

No. 652,160.

Patented June 19, 1900.

E. C. BEECHER.
HOOK AND EYE.

(Application filed Nov. 18, 1899.)

(No Model.)

Fig. 1.

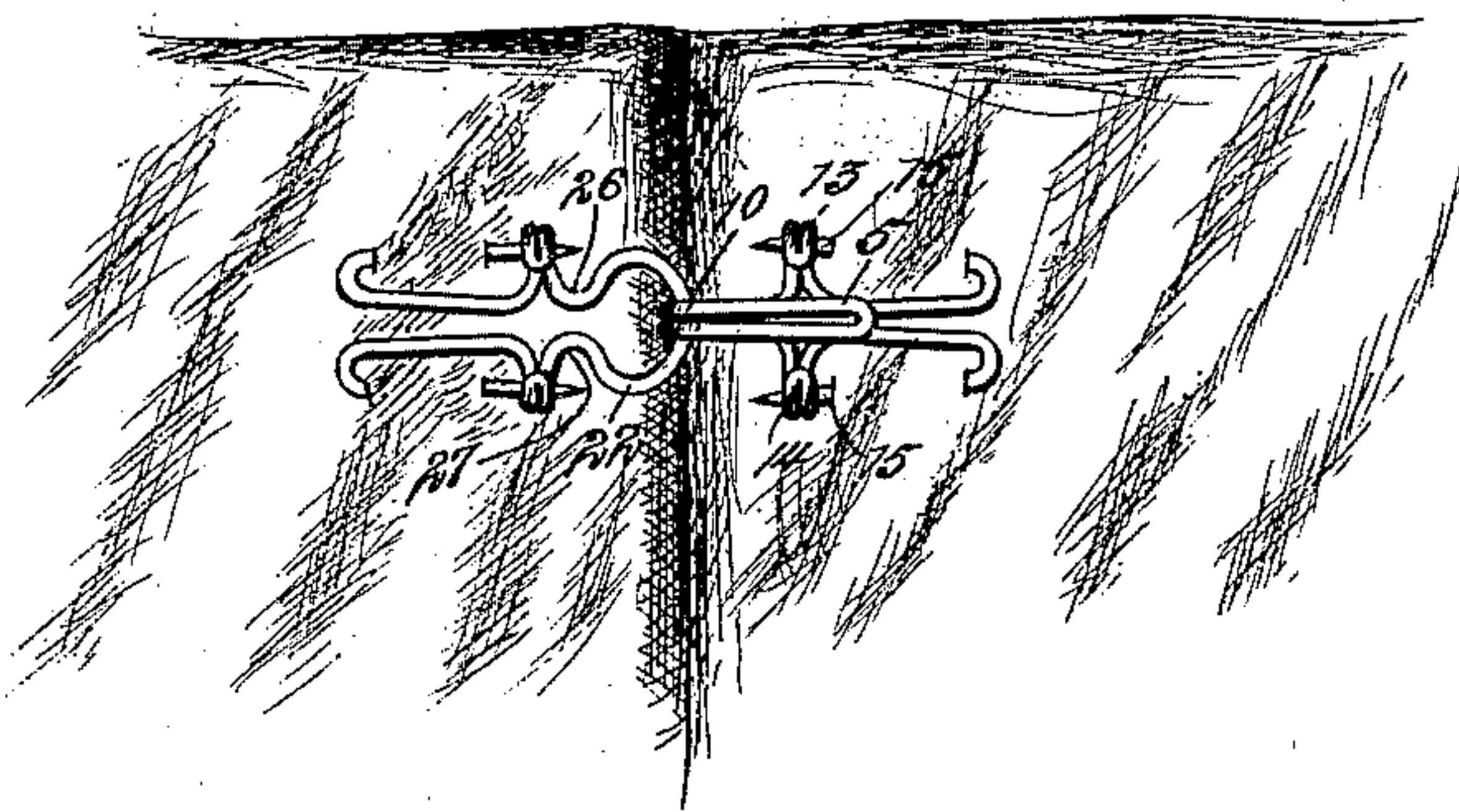


Fig. 2.

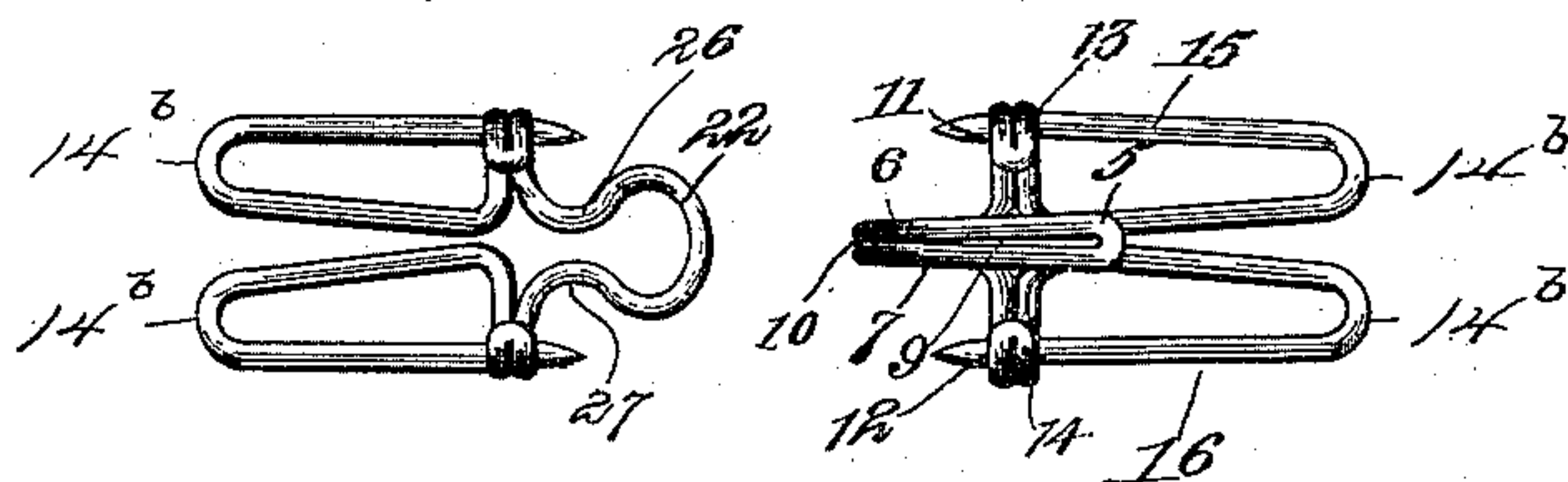
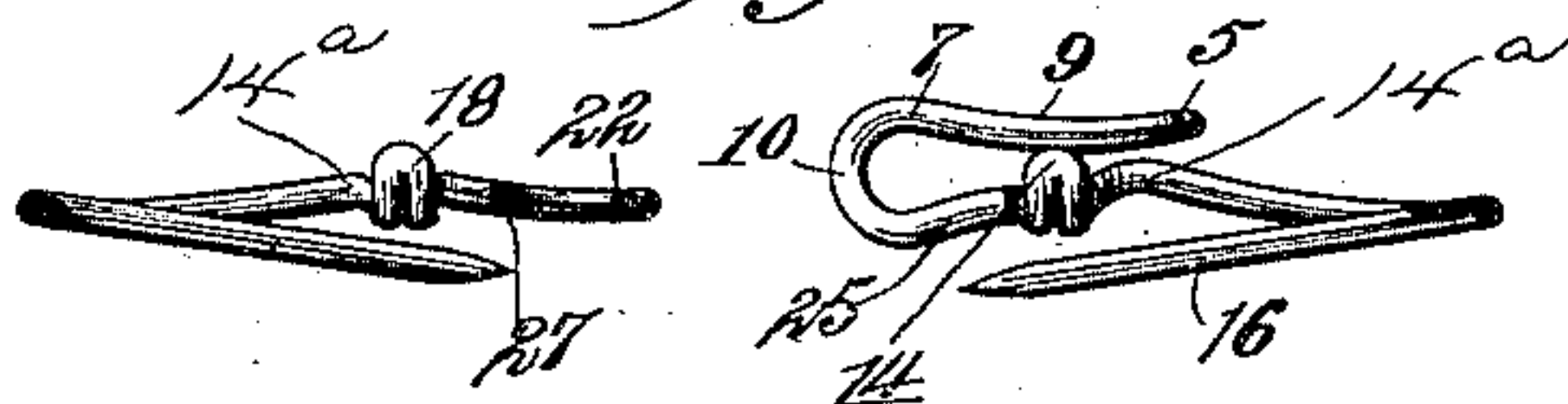


Fig. 3.



Witnesses

E. H. Walker.
Geo. H. Chandler.

By *Fris* Attorneys.

Elmer C. Beecher Inventor

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ELMER C. BEECHER, OF NORWALK, OHIO.

HOOK AND EYE.

SPECIFICATION forming part of Letters Patent No. 652,160, dated June 19, 1900.

Application filed November 18, 1899. Serial No. 737,475. (No model.)

To all whom it may concern:

Be it known that I, ELMER C. BEECHER, a citizen of the United States, residing at Norwalk, in the county of Huron and State of Ohio, have invented a new and useful Hook and Eye, of which the following is a specification.

This invention relates to garment-fasteners, and more particularly to that class known as "hooks and eyes," and has for its object to overcome the necessity of sewing a hook or eye to a garment or part of a garment, and thus render such devices quickly adjustable at will as well as simple of attachment and detachment and also to form the same of a single piece of material and maintain a close engaging relation when applied by having as an essential part thereof pin extremities, which by their resiliency are normally deflected or stand to one side of inturned keepers.

In the drawings, Figure 1 is an elevation showing portions of the meeting edges of a fabric or part of a garment having the improved hook and eye in relative positions thereon. Fig. 2 is a front elevation of the hook and eye members disengaged. Fig. 3 is a side elevation of the hook and eye members disengaged and the pin extremities detached from their keepers.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The hook and eye members are similar in construction in all particulars except the articulating portion thereof, which will be readily understood in the art as comprising a bill and a loop in the respective members, and the present improvement contemplates exclusively the mode of forming the body, so that a ready attachment, detachment, or adjustment may be acquired without the use of stitches or the common means employed in securing such devices to fabrics or portions of garments. The bodies of both hook and eye members are precisely the same in construction, and a description of one will suffice in general, and the particular difference of bends to form the articulating-loop will be hereinafter referred to.

Referring now to the hook member, the latter consists of a strong wire bent upon itself to form a bight 5 and separate legs 6 and 7

lying side by side and of equal lengths. The doubled end of the wire, which includes the bight, is bent upon itself to form a hook comprising a bill 9 and a semicircular connecting-bend 10. Beneath the bill 9 the legs 6 and 7 are bent outwardly in planes at right angles to form transverse extensions 11 and 12, the extremities of the said extensions being closely drawn together and bent upwardly and inwardly in the direction of the hook or the bill 9 thereof to provide open keepers 13 and 14. The extensions adjacent the keepers, as clearly shown in Fig. 3, are slightly below the plane of the inner adjacent part of the hook for a purpose which will be presently set forth, and from the inwardly-retained bends of the extensions 11 and 12 the opposite portions of the wire are bent rearwardly and divergently and slightly humped, as at 14^a, Fig. 5, adjacent the bight 5, said hump being provided by giving the rearwardly and divergently extending portions of the wire an upward angle toward the hook. The wire is then continued at the rear in horizontal semicircular connecting-bends 14^b, and the terminals are projected forwardly and pointed to provide attaching-pins 15 and 16, which are normally struck down beyond the plane of adjacent inner portion of the hook member, as clearly shown by Fig. 3, so that when the said lugs or pins are brought up into engagement with the keepers 13 and 14 the spring tension exerted by the pins in view of their displacement from a normal position will cause the member of which they form a part to be brought closely to bear against the fabric or part of a garment to which the improved device is applied. In the application of this hook member the pins 15 and 16, which normally are parallel and lie in a common plane beneath the extensions 11 and 12, are passed through the fabric and then outwardly thereof, as illustrated by Fig. 1, after which the ends of the pins are brought upwardly and inwardly and contracted to engage the keepers 13 and 14, and the latter act to hold the said pins against upward, downward, and outward displacement.

As before stated, the eye member is identical in construction with the hook member, with the exception that the doubled wire at that side of the keepers 13 and 14 farthest from

the bases of the pins is curved outwardly and then inwardly to coincide in the formation of the end of the loop 22, which forms the eye proper; but in other respects the said eye member is the same in construction and arrangement as the hook member hereinbefore explained.

By referring to Fig. 3 it will also be observed that the inner portion or body of the hook, as at 25, beneath or below the bill 9 and from the inner termination of the connecting-bend 10, stands inwardly beyond the plane of the extensions 11 and 12, and this construction, in combination with the slight inward deflection of the loop of the eye member, as also shown by Fig. 3, makes it necessary to raise the said loop above the bight of the hook in order to disengage the member, and particularly in view of the inwardly-bent portions 26 and 27 of the eye member, as shown by Fig. 2, being separated by an interspace, which is less than the width of the bight or connecting-bend 10 of the hook.

It will of course be understood that the specific structure shown may be varied and that any suitable materials may be employed

without departing from the spirit of the invention.

Having thus described my invention, what is claimed as new is—

A garment-fastener made of a single piece of wire and bent to provide an attaching member having a partial downward deflection and running to transversely-extending supports formed by doubling the wire and the outer terminals slightly flattened and inturned in a horizontal plane to produce inwardly-opening hooks, the wire being continued inwardly toward the center from one side of said supports and then into rearwardly-projecting divergent legs between forwardly-directed pins to give the latter a resilient action, the said pins being normally below the plane of the fastener and adapted to be indrawn to removably engage the said hooks.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELMER C. BEECHER.

Witnesses:

IRA T. CONKLIN,
IRA G. CONKLIN.