

No. 626,327.

Patented June 6, 1899.

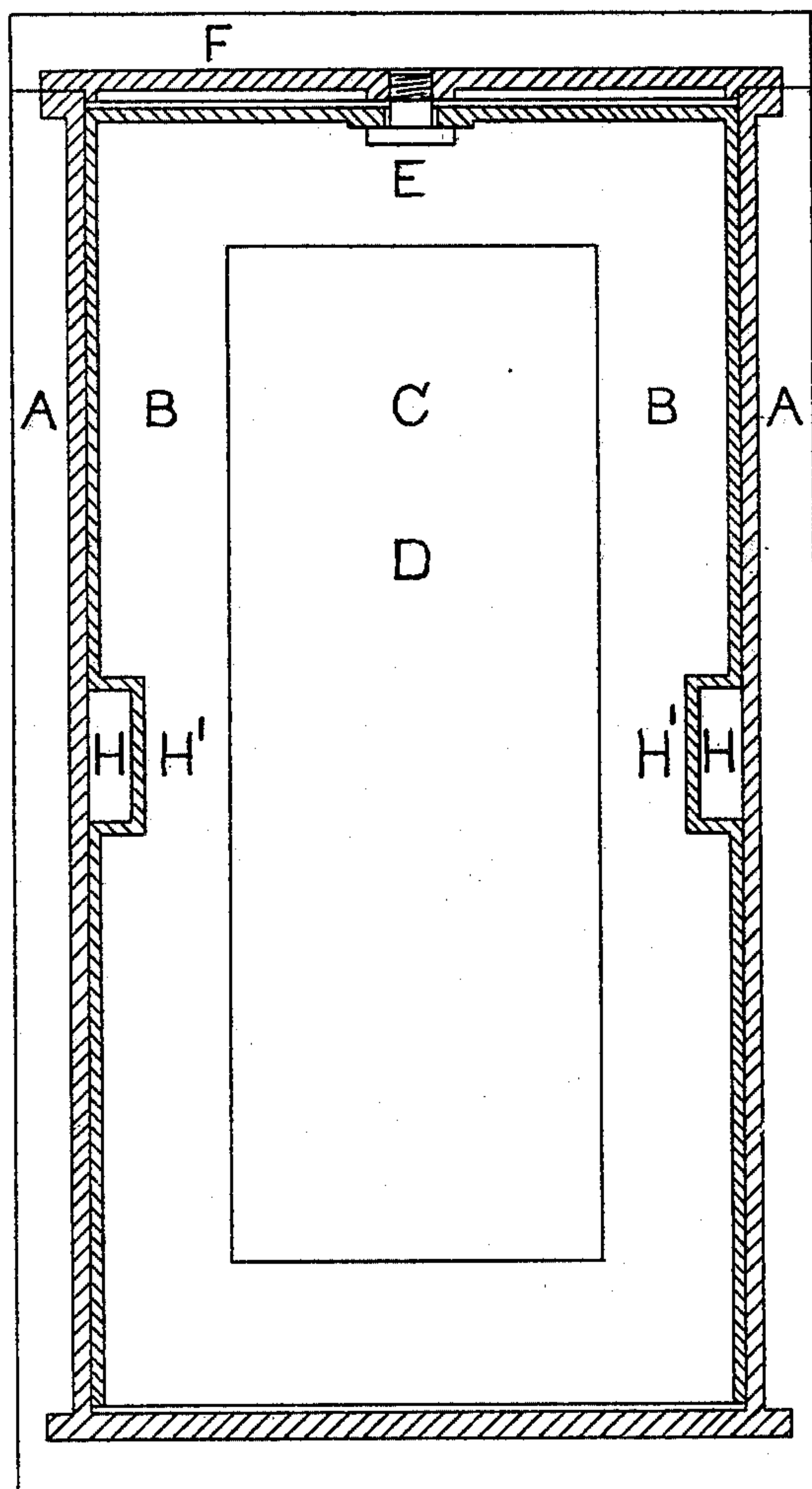
W. KIRKALDY.
REVOLVING CYLINDRICAL BULKHEAD DOOR.

(Application filed Apr. 16, 1898.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1.



Witnesses:

Robert Kirkaldy.

Margaret Kirkaldy.

Inventor:

William Kirkaldy.

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2 Sheets—Sheet 2.

FIG. 2.

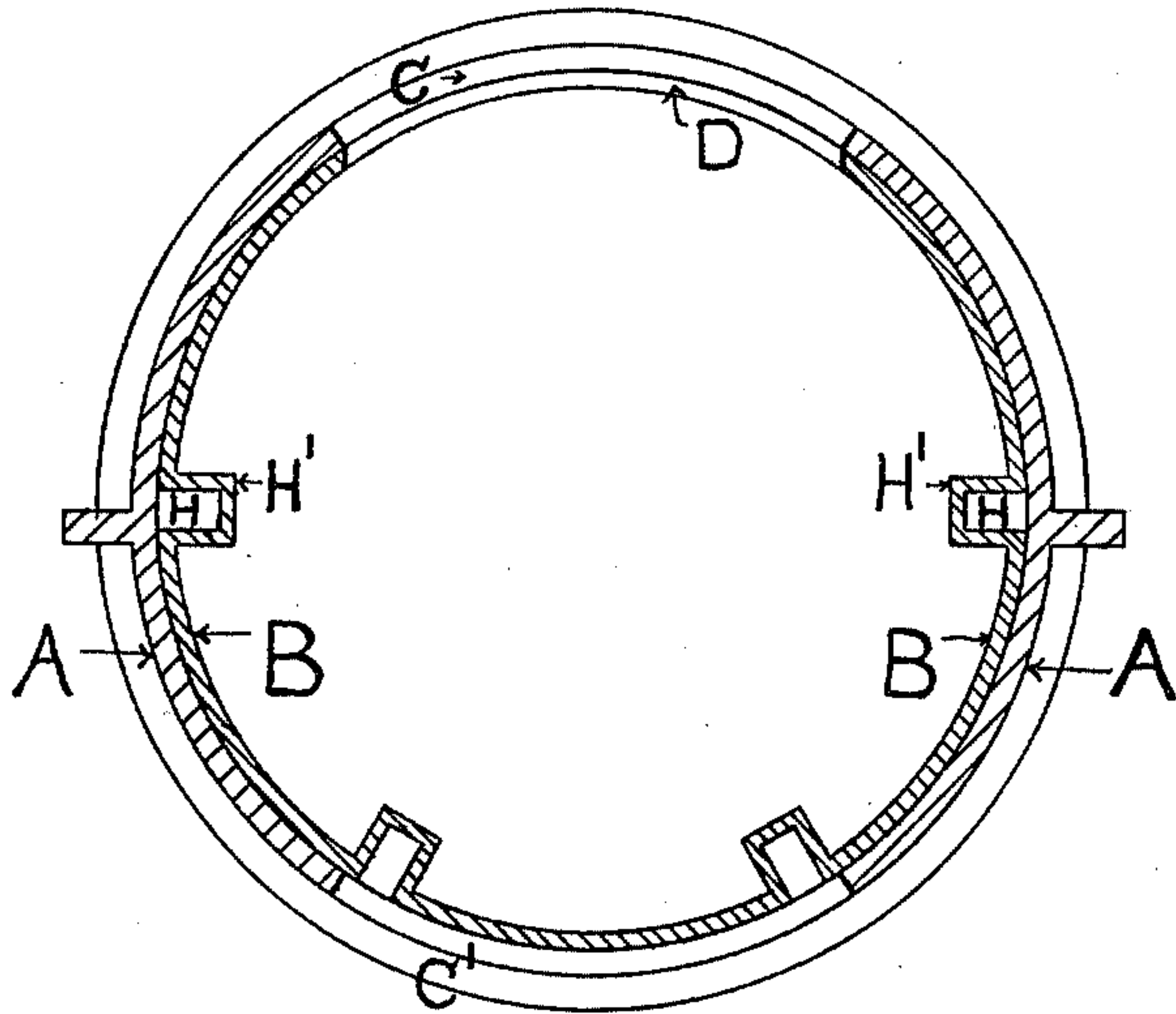
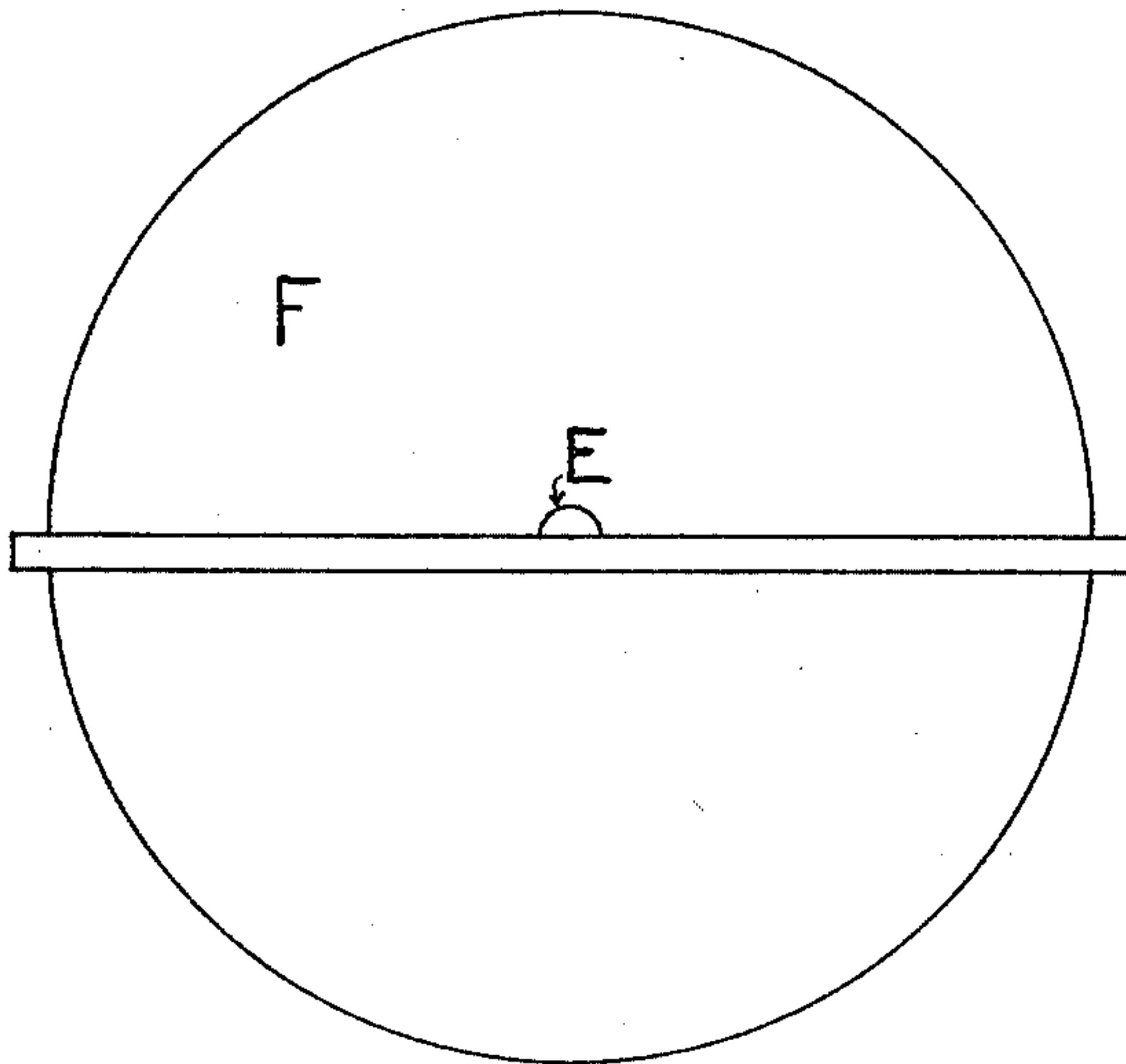


FIG. 3.



Witnesses:

Robert Kirkaldy.

Margaret Kirkaldy.

Inventor:

William Kirkaldy.

UNITED STATES PATENT OFFICE.

WILLIAM KIRKALDY, OF GLASGOW, SCOTLAND.

REVOLVING CYLINDRICAL BULKHEAD-DOOR.

SPECIFICATION forming part of Letters Patent No. 626,327, dated June 6, 1899.

Application filed April 16, 1896. Serial No. 587,823. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KIRKALDY, a British subject, residing at 16 Derby street, in the city and county of Glasgow, Scotland, have invented a new and useful Revolving Cylindrical Door, (for which I have received Letters Patent in Great Britain, No. 18,923, dated October 9, 1895,) of which the following is a specification.

My invention has for its aim and object the saving of life and property on land and at sea by providing a hollow cylindrical door which revolves within a suitable casing fixed to or forming part of an air-tight, water-tight, or fireproof bulkhead or partition dividing air and water tight compartments or fireproof rooms and the like. By combining this revolving cylindrical door and casing as hereinafter described a double door and air-lock is formed, which effectually prevents the ingress of fire, water, or air under pressure through air-tight, water-tight, or fireproof bulkheads or partitions in ships, caissons, tunnels, structures, and the like, yet on being revolved allows free thoroughfare between compartments or rooms so divided, with the certainty that at all times and under all conditions one of the doors must be absolutely closed before the other door is open, thus guaranteeing that the bulkhead or partition is intact and thoroughly reliable in the event of a sudden disaster. I attain this object by the combination herein described, and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the casing and revolving cylindrical door; Fig. 2, a horizontal section of the casing and revolving cylindrical door; Fig. 3, a top view of casing.

Similar letters refer to similar parts throughout the several views.

The casing A, as shown on Figs. 1 and 2, is a hollow cylinder with a plain or corrugated surface and furnished with two or more doorways C C' in its circumference, close bottom and bolted on cover F, and external flanges for fixing to bulkheads or partitions.

Within casing A, revolving on an overhead axial pin E or in other suitable manner, is the revolving cylindrical door B, which is a hollow cylinder with a plain or corrugated surface and having essentially a doorway D in its circumference, an open end, and handles H' inside and hand-recesses H outside for revolving door B by hand.

When doorways C and D in casing A and cylindrical door B are in line, as shown on Figs. 1 and 2, free passage through bulkhead or partition is gained by entering and standing inside of casing A and revolving the cylindrical door B by means of the handles H', when the ingress-door C is absolutely closed before the doorway D comes in line with doorway C' to allow egress from casing A. To pass through bulkhead or partition when the door C' is closed, as shown in Fig. 2, insert hands into hand-recesses H and revolve cylindrical door B until the doorway D comes in line with doorway C'. Then enter and stand inside of casing A and revolve the cylindrical door B by means of handles H', when the ingress-door C' is absolutely closed before the doorway D comes in line with doorway C to allow egress from casing A. Moreover, it is essential that the cylindrical door should be capable of revolving instantaneously when operated hurriedly by panic-stricken men passing through the bulkhead, and it is evident that the means hereinbefore described and illustrated constitute the simplest for the purpose of revolving said door; but I do not therefore limit myself to the sole use of said means, nor to the general construction of door and casing, as it is obvious that the cylindrical door can be revolved by other known means of a mechanical nature and the general construction of said door and casing varied without departing from the spirit of my invention.

Packing may be inserted in grooves within the casing along edges of doorways; but the use of said packing is not, for obvious reasons, to be preferred.

Having fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

A bulkhead door or passage-way, consisting of a cylindrical casing attached to the bulkhead or partition and provided with doorways in opposite sides of its circumference, a hollow cylindrical door having a doorway in its circumference revolvably mounted in said casing and provided with handles H' on the inside and recesses H in the outside or with other suitable means by which said door may be revolved, substantially as described.

WILLIAM KIRKALDY.

Witnesses:

ROBERT KIRKALDY,
MARGARET KIRKALDY.