

No. 812,438.

PATENTED FEB. 13, 1906.

DE WITT C. MOSHER.

BARREL FILTER.

APPLICATION FILED APR. 29, 1903.

Fig. 1

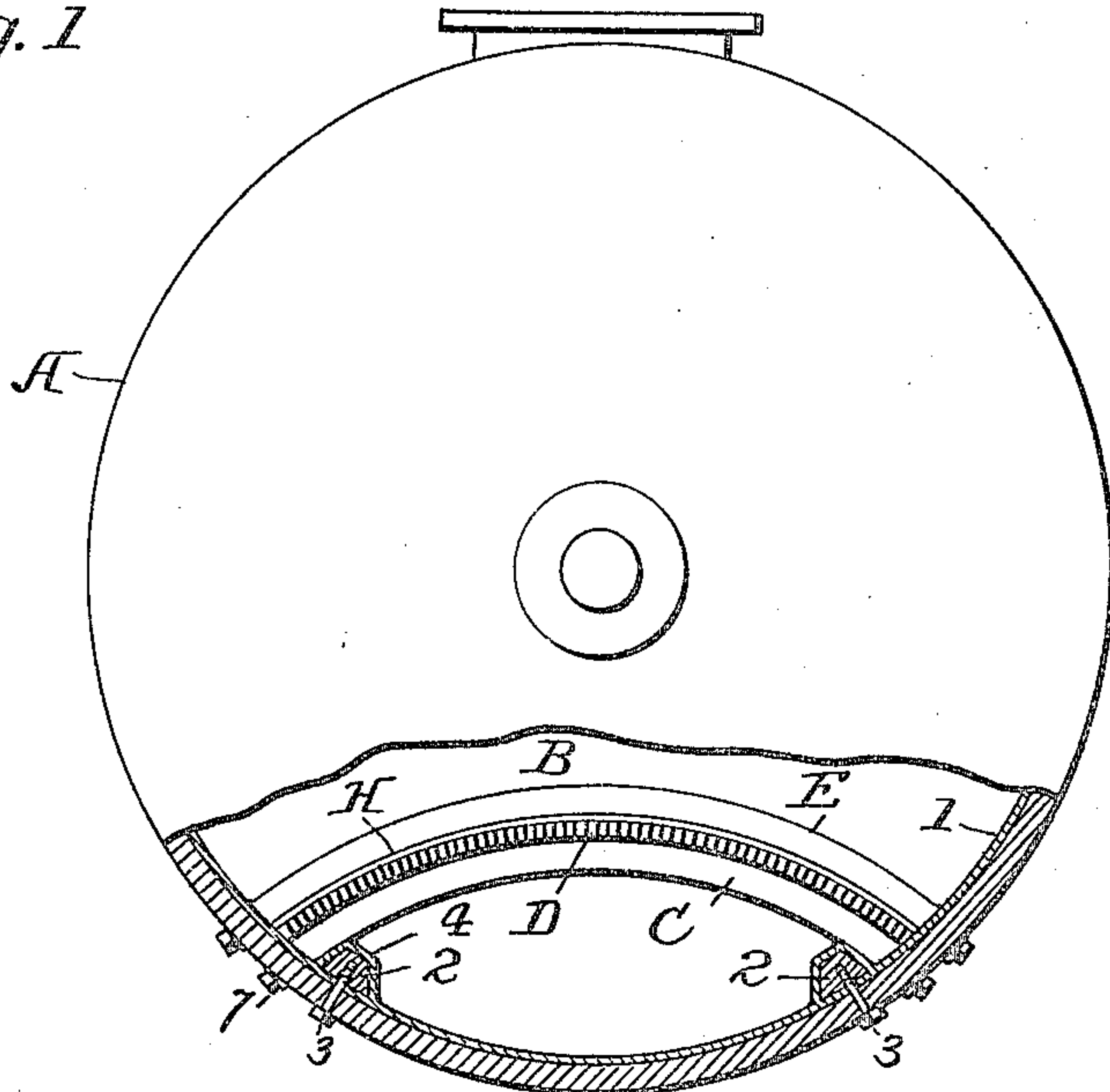


Fig. 2

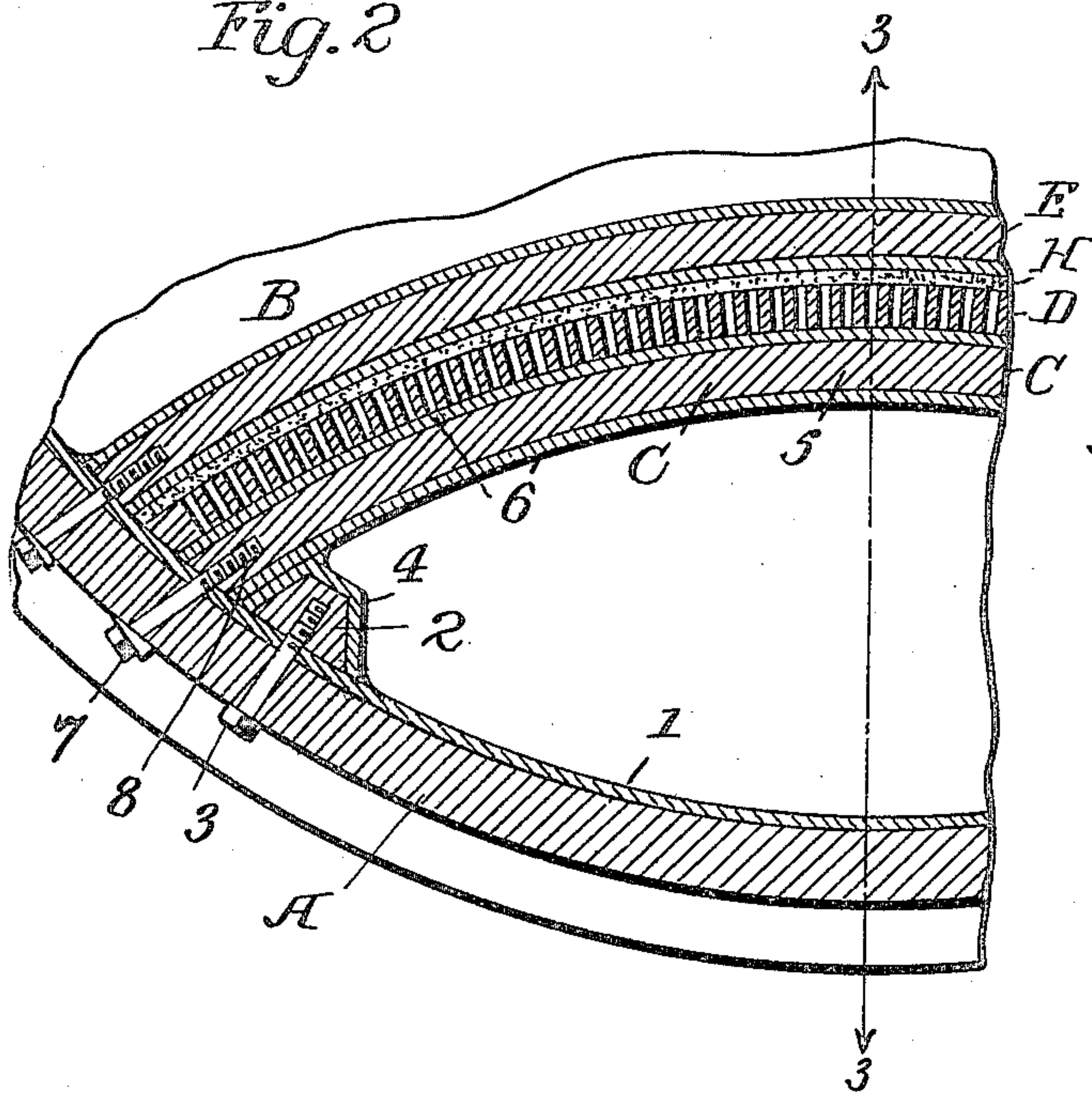
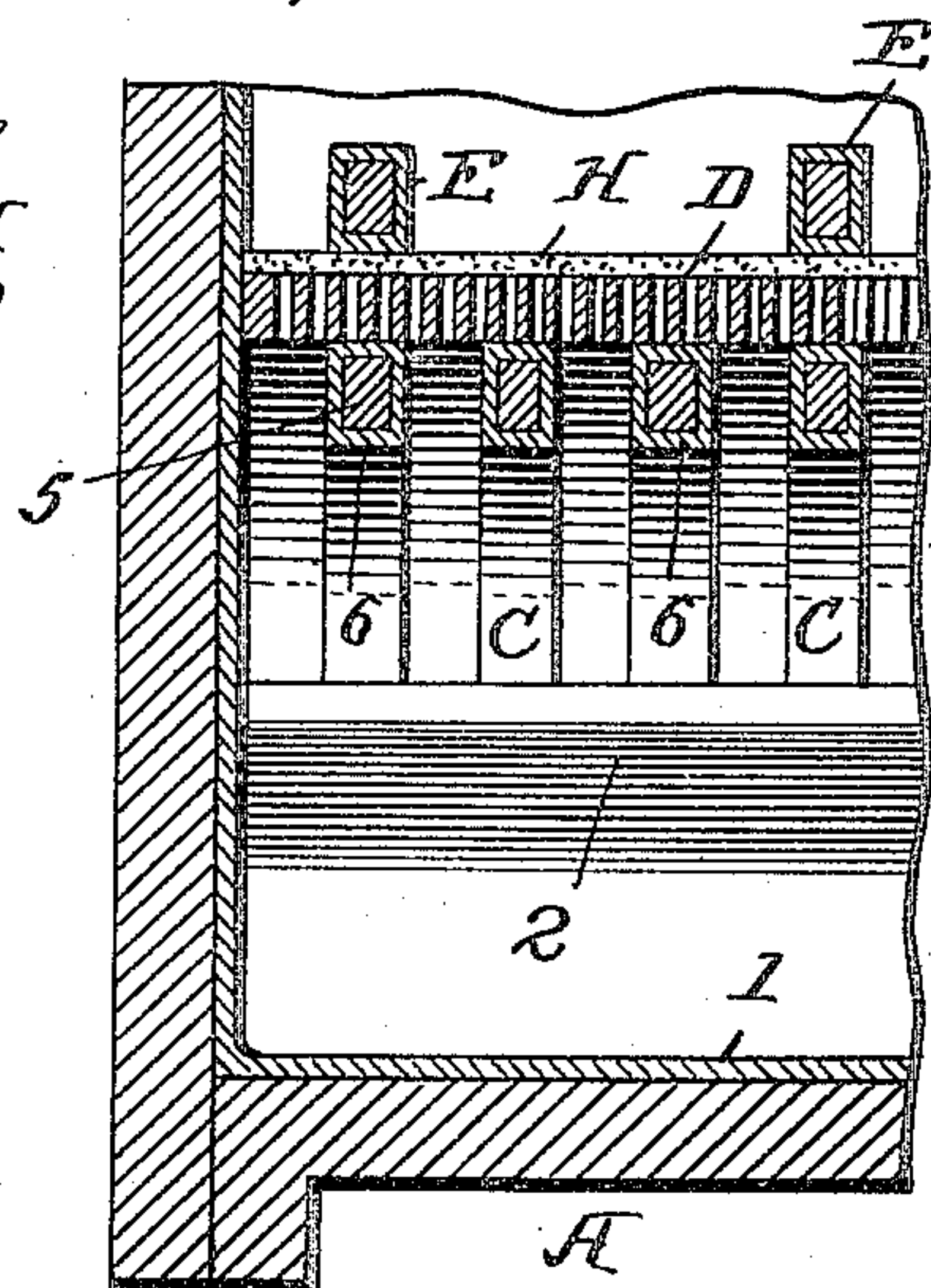


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

DE WITT C. MOSHER, OF MANITOU, COLORADO.

BARREL-FILTER.

No. 812,438.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed April 29, 1903. Serial No. 154,832.

To all whom it may concern:

Be it known that I, DE WITT C. MOSHER, a citizen of the United States, residing at Manitou, State of Colorado, have invented certain new and useful Improvements in Barrel-Filters, of which the following is a specification.

This invention relates to that type of filters in which rotatable lead-lined barrels are employed; and it consists in constructing the filter and securing the parts within the barrel so as to secure great strength and rigidity, facilitate and reduce the cost of manufacture, and generally improve the construction, as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of a barrel-filter embodying my invention. Fig. 2 is a cross-section of part of the barrel, enlarged. Fig. 3 is a section on the line 3 3, Fig. 2.

The barrel A, of any suitable construction, is shown as mounted to rotate on trunnions and is provided with a lead lining 1 and with suitable inlet and outlet openings, as usual. Within the barrel is a filter B, which is made in the form of an arch, so that it is better fitted to resist the thrust and weight of the materials, although it may be flat, if required, and this filter is provided with iron supports to add to its strength and rigidity, and the iron supports are covered with lead to protect them from the action of the chlorinating liquor, and wherever the lead covering of the filter meets the lining of the barrel the two are burned together, so as to prevent the liquor from gaining access to the iron supports and the fine material from entering the joints.

In the construction shown there are side rails 2 2, each of which is bolted by bolts 3 to the barrel, extends longitudinally thereof, and is surrounded by a lead covering or casing 4, burned to the lining. Upon the rails 2 2 rest the ends of the bows or bars C, each of which has an iron core 5 and a surrounding lead sleeve or casing 6. These bows C have holes 7 in the ends by which to bolt them in place against the side rails 2, the bolts 8 extending through the side of the barrel into the holes 7. The ends of the lead casings 6 are burned to the lining, so as to be practically integral with the latter, and upon these

supports C rests the filtering-bed D, which may be a perforated lead plate or sheet burned at the edges to the lining of the barrel or may be otherwise made of a single or plurality of parts covered by the filtering-cloth H, and, if desired, to secure additional rigidity and strength and hold the filtering-bed in place there may be cross-pieces E, extending either longitudinally or transversely. As shown, the cross-pieces are in the form of bows like the bows C, extending parallel to the bows C and connected in like manner at their ends. Preferably the bows C are placed parallel a short distance from each other, while the bracing-bows E are separated to a greater extent.

Without limiting myself to the precise construction and arrangement set forth, I claim as my invention—

1. A barrel-filter composed of a barrel having a lead lining, and a filter consisting of an arched bed and transverse, arched rigid cores supporting it, with surrounding lead casings made integral with the lining, substantially as specified.

2. The combination with a lead-lined barrel, of an arched filtering-bed supported upon a series of transverse, arched rigid bars abutting against the barrel at the ends and covered with lead casings integral with the lining, substantially as set forth.

3. The combination with a lead-lined barrel, of an arched filter composed of arched cores having surrounding lead casings and supporting a filtering-bed, substantially as described.

4. The combination with a lead-lined barrel, of a filter-bed, having supports with rigid cores and surrounding lead casings integral with the lining and by cross-pieces at the top of the bed also of rigid cores with lead casings integral with the lining, substantially as set forth.

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

DE WITT C. MOSHER.

Witnesses:

RUFUS C. THAYER,
CLARENCE C. HAMLIN.