

(No Model.)

2 Sheets—Sheet 1.

L. C. KENDALL.
FREIGHT CAR.

No. 594,022.

Patented Nov. 23, 1897.

Fig. 1.

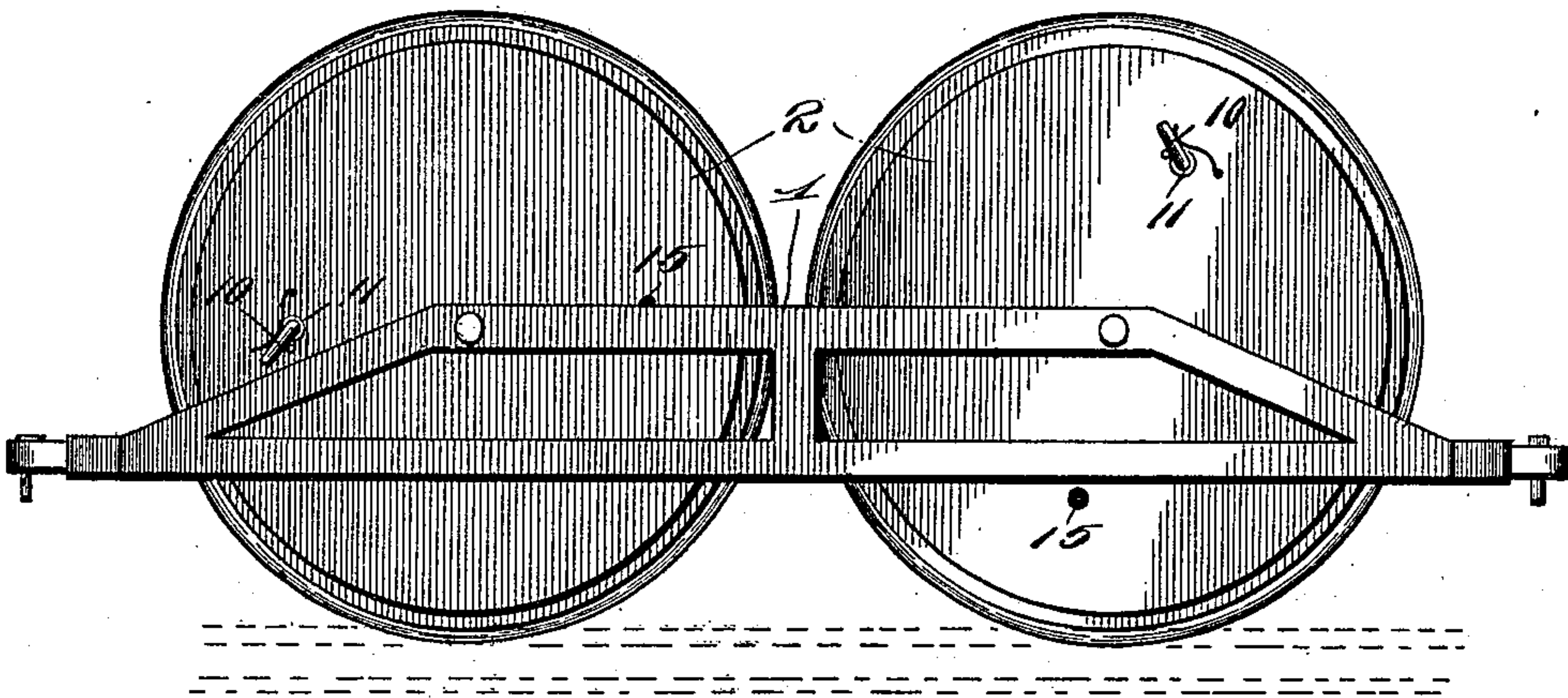
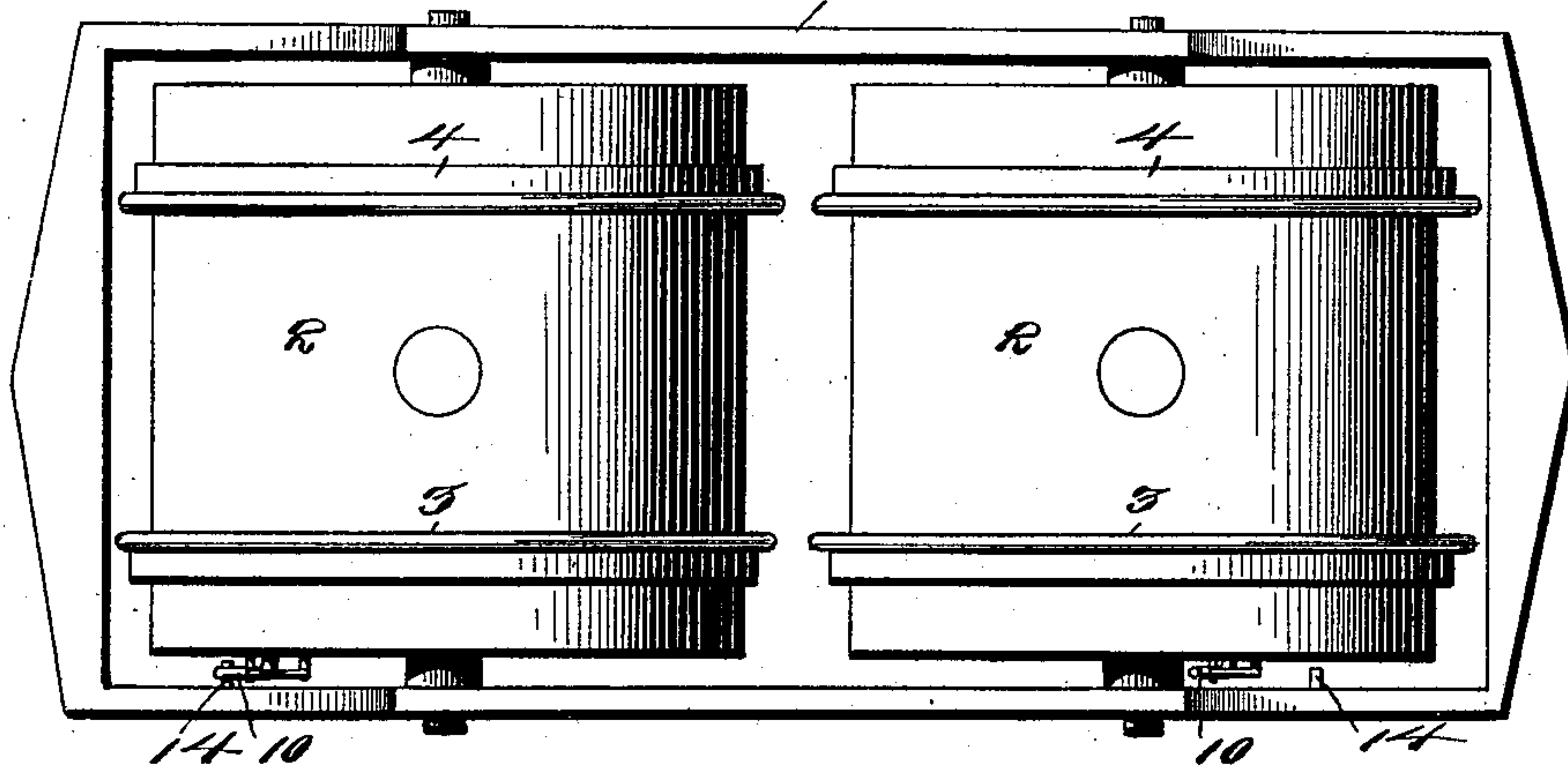


Fig. 2.



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Fig. 3.

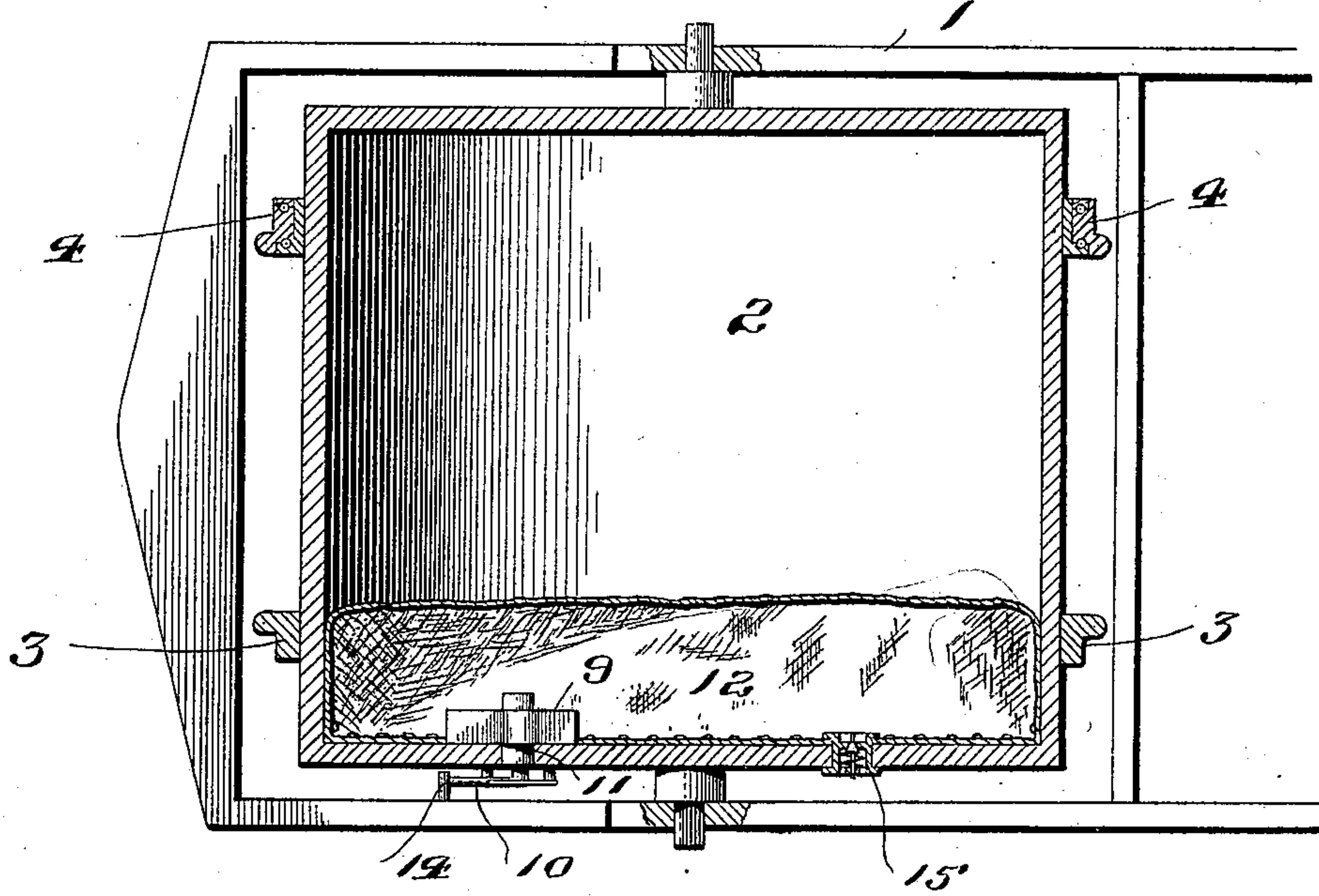


Fig. 4.

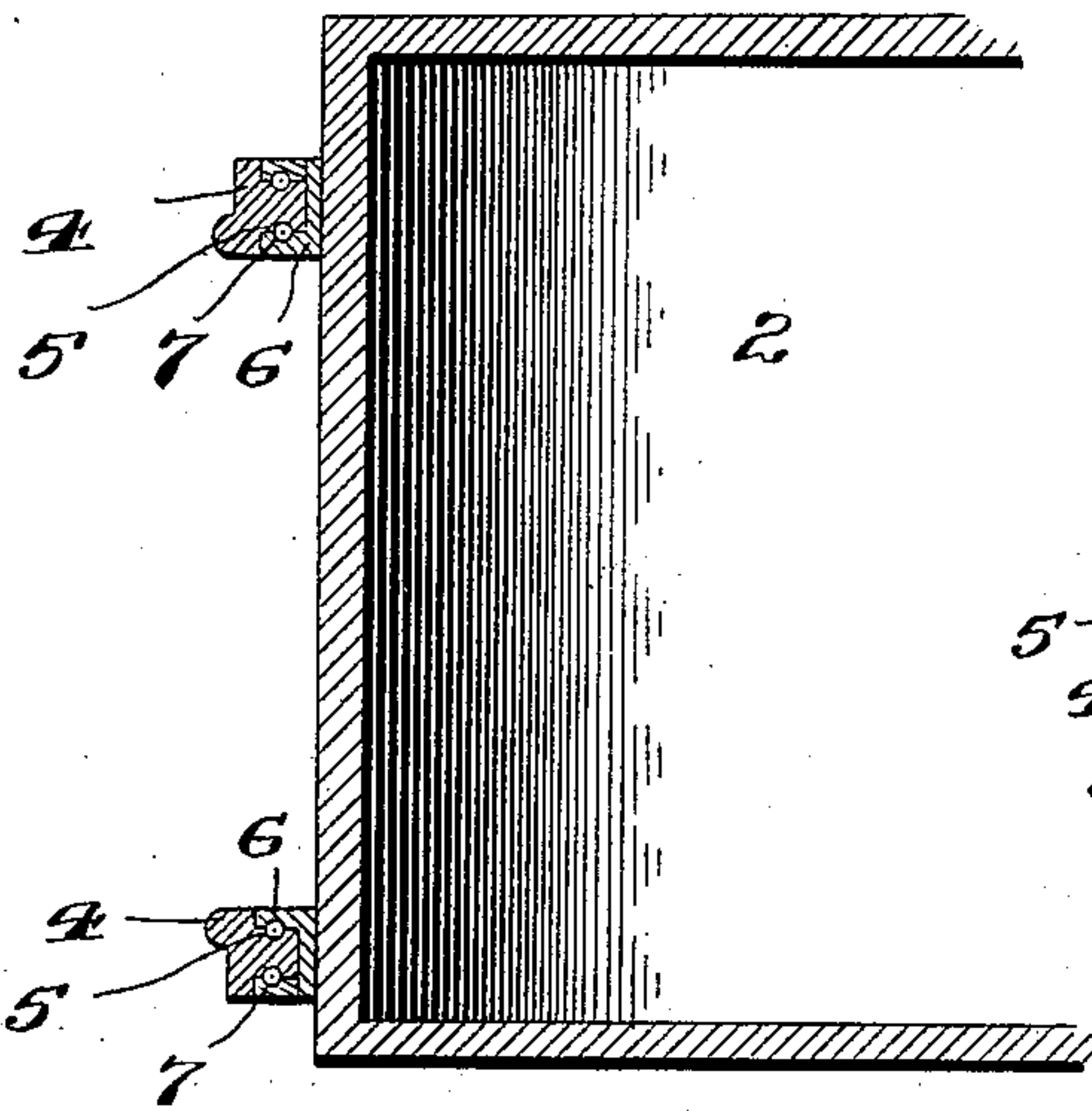
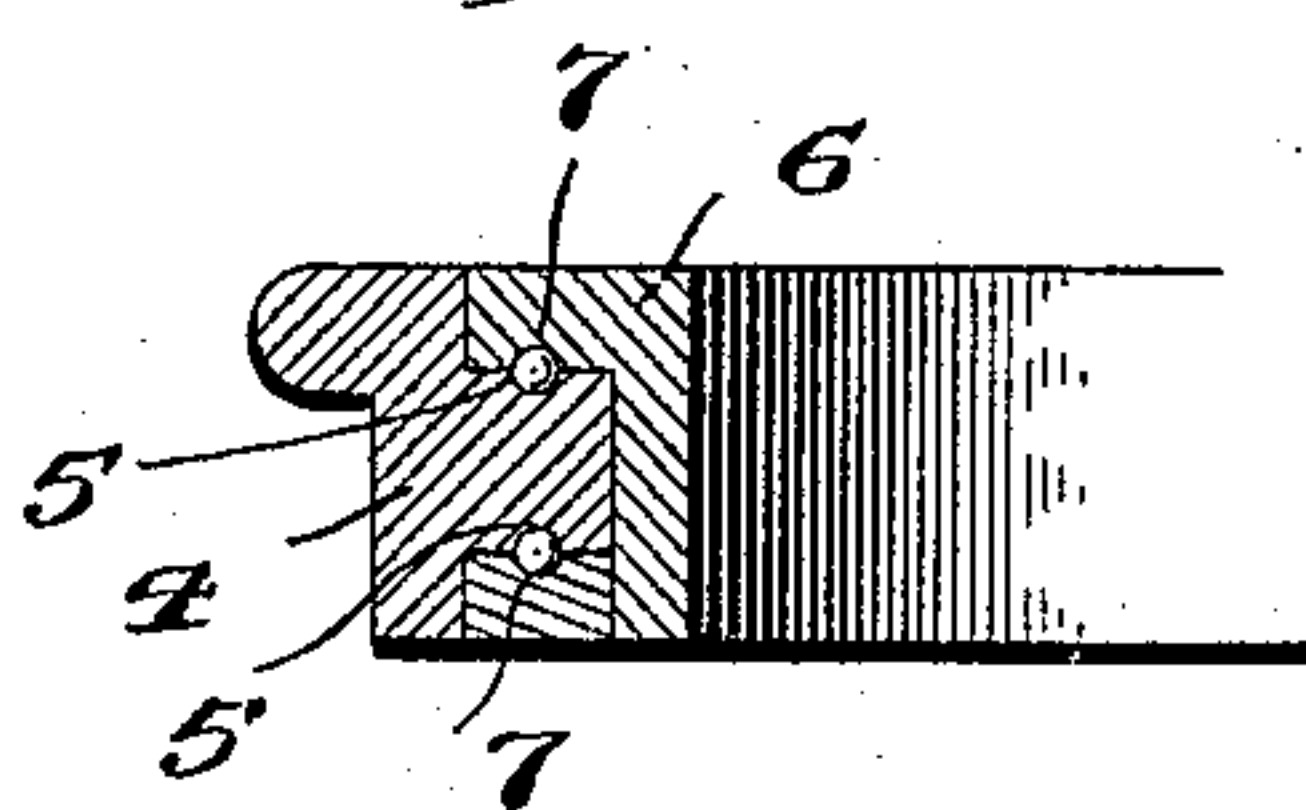


Fig. 5.



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UNITED STATES PATENT OFFICE.

LEMUEL C. KENDALL, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO CHARLES L. YOUNG, OF SPRINGFIELD, MASSACHUSETTS.

FREIGHT-CAR.

SPECIFICATION forming part of Letters Patent No. 594,022, dated November 23, 1897.

Application filed December 15, 1896. Serial No. 615,748. (No model.)

To all whom it may concern:

Be it known that I, LEMUEL C. KENDALL, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Freight-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in freight-cars. In the previous application filed June 8, 1896, and bearing Serial No. 594,728 I have provided a freight-car, especially adapted for a grain-car, of a cylindrical form, the axes of said cylinder running at right angles to the line of the track upon which the car is designed to move. I herein provide an improved wheel-flange adapted to be used with said car.

In the accompanying drawings, Figure 1 is a side elevation of the car equipped with my device. Fig. 2 is a top plan view thereof. Fig. 3 is a section through my improved flange, and Fig. 4 is a view showing a modified form of my device. Fig. 5 is an enlarged detail section.

The numeral 1 indicates a supporting-frame, to which are attached the cylindrical car-bodies 2. I preferably attach these bodies so that they will rotate about their axes, and they are so illustrated in Fig. 1, while in Fig. 4 they are shown immovably fixed with reference to the same. Within these car-bodies I propose to use the device claimed in my former patent or the means hereinafter described in order to keep the grain in place. The flanges 3 extend around the car-body and are made in the usual manner, while the flanges 4 are made with roller-bearings. The flange 4 has in the sides thereof two annular grooves 5 and is adapted to rotate relative to an annular bearing 6, which is provided with similar grooves 7. Balls 8 lie partially within grooves in the flanges and their complementary grooves in the bearings. In the form illustrated in Figs. 1 and 2 it is only necessary to have one of the flanges on the car-body of this latter description, this being provided in order to allow for the movement on going around curves. In the form illustrated

in Fig. 4, however, it is necessary that all of the flanges should consist of the roller-bearing type, as in this latter form the car-body itself cannot turn over and must be provided with an approximation of wheels.

I will now describe my improved means for retaining the grain in position in the car-body and filling up all space made by the settling thereof. In the sectional view is shown an air-pump 9, provided with a handle 10, which projects through the side of the car-body, as at 11. I preferably use a pump of the reciprocating rotary class, and in this event provide the shaft with a handle extending at right angles thereto, as shown in the drawings. This pump communicates with a rubber bag 12, and upon the frame is a lug 14, adapted to engage the handle of the pump.

At 15 is shown a safety-valve, of which any form desired may be employed, that herein shown being of the spring-pressed type. With the rotation of the car-body the handle of the pump will strike against the lug and thus actuate the pump and force air into the bag. It is obvious that this construction will replace any space caused by the settling of the grain and will maintain a constant pressure against the body thereof, thus holding it from being broken by the constant tumbling. In the form shown in Fig. 4 it is not necessary to show any device of this description, as the car-body does not rotate and the grain is not thrown about by the motion of the car.

Suitable doors or manholes may be provided where deemed necessary in the car-body.

It is obvious that I have provided and set forth an improved grain-car which will readily move around curves or on straight tracks with the use of little power.

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

1. In a grain-car, the combination with a cylindrical car-body, of flanges extending therearound adapted to roll upon a track, and inflatable means contained in said car and secured along one end thereof whereby the space unoccupied by grain may be filled, and a safety-valve operatively connected with said inflatable means.

2. In a grain-car, the combination with a cylindrical car-body, having flanges mounted thereon and extending therearound, of an air-tight bag of flexible material contained
5 within the car-body and means whereby the same may be automatically inflated with air.

3. In the herein-described freight-car, the combination with a cylindrical body having a flexible receptacle therein and means for
10 automatically inflating the same, a wheel comprising a grooved trough of annular form carried upon said car, an annular flange fitting

within said trough provided with complementary grooves, and balls within said grooves constituting a ball-bearing adapted to permit the rotation of the flange relative to the
15 trough.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

LEMUEL C. KENDALL.

Witnesses:

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