May 11, 1937. E. L. JOHNSON ET AL 2,079,711

JEWELRY HINGE

Filed April 22, 1935

Fig. 1.

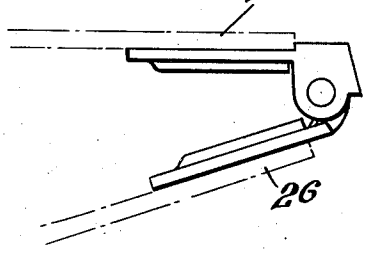

Fig. 2.

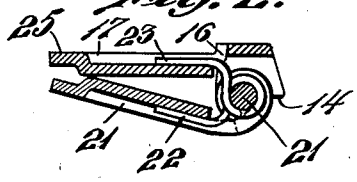

Fig. 4.

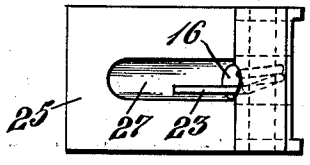

Fig. 3.

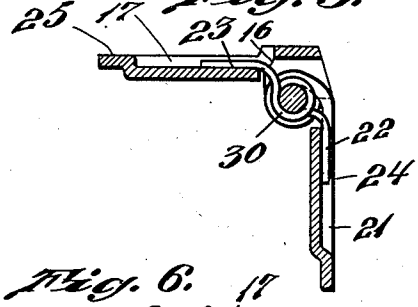

Fig. 5.

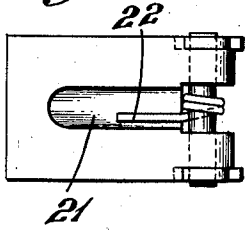

Fig. 6.

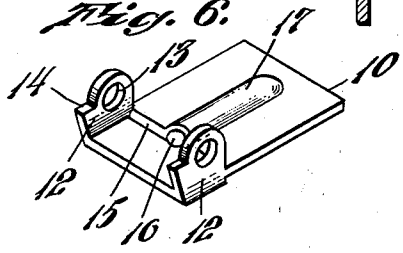

Fig. 7.

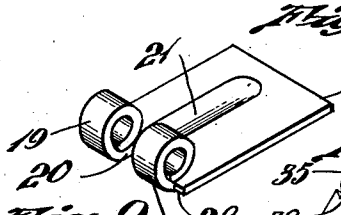

Fig. 8.

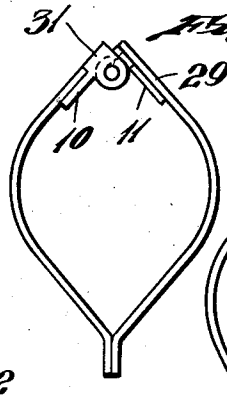

Fig. 9.

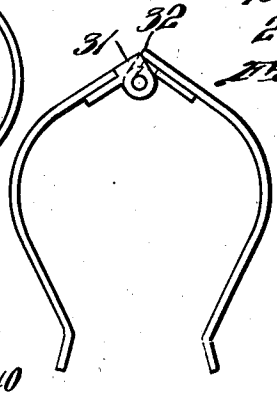

Fig. 10.

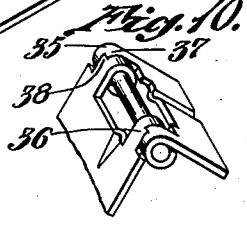

Fig. 11.

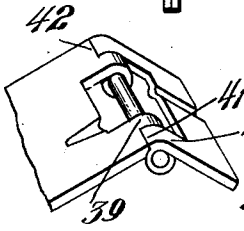

Fig. 12.

INVENTORS
Emil L. Johnson
Olof Lundsten
BY
Barlow & Barlow
ATTORNEYS.

Patented May 11, 1937 2,079,711

UNITED STATES PATENT OFFICE

2,079,711

JEWELRY HINGE

Emil L. Johnson and Olof Lundsten,
Attleboro, Mass.

Application April 22, 1935, Serial No. 17,680

3 Claims. (Cl. 24—253)

This invention relates to jewelry findings, particularly a spring actuated hinge which is to be attached to another part or other parts for assembly in various uses, such for instance as an ear clip, hat ornament or the like; and has for one of its objects the provision of means to prevent distortion or rupturing of the resilient portion or spring of the device.

Another object of the invention is the provision of a stop to limit the opening movement of the hingedly related parts to prevent undue tension upon the spring.

Another object of the invention is the provision of means for locating the end of the spring so that it will be in balanced relation and will be so located that the parts to which the hinge is secured will not interfere with the action of the spring, nor will the spring interfere with the positioning of the parts to which the hinge is attached.

Another object of the invention is the provision of a hinge in such position that the part mounted thereon will serve as an abutment for engagement with a part of another section of the hinge and prevent excessive movement of the hinge towards open position.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawing.

Fig. 1 is a side elevation of the hinge finding showing in dotted lines the fragmental portions of an ornament or the like assembled therewith;

Fig. 2 is a central sectional view through the hinge;

Fig. 3 illustrates a similar sectional view with the two members swung toward open position and shown as at their limit of movement;

Fig. 4 is a plan view of the top portion of the assembly shown in Figure 2;

Fig. 5 is a similar view of the bottom plate or member;

Fig. 6 is a perspective view of one of the members;

Fig. 7 is a perspective view of the other member;

Fig. 8 is a side elevation of a modified form of hinge arrangement in closed position;

Fig. 9 is a view similar to Figure 8 showing the parts as moved to open position;

Fig. 10 is a perspective view of a modified stop arrangement with the spring omitted;

Fig. 11 is a perspective view of a different modification with the spring omitted;

Fig. 12 is a section through the structure of Figure 11.

In the use of jewelry findings, such for instance as hinges, for connecting together two plates at least one of which is ornamentally embellished, or in other uses, it is frequent that where a spring is used for urging these plates toward closed position that an excessive movement of these plates toward open position will so deform or rupture the spring as to prevent its proper action in closing the plates or moving them toward closed position; and in order to obviate this difficulty, we have provided a stop or some means to prevent excessive opening of the parts and thus guard against such rupture of the spring; and we have also provided an opening through which one of the ends of the spring may extend so that it can be better arranged and positioned for operation on the members with which it is assembled; and the following is a more detailed description of the present embodiment of this invention, illustrating the preferred form or means by which these advantageous results may be accomplished:

With reference to the drawing, 10 designates one member and 11 the other member. This member 10 is shown as formed of flat sheet stock with ears 12 bent up on either side adjacent one end thereof, which ears are pierced as at 13 for the reception of a pintle pin. These ears are also provided with a projection or abutment 14 to act as a stop, as will presently be described. This plate is also offset as at 15 and is provided with an opening 16 at the offset through which one end of the spring may be passed. This offset is for the purpose of accommodating a plate or other part to be mounted on the hinge and is provided with a recess 17 extending from the opening 16 outwardly towards its free end for reception of the end of the spring so that it may be located beneath the contacting surface thereof.

The member 11 consists of a plate with eyes 19 rolled on the end thereof with a notch 20 between these eyes and with a recess 21 formed in the plate on its outer surface for the reception of one end of the helical spring.

These members 10 and 11 are assembled and a pintle pin 21 is passed through the ears 12 and eyes 19, while a helical spring 22 embraces this pin between the eyes 19 with one portion 22 extending through the notch 20 and in the recess 21, while the other portion 23 extends through the hole 16 and along the recess 17 formed in the outer surface of this plate. In this manner, both the spring end extension portions 22 and 23 are positioned below the outer surfaces 24 and 25 of

the plate so that the end portions 22 and 23 will in no way interfere with the mounting of ornamental members such as 26 on these hinge sections.

By reason of the offset 15 the ornamental plate 25 will be located longitudinally of the hinge as will fully appear from Figure 1, and by reason of the opening 16 it is unnecessary to have the portion 23 extend around the rear end of the member 10 as would otherwise be necessary.

Operation

In operation, the spring tends to move the members 10 and 11 and the parts such as 26 to which they are attached to closed position, as shown in Figure 2. These parts may be opened or moved apart about the pin 22 as a center, but by reason of the abutment surface 14 the edge 28 of the member 11 will contact with these abutment surfaces and prevent opening beyond the point shown in Figure 3, or this abutment 14 may be located at some other convenient point for such opening as may be desired to limit the tension on the spring so as to prevent the spring from being stretched beyond its range of operation.

Modifications

In some cases, however, instead of providing a protuberance as 14 for engagement with the edge 28, the ornamental plate will serve this purpose by a proper location to contact with an abutment surface on the hinge or some part movable therewith, and we have shown the ornament 29 so secured to the member 11, see Figure 8, that it will contact a portion 31 of the member 10 so as to designedly limit the opening movement as illustrated in Figure 9, where the parts 31 and 32 are in contact and thereby limit the opening movement in this manner.

In Figure 10 we provide rolled edges 35 and 36 on each hinge member and oppositely notch each of these to provide cooperating abutments 37 and 38 for engagement to limit the opening movement of the hinge members.

In Figures 11 and 12 we have also provided rolled hinge eyes 39 and 40 on each member, and for the stop or limiting means we raise the stock of one rolled eye to form an abutment 41 to engage the edge 42 of the plate of the other member and thus limit its opening movement.

The foregoing description is directed solely towards the construction illustrated, but we desire it to be understood that we reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

We claim:

1. A jewelry finding comprising a pair of hinge members pivotally related by a hinge pin adjacent their inner ends and having a light spring to force the free ends together, said members having eyes at their pivoted ends for receiving the hinge pin and terminating close to said eyes and both members having portions close to said eyes adapted to abut at points close to said hinge axis to limit their opening movement to substantially less than 180° to thereby protect said spring.

2. A pair of plate-like hinge members pivotally related by a hinge pin at their inner ends, and a spring on said pin arranged to urge the outer ends of said members together, said members having recesses and apertures opening from the ends of said recesses and said spring extending through said apertures and having its ends in said recesses so that its ends may move relatively to the hinge members even though such recesses are covered by parts connected to the hinge members.

3. A jewelry finding comprising a pair of hinge members pivotally related by a hinge pin adjacent their inner ends and having a light spring to force the free ends together, said members having eyes at their pivoted ends for receiving the hinge pin and terminating close to said eyes and both members having portions adapted to abut to limit their opening movement to substantially less than 180°, such portions on one of said members being on the eyes proper.

EMIL L. JOHNSON.
OLOF LUNDSTEN.