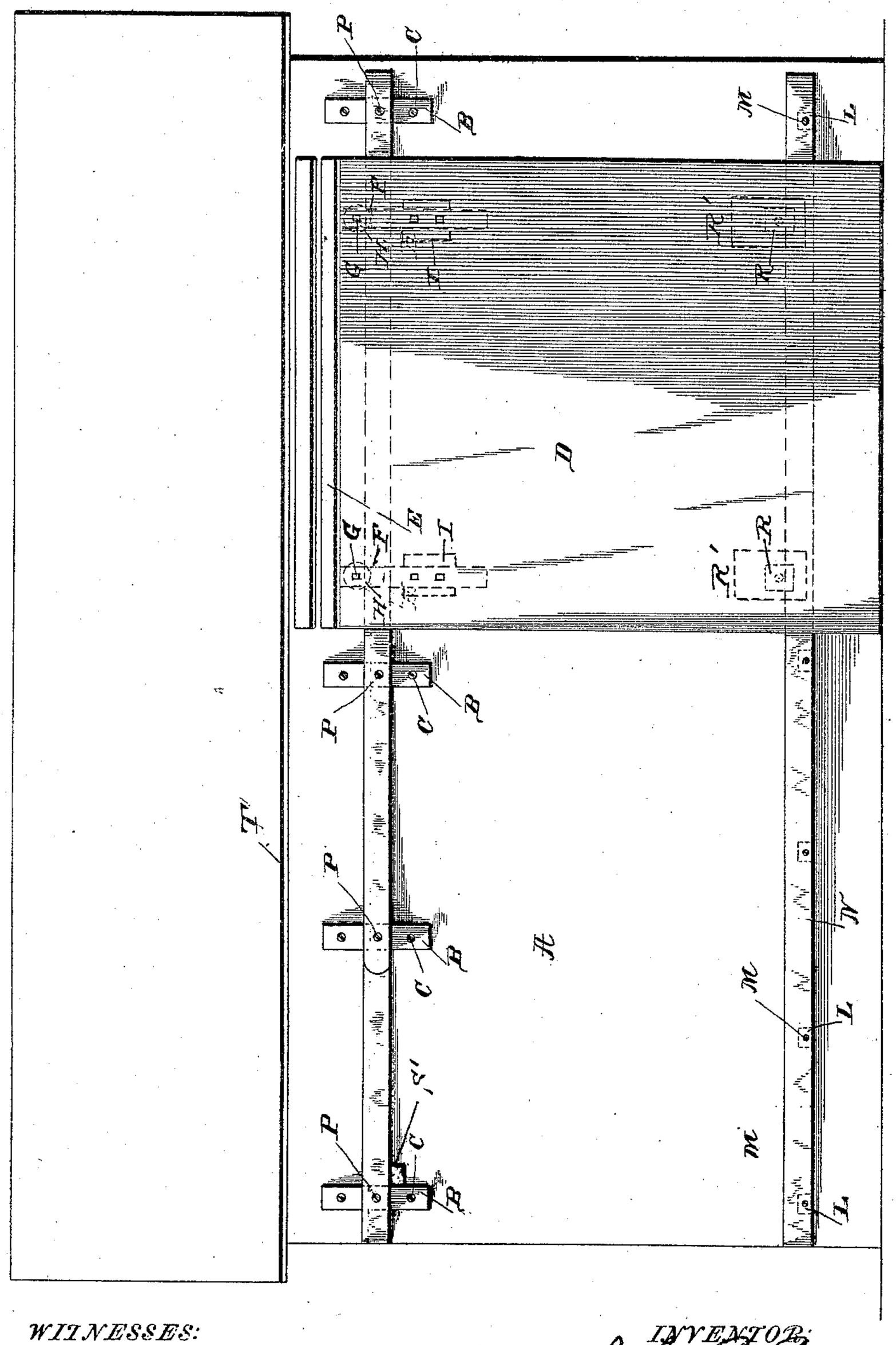
(No Model.) 2 Sheets—Sheet 1.

J. R. BODELL

SLIDING DOOR.

No. 442,944. Patented Dec. 16, 1890.



WITNESSES:
F. L. Ourand.
A. L. Morsell.

INVENTOR:
John R. Bodell,
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Attorneys.

(No Model.) 2 Sheets—Sheet 2.

J. R. BODELL.

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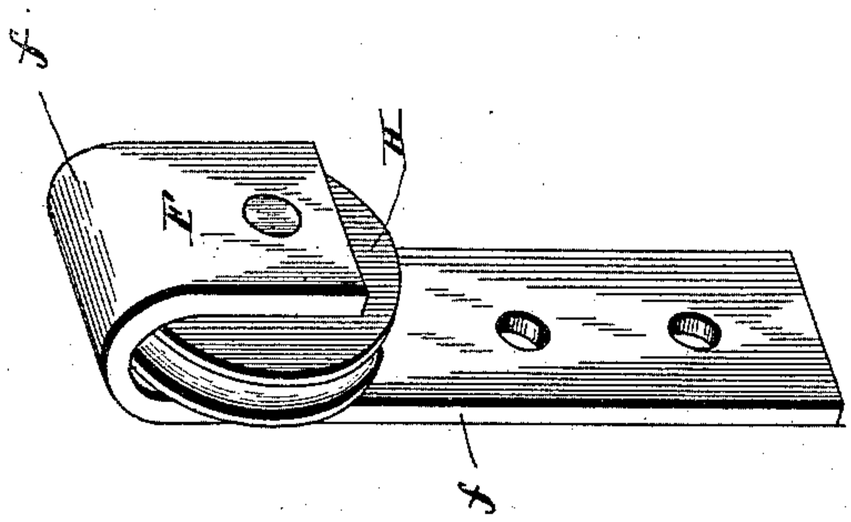

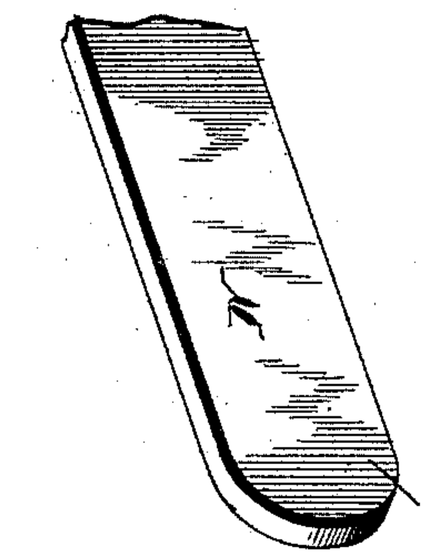

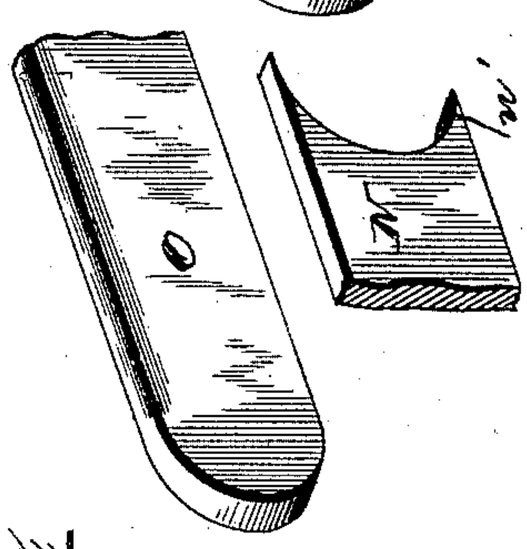

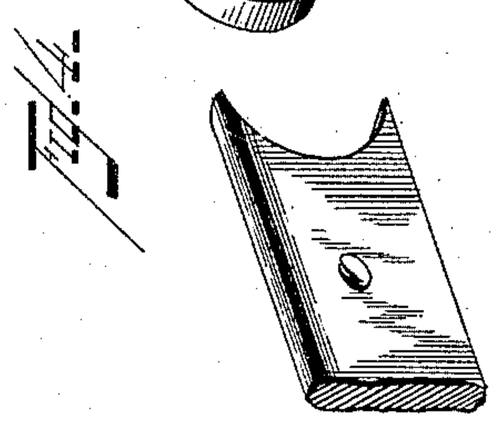

WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN R. BODELL, OF NEW SALEM, OHIO, ASSIGNOR OF ONE-HALF TO GEORGE HAVER, OF SAME PLACE.

SLIDING DOOR.

SPECIFICATION forming part of Letters Patent No. 442,944, dated December 16, 1890.

Application filed February 3, 1890. Serial No. 338,964. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. BODELL, a citizen of the United States, and a resident of New Salem, in the county of Fairfield and State of Ohio, have invented certain new and useful Improvements in 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 appertains to make and use the same.

My invention has relation to sliding doors used more particularly in barns, freight-cars, and the like.

The invention consists in the improved construction and combination of parts, as hereinafter more fully pointed out and described.

In the accompanying drawings, Figure 1 is a side elevation of a barn, showing my improved sliding door. Fig. 2 is a cross-sectional view on the line *x x*, Fig. 1. Fig. 3 is a detail view of the roller and its bracket; and Figs. 4 and 5, respectively, are detail views of the upper and lower tracks, showing the manner of connecting the ends thereof.

Like letters of reference denote like parts in all the figures.

Referring to the drawings, the letter A indicates the building in connection with which my improvement is employed. Brackets or strips B are secured to the building at suitable intervals by means of screws C or equivalents, having their heads countersunk in the strips. These strips are located near the top of the structure.

The letter D indicates the sliding door, said door having secured to its top edge a weather-strip E, said strip being inclined, so as to readily discharge the water which may be deposited thereon in rainy weather.

Secured to the inner face of the door below the inner projecting portion of the weather-strip is a bracket F, said bracket provided with an upper bent end *f* and an extended shank *f'*. A transverse shaft G is mounted in the upper bent end of this bracket, and upon this shaft turns loosely a grooved wheel H. Bearing against the shank *f'* of the bracket is a block I. Transverse screws J pass entirely through the batten, bracket, and door, the ends thereof receiving locking-nuts K. I prefer to provide the door with two of these wheels and their appropriate adjuncts arranged at each end of the top of the door; but it is obvious that this number may be increased, if desired. Near the bottom of the side of the structure a series of laterally-extending lugs L are secured by means of screws M or equivalents, and secured to these by the same rivet or screw is a bottom guide-rail N, which extends a suitable distance the length of the building. This guide-rail is preferably formed of sections, one section being provided with a rounded tongue *n* and the opposing section with a corresponding mortise *n'* for the reception of the tongue.

The letter O indicates the upper guide-rail, which extends longitudinally for a distance equal to the distance of the lower rail. This rail is secured in place by means of rivets or screws P, which pass through the same, and also through washers or blocks Q, interposed between the inner face of the rail and the vertical strips or brackets B, and the upper edge of said rail is rounded and fits into the grooved wheels, forming a track therefor. This track is also, preferably, formed in sections in the same manner as the lower track. The inner face of the lower end of the door is also formed with a series of blocks R', which have projecting therefrom angular or hooked lugs R, adapted to engage or overlap the lower guide-rail, and thus prevent the lower portion of the door from being dislodged. I also provide the upper inner corner or angle of the outermost top block I with an angular stop S, adapted to engage a lug S', or equivalent device, extending from the building, and thus limit the movement of the door, so as to prevent its being slid too far upon the tracks.

In order to more effectually protect the roller and other portions of my invention from the injurious effects of the weather, I furthermore provide the top of the barn with a weather-strip or water-table T, which, in connection with the strip upon the top of the door, acts to most thoroughly preserve the working parts.

It will be noticed that the top track is secured by means of the bolts passing through the interposed washers or blocks near the ends of each section, so that the track is supported

and strengthened at the points of uniting, as clearly shown. The bottom track is similarly connected by means of the laterally-extending lugs.

From the foregoing description the construction and opertaion of my improved sliding door will be readily uuderstood.

It will be seen that by the particular construction adopted by me the door is little liable to become broken or injured and that the parts are thoroughly protected from the weather.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

In a sliding door, the combination, with a frame or building, of a track secured to said building by lateral connections, a door, brackets secured to the inner face of said door, the upper ends of said brackets being bent or hooked and the lower ends straight, transverse shafts mounted in the upper bent ends of the brackets, grooved rollers mounted upon said shafts, a block bearing against the lower straight end of each bracket, transverse bolts for connecting the blocks with the lower ends of the brackets and with the door, an angular stop secured to the outermost block, and a projection secured to the building adapted to contact with said stop and limit the movement of the door, substantially as described.

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

JOHN R. BODELL.

Witnesses:

FRANK M. ANDREWS,

HARLAN C. BAKER.