

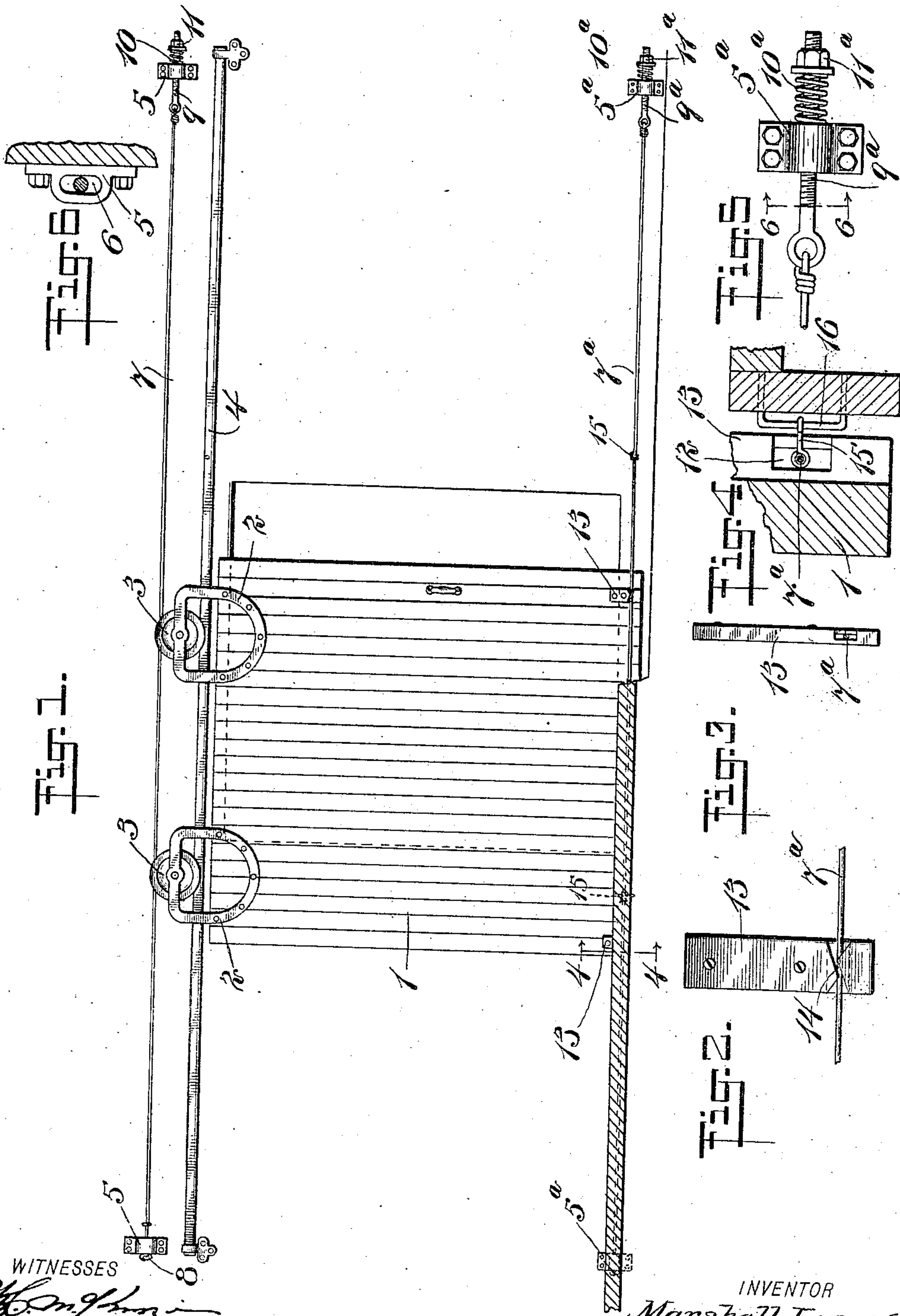
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PATENTED MAR. 26, 1907.

M. LOGAN.

APPLIANCE FOR SLIDING DOORS.

APPLICATION FILED AUG. 21, 1906.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

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## APPLIANCE FOR SLIDING DOORS.

No. 848,475.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed August 21, 1906. Serial No. 331,482.

*To all whom it may concern:*

Be it known that I, MARSHALL LOGAN, a citizen of the United States, and a resident of Plymouth, in the county of Marshall and State of Indiana, have invented a new and Improved Appliance for Sliding Doors, of which the following is a full, clear, and exact description.

This invention is an improvement in appliances for sliding doors, being especially directed to barn-doors of the edgewise-movable type, although it will be found to be of advantage for use on box-cars and in other relations where a sliding door is employed.

The object of the invention is to provide the door with an effective and comparatively inexpensive means to keep it in engagement with the supporting rail or track and to prevent looseness or shaking at the bottom of the door, which, if unguarded, is the source of serious inconvenience, especially in windy weather.

One embodiment of the invention consists of brackets or plates secured to the lower end of the door, provided with a novel form of opening and slot, through which a wire is adapted to pass and be secured at each end, and having means to adjust its tension and means adapting the wire to yield when subjected to undue strain. A second wire with like provision is strung at the top of the door in contact with the rollers thereof and prevents their disengagement with the supporting-track.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is an outside elevation of a sliding door embodying my improvement as applied to a barn. Fig. 2 is an enlarged view of one of the plates or brackets employed, showing a wire in position therein. Fig. 3 is an edge view of the same. Fig. 4 is a sectional view on the line 4 4 of Fig. 1 looking in the direction of the arrows. Fig. 5 is an enlarged view of the means employed to adjust the tension of the wire, and Fig. 6 is a sectional view on the line 6 6 of Fig. 5 looking in the direction of the arrows.

Referring to the drawings, Fig. 1 indicates a sliding door having suitable brackets 2 attached to its upper end, in which rollers 3 are

journaled, the latter being in engagement 55 with a track or rail 4, secured to the outside of a barn or other structure. Secured just above the track 4 at each end thereof is a block 5, provided with an oblong opening 6. These openings receive a wire 7, having an 60 enlargement or other device 8 at one end to prevent it from passing through one of the blocks and is connected at its opposite end with an eyebolt 9, passing through the slot 6 in the opposite block 5. A spiral spring 10 65 encircles the outer end of the eyebolt and is seated between the said block 5 and an adjusting-nut 11. It is apparent from this construction that the height of the wire may be adjusted by loosening the nut 11 and moving the wire up or down in the openings 6 of the blocks 5; also, the tension on the wire may be adjusted by screwing up or unscrewing said nut, the spring 10 permitting the wire to yield when any undue strain is brought to 75 bear thereon. When the wire is adjusted, as shown in Fig. 1, it engages the groove in the rollers 3 and keeps the door securely seated on the track.

Secured to the bottom sill of the barn are 80 blocks 5<sup>a</sup> of identical construction as the blocks 5 and spaced apart a like distance. A wire 7<sup>a</sup> is fixedly held at one end to one of the blocks 5<sup>a</sup> and is connected at its opposite end to an eyebolt 9<sup>a</sup>, similarly provided with a 85 spring 10<sup>a</sup> and an adjusting-nut 11<sup>a</sup>, adapting the tension on this wire, also its vertical height, to be adjusted as described for the wire 7. The wire 7<sup>a</sup> passes through alining openings 12 in metal plates or brackets 13, secured 90 to the bottom of the door, said openings communicating with inclined slots 14, entering the faces of the brackets, the slots being enlarged at each end, as best shown in Fig. 2.

For supporting the wire 7<sup>a</sup> at suitable 95 points of its length a short wire 15 embraces it and is slidably connected to the vertical member of a staple 16, driven oppositely to the door just below the floor-line. These short wires 15 on striking the brackets 13 100 readily pass through the slots 14, as is evident, and in view of these slots being inclined the wire 7<sup>a</sup> cannot be accidentally displaced from the brackets, but may be turned at an angle and disengaged from or with them 105 when desired.

Although I have described the invention in detail, it is to be understood that the precise



embodiment is not material provided the essential characteristics are employed, as pointed out in the annexed claims.

Having thus described my invention, I  
5 claim as new and desire to secure by Letters Patent—

1. The combination of a movable door and a track secured above the doorway, brackets secured to the upper end of the door, grooved  
10 wheels rotatably mounted in said brackets, brackets secured to the lower end of the door having oblong alining openings therein with inclined slots communicating therewith, a wire passing through said openings, means  
15 for supporting the wire, and means for adjusting the tension of the wire.

2. In combination with a sliding door, a wire carried by suitable supports, means slidably connecting the door with the wire, and  
20 means for adjusting the tension on the wire.

3. The combination with a movable door and a track secured above the doorway, grooved wheels carried by the door in engagement with said track, a wire in engagement  
25 with the rollers, and means for supporting the wire.

4. The combination with a movable door and a track secured above the doorway, of

brackets secured to the upper end of the door, grooved wheels rotatably mounted in said  
30 brackets, a wire in engagement with said wheels, means for supporting said wire, and means for adjusting the tension and vertical height thereof.

5. A sliding door having brackets secured  
35 thereto, said brackets being provided with alining openings, a wire passing through the openings, means for supporting the wire, means for adjusting the tension and the height of the wire, and means adapting the  
40 wire to yield, for the purpose described.

6. A sliding door having brackets secured to the lower end thereof, said brackets having alining openings with inclined slots commu-  
45 nicating therewith, a wire passing through the openings, means for supporting the wire at each end, and means for supporting the wire intermediate its length.

In testimony whereof I have signed my name to this specification in the presence of  
50 two subscribing witnesses.

MARSHALL LOGAN.

Witnesses:

HARLEY A. LOGAN,  
E. H. KENDALL.