

No. 879,229.

J. H. WILLIAMS.

PATENTED FEB. 18, 1908.

ADJUSTABLE HINGE CONSTRUCTION FOR SAFE AND VAULT DOORS.

APPLICATION FILED JUNE 29, 1904.

2 SHEETS—SHEET 1.

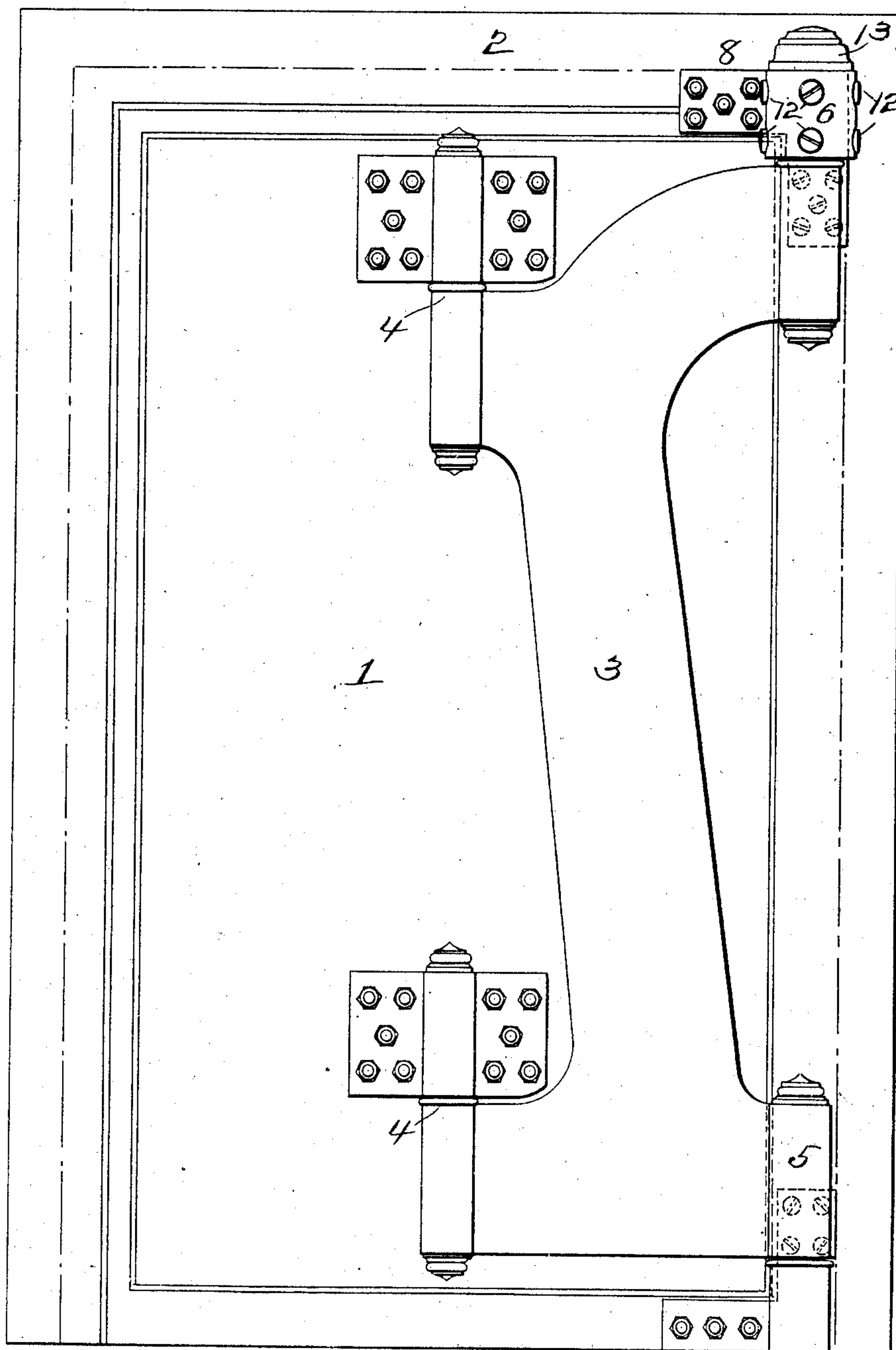


FIG. 1.

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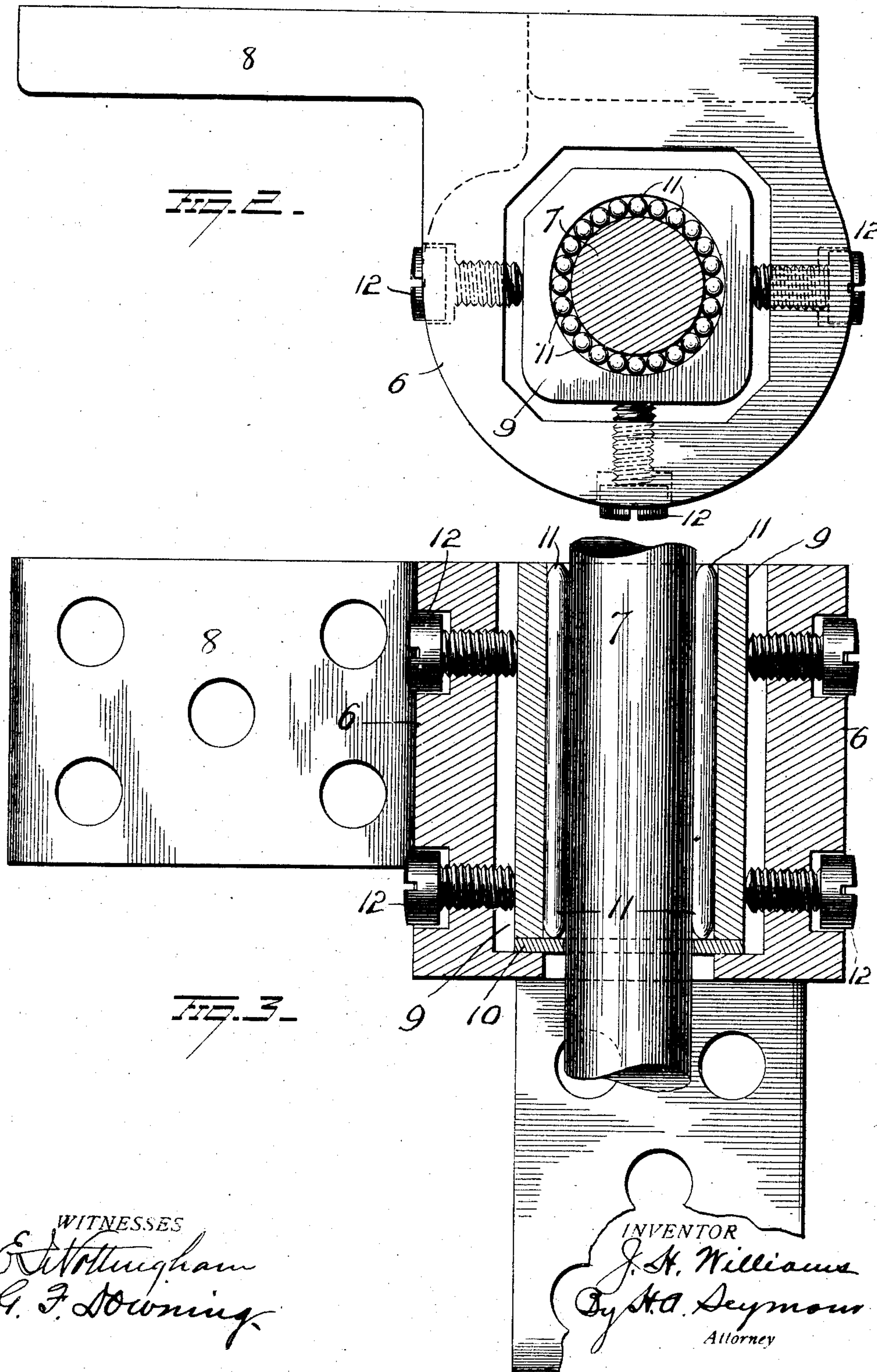
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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

JAMES HENRY WILLIAMS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO REMINGTON AND SHERMAN COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

ADJUSTABLE HINGE CONSTRUCTION FOR SAFE AND VAULT DOORS.

No. 879,229.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed June 29, 1904. Serial No. 214,657.

To all whom it may concern:

Be it known that I, JAMES HENRY WILLIAMS, a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Adjustable Hinge Construction for Safe and Vault Doors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved adjustable hinge construction for safe and vault doors, the object of the invention being to provide improvements of this character which will permit the door to be adjusted to swing evenly regardless of whether or not the safe or vault jamb or vestibule is out of plumb, and the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation illustrating my improvements. Fig. 2 is an enlarged view in horizontal section of the adjustable bearing and Fig. 3 is a view in vertical section.

1 represents the safe or vault door and 2 the jamb or vestibule of the safe or vault. 3 represents a supporting crane connected by hinges 4 with the door and at its lower end is connected with the jamb or vestibule by a hinge 5 of any approved construction, the upper end of the crane being connected with the jamb by my improved adjustable bearing as will now be described.

The crane 3 has a sleeve integral therewith or secured thereto, and having a journal 7 fixed therein and projecting up into bearing box 6, which latter has an integral plate 8 secured to the jamb or vestibule in any approved manner.

The bearing box 6 is cored to receive a sleeve 9 of appreciably less diameter than the bore of the box 6, and said sleeve 9 rests on a washer 10 and incloses a series of rollers 11 around the journal 7. The bearing box 6 is

provided on three sides with vertically alined threaded openings, to receive and countersink set screws 12, the inner ends of which bear against sleeve 9, and it will be seen that by adjusting these sets of screws 12, the position of sleeve 9, journal 7, crane 3, and the door 1, can be varied to exactly balance the weight of the door regardless of the inclination of the jamb or vestibule and thereby permit the door to be stopped at any position in opening and not gravitate to a certain position due to the imperfect hinge connection with the jamb.

While I have shown the outer surface of the sleeve 9 and inner surface of bearing box 6 as having flattened opposite faces, which permit the employment of wedges or other like devices to be inserted between the sleeve and box to secure the sleeve at any adjustment of the screws and thereby relieve the screws of the strain they would otherwise be compelled to bear, I do not wish to be restricted to such shape of parts, as the box and sleeve may be made of a great many different shapes and the wedges may be used or dispensed with as preferred.

An ornamental cap or cover 13 is secured on the upper end of the bearing to exclude dirt and grit and give to the bearing or hinge an attractive appearance.

A great many changes might be made in the general form and arrangement of the parts described without departing from my invention, and hence, I do not restrict myself to the precise details set forth but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new and desire to secure by Letters-Patent is:—

In an adjustable hinge construction for safe or vault doors, the combination with a box provided with means for rigidly securing it to a door frame, said box having a bottom provided with an opening, of a sleeve disposed within said box, spaced from the wall of the box and sustained by the bottom of the box, a pin or journal adapted for attach-

ment to a door and passing through said box,
a washer supported by the bottom of the box,
rollers surrounding the pin or journal and
supported by said washer, and screws passing
5 through the wall of the box and engaging said
sleeve for adjusting the same.

In testimony whereof, I have signed this

specification in the presence of two subscri-
ing witnesses.

JAMES HENRY WILLIAMS.

Witnesses:

J. K. LEE SMITH,
ALBERT E. LOWRY.