

(No Model.)

4 Sheets—Sheet 1.

E. W. MORGENTHALER.
TRUNK.

No. 585,774.

Patented July 6, 1897.

Fig I

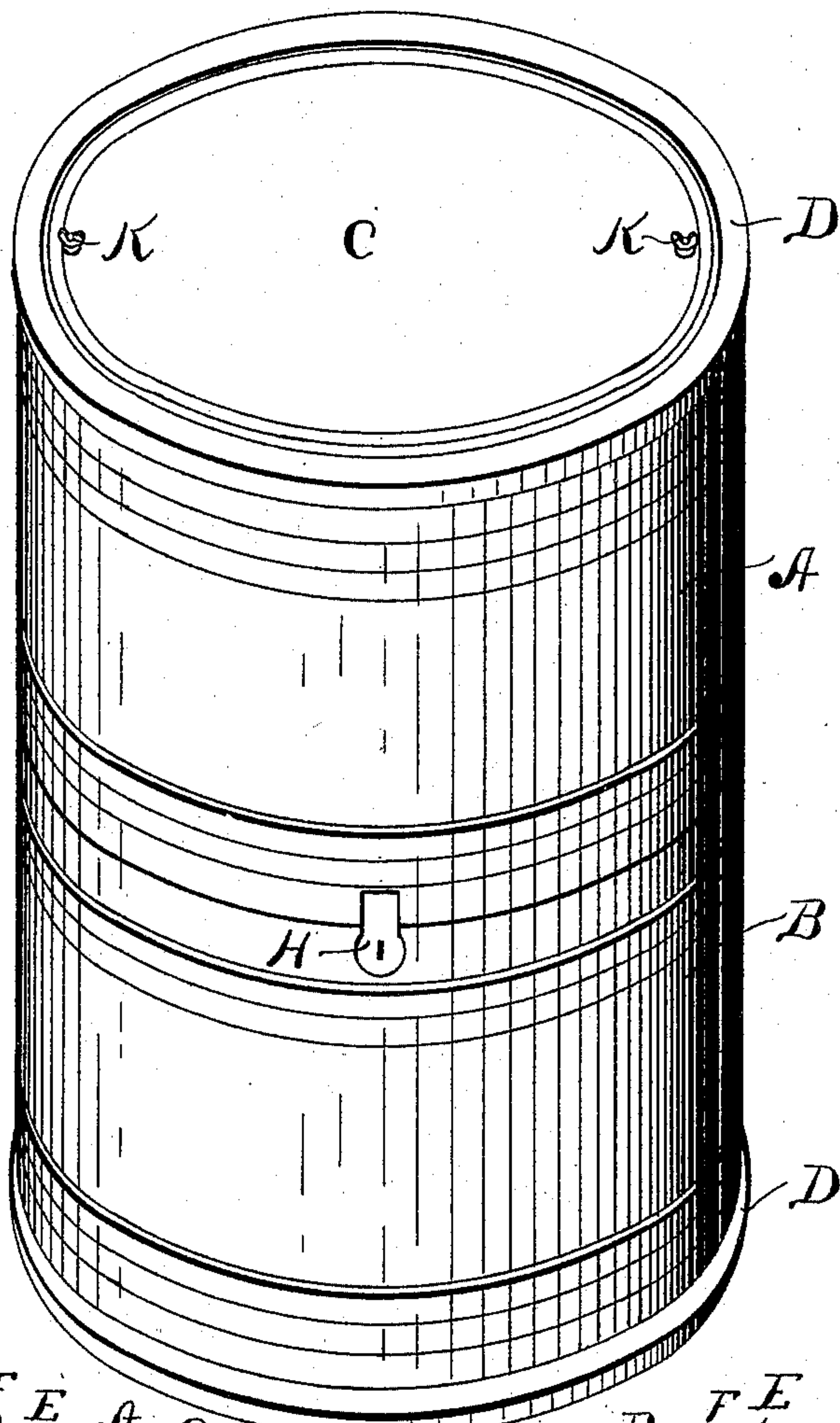
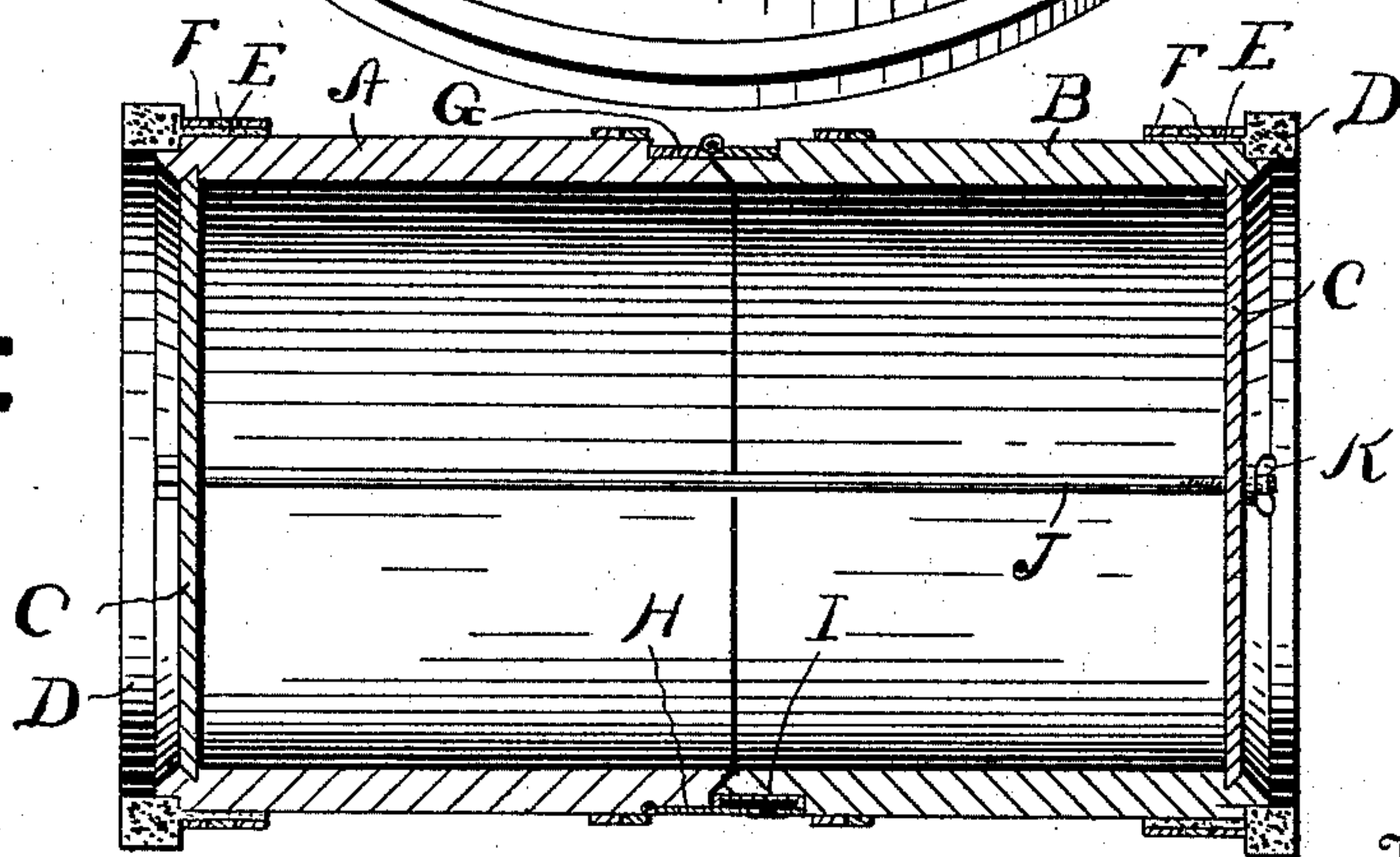


Fig II



Witnesses
E. E. Chandler,
J. B. Smith

Inventor
Edward W. Morgenthaler
By His Attorney
Warren D. House,

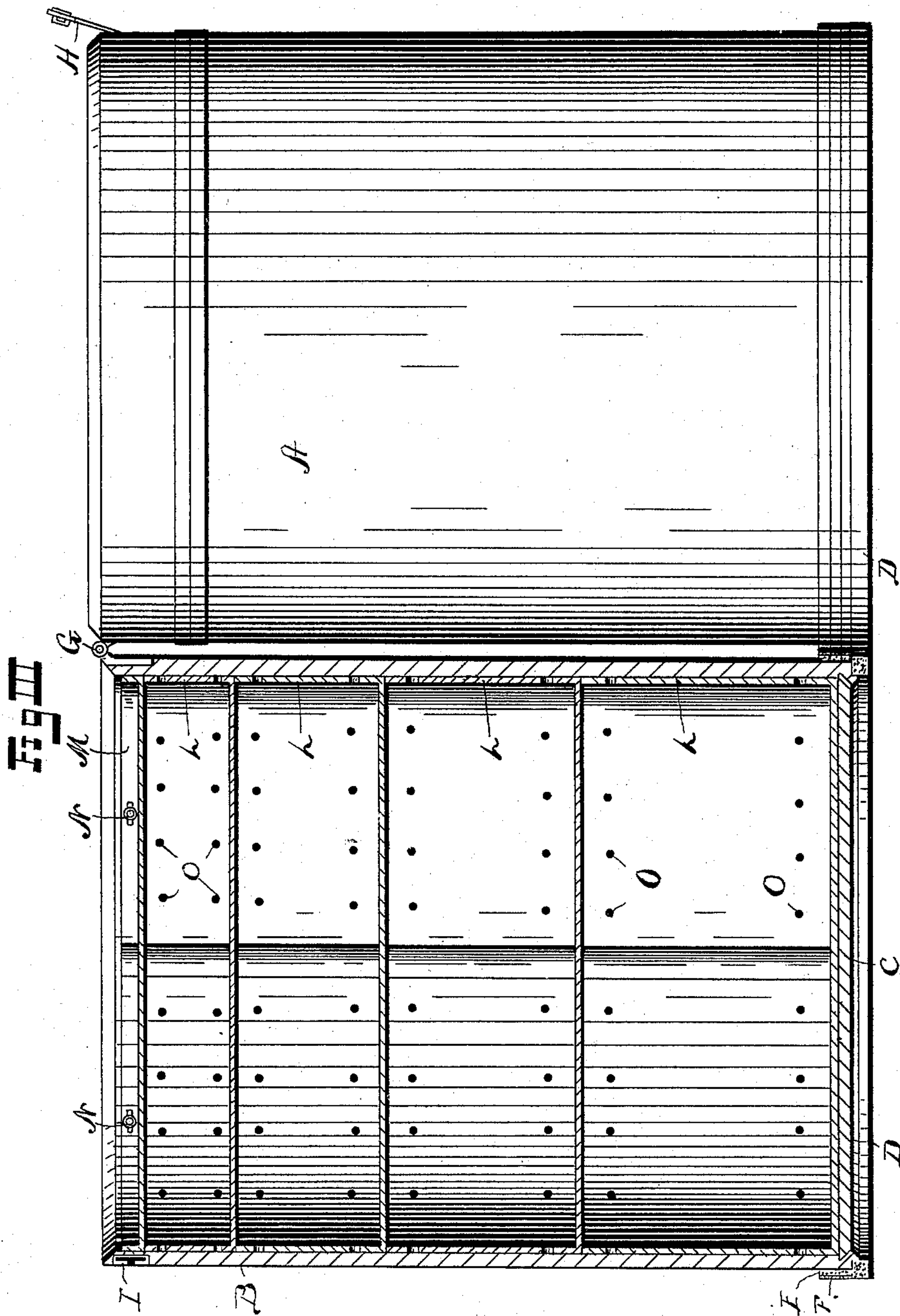
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4 Sheets—Sheet 2

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Ray Smith,

Inventor
Edward W. Morgenthaler
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Warren D. House.

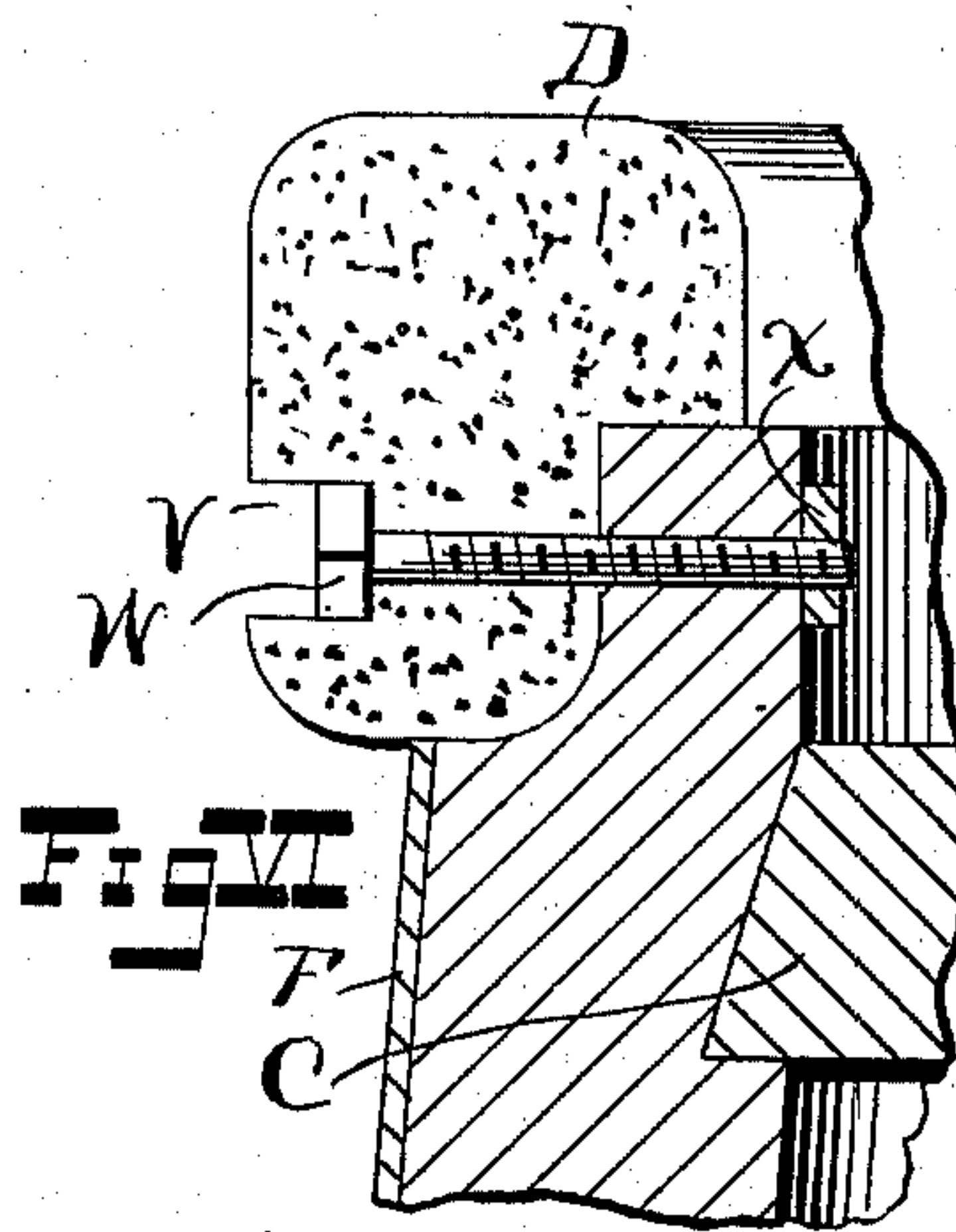
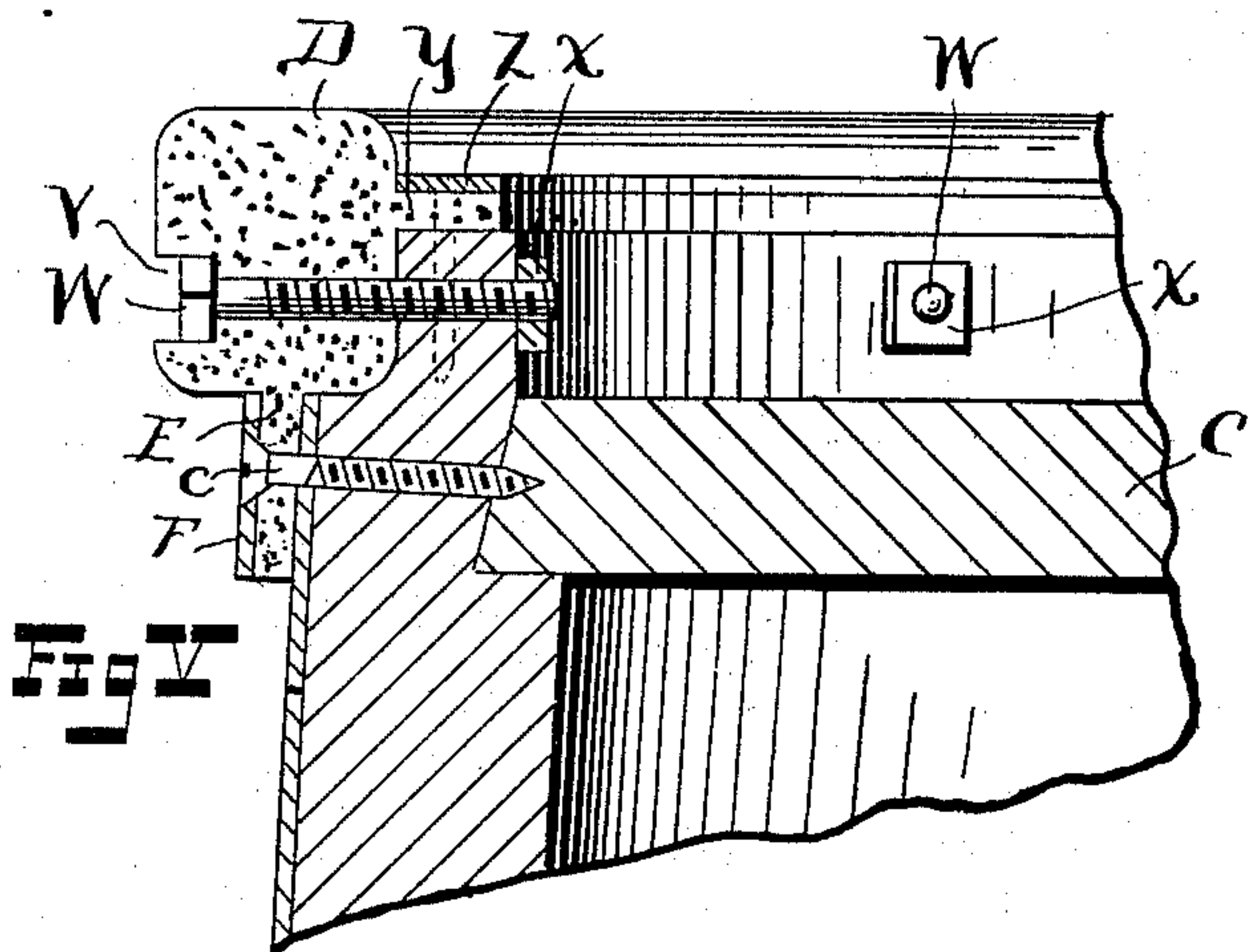
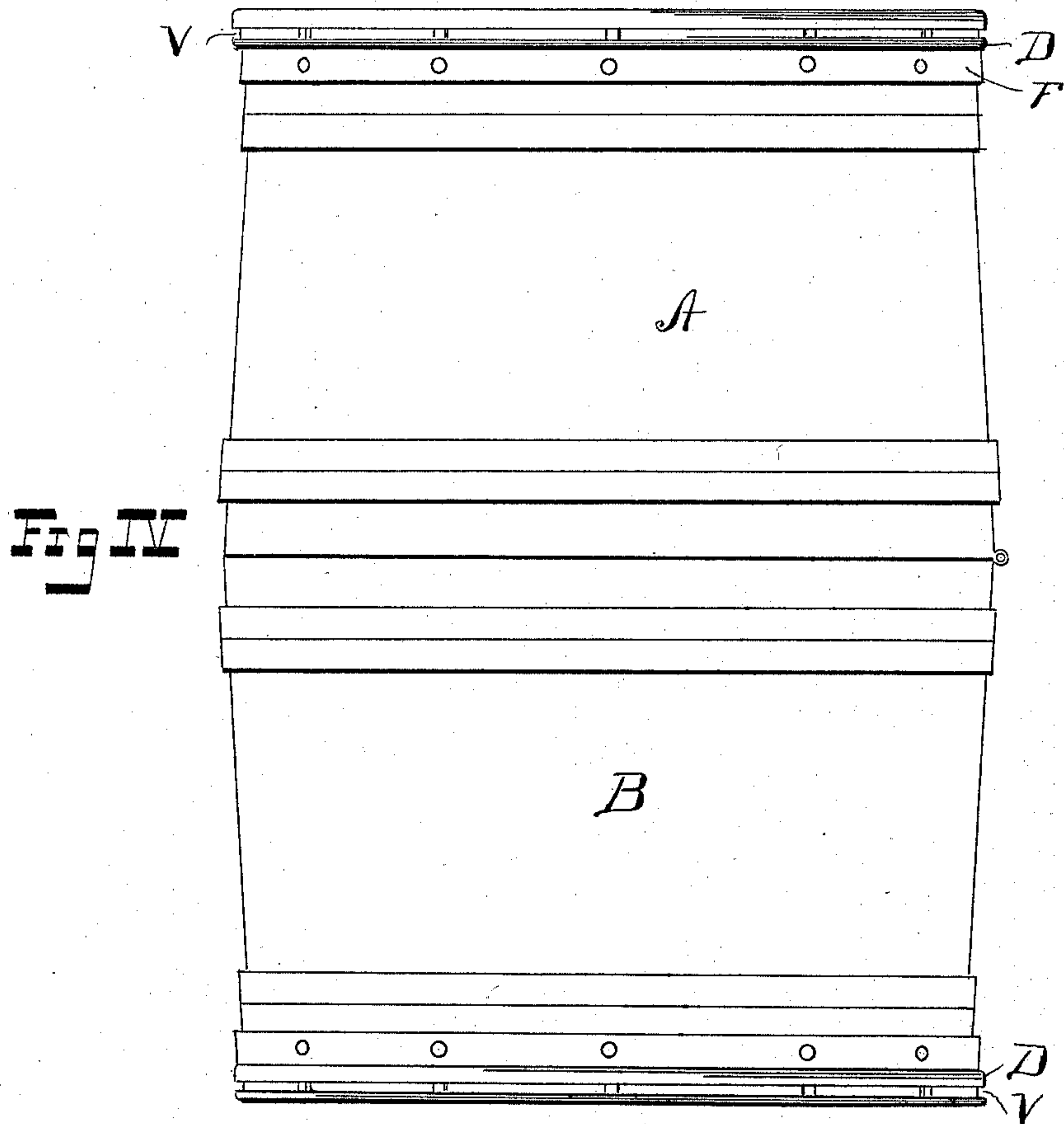
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4 Sheets—Sheet 3

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Witnesses
E. E. Chandler,
J. E. Smith.

Edward W. Morgenthaler
By His Attorney
Warren D. House.

Inventor

(No Model.)

4 Sheets—Sheet 4.

E. W. MORGENTHALER.
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Patented July 6, 1897.

Fig VII

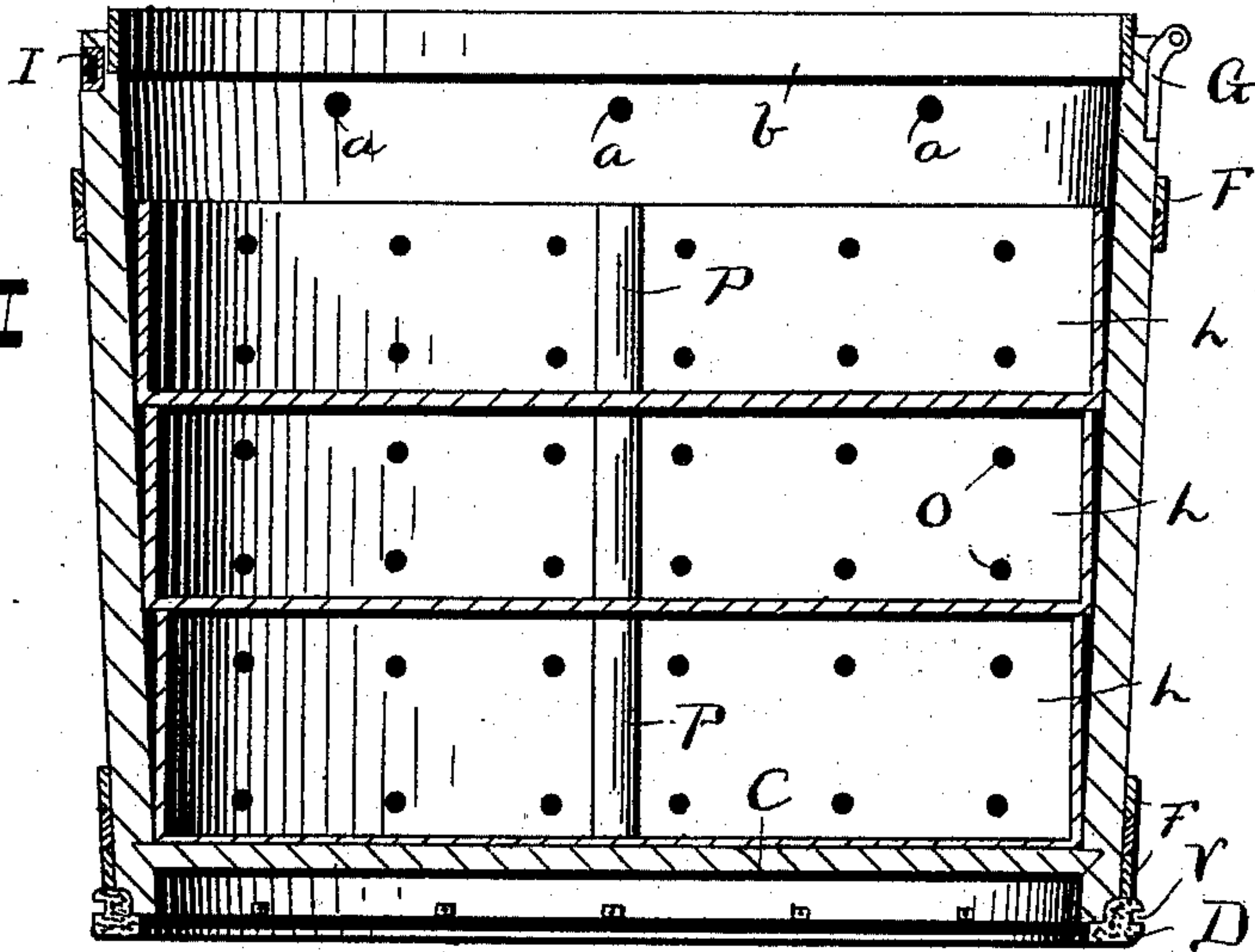
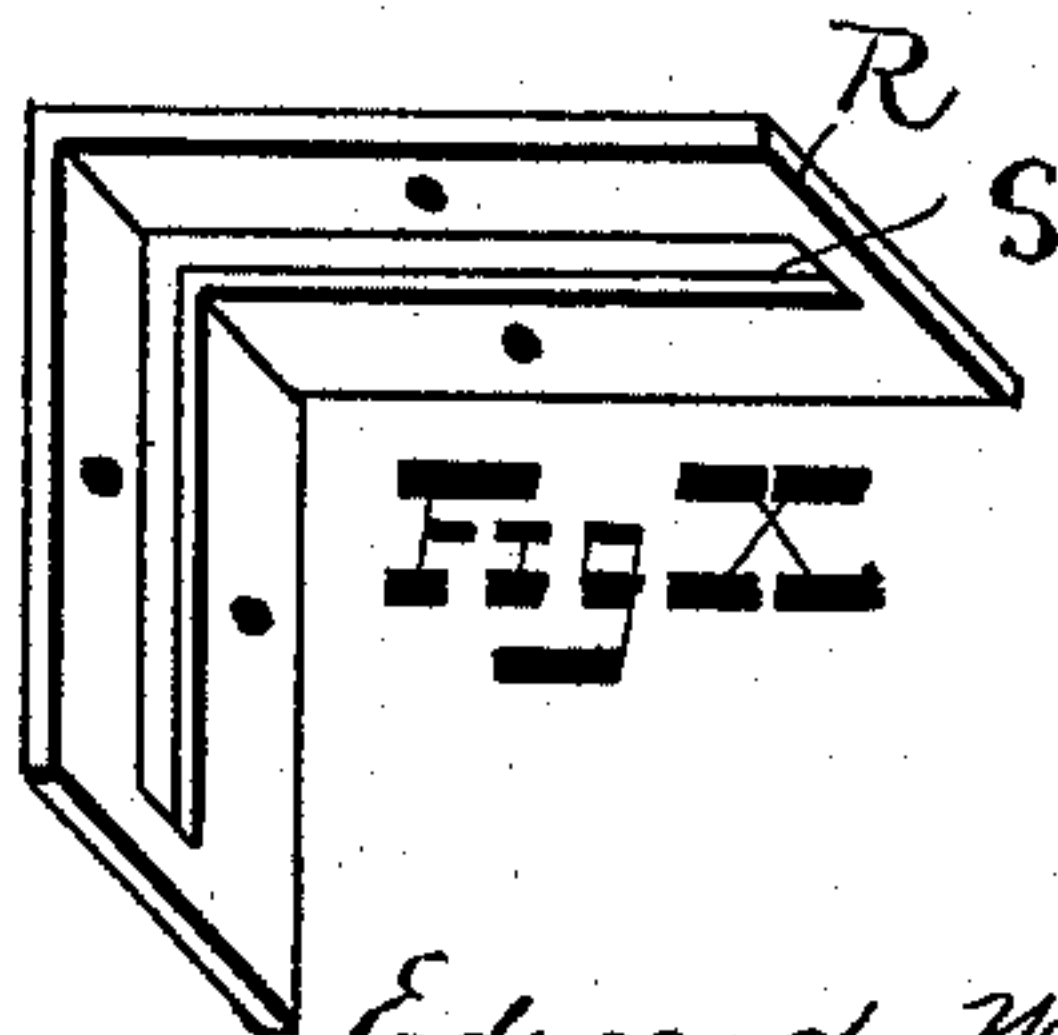
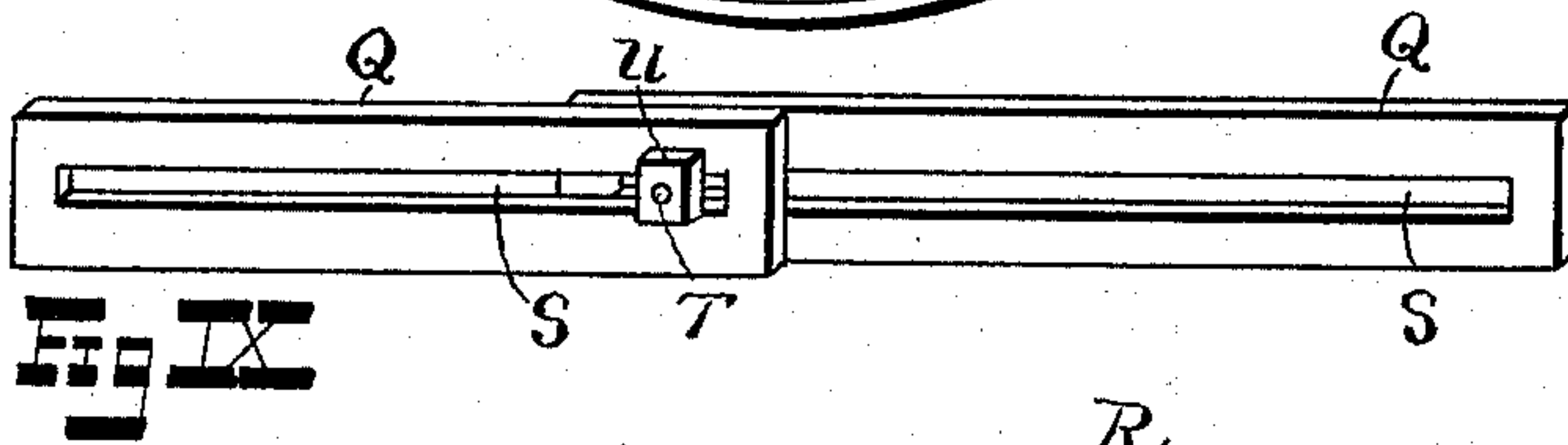
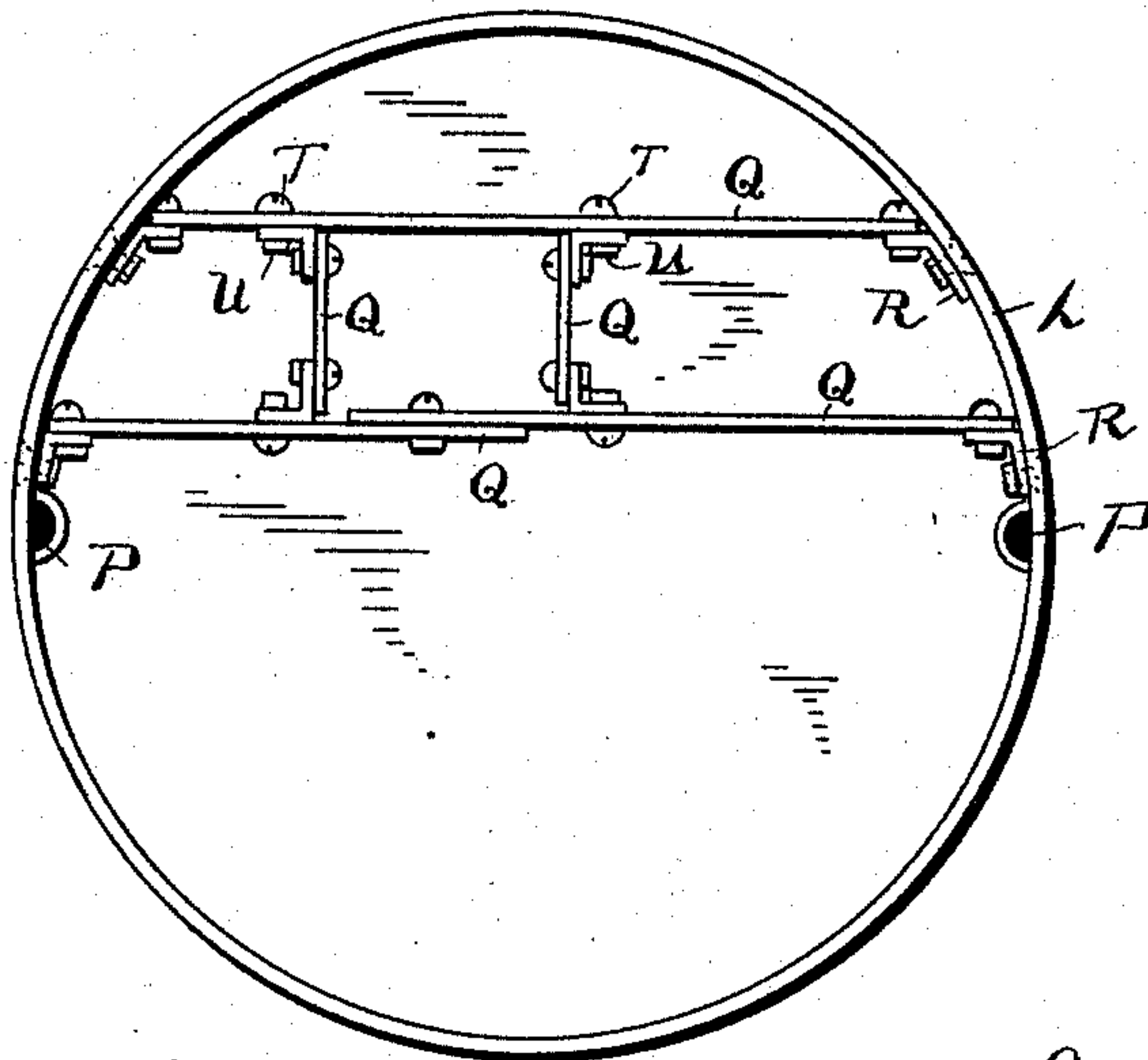


Fig VIII



Witnesses
Elbert E. Chandler,
Ray Smith,

Inventor
Edward W. Morgenthau,
By His Attorney
Warren D. House,

UNITED STATES PATENT OFFICE.

EDWARD W. MORGENTHALER, OF PAOLA, KANSAS.

TRUNK.

SPECIFICATION forming part of Letters Patent No. 585,774, dated July 6, 1897.

Application filed November 27, 1896. Serial No. 613,583. (No model.)

To all whom it may concern:

Be it known that I, EDWARD W. MORGENTHALER, a citizen of the United States, residing at Paola, in the county of Miami and State of Kansas, have invented certain new and useful Improvements in Trunks, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in trunks or packing-cases. It is particularly adapted to be used in the construction of trunks or cases adapted to contain fragile articles, such as queensware.

With a trunk made in accordance with the principles of my invention it is possible to ship queensware from place to place with safety from breakage and injury and without the use of straw or other packing material.

The object of my invention is to provide a trunk, the form of which is approximately of a barrel shape, with elastic buffers of rubber or other suitable material secured to the ends of the trunk, as hereinafter described.

My invention provides, further, a barrel-shaped trunk divided transversely into two halves having a hinged connection with each other, and a locking device for securing the two parts together.

My invention provides also a series of trays with means for securing them in place within the trunk.

My invention provides, still further, a novel construction of trays for use with a trunk made in accordance with the principles of my invention.

My invention also provides certain novel and useful features of construction hereinafter fully described and claimed.

In the accompanying drawings, illustrative of my invention, Figure 1 represents a perspective view of a trunk made in accordance with the principles of my invention, the sides of the trunk shown in this figure being straight. Fig. 2 represents a vertical sectional view of the trunk shown in Fig. 1, with the trays removed and the trunk lying on its side. Fig. 3 represents a view of the trunk in the open position, the lower half being shown in vertical section and the upper half in elevation. Fig. 4 represents a front elevation view of a trunk made with inclined sides

similar to a barrel. In this view is shown a modified form of the rubber buffer. Fig. 5 represents a sectional view of a portion of the top of a trunk, showing a modified form of rubber buffer and manner of fastening to the trunk. Fig. 6 represents a similar view of the same parts shown in Fig. 5, showing the form of buffer illustrated in Fig. 4. Fig. 7 represents a vertical sectional view of the lower half of a trunk similar in construction to the one illustrated in Fig. 4. In this view the upper tray and tray-securing device are omitted. Fig. 8 represents a top view of a tray and shows some of the adjustable portions in place. Fig. 9 represents a perspective view of two partition-plates secured together. Fig. 10 represents a perspective view of one of the angle-plates.

Referring to the drawings, A and B refer, respectively, to the upper and lower halves of the trunk, the sides of which in the form shown in Figs. 1, 2, and 3 are in the form of a cylinder with straight sides.

In the form of trunk shown in Figs. 4 and 7 the trunk is barrel-shaped, being larger in the middle than at the ends.

C indicates the two heads of the trunk, which may be secured in any desirable manner to the body.

D indicates a ring composed of rubber or other suitable material, which is secured one at each end of the trunk. In the form illustrated in Figs. 1, 2, and 3 the ring is provided with a vertical flange E, which encircles the outside of the trunk, and is secured thereto by means of a hoop F, which encircles and is secured to the sides of the trunk.

G indicates a hinge which connects the halves together at contiguous edges.

H indicates a hasp secured to one half of the trunk and adapted to engage with a lock I, secured to the other half. To prevent injury thereto, the hasp, lock, and hinge should be secured in recesses provided in the body of the trunk.

J indicates two rods, which are located in the trunk diametrically opposite each other, and which extend lengthwise through vertical openings provided in the heads C. One end of each rod J is provided with a head the inner side of which has a bearing upon the adjacent head and the other end is screw-

threaded and has mounted thereon a wing-nut K, the inner side of which has a bearing against the head adjacent thereto. The rods J are inserted in their respective positions and the nuts K applied thereto after the trunk has been closed. The function of the rods is to assist the lock and hinge in holding the two parts rigidly together.

L indicates the trunk-trays, which are cylindrical in shape and are made to fit the inner periphery of the trunk, and are located one above the other, as shown in Fig. 3. The trays are of any desirable number and depth, and after being placed in the trunk are held securely therein by means of a shallow pan M, the sides of which are preferably a heavy iron ring fitting the interior of the trunk, and which is provided with several transverse screw-threaded openings, in which are fitted thumb-screws N, which are adapted when turned in the proper direction to enter openings a, located around the inner periphery of the trunk and shown in Fig. 7.

P indicates two tubes vertically disposed in diametrically opposite positions adjacent to the inner periphery of each tray. These tubes are adapted to receive the rods J, the bottom of the tray being perforated for the admission therethrough of the rods.

The trays L are adapted to be divided into several compartments by means of partitions Q. These partitions are of different lengths to suit the various sizes of compartments that may be desired. They are, however, all of one form, which is rectangular, and each partition-plate Q is provided with a long longitudinal slot S, which extends almost the full length of the plate. The main partitions are secured at each end to an angle-plate R, which is secured to the sides of the tray by means of bolts which are provided with nuts and which extend through openings O in the wall of the tray and thence through corresponding openings provided in the angle-plate. The angle-plate R is provided with a slot S, similarly disposed to the said slot in the plate Q. The end of the plate Q is secured to the angle-plate R by means of a bolt T, having a nut U, the bolt extending through both of the slots S in the partition-plate and the angle-plate. Where a plate is not of sufficient length to extend clear across the tray, two of the plates may be united, as shown in Figs. 8 and 9. Compartments of different sizes may be provided by securing the angle-plates R at different points around the interior of the tray, the openings O being numerous enough and sufficiently well distributed to permit of a large number of variations.

The angle-plate R should be composed of some material that can be readily bent at different angles to correspond to the different positions on the wall of the tray which it may occupy. After the partitions dividing the tray into compartments have been secured in place each compartment, if desired,

may be subdivided by placing cross-partitions therein, as shown in Fig. 8. This is accomplished by securing at opposite points on adjacent partitions angles R and connecting the same by means of short partitions Q.

In Fig. 6 I have illustrated a modified form of rubber buffer D in which the flange E is dispensed with, and the buffer is held secure by means of bolts W, which extend horizontally through the buffer-ring D and the barrel chime and each of which has fitted to its inner threaded end a nut X. The heads of the bolts W all lie within an external peripheral groove V, with which the ring D is provided. In all the forms it is desirable to have the upper and lower ends of the chimes grooved externally for the seating of the rings D, as illustrated in Figs. 2, 3, 5, 6, and 7.

In Fig. 5 I have illustrated still another modification of buffer-ring. In this form a horizontal flange Y is provided on the rubber ring, which extends inwardly and covers the top of the chime, to which it is secured by means of a ring Z, of metal, preferably, and which lies upon the top of the flange, the said ring Z being held by means of screws which extend through the flange into the top of the chime. In this form the vertical flange E is also used and is made to encircle the top hoop of the barrel, to which it is secured by means of an additional outer hoop F, as shown in Fig. 5, the said hoop being held by means of wood-screws c, which extend through the hoops and flange E into the sides of the trunk.

In the form of trunk shown in Figs. 4 and 7, in which the sides are flaring, the trays used therewith must be made of different sizes in order to neatly fit the interior of the trunk. In the lower half of the trunk the bottom tray is the smallest in diameter, the next one above larger, and so on to the top tray. The bottom of each tray serves as a cover to each one of the trays immediately beneath it.

In the construction of the trunk I do not confine myself to any particular materials for the various parts, but would suggest wood as suitable for the body of the trunk and metal, such as zinc, galvanized iron, or aluminium, for the trays and partitions.

Various modifications than those shown may be made in the construction without departing from the true spirit of my invention.

My invention is operated as follows: The trunk is first opened into the position shown in Fig. 3 and the trays in each half removed. The partitions of each tray are then arranged to suit the various articles which are to occupy the different compartments. This is accomplished by first securing the angle-plates R in the positions on the sides of the tray where it is desired to place them and then securing thereto the main partitions Q, which when not of sufficient length to reach across the tray are joined end to end, as shown in Fig. 9. The angle-plates to which the cross-partitions are attached are

then secured to the main partition-plates, as already described, and the cross-partitions are then secured to these angle-plates. The size of each compartment is made such that a single article of queensware occupies a single compartment. The trays are then filled with the articles to be shipped and the trays placed within the two halves of the trunk. Above each upper tray is then secured the retaining pan or tray M, which is then secured in position by screwing the thumb-screws N into the openings provided therefor in the inner wall of each half of the trunk. The half A is then swung on the hinge G into the position shown in Figs. 1 and 4, and the hasp H is made to engage the lock I. Then the rods J are placed in position shown in Fig. 2 and the wing-nuts K are mounted thereon and screwed tight against the upper head C. It is desirable to have the two contiguous edges of the two halves enter one within the other, as shown in Fig. 2. For this purpose one half may be provided with a groove in which fits a projecting flange located on the other half. In Fig. 7 a metallic ring b is inserted and secured in one half of the trunk, a portion of the ring extending above the top edge of the lower half and which is adapted to enter and fit a corresponding groove provided in the adjacent edge of the other half. The flange b serves to prevent any relative side movement of the two halves of the trunk after it is closed ready for shipment. It is desirable also to line all the portions of the trays and partitions with felt or other suitable soft material which are liable to have contact with any of the articles contained in the tray.

In addition to their function of rigidly securing the two halves of the trunk together the rods J also serve, in extending through the tubes P, to prevent turning of the trays in the trunk.

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

1. In a trunk or packing-case, a barrel-shaped body transversely divided the two parts having a hinged connection with each other and provided at each chime with an external peripheral groove, a cushion at each end comprising a ring of resilient material located in the said groove and extending above the end and beyond the sides of the body, and a locking device for holding the two parts of the body closed, substantially as described.

2. In a trunk or packing-case, a barrel-shaped body having suitable heads and provided at each chime with an external peripheral groove, a cushion at each end comprising a ring of resilient material located in the said groove and projecting beyond the end of the chime and the sides of the body, the said ring being provided with an external peripheral groove, and a series of screws extending through the ring the heads of the screws

lying within the said groove in the ring and the other ends of the screws being secured to the chime, substantially as described.

3. In a trunk or packing-case, a barrel-shaped body having suitable heads and provided at each end with an external peripheral groove, a cushion at each end comprising a ring of resilient material located in the said groove and provided with a vertical flange encircling the outside of the body, and a hoop encircling the said flange and secured to the body, substantially as described.

4. In a trunk or packing-case, a barrel-shaped body having suitable heads and provided at each end with an external peripheral groove and having the inside and outside of the chimes substantially parallel with each other, a ring of resilient material located in the said groove the said ring being provided with an external peripheral groove and a series of bolts extending through the ring and chime, the heads of the bolts lying within the groove in the ring, the inner ends of the bolts being provided with nuts having a screw-thread engagement therewith and adapted to be tightened against the inner wall of the chime, substantially as described.

5. In a trunk or packing-case, a barrel-shaped body having suitable heads and provided at each chime with an external peripheral groove and having the two sides of the chime substantially parallel with each other, the body being transversely divided into two parts which have a hinged connection with each other, a ring of resilient material located within the said groove, the said ring being provided with an external peripheral groove, a series of bolts which extend through the said ring and adjacent chime, the heads of the bolts lying within the groove in the ring and the inner ends of the bolts having mounted thereon nuts which bear against the chime, and a locking device for holding the two parts of the body together when in the closed position, substantially as described.

6. In a trunk or packing-case, a barrel-shaped body having suitable heads and transversely divided into two parts which have a hinged connection with each other, a series of trays located in each part of the body, means for preventing longitudinal movement of the trays in the body, and one or more rods which extend through the trays and trunk-heads, the said rod or rods being provided with a head at one end and a nut at the other, the rods serving both to hold the two parts of the trunk together and to prevent circumferential movement of the trays, substantially as described.

7. In a tray, the combination with the body portion L the sides of which are provided with openings, O, of the angle-plates R having the slot S and openings adapted for the insertion of bolts and corresponding to the openings, O, in the tray-walls, the adjustable partition-plates, Q, having the slot S, and the bolts T and nuts U adapted to unite the partition-

plates and angle-plates through the medium of the slots S, substantially as described.

8. In a trunk, the combination with a body portion having suitable heads and trans-
5 versely divided into two parts which have a hinged connection with each other, of the rods J extending through the trunk-heads and having mounted thereon the nut K, trays L provided with the tubes P adapted to receive the
10 rods J, tray M having thumb-screws operating in screw-threaded openings in its wall and

adapted to enter openings provided in the interior of the trunk-body, and a locking device for holding the two halves of the body in the closed position, substantially as described. 15

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD W. MORGENTHAUER.

Witnesses:

WARREN D. HOUSE,
ELBERT E. CHANDLER.