

(No Model.)

2 Sheets—Sheet 1.

J. C. WANDS.
CAR DOOR.

No. 424,384.

Patented Mar. 25, 1890.

Fig. 1

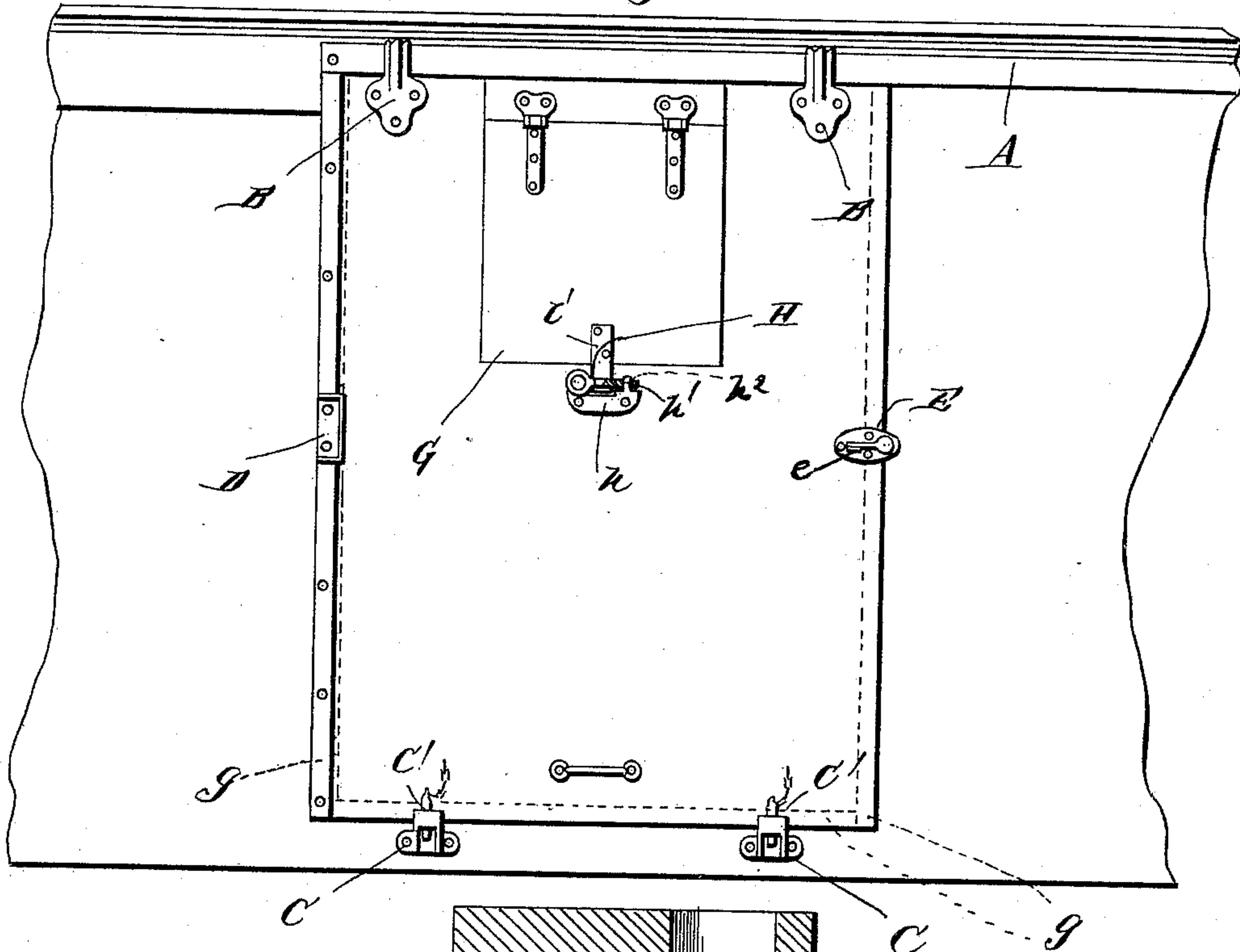


Fig. 2

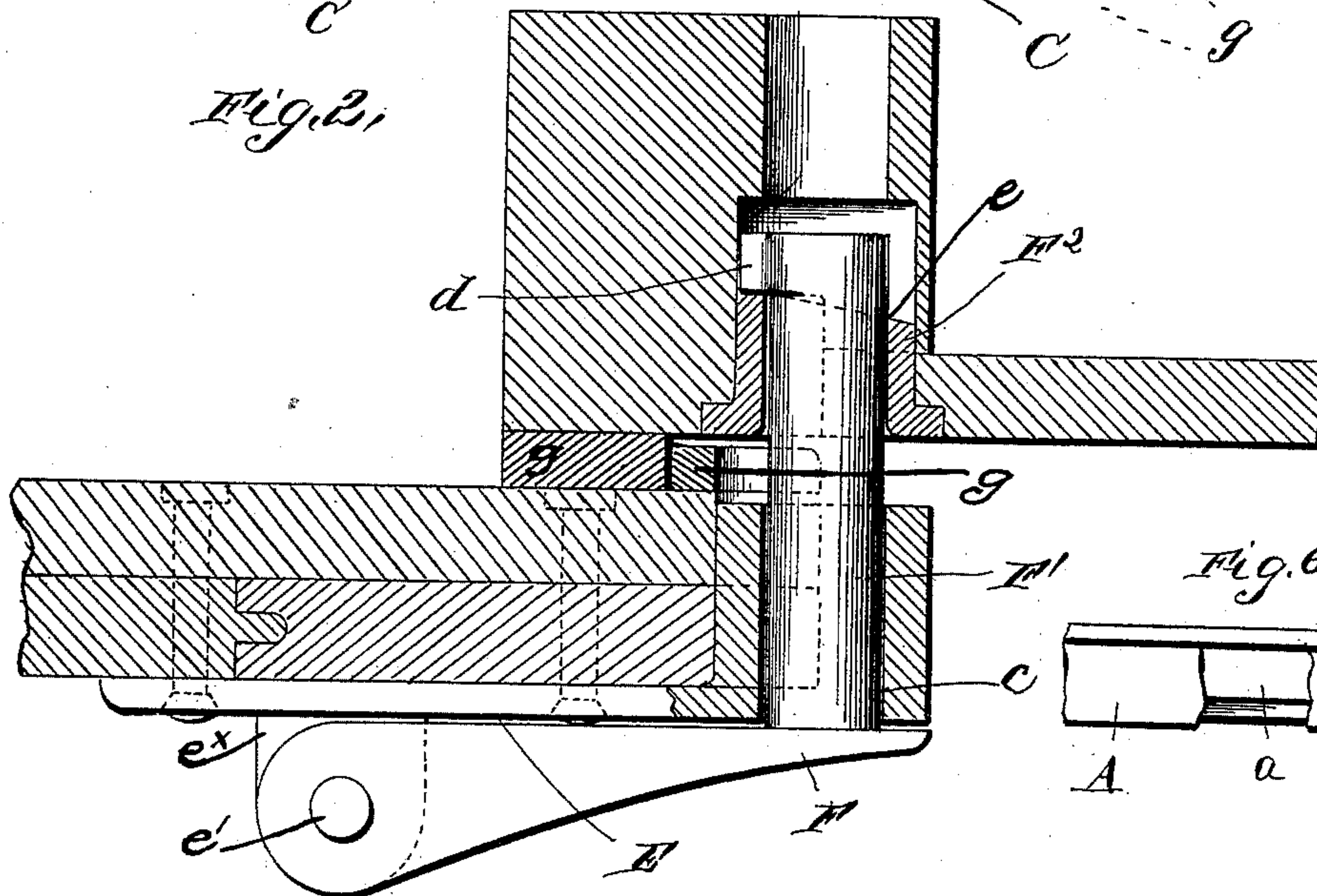
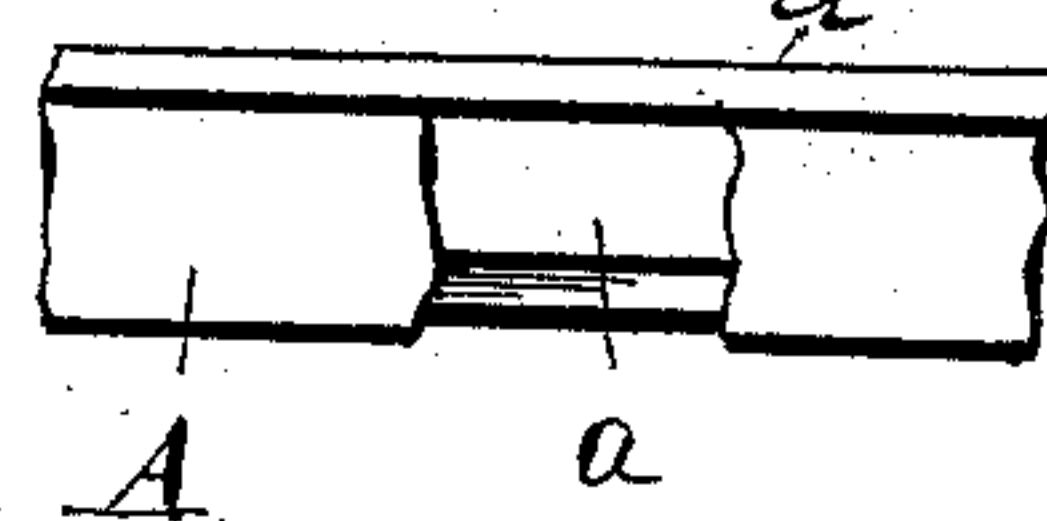


Fig. 6



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his Attorney

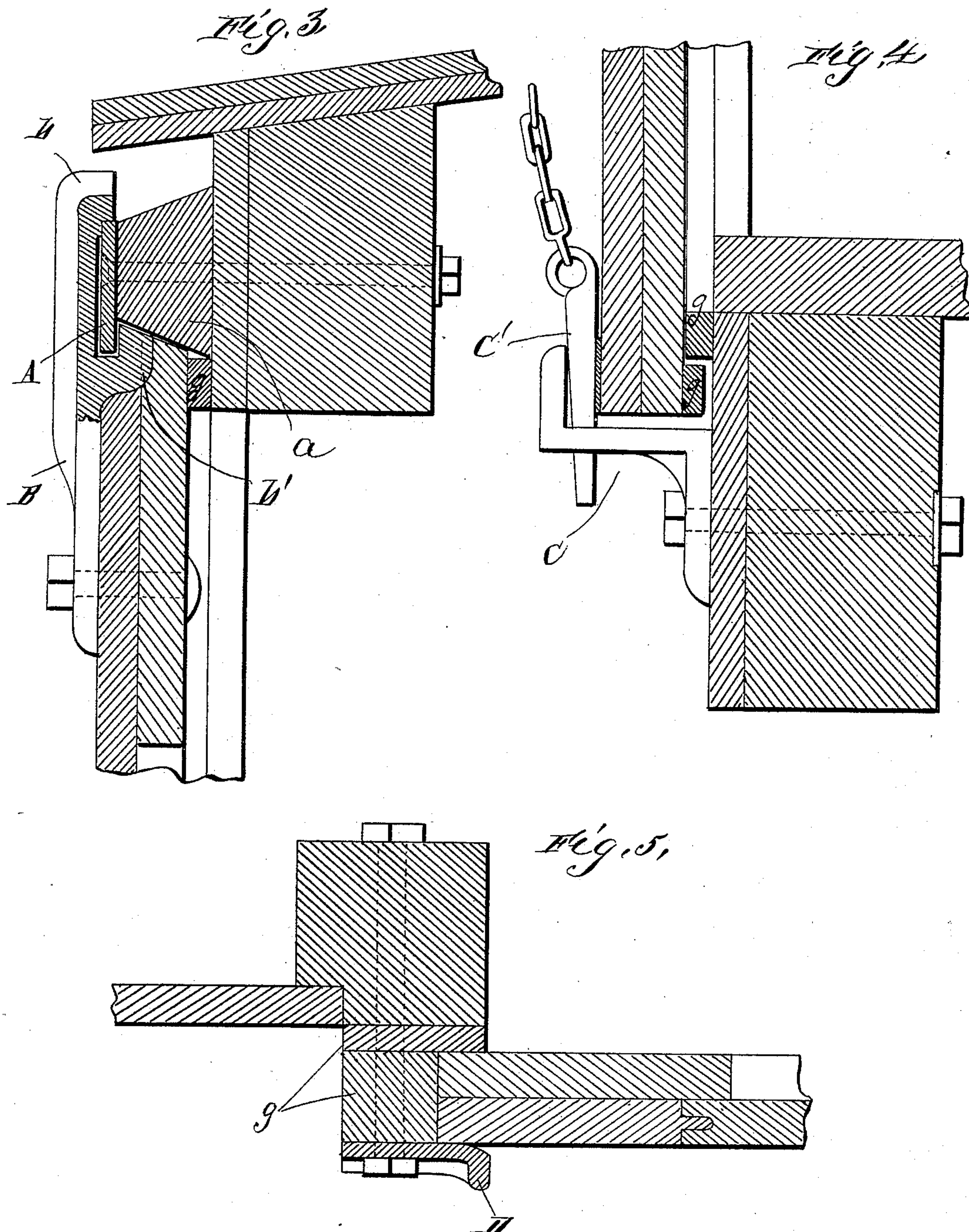
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WITNESSES

B. Taylor
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UNITED STATES PATENT OFFICE.

JOHN CLARK WANDS, OF ST. LOUIS, MISSOURI.

CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 424,384, dated March 25, 1890.

Application filed July 12, 1889. Serial No. 317,282. (No model.)

To all whom it may concern:

Be it known that I, JOHN CLARK WANDS, a citizen of the United States, and a resident of St. Louis, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Car-Doors; and I do 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 of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a front view illustrating this invention. Fig. 2 is a sectional view. Figs. 3, 4, and 5 are sectional views of details of the construction. Fig. 6 is a detail sectional view of the same.

This invention relates to certain improvements in car-doors, and has for its object to render the same perfectly storm and spark proof; and it consists of the novel construction and combination of parts, as will fully appear from the following description and accompanying illustrations.

In carrying out my inventions I provide a cleat or guide-bar A, which is bolted to a hard-wood strip *a*, fastened to the side of the car at its upper edge, it may be, or, as it is usually practiced, by the same bolts securing the said strip and guide-bar in place.

B B are the door-hangers applied to the upper edge of the door and having an upper inwardly-extending arm *b* resting upon the upper edge of the guide-bar A, and a lower right-angled or inward and upward extending arm *b'* taking in under and behind the said guide-bar and bearing against the strip *a*. The inner ends of the arms *b* of the hangers B face rearward and not downward, thus dispensing with a pendent portion standing in behind the rail at its upper edge, which would interfere with the removal of the car-door when required with the facility that my door can be removed. Thus it will also be seen that the door is caused to stand in under and be protected at its upper edge by the strip bearing the guide-bar from the weather.

The bottom edge of the door is held by means of fastenings consisting of right-angled bracket plates or castings C C, bolted to

the car at the lower edge of the door-opening, and keys or wedges C' C', conveniently connected to the door by chains and adapted to be inserted in between the vertical portions of said bracket-plates and the door and entering openings or apertures in the horizontal portions of said bracket-plates.

To the outer side of the door-stop is applied or bolted about centrally thereof a plate D, having its inner vertical edge turned outward, which is adapted to clamp or wedge the door in place at its forward edge.

To the side of the car-door at its rear edge is bolted a plate E, which has in its rear end an opening or aperture *c*, which receives a bolt-like projection or pin F' of a lever F, said pin or projection entering a socket F², let into and fastened to a studding of the car. This pin or projection F' has a lateral stud *d* on its inner end, which engages an inclined shoulder or offset *e* of the socket F², near its inner ends, and by the action of these parts the door is drawn tightly in position at that edge, as well as at all other points, the lever F for the purpose being carried upward and around toward the front and its free end caused to rest upon the stop *e*^x, the stud *d* in the meantime engaging the inclined edge of the shoulder or offset *e*. A bolt or pin may be inserted in a hole *e'* in the free end of the lever F, engaging a registering hole in the stop *e*^x to prevent accidental displacement of the lever.

At the bottom and rear side edges of the door and to the same edges of its opening are bolted or applied abutting cleats or strips *g g*, rendering the door perfectly weather-tight at those points.

In the main door is hung a wicket or emergency-door G, to permit access to the car in event of inability to open the main door should it become jammed or wedged in place by the lodgment against it of the disarranged contents of the car. This door or wicket is held or secured in its closed position by a fastening-lever H, pivoted at one end upon a stud or pivot of a casting or bracket *h*, bolted to the main car-door, and of approximately U shape. The opposite end of the casting or bracket *h* has a stud *h'*, which enters an aperture *h*² in the free end of the lever H to lock it in position, said lever swinging down-

wardly and resting upon the bracket *h*, and the hasp or strap *i* on the wicket or emergency-door swinging inward and resting between the arms of said bracket and at right angles to and inward from the lever *II*.

From the foregoing it will be seen that I provide six solid fastenings, instead of only four, as heretofore, producing a cheap, strong, and effective car-door.

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

15 1. The car-door provided with a guide-bar and hanger, having the upper inwardly-projecting arms resting upon the upper edge of the guide-bar, and with lower right-angled arms extending under said guide-bar upward and behind said guide-bar, the inner ends of said upper arms facing rearward, and the project-

ing strips secured to the car and carrying the said guide-rail, substantially as set forth. 20

2. The combination of the car, the car-door, the hangers engaging the guide-bar of the door-overhanging strip, the right-angled brackets and their keys or wedges engaging 25 the bottom edge of the door, the plate applied to the rear edges of the door and having the lever provided with a pin having a lateral lug engaging the inclined shoulder or offset on a socket let into the car-studding, and the 30 plate applied to the stop for the forward edge of the door, substantially as set forth.

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

JOHN CLARK WANDS.

Witnesses:

JERRY MARTIN,

J. H. COGSWELL, JR.