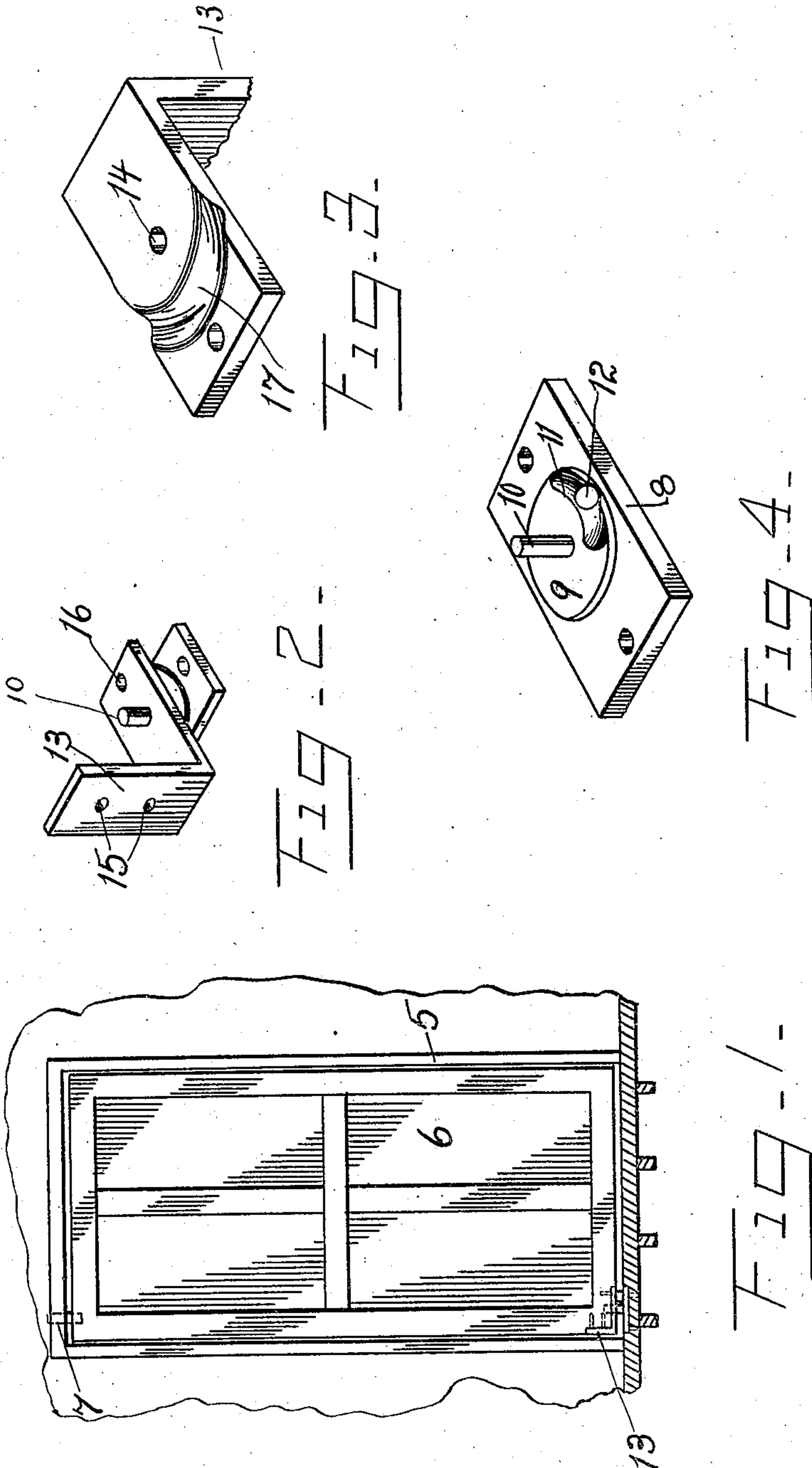


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GRAVITY HINGE.
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983,015.

Patented Jan. 31, 1911.



Inventor

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UNITED STATES PATENT OFFICE.

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GRAVITY-HINGE.

983,015.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ANTHONY N. ANDERSON, a citizen of the United States of America, residing at Jacksonville, in the county of Duval and State of Florida, have invented certain new and useful Improvements in Gravity-Hinges, of which the following is a specification.

This invention relates to gravity hinges for doors, the object of the invention being to provide an improved hinge of this character constructed in such manner that by its use a door may be pivoted to swing freely in either direction and to return to its closed position when released without the use of springs.

A further object of the invention is the provision of a device of the character above set forth constructed in a very simple and inexpensive manner.

Further objects and advantages of the invention will be set forth in the detailed description which now follows.

In the accompanying drawing, Figure 1 is a face view of a door having the invention applied thereto, Fig. 2 is a detail perspective view of a complete gravity hinge, Fig. 3 is an inverted partial perspective view of an L-shaped wearing plate hereinafter described, and Fig. 4 is a detail perspective view of a base plate hereinafter described.

Like numerals designate corresponding parts in all of the figures of the drawing.

Referring to the drawing, the numeral 5 designates a door frame and 6 a door. This door is pivoted within the door frame by a pivot pin 7 at the top of the door and by the gravity hinge, hereinafter described, at the bottom of the door.

This gravity hinge comprises a base plate 8 having a central boss 9 and an upstanding post 10. A groove 11 is formed in the upper face of the boss 9 and inclines downwardly from each end thereof. An anti-friction ball 12 is located in this groove and normally tends to roll to the central point of said groove. The other part of the hinge comprises an L-shaped wearing plate 13 having an opening formed therethrough at 14 for the passage of the post 10. This plate is provided with openings 15 and 16 for the passage of screws or other fastening devices by which the L-shaped wearing plate may be secured to the lower rear corner of the door, as illustrated in Fig. 1. The underside of

this wearing plate is provided with a curved groove 17 in which the ball 12 travels, this groove being deeper at its central portion than at its outer ends.

As is best illustrated in Fig. 1, when the wearing plate 13 is placed in position, the post 10 passes therethrough, this post serving the double function of pivoting the door and aiding in resisting displacement of the wearing plate since the post passes entirely through the bottom of the wearing plate and into the material of the door.

The ball 12 bears between the wearing plate 13 and the base plate 8, and travels in the grooves 11 and 17.

I am aware of the fact that gravity hinges have been employed, but I am not aware that any gravity hinge has ever been constructed in the manner herein shown and described or in such simple and efficient form as is herein set forth.

From the foregoing description, it will be seen that simple and efficient means are herein provided for accomplishing the objects of the invention, but while the elements shown and described are well adapted to serve the purposes for which they are intended, it is to be understood that the invention is not limited to the precise construction set forth, but includes within its purview such changes as may be made within the scope of the appended claim.

Having described my invention, what I claim is:

The combination with a door and door frame, of a vertical pivot between the upper and rear portion of said door and the lintel of the door frame, a base plate located beneath the lower rear edge of the door, an upstanding post carried thereby, a groove formed in the upper face of said base plate concentrically with said post, the bottom of said groove sloping downwardly from each end and the deepest portion of said groove lying beneath the lower edge of the door when said door is in its closed position, a ball traveling in said groove, an L-shaped wearing plate, one portion of which extends horizontally along the under edge of the door and the other portion of which extends vertically along the rear edge of the door, fastening devices passing through said vertically extending portion and entering the material of the door, said wearing plate having a curved groove formed therein in

which said ball travels, said groove being
deepest at its central portion and said post
passing through said wearing plate and en-
tering the material of the door, and fasten-
5 ing devices passing through said horizon-
tally extending portion and entering the ma-
terial of the door.

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

ANTHONY N. ANDERSON.

Witnesses:

A. C. MACNEILL,
PAUL DEANHOFF.