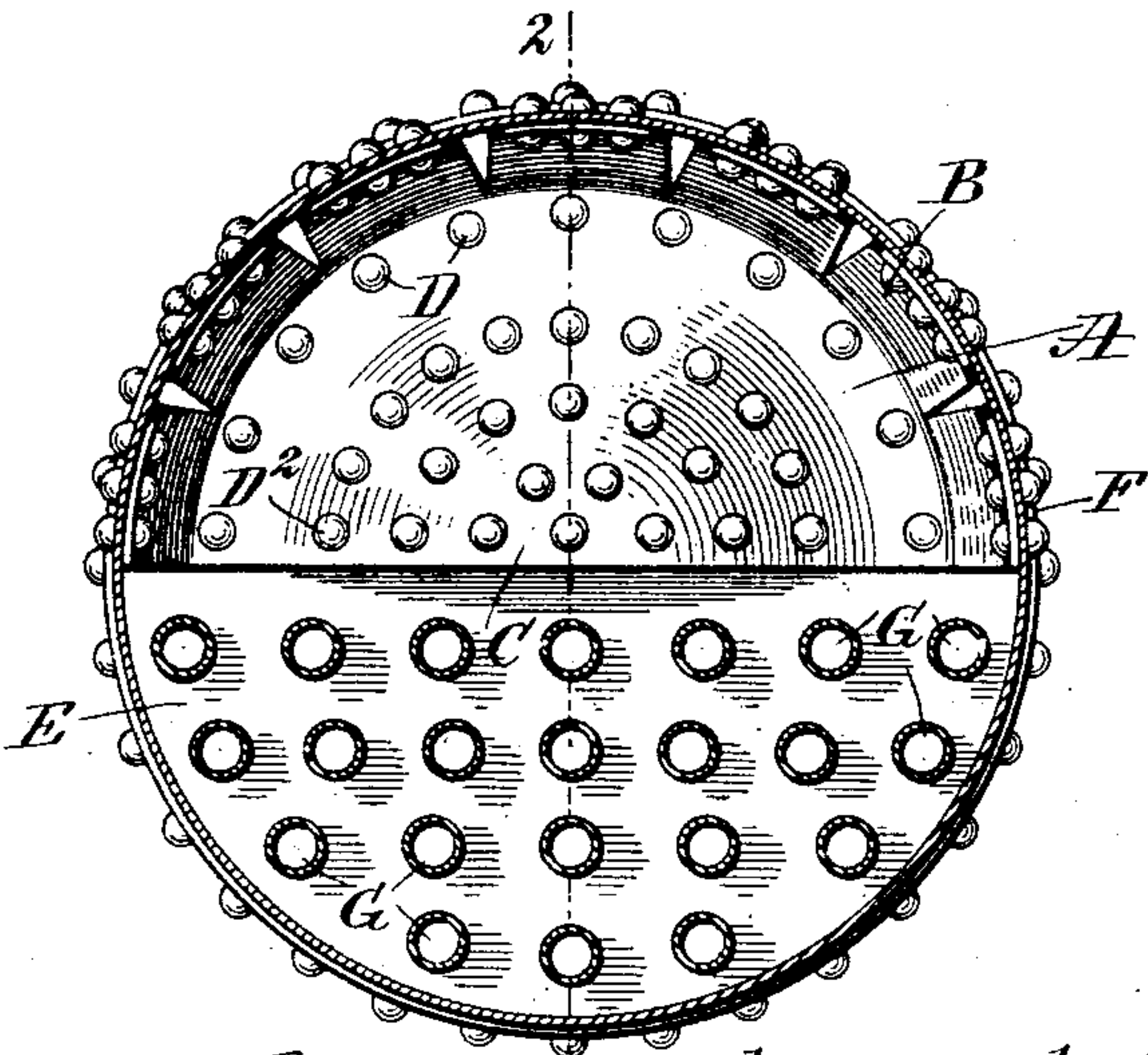


Fig. 2.

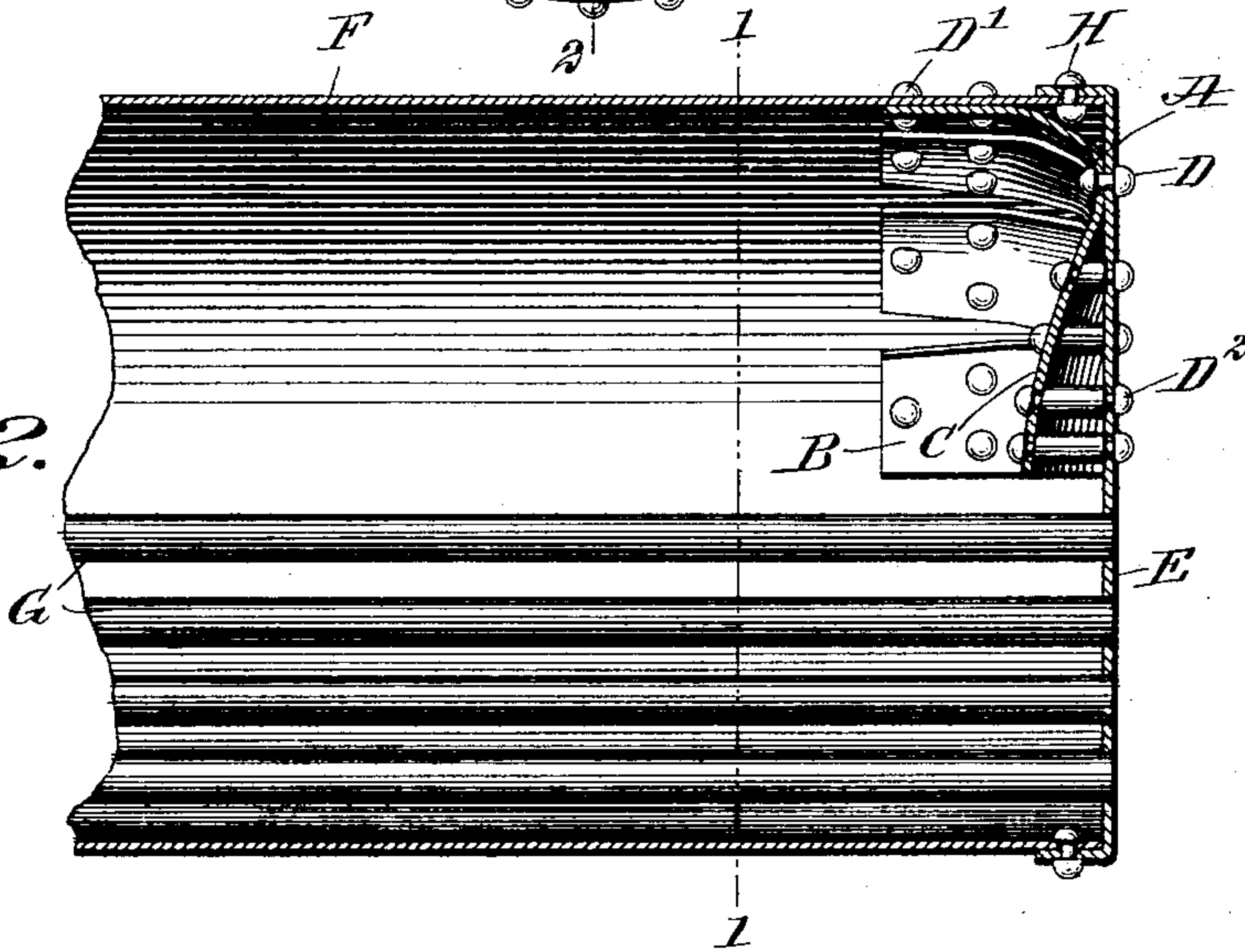
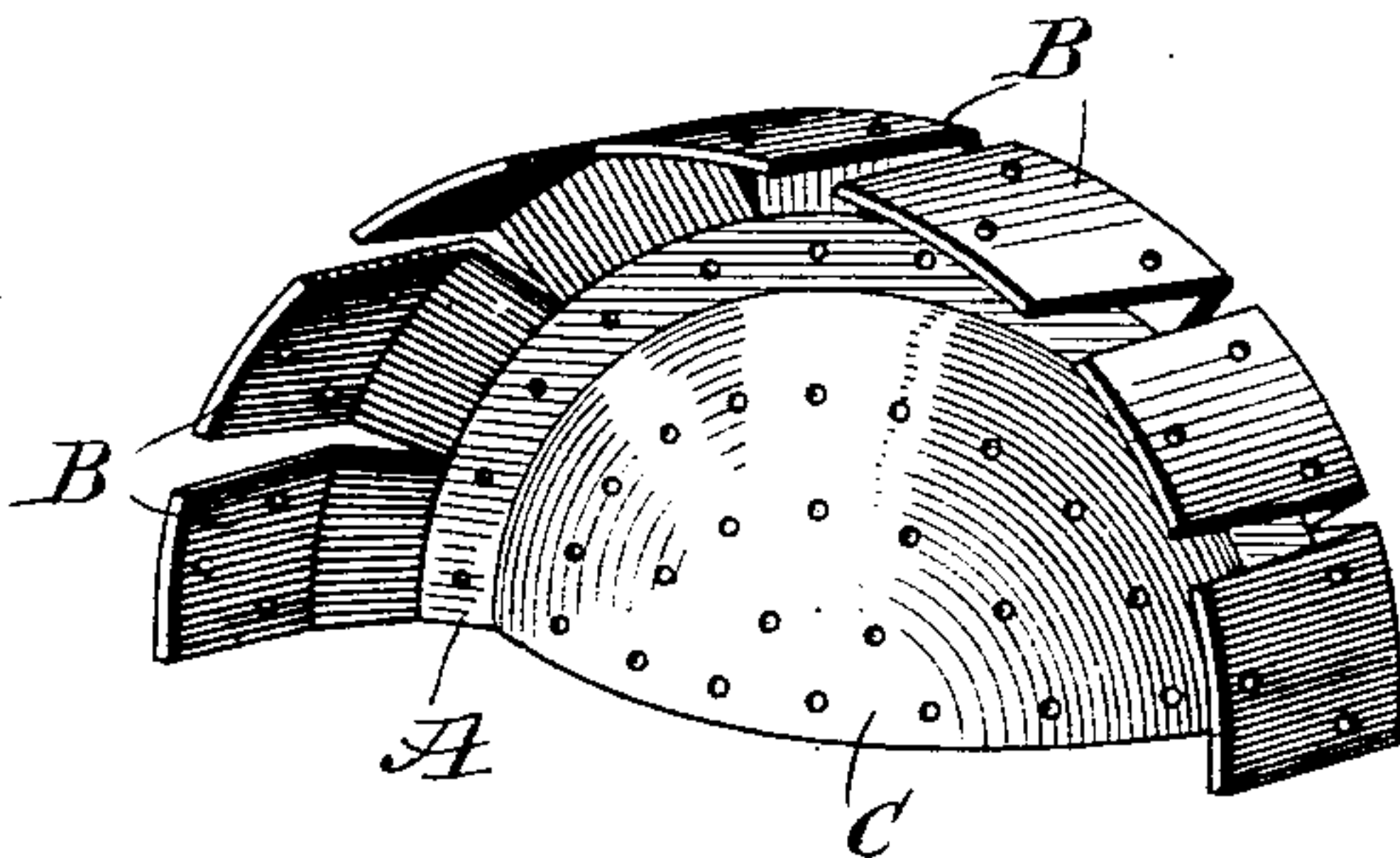


Fig. 3.



WITNESSES:

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EVERETT COOK, OF PORTLAND, MAINE, ASSIGNOR OF ONE-FOURTH TO
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BOILER-BRACE.

SPECIFICATION forming part of Letters Patent No. 750,607, dated January 26, 1904.

Application filed September 21, 1903. Serial No. 174,013. (No model.)

To all whom it may concern:

Be it known that I, EVERETT COOK, a citizen of the United States, and a resident of Portland, in the county of Cumberland and State of Maine, have invented a new and Improved Boiler-Brace, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved boiler-brace which is simple and durable in construction, cheap to manufacture, readily applied, and arranged to prevent the boiler-head from bulging outwardly and loosening the joints of the tubes in the head.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all of the views.

Figure 1 is a transverse section of the improvement as applied, the section being on the line 1 1 of Fig. 2. Fig. 2 is a longitudinal sectional elevation of the same on the line 2 2 of Fig. 1, and Fig. 3 is a perspective view of the improvement.

The body of the boiler-brace is made from a single piece of sheet metal, and it consists of a ring-section A, angular flanges B, extending integrally from the outer edge of the ring-section A, and a spherical or arched central portion C, extending integrally from the inner edge of the ring-section.

The ring-section A of the body is secured by rivets D to the head E of the boiler, and the longitudinal terminals of the angular flanges B are fastened by rivets D' to the shell F of the boiler, and the spherical or arched portion C is connected by stay-rivets D² to the boiler-head E.

The brace described is arranged in the upper portion of the boiler above tubes G, and the lower edge of the brace-body extends approximately diametrically of the boiler-head, as plainly shown in Fig. 2, so that an exceed-

ingly strong brace is produced connecting the head E with the shell F to prevent outward bulging of the head, and thus maintain the joints of the tubes G in the head E at all times in proper condition to avoid leakage. It will further be seen that by the arrangement described each flange B forms a brace between the head E and the shell F, and by having the flanges arranged as described sufficient room is left at the end of the shell adjacent to the head E to accommodate the inner heads of the rivets H used for connecting the head to the shell F. (See Fig. 2.)

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

1. A boiler-brace made of a single piece of material and comprising a ring-section for attachment to the head of the boiler, angular flanges extending integrally from the outer edge of the said ring-section and arranged for engagement with the shell, and a spherical central portion extending integrally from the inner edge of the said ring-section, as set forth.

2. The combination with a boiler, of a boiler-brace extending between the head of the boiler and the shell thereof, in the upper portion of the boiler, the said boiler-brace being made of a single piece of material comprising a ring-section for attachment to the head of the boiler, angular flanges extending integrally from the outer edge of the said ring-section, to engage the said shell, a spherical central portion extending integrally from the inner edge of the said ring-section and projecting from the inner face of the head, fastening devices for connecting the ring-section and the spherical central portion to the boiler-head, and fastening devices for securing the flanges to the shell, as set forth.

3. The combination with a boiler, of a boiler-brace extending between the head of the boiler and the shell thereof, in the upper portion of the boiler, the said boiler-brace being made of a single piece of material comprising a ring-section for attachment to the head of the boiler, angular flanges extending integrally from the outer edge of the said ring-section, to engage the said shell, a spherical central portion ex-

tending integrally from the inner edge of the
said ring-section and projecting from the in-
ner face of the head, rivets for fastening the
ring-section to the boiler-head, rivets for fas-
5 tening the flanges to the boiler-shell, and stay-
rivets connecting the spherical central portion
to the boiler-head, as set forth.

In testimony whereof I have signed my name
to this specification in the presence of two sub-
scribing witnesses.

EVERETT COOK.

Witnesses:

HANNO W. GAGE,
CORDELIA TURNER.