

No. 734,777.

PATENTED JULY 28, 1903.

W. C. UTLEY & W. C. NEWMAN.

HOOK AND EYE.

APPLICATION FILED JULY 19, 1902.

NO MODEL.

Fig. 1.

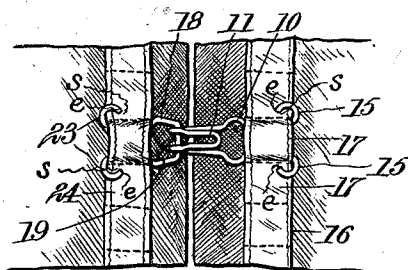


Fig. 2.

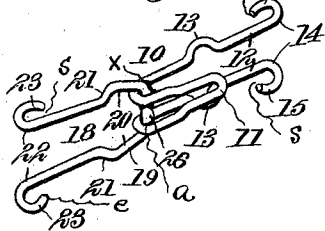


Fig. 3.

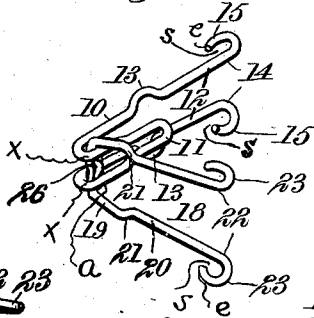


Fig. 6.

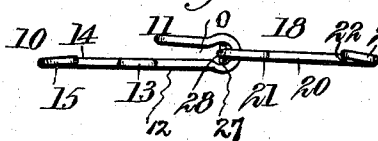


Fig. 7.

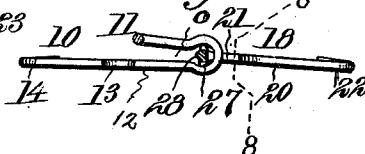


Fig. 8.



Fig. 4.



Fig. 5.



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UNITED STATES PATENT OFFICE.

WINIFRED C. UTLEY AND WILLIAM C. NEWMAN, OF HAGERSTOWN,
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HOOK AND EYE.

SPECIFICATION forming part of Letters Patent No. 734,777, dated July 28, 1903.

Application filed July 19, 1902. Serial No. 116,216. (No model.)

To all whom it may concern:

Be it known that we, WINIFRED C. UTLEY and WILLIAM C. NEWMAN, of Hagerstown, in the county of Washington and State of Maryland, have invented certain new and useful Improvements in Hooks and Eyes; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to
10 which it appertains to make and use the same.

This invention relates to certain new and useful improvements in hooks and eyes.

The invention has for its object the production of a simple and inexpensive hook and
15 eye which may be readily and easily attached to and detached from a garment.

A further object is to provide improved means for preventing the hook and eye members from becoming accidentally disengaged.

20 In carrying out our invention we employ a strip or tape of any desirable material and secure the same to a garment in any preferred manner, as by sewing. The hook and eye members are each provided with approximately spiral hook-like portions, which are intended to engage said strip or tape, whereby said members are firmly held in relative position and are at the same time capable of
25 ready disengagement from said strip or tape. The eye member is also provided with a locking device, which serves to prevent the accidental disengagement of the two members.

The invention will be hereinafter fully set forth, and particularly pointed out in the
35 claims.

In the accompanying drawings, Figure 1 is a plan view illustrating our invention. Fig. 2 is a perspective view illustrating the hook and eye members in engagement. Fig. 3 is a similar view illustrating the method of disengaging the hook and eye members. Fig. 4 is a sectional detail view illustrating the locking device. Fig. 5 is an end view of the latter. Fig. 6 is a side view, and Fig. 7 a longitudinal sectional view illustrating the hook and eye in engagement. Fig. 8 is a transverse sectional view on the line 8 8, Fig. 7, looking to the left.

Referring to the drawings, 10 designates a hook member, formed of a single wire and bent sidewise to form a hook portion 11. The securing-arms 12 are bulged or bowed at 13, the ends 14 being bent back and somewhat upwardly, and at the same time curled to form substantially spiral-shaped hooks 15, arranged to engage a strip or tape 16, secured to a garment in such manner as to form loops or pockets 17. The ends *e* of the wire forming the hooks 15 are thus on a different horizontal plane from arms or shanks 12, an open space *s* being formed between said ends and said shanks. The eye member 18 is also formed of a single piece of wire bent to form a widened loop 19, the arms 20 of which are contracted at 21 and bent sidewise at 22 to form hooks 23, similar in construction to hooks 15 and adapted to engage a strip or tape 24. The inner face of the end of loop 19 is cut out to form grooves 25, a lug 26 being formed by the metal left between said grooves, said lug having a flattened face and a convexed top edge. The end of said loop is preferably widened at 27, the outer face of said end being flattened and provided with a rib 28 running longitudinally thereof.

In practice the hook 11 and eye 18 are slipped beneath the strips or tapes 16 and 24, respectively, and drawn through until the hook-like ends 15 and 23 are brought into frictional engagement with the surface of the fabric thereof near its edge. When in this position, the loops of the strip or tape and the bulged portions and the hook-like ends of the hook and eye members all serve to hold the said members in their relative positions. When the hook and eye members are in engagement, it will be noticed that the wire *a* of the hook member will enter the grooves 25, as indicated at *a*, the lug 26 extending between said wires. (See Fig. 8.) The widened portions 27 of the eye member are wider than the narrow or contracted space or portion *o* between the hook 11 and the arms 12, so that said members can only be separated by tipping the eye member, as illustrated in Figs. 3, 6, and 7. By reason of this

arrangement said widened portions serve as a lock and accidental disengagement of the hook and eye members is practically impossible. The widened portions 27 are held in their locking positions by reason of the wire α fitting into the grooves, as before stated, whereby the lug 26 prevents lateral movement of the hook member with relation to the eye member. By convexing the lug 26 the same conforms to the approximate divergence of the wire α from the top of the hook 11 to arms 12, as illustrated in Fig. 8. In engaging and disengaging the hook and eye members said eye member is turned so that the rib 28 rests against the arms 12, maintaining the eye member in a tilted position and bringing the edges of the widened portions 27 opposite the opening o between the hook 11 and arms 12—i. e., to the exact position which will allow the eye to pass out of engagement with the hook. Said rib also serves to strengthen the end of the eye member by reinforcing it at the points where it is cut out to form the grooves 25. The spiral hooks 15 and 23 are intended to fit over the outer edge of the strips 16 and 24, respectively, whereby they act as primary securing means, the hook and eye members passing under said strips, whereby they will not become accidentally disengaged therefrom; yet when so desired the hook and eye members are readily disengaged from their respective tapes, no tools being required either for attachment or detachment.

From what has been said it will be observed that we have produced a simple and inexpensive hook and eye which may be readily attached to a garment or detached therefrom for any desired purpose, such as laundering, &c. It will also be noted that by means of our improved locking device the hook and eye members cannot become accidentally disengaged.

We are aware that it is old to secure hook and eye members to a tape by passing them bodily around the tape and clenching, whereby they are securely held in position, and we do not make claim to such a structure. On the contrary, our invention relates to hook and eye members which may be readily attached and detached from a tape at will without the use of tools, such results being impossible of performance by the forms of devices referred to.

We claim as our invention—

1. The combination with a tape or strip, of hook and eye members each formed of a single piece of wire bent into the desired shape and having shanks, said shanks being curled to form substantially spiral hooks arranged to have frictional engagement with the surface of said tape or strip, as set forth.

2. The combination with a tape or strip, of hook and eye members each formed of a single piece of wire bent to the desired shape

and having shanks, the ends of said shanks being bent sidewise to form hook portions the extremities of which are on a different horizontal plane from said shanks, said hooks being adapted for frictional engagement with the surface of said tape or strip, as set forth.

3. The combination with a tape or strip adapted to be secured to a garment, of hook and eye members each formed with shanks, the ends of said shanks being bent to form hooks of substantial spiral form arranged to have frictional engagement with said tape or strip, an open space being formed between said shanks and the extremities of said hooks for the engagement of the edge of said tape or strip, as set forth.

4. The combination with a tape or strip adapted to be secured to a garment, loops being formed in said tape or strip, of hook and eye members having hook-like ends arranged to engage one edge of said loops, said hook and eye members being extended beneath said loops and having enlarged or bulged portions engaging the other edge thereof, as set forth.

5. As an article of manufacture, an eye member having a flattened end portion, the inner face of which is provided with a lug formed with a convexed top and a flat face, the flattened end portion of said eye member forming a lock, as set forth.

6. As an article of manufacture, an eye member having a flattened end portion, the inner face of which is provided with grooves or recesses and a lug separating the same, said lug being formed with a flat face, the flattened end portion of said eye member forming a lock, as set forth.

7. As an article of manufacture an eye member having a flattened end portion, the inner face of which is provided with grooves or recesses and a lug separating the same, said lug being formed with a flat face and a convexed top, as set forth.

8. The combination of a hook member having two arms and a contracted portion, of an eye member having a flattened end arranged to be engaged by said hook member, the flattened end of said eye being wider than the contracted portion of said hook, the outer face of said end being provided with a longitudinal rib guided by said arms, as set forth.

9. An article of manufacture comprising an eye member having its end provided with inner grooves forming an intermediate flattened lug, the width of said end being increased adjacent each of said grooves to form a lock, as set forth.

10. An article of manufacture comprising an eye member having its end provided with inner grooves forming an intermediate lug having a flat face, a longitudinal rib being formed on the outer face of said end, as set forth.

11. An article of manufacture comprising

an eye member having its end provided with inner grooves forming an intermediate lug, said end being widened adjacent said grooves, the outer face of said end being flattened and
5 provided with a central longitudinal rib, as set forth.

In testimony whereof we have signed this

specification in the presence of two subscribing witnesses.

WINIFRED C. UTLEY.
WILLIAM C. NEWMAN.

Witnesses:

J. W. COOK,
F. E. COOK.