

L. ASPY.
DOOR HINGE.

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1,007,838.

Patented Nov. 7, 1911.

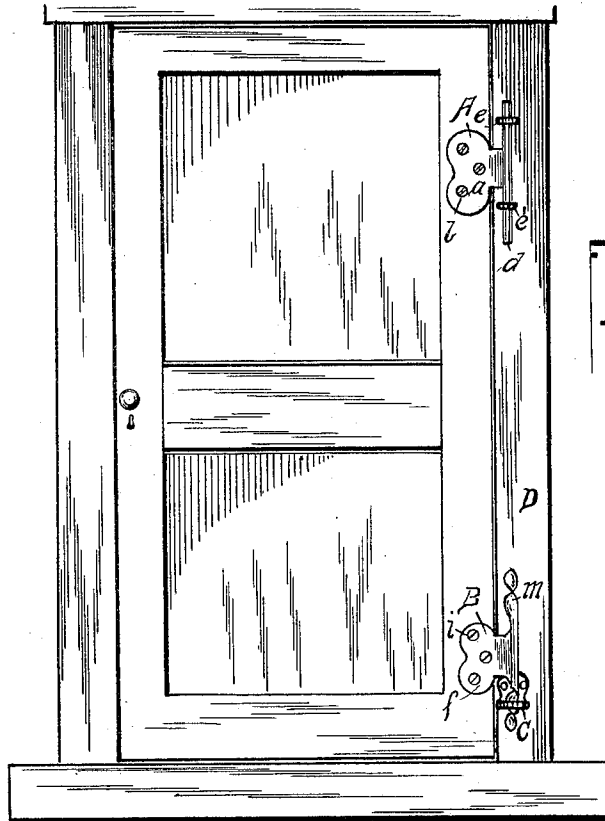


Fig. 1.

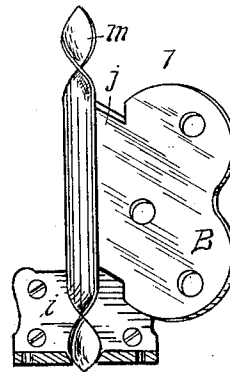


Fig. 2.

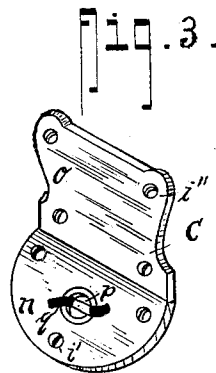


Fig. 3.

WITNESSES:

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LOTUS ASPY, OF TERRE HAUTE, INDIANA.

DOOR-HINGE.

1,007,838.

Specification of Letters Patent.

Patented Nov. 7, 1911.

Application filed July 31, 1909. Serial No. 510,636.

To all whom it may concern:

Be it known that I, Lotus Aspy, a citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented new and useful Improvements in Door-Hinges, of which the following is a specification.

My invention relates to hinges used to suspend and operate doors, screens, shutters, windows and the like. And the objects of my invention are; first, to provide a hinge whereby doors, windows, etc., may be suspended and operated; second, to provide such a device, whereby the doors, etc., supplied therewith will be self-closing; third, to provide such a device whereby the pressure, motion and speed of a door mounted thereon, will be uniform at all times and in all positions, thereby avoiding slamming and violent jar, injurious to the door and annoying; fourth, to provide such a device whereby a door, or the like, may be easily and quickly hung or removed, and fifth, to provide a hinge which will be substantial, durable and economical. These objects I attain by means of the mechanism illustrated in the accompanying drawings, in which:—

Figure 1, is a view of a door equipped with a set of my hinges. Fig. 2, is a perspective detail of the hinge-part, showing its position when the door is open and stationary. Fig. 3, is a perspective view of the bearing-plate.

Similar letters of reference refer to similar parts throughout the several views.

My invention consists of a set or pair of hinge-parts of peculiar design, and the peculiar construction and arrangement of the different parts of the hinge-parts, and the operation thereof, constitute the essential features of the invention.

The letter B indicates the hinge-part which consists of a plate *f*, which is perforated to receive two or more screws *i*, whereby it is attached to the side of the door, a shank *j* integral with and projecting backward from the plate *f*, and a spiral, or screw-like shaft *m*, which is formed by twisting the elongated edge of the shank *j* into a spiral form, or may be a solid spiral shaft, brazed or otherwise suitably attached to the edge of the shank *j*. The shank *j* is slightly raised, or angled from the plane of the plate *f*, to afford room for a free bearing for the spiral shaft. The spiral shaft *m* is twisted into a right-hand thread upon one

end and a left-hand thread upon the other end, in order that the same hinge-part may be interchangeably adaptable for either right or left hand doors. The extreme ends of the spiral-shaft are rounded, or beveled to a point, for the purpose hereinafter set forth.

The letter C indicates a bearing-plate, which consists of a flat plate *n*, provided with perforations for screws *i'* whereby it may be securely fastened to the floor or door-sill, and a perpendicular plate *o*, integral with the plate *n* and standing upward at right angles thereto, and provided with perforations for screws *i''*, whereby it may be securely fastened to the door-frame. The plate *n* is provided at its center, with a circular perforation *p*, the edge of which is counter-sunk, or beveled upon the upper side, to conform with the beveled contour of the ends of the spiral-shaft *m*, and is further provided with an S-shaped slot *q*, of a design similar to a cross-section of the spiral-shaft *m*, and therefore adapted to receive, in a thread-like manner, the spiral-shaft *m*.

It is apparent, that when the hinge-part B is turned backward upon its bearing plate, the spiral-shaft being cut the exact proper length, the shaft will thread itself upward through the slot *q* and the beveled point of the shaft will rest solely upon the counter-sunk, or beveled edge of the circular perforation *p* and will stand stationary thereon, when pushed farther back or open, hence needs no restraint to keep the door open, and prevent its slamming.

To mount a door, shutter, gate, window, or other similar object, upon my hinges, I attach the plate of the hinge-part B to the edge of the door, or other object, and the bearing-plate C is attached to the door-sill or door-frame, or both as desired, opposite to the hinge-part B. The beveled point of the spiral-shafts *m* are then placed within the beveled perforation *p* of the bearing-plate and the weight of the door will cause the spiral-shaft *m* to wind downward through the slotted bearing-plate C, thereby revolving said spiral-shaft and incidentally closing the door.

To remove the door, it is only necessary to open the same until the spiral-shaft frees itself from the slot of the plate C, when the door may be withdrawn.

It is apparent that many alterations in the design shown and the construction de-

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scribed, may be made without departing from the main principle of the invention, and the device may be constructed of sheet-metal, stamped, forged or cast, and I reserve the right to make such alterations.

Having described my invention, its structure, operation and advantages, what I claim as new and desire to protect by Letters Patent, is:

10 In a hinge, the combination of a plate, a shank integral with the said plate and projecting backward and slightly raised from said plate, an elongated spiral shaft, integral with or suitably attached to the rear
15 edge of said shank and projecting from the upper and lower edges of said shank, said

spiral-shaft being reversely twisted, a bearing-plate perforated centrally by a counter-sunk circular aperture, adapted to support the spiral-shaft and provided with a slot adapted to receive the spiral-shaft, all substantially as described and shown and for the purpose set forth. 20

In testimony that I claim the foregoing as my own, I have hereunto attached my signature, in the presence of two witnesses, at Terre Haute, in the county of Vigo and State of Indiana. 25

LOTUS ASPY.

Witnesses:

SYDNEY B. DAVIS,
JOHN MCMINN.

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