

(No Model.)

2 Sheets—Sheet 1.

E. Y. MOORE.

SHIELDED SLIDING DOOR.

No. 397,560.

Patented Feb. 12, 1889.

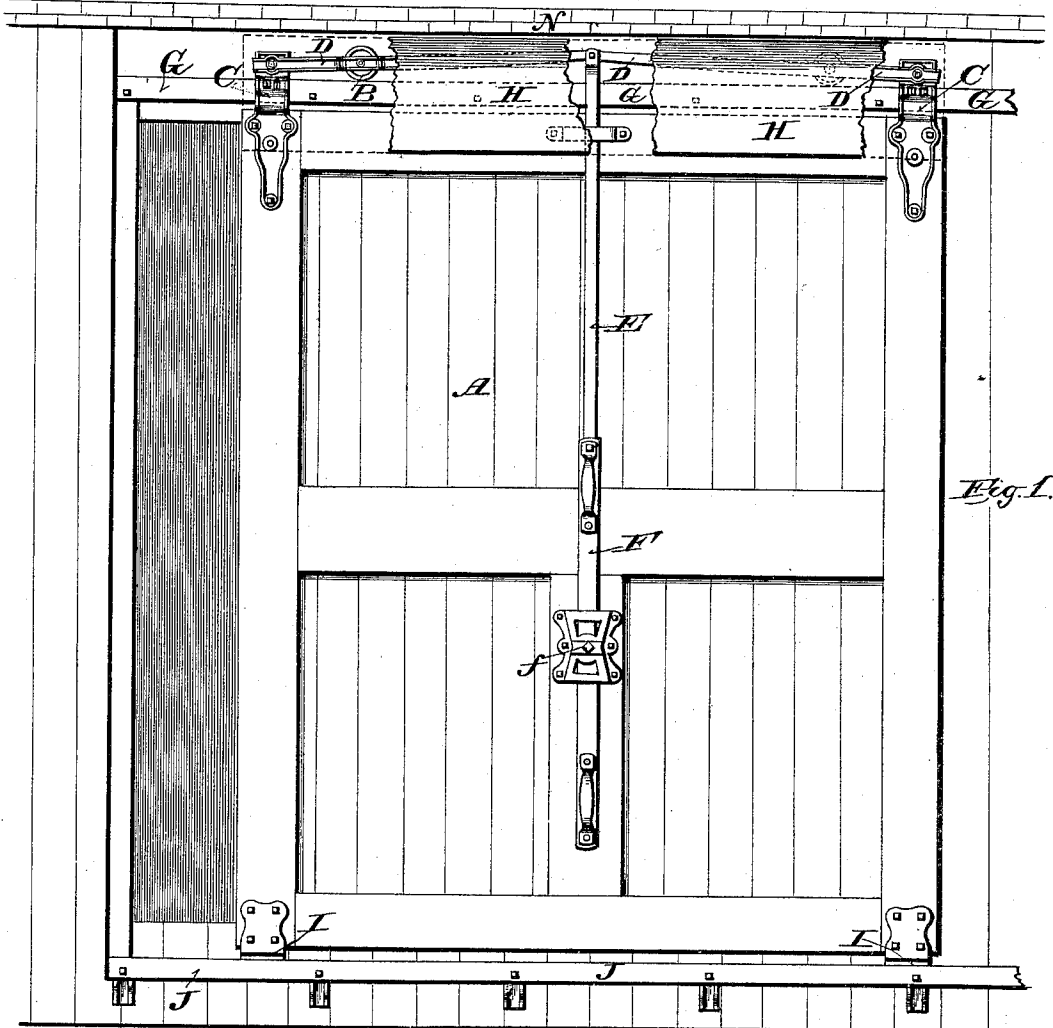


Fig. 1.

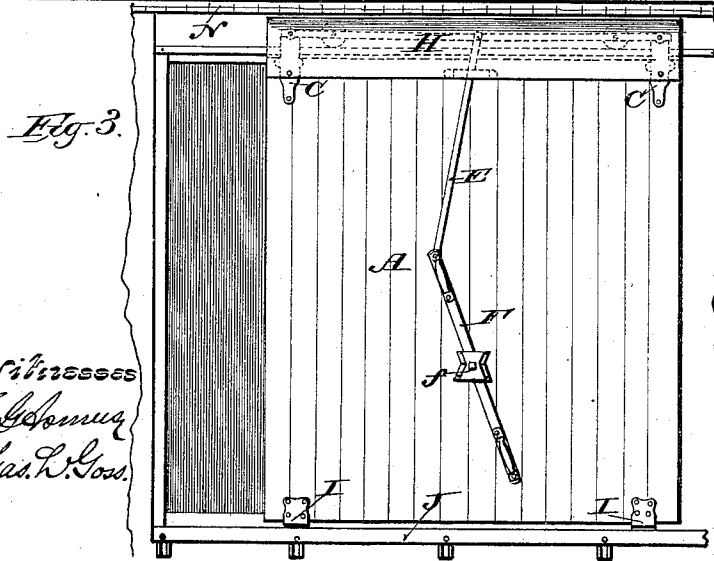


Fig. 3.

Witnesses
Ed. Schumacher
Chas. L. Ross.

Inventor:
Edward Y. Moore,
By
Winkler, Flanders, Smith, Patton & Kline
Attorneys.

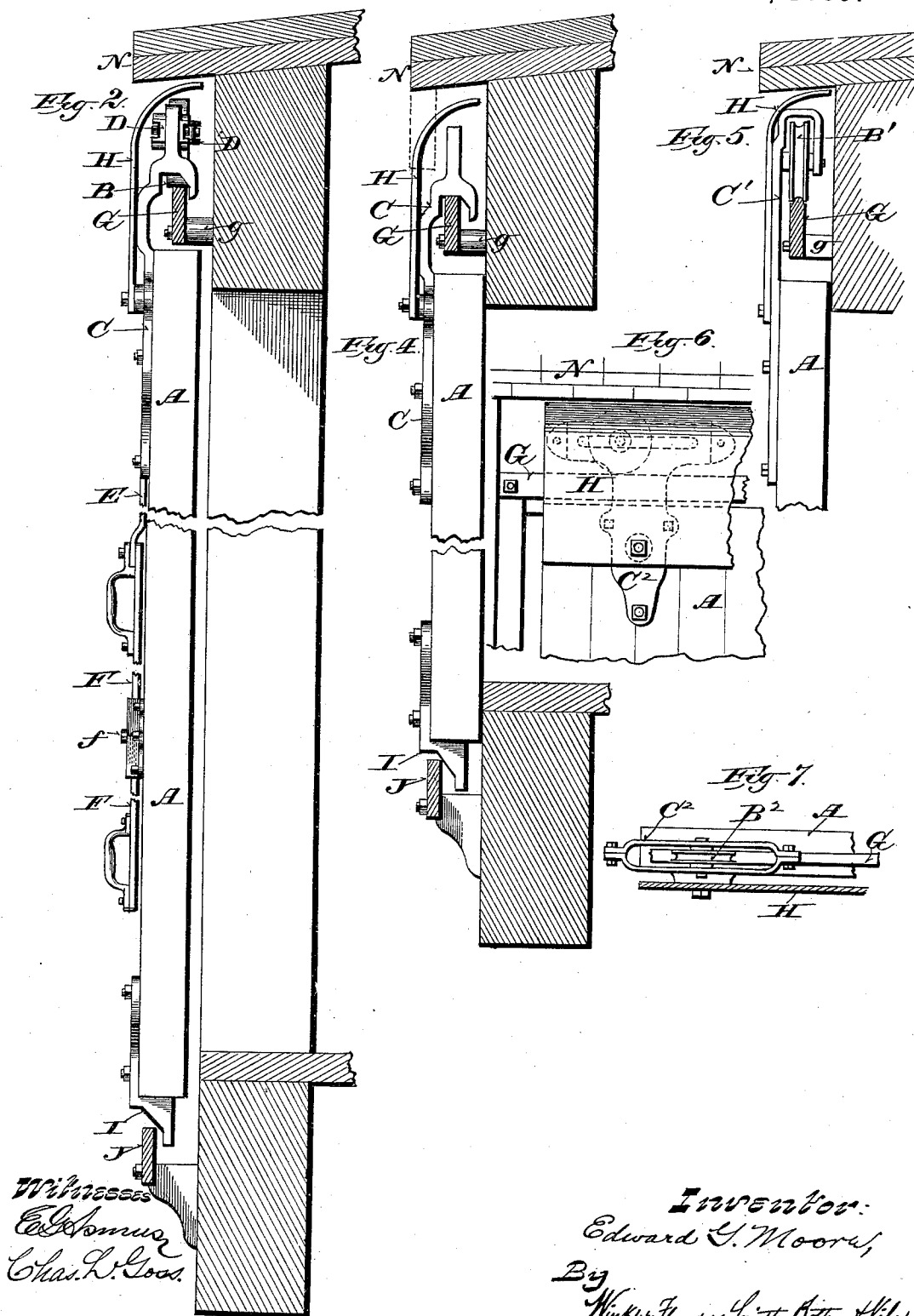
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UNITED STATES PATENT OFFICE.

EDWARD Y. MOORE, OF MILWAUKEE, WISCONSIN.

SHIELDED SLIDING DOOR.

SPECIFICATION forming part of Letters Patent No. 397,560, dated February 12, 1889.

Application filed October 16, 1888. Serial No. 238,284. (No model.)

To all whom it may concern:

Be it known that I, EDWARD Y. MOORE, of the city and county of Milwaukee, and State of Wisconsin, have invented certain new and useful Improvements in Shielded Sliding Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The objects of my invention are to shield and protect the hangers of a sliding door, to prevent accumulation of ice, snow, &c., upon the track, &c.

It consists, essentially, of a shield attached to the top of the door and extending its entire width and bent inwardly over the hangers, so as to form a protection for the same and the track-rail on which they run.

In the accompanying drawings, like letters designate the same parts in the several figures.

Figures 1 and 3 are side elevations of a car-door embodying my improvements and provided with a particular kind of hanger, Fig. 1 representing the hangers in position when the door is at rest, and Fig. 3 representing them in position for moving the same. Fig. 2 is a cross-section of the doorway on an enlarged scale, the door and its hangers being in the position shown in Fig. 3 for running the same along the supporting-rail. Fig. 4 is a similar section showing the door closed snugly against the side of the car and the hangers in the position in which they are illustrated in Fig. 1; and Figs. 5, 6, and 7 are views of other forms of door-hangers, illustrating the application of my improvements.

My improvement is applicable to any form of hangers which embraces sheaves arranged to run on a track secured to the side of the car across the top of the door-opening, and extending at one side thereof a distance about equal to the width of the door. I have, for the purpose of clearly illustrating my invention, shown it in connection with several forms of hangers, for which, *per se*, I make no claim.

The hangers shown in Figs. 1, 2, 3, and 4, for use with which my improvement is particu-

larly adapted, consist, essentially, of straps C C, attached to the top of the door A, of bars D D, hinged at their opposite ends to said straps and at their adjacent ends to an upright jointed rod, E F, which extends downwardly close to the outer face of the door and is pivoted thereto at *f*, and of sheaves or wheels B B, which are journaled in the bars D D a short distance from the straps C C toward the center of the door. The purpose of this construction is to slightly raise or lower the door by throwing the joint of the rod E F to one side, as shown in Fig. 3, or by bringing it into line therewith, as shown in Fig. 1, by which operations the inner or adjacent ends of the bars D D are drawn down, and consequently their outer or opposite ends raised, thus lifting the door, and vice versa, the journals of the sheaves or wheels B B, which rest on rail G, serving as fulcrums.

The straps C C being formed with inclined projections on the inside of their upper ends which overhang the rail G, and similarly-inclined projections I being attached to the bottom of the door just inside of a horizontal rail, J, as shown in Figs. 2 and 4, the door is carried obliquely and snugly against the side of the car or door-jambs when it is lowered, as seen in Fig. 4, and is allowed to move out of contact therewith when it is raised, as seen in Fig. 2.

H is a shield, preferably formed of some suitable sheet metal and attached at or near its lower edge to the top of the door A, extending the entire width thereof. It is bent at its upper edge inwardly toward the side of the car under the projecting roof N, and closely over the hangers and that part of the track-rail adjacent to the door. In connection with the shield H, attached to the door A, as described, I prefer to hold the track-rail G away from the side of the car by thick washers or perforated blocks *g*, instead of continuous strips, so as to leave between said rail and the car a clear open space, through which snow, dirt, &c., will fall. This construction of the track will prevent the accumulation of dirt, &c., behind that portion of it which is not covered by the shield H.

It is obvious that the shield H, being attached to the door A, will partake of its vertical as well as of its other movements, and that

its relative position to the top of said door will thus be constantly maintained.

Referring to Fig. 5, C' represents an ordinary hanger strap or yoke, in which the sheave or wheel B' is journaled. It is attached in the usual manner to the door A, and is bent at its upper end over the sheave B' to receive and furnish a bearing for its journal on the inside. The shield II is attached to the door so as to overhang the hangers and track, as previously described.

Referring to Figs. 6 and 7, C² represents an anti-friction hanger-yoke having horizontal slots in its sides (shown by dotted lines, Fig. 6) to receive the journals of the sheave B². It is attached, with the shield II, to the car-door in the manner hereinbefore described.

Heretofore it has been customary, for the purpose of protecting the door and the hangers and ways on which it moves at the top, to attach to the projecting roof of the car a depending strip or cornice, as shown in Fig. 4 by dotted lines. This strip, however, does not as effectually inclose the top of the car-door with its hangers, nor does it maintain its relative position thereto, as my shield does when the door has a vertical, lateral, or oblique movement, as hereinbefore described in connection with Figs. 1 to 4, inclusive. Besides, such a protecting-strip must be at least twice the width of the door or door-opening, whereas my shield should extend only the width of the door.

I claim—

1. The combination, with a sliding door provided with hangers and a track on which said hangers run, of a shield attached to said door and turned inwardly at its upper edge over the top of said door and over said track and hangers, substantially as and for the purposes set forth.

2. The combination, with a sliding car-door provided with hanger-sheaves and a track on which said sheaves run, attached to the side of the car and held away from the same at intervals by blocks or washers, of a shield attached to and overhanging at its upper edge the top of said door and its hang-

ers, substantially as and for the purposes set forth.

3. The combination, with the sliding door, the track on which it is suspended, and hangers arranged to raise and lower said door, of a shield attached to and extending across said door and bent inwardly at its upper edge, so as to overhang the top of the door, its hangers, and the track-rail adjacent thereto, substantially as and for the purposes set forth.

4. The combination, with a sliding car-door, a track attached to the side of the car, hangers provided with sheaves which run on said track, means for raising and lowering said door slightly, and inclines for carrying said door when lowered snugly against the side of the car, of a shield attached to and partaking of the various movements of said door and bent at its upper edges over the top of the door and its hangers, substantially as and for the purposes set forth.

5. The combination, with a sliding door suspended by sheaves running on a fixed track by the door-opening, of a shield attached to and extending the width of the door, and bent along its upper edge over the top of said door and its hangers, substantially as and for the purposes set forth.

6. The combination, with a sliding door capable of a slight vertical movement and provided with hangers by which it is suspended from a fixed track adjacent to the door-opening, and by means of which it is raised and lowered slightly, of a shield attached thereto, so as to partake of its several movements, and bent along its upper edge inwardly over the top of said door and its hangers, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDWARD Y. MOORE.

Witnesses:

CHAS. L. GOSS,
E. H. BOTTRUM.