

# UNITED STATES PATENT OFFICE.

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SAID DENISON ASSIGNOR TO SAID BOYES.

## RANGE-BOILER.

SPECIFICATION forming part of Letters Patent No. 602,722, dated April 19, 1898.

Application filed May 31, 1895. Serial No. 551,320. (No model.)

*To all whom it may concern:*

Be it known that we, DAVID W. BOYES and JAMES R. DENISON, citizens of the United States, residing at Grand Rapids, in the  
5 county of Kent and State of Michigan, have invented certain new and useful Improvements in Range-Boilers, of which the following is a specification.

Our invention relates to improvements in  
10 range-boilers for use in a bath-room in direct connection with a heating apparatus; and its objects are, first, to provide a range-boiler with which the heating water may be medicated; second, to provide a range-boiler that  
15 may be readily converted from a direct draft to a spiral draft; third, to provide a range-boiler with which a draft of cold air can be taken from the floor and heated while passing through the boiler and discharged into  
20 the room thoroughly heated, and, fourth, to provide a range-boiler that may be located in the bath-room and heated upon an ordinary box-stove. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of our boiler, showing the position of the coil-flue; and Fig. 2 is an elevation of the coil detached from the boiler.

30 Similar letters refer to similar parts throughout both views.

A is the outer cylinder of the range-boiler proper and is constructed in the usual manner to be waterproof.

35 B is the inner cylinder, designed to receive the medicinal compound, as herbs, powders, solution or other ingredients with which to medicate the water before a bath is to be taken. When used for this purpose the water is conducted into it at the top, as indicated  
40 by the inflow-pipe I, and passes down through the medicinal ingredients contained in the cylinder to the screen G, where it is filtered or strained into the outer chamber, whence it  
45 is drawn through the outflow-pipe J.

To give our range-boiler the greatest possible heating capacity, we provide to have the heat and smoke from the stove pass through a coiled pipe C, the lower end of which forms  
50 an elbow to pass down into the stove, as indicated at C<sup>6'</sup>, and the upper end, as C',

passes out of the top of the boiler to form the receptacle for the stovepipe. As it is impossible to make a coil of small diameter from ordinary large piping, we provide for meeting  
55 this contingency by making our pipe in sections of one-fourth or one-third of a circle and form ears or flanges, as c, by means of which the sections may be bolted together lengthwise and make a fire and water proof  
60 joint between them by the use of asbestos packing.

We sometimes construct our boiler so that the inner cylinder may be readily converted into a flue for the passage of the heat and  
65 smoke from the stove, and when doing so we form a removable head, as D and D', the lower head D' being secured to the boiler by bolts, as c', or otherwise, with packing to form a water-joint in the usual way, and a rod F connects this with the upper head D, so that they  
70 may be drawn snugly to the heads of the boiler and form water-joints at both ends. If it is desired to convert this into a direct flue for the smoke, it is necessary to close the  
75 screen G and form a water-joint, so that the water will not flow or drip through into the fire, and for this purpose we place a sliding door F in the cylinder, so that it may be forced  
80 down over the screen and pack it to a water-joint. We then extend a stem H up through the top of the boiler, so that it may be accessible from the outside for the purpose of manipulating the slide. With this slide closed it is simply necessary to remove the heads  
85 and the boiler is converted to a direct flue. It will be readily seen that with this construction the range-boiler may be conveniently used in any ordinary bath-room upon an ordinary box-stove at slight expense and save  
90 the trouble of piping from some distant room to the bath-room.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is— 95

1. In a range-boiler, an outer and an inner chamber, a screened communication between the two and detachable heads, in combination with a coiled flue passing through the outer chamber, substantially as and for the purpose set forth. 100

2. In a range-boiler, an outer chamber, an

(No Model.)

F. A. BROWN.  
MAIL BAG.

No. 602,723.

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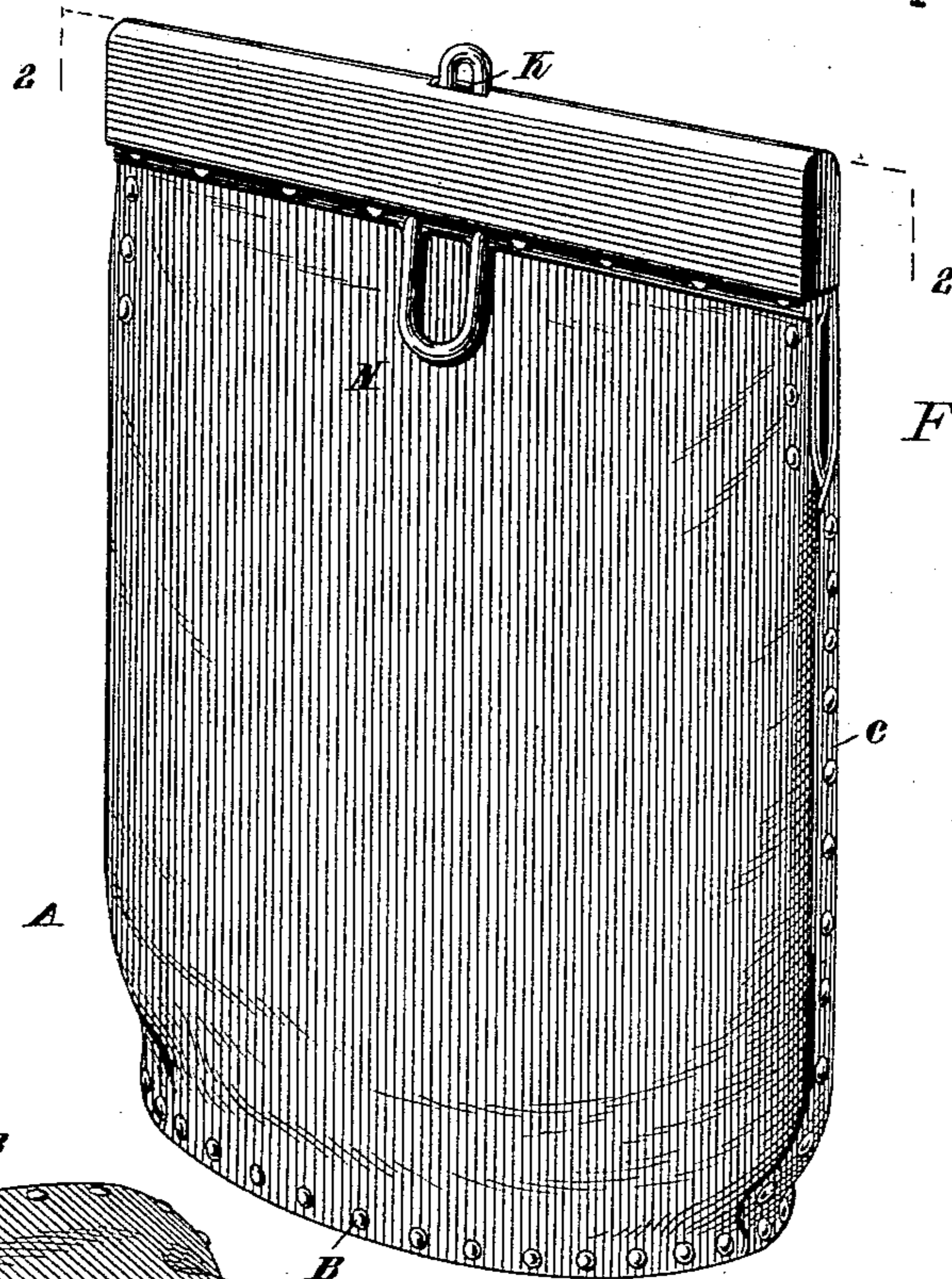


Fig. 1.

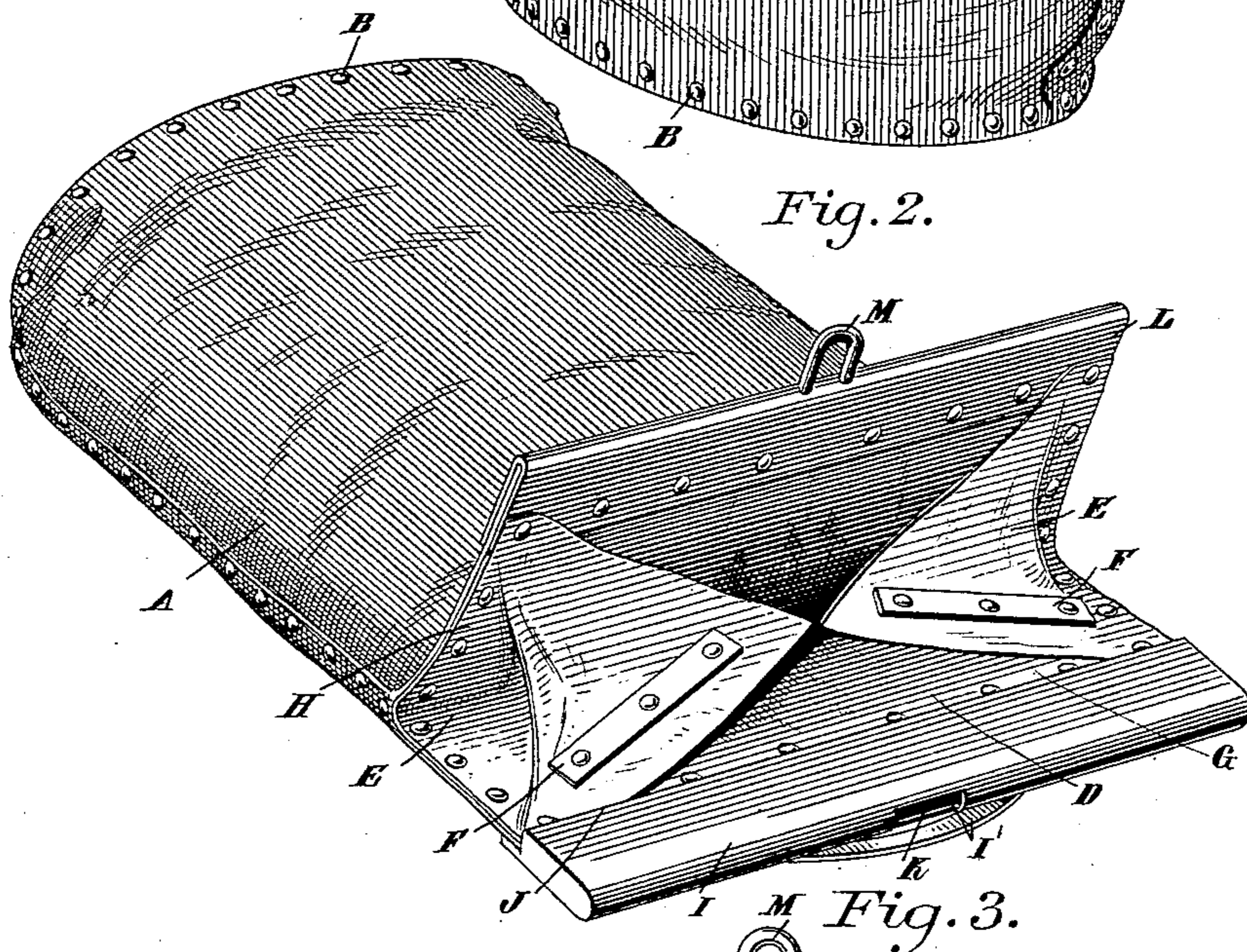


Fig. 2.

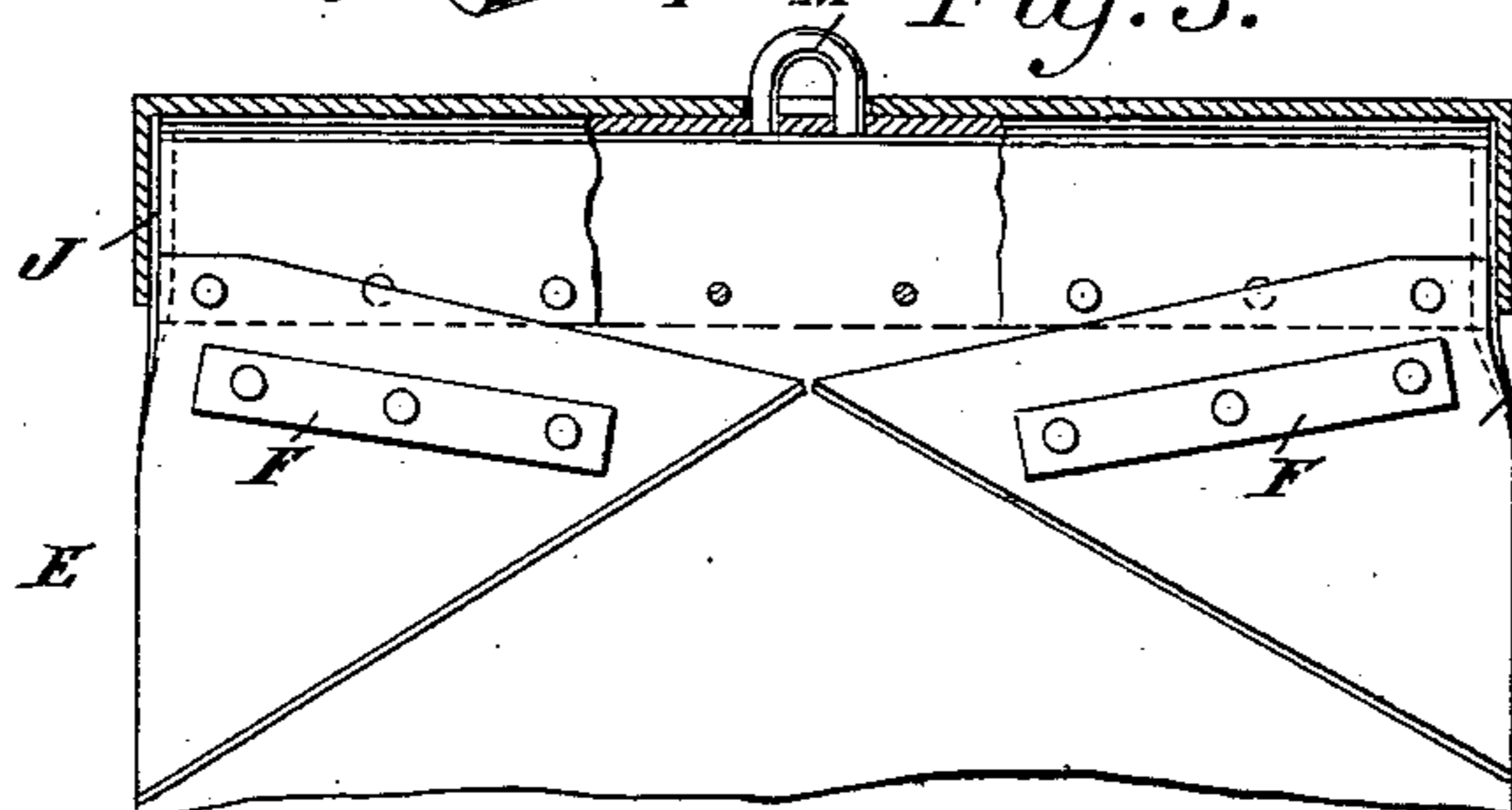


Fig. 3.

Witnesses  
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