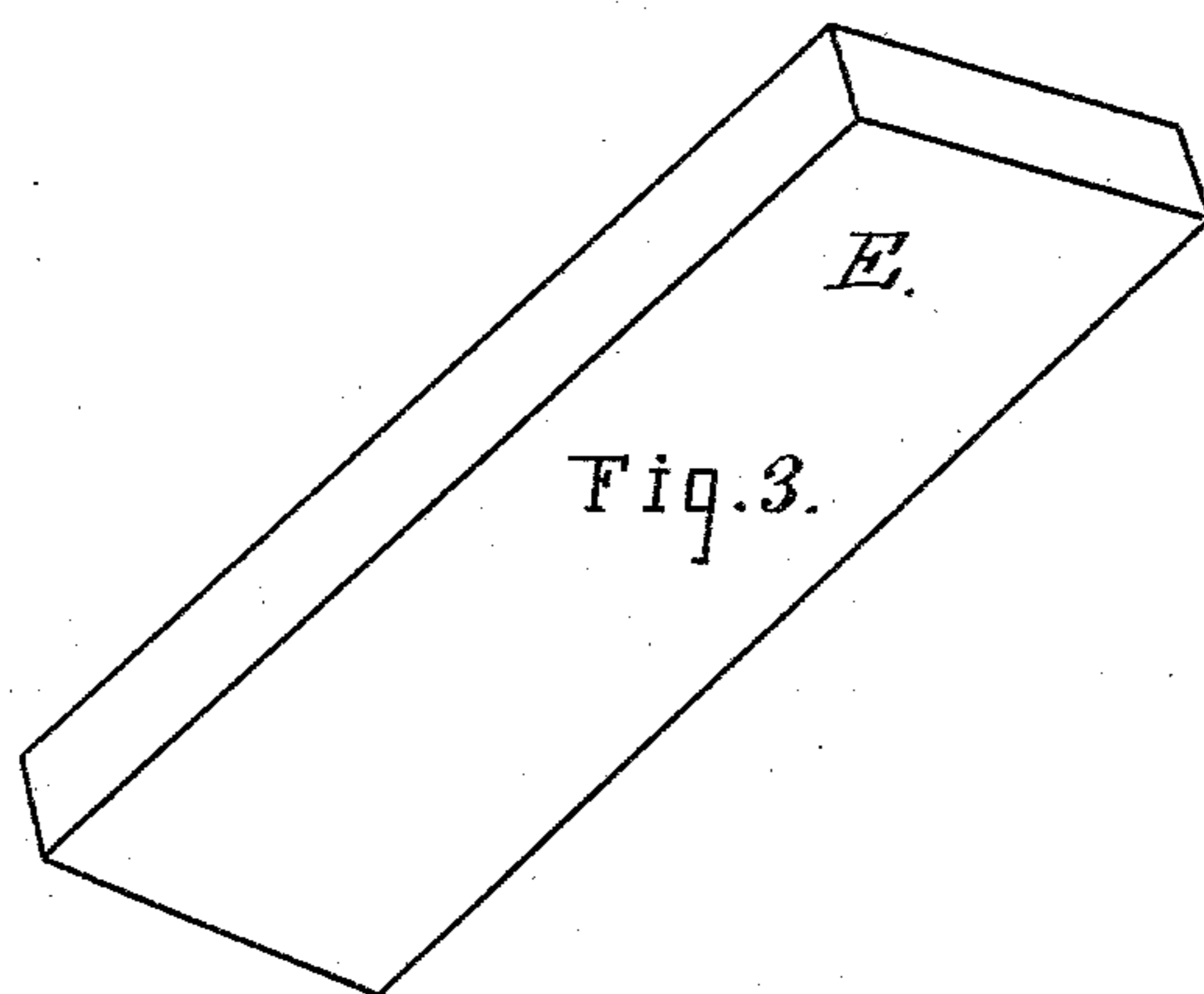
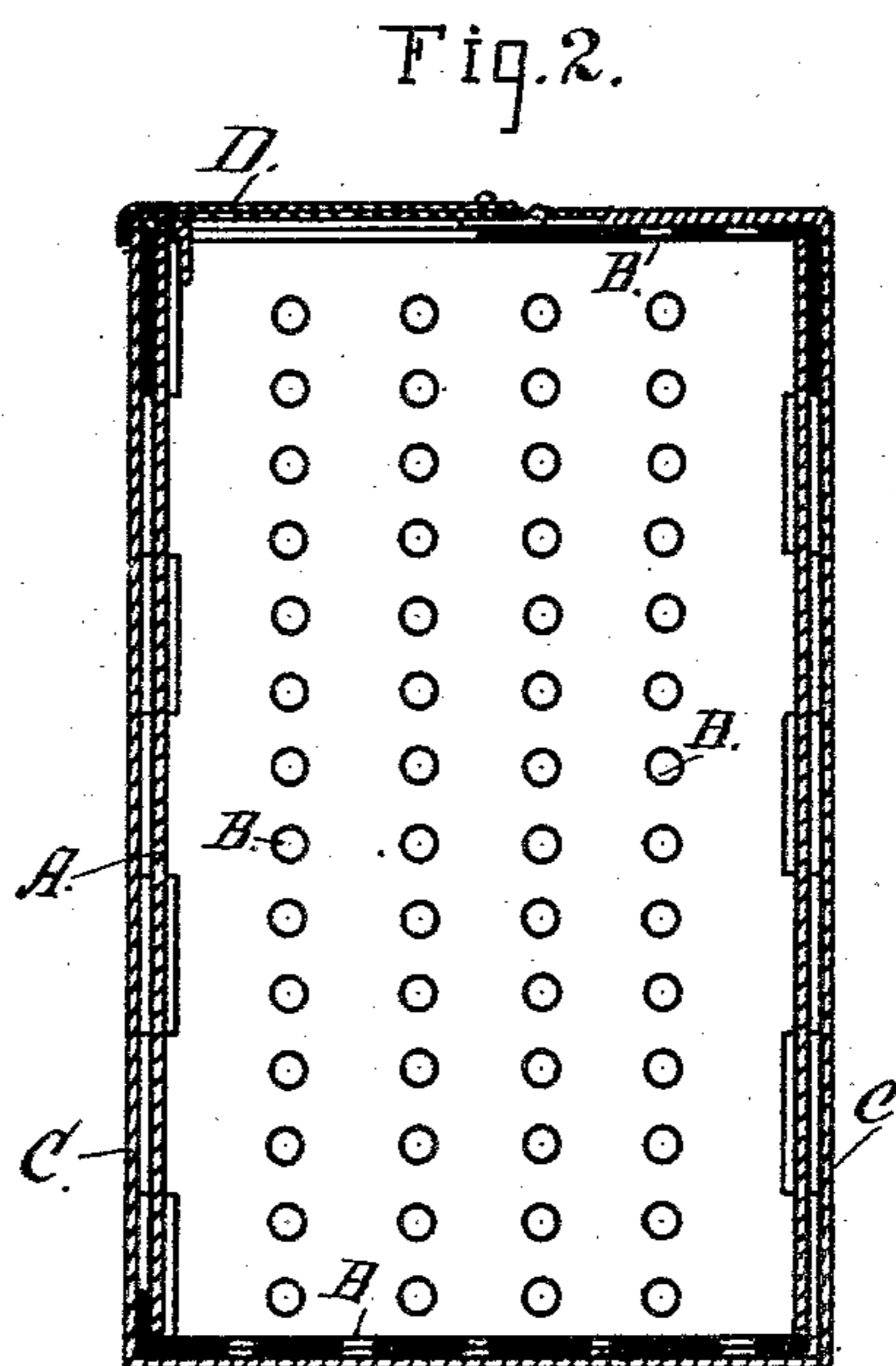
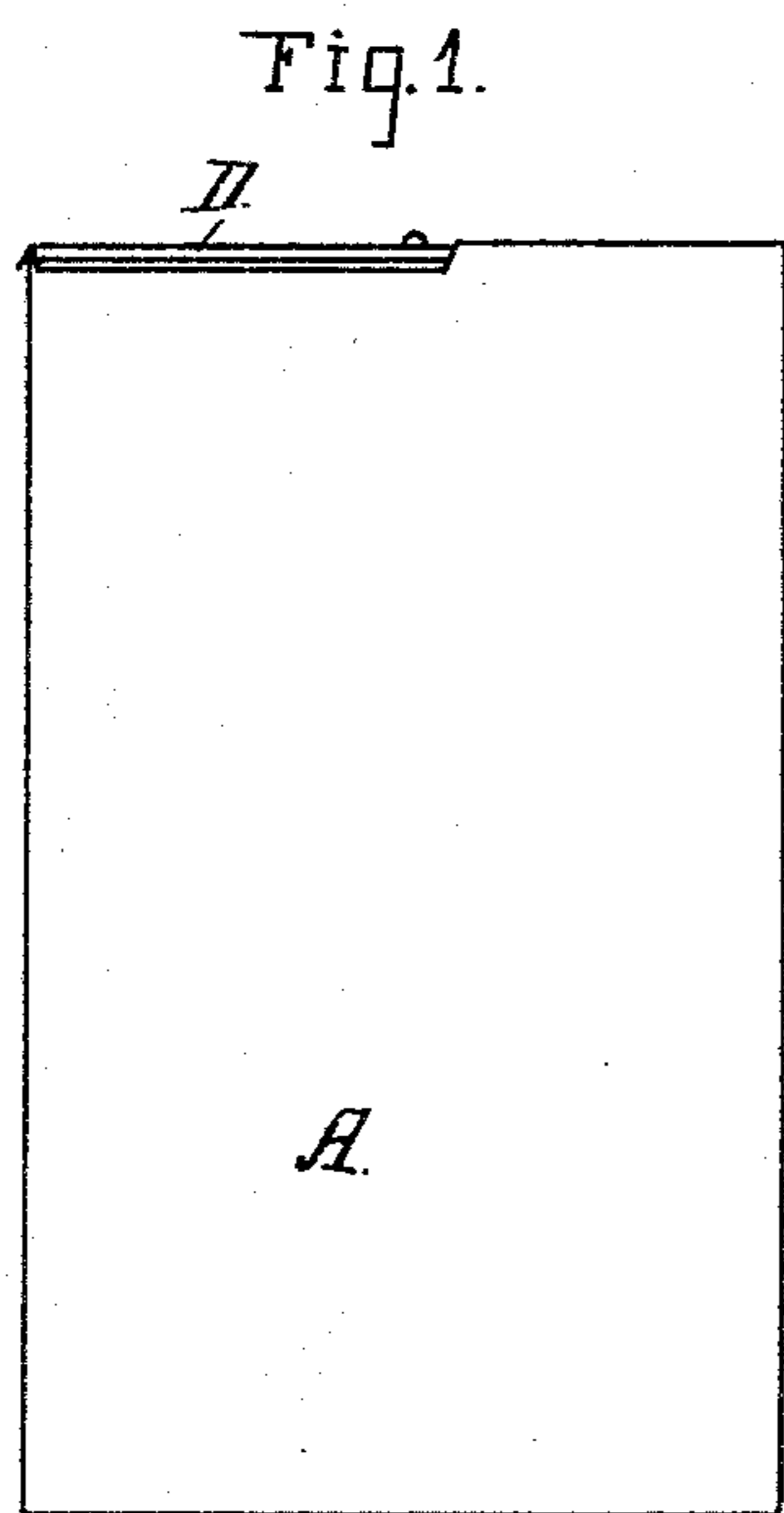


(No Model.)

F. HILLER, Jr.
HEATER FOR MUFFS, &c.

No. 381,549.

Patented Apr. 24, 1888.



Witnesses:

Wm. Mayer
Joseph E. Ford

Inventor:

Frederick Hiller, Jr.
By *C. N. Smith*
Atty.

UNITED STATES PATENT OFFICE.

FREDERICK HILLER, JR., OF SAN FRANCISCO, CALIFORNIA.

HEATER FOR MUFFS, &c.

SPECIFICATION forming part of Letters Patent No. 381,549, dated April 24, 1888.

Application filed March 6, 1886. Serial No. 194,354. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK HILLER, Jr., a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Muff, Hand-Warmer, &c., of which the following is a specification.

My invention relates to that class of miniature stoves or warmers employed about the person that will emit or throw off heat without burning the parts it may come in contact with.

Referring to the accompanying drawings, forming a part of this specification, Figure 1 is a plan view, with cover in position, of my muff and hand-warmer. Fig. 2 is a longitudinal section of the same. Fig. 3 is a view in perspective of the block or metal pig.

In carrying out my invention I construct a square or rectangular case or box, A, of metal, preferably of copper, both the flat sides and ends of which are perforated with a series of holes, as at B B'. These holes are made in parallel lines a little distance apart; yet it will be evident that the order in which they are made is immaterial. Over the box or case containing these perforations is placed a layer of fibrous material or cloth, C, and almost any kind of cloth will answer the purpose. This superposed layer of cloth is made to hug the outer face of the box as closely as possible, and may be glued to it, so that the heat from the interior of the box or case will pass directly through the perforations and covering only at those points, the object being to store the heat within the box or case as long a period as possible and provide the necessary means for draft. To one corner of the box is connected a small door, D, which opens and closes on a hinge, and is made so as to close as nearly air-

tight as possible. In place of the hinged door, however, a sliding door may be employed and cover the entire end of the box or heater.

The heating medium which I employ is composed of a small block or pig of metal, E, which is first heated to a sufficient degree to throw off a sufficient amount of caloric for a considerable period of time and thrust into the box or case and the door tightly closed, when the device is ready for use.

It is evident by this description that my device may be used about the various parts of the body—as, for instance, where pains are felt—and it will also be found an excellent medium for keeping poultices warm when applied to the body by placing the warmer or heater over the poultice and binding or otherwise holding it thereto.

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

As an article of manufacture, a heater of a form and size adapting it to be carried on the person, said heater consisting of a sheet-metal case of rectangular form having its entire surface perforated, a door at one corner of the box, a removable metallic plate or bar adapted to be introduced into said case in a heated condition, and a covering of textile fabric inclosing said case, permitting the gradual escape of the heat therefrom, and also protecting the metallic case from contacting with the hand or other part of the body.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

FREDERICK HILLER, JR. [L. S.]

Witnesses:

C. W. M. SMITH,
JOHN E. HAMILL.