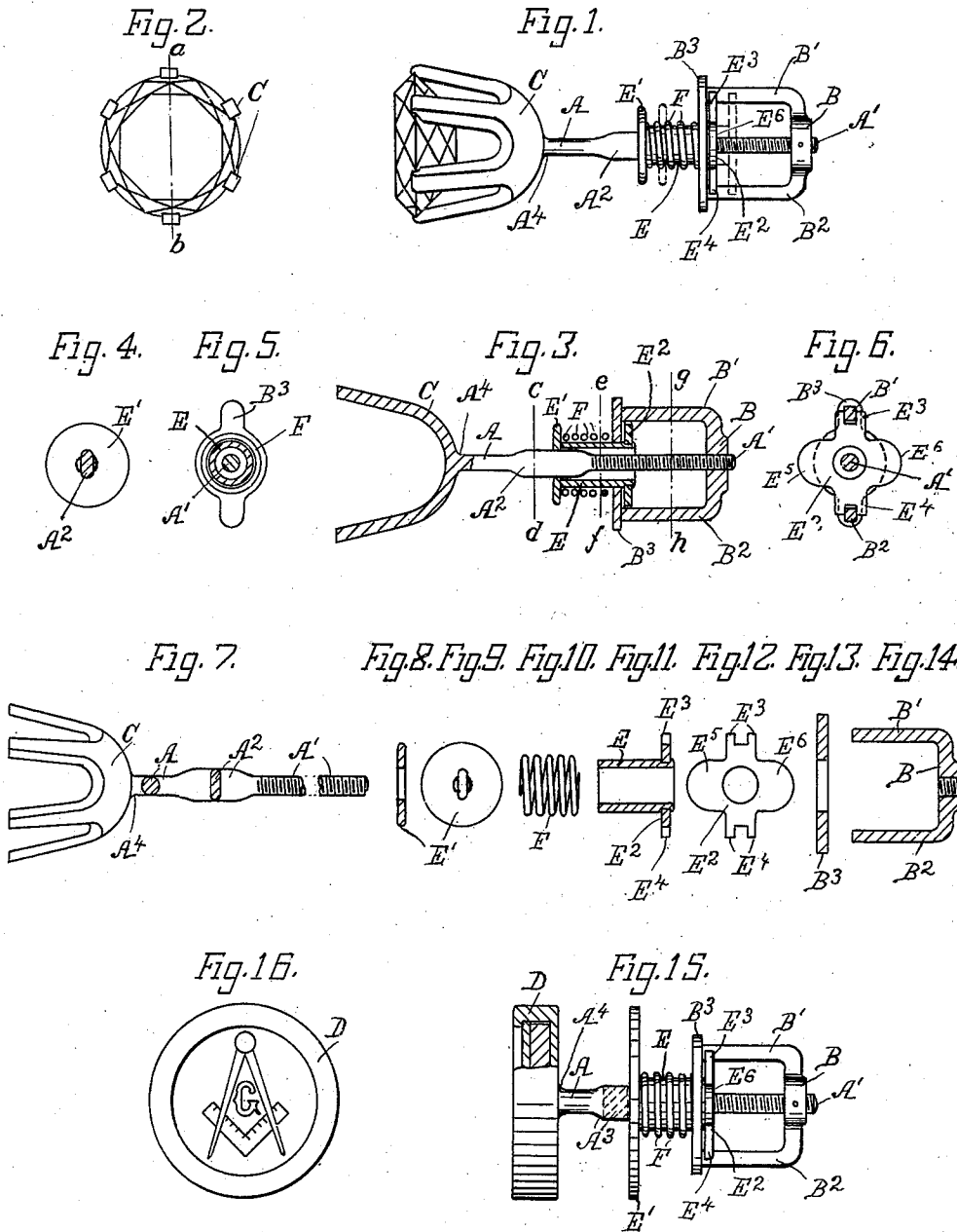


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SAFETY SCREW BACK FOR EAR RINGS AND BUTTONS.  
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# UNITED STATES PATENT OFFICE.

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SAFETY SCREW-BACK FOR EAR-RINGS AND BUTTONS.

978,789.

Specification of Letters Patent.

Patented Dec. 13, 1910.

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*To all whom it may concern:*

Be it known that I, HENRY STERN, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Safety Screw-Backs for Ear-Rings and Buttons, of which the following is a specification.

This invention relates to safety screw backs for ear-rings and buttons, and it consists in providing the screw member of the device with a locking sleeve which engages with an enlarged portion of the screw member at the front end of the sleeve and the rear end of the latter made to engage with projections from the nut so that the sleeve can slide forward and back upon the screw member and thereby lock or liberate the turning of the screw and nut in the operation of screwing or unscrewing according as the sleeve placed upon the screw by manipulation of the device and by the action of a spring around the sleeve which throws the latter forward into the locking position, and as will be more fully explained hereinafter.

The object of the device is to provide a means of preventing the accidental unscrewing of an ear-ring or button to which it may be applied, and thereby prevent possible loss of the article, which is desirable as can be understood, especially in the case of ear-rings carrying valuable gems, such as diamonds, or the like.

The nature and objects of the invention will be more fully understood from the following specifications taken in connection with the accompanying drawings in which similar letters refer to similar parts throughout the several views.

In the drawings:—Figure 1, is a side elevation of a screw ear-ring provided with my improvement. Fig. 2, is a front view of Fig. 1. Fig. 3, is a longitudinal vertical sectional view on line *a—b*, Fig. 2. Fig. 4, is a transverse sectional view on line *c—d*, Fig. 3; Fig. 5, is a similar view on line *e—f*, therein; and Fig. 6 is also a similar view on line *g—h*, in said figure, and in this case looking from right to left therein. Figs. 7, 8, 9, 10, 11, 12, 13 and 14, are detailed side views of the device seen in Fig. 3, assembled together but the parts separated from each other that their shapes may be better understood. Figs. 8 and 9 however, are sectional and front views of the same part, as

are Figs. 13 and 12 respectively, likewise similar views of another part of the device and all of which details, will be more fully described hereinafter. Fig. 15, is a side sectional view of the device as applied to a button, and Fig. 16, is a front view of Fig. 15.

In the drawings:—A, represents a screw shank having the threaded portion A', which is fitted to the nut B, in the usual manner, and with an enlarged portion of the shank of oblong cross section as seen at A<sup>2</sup>, in Fig. 7, or of rectangular cross section as seen at A<sup>3</sup>, in Fig. 15. The front end A<sup>4</sup>, may have a jewel setting C, attached thereto as seen in Figs. 1, 3 and 7, or a button D, as seen in Fig. 15, either of which may be secured to the screw in any suitable manner. Upon the screw A, the sleeve E, is loosely fitted and having the locking ring E', secured to its front end (the left end in the figures) and the yoke ring E<sup>2</sup>, attached to its rear end, (the left in the figures.)

The yoke ring E<sup>2</sup>, has two fork shaped extensions E<sup>3</sup>, E<sup>4</sup>, which loosely engage with corresponding fingers B', B<sup>2</sup>, extending forward from the nut B, and which are connected to the washer B<sup>3</sup>, and which washer slides along the outer surface of the sleeve E. A spiral spring F, is arranged over the outside of the sleeve E, and seats against the locking ring at its front end and against the washer at its rear end, and which arrangement causes the spring to press the washer B<sup>3</sup>, against the yoke ring E<sup>2</sup>, and thus force the locking ring forward over the enlarged portion of the screw and locking the sleeve and yoke ring against any possible rotation of the screw in the nut while the parts are in this position. Fig. 4, shows the enlarged portion A<sup>2</sup>, of the screw within the locking ring E', and Fig. 6, the yoke ring E<sup>2</sup>, as engaged with the fingers B, B', of the nut when the sleeve is in the locked position. By placing the nut and yoke ring between the fingers a person can draw the sleeve backwardly as indicated by the dotted lines in Fig. 1, by compressing the parts together, and while in that position, the setting or button can be turned around and the nut screwed or unscrewed upon the screw to the proper extent, whereupon by releasing the locking mechanism again the locking ring will be pressed forward upon the enlarged part of the screw again and lock the nut in that position upon the screw. To

facilitate the manipulation of the locking mechanism, the yoke ring  $E^2$ , is provided with two ears  $E^5$ ,  $E^6$ , seen in Figs. 6 and 12.

The hole in the locking ring is shaped so as to permit the body or threaded portion of the screw to be rotatable therein, but the enlarged portion of the screw is only slidable longitudinally in the said hole and in one position on account of the correspondingly shaped parts of the hole in the locking ring and enlarged portion of the screw. In other words, the locking ring can be rotated over any portion of the screw member except where the latter is enlarged and there only slidable longitudinally thereover. This arrangement of the parts, make the device operative as explained, and when understood, its nature and manipulation are apparent without further explanation.

The operation of the device can be understood from the foregoing explanation of its construction, and it is only necessary to state that in the case of an ear-ring, the nut is first unscrewed from the screw and the latter then inserted in the lobe of the ear of the wearer, with its attached jewel, when the nut can then be screwed onto the screw from the back of the ear, the locking ring being manipulated as already explained until the nut has been sufficiently screwed onto the screw, when the locking mechanism is released, and then the latter locks the nut against any possible unscrewing, as already described, and the ear-ring is thus safely kept in its position.

From the foregoing description, it can be seen that I provide a simple and inexpensive device for the purpose intended and that it meets all the requirements of such an article.

The figures are all drawn to enlarged dimensions that the parts can be clearly seen and understood, but it is to be known that they can represent articles of any proper dimensions, and that the locking parts can be changed in dimensions and proportions relatively to suit any requirements, without departing from the nature of the invention.

The detailed views shown in Figs. 7 to 14, inclusive, of the several parts detached from each other show clearly how the several parts can be made preparatory to assembling together, in the case of a screw ear-ring setting and any jewel it may be suitable to carry.

Buttons are sometimes made detachable, such as fraternity emblems, army, navy or police buttons, or the like, and the screw shank and safety device seen in Fig. 15, shows how the invention can be applied in such cases, and in which the device can be shortened or changed so as to project rearwardly as little as is practicable.

In the same manner, the invention can be applied to any other article of a similar nature or purpose as may be desired and in

which case it will serve its purpose, equally well.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is:—

1. In a screw back for an ear-ring or button, the combination of a screw having a portion of its shank of substantially angular cross section, a nut fitted to the screw having fingers projecting therefrom, and a sleeve having a portion of angular cross section to correspond to the angular cross section of the shank, slidably fitted to the angular portion of the screw shank and the finger members of the nut and non-rotatable with reference thereto and being rotatable upon the screw when its engagement with the angular portion of the shank of the screw is released by the proper longitudinal change of position of the sleeve over the screw to allow this result.

2. In a safety device for an ear-ring or button, the combination of a screw having an enlarged angular cross sectional shank portion, a nut fitted to the screw having fingers projecting therefrom, a sleeve having a portion of angular cross section to correspond to the angular cross section of the shank, loosely fitted over the screw and shaped so as to be slidable only when in engagement with the angular portion of the screw shank and being rotatable upon the screw when in non-engagement with the said angular portion of the screw shank and having a slidable connection with the finger members of the nut and non-rotatable with reference thereto, and a spring adapted to hold the sleeve in engagement with the angular portion of the screw shank and consequently in the non-rotatable position upon the screw and thereby holding the nut in a locked position thereon.

3. In a screw back for an ear-ring or button, the combination of a screw having an enlarged shank portion substantially of angular cross section for a portion of its length, a nut fitted to the screw and having fingers projecting therefrom, a washer secured to the free extremities of the fingers of the nut, a sleeve loosely fitted within the washer and over the screw having a locking ring at one end having a portion of angular cross section to correspond to the angular cross section of the shank, adapted to engage with the angular portion of the screw shank and be slidable thereon and having a yoke ring at its other end having a slidable connection with the finger members of the nut and non-rotatable with reference thereto and having an end movement upon the screw sufficiently great to allow the locking ring to clear longitudinally the angular portion of the screw shank and be rotatable upon the screw, and a spring adapted to hold the sleeve normally in the non-rotatable position

tion upon the screw and in engagement with the angular portion of the screw shank and thereby lock the nut upon the screw.

4. In a screw back for an ear-ring or button, the combination of a screw having a threaded portion and an enlarged shank portion angular in cross section for a part of its length, a nut fitted to the threaded portion of the screw and having fingers projecting therefrom, a washer secured to the free extremities of the nut fingers, a sleeve loosely fitted within the washer and over the screw having a locking ring attached at one of its ends and a yoke ring connected to its other end the locking ring having a portion of angular cross section to correspond to the angular cross section of the shank, being fitted to the angular portion of the screw shank so as to make the sleeve slidable only over the screw when the locking ring is in engagement with the said an-

gular portion of the screw shank but allowing the sleeve to be rotatable upon the screw when the locking ring is clear of the said angular portion of the screw shank by being moved away endwise therefrom and the yoke ring being slidably connected with the finger members of the nut and non-rotatable with reference thereto, and a spring upon the sleeve between the locking ring and the washer adapted to automatically force the locking ring over the enlarged angular shank portion of the screw and thereby lock the nut upon the screw so as to prevent possible rotation thereon while in that position.

Signed at New York city, in the county of New York, and State of New York, this 16th day of April, A. D. 1910.

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Witnesses:

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