

W. J. HOPE.
GRAVITY HINGE.
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1,065,807.

Patented June 24, 1913.

Fig. 1.

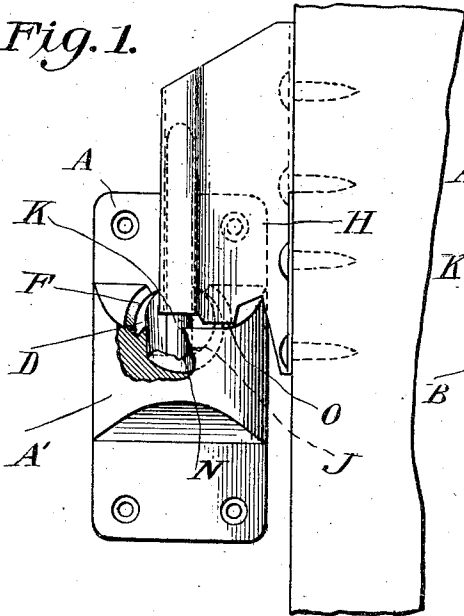


Fig. 1^a.

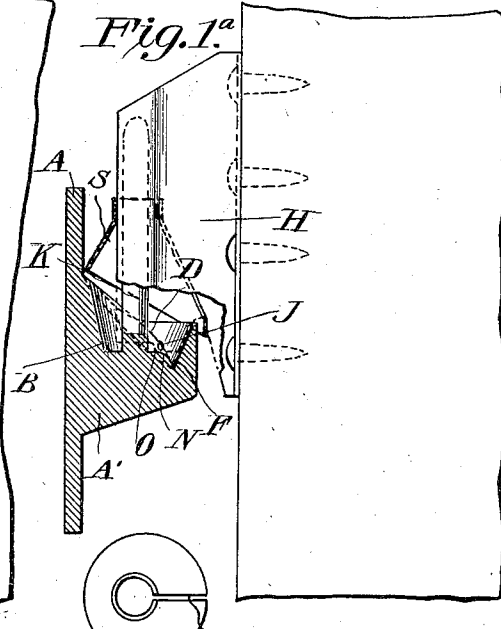


Fig. 2.

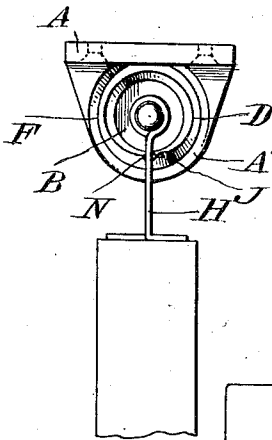


Fig. 5.

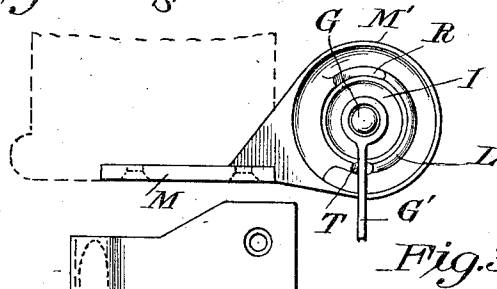
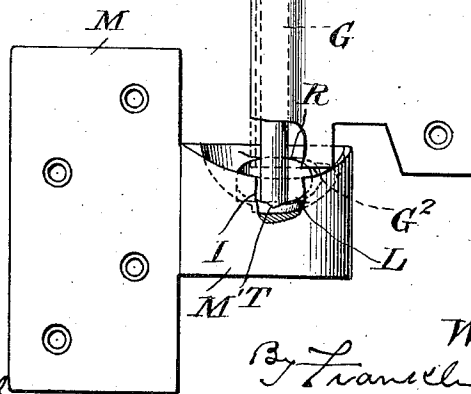


Fig. 3.

Fig. 4.



WITNESSES

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GRAVITY-HINGE.

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To all whom it may concern:

Be it known that I, WILLIAM J. HOPE, a citizen of the United States, residing at Tunica, in the county of Tunica and State of Mississippi, have invented certain new and useful Improvements in Gravity-Hinges; 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in automatic, self-oiling gravity hinges for doors of various kinds and comprises a simple and efficient device of this nature having various details of construction and combinations and arrangements of parts which will be hereinafter fully described, shown in the accompanying drawings and then specifically defined in the appended claim.

My invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a front elevation, partially broken away, of my improved hinge. Fig. 1^a is a vertical section. Fig. 2 is a top plan view. Fig. 3 is a top plan view of a modified form of the hinge, Fig. 4 is a side elevation, and Fig. 5 is a detail view of a guard upon the pintle of the hinge.

Reference now being had to the details of the drawings by letter, A designates a plate which is adapted to be fastened to the jamb of a door and is provided with a laterally projecting portion A' which, at its upper edge, is recessed as at B, forming a receptacle for a lubricant. The bottom of said lubricating receptacle is inclined, and an inclined ridge D is formed about the inner marginal edge of the groove F in the bottom of the receptacle and upon which the lower end of the hinge H is adapted to ride. A pintle K rises centrally from the center of the top of said projection and adapted to receive the hinge H upon which it is pivotally mounted. It will be noted that the lower portion of the hinge has a projection O which, when the door is closed, normally rests in a notch N formed in the inclined ridge upon which the door rides, said notch and projection being provided for the purpose of steadying the door when closed and

preventing accidental opening of the door before sufficient pressure is applied thereto to cause the hinge to move upward against the inclined edge of the ridge. Said projection is adapted to dip into the oil contained within the receptacle and to lubricate the ridge each time the door is swung in one direction or the other.

In Fig. 3 of the drawings, I have shown a slight modification of my invention in which, instead of providing a hinge for a door which swings in opposite directions, the form illustrated therein is for a door designed to swing in one direction and in which the hinged plate M is adapted to be fastened to the door jamb and is provided with a lateral projection M', recessed upon its edge and forming a receptacle I for a lubricant, and an inclined way L is formed upon the inclined bottom, and a pintle G rises from said projection upon which the hinge G' is pivotally mounted. A notch T is formed in the ridge for the reception of the projection G² near the lower end of the hinge to hold the door from accidental movement, while a flattened portion R is formed near the upper edge of the inclined ridge to hold the door open.

In Fig. 5 of the drawings, I have shown a top plan view of a conical-shaped hood, designated by letter S, and which has a slot S' therein to allow the same to swing about the pintle and frictionally engage the outer surface of the cylindrical portion of the hinge which engages the pintle, said hood being provided for the purpose of protecting the lubricant within the receptacle from dust, etc., and also serving as means for obscuring the oil or lubricant.

In order to prevent a sudden slamming of the door, a knob or raised portion, designated by letter J, is formed upon the inclined edge on which the hinge rides and positioned adjacent to the notch at the lower end thereof and which will tend to break the swinging movement of the door as the latter returns to its normal position.

By the provision of a hinge made in accordance with my invention, it will be noted that a simple and efficient means is afforded whereby the door may be automatically closed without the utilization of springs, a ridge or bearing upon which the hinge rides being adapted to lubricate each time the door swings by reason of the projection

upon the hinge dipping into the lubricant and oiling the surface upon which the hinge rests and the notch will hold the door against accidental opening.

5 What I claim to be new is:—

A self-lubricating gravity hinge comprising a plate adapted to be fastened to the jamb of a door and having a laterally projecting portion which is recessed, the bottom
10 of the recess being inclined and having a groove in the bottom thereof, the wall of said recess being inclined, a pintle rising from the bottom of the recess, a hinge member having a recess in the bottom thereof
15 adapted to fit over the outer edge of the

projection, a portion of the lower edge of the recessed hinge member intermediate the recess and pintle adapted to ride upon said inclined ridge and dip into the lubricant of the receptacle, the ridge being provided
20 with a notch for the reception of the part which rides upon the ridge, and a projecting hood fitted to the hinge member and adapted to cover said recess, as set forth.

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

WILLIAM JAMES HOPE.

Witnesses:

D. W. COKER,

H. T. HALL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."