E. HALSEY.

Double Reversible Hinge.

No. 160,425. Patented March 2, 1875.

Fig. 1.

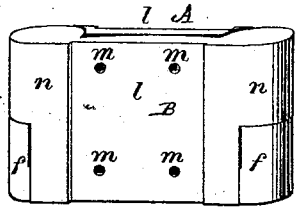


Fig. 2.

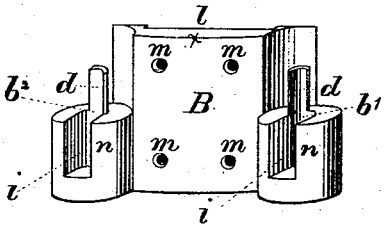
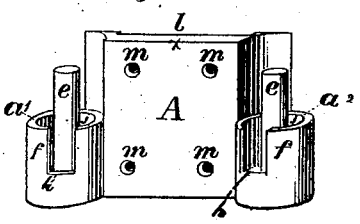


Fig. 3.



Witnesses;
Charles W. Halsey
J. G. Kennedy

Inventor;
Edward Halsey

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

EDWARD HALSEY, OF SAN JOSÉ, CALIFORNIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO DANIEL C. BAILEY, OF SAME PLACE.

IMPROVEMENT IN DOUBLE REVERSIBLE HINGES.

Specification forming part of Letters Patent No. **160,425**, dated March 2, 1875; application filed March 17, 1874.

CASE C.

To all whom it may concern:

Be it known that I, EDWARD HALSEY, of San José, in the county of Santa Clara and State of California, have invented a new and Improved Reversible Hinge; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification.

My invention is an improvement in the class of reversible hinges which are formed of two plates, one having eyes or sockets and the other pintles on each side, and the eyes being slotted to receive the pintles, so that the door may swing in either direction.

The improvement relates to features of construction and arrangement hereinafter described, and specifically indicated in the claim.

Figure 1 is a perspective view of the hinge with the leaves folded. Fig. 2 is a perspective face view of the door-plate or leaf inverted; and Fig. 3 a like view of the jamb-plate or leaf.

Each plate or leaf is rectangular in its general plan or outline, and provided with screw-holes *m* to adapt it for attachment in its appropriate place. Each leaf is also cut away or grooved on its face-side edges on the arc of a circle, whose radius is the same as, or coincident with, the cylindrical sockets *f* and *n*, which are formed, respectively, on the lower and upper parts of the leaves A and B, and are so located oppositely as to occupy part of the length of the grooves aforesaid. The sockets *f f* have cylindrical pintles *e e*, which stand vertical in the center thereof, so that annular spaces *j* are formed around them. These sockets form the bearings for the sockets *n* on the door-plates, the latter receiving the pintles *e e*. The vertical segments *d* which project upward from the edge of the slots *i* in the sockets *n* are adapted to pass through the slots *h* in sockets *f f* and fit in the annular spaces *j*, so as to turn around the pintles *e* as the hinge opens or closes. The slots *i* of sockets *n* similarly admit pintles *e*, the arrangement being such that when one leaf or plate turns on the other the pintle and segment on the swinging sides of the plates enter their respective slots simultaneously.

The slots of the two sockets are formed on lines which would meet if extended horizontally. In other words, the sides of each slot are in a plane inclined, and not perpendicular, to the face of the plate A. Hence, while the door-plate B turns freely to the right or left on either of the sockets *f* as a center, the leaves will not separate or disconnect when parallel and face to face, as in Fig. 1, which results are due to the arrangement of the pintles *e e* relative to the slots of the sockets *n*. The leaves cannot, in fact, be disconnected at all except by a vertical movement, as in the case of the common slip-hinge.

It will be observed also that the construction and arrangement of the segments, pintles, and sockets is such that the segments supplement the function of the pintles, in that they bear part of the strain, to which the latter are subjected in consequence of the weight of the door. The segments also prevent the leaves A and B separating when the door is being swung to open or close it, since they enter the circular space between the pintles and inner sides of the sockets at the moment the leaf B begins to turn on A.

The construction of parts above described enables me to employ pintles which are cylindrical in form, and hence of greater strength than in other hinges of this class, wherein the pintle is made segmental in cross-section to prevent the leaves separating when open.

The door-plate B is slightly convex on its face, as shown in Fig. 1, so that when the door swings shut there will be little or no jar or concussion between the leaves or plates, but one will rock on the other till the door attains its normal or closed position.

I do not claim forming the slots in the sockets of the jamb-plate A on a plane inclined to the face of said plate; nor do I claim, broadly, the use of segments or projections to prevent the plates separating when in a certain position.

What I claim is—

1. The combination of the leaves or plates A and B, one having the sockets *f f* slotted at *h h*, and the cylindrical pintles *e e*, with annular spaces *j j* around them, the other leaf B having the inwardly-inclined slots *i i* and the segments *d d*, adapted to fit in said spaces, all constructed and arranged as shown and described.

2. The leaf B, having a convexity, as shown and described, in combination with the leaf A, said leaves being provided with pintles and sockets, adapted to co-operate substantially as and for the purpose specified.

EDWARD HALSEY.

Witnesses:

CHARLES W. HALSEY,

J. G. KENNEDY.