

No. 628,604.

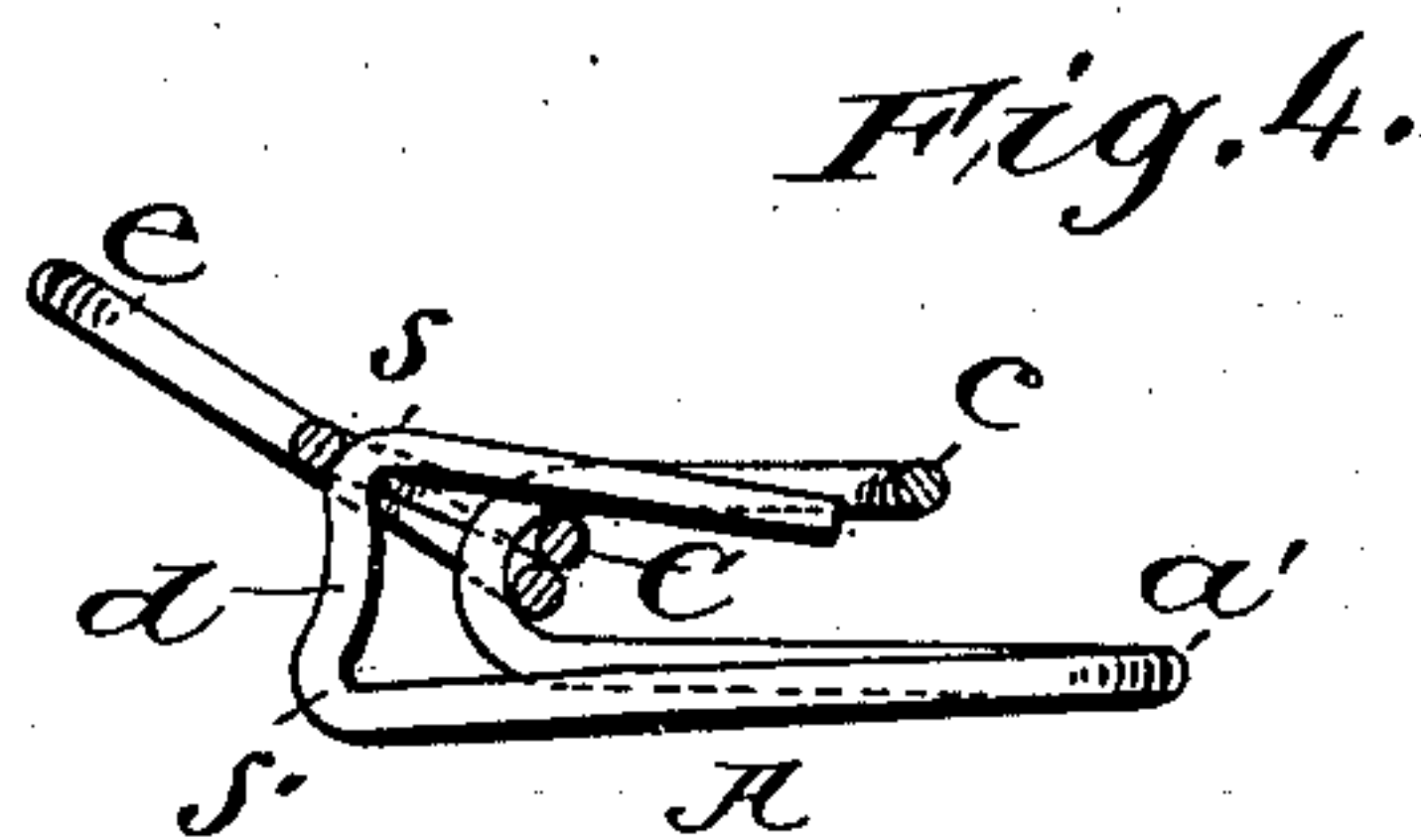
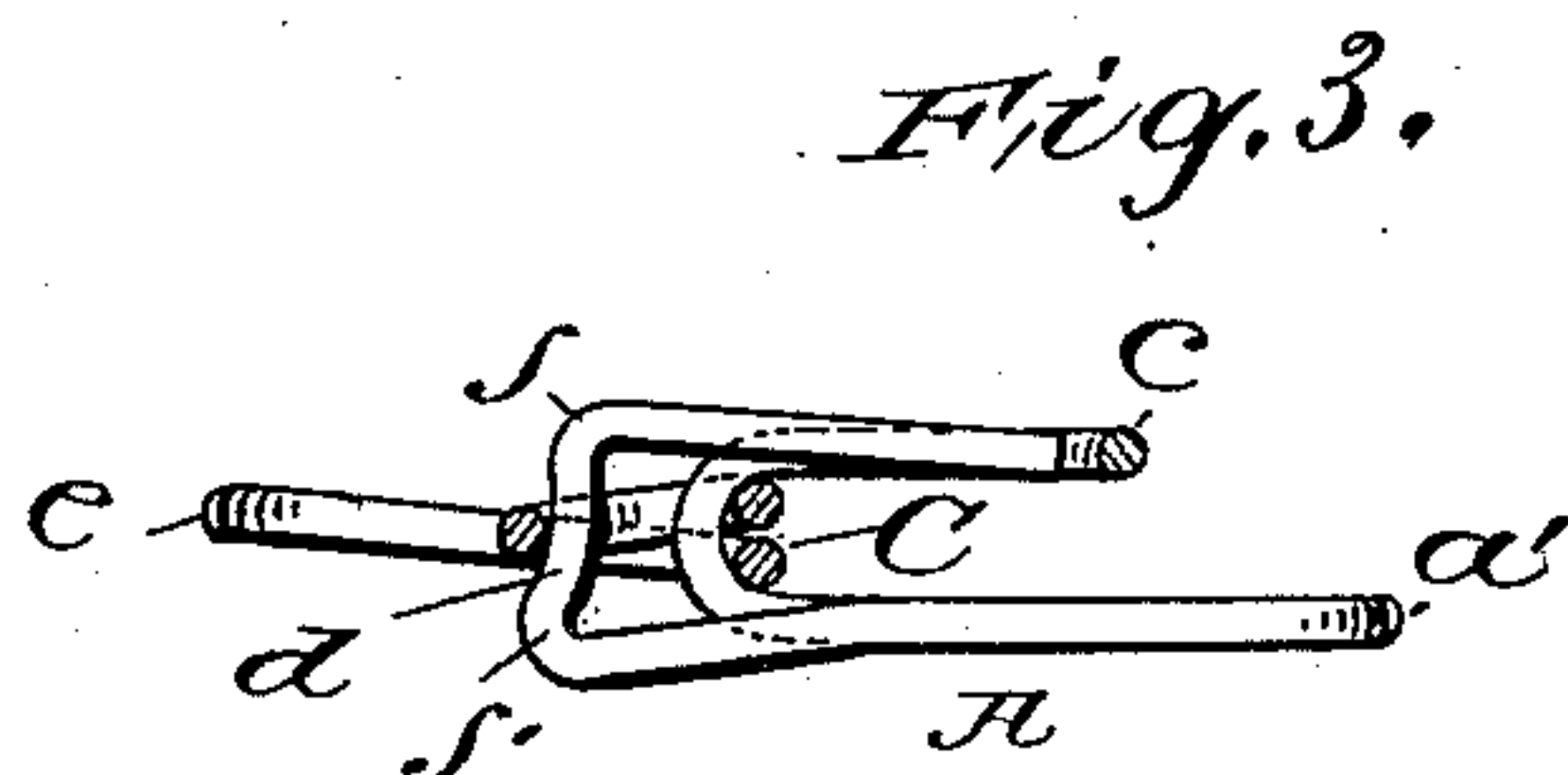
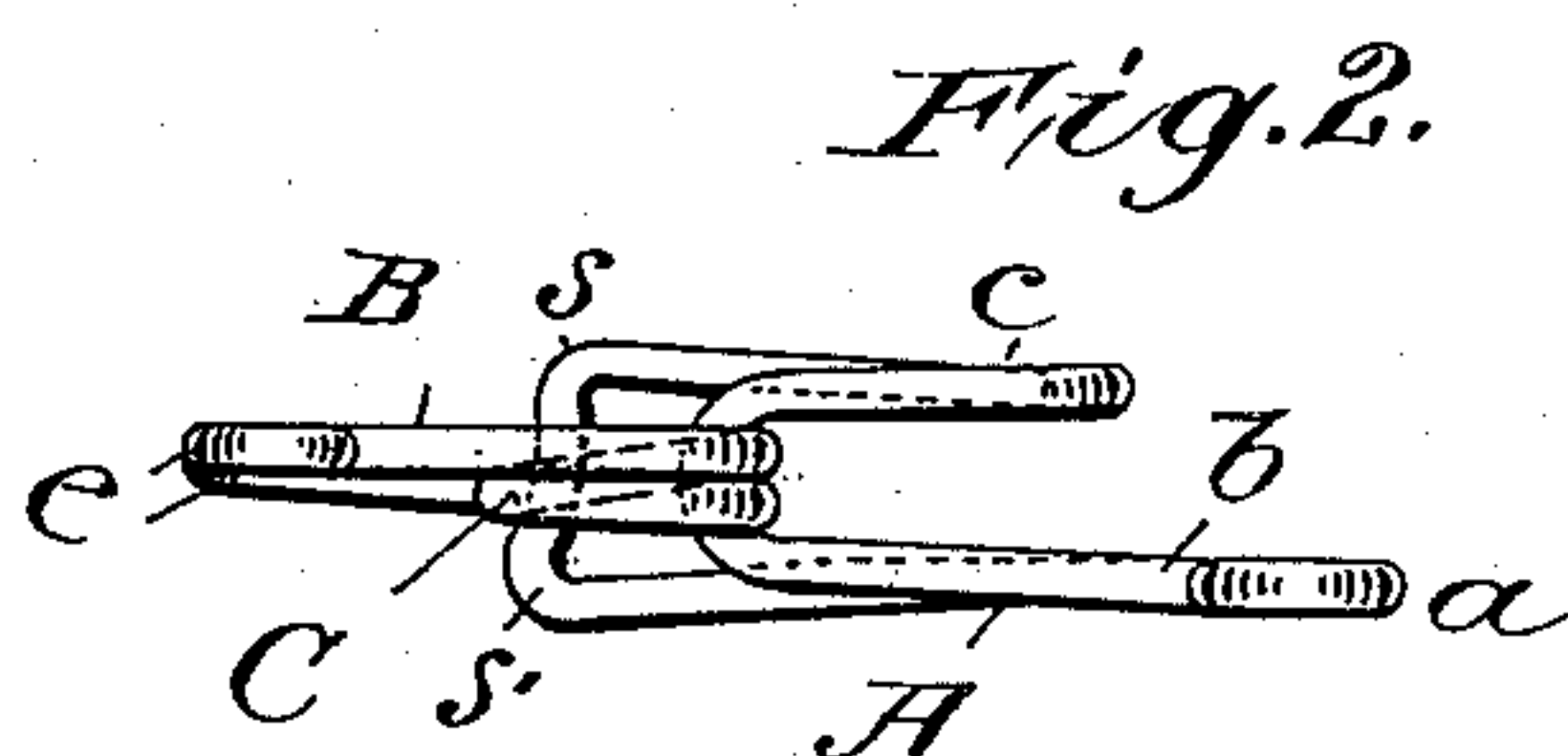
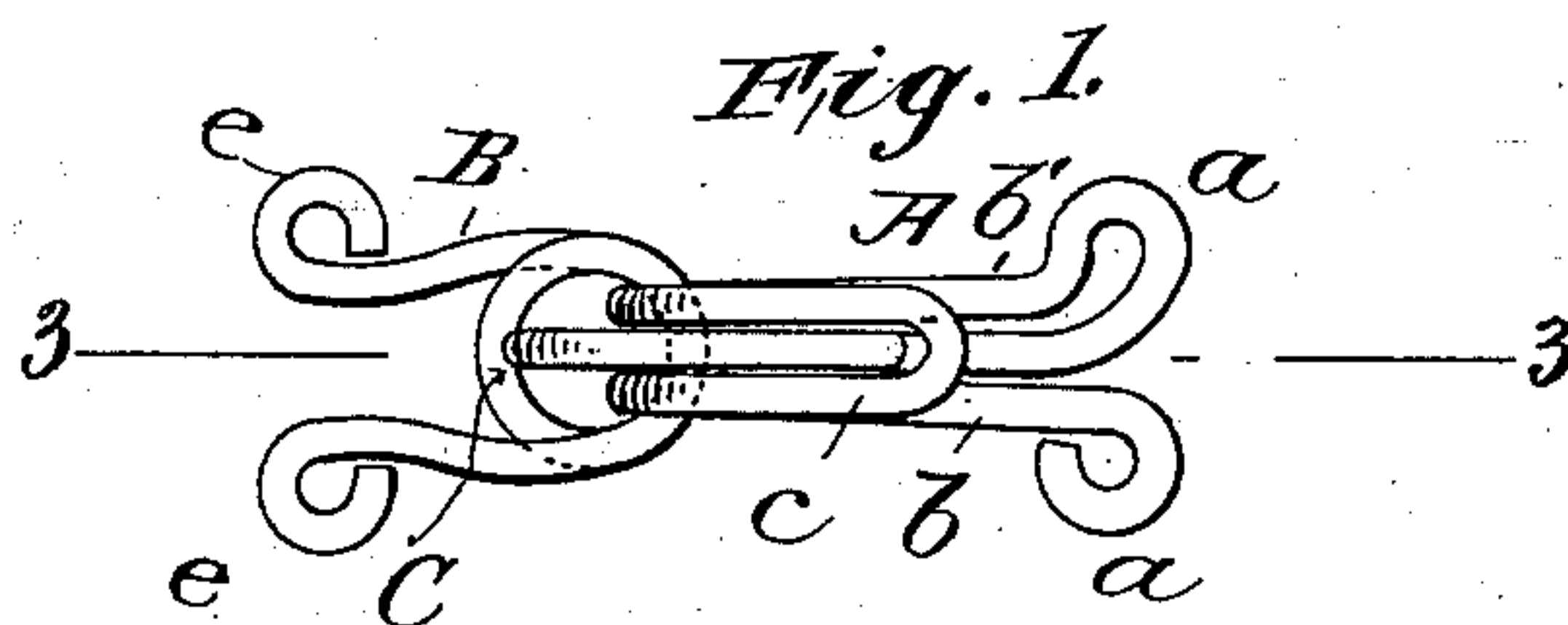
Patented July 11, 1899.

D. L. M. MCINTYRE.

HOOKE AND EYE

(Application filed Feb. 6, 1899.)

(No Model.)



WITNESSES

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# UNITED STATES PATENT OFFICE.

DONALD L. M. MCINTYRE, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF  
TO JOHN J. THOMPSON, OF SAME PLACE.

## HOOK AND EYE.

SPECIFICATION forming part of Letters Patent No. 628,604, dated July 11, 1899.

Application filed February 6, 1899. Serial No. 704,614. (No model.)

*To all whom it may concern:*

Be it known that I, DONALD L. M. MCINTYRE, a subject of the Queen of Great Britain, residing in the city and county of New York, in the State of New York, have invented certain new and useful Improvements in Hooks and Eyes, of which the following is a specification.

My invention relates to the construction of both the hook and eye parts of the combined garment-fastening device known as a "hook and eye;" and the object of my improvements is to provide a form of the device which will not be subject to accidental disengagement when in use, but which can be readily fastened and unfastened when desired. To this end I construct the eye of a single piece of wire, which is bent around so as to form a closed loop or ring midway between the eyes or loops at the ends thereof, whereby the eye is secured to the garment. The hook is also composed of a single piece of wire of the usual shape, except that the free end of the wire (which terminates at or near the tip of the bill) is carried to the rear of the bend of the bill of the hook and is there bent so that a portion of it stands at an angle to the plane of the fabric when the hook is in position for use. This portion is also provided with projecting shoulders at the upper and lower corners thereof. When the hook and eye are engaged, the closed loop of the eye is tilted and easily slipped over the upper shoulder by reason of the spring of the wire, and then is held securely in the narrower portion between the two shoulders, from which it cannot be dislodged by any movement which tends to push the eye from the hook. In order to disengage the device, the eye is slightly tilted into a position from which it is normally held by the garment when in use and is then easily slipped over the shoulder, and thus disengaged from the hook.

The invention will be best understood by reference to the accompanying drawings, forming a part hereof, in which—

Figure 1 shows a plan view, and Fig. 2 a side elevation, of a hook and eye in position for wear. Fig. 3 shows a vertical section on the line 3 3 in Fig. 1, the hook and eye being in the position they occupy when engaged

for use; and Fig. 4 shows a similar section with the eye in process of being removed from or attached to the hook.

The same letters of reference indicate corresponding parts throughout the drawings.

Referring to the drawings, A indicates the hook, composed of a single integral piece of wire or metal, which starting at one end thereof, at one of the eyes *a* whereby the hook is fastened to the garment, passes along to form one of the legs *b* of the hook and is then bent upward and around to form the bill *c* of the hook, thence down and along to form the other leg *b'* of the hook and the eye *a'* at the end thereof, and thence around such eye and along back between the legs *b b'* of the hook to a point somewhat in the rear of the bend of the bill of the hook, where it is bent upward, so that a portion of it, *d*, will, when the hook is in use, stand upright or at an angle to the plane of the fabric to which the hook is secured. From this part it passes along and terminates between the strands of the bill *c*, near the point of which its free end lies. The upstanding part *d* of the wire is bent so as to provide slight projections or shoulders *s s'* at the upper and lower corners thereof.

B indicates the eye, which is also formed of a single piece of wire or metal and is of the usual shape except that midway between the eyes *e e*, whereby it is secured to the garment, or, in other words, at the bend or belly of the eye, it is bent around so as to form a closed loop, ring, or coil C. This ring or loop C is of such a diameter that when the eye is engaged with the hook it will lie easily between the shoulders *s s'*, but will not readily pass over either of them. If preferred, instead of being circular it may be slightly oval in shape, having its longer diameter in the direction of the length of the eye, whereby sidewise motion of the eye upon the hook is prevented.

In engaging the eye with or disengaging it from the hook it is slightly tilted, and then by reason of the spring of the wire is easily passed over the shoulder *s*, and while in use is held against any possibility of accidental disengagement between the shoulders *s s'*, since it has a rigid bearing against the inside



of the hook A, whereon comes the strain of the connected parts of the garment, and can only be released by a forward push of the shoulder s in the direction of the free end of the wire. The advantages of this will be readily apparent to those skilled in the art.

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

1. In a hook and eye, an eye formed of a continuous piece of wire, having at the ends thereof eyes for attachment to the fabric, and bent so as to form midway between such eyes a closed loop, and a hook formed of a continuous piece of wire having a portion thereof extended at the rear of the bill and bent upward and having rearwardly-projecting shoulders thereon, such rear portion terminating in a free end and forming a spring, whereby when the parts are engaged the closed loop of the eye has on one side a rigid bearing against the inside of the bill of the hook and is held on the other between said shoulders substantially as and for the purposes set forth.

2. In a hook and eye, an eye which has at the bend thereof a closed loop, and a hook

having at the rear of the bill a part rearwardly extended and bent upward and having rearward projections thereon, such rear part forming a spring whereby the parts may be readily engaged and disengaged and when engaged said loop has on the one side a rigid bearing and on the other is held between such projections, substantially as and for the purposes set forth.

3. In a hook and eye, a hook having a part thereof projecting rearwardly beyond the rear of the bill and bent upward and upper and lower shoulders thereon, said rear part forming a spring whereby a closed loop, adapted to embrace the bend of the hook and said part, may be passed over said upper shoulder and held between the two, substantially as and for the purposes set forth.

In testimony whereof I have hereunto subscribed my name this 3d day of February, A. D. 1899.

DONALD L. M. MCINTYRE.

Witnesses:

CLARKSON A. COLLINS,  
JOHN J. THOMPSON.