C. B. CLARK.

Lock-Hinges.

No. 141,323. Patented July 29, 1873.

Fig. 1.

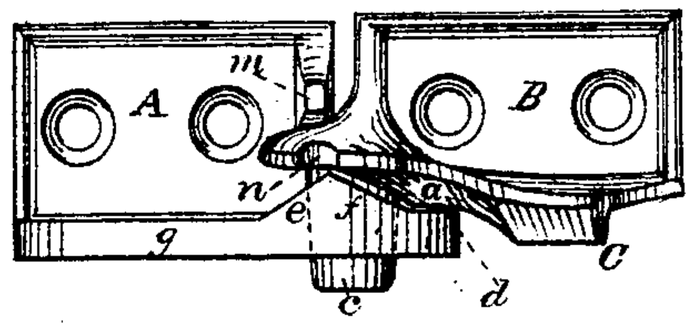


Fig. 2.

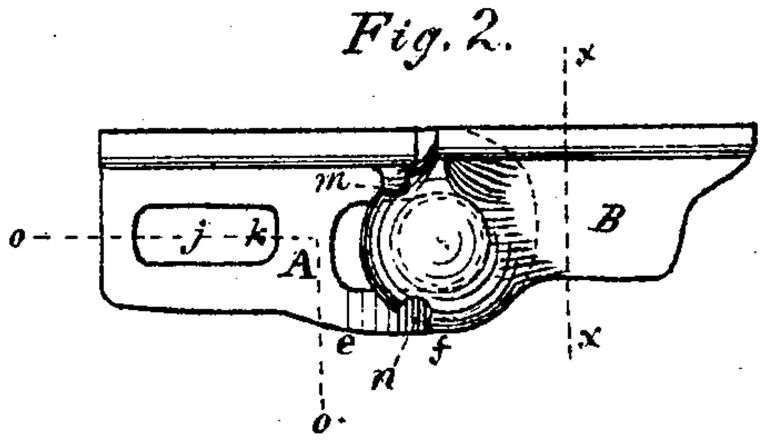


Fig. 3.

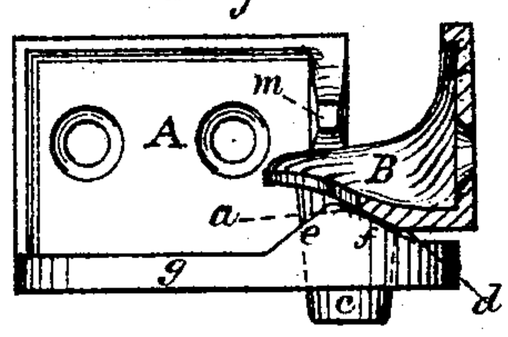


Fig. 4.

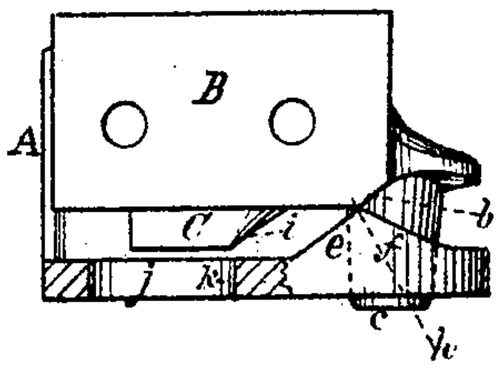


Fig. 5.

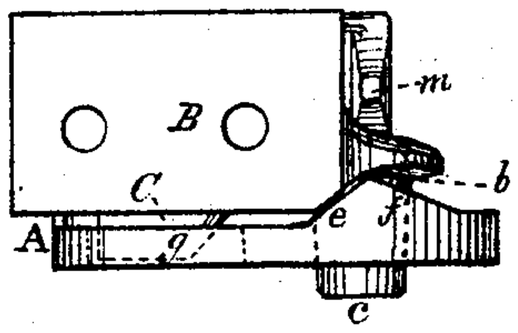


Fig. 6.

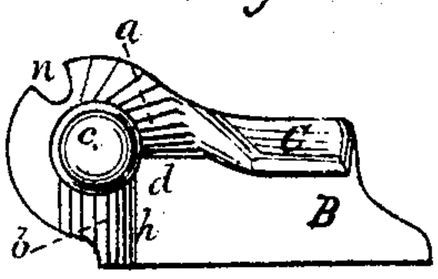


Fig. 7.

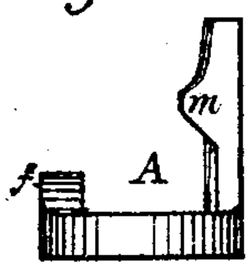
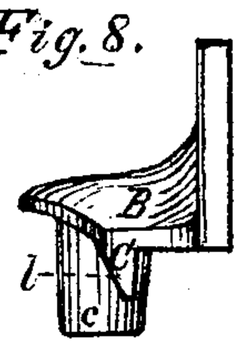


Fig. 8.



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UNITED STATES PATENT OFFICE.

CHARLES B. CLARK, OF BUFFALO, NEW YORK.

IMPROVEMENT IN LOCK-HINGES.

Specification forming part of Letters Patent No. **141,323**, dated July 29, 1873; application filed June 23, 1873.

To all whom it may concern:

Be it known that I, CHARLES B. CLARK, of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Blind-Hinge, of which the following is a specification:

My invention relates to the class of hinges which are self-fastening when opened; and it consists, primarily, in a novel arrangement of double inclines on the eye piece, in combination with inclines and an intervening plane on the proximate surface of the pin piece; also, in the combination therewith, of a beveled latch-piece for effecting the locking of the blind by means of a lateral movement produced by the weight of the blind acting on the parts above named; the object being to avoid injurious concussion when the parts engage, and to form a hinge of greater strength and lightness than usual, and one which can be cast by plain molding; and it further consists in a novel arrangement of an elongated slot on the eye piece, and a beveled catch on the pin piece, in combination with the double and single inclines and plane or level, all as hereinafter more fully described.

Figure 1 is a front elevation of the hinge as it appears when the blind is closed. Fig. 2 is a plan view of the same. Fig. 3 is a front elevation of the eye piece, with the pin piece in a position at right angles to the eye-piece, as when the blind is half open, the pin piece being shown in section on about the line *x x* of Fig. 2. Fig. 4 is an elevation, with the back of the pin piece turned toward the observer, as it appears when the blind is fully opened, and shown just upon the point of locking, part of the eye piece being in section on about line *o o* of Fig. 2. Fig. 5 is a like view with the parts locked. Fig. 6 is a plan view of the under side of the pin piece, showing the arrangement of the inclines thereon. Fig. 7 is an end or edge view of the eye piece; and Fig. 8 is a like view of the pin piece.

Similar letters of reference indicate corresponding parts.

Upon the under side of the pin piece B, and at each side of or surrounding the pintle *c*, are formed inclines *a b*, Figs. 6, 1, 3, 4, and 5, while between the two is left a level part, *d*, as seen in Fig. 6. The inclines *a* and *b* incline in the same direction, the incline *b* being more abrupt than the one *a*, as represented in Fig. 6, and in Figs. 1, 3, 4, and 5. At the outer edge of the eye piece A, and near the point where the pin *c* enters the same, a projection, *e f*, is formed, whose sides incline in opposite directions, as shown in Figs. 1, 2, 3, 4, 5, and 7.

When the blind is closed, as in Fig. 1, the pin piece B rests upon the eye piece A at the level part *d;* but when the blind is opened the pin piece is rotated, and its incline *a* brought in contact with the incline *f* of the eye piece A, as shown in Fig. 3, the effect of which is to raise the pin piece and the blind to which it is attached. When the blind has been opened about two-thirds of the distance the incline *a* will have fully traversed the incline *f*, and the level portion *d*, Figs. 1, 3, and 6, of the pin piece B will then rest upon the apex of the projection *e f*. At this point the pin piece B will have been sufficiently elevated to allow its latch or projection C to pass freely over the edge *g* of the eye piece A. When the blind is nearly fully opened the level part *d* will have been fully traversed by the apex of the projection *e f*, and the apex will then rest upon the edge *h*, Fig. 6, as shown in Fig. 4; and when the blind is fully open, and parallel with the building, the incline *b* of the pin piece will be brought into coincidence with the incline *e* of the eye piece, and the incline *i* of the latch *c* with the edge *k* of the slot *j*, Figs. 4 and 2, at which point the blind descends the incline *e* by its gravity, the latch *c* engaging in the slot *j*, the blind being thereby effectually locked, as seen in Fig. 5.

In the act of locking the incline *b* acts in connection with the incline *e*, and the incline *i* with the edge *k* of the slot *j* simultaneously, so that the descent of the blind is gradual, easy, and regular, and the downward strain or concussion, caused by the weight and fall of the blind, is borne equally by both parts of the hinge and the screws by which they are attached. The incline *i* also causes the latch C to enter its slot *j* with precision, and the incline *l*, on the front of the latch, Figs. 1 and 8, prevents the possibility of the edge *g* of the eye piece preventing the easy passage of the latch C over it. The eye piece is provided with a stop or projection, *m*, Figs. 1, 3,

and 7, to prevent the detachment of the parts when the blind is operated carelessly, or otherwise; but the parts may be detached, when necessary, at the point where the notch *n* on the pin piece coincides with the stop *m* on the eye piece.

By this construction the downward strain or concussion on the hinge, in the act of locking, is equally distributed on both parts of the hinge; and I am enabled to cast it entire without cores or other appliances than those required for plain molding; and I form at the same time a hinge of greater strength and lightness, and of neater appearance.

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

1. The inclines *a b* and plane *d* on the part B, in combination with the double inclines *e f* on the part A, substantially as and for the purposes set forth.

2. The bevel *i* on the latch C, in combination with the inclines *e f* and *a b*, substantially as and for the purpose set forth.

3. The elongated slot *j* and beveled latch C, in combination with the inclines *a b e f* and plane *d* of the parts B A, substantially as and for the purpose set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES B. CLARK.

Witnesses:

CHARLES H. THAYER,

N. ROCHESTER.