C. N. DUTTON.

Lock-Hinge.

No. 210,305. Patented Nov. 26, 1878

Fig. 1.

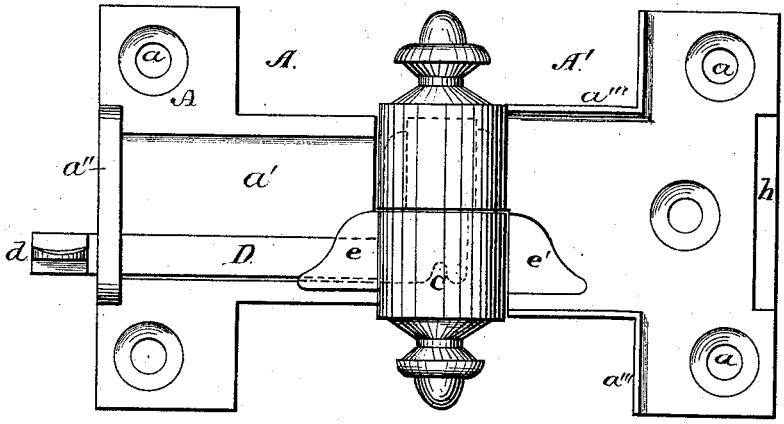
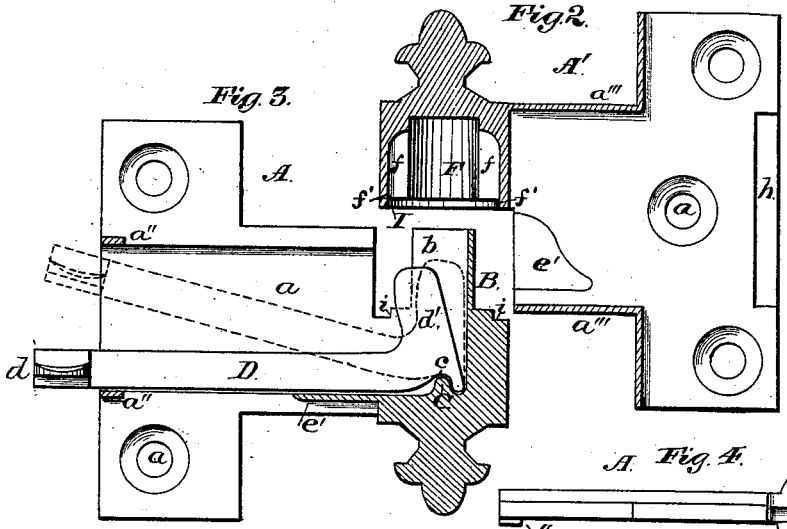


Fig. 2.



A. Fig. 4.

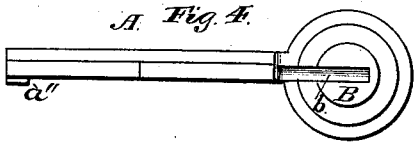


Fig. 6.

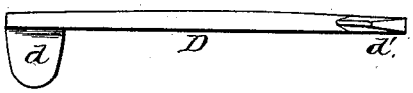
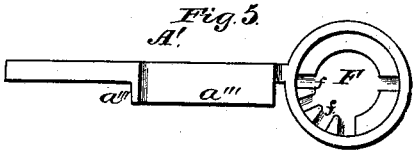


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHAUNCEY N. DUTTON, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN LOCK-HINGES.

Specification forming part of Letters Patent No. **210,305**, dated November 26, 1878; application filed October 2, 1878.

To all whom it may concern:

Be it known that I, CHAUNCEY N. DUTTON, of Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Automatically-Locking Hinges; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of hinges which are usually employed in hinging window shutters and blinds; but my improved hinge may also be applied to doors and gates, lids and covers, or wherever such hinges are applicable, so that the parts can be locked in any desired position, whether closed or open, or partially open, as occasion may require.

The invention consists in a hinge of peculiar construction, made in two parts, one having a central recess, provided with a series of notches in its inner periphery, and the other having a slotted pintle and provided with a locking-lever, which operates automatically in the manner substantially as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is an elevation of my improved hinge, shown wide open. Fig. 2 is a view, partly in section, showing the female or upper half of the hinge. Fig. 3 is a similar view, showing the male portion, with the locking-lever attached thereto, shown in elevation. Fig. 4 is a plan view of the lower or male part, and Fig. 5 is a similar view of the upper or female part, of the hinge reversed. Fig. 6 is a plan or top view of the locking-lever detached.

Referring to the parts by letters, A represents the male portion or half, and A′ the female part of the hinge.

As shown by the drawings, the working parts of the portion A are arranged beneath, or so as to fit into, the corresponding parts of the other portion, A′, arranged above the part A; but, as will be evident to those skilled in the art, the position of the parts may be reversed, yet still be within the scope of my invention. The parts A A′ are provided with suitable bolt or screw holes *a*, so that by the use of suitable screws or bolts they may be securely fastened to the shutter, doors, or gates, &c., to which they may be applied.

The part A has a central pintle or shaft, B, which is formed with a vertical slot or groove, *b*, said slot or groove at its lower end having a central projection, C. This projection C constitutes the bearing for the locking-lever D, said bearing being knife-edged, conical, or of any suitable form.

The part A is also provided with a lateral recess or groove, *a′*, and a guide or staple, *a″*, for the purpose of receiving and holding in proper position the locking-lever D. Said locking-lever is provided at its outer extremity with a thumb-piece, *d*, and its inner end is formed with an elbow or projecting part, *d′*, the bearing of the lever being formed with a notch, *c*, corresponding with the form of the projection C.

The portion A′ of the hinge is formed with an annular recess, F, for the reception of the male projection B of the part A; and between said recess F and the periphery of said portion of the hinge a series of radial recesses, *f*, are provided, into one or other of which the portion *d′* of the locking-lever D drops automatically when said lever is not held up by hand. Said portion A′ is also formed with an annular recess, I, and the other portion, A, with an annular gain or shoulder, *i*, which fits the recess I, thereby forming a bearing for the two parts of the hinge without pressure upon the pintle B or pivot on which the parts turn; and to further avoid such pressure on the pintle, the recess F is made somewhat longer than the pintle, and with a shoulder, *f′*. The portion A′ is also provided with lateral flanges *a‴*, which fit over the corresponding edges of the part A, preventing the insertion of any tool which might move the locking-lever D, and thereby pick the lock from the outside, and also serve to prevent the ingress of water, snow, or other extraneous matter which might interfere with the operation of the hinge. As a further means of preventing the picking of the lock, the part A is formed with a projection or offset, *e*, which fits a corresponding recess, *e′*, formed in the part A′ when the two parts are brought together. The part

A′ is also formed with a recess, *h*, to receive the guide or staple *a″*.

The projection *d′* on the end of the locking-lever D is made wedge-shaped in form, and said lever is enlarged in width toward its central point, as clearly shown by Fig. 6 of the drawings.

The object of making the locking-projection *d′* wedge-shaped is to compensate for wear and always insure of its engagement with the recesses *f* of the portion A′; and, if desired, said recesses *f* may also be made wedge-shaped in form.

The object of enlarging the lever D is to make it loosely fit the recess *a′* and prevent any unnecessary lateral movement of said lever, but without interfering with its movement in a vertical direction.

When the hinge is applied to doors, gates, &c., the position of the locking-lever D is reversed; and, as will be evident to those skilled in the art, by a slight alteration in the construction of the parts the projecting end of the lever may be located in any suitable or desirable position convenient for operation.

If not fully understood from the foregoing description, the operation of the device may be described as follows:

So long as the hinge is in the position shown by Fig. 1 of the drawing it is locked in suitable position, the portion *d′* of the lever D engaging with the one or other of the recesses *f*.

In order to change the position of the shutter, door, gate, &c., the lever D is raised so as to disengage its end *d′* from the notches *f*, when the readjustment may be effected.

It will be observed that, to readjust the position of shutter or door, &c., in this way, it is only necessary to raise the lever D, and when the required position is attained the removal of pressure from the thumb-piece *d* permits the lever D to fall by its own gravity and engage with the corresponding recess *f*, thereby locking the shutter, door, or gate in the desired position automatically.

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

1. A hinge composed of the two parts or members A A′, the one part having a central recess, F, formed in its inner periphery, and series of notches *f*, and the other part having a slotted pintle, B, and locking-lever D, constructed and operating substantially as and for the purpose specified.

2. In a hinge constructed substantially as described, the part A, provided with a central bearing, C, and recess *a′*, in combination with the locking-lever D, having the notch *c* and wedge-shaped projection *d′*, and with the part A′, provided with the notches *f*, operating substantially as and for the purpose specified.

3. The part A′, having the annular recess I and the recess *e′*, in combination with the part A, having the shoulder *i* and projection or offset *e*, substantially as and for the purpose specified.

4. The portion A′, constructed with the lateral flanges *a‴*, which fit over the corresponding edges of the part A, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHAUNCEY N. DUTTON.

Witnesses:

D. G. STUART,

A. MCCALLUM.