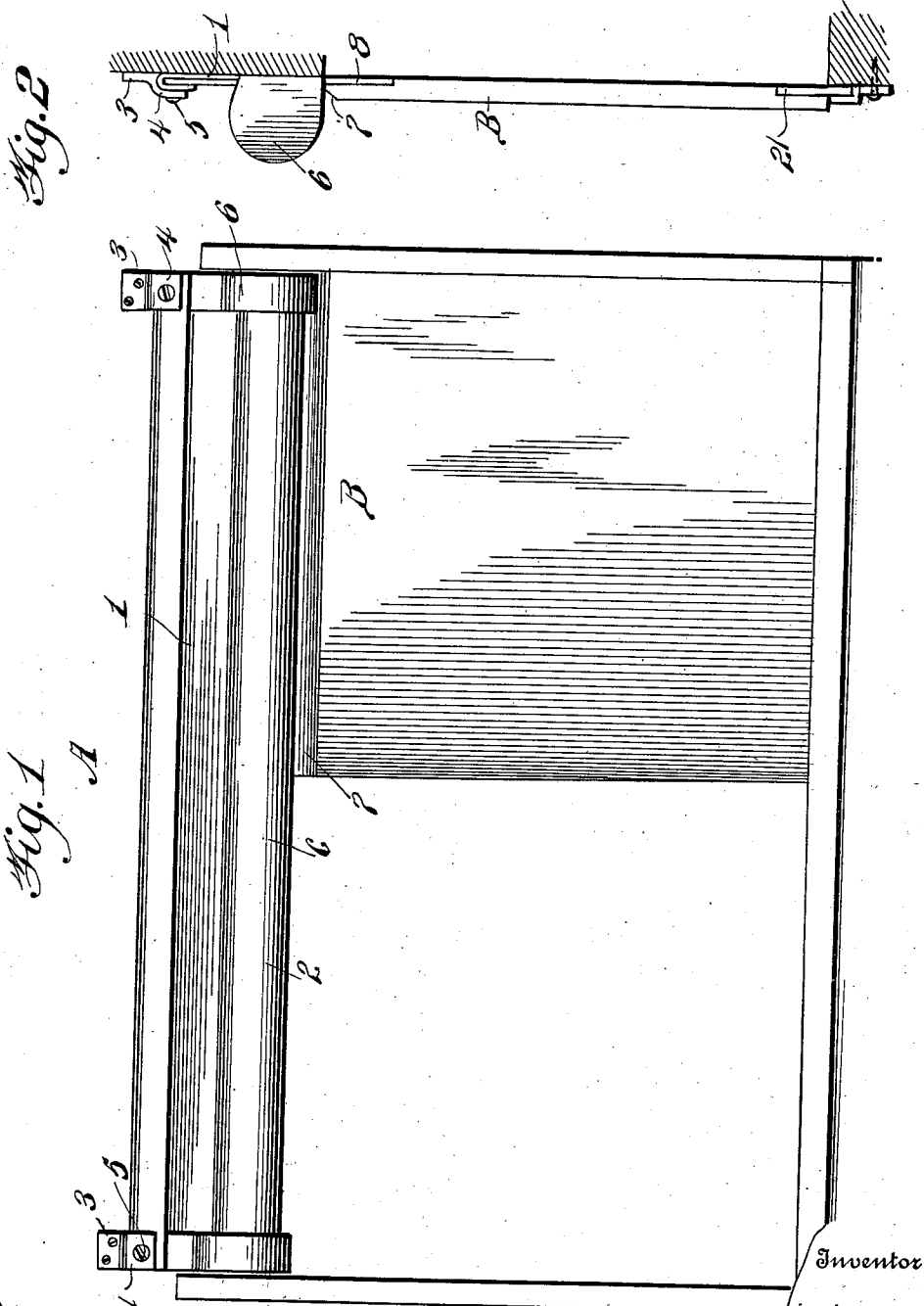




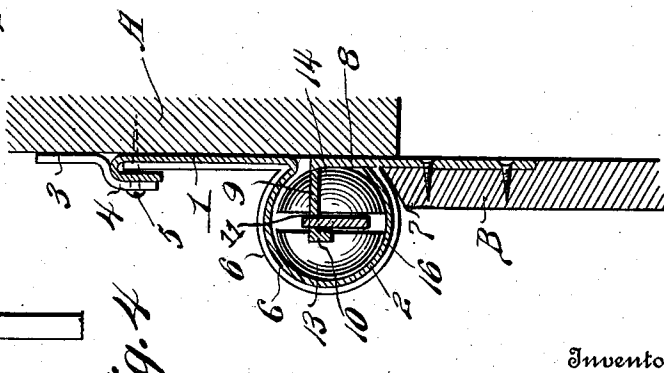
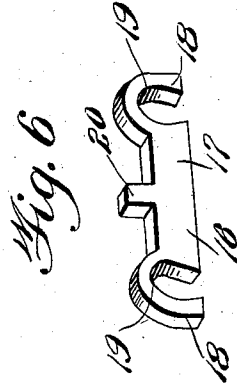
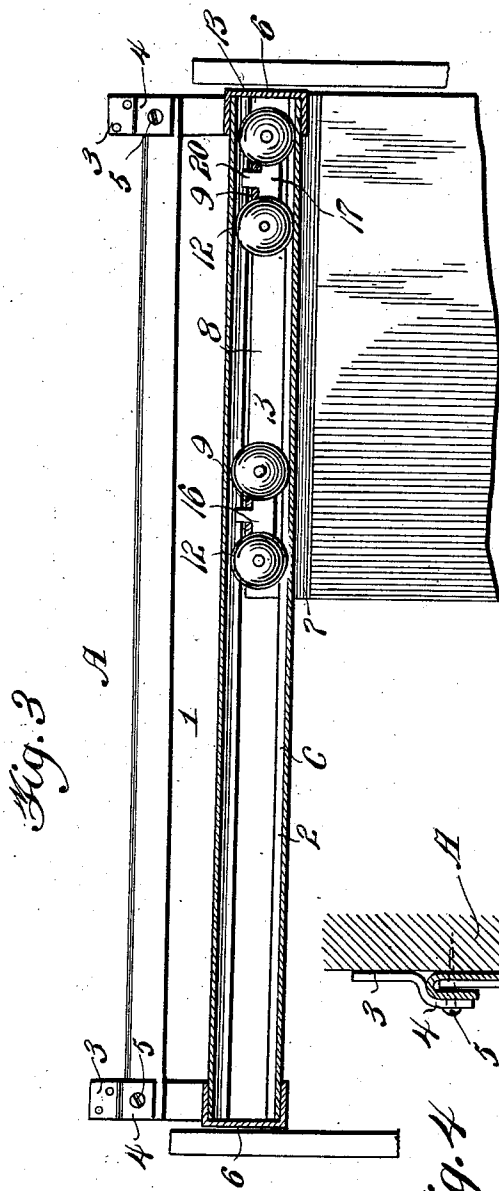
Witnesses
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1,028,714.

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DOOR TRACK AND HANGER.
APPLICATION FILED NOV. 22, 1911.

Patented June 4, 1912.
2 SHEETS—SHEET 2.



Witnesses

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Fig. 4

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UNITED STATES PATENT OFFICE.

WILLIAM F. HACKNEY, OF WASHINGTON, KANSAS, ASSIGNOR OF ONE-HALF TO EDGAR BENNETT, OF WASHINGTON, KANSAS.

DOOR TRACK AND HANGER.

1,028,714.

Specification of Letters Patent.

Patented June 4, 1912.

Application filed November 22, 1911. Serial No. 661,679.

To all whom it may concern:

Be it known that I, WILLIAM F. HACKNEY, a citizen of the United States, residing at Washington, in the county of Washington and State of Kansas, have invented new and useful Improvements in Door Tracks and Hangers, of which the following is a specification.

This invention relates to door tracks and hangers, and has particular application to certain novel and useful improvements in devices of the class described, adapted to be used in connection with sliding doors of the character such as are commonly employed in connection with freight cars, elevators, buildings and other structures.

In the present invention, it is my purpose to provide an improved door track and hanger wherein I employ a tubular track which may be formed of a single section or a plurality of sections suitably joined together, said track being designed to support a sliding door, the tubular section of such track forming a raceway for roller bearings for the door.

Still a further object of my invention is to provide a construction of trackway wherein the tubular section forming a raceway for the roller bearings is formed integral with a flange adapted to be connected to the structure above the opening of the door.

I also aim to construct the track in such manner as to secure protection for the roller bearings and at the same time form a hood for the top of the sliding door thereby rendering it impossible for rain, sleet and snow to enter the building over the top of the door and, furthermore, such construction provides for a protection of the bearings against the entrance of dust, cinders or other foreign matter.

Another object of the invention is to provide a novel and improved form of roller bearing, and means for retaining the same so that the liability of the bearings becoming disconnected and thereby causing binding of the trackway is avoided.

Furthermore, my purpose is to provide a structure which will embody the desired features of simplicity, strength durability and efficiency.

With the above-recited objects and others of a similar nature in view, the invention consists in the construction, combination and

arrangement of parts, set forth in and falling within the scope of the appended claims.

In the drawings:—Figure 1 is a view in side elevation of a structure provided with a sliding door hanger and trackway embodying my invention. Fig. 2 is an end view of my improved trackway. Fig. 3 is a vertical longitudinal sectional view, taken through the same. Fig. 4 is a vertical transverse sectional view. Fig. 5 is a detail view of the roller bearing and retaining devices therefor. Fig. 6 is a detail view of the yoke or retaining device for the roller bearings.

Referring now to the accompanying drawings in detail, the letter A indicates the structure of any approved character such as a building or car which is provided with a door B. This door in the present instance has its main body portion formed of wood or other suitable material.

My improved trackway is indicated as an entirety by the letter C and comprises a strip which is formed of an integral piece of metal bent in shape to form a vertical flange 1 designed to be secured to the structure over the doorway, said strip being then rolled to form the lower section or tube 2 at the bottom of the vertical flange.

The hanger brackets for the trackway are indicated by the numeral 3 and it is, of course, to be understood that there may be any suitable number of these hanger brackets, the arms 4 of the bracket lying flush with the flanges and having apertures formed therein in alinement with similar apertures in the flange. Through these alining apertures are passed securing bolts 5 for connecting the track to the structure. Each end of the cylindrical or tubular trackway is closed by an end plate 6. The upper end of the door B is beveled as at 7 while to the rear face of said upper end portion is secured a top plate 8, formed of any suitable metal, said plate being provided with laterally extending lugs 9, the end of said lug being bent or turned downwardly as at 10. The laterally extending portion of each lug is formed with an aperture 11 for the purpose hereinafter described.

Adapted to travel in the tubular portion of the trackway are the roller bearings of my device which form an important feature of the present invention. In the present in-

stance, I employ two sets of bearings although I wish it to be understood that any suitable number may be used. Each bearing comprises a pair of rollers or balls

5 12—12, each ball being formed of two members 13—13 connected through the medium of a central shaft 14, the construction being such that a circumferential groove 15 is formed between each section of each ball or

10 bearing. There are two rollers or balls to each bearing and these are connected through the medium of the yoke 16. This yoke is formed of a central section 17 at each of which is formed an arm 18 so constructed that a circular bearing surface 19

15 is formed therein. When the rollers or balls are assembled in conjunction with the yoke, the curved arms fit over the shafts of the rollers, while the central portion 17 of the

20 yoke is provided with an upwardly extending stud 20 adapted to extend through the aperture in the adjacent lug of the top plate 8 of the door. When the rollers of each bearing are connected to the yoke as shown

25 and described, the liability of such rollers being disconnected or disengaged and thereby causing binding in the trackway is obviated. In the present instance, I provide a set of roller bearings for each lug, so

30 that the door shown herein is provided with two such bearings. The lower portion of the door is preferably provided with a metallic plate 21 extending entirely across the bottom of the door and projecting

35 slightly below the same so that a tight screw joint will be formed between the bottom of the door and the sill of the doorway. At the same time, the door may slide freely in its bearings without binding or catching.

40 By the construction above described, it will be noted that I have provided an exceedingly simple yet efficient means by which the door may ride in the trackway, the weight of the door at all times bearing

45 directly upon the rollers so that friction or binding of the door is obviated, and while I have herein shown and described one particular embodiment of my invention, I wish it to be understood that I do not limit my-

50 self to all the precise details of construction

herein shown, as modification and variation may be made without departing from the scope of the appended claims.

I claim:—

1. The combination with a metallic track- 55
way formed of a flanged portion and a tubular track portion integral therewith, brackets for supporting the trackway above the doorway, a door, a hanger plate connected to the upper end of said door and provided 60
with inwardly turned lugs having apertures therein, and roller bearings moving within the trackway, each roller bearing comprising a pair of rollers, a yoke connecting the same, said yoke having a stud adapted to pass through the aperture in the ad- 65
jacent hanger of the door.

2. The combination with a door having an upper beveled end, of a hanger plate connected to the upper end of said door and 70
having laterally extending lugs each formed with an aperture, of a trackway secured above the doorway, said trackway having a tubular section, roller bearings moving 75
within said tubular sections, each roller bearing comprising a pair of rollers, each roll formed of two sections connected by a shaft, a yoke having two arms adapted to engage with the shafts of the rolls, and a 80
stud formed at the center of each yoke and adapted to project through the aperture in the adjacent hanger lug.

3. The combination of a metallic track- 85
way formed of a flanged portion and a tubular track portion integral therewith, brackets for supporting the trackway above a doorway, a door, a hanger plate connected to the upper end of said door and provided with inwardly turned lugs having aper- 90
tures therein, and bearings moving within the trackway, each bearing including a member having a stud adapted to pass through the aperture in the adjacent hanger of the door.

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

WILLIAM F. HACKNEY.

Witnesses:

T. J. RAPLEE,
C. E. RUST.