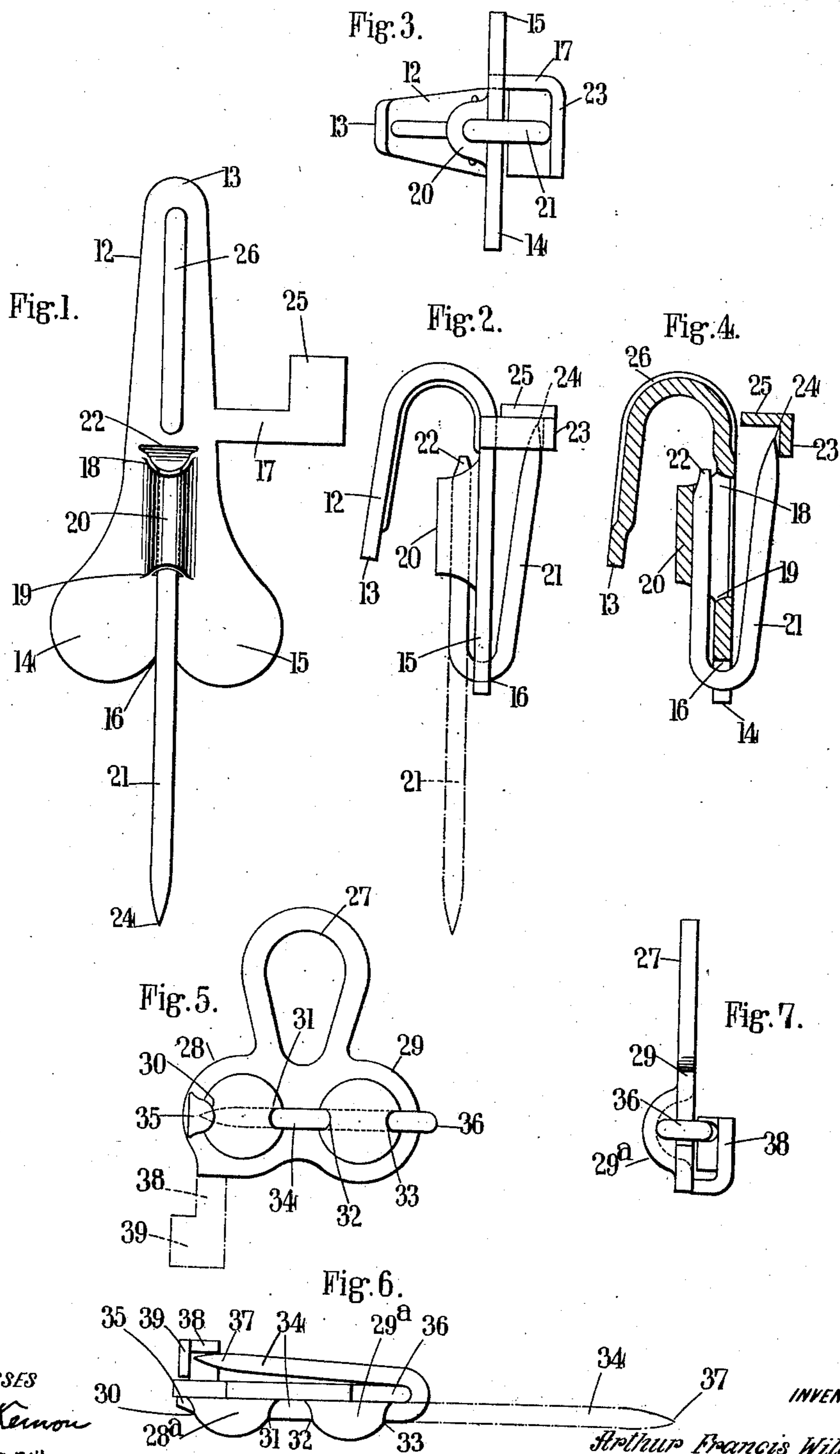


998,438.

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HOOK AND EYE.  
APPLICATION FILED SEPT. 18, 1909.

Patented July 18, 1911.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

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## HOOK AND EYE.

998,438.

Specification of Letters Patent.

Patented July 18, 1911.

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*To all whom it may concern:*

Be it known that I, ARTHUR FRANCIS WILEMAN, a subject of the King of Great Britain, and resident of 70 Goldhurst Terrace, Hampstead, London N. W., England, engineer, have invented certain new and useful Improvements in Hooks and Eyes, of which the following is a specification.

My invention relates to what may be termed safety-pin hook and eye fastenings, that is to say, hook and eye fastenings which are provided with a pin serving, in lieu of sewing, for securing the fastening to articles of ladies' attire.

As is well known, the usual method of securing a hook and eye fastening is open to objection not only in consequence of the time occupied in initially attaching the fastening to the garment, but also (in the case of washing garments) because it militates against the ready removal of the fastening before washing, so that the garment is liable to become spoiled by iron-mold and similar stains, while the hook and eye, if removed, must be again sewn in place which may be inconvenient if not impossible in the time available. Furthermore, difficulty may be experienced in securing the fastening or each portion thereof in the proper position, in which case the fit of the garment is impaired unless one or both members of the fastening be again removed and once more sewn in place. Many unsuccessful attempts have been made to avoid these objections by the use of a safety-pin integral with the fastening, the failure being probably due to the fact that the fastening is so small as to render it a matter of considerable difficulty to make a combined hook (or eye) and fastening in a single piece.

The object of my invention is to provide what, for convenience, I refer to as a safety-pin hook and eye fastening, and to this end it consists more particularly in the method hereinafter described whereby a pin is secured to each element of a fastening made from stamped-up metal.

The invention is illustrated in the accompanying drawings wherein—

Figures 1 to 4, and Figs. 5 to 7 illustrate respectively, examples of the application of the invention to a hook and an eye, the main portion of each of which is formed of a sheet metal stamping.

Fig. 1 is a face view of the blank from which the sheet-metal hook is to be formed,

with the pin in place but not yet bent, while Figs. 2 and 3 are respectively side and end views of the finished hook, and Fig. 4 is a view similar to Fig. 2, but in section on the median plane of the hook. It will be observed that the blank comprises a comparatively long and narrow portion 12 to form the nose and bight of the hook proper, and, at the end of the blank opposite to that extremity 13 which is to form the point of the hook, there are a pair of wings or lateral extensions 14, 15 preferably separated by a central notch 16. In a suitable position about midway of its length, the blank has also a lateral extension 17 adapted to form the catch for the point of the spring-pin. Between this extension 17 and the notch 16 the blank is cross-slitted in the center of its width at two points 18 and 19 some distance apart, the central longitudinal portion 20 of the blank which extends between these cross-slits being pressed up toward what is to be the front of the hook, so as to cause the slits to become holes opening in alignment with one another, as clearly shown in Fig. 4.

Through the cross-slits 18, 19, so as to extend in front of the main portion of the blank, but in rear of the pressed-up portion 20, is threaded a straight pin 21, which is passed into position from the direction of the point 13 of the blank so as to be arrested by a small flattened T-head 22 provided on the end of the pin, encountering the end of the portion 20, as indicated in Fig. 1.

The lateral extension 17 of the blank having been rearwardly bent to form, as at 23, the catch for the point of the spring-pin, that portion of the pin 21 which now extends beyond the broad end of the blank is bent rearward so as, being doubled back through the notch 16, to extend lengthwise of and substantially parallel to the back of the hook, the sharpened point 24 of the pin being sprung into engagement with the catch 23 as shown. It will be noticed that the fact of the pin being doubled back in contact with the blank at the notch 16 prevents retraction or displacement of the pin when once fixed in position in the blank.

The catch 23 may be furnished with a shield 25 for the point 24 of the pin, this shield being formed by a suitably bent extension of the portion 17 of the blank, as indicated.

After the pin 21 has been inserted in posi-

tion, the hook may be bent over toward the point as in Figs. 2 and 4 and in order to stiffen the bight and nose of the hook, the corresponding portions of the blank may be  
 5 formed with a central longitudinal corrugation as indicated at 26.

When applied to the garment, the wings 14, 15 (which are preferably left flat) serve to prevent the hook from canting laterally; inasmuch however, as the improved hook is  
 10 not attached by means of stitching through the loops provided at the corresponding portions of hooks as usually constructed, the wings 14, 15 need not be perforated.

Referring now to Figs. 5 to 7 (which respectively show front, end and side views of an eye whereof the main portion is formed by a sheet-metal stamping), it will be observed that the eye is of substantially trefoil shape, comprising a centrally disposed loop 27 forming the eye proper, and two wings 28, 29 disposed laterally in the same plane as the loop 27. These wings 28, 29 while preventing the eye from canting laterally when applied to the garment, also afford means of attachment for the spring-pin, which in this case extends not longitudinally but transversely of the center-line of the loop. To enable this to be done, a  
 20 straight row of four parallel slits 30, 31; 32, 33 is formed in the blank, two in each wing 28 and 29, the row of slits extending across the width of the wings; while each wing is forwardly embossed at its center as indicated at 28<sup>a</sup> and 29<sup>a</sup> so as, by causing the  
 25 slits 30, 33 to become holes opening in registration with one another, to permit of a straight pin 34 being threaded, transversely of the eye and wings, through all the slits in succession, the pin extending in front of the wings but behind each protuberance 28<sup>a</sup>, 29<sup>a</sup> thereof as shown. The pin 34 has a small flattened T-head 35 which, by encountering the metal surrounding the hole  
 30 30, prevents further movement of the pin in one direction, retraction of the pin in the opposite direction being prevented by the

pin being doubled back as at 36 around the opposite side of the blank. This doubled-back portion of the pin then extends across  
 50 and substantially parallel to the rear face of the wings, the sharp point 37 of the pin engaging with a catch 38 formed by suitably bending rearward the extension provided on the blank as indicated by dotted lines in  
 55 Fig. 13. The catch 38 may be furnished with a shield 39 for the point 37 of the pin, this shield being formed by a suitably bent extension of the portion 38 of the blank, as indicated. 60

#### Claims:

1. In a fastener, a plate having lateral extensions to prevent the plate from canting and an integral member for engaging a co-operative part, said plate being provided  
 65 on its front face with an integral keeper and on its rear face with an integral shield, and a pin having a T-shaped head and passed through the said keeper with its head in engagement therewith whereby it is pre-  
 70 vented from turning, the pin being bent around an edge of the plate and along the rear face thereof for engagement with the shield.

2. In a fastener, a plate having at one end  
 75 lateral extensions to prevent the plate from canting, a hook at its other end, a notch between the lateral extensions, a longitudinally and centrally disposed outwardly  
 80 pressed portion on its front face opposite the hook and forming a passage open at its ends, and an integral shield on its rear face, a pin passing through the said passage, said pin having a flattened T-head, said  
 85 head being in engagement with one end of said passage, the head serving to prevent the pin from turning, the pin being bent through the notch and along the rear face of the plate for engagement with the shield.

ARTHUR FRANCIS WILEMAN.

#### Witnesses:

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