No. 891,686. PATENTED JUNE 23, 1908.

F. W. GOERDES.

PIN JOINT.

APPLICATION FILED FEB. 28, 1907

Fig. 1.

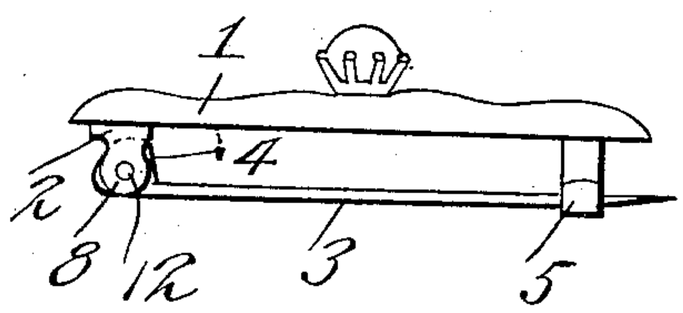


Fig. 2.

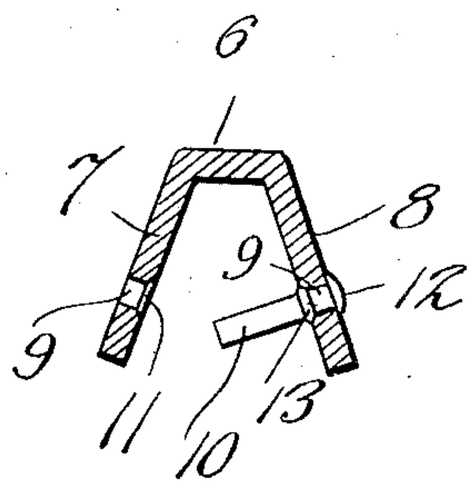


Fig. 3.

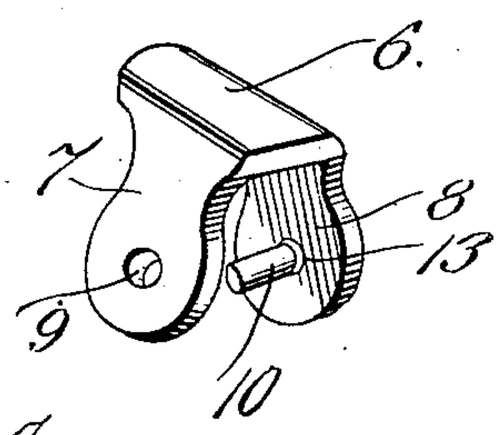
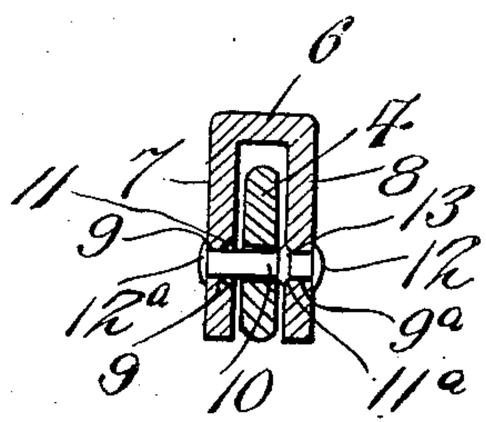


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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PIN-JOINT.

No. 891,686. Specification of Letters Patent. Patented June 23, 1908.

Application filed February 28, 1907. Serial No. 359,781.

To all whom it may concern:

Be it known that I, FREDERICK W. GOERDES, a citizen of the United States of America, residing at Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Pin-Joints, of which the following is a specification.

This invention relates to improvements in that class of joints for ornamental pins, brooches and the like commonly known as "open joints" in contradistinction to closed or cup joints. Joints of this character ordinarily consist of a base having walls or ears extending therefrom, which walls or ears are pierced for the passage of a connecting pin or rivet, to which the fastening pin of the ornament is pivoted. In ornaments of very cheap construction the pin is simply frictionally held by the ears, an exceedingly insecure mode of mounting. In a better class of ornaments the pin or rivet is either carried by the fastening pin and headed upon the closing of the joint or fitted loosely in position to connect the parts and then headed, a better mode of joining, but still not entirely secure.

One object of the present invention is to provide a construction of pin-joint which will sustain a maximum wear and tear and insure obviation of the pivot pin working loose under all conditions of service.

Another object of the invention is to provide a construction by which the joint as a complete article with the pin forming a permanent part thereof may be sold complete to the jewelry manufacturer, thus simplifying and reducing the amount of labor attendant upon forming the joint.

Another object is to provide a joint construction in which the pivot pin is provided with additional holding means which will also form bearings to prevent lateral play of the pivot portion of the fastening pin.

Another object is to provide a joint having a permanent pivot pin which may be subjected to the operation of "tumbling" for polishing purposes without liability of the pin becoming loosened under strain.

In the accompanying drawing:—Figure 1 is a side elevation of a brooch or ornament embodying my invention. Fig. 2 is a cross section through the improved joint. Fig. 3 is a perspective view of the same. Fig. 4 is a cross section through the joint as it appears when completed for use upon the ornament.

Referring to the drawing, 1 represents the back or body of a brooch or other ornament, 2 the joint, 3 the fastening pin having a pivot portion 4 engaging the joint, and 5 the pin-catch.

The joint 2 is affixed in practice to the body or back 1 and comprises a base 6 having normally outwardly diverging ears or walls 7 and 8, the base and walls being integral in a casting or stamped-up piece of heavy sheet metal.

As shown, the walls 7 and 8 are pierced to form corresponding openings 9, 9^a for the reception of the ends of the pivot pin or rivet 10, which passes through an opening in the portion 4 of the pin 3, whereby the latter is pivotally mounted thereon. Flaring recesses or countersinks 11, 11^a are formed on the inner sides of the respective ears at the inner ends of the openings 9, as clearly shown in Fig. 2.

The pin 10 is permanently attached to one of the ears, as the ear 8, for example, in which condition the joint as a whole or in its complete form is designed to be sold by the manufacturer thereof to the manufacturer or assembler of parts of the brooches or other ornaments. In fixing the pin in position one of the ends thereof is inserted in the opening 9^a of the ear 8 and swaged or upset to provide outer and inner heads or enlargements 12 and 13 which clamp the pin in position, the head 13 being forced in the swaging operation into the countersink or recess 11^a to securely hold the pin against any tendency to play in the opening.

In the operation of completing the article of jewelry, the base 6 of the joint is secured to the article 1, the pivot portion 4 of the pin 3 slipped on to the free end of the pin 10, the ears 7 and 8 compressed until they lie in parallel relation in the manner shown in Fig. 4, in which the free end of the pin is fitted in the opening 9 in the ear 7, and such end of the pin then swaged to form a head 12^a lying against the outer side of the ear, whereby it is fastened to said ear. The purpose of the recess 11 is to form a flaring guiding or finding entrance to the opening 9, whereby the operation of fitting the free end of the pin in said opening is facilitated. As a result of this construction, a completed joint will be formed in which the pivot pin or rivet will be bound to the ears in such manner that it cannot possibly work loose under all ordinary conditions of service. In addition to forming a permanent binding connection to pre-

vent the pin from slipping out of the opening 9ª, the head 13 bears against the pivot portion 4 of the fastening pin 3 and holds the same pressed against the ear 7 to bind the fastening pin to a desirable degree to work somewhat stiffly, thus preventing it from becoming quickly loosened in service.

In practice the rivets are formed from a piece of wire which is cut into lengths and simultaneously swaged in the ear 8. In this form, with the pin permanently fixed in one of the ears, the joint is sold to the jewelry manufacturer, who may assemble the joint without liability of losing the pin and with only the labor of placing the parts in proper relative position and completing the joint. The construction described permits a large number of the joints being polished by the ordinary operation of "tumbling", as the pins are strongly enough fixed in position to withstand the strain. A strong and durable article will accordingly be provided in which liability of loosening of the joints will be reduced to a minimum.

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

1. As a new article of manufacture, a pin-joint comprising a base having integral diverging ears adapted to be bent to a parallel position and provided with transverse openings, and a pivot pin permanently bound at one end in the opening of one ear and adapted to be secured at its free end within the opening of the other ear when the joint is closed, whereby the article with the pin attached may be polished by the operation of "tumbling" without injury to or displacement of the pin.

2. As a new article of manufacture, a pin-joint comprising a base having diverging ears adapted to be bent to a parallel position, said ears being formed with transverse openings, the opening of one ear being provided at its inner end with a countersink, and a pivot-pin fitted at one end within the opening in the latter named ear and provided with heads engaging the opposite sides of said ear, the inner head fitting within the countersink, the other end of the pin being adapted to be fitted in the opening in the other ear and headed upon the outer side thereof upon the closing of the joint.

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

FREDERICK W. GOERDES.

Witnesses:

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