

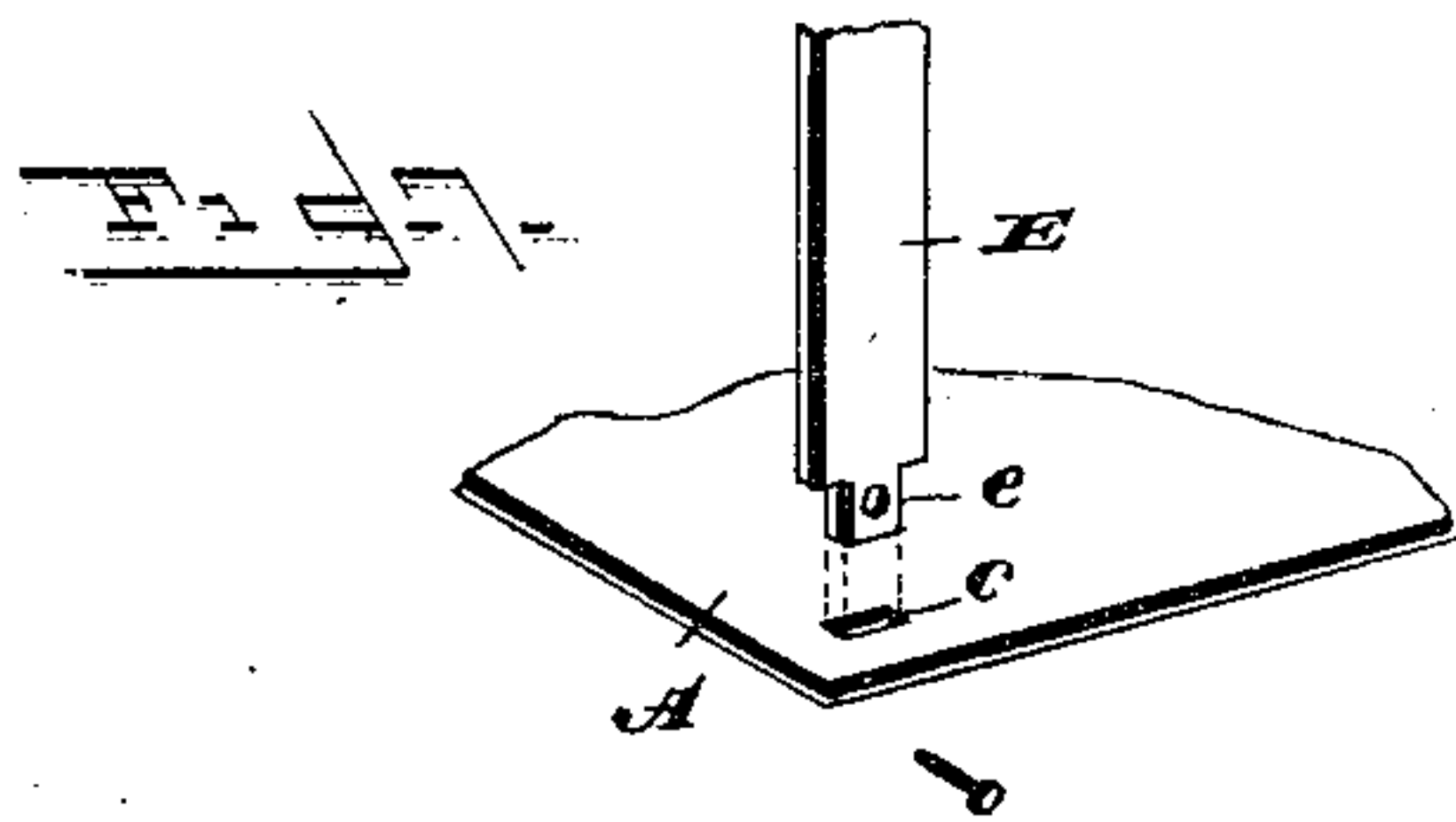
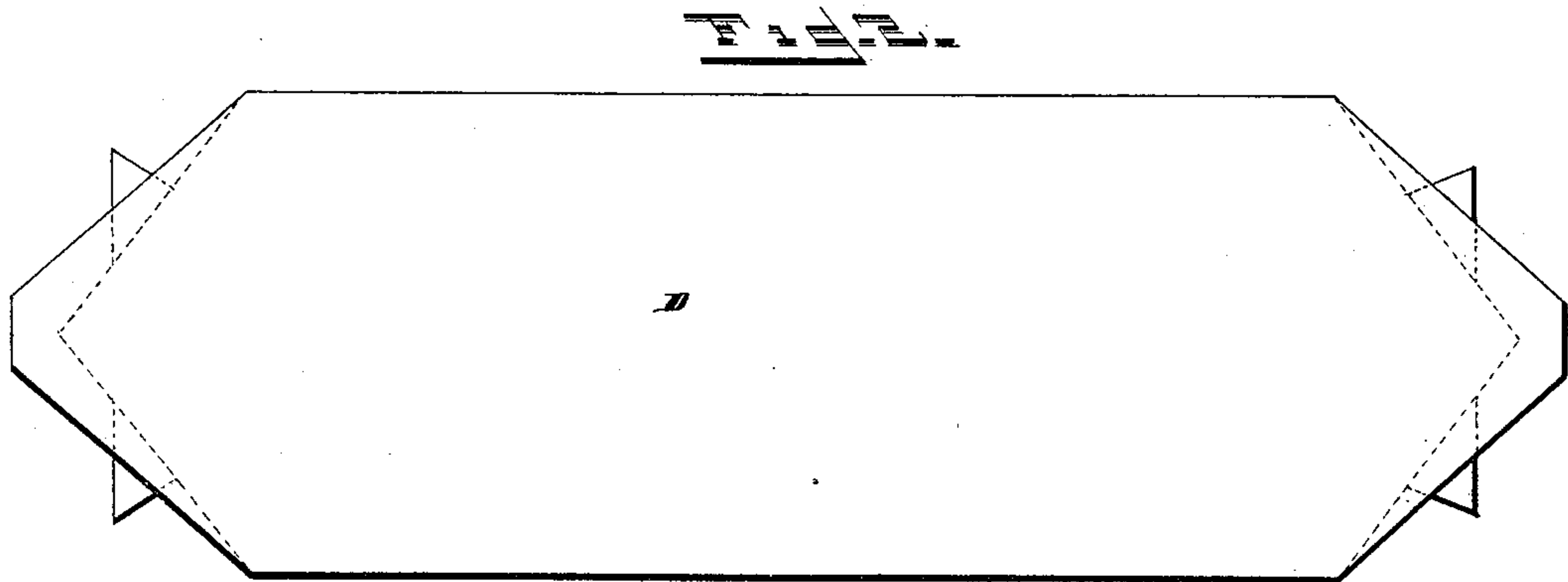
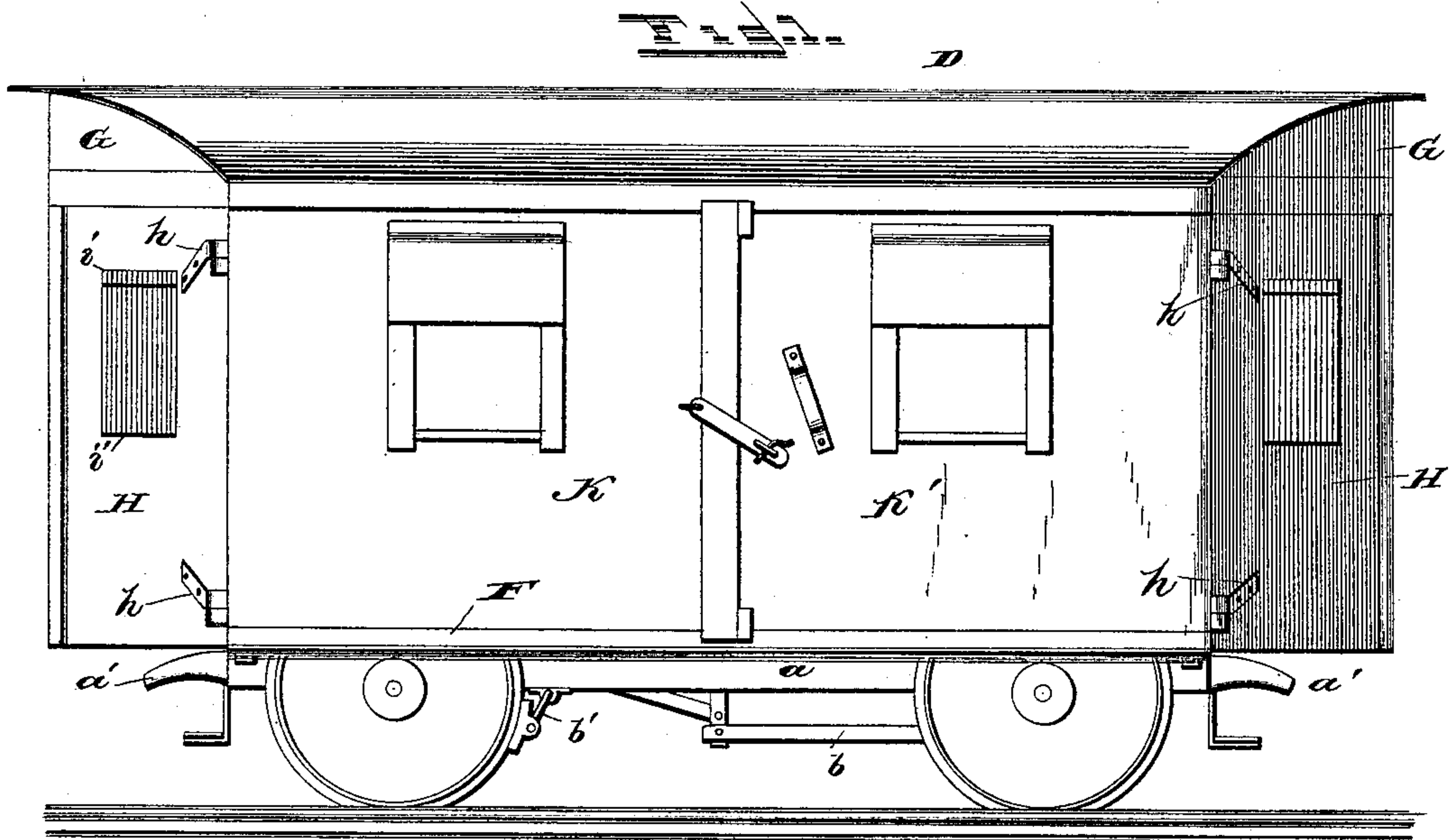
(No Model.)

2 Sheets—Sheet 1.

A. F. KUHL.
HAND CAR.

No. 405,893.

Patented June 25, 1889.



Witnesses
L. S. Elliott,
W. Johnson

Albert F. Kuhl

Inventor

By his Attorneys

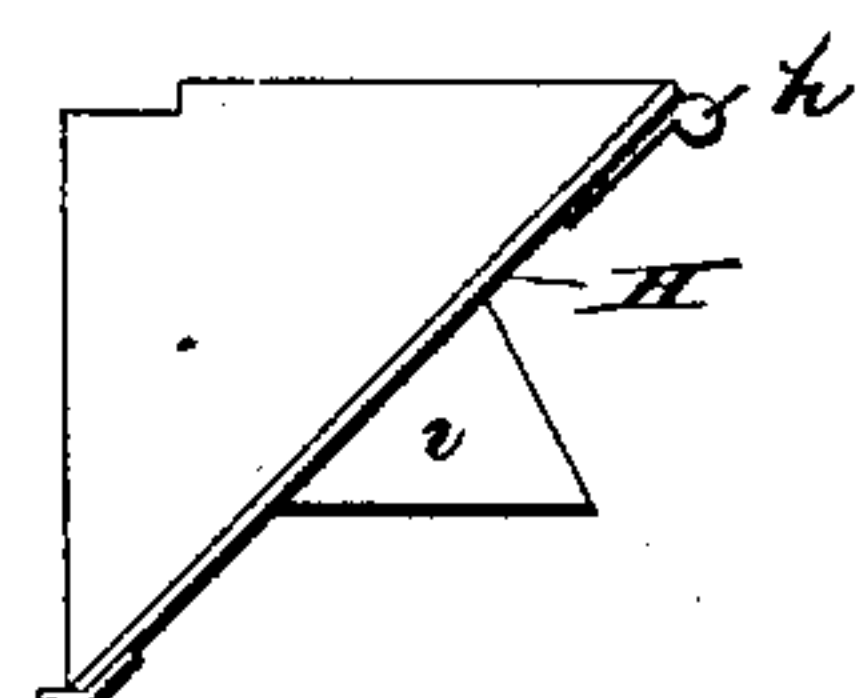
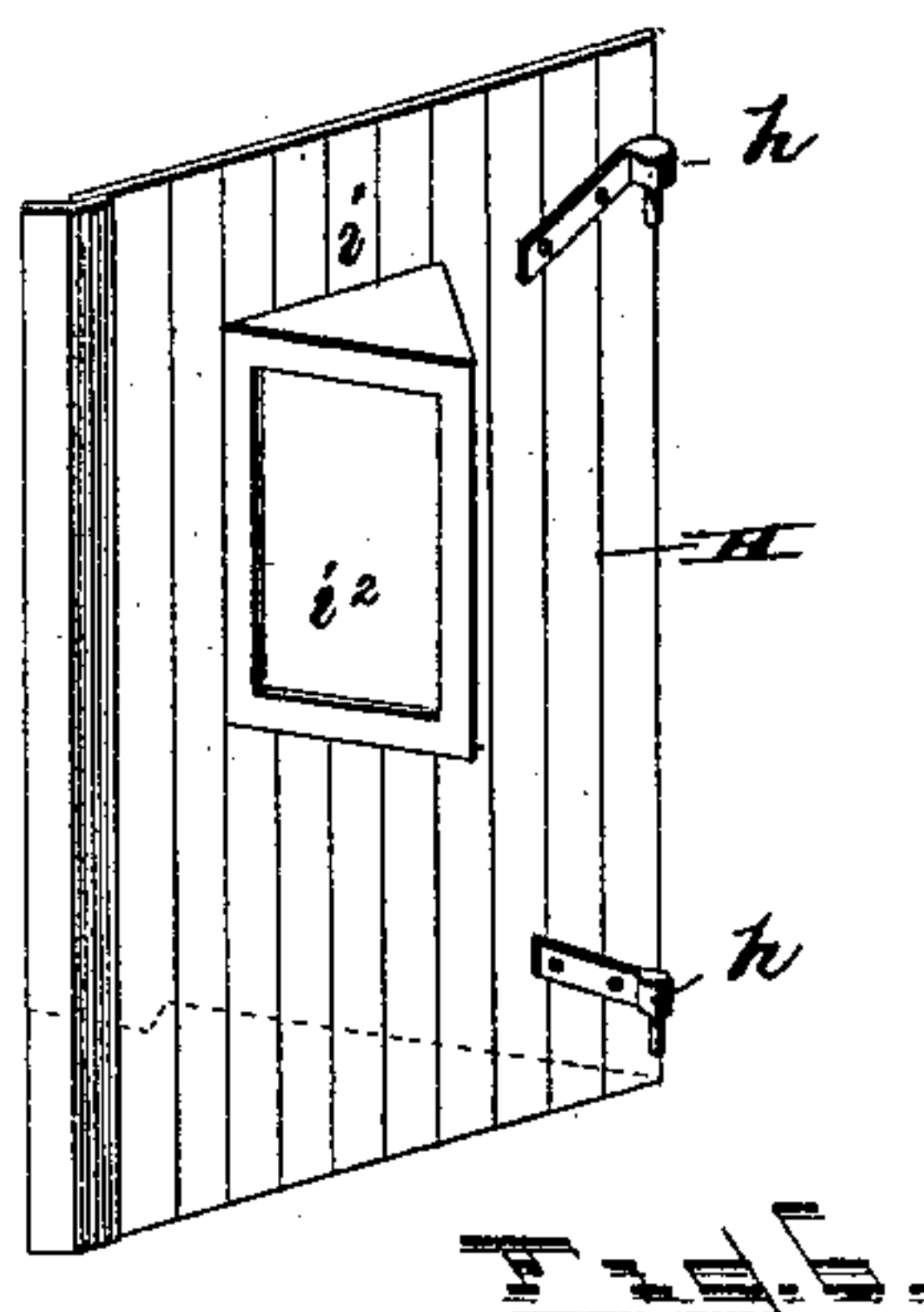
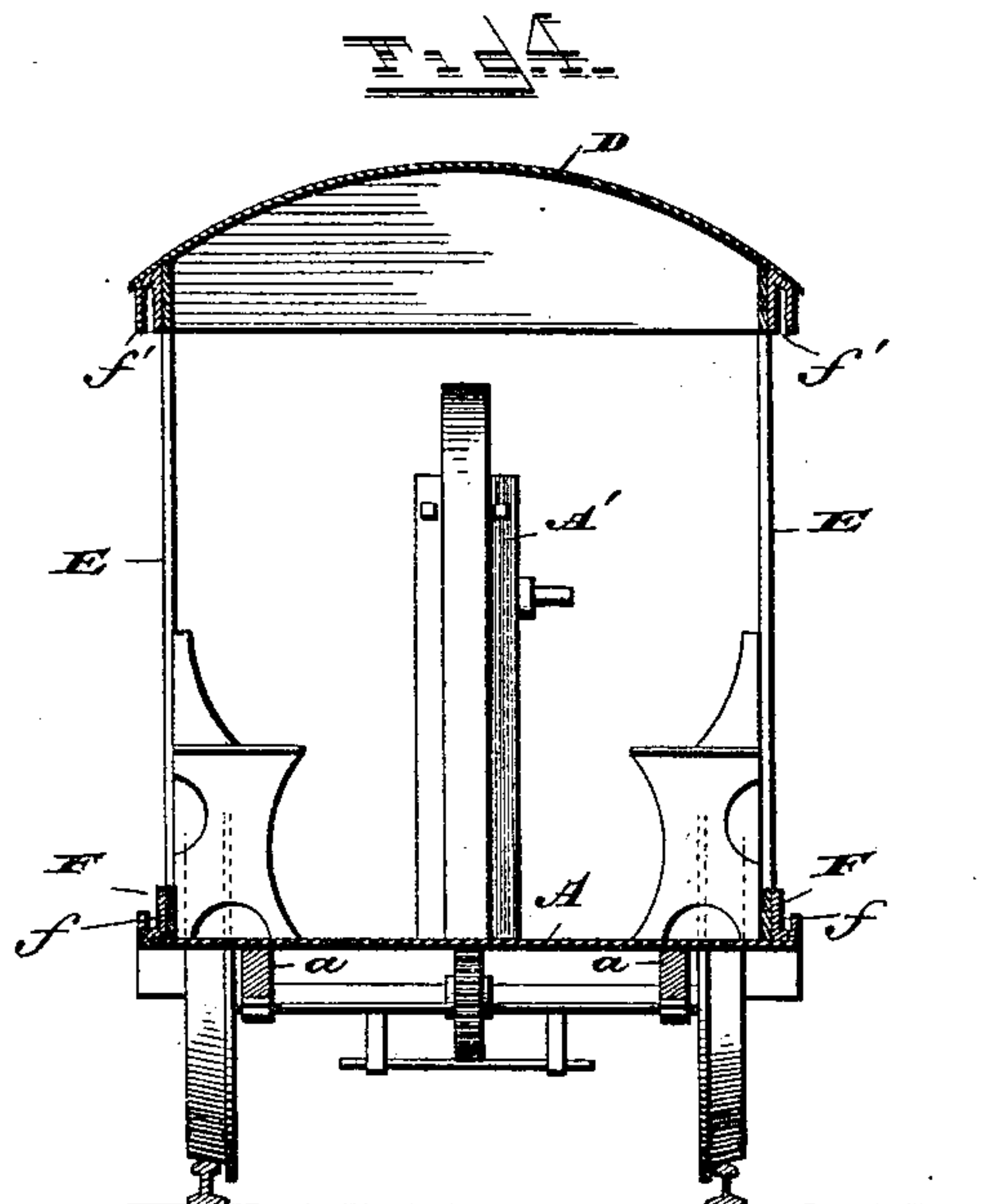
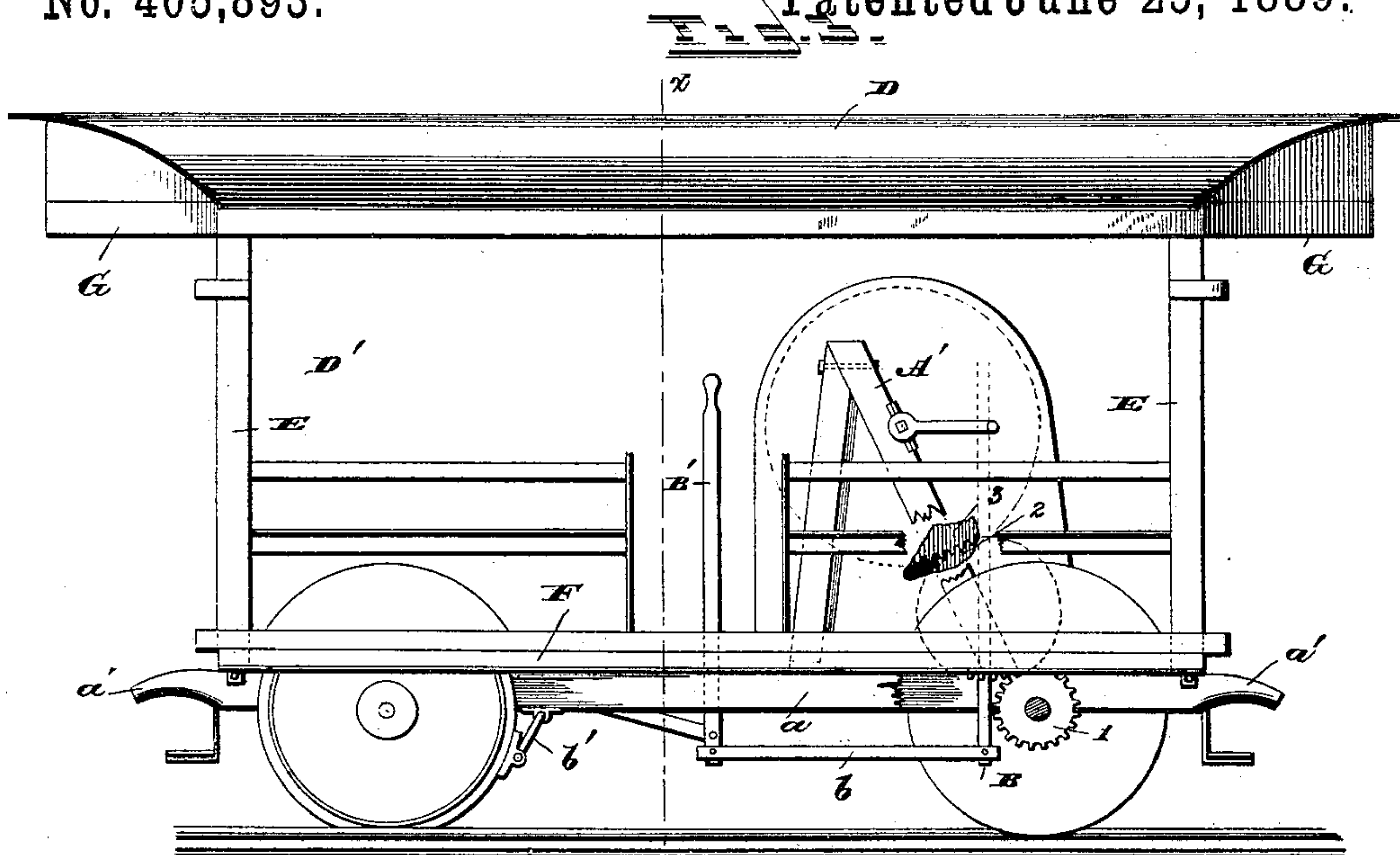
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UNITED STATES PATENT OFFICE.

ALBERT F. KUHL, OF VAN WERT, OHIO.

HAND-CAR.

SPECIFICATION forming part of Letters Patent No. 405,893, dated June 25, 1889.

Application filed April 4, 1889. Serial No. 305,925. (No model.)

To all whom it may concern:

Be it known that I, ALBERT F. KUHL, a citizen of the United States of America, residing at Van Wert, in the county of Van Wert and State of Ohio, have invented certain new and useful Improvements in Hand-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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in hand-cars; and it consists in the special construction and arrangement of a superstructure therefor, as will be hereinafter fully set forth, and particularly pointed out in the claims.

The object of my invention is to provide a superstructure or housing for hand-cars which can be readily removed therefrom to provide either an open or closed car.

I accomplish the above object by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a hand-car, showing the housing applied thereto to provide a closed car. Fig. 2 is a plan view. Fig. 3 is a side view showing the end and side sections removed. Fig. 4 is a sectional view through the line xx of Fig. 3. Fig. 5 is a detail perspective view of one of the end doors. Fig. 6 is a detail plan view of one of the end doors. Fig. 7 shows the attachment of the post to the car-floor.

A refers to the floor of the car-body, which is suitably braced by longitudinal stringers a , which terminate in handles a' for lifting the car when it is desired to remove the same from the track. These stringers have bolted thereto boxes forming bearings for the axles, and the floor is further braced by additional longitudinal stringers or beams and by transverse beams. One of the axles is provided centrally with a cog-wheel 1, which is rigidly keyed thereon and meshes with a larger wheel 2, supported between the inclined beams of the frame A' , and the wheel 2 meshes with a still larger wheel 3 above the

same, which is driven by suitable crank-handles. The driving mechanism, consisting of the cog-wheels 1, 2, and 3, is suitably covered or protected by a casing, and the supporting-frame is rigidly bolted to the floor A and to the stringers beneath the same. In order that the driving-axle may have a slight lateral play, the cog-wheel 1, attached to the axle, is made quite broad, so that should the axle move laterally it will continue to mesh with the wheel 2 above.

B and B' refer to brake-levers pivoted to the floor-boards, to the lower ends of which is pivoted a bar b , connecting them together. One of these levers has attached thereto a link which engages with the central crank-arm of a brake-bar b' , which carries shoes which engage with the tread of one set of wheels. One of the brake-levers B is located immediately in rear of the driving mechanism, while the other lever B' is to one side of the same, so that either lever may be grasped.

The floor-board A extends beyond the stringers a and also beyond the transverse end beams, and this floor-board is provided at its four corners with openings or slots c c' , through which pass tenons formed on the corner-posts of the top or housing frame. The wheels pass through openings in the floor-boards, and these openings are protected by suitable shields, which lie under the benches or seats. The ends of the car are provided with steps, as shown.

The car hereinbefore described is adapted to be used without the superstructure or housing as an ordinary hand-car, and may be used for all the purposes to which such a car is usually put.

D refers to the roof, the ends of which taper nearly to a point, and this roof is rigidly secured to a rectangular frame D', provided with supporting-posts E, which are attached to the floor of the car by mortise and tenon, the tenon e having a perforation through which a pin passes for securing the posts securely in place. The corner-posts are further braced at their lower ends by longitudinal strips F, which are grooved, as shown at f , and similar grooved strips f' are secured to the rectangular frame D', which, taken together, form ways for holding the sides in

place. To the roof and frame thereof are rigidly secured depending and tapered end pieces G G, which not only serve to support the overhanging ends of the roof, but also form frames against which the end doors abut. These end doors H H are hinged to suitable eyes secured to the corner-posts, with which the hinges h h attached to the doors engage. The doors H H each carry an angular bottom plate H', which plates, when the doors are closed, form a continuation of the floor, and the doors are also provided with windows set in frames, the upper and lower portions i and i' of which are angular, while the part i² stands at nearly right angles with the door, so that the window will be at right angles with the sides of the car when the doors are closed, thus permitting a free view ahead. Latches are provided for holding the doors closed, which latches may be located either on the doors or upon the inner edges of the end pieces G.

K K' refer to the side sections of the car, each of which are provided with windows and a suitable hasp and staple for securing the sides to each other, and, if desirable, these sides may be used as doors, as they are free to slide in the grooved strips.

The superstructure or housing may be made of either light metal plates or thin boards, and a car constructed as hereinbefore described may be either used as an ordinary hand-car or for carrying passengers, and for inspecting the road.

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

1. In a car provided with hand propelling mechanism, substantially as shown, brake-levers B B', one located to one side of the propelling mechanism and the other to the rear thereof, the lower ends of said brake-levers being connected by a bar, and a link for connecting one of the levers to a crank-rod car-

rying brake-shoes, substantially as shown, and for the purpose set forth.

2. In a hand-car, a superstructure or housing therefor, consisting of a top connected to a frame for supporting and bracing the same, side strips D and F, having grooves ff for supporting side sections, substantially as shown, and for the purpose set forth.

3. In a car, a roof having front and rear portions which extend beyond the frame thereof, angular depending end pieces, the supporting corner-posts, and end doors hung to the corner-posts and provided with angular bottom plates, the parts being organized substantially as shown.

4. In a car, a removable superstructure supported upon corner-posts, said corner-posts being provided with eyebolts, and doors hinged thereto, said doors being adapted to meet in front of the car, substantially as shown.

5. In a car, end doors constructed substantially as shown and provided with angular extensions which, when the doors are closed, form a continuation of the floor-boards, for the purpose set forth.

6. In combination with a car, the end doors supported upon hinges and provided at their lower ends with inwardly-extended pieces, which are adapted to meet when the doors are closed, said doors having windows supported in angular frames, substantially as shown, and for the purpose set forth.

7. In combination with a housing for hand-cars, end doors hinged to the side frames so as to meet beyond the car-body, the doors being at an angle, as shown, with the sides of the car.

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

ALBERT F. KUHL.

Witnesses:

C. F. MANSHIP,
M. B. EVERS.