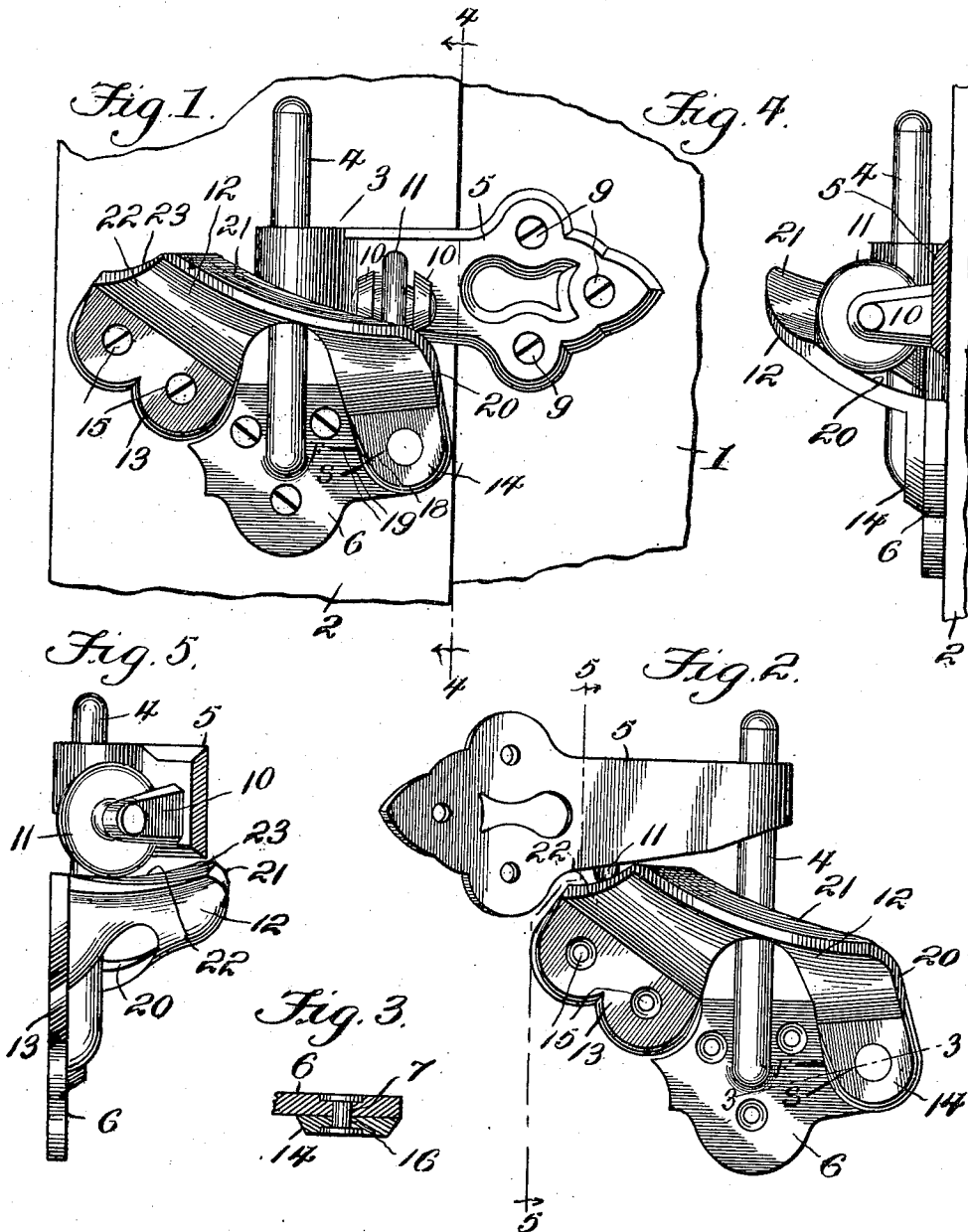


G. HUBERT.
SELF CLOSING HINGE.
APPLICATION FILED AUG. 5, 1910,

996,411.

Patented June 27, 1911.

2 SHEETS—SHEET 1.



Witnesses

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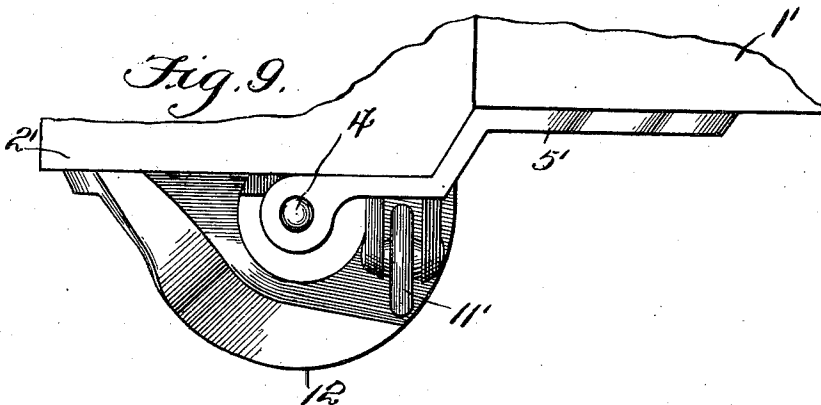
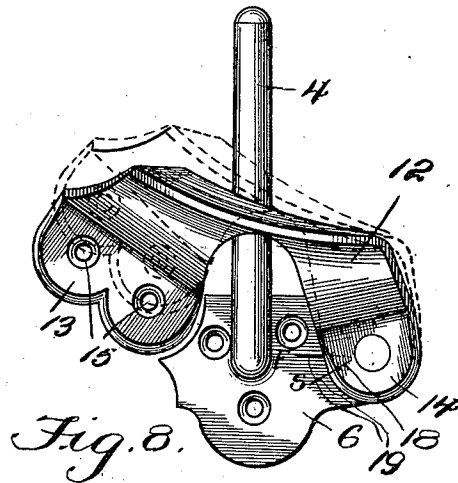
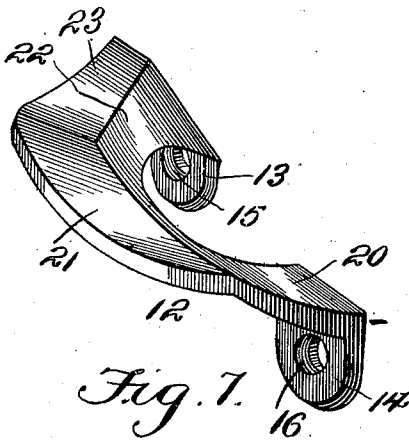
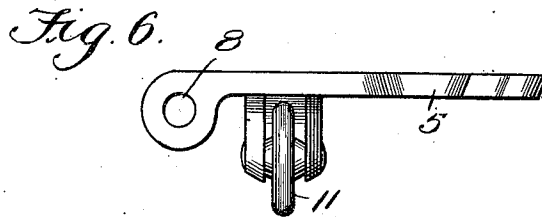
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

GUSTAV HUBERT, OF GRAND HAVEN, MICHIGAN.

SELF-CLOSING HINGE.

996,411.

Specification of Letters Patent. Patented June 27, 1911.

Application filed August 5, 1910. Serial No. 575,695.

To all whom it may concern:

Be it known that I, GUSTAV HUBERT, a citizen of the United States, residing at Grand Haven, in the county of Ottawa and State of Michigan, have invented new and useful Improvements in Self - Closing Hinges, of which the following is a specification.

This invention pertains to that class of hinges known as gravity hinges, and it contemplates the provision of a simple, compact and strong gravity hinge designed for use upon gates or doors of the ordinary construction and more particularly for use in combination with heavy refrigerator and cold storage apartment doors and constructed with a view of enabling the door to freely gravitate to its closed position and to effectively retain the door in either its closed or its open position.

Another object of the invention is to provide a gravity hinge with an adjustable track so that the inclination of the said track may be changed to allow the gate or door to gravitate slowly or fastly as occasions may demand.

With the above, and other objects in view, which will appear as the description progresses, the invention resides in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, there has been illustrated a simple and preferred embodiment of the improvement and in which drawings,

Figure 1 is a front elevation of the hinge constructed in accordance with the present invention, showing the same in its closed position. Fig. 2 is a similar view showing the hinge in its open position, the track being adjusted to assume a different inclination from that shown in Fig. 1. Fig. 3 is a detail sectional view upon the line 3—3 of Fig. 2. Fig. 4 is a vertical sectional view upon the line 4—4 of Fig. 1. Fig. 5 is a sectional view upon the line 5—5 of Fig. 2. Fig. 6 is a top plan view of the leaf. Fig. 7 is a perspective view of the track. Fig. 8 is a front elevation of the pintle member and track and illustrating the manner of adjusting the track. Fig. 9 is a top plan view of the hinge and track showing a slight modification of the leaf member wherein the said leaf member is adapted to engage a door or gate which is offset from the support.

In the accompanying drawings the numeral 1 designates a portion of a gate, door or the like, and 2 designates the post or casing for the door.

The numeral 3 designates the hinge proper. This hinge 3 comprises a pintle 4 and a leaf member 5. The pintle 4 has its lower extremity provided with a plate 6 and the said plate is provided with a plurality of openings which are adapted for the reception of securing elements and with an additional opening 7 for a purpose presently to be set forth. The pintle member 4 is secured to the post or casing 2 while the leaf 5 is connected with the door or gate 1. This leaf 5 has its inner extremity provided with an eye 8, the same engaging the pintle member 4 and the outer portion of the leaf is provided with a plurality of openings which are adapted for the reception of securing members 9 whereby the said leaf is attached to the gate or door 1. The leaf 5 is integrally formed with a pair of spaced outwardly projecting arms 10, and pivotally connected with the extremity of the said arms is a wheel 11. This wheel has its periphery rounded and it will be noted that by spacing the said wheel a distance away from the leaf 5 the said wheel may be free to play upon the track for the device.

The numeral 12 designates the track. This track 12 comprises a substantially U-shaped member provided with depending vertical fingers 13 and 14. Each of these fingers 13 and 14 are provided with suitable openings 15 and 16, the opening 15 being secured to the post or casing, while the opening 16 is adapted to aline with the opening 7 in the leaf 6 and the said opening is adapted for the reception of a suitable securing member which also acts as a pivot whereby the track 12 may have its opposite end raised or lowered to provide for the rate of speed which the leaf 5 is to travel upon the pintle member 4. The finger 14 having the opening 16 is provided with an indicating mark 18, and the plate 6 is also provided with a plurality of indicating marks 19, the same being adapted to aline with the mark 18 so as to readily estimate the speed at which the leaf is to travel upon the track.

The portion of the track adjacent the finger 14 is substantially flattened and inclined upwardly a suitable distance as at 20 and the central portion 21 of the track

is rounded upwardly and inclined from its center toward its opposite edges. The opposite end portion of the track adjacent the finger 13 and designated by the numeral 22 has its face inclined from its center toward its opposite edges as clearly illustrated in the figures of the drawing. By this arrangement it will be noted that when the rounded wheel 11 of the leaf 5 travels upwardly it first passes over the substantially straightened portion 20 of the track and thence over the outer beveled face of the central portion 21, and as the wheel is further moved it will engage the inner inclined face provided by the portion 22. It will be noted that when the wheel is rotated either within the portion 20 or the inclined portion of the member 22, the gate will be held against movement in either direction, and pressure must be brought to bear before the wheel leaves the beveled surface designated by the numeral 23 and provided upon the portion 22 before the said wheel will travel over the inclined portion 21 and be positioned within the depressed flattened portion 20. By this arrangement it will be noted that the leaf supporting the door or gate 1 is effectively retained in both its open and its closed positions and that accidental movement of the gate in either direction is effectively obviated. It will be further noted that by providing means whereby the track may be adjusted in relation to the pintle and hinge the desired amount of speed at which the gate is swung closed is effectively regulated.

In Fig. 9 the structure is substantially similar to that heretofore described, except that the leaf 5' has its extremity arranged at an angle to that portion of the leaf occu-

pied by the wheel and arranged with the eye. By this construction, it will be noted that the door or gate 1' which is offset from the post or casing 2' may be tightly closed.

From the above description, taken in connection with the accompanying drawings, it will be noted that I have provided an extremely simple and effective device for the purpose intended, and while I have illustrated and described the preferred embodiment of the improvement, as it now appears to me, minor details of construction within the scope of the following claim may be resorted to if desired.

Having thus fully described the invention, what I claim as new is:—

In combination with a gate and a casing or post for the gate, of a pintle and a track secured upon the casing or post, the said track comprising a member substantially U-shaped in plan, said track having a flat upwardly inclined portion arranged adjacent one of its ends, the central portion of the track being rounded upwardly from its center and inclined toward its opposite edges, and the opposite end of the track being inclined downwardly from its center toward its opposite edges, means for adjusting the track in relation to the pintle, the gate having a leaf, said leaf being provided with an eye adapted to engage with the pintle, and a roller carried by the leaf adapted to play upon the track, substantially as and for the purpose set forth.

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

GUSTAV HUBERT.

Witnesses:

CHAS. MAURER, Jr.,
JOHN BEHM, Jr.