(No Model.)

R. S. ROBSON & J. LOUGHREY.

FRICTION HINGE.

No. 301,164. Patented July 1, 1884.

Fig 1

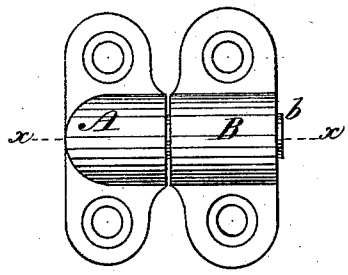


Fig 2

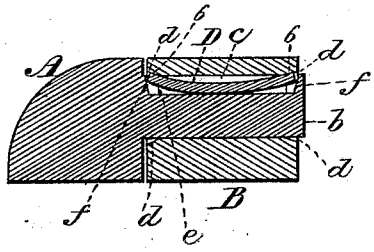


Fig 3

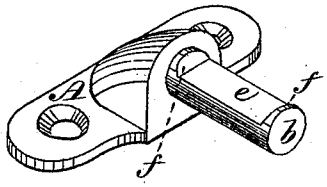


Fig 5

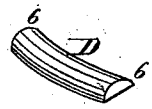
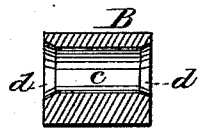


Fig 4



WITNESSES

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UNITED STATES PATENT OFFICE.

ROBERT S. ROBSON AND JOHN LOUGHREY, OF CAMBRIDGE, ASSIGNORS TO CHARLES D. PALMER, OF LOWELL, MASSACHUSETTS.

FRICTION-HINGE.

SPECIFICATION forming part of Letters Patent No. 301,164, dated July 1, 1884.

Application filed January 23, 1884. (No model.)

To all whom it may concern:

Be it known that we, ROBERT S. ROBSON and JOHN LOUGHREY, citizens of the United States, residing at Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Friction-Hinges or Supporting Devices for Mirrors, Transoms, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan of our improved friction-hinge or supporting device. Fig. 2 is an enlarged vertical section of the same on the line *x x* of Fig. 1. Fig. 3 is a view of one of the leaves of the hinge and the pintle projecting therefrom. Fig. 4 is a vertical section through the other leaf of the hinge. Fig. 5 is a view of the spring detached.

Our invention relates to certain improvements in frictional hinges or supporting devices, which are particularly adapted for supporting bureau-mirrors, transom-windows, swinging screens, &c., where it is desirable to prevent the frame or article supported from oscillating too freely on its pivots; and our invention consists in a friction-hinge or supporting device for mirrors, transoms, &c., composed of two leaves or portions, one provided with a circular orifice, with slightly-enlarged or countersunk ends for the reception of a pintle projecting from the other leaf, said pintle being flattened on one side to form a longitudinal recess for the reception of a curved spring, which is adapted to turn with the pintle and produce the desired friction between it and the walls of the orifice in which it is placed, while the opposite ends of the spring bear against shoulders at the ends of the recess of the pintle, and also fit closely into the countersunk ends of the orifice in which the pintle turns, thus securely locking the latter in place and preventing the separation of the two leaves of the hinge.

In the said drawings, A B represent the two leaves of our friction-hinge or supporting device, which may be made of any suitable form to adapt them for the purpose for which they are to be employed. These leaves A B are connected together by a pintle, *b*, which is preferably cast in the same piece with the leaf A, but may be made separate and afterward cast within or otherwise immovably secured thereto. The leaf B is provided with an orifice, *c*, extending entirely through it from one end to the other, for the reception of the pintle *b*, each end of the orifice *c* being slightly enlarged or countersunk, as seen at *d*, Figs. 2 and 4. That portion of the pintle *b* which lies within the orifice *c* is flattened or cut away on one side, as seen at *e*, forming between the shoulders *f f* a longitudinal recess, within which is placed a stiff spring, D, which is curved outwardly from the center toward each end 6, by which construction it is caused to take a bearing at three points only—viz., at the center of its length on the pintle *b*, and at each end, 6, against the countersunk end of the orifice *c* of the leaf B—thus producing the desired amount of friction between the pintle and the walls of the orifice *c*, to prevent the mirror-frame, transom, or other article supported by the device from oscillating too freely on its pivots, and causing it to remain fixed at any angle in which it may be placed. The upper surface of the spring is curved or rounded transversely to correspond to the curvature of the walls of the orifice *c*, thus preventing undue wear; and it will be seen that the spring D, which turns with the pintle *b*, besides producing the desired friction between the moving and stationary parts of the hinge, also serves to lock the pintle securely within the orifice *c*, as the opposite ends 6 of the spring lie partially below the level of the tops of the shoulders *f f* of the recess *e*, against which they bear, and also fit snugly up into the enlarged or countersunk ends *d* of the orifice *c*, as seen in Fig. 2, thus preventing the easy withdrawal of the pintle from the orifice *c* of the leaf B, and causing the two leaves to be securely held together as required.

The above-described supporting device is exceedingly simple, durable, and effective, can be used for a great variety of purposes wherever it is desired to support a frame or other object in such manner as to admit of its being freely turned on its pivots, and then remain fixed in any position in which it may be left.

We are aware that friction-hinges have been

made with a recess running at right angles to the pintle to receive a spring; but this construction is objectionable, as it unnecessarily widens out the hinge and renders it inconvenient and unsightly.

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination, with the leaf B, having an orifice, *c*, enlarged or countersunk at its ends, and the leaf A, with its pintle *b*, provided with a longitudinal recess, *e*, and shoulders *f f*, of the curved spring D, placed within said recess and adapted to bear at its center upon the pintle and at each end against the countersunk ends of the orifice *c*, and having its ends partially below the level of the tops of the shoulders *f f*, substantially as and for the purpose described.

Witness our hands this 21st day of January, A. D. 1884.

ROBERT S. ROBSON.
JOHN LOUGHREY.

In presence of—
P. E. TESCHEMACHER,
W. J. CAMBRIDGE.