

G. J. MONEY.

FASTENING DEVICE OR LATCH FOR DOORS, WINDOWS, OR THE LIKE.

APPLICATION FILED AUG. 31, 1911.

1,059,555.

Patented Apr. 22, 1913.

3 SHEETS—SHEET 1.

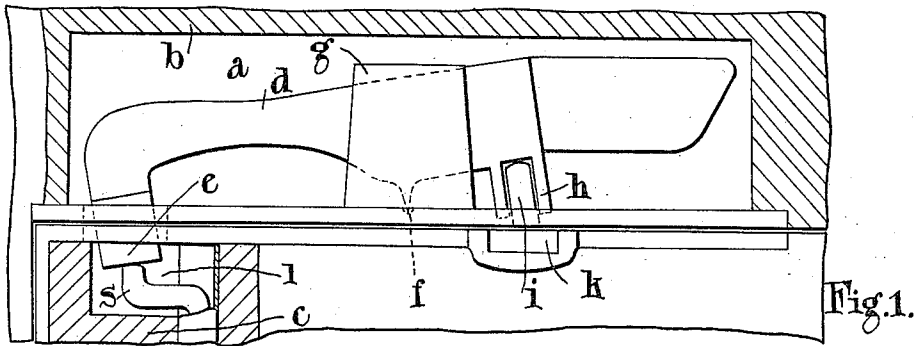


Fig. 1.

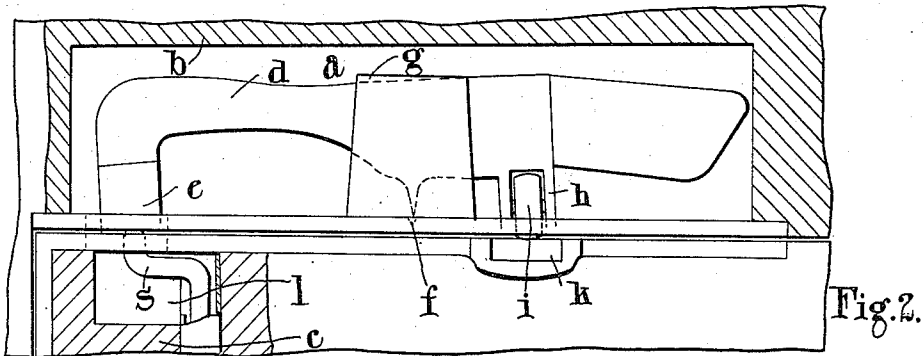


Fig. 2.

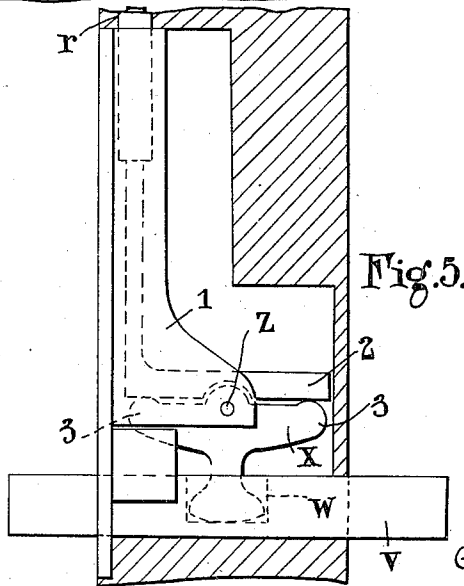


Fig. 5.

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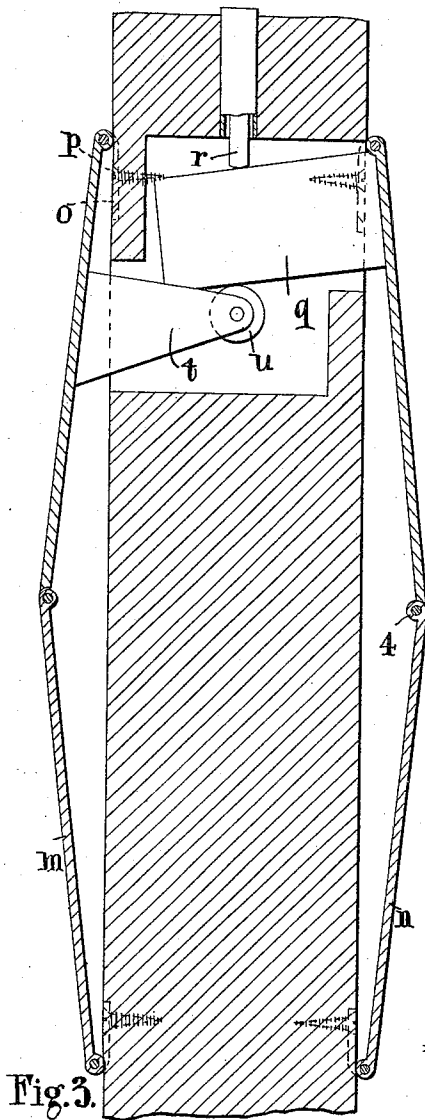


Fig. 3.

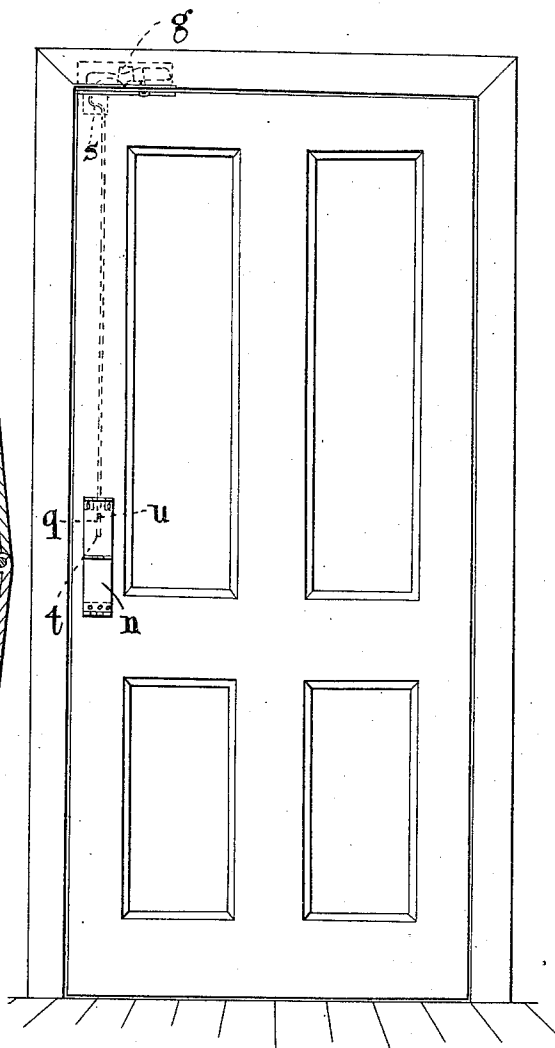


Fig. 4.

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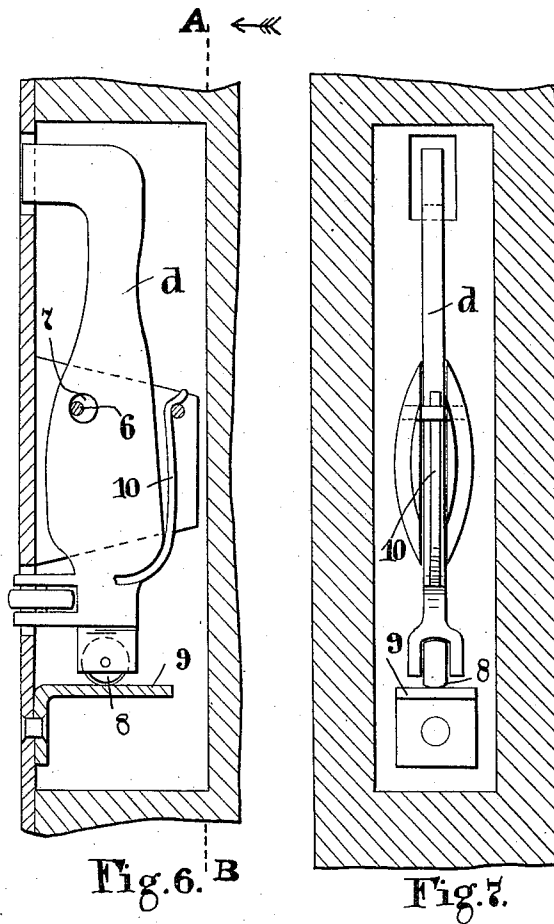
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3 SHEETS—SHEET 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE JOHN MONEY, OF LONDON, ENGLAND.

FASTENING DEVICE OR LATCH FOR DOORS, WINDOWS, OR THE LIKE.

1,059,555.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed August 31, 1911. Serial No. 647,044.

To all whom it may concern:

Be it known that I, GEORGE JOHN MONEY, of 39 Rochester road, in the county of London, England, have invented certain new and useful Improvements in or Relating to Fastening Devices or Latches for Doors, Windows, or the Like, of which the following is a specification.

This invention relates to fastening devices or latches for doors, windows, or the like, and has for its object to provide a simple device of this nature which may be cheaply and readily constructed and fitted in position and which shall be adapted to come automatically into operation when required.

The invention consists in a fastening device in which the latch or bolt is adapted to become operative or inoperative by the mere disturbance of its equilibrium.

The invention also comprises other details and arrangements hereinafter more particularly referred to.

The accompanying drawings illustrate two modes of carrying out the invention.

Figure 1 is a fragmentary view partly in section showing one form of fastening device constructed in accordance with the invention as applied to a door, the device being shown in the position which it occupies when the door is closed. Fig. 2 is a similar view showing the device released in order to allow the door to open. Fig. 3 is a side sectional elevation showing one convenient arrangement for operating the releasing means for the catch. Fig. 4 is a general view of a door showing one convenient manner in which the various parts of the invention may be disposed in relation to the door and door-frame. Fig. 5 is a similar view to Fig. 3 showing a modification. Fig. 6 is a fragmentary side elevation partly in section showing a modification of the invention when applied to a latch placed in the usual position upon the side of the door. Fig. 7 is a sectional view on line A—B, Fig. 6, looking in the direction of the arrow.

In carrying the invention into effect in one convenient manner, as for example, in its application to a latching device for a door and as illustrated in Figs. 1 to 4, a beam *d* provided with a suitable latch or projection *e* at one end is pivotally mounted within a recess of the casing *a* in the transom rail *b* upon the door *c*, the beam being so balanced upon the knife edge point of sup-

port *f* that the latch *e* is normally held in a raised or elevated position. For the purpose of retaining the beam *d* in position within its casing it is preferred to provide a bracket or guide *g* which in a convenient modification may take the form of a lug in which is a vertical slot wherein the beam *d* may work, a pin or other convenient arrangement being adapted to prevent the beam from becoming displaced out of its slot. The beam may be provided toward its after-end with a pair of lugs *h* upon which is mounted a small slight slide, pulley or roller *i* or like anti-friction device, the pulley or roller being normally in its lowermost position due to the normal balancing of the beam. Fixed in any suitable manner upon the upper edge of the door and arranged flush therewith is a device *k* which provides an inclined plane up which the pulley or roller *i* may move, a pair of such inclined planes being provided for a double-acting door, and it will be obvious that the inclined plane may be simply cut from the material of the door although it is preferably formed from metal, vulcanite, or other durable material for the purpose of preventing wear. The arrangement is such that when the door closes the roller *i* rides up the inclined plane (the latch resting upon the edge of the door) and thus causes the beam to assume the position shown in Fig. 1 whereby the latch *e* is caused to enter a corresponding recess *l* in the upper edge of the door when the latch comes into register with the recess and the door is firmly held in its closed position. Any suitable means may be employed for raising the catch *e* from the recess in the door, for example, the latch may be directly operated upon by a rod or the like adapted to be thrown in an upward direction by a lever or rotating or other cam or similar device fixed to or operated by an ordinary handle such as is employed with latches as hitherto constructed.

In the modification illustrated in Fig. 3, which shows its application to a double acting door the releasing device may be operated by the action of pushing upon one or other of the finger-plates *m* and *n*. The plates *m*, and *n* are hinged at the middle of their length and at each end, one end being fixed while the other end is provided with a plate *c* having slotted holes therein so that the plates may be moved past the retaining screws or the like *p*. The finger plates are

preferably arranged so that the small plates to which they are hinged are hidden behind the finger-plates as shown in the figure, and in this case it will be necessary to make the central pin 4 removable so that it may be inserted in position after two parts of the finger-plate have been fixed in place. When the finger-plate *n* is pushed inward the projection or plate *q* formed integral therewith or secured thereto in any convenient manner rises and pushes the rod *r* in an upward direction so that the cranked or bent member *s* thereof pushes the latch *e* out of engagement with its recess *l* whereby the door is free to be opened in the usual manner. When, however, the finger-plate *m* is pushed the plate *t*, which is preferably provided at its end with a roller *u*, causes the plate *q* to be pushed in an upward direction whereby the rod *r* is moved upwardly as above described.

It will be understood that in order to provide for the return of the rod *r* any suitable spring or weight may be employed if the weight of the rod or other parts are not sufficient to effect this return automatically.

Fig. 5 illustrates a convenient modification according to my invention in those cases where it is desired that the pushing or pulling of one device is sufficient to effect the release of the catch. In this modification I provide a bar or the like *v* which may be pushed or pulled in either direction through the door by means of suitable handles (not shown) and within a recess *w* in which a cam-like device *x* is capable of rocking. The cam *x* is pivoted at *z* to a guide or guides 1 fixed in a suitable recess in the door and between which a right-angle bar 2 is adapted to slide. The arrangement is such that upon movement in either direction of the bar *v* the cam *x* is adapted to rock and one or other of the wing-like extensions 3 of the cam engages the bar 2 causing it to be moved in an upward direction whereupon the vertical limb of the right-angle piece 2 pushes upon the rod *r* thus effecting the release of the catch.

It will be readily understood that when the latch is pushed into the position shown in Fig. 2 by means of the rod *r* and the roller *i* moved down the inclined plane when the door is opened and the balance of the beam *d* insures that the latch *e* shall be retained in its upper or normal position.

Fig. 6 illustrates a modification of the invention when applied to a latching device placed in the usual position upon the side of the door. In such a modification the beam *d* is pivoted upon a pin 6 by means of a hole or aperture 7 in the beam which is of larger diameter than the pin 6 and the end of the beam *d* is provided with a wheel or roller 8 adapted to roll upon a slide 9 and to take the weight of the latching beam *d*.

As before, a roller *i* and inclined planes *h* are employed for the purpose of disturbing the balance of the beam, and a spring 10 is employed to pull the beam into, and hold it in, its operative or inoperative position as required, it being evident when in the operative position of the beam the roller *i* is the fulcrum about which it oscillates while in its inoperative position the pin 6 becomes the fulcrum and these fulcra are placed one upon either side of the spring 10 so that the latter acts in the same manner upon the beam whether in its operative or inoperative position.

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

1. A fastening device for doors, windows and the like comprising a latch, a beam carrying said latch, a fulcrum on which the beam loosely rests, whereby the latter can pivot thereon and be removed therefrom, an attachment on the beam, a member for operating upon said attachment to move the beam and bring the latch in its operative position and serving as a support for the attachment, and means for removing the latch from its operative position, whereby the removal of the latch from the operative position causes the beam to be removed from the fulcrum on which it loosely rests and to pivot by means of said attachment on the member which operates the attachment and the disengagement of the attachment and said member causes the beam to return to its fulcrum with the latch in its inoperative position, as set forth.

2. A fastening device for doors comprising a door-frame, a door, a latch, a beam carrying said latch and loosely fulcrumed in the door-frame, an attachment on the beam, a member on the door for operating upon said attachment to move the beam and bring the latch in its fastening position and serving as a support for said attachment, a reciprocating rod which is independent of the latch and is mounted within the door, a hinged finger plate on the door and means independent of the reciprocating rod and operable by the finger plate for pushing the rod against the latch and forcing the latter into its inoperative position, as set forth.

3. A fastening device for doors comprising a door-frame, a door, a latch, a beam carrying said latch and loosely fulcrumed in the door-frame, an attachment on the beam, a member on the door for operating upon said attachment to move the beam and bring the latch in its fastening position and serving as a support for said attachment, a reciprocating rod which is independent of the latch and is mounted within the door, a hinged finger plate on the door and a projection upon the finger plate which

is independent of the reciprocating rod and serves for pushing the rod against the latch and forcing the latter into its inoperative position, as set forth.

- 5 4. A fastening device for doors, windows, and the like, comprising a latch, a beam carrying said latch and provided with an aperture, a pin located in said aperture and of smaller diameter than the aperture, means 10 for disturbing the balance of said beam to render the latch operative or inoperative and a spring device for pulling the latch into and holding it in its operative or inoperative position.
- 15 5. A fastening device for doors, windows, or the like, comprising a latch, a beam car-

rying said latch and provided with an aperture, a pin projecting through said aperture, and of smaller diameter than the aperture, means for disturbing the balance of said 20 beam, means for taking the weight of said beam and a spring device for pulling the latch into and holding it in its operative or inoperative position.

In testimony whereof I have signed my 25 name to this specification in the presence of two subscribing witnesses.

GEORGE JOHN MONEY.

Witnesses:

E. C. WALKER,
P. A. OUTHWAITE.

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