

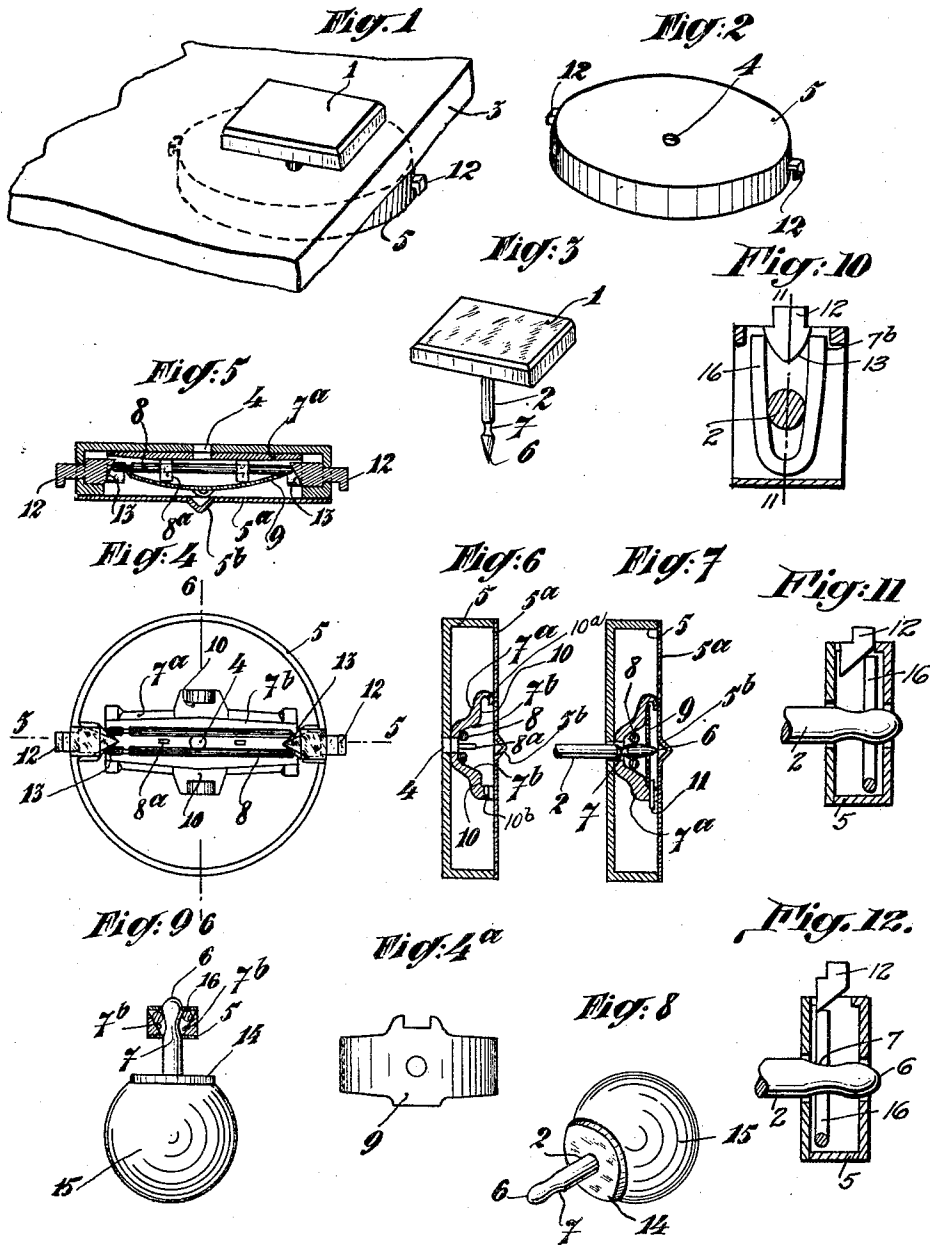
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FASTENING DEVICE FOR JEWELS AND OTHER ORNAMENTS

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UNITED STATES PATENT OFFICE

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FASTENING DEVICE FOR JEWELS AND OTHER ORNAMENTS

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The invention relates to a fastening device for jewels and other ornaments, which may be used for fastening the jewel to a piece of clothing or any other support and may be employed with ear rings.

The jewel to be fastened comprises a grooved pin which is driven first into the piece of clothing or the support, then into a stop piece located behind the piece of clothing or the support and provided with two small rollers between which is inserted the grooved part of the pin. Said rollers are disposed between two inclined surfaces converging towards the jewels, so that if said jewel is submitted to a pulling effort the rollers are driven along the inclined surfaces by the pin itself. They are therefore applied more and more strongly against the pin completely locking the same and thus preventing its extraction from the stop piece. In order to effect said extraction it is necessary to use a push button mounted on the stop device and provided with a wedge adapted to push apart the rollers.

On account of the very efficacious locking action of the rollers, it is possible to use a groove having a small depth so that it consists of a surface having a continuous curve perfectly joined to the remaining part of the pin. In this way, is avoided any tearing of the cloth or any injuring of the support to which it is desired to fasten the jewel.

For ear rings especially, in the fastening devices used up to now for said jewels, the pin to be driven through the ear-lap had a groove cut at practically a right angle and one could get hurt when removing the ear-ring.

The invention in this respect is a considerable improvement for, owing to the fact that the groove in the pin is not very deep and is exactly joined to said pin, any risk of harm is avoided.

Embodiments of the invention, given by way of example, are illustrated in the appended drawing in which:—

Figure 1 shows diagrammatically in perspective the jewel fastened to a piece of clothing or some support by means of the stop piece of the invention.

Figures 2 and 3 show separately and in perspective the stop piece and the jewel.

Figure 4 shows in projection the under side of the stop piece of Figure 2.

Figure 4a shows a detail.

Figures 5 and 6 are respectively sections of Figure 4 on the lines 5—5 and 6—6.

Figure 7 is a section similar to Figure 6 showing the action of the locking rollers when the pin is inserted.

Figure 8 is a perspective view of an ear-ring.

Figure 9 shows the same ear ring engaged with its stop piece.

Figure 10 shows the under side of the stop piece.

Figures 11 and 12 are sections on the line 11—11 of Figure 10 showing two successive stages of the insertion of the fastening pin of the ear-ring.

The jewel 1 comprises a pin 2 which is first driven into the piece of clothing or support 3 then into a hole 4 located at the center of stop piece 5. Pin 2 comprises a point 6 and a groove 7 at some distance from the point which groove engages the rollers or small cylindrical rods 8 of the stop piece 5. Said rollers are disposed in a setting or gutter shaped piece 7a comprising two inclined surfaces 7b between which they can move. Normally said rollers are pushed towards the bottom of the groove which is limited laterally by the inclined surfaces 7b, by means of a plate spring 9 which is fastened in its central part on two seats 10 shown in Figure 6 and the ends of which bear against said rollers. In order to secure said spring, one of the seats 10 is provided with a flange 10a and the other one with a hole 10b into which a fastening pin 11 can be engaged. The rollers are kept at a minimum distance from each other by means of two small tongues 8a so that point 6 of the pin 2 of the jewel could always be inserted between them through hole 4 in the stop piece. At both ends of the stop piece 5 push buttons 12 are provided. Said push buttons are provided with wedges adapted to have their points inserted between the rollers, in order to separate them.

The functioning of said stop piece is as follows:—

When point 6 of pin 2 passes between the rollers it pushes them apart, making them ascend, against the action of spring 9, along the inclined surfaces 7^b. Then said rollers slightly move down again when groove 7 comes to their level, and then they settle in said groove on each side of the pin.

The jewel is then fixed and locked to its support, for if it is submitted to a pulling effort, with a view to removing it from its support, said effort, transmitted to the rollers, has for its result to move them in the direction where inclined surfaces 7^b converge. Consequently said rollers are more and more strongly applied against the bottom of the groove and thus prevent by a wedgelike action any extraction of the jewel. In order to extract the pin, it is necessary to push buttons 12, thereby separating the rollers by the action of wedges 13 and releasing the pin which may then be extracted.

In order to improve the position of the pin, a hole 5^b may be provided in side 5^a of the stop piece, opposite hole 4. The pin point enters said hole thereby preventing the pin from taking an inclined position.

It is quite obvious that the above described device has been shown merely by way of example and that it can be modified in its particulars without departing from the principles of the invention.

The stop piece 5 especially, may be given any form different from the one shown. It is sufficient that the stop piece comprise two inclined surfaces converging towards the hole through which the pin is introduced, for it being able to fulfill its office.

Likewise, the rollers could be arranged in a different manner, and for example be constituted by the branches of a steel wire bent in the shape of a hair pin, a single push button being sufficient in that case. Besides, even if two separate rollers are used, as in the device above described, it is also possible to have but a single push button.

In the embodiment shown in Figures 8 and following, the invention is supposed to have been applied to an ear-ring and the socket member is a modification of the socket member shown in Figs. 4 to 7 inclusive. The stop device comprises two rollers made of the branches of a steel wire 16 bent in the shape of a hair pin.

On setting 14 is secured, on the one hand, pearl 15 and, on the other hand, fastening pin 2, with its point 6 and its groove 7. Pin 2 is first driven through the earlap, then into stop piece 5, which comprises the hairpin-shaped wire 16 the branches of which are located opposite two inclined surfaces 7^b. A push button 12 provided with a wedge 13 enables one to push apart the branches of wire 16, so as to release the pin. Figures 11 and

12 show the successive stages of the fastening of the pin in the stop device. The pin first separates the branches of wire 16 and makes them ascend along the inclined surfaces 7^b and these branches afterwards slide down again when they enter groove 7. Any extraction of the pin is impossible for the reasons which have been explained above, unless button 12 is pushed.

In addition to the uses which have been indicated, the above described device may also be used as a safety snap button and may be adapted to a handbag either with the pin secured to one of the clasp branches and the locking device to the other one or with the pin secured to a flap and the locking device to the bag-pocket.

Lastly said device may also be used with a jewel adapted to be fixed on the hem of a lapel or generally on the edge of a cloth, one of the jaws being provided with the pin or pins and the other one with the corresponding locking devices.

Generally speaking, the invention may be used in jewelry for any jewel fastening, or any box or bag locking.

What I claim is:—

1. A fastening device comprising in combination, a gutter shaped piece having converging smooth inner surfaces and provided with a hole in its bottom, a grooved pin adapted to freely enter said hole, and movable locking means disposed inside said gutter shaped piece and extending in a parallel direction to the inner surfaces of said piece, said locking means comprising separate members formed to cooperate with the smooth inner surfaces in such a manner as to permit a translatory motion of said members within said piece so as to wedge between said inner surfaces and the grooved part of the pin.

2. A fastening device comprising a gutter shaped piece with converging inner surfaces provided with a hole, a grooved pin adapted to freely enter said hole, two small rods inside said piece adapted to engage the groove of the pin, and elastic means in the gutter shaped piece for pushing the small rods towards the bottom of the gutter-shaped piece.

3. A fastening device comprising a gutter-shaped piece with converging inner surfaces provided with a hole, a grooved pin adapted to freely enter said hole, two small rods inside said piece adapted to engage the groove of the pin, elastic means in the gutter shaped piece for pushing the small rods towards the bottom of the gutter shaped piece and means for pushing apart said rods, thereby permitting the removal of the pin.

4. A fastening device comprising a gutter-shaped piece with converging inner surfaces provided with a hole, a grooved pin adapted to freely enter said hole, two small cylindrical rods inside said piece adapted to en-

gage the groove of the pin, elastic means in the gutter shaped piece for pushing the cylindrical rods towards the bottom of the gutter shaped piece and means for pushing
5 apart said rods, thereby permitting the removal of the pin.

5. A fastening device comprising a gutter shaped piece with converging inner surfaces provided with a hole, a grooved pin adapted
10 to freely enter said hole, two small cylindrical rods inside said piece adapted to engage the groove of the pin, elastic means in the gutter shaped piece for pushing the cylindrical rods towards the bottom of the gutter shaped piece, and wedge shaped members
15 disposed between the ends of said rods and adapted to slide in a direction parallel to the axes of said rods for pushing them apart.

6. A fastening device comprising in combination, a gutter shaped piece having converging smooth inner surfaces and provided with a hole in its bottom, a grooved pin adapted to freely enter said hole and movable locking means, disposed inside said gutter shaped piece and extending in a parallel
20 direction to the inner surfaces of said piece, said locking means comprising separate members formed to cooperate with the smooth inner surfaces in such a manner as to permit a translatory motion of said members within said piece so as to wedge between
25 said inner surfaces and the grooved part of the pin, and wedge shaped members disposed between the ends of said locking means and positioned to slide in a direction parallel
30 to the surfaces of said gutter shaped piece for pushing said locking means apart.

In testimony whereof I have signed this specification.

40 ANDRÉ VIDAL.

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