No. 802,966. PATENTED OCT. 31, 1905.

O. P. BREITHUT.

HINGE.

APPLICATION FILED OCT. 25, 1904.

Fig. 1.

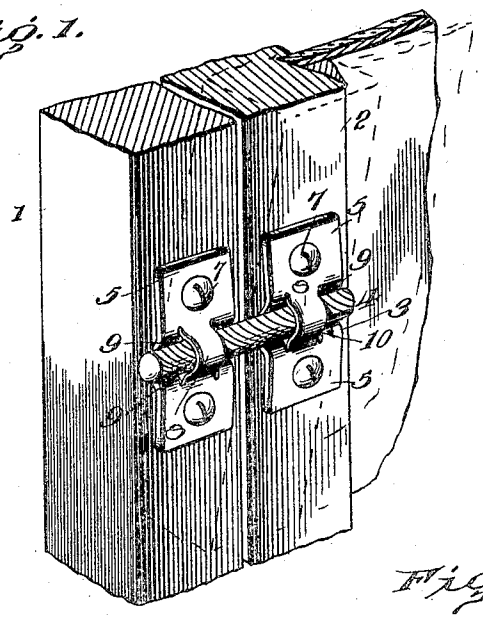


Fig. 2.

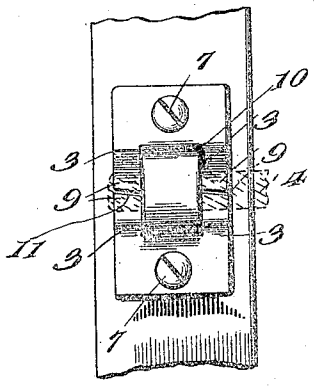


Fig. 4.

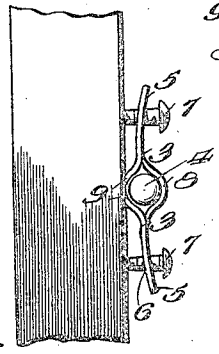


Fig. 3.

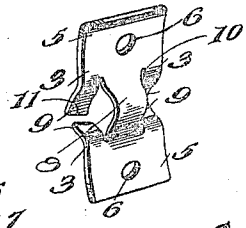


Fig. 6.

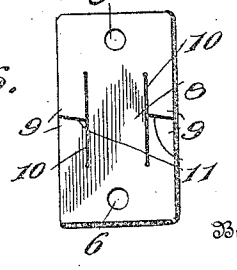
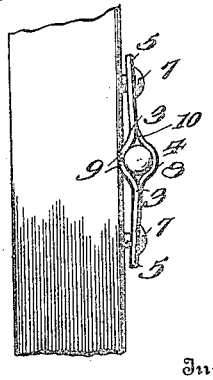


Fig. 5.



Witnesses

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By Attorneys

UNITED STATES PATENT OFFICE.

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HINGE.

No. 802,966. Specification of Letters Patent. Patented Oct. 31, 1905.

Application filed October 25, 1904. Serial No. 229,997.

To all whom it may concern:

Be it known that I, OSCAR P. BREITHUT, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Hinges, of which the following is a specification.

This invention provides a frictional hinge device which is particularly designed for use in mounting mirrors or the like upon supporting-frames constructed therefor.

The invention comprises hinge parts which are adapted to receive a pintle and to frictionally engage or coöperate with this part so that the member mounted upon the hinge or hinges may be held in an ascertained position by the frictional contact of the hinge parts with the said pintle.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a perspective view showing the invention applied. Fig. 2 is a front elevation. Fig. 3 is a detail perspective view of one of the hinge-plates. Fig. 4 is a side elevation showing one of the hinge-plates mounted upon the part to which it is adapted and preparatory to the mounting of the pintle therein. Fig. 5 is a view similar to Fig. 4, the pintle being shown in position and the hinge-plate firmly attached as when in operative position. Fig. 6 is a plan view of the blank from which one of the hinge parts may be formed, showing the manner of cutting the same.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In showing the application of the invention a portion of the frame 1, upon which the mirror is ordinarily mounted, is illustrated, the frame of the mirror being designated 2. The hinge parts consist of plates 3, preferably made of spring metal, and one of these plates is attached to the respective parts 1 and 2 aforesaid. A pintle 4 is mounted in the plates 3, and the latter are of a peculiar form in order to secure the necessary frictional coöperation thereof with the said pintle. Since the plates 3 are of substantially the same form, one only will be described. Each plate is longitudinally curved or has the end portions thereof curved upwardly or from the plane of the body of the plate, as shown at 5, these end portions 5 being provided with apertures 6, through which the fastenings 7 may be passed in securing the plate in position. About intermediate the ends of the plates 3 the body thereof is concaved or curved, as shown at 8, to form a seat for the pintle-bar 4. The portion 8 extends upwardly or outwardly from the plate 3 in the direction of the curvature of the ends 5, and projections 9 are formed with the plate 3, said projections extending downwardly and curving in a direction opposite to that of the portion 8 mentioned. The projections 9 are formed integral with the plates 3, preferably being spaced lengthwise thereof, and in order to admit of formation of the hinge part as cheaply as practicable said projections 9 comprise bent portions of the body of the plates 3, said portions being projected from the plates upon opposite sides of the curved portion 8. In forming the projections 9 the plate from which the hinge part is made is cut or slit longitudinally, as shown at 10, the cuts or slits 10 extending some distance between the ends of the plate, terminating adjacent the openings 6 in the extremities thereof. The longitudinally-slit portions of the plate are separated by lateral or transverse slits or cuts 11, the latter being formed at an angle to the parallel end edge portions of the plates. The blank piece of metal from which the hinge parts are formed is shown most clearly in Fig. 6 of the drawings, the various cuts or slits being designated therein. After the metal blank from which the hinge part is made has been cut, as shown at 10 and 11, a central portion of the plate is curved upwardly, as shown at 8, and the end portions are curved, as shown at 5. The projections 9 are curved downwardly in order that the pintle 4 may be readily received in said projections of the portion 8, such parts forming a bearing for the pintle.

The formation of each hinge part is advan-

tageous in that the upward curvature of the ends thereof separates the adjacent extremities of the projections 9, and since the fastenings 7 when placed in position are designed to force the ends of the plate 3 into contact or against the part to which it is attached such action will effect binding of said parts against the pintle in such a manner as to promote friction, whereby the mirror or like part which is mounted upon the hinges may be positively held in a predetermined position. To promote the friction of the plates 3 with regard to the pintle 4, the latter is preferably roughened by corrugating or ribbing the peripheral portion of the same, thus accomplishing the desired purpose.

Each hinge part being of integral formation may be readily stamped from a piece of sheet metal, and in the same operation the parts 5, 8, and 9 may be formed. The device may therefore be manufactured at a minimum cost, which is of no small importance in this class of devices.

Having thus described the invention, what is claimed as new is—

1. In combination, a hinge part embodying a longitudinally-curved spring-plate, projections extending from the side of the plate opposite the concaved side thereof and spaced lengthwise of said plate, fastenings for the ends of the plate whereby said ends are forced toward alined positions to compress the spaced projections or force the same toward each other, and a pintle arranged transversely of the plate between the spaced projections aforesaid.

2. In combination, a hinge embodying the longitudinally-curved plate 3 of spring metal, said plate being formed with the longitudinal slits 10, the plate being further formed with the lateral slits 11, the portions of the plate 3 upon opposite sides of the lateral slits 11 being bent outwardly from the side of the plate opposite the concaved side thereof to form spaced integral projections 9, the body of the plate between the spaced integral projections aforesaid being bent opposite the projections to form the seat 8, and a pintle-bar 4 received between the spaced projections 9 aforesaid.

In testimony whereof I affix my signature in presence of two witnesses.

OSCAR P. BREITHUT. [L. S.]

Witnesses:

MICHAEL ROTHFUSS,

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