

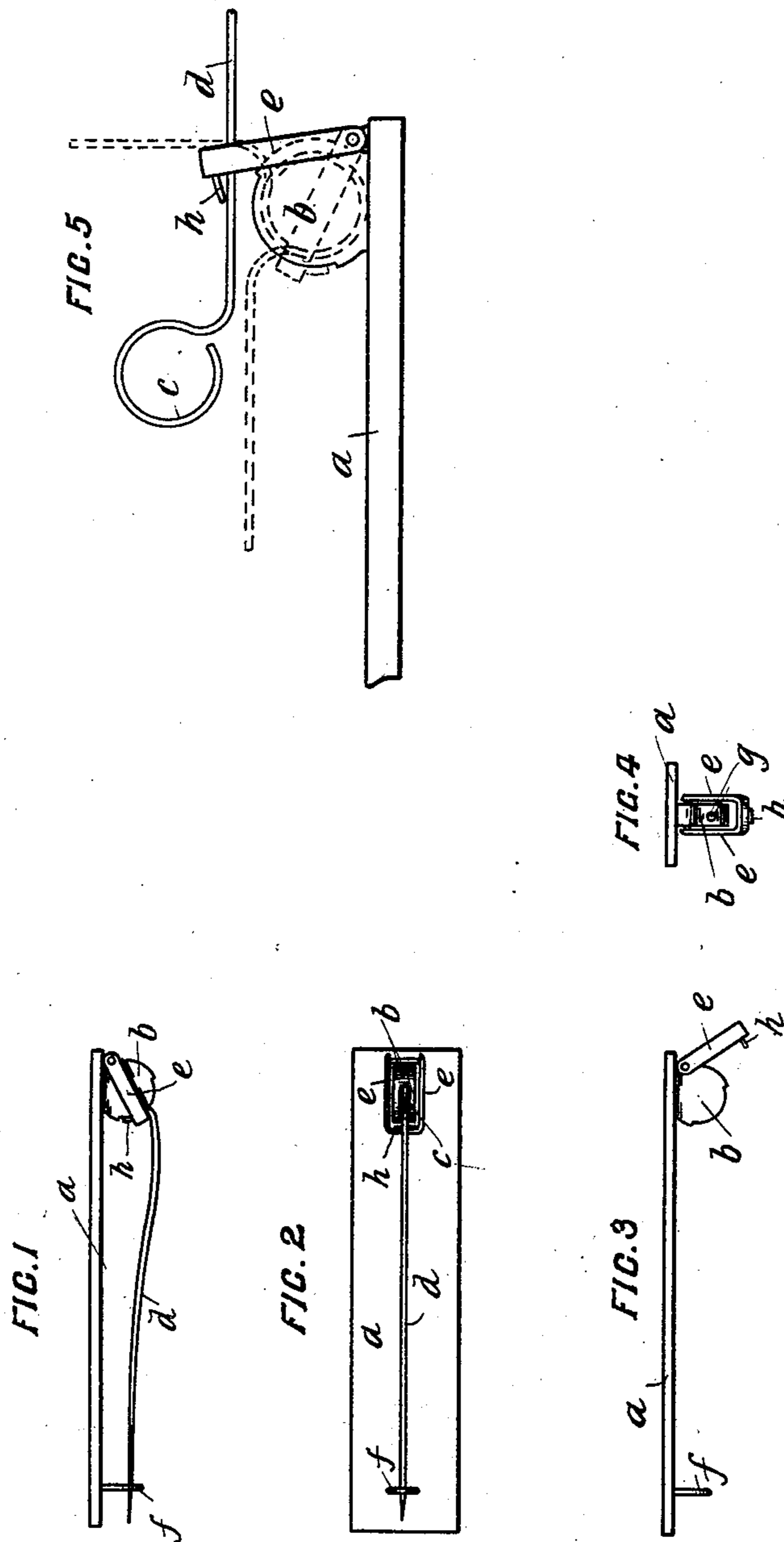
No. 698,824.

Patented Apr. 29, 1902.

C. S. DUNNINGHAM.
BROOCH.

(Application filed May 9, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES STEPHEN DUNNINGHAM, OF WELLINGTON, NEW ZEALAND.

BROOCH.

SPECIFICATION forming part of Letters Patent No. 698,824, dated April 29, 1902.

Application filed May 9, 1901. Serial No. 59,511. (No model.)

To all whom it may concern:

Be it known that I, CHARLES STEPHEN DUNNINGHAM, a subject of the King of Great Britain, residing at Wellington, New Zealand, have invented a new and useful Improvement in Brooches; and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention has been designed for the purpose of providing a brooch-pin that may be readily secured upon the brooch in a manner that will not allow of any loose side play and that will not subject the pin to the liability of breaking, incidental to the brooch-pins hitherto in use, consequent upon the fibers of the pin being weakened by the continual bending they receive near the hinge. In case through any circumstances the pin should be broken the broken parts may readily be removed and a new pin substituted by the wearer with a minimum of trouble and without the need of employing skilled labor.

In order that the invention may be thoroughly understood, reference will be made to the accompanying sheet of drawings, in which—

Figure 1 is a side elevation of a brooch with the pin secured thereto. Fig. 2 is an underneath plan of the same. Fig. 3 is a side elevation of the brooch, showing the pin removed and the recess open ready to receive a fresh one. Fig. 4 is an end elevation of the same. Fig. 5 is a detail on an enlarged scale, showing the recess open and the procedure adopted in fastening the loop of the pin therein.

a is the brooch, to the back of which is secured a circular-walled recess *b*. This recess is closed in all around with the exception of a space in the front wide enough to allow of the insertion of the loop *c* upon the end of the pin *d* within and between the side walls of the recess. Hinged to the brooch at the back of the recess *b* are a pair of arms *e*, that are hinged so as to lie one on each side of the recess and the front ends of which are joined together by means of a cross-plate *h*. The pin *d* is made with one end bent down in a curve and then the end turned up again, so as to form a circular loop *c*. This loop is made of a size whose diameter is slightly less than the inside diameter of the recess *b*.

To insert the pin within the recess, the operation shown in Fig. 5 is carried out. The hinged arms *e* are raised to the position shown in this figure and the pin inserted, point first, between the arms and the loop *c* passed into the recess *b* through the opening in its edge. The pin is then turned over, as shown by dotted lines, and will carry with it the arms *e* until the front plate *h* of the arms is prevented from going farther by coming into contact with an enlargement on the recess. The pin may then be moved up and down at will without affecting the arms *e*, the front plate of which will partially close up the opening of the recess, so that it shall be of considerably less width than the diameter of the loop *c*, which will thus be incapable of being again withdrawn from it without raising the arms *e*.

The springy action necessary in brooch-pins will be obtained by reason of the pin *d* bearing upon the top of the front plate *h* of the arms *e*, which is so adjusted with regard to the curve in the pin to allow of such spring when the pin is pushed down to be caught by the usual catch *f*.

A small hole *g* is provided in the back part of the recess *b* to allow of the insertion of a small tool to remove or push out the loop of the pin if through any cause it should become caught or stuck therein when it is desired to remove it.

The relatively large amount of side bearing of the sides of the recess *b* upon the loop *c* will insure that there will be no side play in the pin, which will therefore not be liable to become loose from engagement with the retaining-catch *f*.

It will of course be understood that the different parts of my invention have been considerably exaggerated in the drawings for the purpose of clearness in illustration, the relative sizes of such being rather smaller than that shown.

By the adoption of my invention a brooch may be sold with several extra pins, which may be inserted in the brooch by the wearer whenever a new pin is required.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In brooch-fastenings, a circular-walled recess secured to the back of the brooch and

provided with an opening in the edge thereof, and a pair of arms hinged behind the recess and which are adapted to lie one on each side thereof, the front ends of which are joined
5 together by means of a plate such plate being adapted to partially close the opening in the edge of the recess, as herein specified.

2. In brooch-fastenings, the combination
10 with the back of a brooch provided with a circular-walled recess with an opening in the edge thereof, of a pin one end of which when in closed position is curved downward to-

ward the back of the brooch and the end portion of said downwardly-curved part then curved upward into a circular loop, said loop
15 being fitted edgewise into said recess.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES STEPHEN DUNNINGHAM.

Witnesses:

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