No. 834,137. PATENTED OCT. 23, 1906.

H. KELLER.

BOILER.

APPLICATION FILED DEC. 26, 1905.

Fig-1-

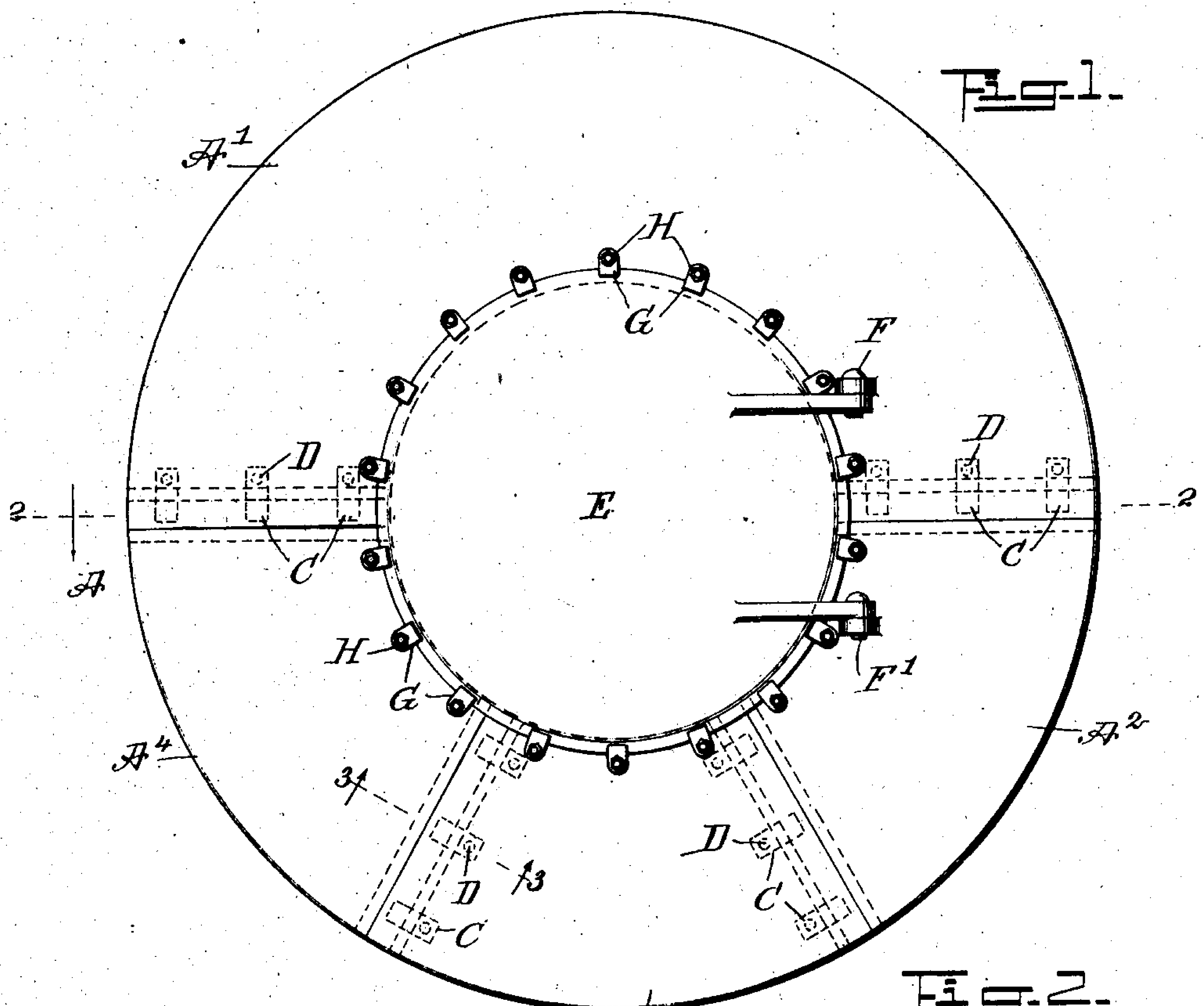


Fig-2-

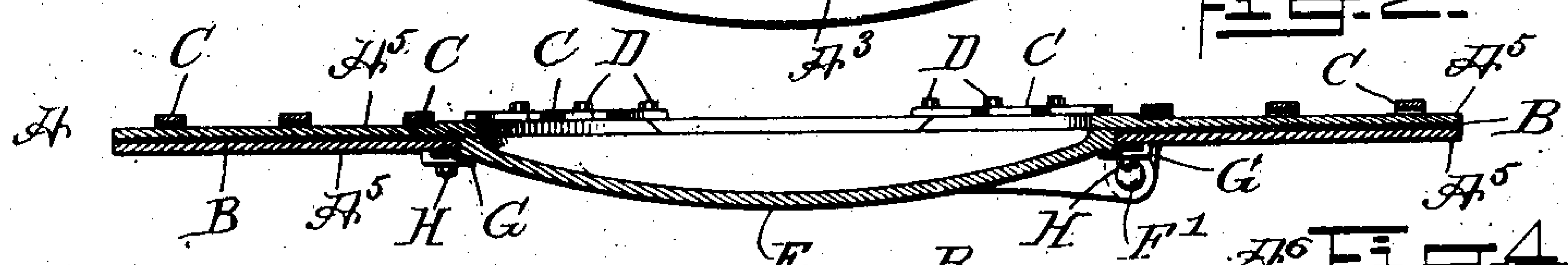


Fig-3-

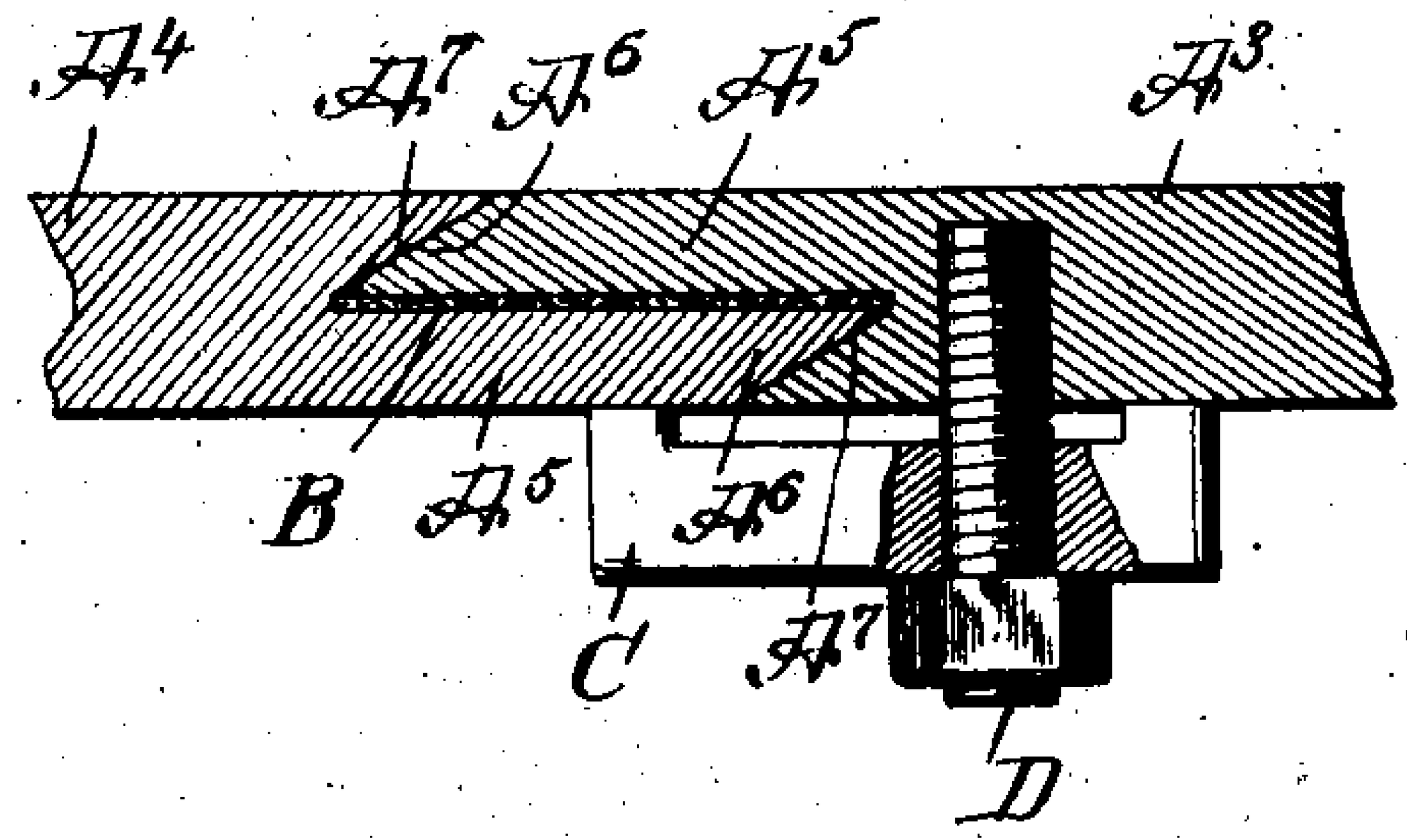
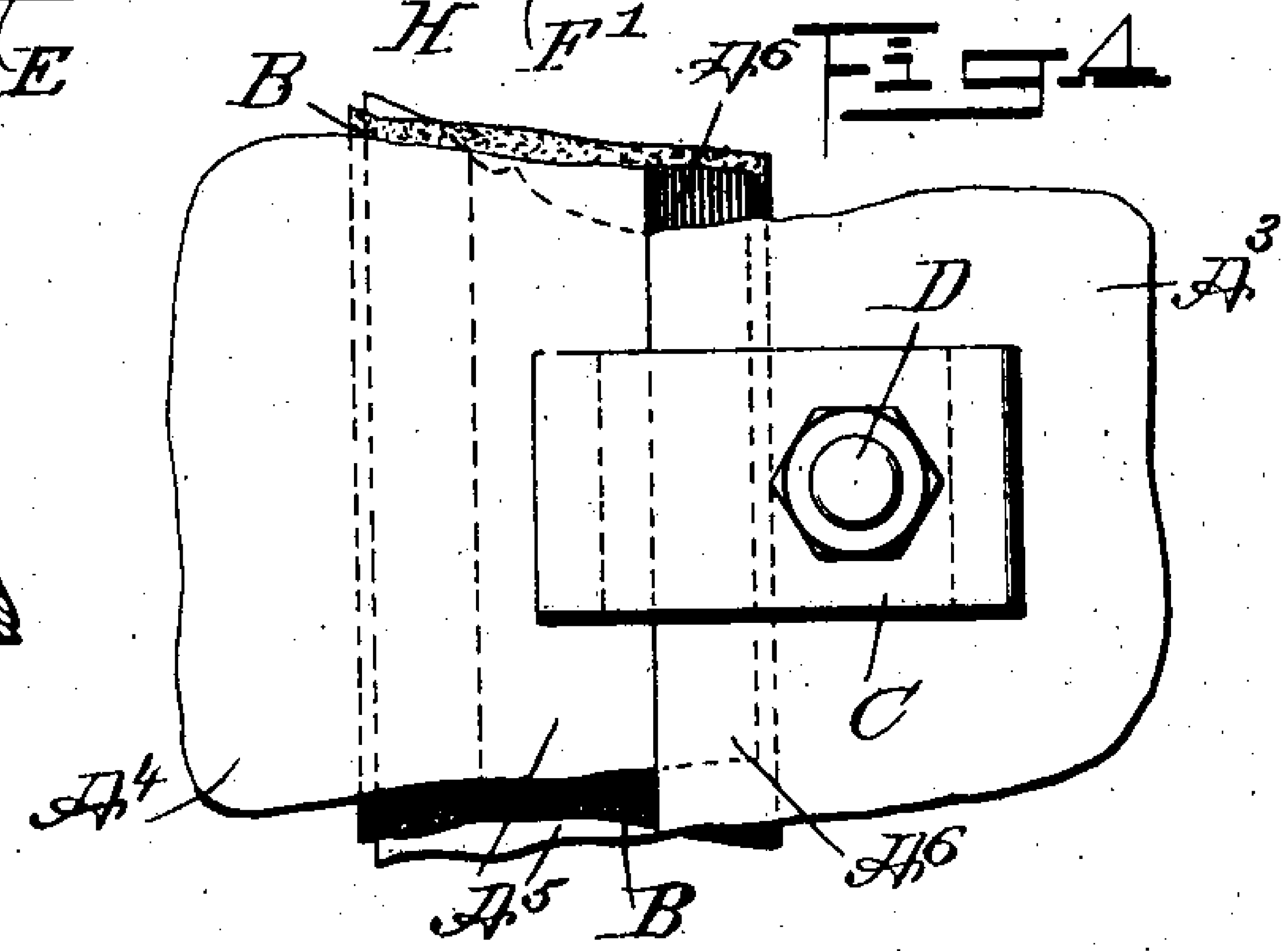


Fig-4-



WITNESSES:

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HENRY KELLER, OF CHATTANOOGA, TENNESSEE.

BOILER.

No. 834,137. Specification of Letters Patent. Patented Oct. 23, 1906.

Application filed December 26, 1905. Serial No. 293,255.

To all whom it may concern:

Be it known that I, HENRY KELLER, a citizen of the United States, and a resident of Chattanooga, in the county of Hamilton and State of Tennessee, have invented a new and useful Improvement in Boilers, of which the following is a full, clear, and exact description.

The invention relates to stationary and locomotive boilers; and its object is to provide a new and improved sectional front end ring and door for the same, the end ring being arranged to provide for expansion and contraction with a view to prevent breaking or cracking of the sections, at the same time rendering the end ring air-tight and allowing ready removal of the sections when worn out and replacing the same by new ones.

The invention consists of novel features and parts and combinations of the same, which 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 the views.

Figure 1 is a front face view of the improvement. Fig. 2 is a sectional plan view of the same on the line 2 2 of Fig. 1. Fig. 3 is an enlarged inverted sectional plan view of part of the improvement on the line 3 3 of Fig. 1, and Fig. 4 is a rear face view of the same.

The end ring A for the stationary or locomotive boiler is made in sections A', A^2, A^3, and A^4, of which the section A' forms the upper half of the end ring, while the sections A^2, A^3, and A^4 form the lower half of the end ring. The sections are connected with each other by radially-disposed interlocking joints, and for this purpose each joint is formed with overlapping and interlocking tongues A^5, (see Fig. 3,) having beveled ends A^6 fitting corresponding recesses or pockets A^7 in the adjacent section, so that when the tongues F^5 overlap each other and engage the pockets A^7 with their beveled ends A^6, as shown in Fig. 3, then an exceedingly-tight joint is had between adjacent sections. A packing-strip B, as asbestos or other suitable material, is placed between the overlapping tongues A^5, and the overlapped tongues A^5 are drawn toward each other and firmly clamped in position by a clamping-bar C, engaged by a clamping-bolt D, secured on one of the sections and at the inner face of the end ring A, as will be readily understood by reference to the drawings. When the members are joined together, with the packing-strip B between the jointed members and the operator screws up the bolts D, then the clamping-bar C firmly draws the tongues A^5 together against the packing-strip B to insure the formation of an air-tight joint.

The inner edge of the end ring A is formed with a recess for the reception of a circular door E, hinged at F and F' to the sections A' and A^2, and the said door E is locked in place by clamping-bars G, extending over the edge of the door E and secured by bolts H to the adjacent sections A', A^2, A^3, and A^4, as plainly shown in Fig. 1.

From the foregoing it will be seen that by the arrangement described the sections of the end ring A are jointed together to form an air-tight joint and also to allow expansion and contraction of the sections without danger of breaking or cracking the sections, and consequently insuring long life to the end ring. It will also be noticed that by making the end ring in the manner described any one of the sections, if accidentally broken or injured, can be readily removed and replaced by a new one without requiring replacing of all the end-ring sections.

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

1. A front end ring for boilers made in separable sections having interlocking joints, and means for removably holding the sections in place.

2. A boiler provided with a front end ring made in sections radially interlocked.

3. A boiler provided with a front end ring made in sections radially interlocked, the upper half of the end ring consisting of a single semicircular section, and the lower half of the end ring consisting of a plurality of sections.

4. A boiler provided with a front end ring made in sections radially interlocked, and packing-strips between the members of the joints of the sections.

5. A boiler provided with a front end ring made in sections radially interlocked, and means for clamping the interlocked members of the joints of the sections together.

6. A boiler provided with a front end ring made in sections radially interlocked, packing-strips between the members of the joints

of the sections, and means for clamping the members of a joint together.

7. A boiler provided with a front end ring made in sections radially interlocked, the upper half of the end ring consisting of a single semicircular section and the lower half of the end ring consisting of a plurality of sections, and a door hinged to the section of the upper half of the end ring and to an adjacent section of the lower half of the end ring.

8. A boiler provided with a front end ring made in sections radially interlocked, the upper half of the end ring consisting of a single semicircular section and the lower half of the end ring consisting of a plurality of sections, a door hinged to the section of the upper half of the end ring and to an adjacent section of the lower half of the end ring, and clamps bolted to the sections and extending over to and engaging the door.

9. An end ring for boilers made in sections having radially-disposed interlocking joints, clamping means on the inside of the end ring for clamping the members of the interlocked joints together, a door hinged on the outer face of the said end ring and fitting the recessed inner edge of the end ring, and clamping means on the outer face of the end ring and engaging the said door.

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

HENRY KELLER.

Witnesses:

L. B. PARTRIDGE,

A. J. JONES.