

T. W. FADE.
COMBINED HINGE AND DOOR HOLDER.
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1,429,416.

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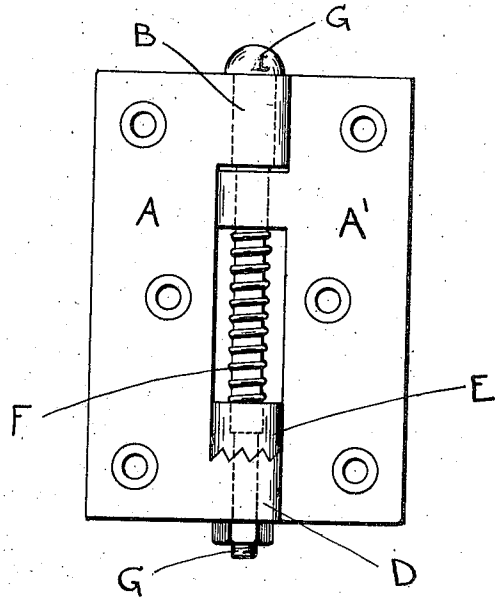


FIG. 1

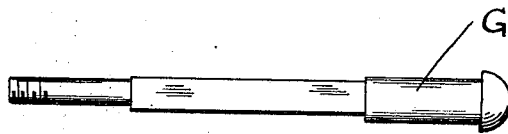


FIG. 2

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UNITED STATES PATENT OFFICE.

THOMAS WILLIAM FADE, OF LONDON, ENGLAND.

COMBINED HINGE AND DOOR HOLDER.

Application filed January 2, 1922. Serial No. 526,459.

To all whom it may concern:

Be it known that I, THOMAS WILLIAM FADE, of 18 Repton Road, Fulham, London, S. W. 6, a subject of the King of Great Britain and Ireland, have invented certain new and useful Improvements in Combined Hinge and Door Holders; and I hereby declare that the following is a full, clear, and exact description of the same.

10 This invention relates to hinges and while it is particularly designed for doors which are liable to the action of wind pressure (as for example ships' cabin doors) it will be clear that it is capable of general appli-
15 cation to any door or other part which is required to be hinged and which it is desirable should be capable of being temporarily held in any desired position within the limits of movement of the hinge.

20 The invention consists in a hinge so constructed and arranged that it will be self-locking or self-holding in any position within the limits of the movement of the hinged members.

25 The invention also consists in a hinge so constructed and arranged that it may be moved into any position within the limits of its movement by the application of pressure and will be self-holding as soon as
30 such pressure is released.

The invention also consists in a hinge embodying a ratchet connection between the parts adapted to be secured respectively to the two parts to be hinged.

35 The invention also consists in the arrangement of hinge hereinafter described and illustrated.

In the accompanying drawings:

40 Figure 1 is an elevation showing one convenient form of hinge constructed and arranged in accordance with the invention, and

Figure 2 is a view showing a detail.

45 In carrying my invention into effect in one convenient manner I construct my improved hinge with the usual side members AA', such members being pivotally united by means of a non-rotatable bolt G which passes through the lugs BC at the upper
50 part of the members and the lug D at the lower part of one of said members. The lug D is serrated or toothed or otherwise suitably formed so that it co-operates in the manner of a ratchet with a movable collar E correspondingly serrated or
55 toothed. The collar E is slidable upon but

not rotatable on the bolt G, the latter being square or otherwise formed to co-operate with a similarly formed aperture in the collar E whereby the desired result is obtained, it being understood that the lug C is formed with a square bore to prevent the rotation of the pin or bolt. The collar E is pressed by a spring F into engagement with the lug D to cause the serrations of the collar to interlock or interengage with those of the lug.

It will be evident that with such a hinge the parts to be hinged will be held relatively to one another in any position in which the force-producing movement of the hinge is released and the resistance to movement of the hinge from such position against the application of a steady pressure will depend upon the angle of the cooperating ratchet teeth and the strength of the spring F tending to maintain such teeth in contact.

The application, however, of a comparatively small force suddenly applied to disengage the serrations will enable the hinge to be moved so that the parts may be closed or opened or otherwise adjusted relatively to one another.

My improved hinge, therefore, is particularly suitable for use in connection with ships' cabin doors, for example, since with the hinges so arranged the door will remain fixed in any position in which it may be set against the application of wind pressure, for example, or any other steady pressure which is within the limits of the device, while at the same time the sudden application of a comparatively small pressure will be sufficient to release the holding device and enable the hinge to function in the usual manner.

It will be clear that the invention is not to be confined to any particular form or construction of hinge nor to any particular purpose for which the same is to be employed.

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

1. A hinge comprising two hinge members provided at one end with lugs and one of the members at the other end provided with a lug having a clutch face, a non-rotatable hinge bolt passing through the lugs and hingedly connecting said members, a non-rotatable clutch member mov-

able lengthwise on the hinge bolt into and out of engagement with the clutch of last mentioned lug, and a spring coiled on the hinge bolt pressing on said clutch member.

5 2. A hinge comprising two hinge members each provided at one end with a hinge lug and one of the hinge members provided at the other end with a hinge lug having a clutch face, a non-rotatable hinge bolt passing through the lugs and hingedly connecting said members, the hinge bolt adjacent to the last mentioned lug having a multi-
10 lateral surface, a non-rotatable clutch mem-

ber lengthwise movable on the multilateral surface of the hinge bolt into and out of 15 engagement with the clutch member of said lug, and a spring coiled on the hinge bolt pressing the clutch members into engagement.

Dated at the city of Toronto, Province 20 of Ontario, Canada, this 31st day of December, A. D. 1921.

THOMAS WILLIAM FADE.

Witnesses:

CHAS. H. RICHES,
ROBERT McCLINTOCK.