

(No Model.)

J. C. BISHOP.
CAR DOOR FASTENER AND PROTECTOR.

No. 574,775.

Patented Jan. 5, 1897.

FIG. 1.

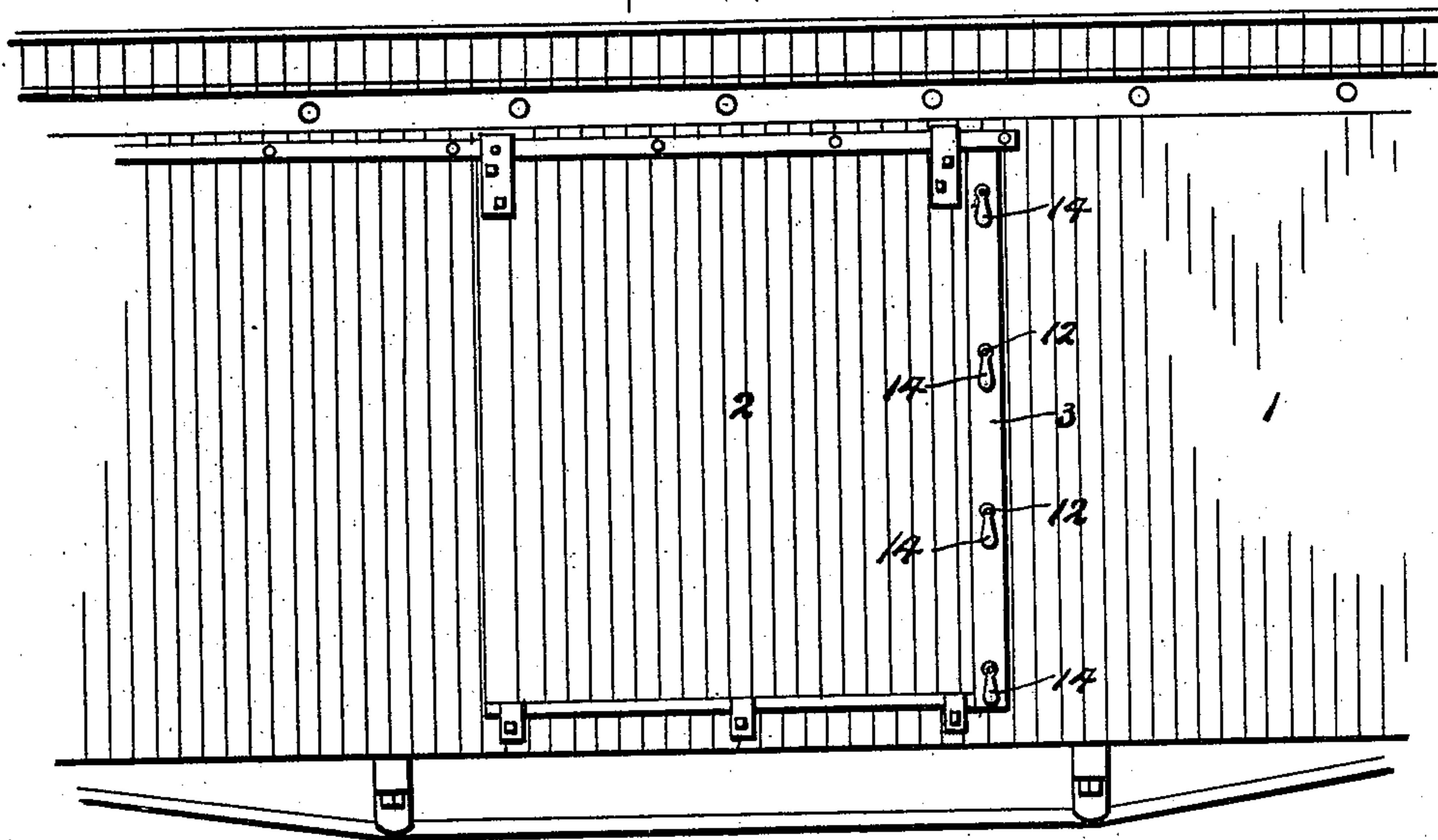


FIG. 2.

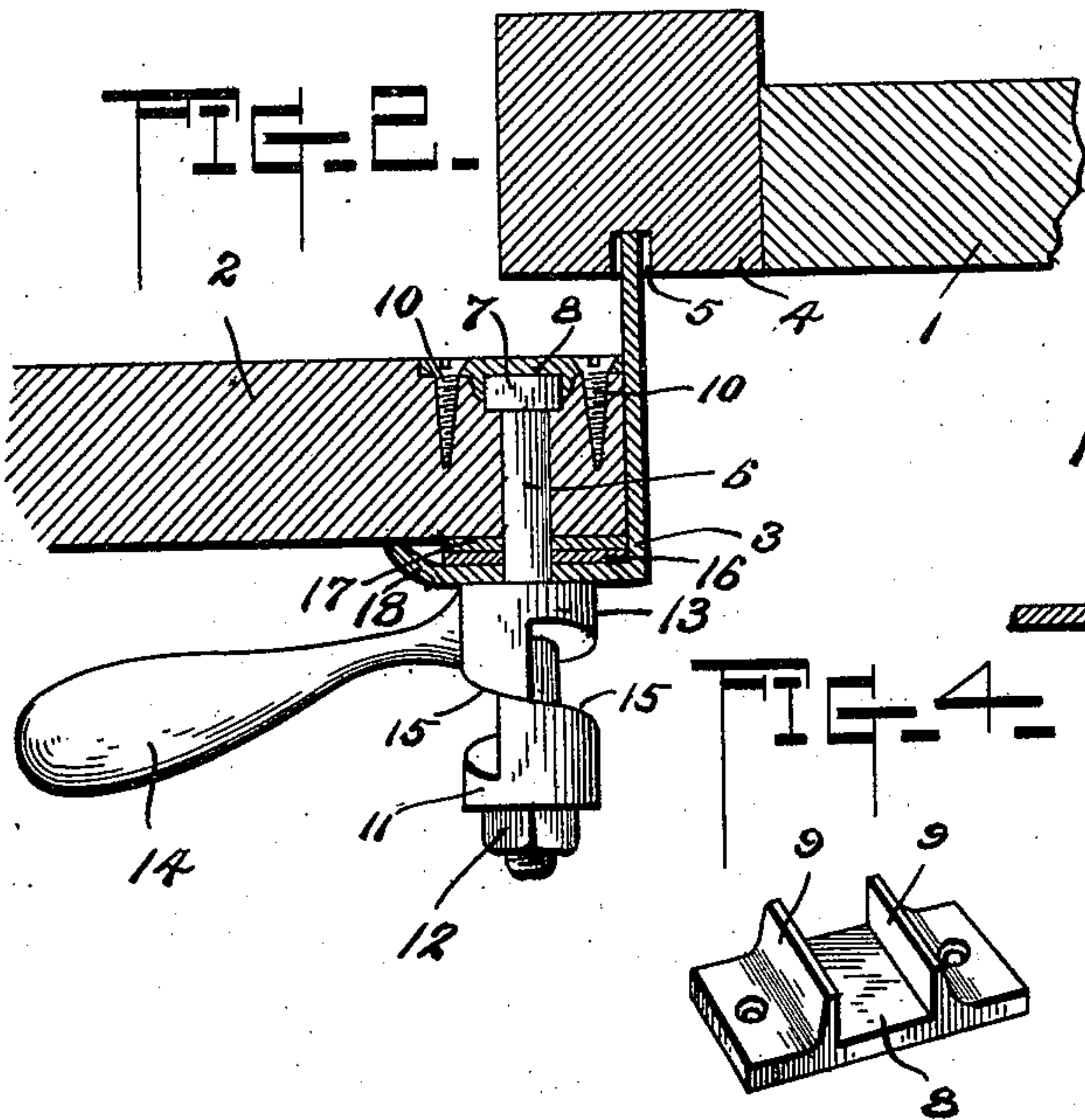


FIG. 3.

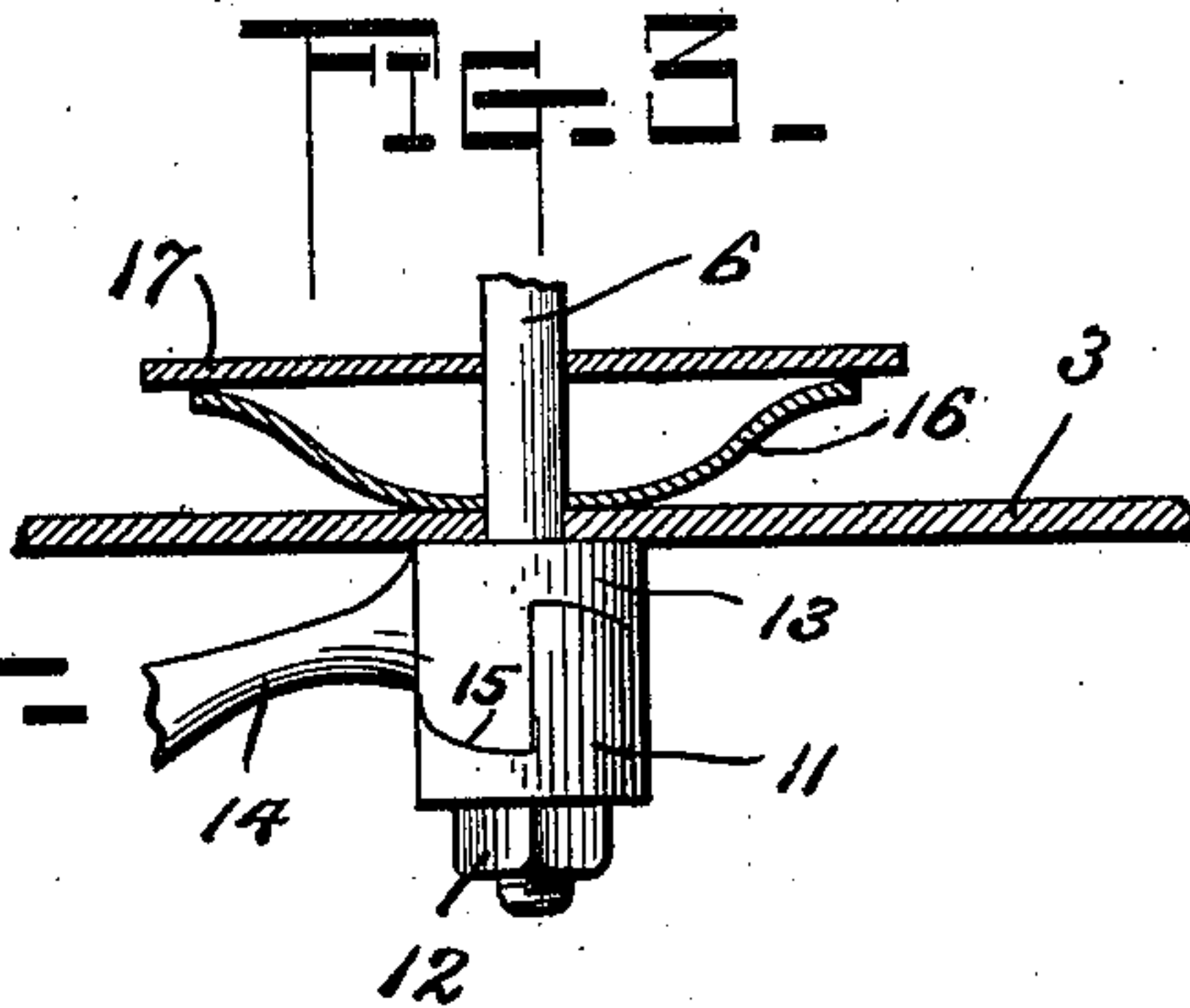
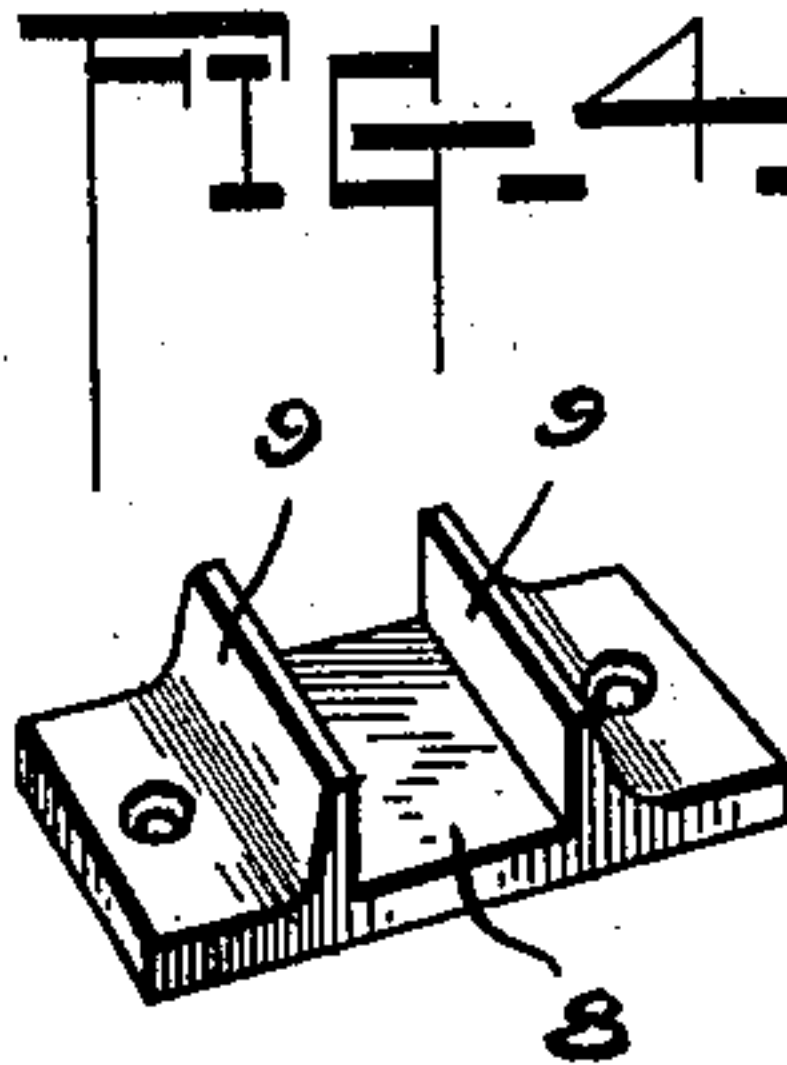


FIG. 4.



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

JOHN C. BISHOP, OF McCOMB, MISSISSIPPI.

CAR-DOOR FASTENER AND PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 574,775, dated January 5, 1897.

Application filed August 18, 1896. Serial No. 603,146. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. BISHOP, a citizen of the United States, residing at McComb, in the county of Pike and State of Mississippi, have invented a new and useful Car-Door Fastener and Protector, of which the following is a specification.

This invention relates to car-door fasteners and protectors, and the object in view is to provide a simple, cheap, and efficient device which is adapted to be applied to the rear edge of a car-door, and which is capable of being manipulated for breaking the joint between the car-door and car-body to the end that no sparks, rain, snow, &c., may gain access to the interior of the car, the device also preventing the accidental opening of the car-door.

One of the principal aims of the invention is to provide novel and efficient means for forcing the fastening and protecting strip into close and positive engagement with the car and the door.

With the above objects in view the invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and embodied in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a car-door and a portion of a car-body, showing the improved device applied thereto. Fig. 2 is a detail sectional view taken adjacent to one of the cam-shaped fasteners, showing the device in its closed position. Fig. 3 is a detail elevation of one of the cam-shaped fasteners, showing one of the retracting-springs. Fig. 4 is a detail perspective view of the socket plate.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

1 designates a portion of a car-body, and 2 an ordinary sliding car-door. The fastener and protector contemplated in this invention is shown at 3 and is in the form of a strip of metal of a length corresponding substantially to the height of the car-door. This strip is L-shaped in cross-section or comprises two flanges which are at right angles to each other. One of these flanges rests and moves laterally against the rear edge of the car-door, while

the other flange extends upon the outer surface of the door, as shown in Figs. 1 and 2. The flange which rests against the rear edge of the door is made of greater transverse extent than the thickness of the door, as shown in Fig. 2, so that its inner edge may contact with the car-body (indicated at 4) or enter a groove 5 in one of the door-posts, as shown, for preventing sparks, rain, snow, &c., from entering the car at the rear edge of the door, and also for preventing the accidental opening of the door by jolting or otherwise.

The combined fastener and protector is operated by the following means: A bolt 6 is passed through the car-door from the inside and near the rear edge, at or near the top and bottom and at intermediate points, as shown in Figs. 1 and 2. The head 7 of the bolt is countersunk in the door and is held against turning by means of a socket-plate 8, applied subsequently to the bolt. This socket-plate comprises a substantially rectangular body portion and spaced ribs or stops 9, and is secured to the inner surface of the door by means of suitable fasteners 10, and in such position that the ribs 9 will bear against the opposing flat sides of the bolt-head, as shown in Fig. 2. The bolt 6 passes through an opening in the outer flange of the strip 3 and has upon its outer end a collar 11, such collar being mounted upon the bolt in such manner that it cannot turn thereon. A nut 12 on the outer end of the bolt 6 admits of the adjustment of the collar 11 lengthwise of the bolt 6. Between the collar 11 and the strip 3 is arranged a rotatable collar 13, surrounding the bolt 6 and provided with a handle 14 for turning it. The contiguous or meeting faces of the collars 11 and 13 are cam-shaped or spirally inclined, as indicated at 15, whereby when the collar 13 is rotated the strip 3 will be forced into engagement with the car-body or allowed to be withdrawn therefrom, according to the direction of rotation of said collar. A leaf-spring 16 is interposed between the outer flange of the strip 3 and a wear-plate 17 on the car-door, said spring having an opening through which the bolt 6 passes. This spring serves to force the strip 3 outward when the collar 13 is turned in the proper direction, so as to disengage said strip from the car-body and allow the door to be moved from

in front of the door-opening. The edge of the outer flange of the strip 3 is deflected inward, as shown at 18, so that when the strip 3 is forced into engagement with the car-body 5 the said deflected portion will insure a close contact between the outer flange of said strip and the car-door, as shown in Fig. 2.

The device above described may be applied to any sliding car door or window, and will 10 effectually prevent the ingress of fire, dust, dirt, and other foreign matter, and is therefore especially valuable in the transportation of cotton or other inflammable material. The fastening and protecting strip also acts as a 15 protection to the edge of the car-door when it becomes necessary to force the door open or closed by means of hammers or priers &c. Any number of the cam-shaped clamping collars or wedges 11 and 13 may be employed, 20 according to the length of the strip 3 and the height of the car-door, and it will be understood that other changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit 25 or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. A sliding car-door having attached to one 30 edge thereof an L-shaped strip, one flange of which bears against the car-body and the other flange overlaps the door, and means connected with the door and the overlapping flange for throwing the first-mentioned flange inward against the car-body and outward therefrom, 35 substantially as described.

2. A sliding car-door having attached to one 40 edge thereof, an L-shaped strip, one flange of which bears against the car-body and the other flange overlaps the door, a clamping device connected with the door and the overlapping flange for throwing the first-mentioned flange inward against the car-body, and a spring for

throwing said flange outward away from the car-body to permit the door to slide, substantially as described. 45

3. The combination with a sliding car-door, of an L-shaped strip embracing the edge of said door, a bolt connected to the door and passing through said strip, and a cam-shaped 50 clamp mounted on said bolt and operating against said strip for forcing the latter into engagement with the car-body, substantially as described.

4. The combination with a sliding car-door, 55 of a strip embracing one of the vertical edges thereof, a bolt connected to the door, a stationary cam on said bolt, and a rotatable cam on said bolt interposed between the stationary cam and said strip, substantially as and for 60 the purpose described.

5. A car-door fastener comprising an L-shaped strip, one flange of which bears against the car and the other flange overlaps the door, a spring for throwing the first-mentioned 65 flange outward, and a series of bolts and cams connecting the door and the overlapping flange for throwing said flange inward against the car-body, substantially as described.

6. The combination with a sliding car-door, 70 of a strip applied to the edge of said door and having an L shape in cross-section, means on the door for forcing one edge of said strip into engagement with the car-body, and a spring located between said strip and the car- 75 door for withdrawing said strip from engagement with the car-body, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 80 the presence of two witnesses.

J. C. BISHOP.

Witnesses:

S. HIBBERT,
THEO. W. GLOVER.