

(No Model.)

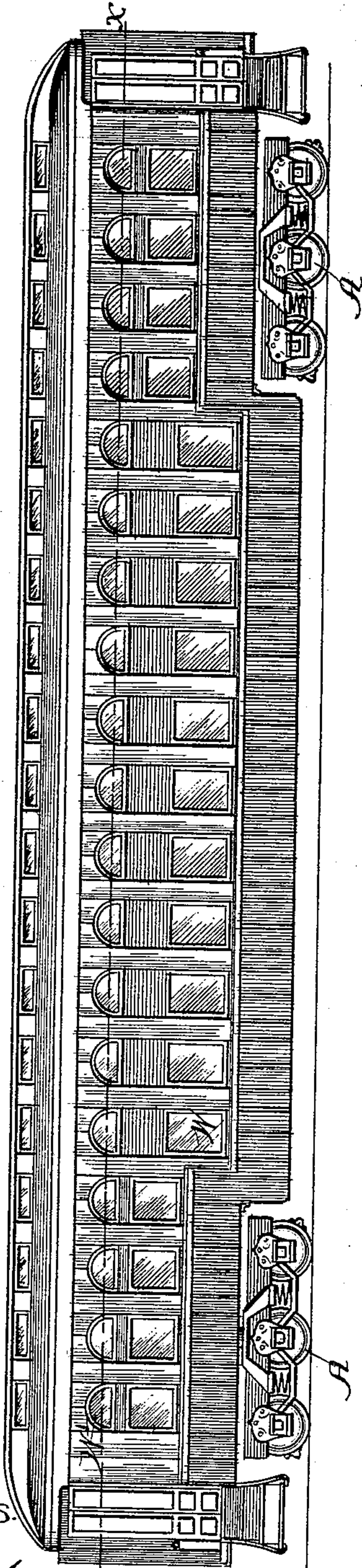
4 Sheets—Sheet 1.

A. FORDHAM.
RAILWAY CAR.

No. 487,918.

Patented Dec. 13, 1892.

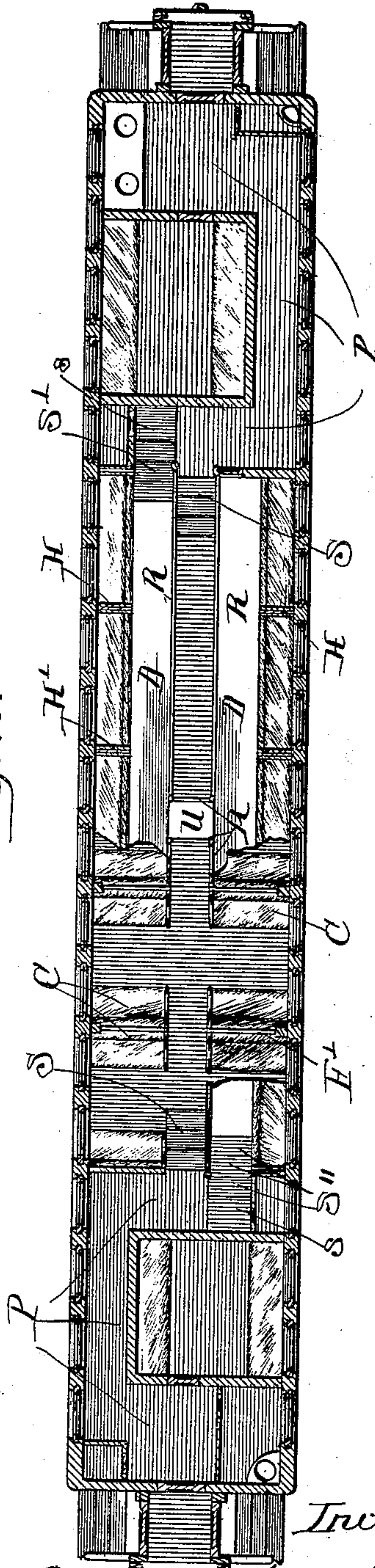
Fig. 1.



Witnesses.

Chas. G. Henry
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Fig. 2.



Inventor:

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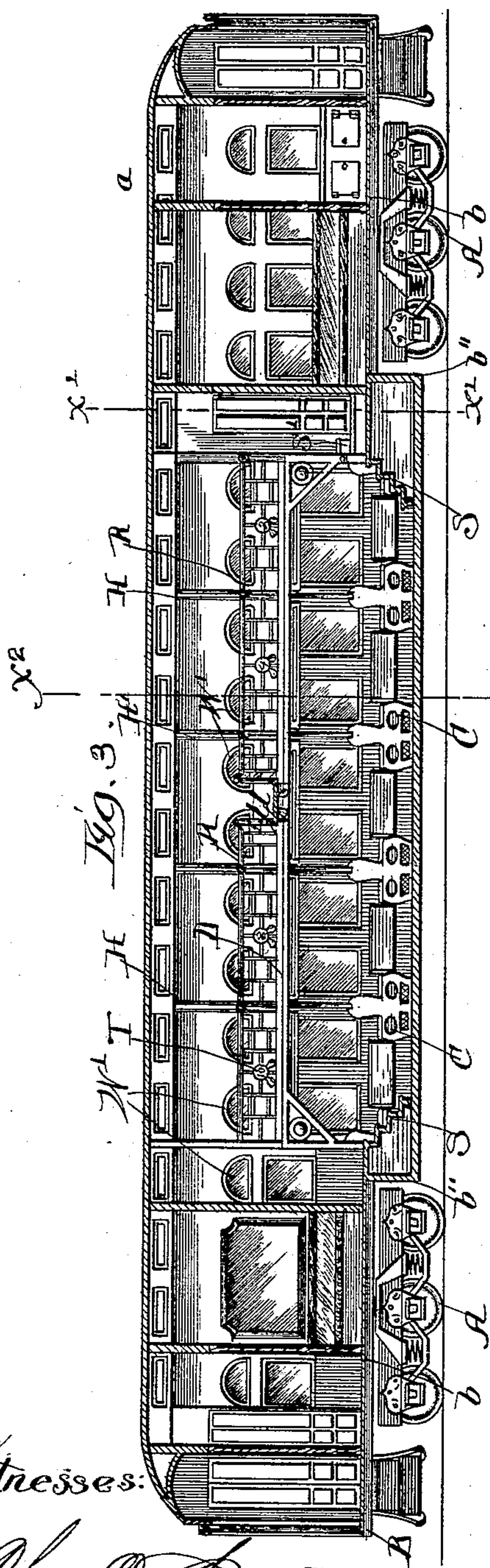
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A. FORDHAM.
RAILWAY CAR.

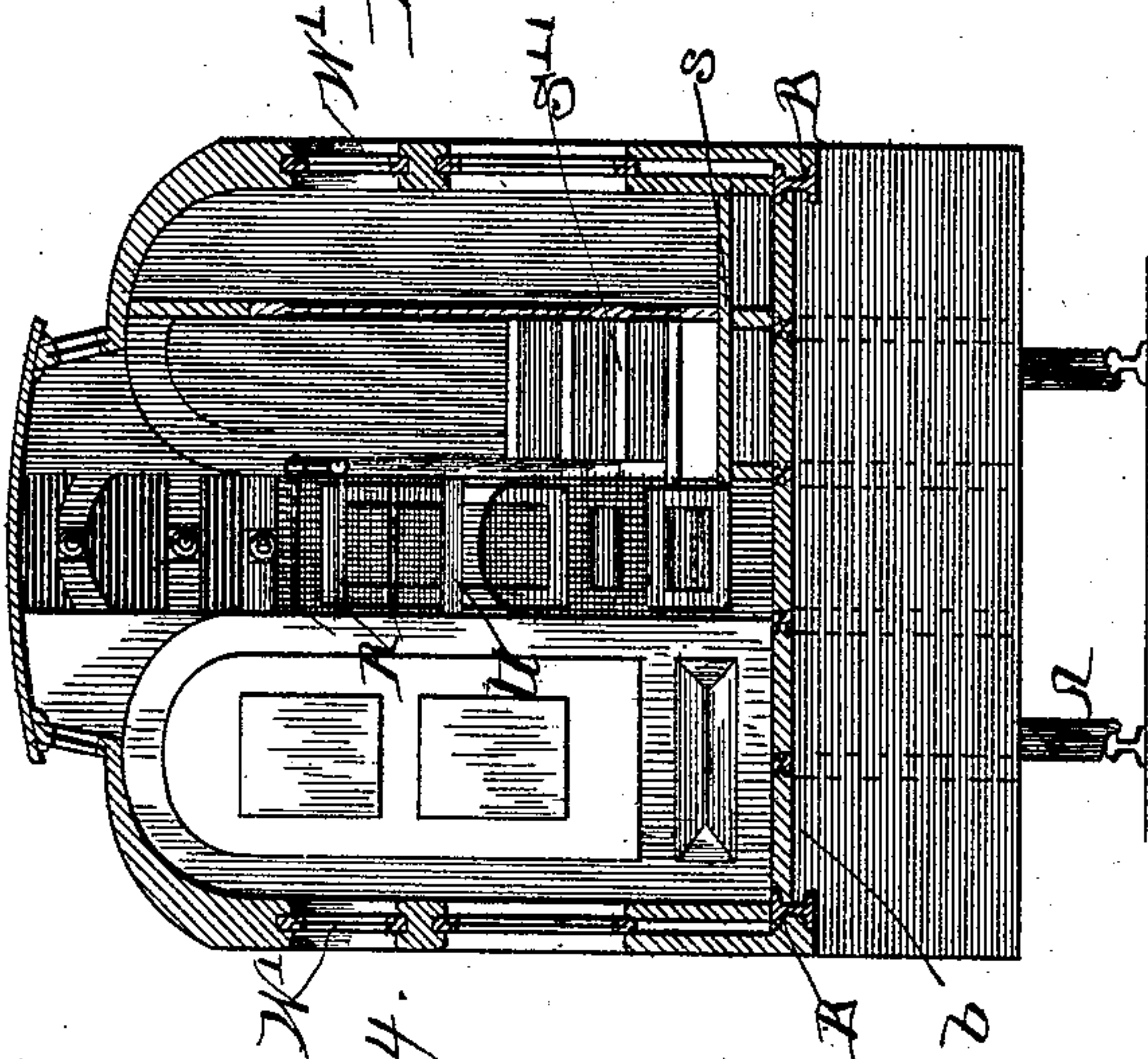
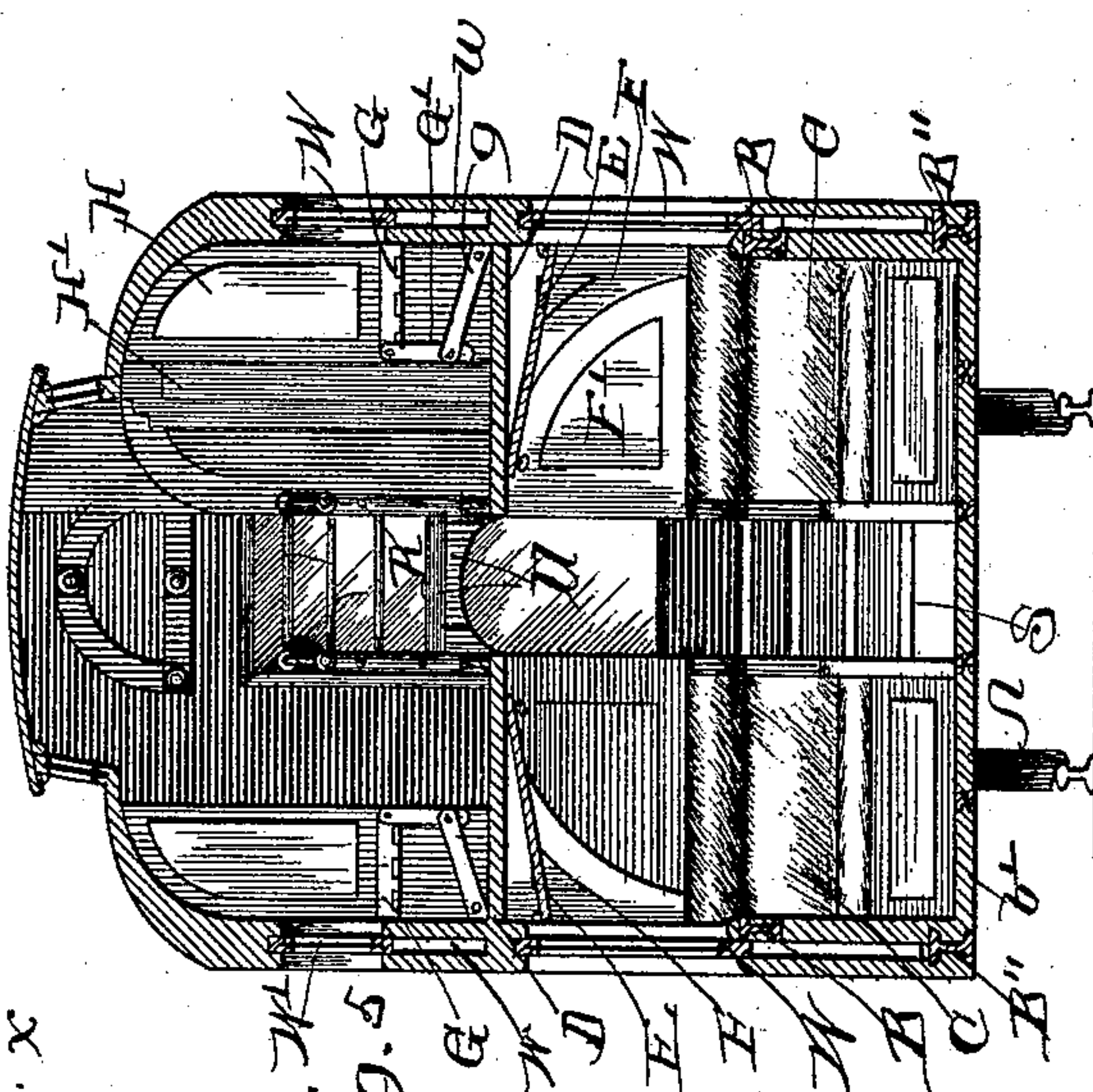
No. 487,918.

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Fig. 8.

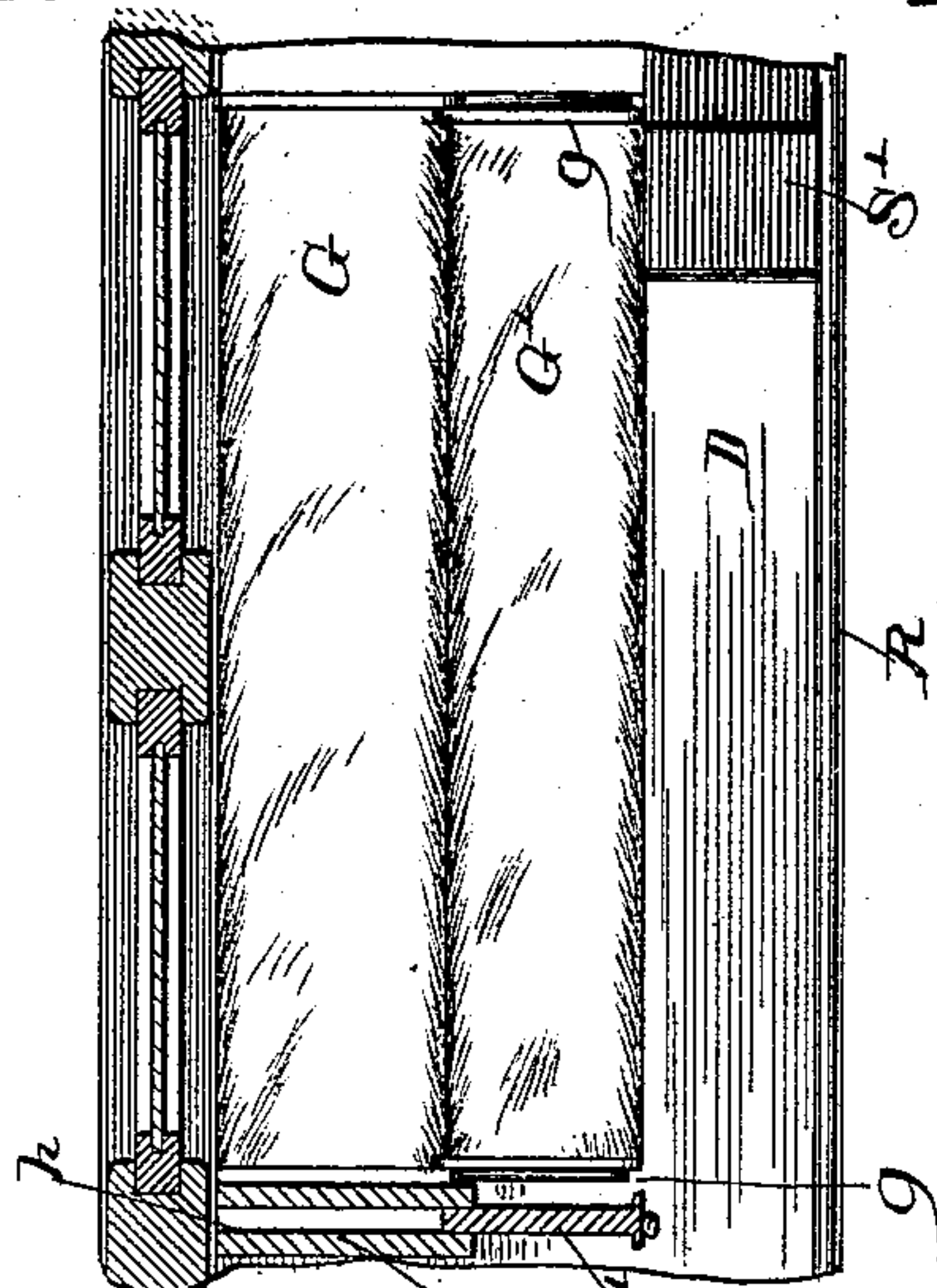


Fig. 9.

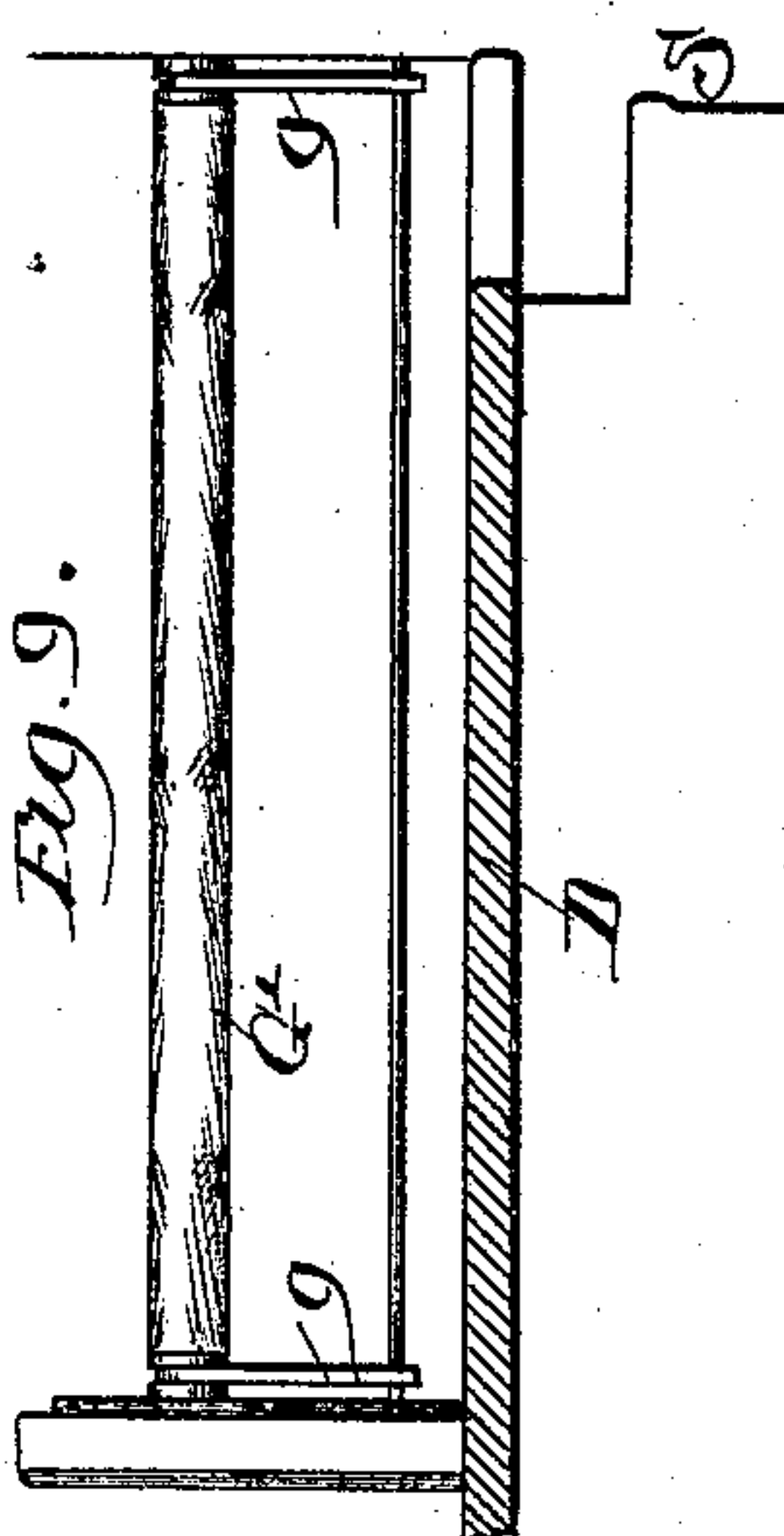


Fig. 7.

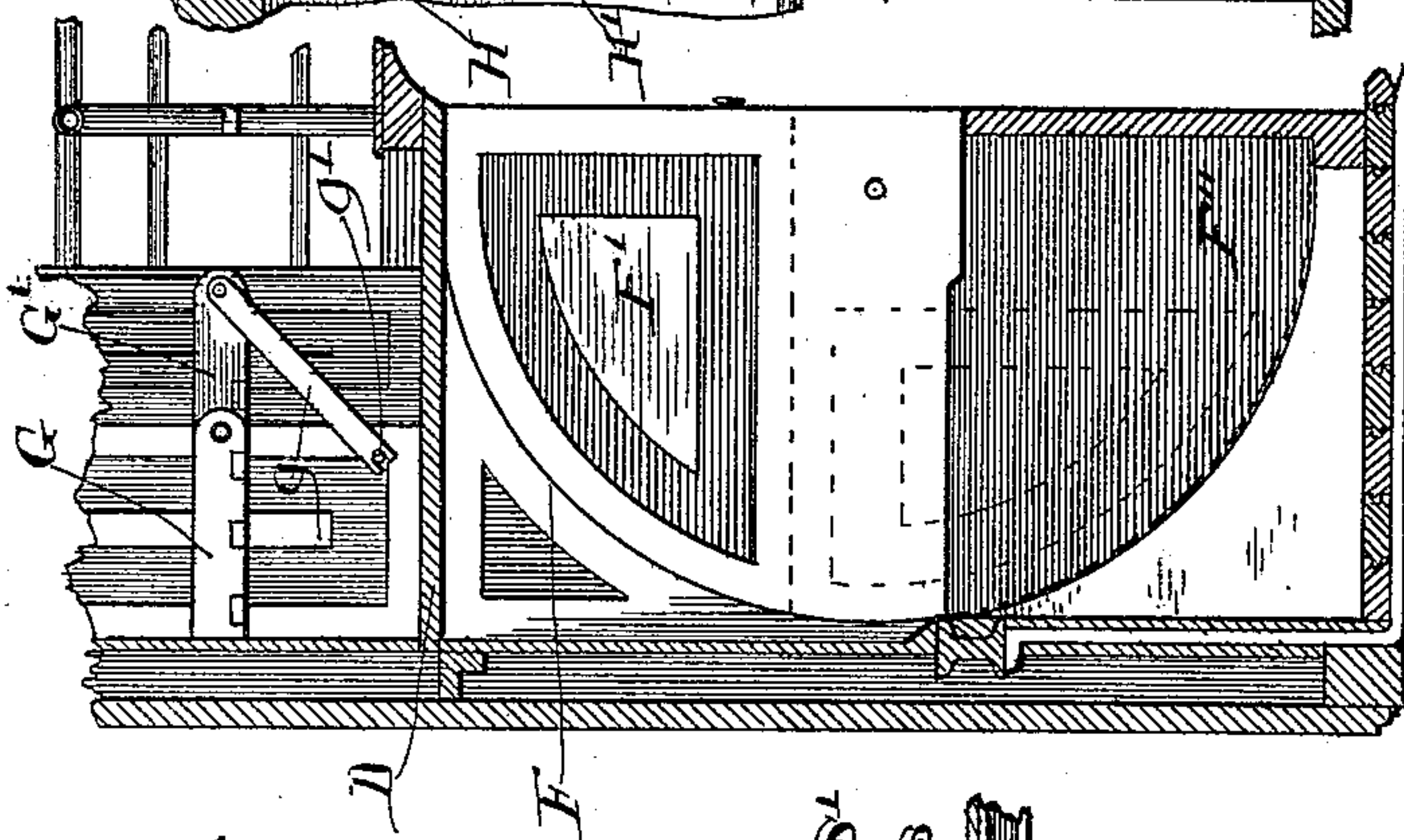
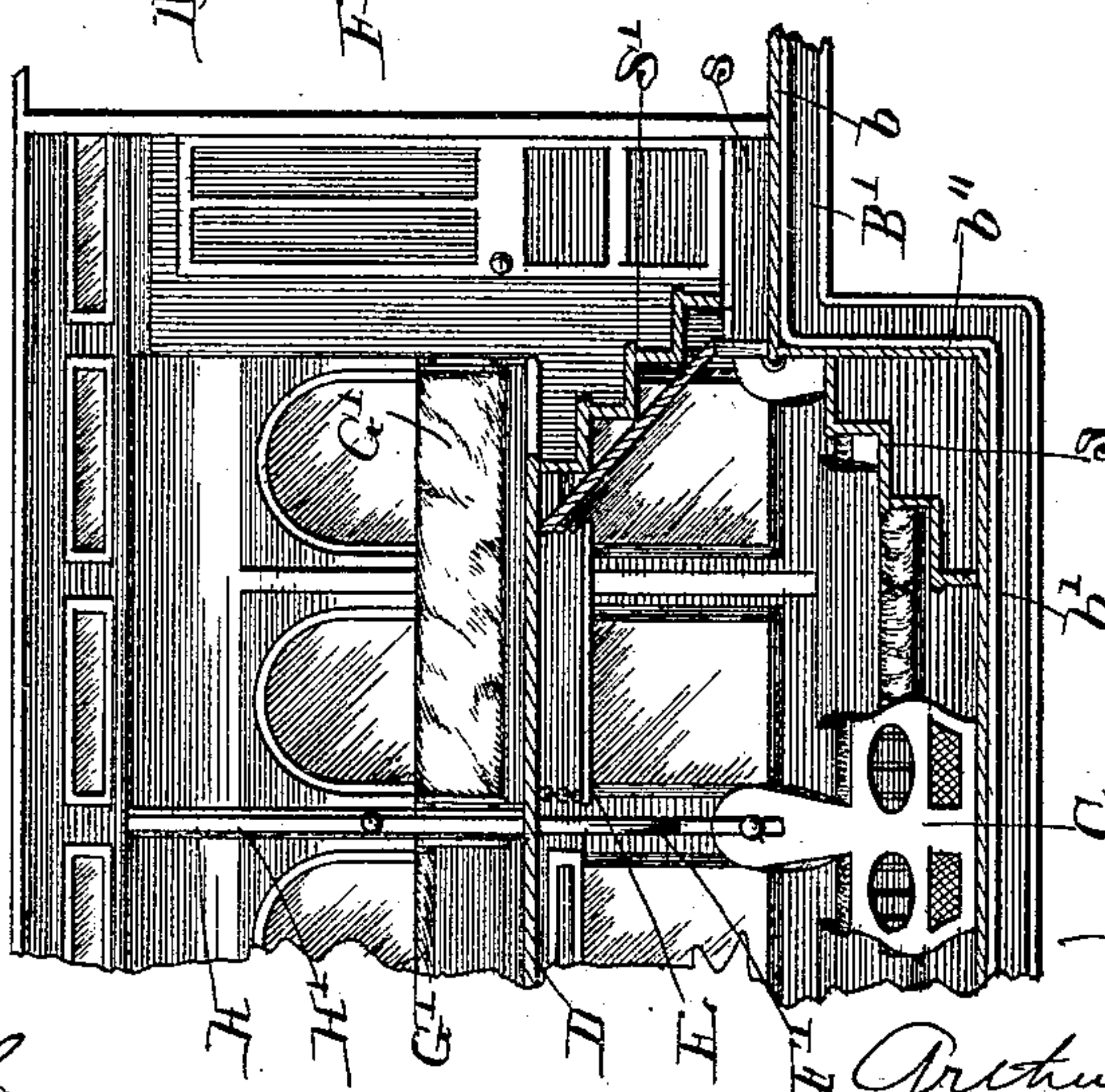


Fig. 6.



Witnesses:

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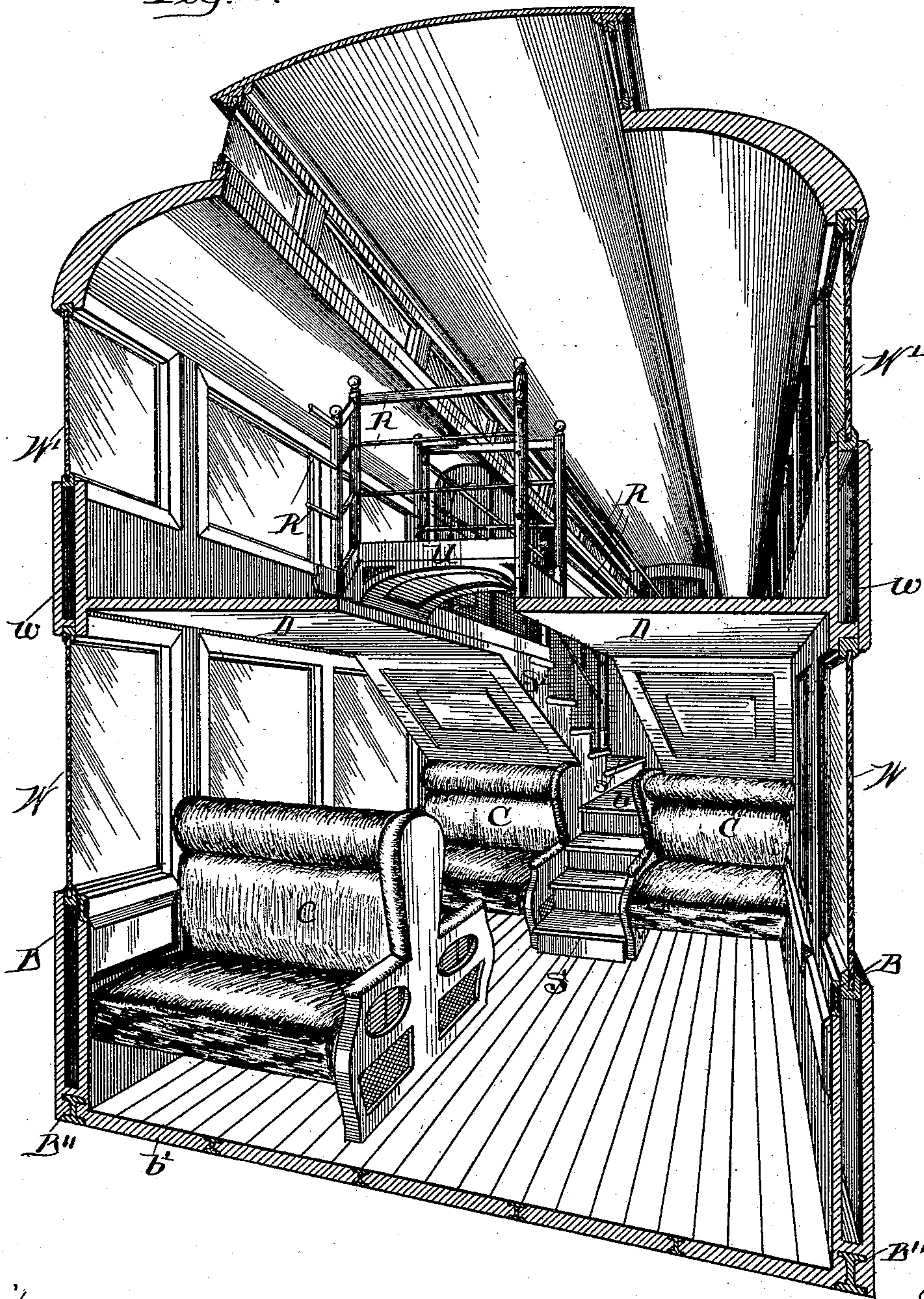
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Patented Dec. 13, 1892.

Fig. 10.



Witnesses:

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UNITED STATES PATENT OFFICE.

ARTHUR FORDHAM, OF CHICAGO, ILLINOIS.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 487,918, dated December 13, 1892.

Application filed July 16, 1892. Serial No. 440,193. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR FORDHAM, a subject of the Queen of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway-Cars, of which the following is a specification.

My invention relates to improvements in railway-cars, and more particularly to that class of railway-cars which are supplied with sleeping-berths and are known as "sleeping-cars."

The invention is fully described and explained in this specification and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a completed car embodying my invention. Fig. 2 is a horizontal section through the line xx , Fig. 1, the view being downward and parts of the galleries of the car being removed to show the seats on the floor below. Fig. 3 is a central longitudinal vertical section of the car. Fig. 4 is a transverse vertical section through the line $x'x'$, Fig. 3, the view being in the direction indicated by the arrow a in said figure. Fig. 5 is a transverse vertical section through the line x^2x^2 , Fig. 3, the view being in the same direction as in Fig. 4. Fig. 6 is a central longitudinal vertical section of one of the end sections of the central portion of the car. Fig. 7 is an enlarged transverse vertical section illustrating the construction of the upper berths and the arrangement of the swinging partitions between the lower berths of the car; and Figs. 8 and 9 are a top plan and front elevation, respectively, of one of the upper or gallery berths of the car when in its horizontal position ready for use as a bed. Fig. 10 is a cross-section in perspective.

In the views, $A A$ are trucks of usual construction, and $B B B'$ are longitudinal sills, whose end portions form the framework of floors b , lying at opposite ends of the car and supported by the trucks. The side sills $B B$ which are in the side walls of the car, are straight and extended from end to end of the car in the same horizontal plane; but the intermediate sills B' are made up of the end portions lying in the plane of the sills $B B$, and central depressed portions lying between the trucks and formed as shown in Fig. 6, the sills being bent twice at right angles at

each end of the depressed portion. Beneath the sills $B B$ lie supplemental sills $B^2 B^2$, suspended from the sills $B B$, and the supplemental sills B^2 and the depressed portion of the sill B' form the framework of a floor b' , lying considerably below the floors b and having at its ends vertical walls b^2 , extending upward to the floors $b b$. Upon the floor made up of the parts $b b b'$ is supported the usual superstructure, made up of side walls, end walls, and roof, the parts of the superstructure above the portions $b b$ being preferably of substantially the same internal height as ordinary sleeping-cars, and the central part of the superstructure, or that over the depressed portion b' , being evidently of considerably-greater internal height.

The ends of the car—that is, the parts over the trucks—are partitioned in the usual manner, as indicated in Fig. 2, one of them being made up of toilet-rooms and smoking-rooms and the usual passage-way P and the other being made up of toilet-rooms, a state-room or drawing-room, and a similar passage P . Each of the passages $P P$ communicates at its inner end with the floor of the central part of the car by means of a flight of steps S leading downward into the central aisle of the car, stationary seats $C C$ being placed on either side the aisle in the manner common in sleeping-cars. Above the seats and preferably separated by a space of about the same width as the aisle between the seats $C C$ are two galleries $D D$ extending from end to end of the central portion of the car and provided at their inner edges with rails $R R$ and ornamental panels of any suitable design. One of these galleries is connected at one end with one of the passage-ways P by means of a flight of steps S' , and the other gallery is connected at the opposite end with the opposite passage-way P by means of steps S^2 , each of the galleries being thus accessible at one end, and its opposite end being shut off by means of a short rail R' at right angles to the main rail R .

It should be noticed that the location of the steps $S' S^2$ is such that they do not interfere with the usual passage-ways at the ends of the ordinary sleeper, as the space occupied by these steps has been ordinarily used for the location of linen-closets. Inasmuch

as it is possible to provide steps at only one end of each of the galleries without interfering with the accepted arrangement of sleeping-cars, I have found it necessary to provide
 5 a bridge or bridges connecting the two galleries to avoid the inconvenience that the gallery passengers otherwise would suffer in getting from their berths to the respective toilet-rooms at the opposite ends of the car. I prefer to use a single bridge at the center of the
 10 car, and the same is shown in the drawings at U and is made slightly crowning, both to gain increased height of its central portion and also to give it a pleasing and ornamental appearance.

The gallery-space along each of the walls of the car is divided into sections by stationary partitions H, placed immediately above the backs of the seats C C below, and these
 20 partitions are preferably formed with pockets h, Fig. 8, to receive sliding partitions H', adapted to be drawn out for the purpose of extending the partitions. In the sections thus formed are placed sofas G, secured against
 25 the wall and provided with hinged sections G', adapted to be dropped down, as shown in Figs. 5 and 6, or raised, as shown in Figs. 7, 8, and 9. Each of the hinged sections G' forms when down the front of the sofa; but
 30 when raised it forms, with the stationary part G of the sofa, a surface of sufficient width for a bed. Each of the hinged sections is provided with braces g, whose front ends are pivoted to the section near its free edge, and these
 35 braces are notched at their free ends to engage a longitudinal rod g', and thus support the hinged section when fully raised. The sofas are so constructed that when the hinged sections are raised there may still be sufficient
 40 space for a passage-way between the edge of each of the sofas and the rail of the gallery, so that when any or all of the gallery-berths are made up or occupied the others may be accessible by means of the gallery.

45 The sections beneath the gallery may be separated by partitions in any desired manner; but I prefer to make the divisions by means of stationary brackets F, Fig. 7, and swinging panels F', lying in pockets between
 50 the backs of the seats and so pivoted as to conform exactly to the surface of the edge of the bracket when raised and to drop into the pocket when lowered. I have found it convenient to provide a series of shelves E, hinged

to the wall in the various sections, the free
 55 edges of the shelves being adapted to be swung upward and fastened to the gallery in the manner shown in Fig. 5 or to be dropped down, as shown in Fig. 6, each of the shelves when
 60 dropped down being a convenient support for the bedding and also for clothing, which may be laid at full length upon it.

The advantages of the use of stationary galleries supporting the upper berths in a sleeping-car in substantially the manner shown in
 65 the drawings will be apparent to any person familiar with the annoyance of climbing into the upper berth of a sleeping-car by means of a movable step-ladder in a manner heretofore necessary. These galleries will be so readily
 70 accessible by means of the stairways shown as to be fully as convenient as the main floor, and since they are provided with windows W', adapted to be lowered into pockets w in the
 75 wall, they will be as well lighted and ventilated, and consequently as comfortable in every way, as the section beneath the gallery.

I claim as new and desire to secure by Letters Patent—

1. The combination, with the car-body having the depressed central floor, of the galleries
 80 above said floor, the seats beneath the galleries, brackets F immediately above the backs of the seats and beneath the gallery, and swinging panels F', adapted to lie in
 85 pockets between the backs of the seats when not in use and to be swung upward and fitted against the edges of the brackets for the purpose of dividing the car in sections, substantially as described.

2. The combination, in a car having the enclosed apartments at each end and the passages P around the same, of galleries along
 90 the opposite sides and the steps S' S², leading to said galleries, respectively, and arranged
 95 at the ends of the passages P, substantially as described.

3. The combination, in a car having the enclosed apartments and the passages P at the
 100 opposite ends, of the oppositely-arranged galleries provided with steps S' S² at the ends of the passages P and a bridge connecting the two galleries at some intermediate point, substantially as described.

ARTHUR FORDHAM.

Witnesses:

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 A. I. H. EBBESEN.