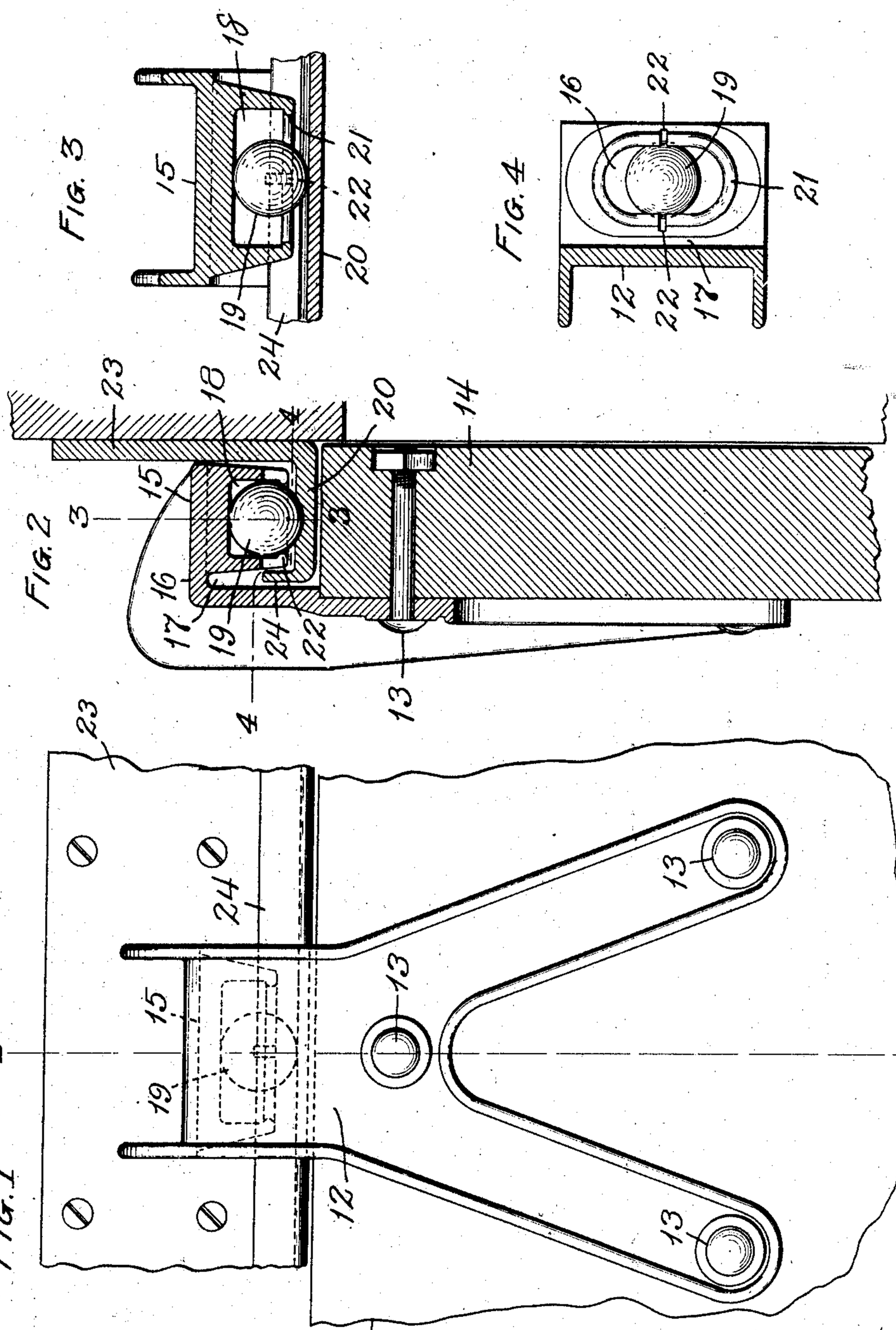
No. 874,013. PATENTED DEC. 17, 1907.

M. E. KANALY.

DOOR HANGER.

APPLICATION FILED APR. 13, 1907.



WITNESSES,

W. S. Mathieson

E. Batchelder

INVENTOR,

M. E. Kanaly

BY Wright Brown Quinby & May

ATTORNEYS

UNITED STATES PATENT OFFICE.

MORRIS E. KANALY, OF ARLINGTON, MASSACHUSETTS.

DOOR-HANGER.

No. 874,013. Specification of Letters Patent. Patented Dec. 17, 1907.

Application filed April 13, 1907. Serial No. 368,074.

To all whom it may concern:

Be it known that I, MORRIS E. KANALY, of Arlington, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Door-Hangers, of which the following is a specification.

This invention relates to hangers for sliding doors, in which the hangers project above the upper edge of the door, and engage a grooved or channeled track affixed to the side of the structure having the opening guarded by the door.

The invention has for its object to provide a door hanger of simple and durable construction, adapted to permit the movement of the door with the minimum frictional resistance, the hanger being provided with an anti-friction ball in rolling engagement with both the hanger and the track, the construction being such that the engagement of a pair of hangers with the track will prevent the door to which the hangers are attached, from being displaced to derail the hangers.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a hanger embodying my invention, with fragmentary portions of the track and door. Fig. 2 represents a section on line 2—2 of Fig. 1. Fig. 3 represents a section on line 3—3 of Fig. 2. Fig. 4 represents a section on line 4—4 of Fig. 2, the track shown in Fig. 2 being omitted.

The same letters of reference indicate the same parts in all the figures.

My improved hanger includes a shank portion 12, the lower portion of which is adapted to be secured by bolts 13, or other suitable fastenings, to a door 14, the upper end of the shank projecting laterally above the door as at 15 and formed with a downwardly projecting portion which is separated from the shank by a recess 17 and is provided with a cavity or socket 18 open at its under side whereby it is adapted to form an anti-friction ball seat. The portion of the hanger which connects the shank with the socketed portion above the recess 17 is indicated at 16. A ball 19 is seated in the cavity or socket 18 and projects below the mouth thereof to bear on a rack 20 The socketed portion is, for convenience, hereinafter referred to as the head. It is provided with means for engaging the ball so that it cannot leave the cavity 18, although free to rotate loosely therein, the preferred means being an inwardly-projecting bead 21 on the inner wall of the cavity, said bead forming a mouth, which is slightly narrower than the diameter of the ball, and is located below the center of the ball, as shown in Fig. 2. The head is preferably provided with slots 22 extending through the bead 21, and making the contracted mouth of the cavity sufficiently resilient to enable the ball to be forced into the cavity, the mouth springing outward to permit the inward movement of the ball, and then contracting after the center of the ball has passed the bead 21. The socket is preferably slightly elongated in the direction of movement of the door, as shown in Fig. 3, so that the head has a limited freedom of movement independent of the ball.

The track which coöperates with the hanger, is composed of the central portion 20 on which the ball 19 runs, the back portion 23, which is bolted or otherwise secured to the side of the car or other structure, having the door opening which is guarded by the door 14, and an outer portion or flange 24 which projects upwardly from the central portion 20 into the recess 17, said flange forming a stop adapted to prevent outward lateral displacement of the hanger by arresting the outward movement of the head 15, and also serving to guide the parts during the travel of the hanger and to prevent possibility of the ball engaging the flange 24 or riding up on said flange. The parts are so proportioned that the head and ball cannot be lifted above the flange 24, while the hanger is attached to the door, the upper edge of the door coming in contact with the track before the head is raised sufficiently to clear the flange 24.

It is obvious that two of the above-described hangers will be used for each door, the track being extended to coöperate with both hangers, and providing for the travel required for the opening and closing of the door.

I claim:

1. In a door hanger, the combination with a shank adapted for attachment to a door and having a socketed head offset from its upper portion, the said head being separated from the shank by a recess adapted to receive a flange of a track, of a ball loosely engaged with the socket of the head, and projecting below the latter, the socket having means for retaining the ball.

2. In a door hanger the combination with

a shank adapted for attachment to a door and having a socketed head offset from its upper portion, the said head being separated from the shank by a recess adapted to receive a flange of a track, of a ball loosely engaged with the socket of the head, and projecting below the latter, the socket having a contracted mouth the width of which is slightly less than the diameter of the ball, said mouth being slotted to make it expansible.

3. In a door hanger the combination of a track having a central hanger-supporting portion, and an upwardly projecting flange, and a door supporting hanger comprising a shank, a socketed head offset from the shank, and a ball seated in the socket of the head and projecting below the latter, the head and shank being separated by a recess which receives the track flange.

In testimony whereof I have affixed my signature, in presence of two witnesses.

MORRIS E. KANALY

Witnesses:

C. F. BROWN,

E. BATCHELDER.