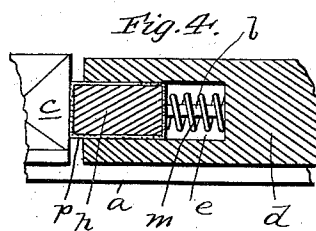
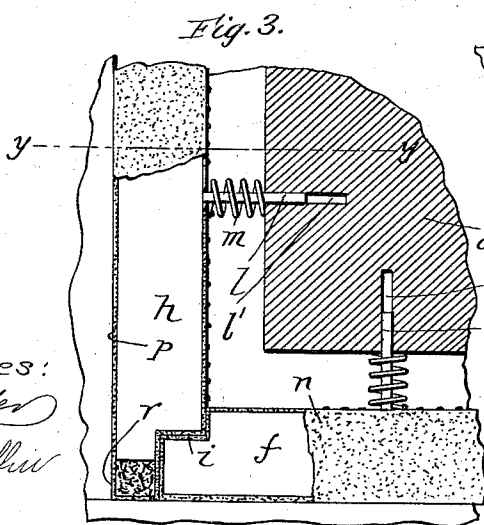
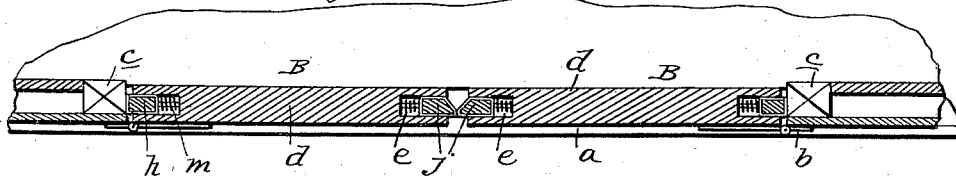
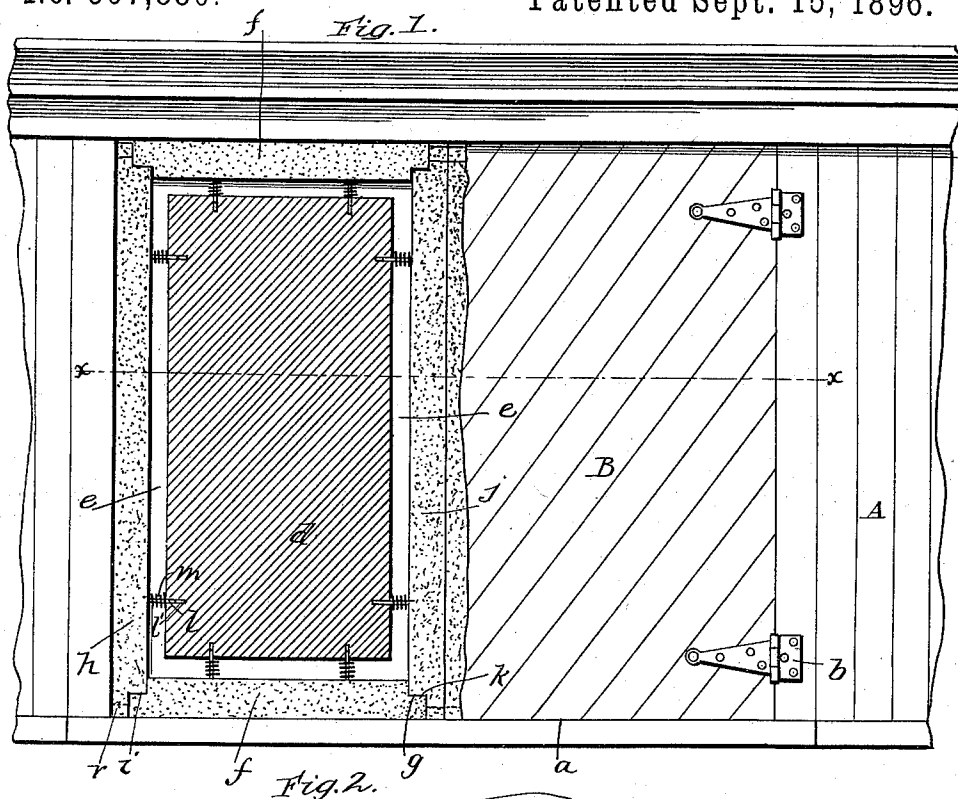


(No Model.)

C. BOUCHARD.
DOOR FOR REFRIGERATOR CARS.

No. 567,880.

Patented Sept. 15, 1896.



Witnesses:

Chas. Bouchard
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UNITED STATES PATENT OFFICE.

CHARLES BOUCHARD, OF CHICAGO, ILLINOIS.

DOOR FOR REFRIGERATOR-CARS.

SPECIFICATION forming part of Letters Patent No. 567,880, dated September 15, 1896.

Application filed May 16, 1896. Serial No. 591,843. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BOUCHARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, 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.

My invention relates to improvements in doors for refrigerator-cars and the like; and it has for its general object to provide doors of a cheap, simple, and durable construction, which, when closed, will effectually exclude air from the interior of the car.

Other objects and advantages of the invention will be fully understood from the following description and claims when taken in conjunction with the accompanying drawings, in which—

Figure 1 is an elevation of a portion of a car equipped with my improved doors, one of said doors being shown partly in section and the other entirely in section. Fig. 2 is a transverse section taken in the plane indicated by the line *xx* of Fig. 1. Fig. 3 is an enlarged detail section, and Fig. 4 is a detail section taken in the plane indicated by the line *yy* of Fig. 3.

In the said drawings similar letters designate corresponding parts in all of the views.

A indicates a refrigerator-car having a door-opening *a*, and B indicates doors constructed in accordance with my invention, which are connected by suitable hinges *b* to posts *c* on opposite sides of the opening *a*, as illustrated. These doors B are similar in construction, and they respectively comprise a body *d*, which is of rectangular form and is provided in its edges with the kerfs or grooves *e*, the horizontal strips *f*, which are arranged in the grooves *e* at the upper and lower ends of the body *d* and are rabbeted at the inner portions of their ends, as indicated by *g*, the upright strip *h*, which is arranged in the groove *e*, contiguous to the end post *c*, and has the inner portions of its ends rabbeted, as indicated by *i*, to conform to the rabbeted ends of strips *f*, and the upright strip *j*, which is arranged in the groove *e* at the outer edge of the body *d*, and also has the inner portions

of its ends rabbeted, as indicated by *k*, to conform to the rabbeted ends of the strips *f*. The several strips *f*, *h*, and *j* are mounted upon rods or pins *l*, seated in sockets *l'* in the body *d*, and they are pressed outward, so as to exert a pressure against the door-casing, by the coiled springs *m*, which surround the bolts *l*, and are interposed between the strips and the bottoms of the grooves or kerfs in the body *d*, as illustrated. I prefer to connect the several strips with the body *d* in the manner just described, but it is obvious that said strips may be connected in any manner that will permit of them being moved outward by the springs.

The horizontal strips *f* are entirely covered with canvas or some other suitable textile or covering *n*, which is tacked or otherwise suitably connected to the inner sides of the strips, as better shown in Fig. 3, and is designed to assist materially in preventing the passage of air between the strips and the door-casing when the doors are closed. The upright strips *h* and *j* are also entirely covered with canvas or other suitable textile or covering, (indicated by *p*,) which is tacked or otherwise suitably connected to the inner sides of the strips, and like the canvas *n* is designed to assist in preventing the passage of air into the car. The canvas *p* is extended beyond the reduced ends of the strips *h* and *j*, and such extended portion *r* is stuffed with some suitable material, as hair, which will give and tend to expand, and will therefore fully occupy the spaces between the ends of the strips *f*, *h*, and *j* at the corners of the doors, so as to effectually prevent the entry of air into the car at such points.

The outer edges of the strips *j* of the doors B may be beveled, as illustrated, to facilitate closing of the doors, and the outer edges of the strips *f* may also be beveled, if found necessary, in order to enable them to enter the door-casing when the doors are closed.

In the practical operation of the invention it will be seen that when the doors B are opened the strips *f*, *h*, and *j* will be forced out beyond the edges of the door-bodies *d* by the springs *m*, and when the doors are closed or swung into the door-casing it will be readily seen that the said strips will be pushed inward against the action of the springs. Con-

sequently the springs *m* will be compressed when the doors are within the casing, and by tending to expand will press the strips against the door-casing, so as to reduce to a minimum the liability of air passing between the doors and the casing. The liability of air gaining entrance into the car is further reduced by the provision of the canvas coverings on the strips and by the provision of the cushions *r* at the corners of the doors.

It will be observed from the foregoing that with all of their advantages my improved doors are very cheap and simple, and it will also be observed that they embody no parts which are likely to get out of order after but little use.

It is obvious that when desired my improvements may be applied with advantage to single doors and to doors used on refrigerators, refrigerator-apartments of buildings, and the like.

Having described my invention, what I claim is—

1. The combination with a door-casing; of a door connected in a hinged manner with the casing and comprising the body having grooves in its edges, strips *f*, covered with canvas and arranged in the upper and lower grooves of the body and having the inner

portions of their ends rabbeted, strips arranged in the upright grooves of the body and having the inner portions of their ends rabbeted; said strips being covered with canvas and having the extended and stuffed canvas portions *r*, at their ends, rods or pins connecting the strips and the body and springs interposed between the body and the strips, substantially as specified.

2. The combination with a door-casing: of the doors connected in a hinged manner with the opposite sides of the casing and respectively comprising a body having grooves in its edges, strips arranged in the upper and lower grooves of the body and covered with canvas, strips arranged in the upright grooves of the body, coverings on said latter strips extended beyond the ends of the same and stuffed, means for connecting the strips and the body, and springs interposed between the strips and the body, substantially as specified.

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

CHARLES BOUCHARD.

Witnesses:

DAVID PRITCHARD,
M. B. BUSHNELL.