

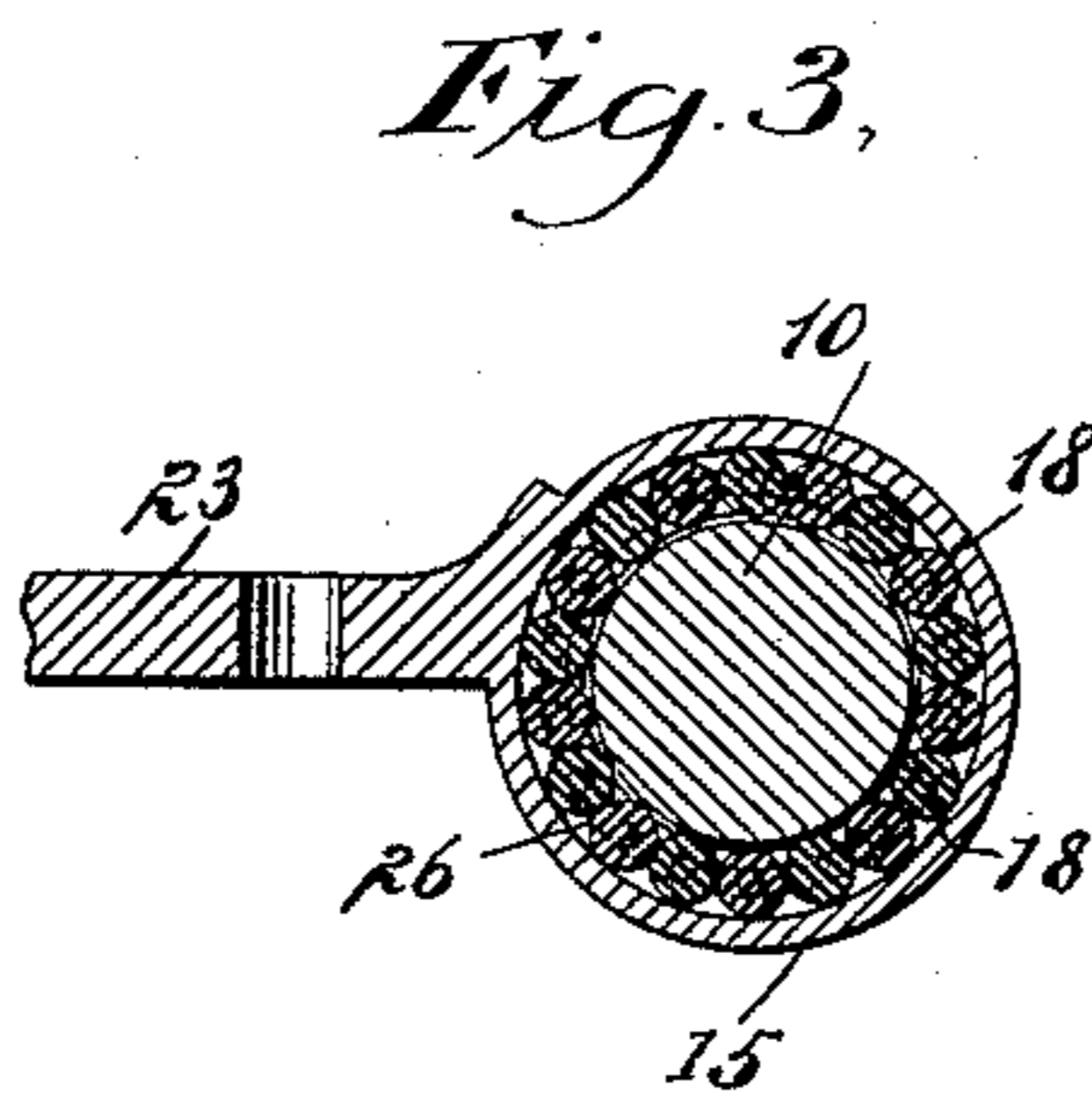
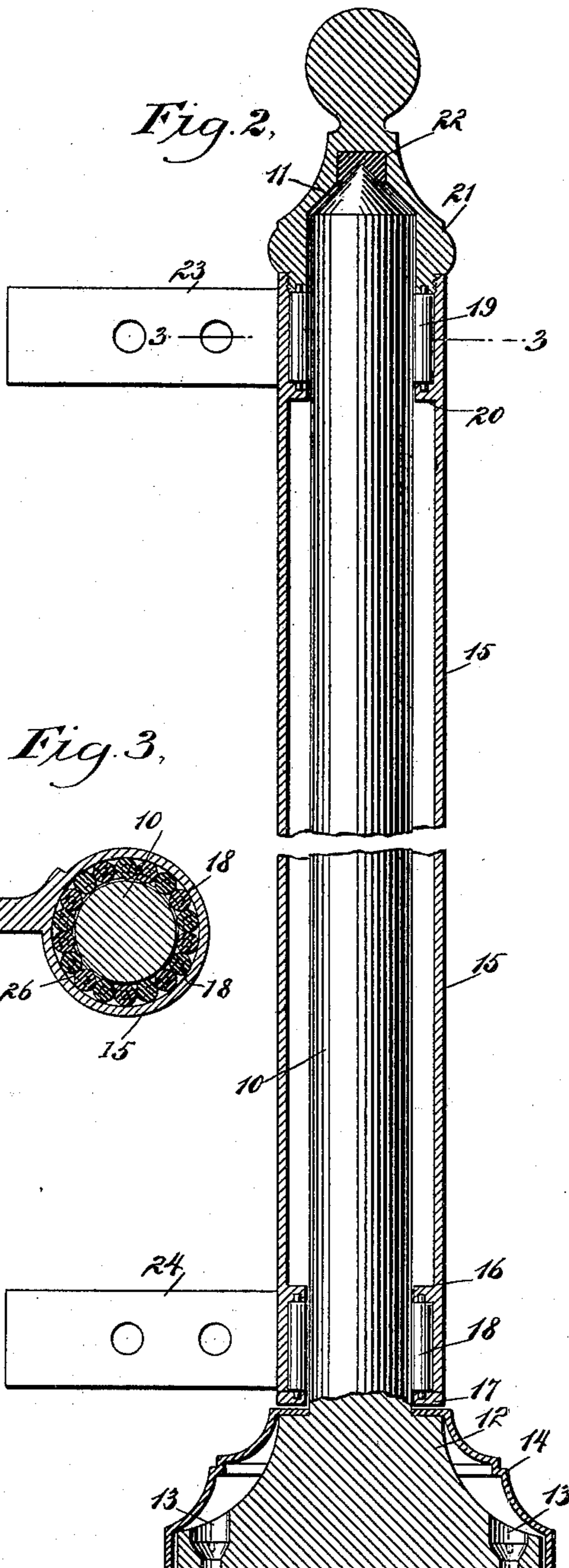
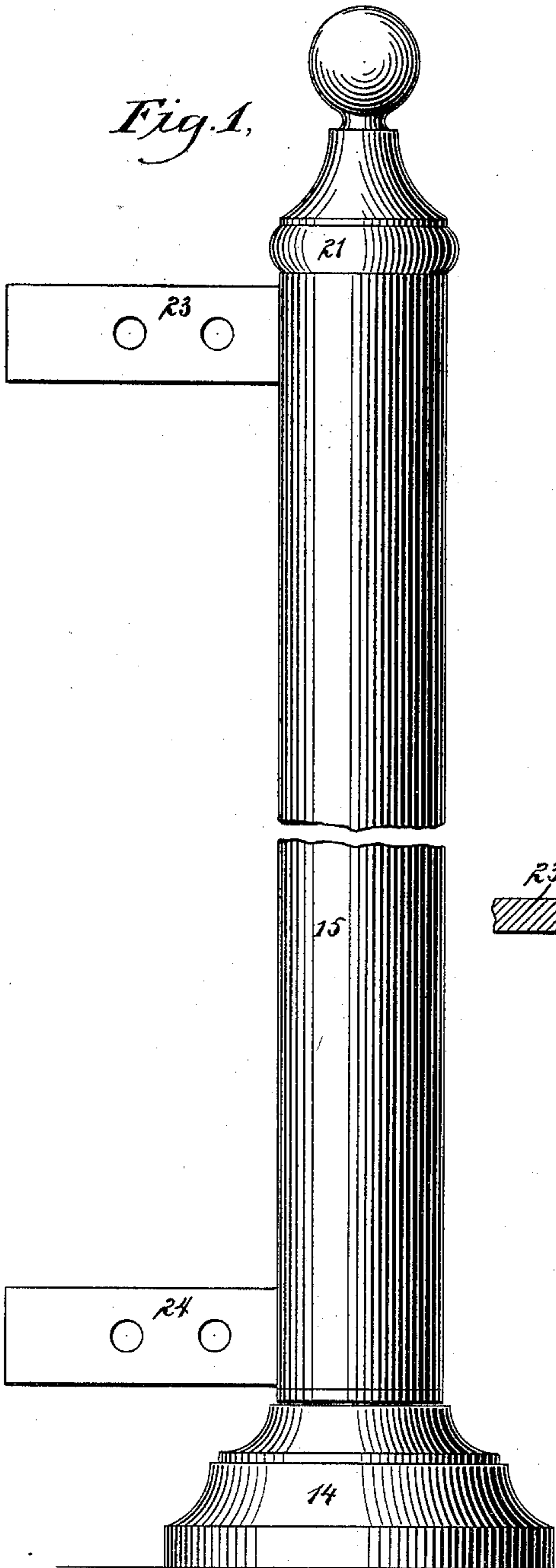
No. 610,820.

Patented Sept. 13, 1898.

H. F. NEHR.
GATE HINGE.

(Application filed Feb. 10, 1898.)

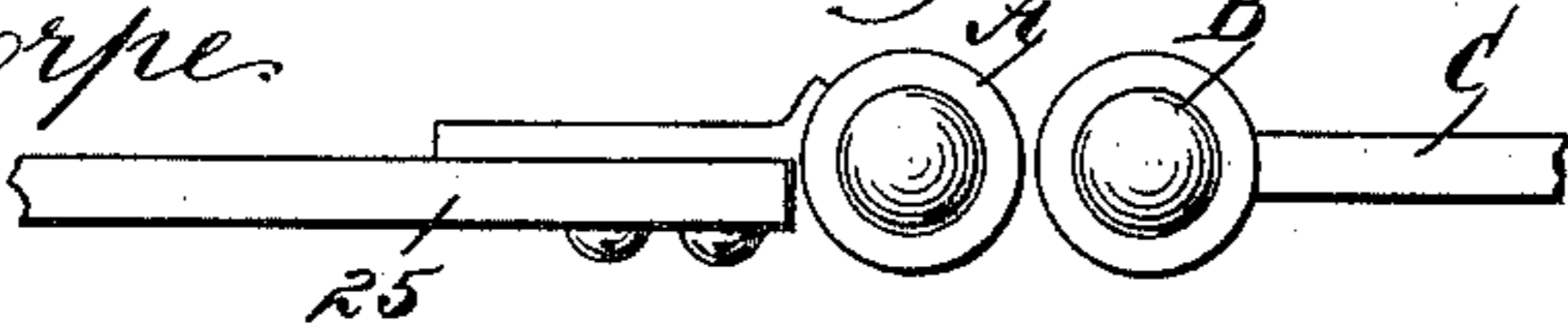
(No Model.)



WITNESSES:

Edward Thorpe.
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Fig. 4.



INVENTOR

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UNITED STATES PATENT OFFICE.

HERMAN F. NEHR, OF NEW YORK, N. Y.

GATE-HINGE.

SPECIFICATION forming part of Letters Patent No. 610,820, dated September 13, 1898.

Application filed February 10, 1898. Serial No. 669,831. (No model.)

To all whom it may concern:

Be it known that I, HERMAN FREDERICK NEHR, of the city of New York, borough of Brooklyn, in the county of Kings and State
5 of New York, have invented a new and Improved Door or Gate Hinge, of which the following is a full, clear, and exact description.

The object of the invention is to provide a simple, durable, and economic hinge especially adapted for heavy doors and gates such
10 as are used in connection with altar-rails, vaults, church structures, and the like.

A further object of the invention is to so construct a hinge of the above-named type that
15 the hinge will be self-supporting, being designed to be used independently of the end post of a rail or other object or surface close to which the door or gate is to be swung.

A further object of the invention is to provide a hinge capable of being secured to a floor or like surface and to which the gate or door may be conveniently and readily attached and wherein the construction of the hinge will be such that a heavy door or gate
20 may be swung as easily as a door or gate of light weight.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth,
30 and pointed out in the claims.

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 a side elevation of the improved hinge. Fig. 2 is a central vertical section through the outer portion of the hinge, showing the supporting-post partly in side elevation and partly in section. Fig. 3 is a horizontal section taken substantially on the line
40 3 3 of Fig. 2; and Fig. 4 is a plan view of a portion of a rail and the improved hinge in position near the end post of the rail, the said view illustrating also a portion of a gate carried by the hinge.

A post 10 is provided for the central portion of the hinge. This post has a conical top 11 and a base 12 of any desired size, the base having openings 13 therein adapted to receive
50 screws or like devices, enabling the base to be secured to the floor or similar support.

The base is preferably covered by an ornamental casing 14, which casing is preferably made removable from the base.

A tubular casing 15 is placed around the
55 post 10. The diameter of the casing 15 is greater than the diameter of the post, and the lower end of the casing is held out of engagement with the base. At the lower end of the casing an upper and a lower interior bearing
60 are formed for the trunnions of rollers 18, the bearings being designated as 16 and 17, and the lower bearing 17 is made removable from the casing. The rollers 18 are grouped quite close together and have bearing against the
65 outer face of the post 10, as shown in Fig. 2, and, as shown in the same figure, similar rollers 19 are provided at the top portion of the casing, engaging with the post 10 near its upper end. The lower trunnions of the upper
70 rollers 19 are journaled in a bearing 20, formed upon the interior surface of the casing 15, while the upper trunnions of the upper rollers 19 are journaled in suitable bearings formed in the bottom of a cap 21, which cap
75 is screwed upon or into the upper end of the casing or is otherwise removably attached thereto. The cap is provided with an inner chamber to receive the upper end of the post 10, which is carried beyond the upper end of
80 the casing. The top of the chamber in the cap is conical, and at the apex of the said conical chamber a block 22 of a hard material is secured, having its inner face recessed to receive the apex of the conical upper end
85 of the post 10. The casing is thus supported upon the post and is capable of turning around the same, being held by the cap 21 from engagement with the base at its lower end.

Preferably two arms 23 and 24 are employed
90 in connection with the casing, being attached thereto or formed integral therewith. These arms usually extend horizontally, one from the top portion of the casing and the other from the bottom portion. The gate 25, door,
95 or other article to be hung is attached to the arms 23 and 24. Thus it will be observed that the improved hinge is provided with its own pivot-support, and the pivot-support for the hinge is capable of being securely fastened
100 to the floor, for example.

In Fig. 4 I have illustrated a portion of an

altar-rail C and an end post B of the said rail, and, as shown, the improved hinge A for the gate is located adjacent to the end post B, supporting the gate independent of the rail and its post. Very heavy gates 25 are often used in connection with altar-rails, and as such gates are frequently opened and closed severe strain is brought upon the rail in the ordinary construction, the strain being often so great as to carry the rail out of proper alignment, thus necessitating frequent repairs. Braces cannot be used to any extent in connection with altar-rails, since they are in the way of occupants of the sanctuary or of persons that are to approach the same.

In forming the bearings for the rollers annular grooves 26 are made in the bearing-surfaces. Thus independent sockets for the trunnions of each roller are obviated, and the rollers may be placed in contact with one another, as shown in Fig. 3.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. In a hinge, the combination of the post, a cap mounted to rotate on the upper end of said post, a block of hard metal interposed between the said cap and post, and a casing surrounding said post and secured to said cap, the said casing being supported solely by the said cap, as and for the purpose set forth.

2. In a hinge, the combination with the post having a conical top and a base adapted for attachment to a support, of a cap mounted to rotate on said conical top, a casing attached to said cap, antifriction devices between said casing and post, and a block of hard metal inserted in the cap above the apex of the top of the post and provided with a recess by which it receives the said apex, as set forth.

HERMAN F. NEHR.

Witnesses:

R. N. SEE,

J. A. McAVOY.