

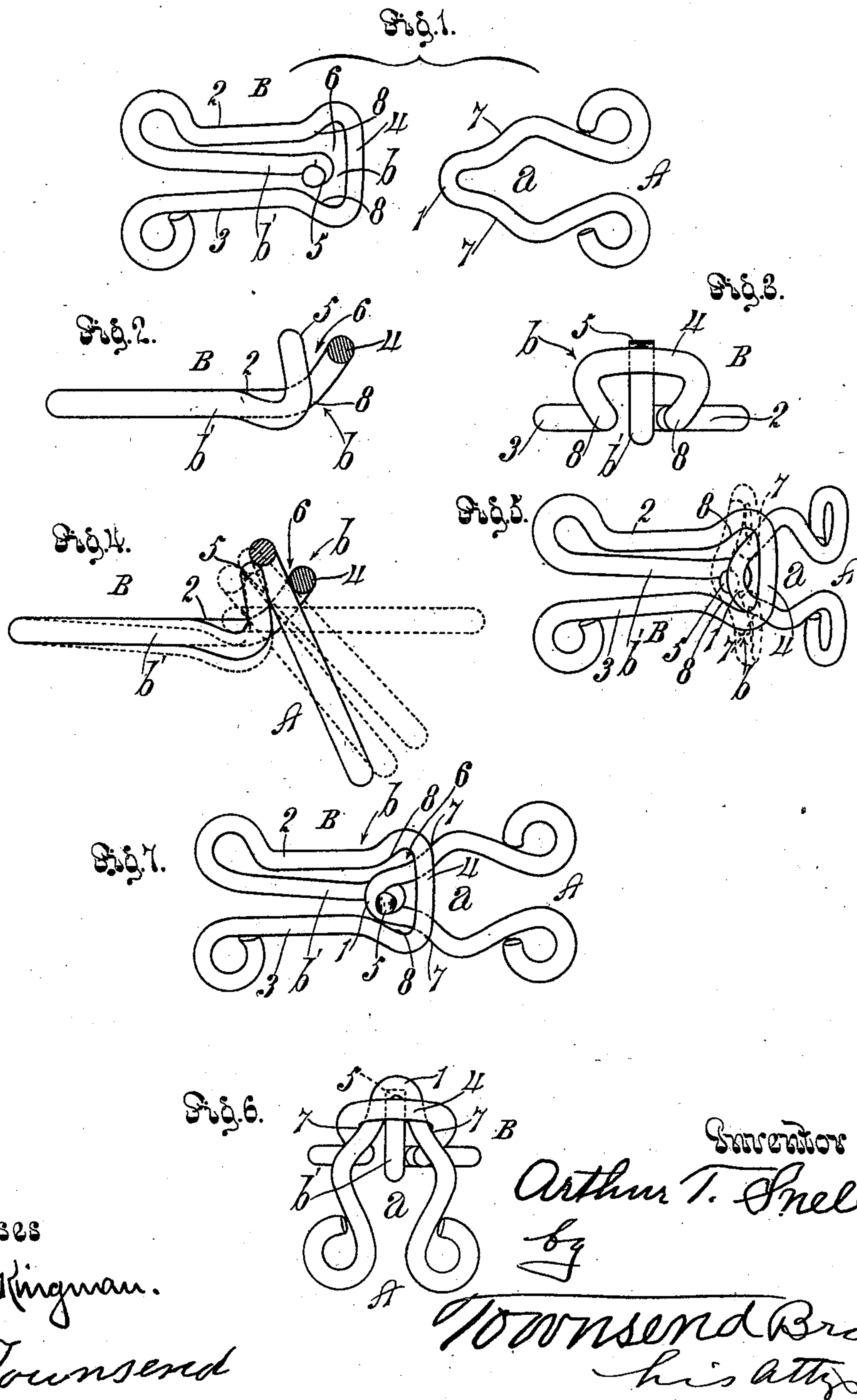
No. 644,153.

Patented Feb. 27, 1900.

A. T. SNELL.
HOOK AND EYE.

(Application filed Oct. 7, 1899.)

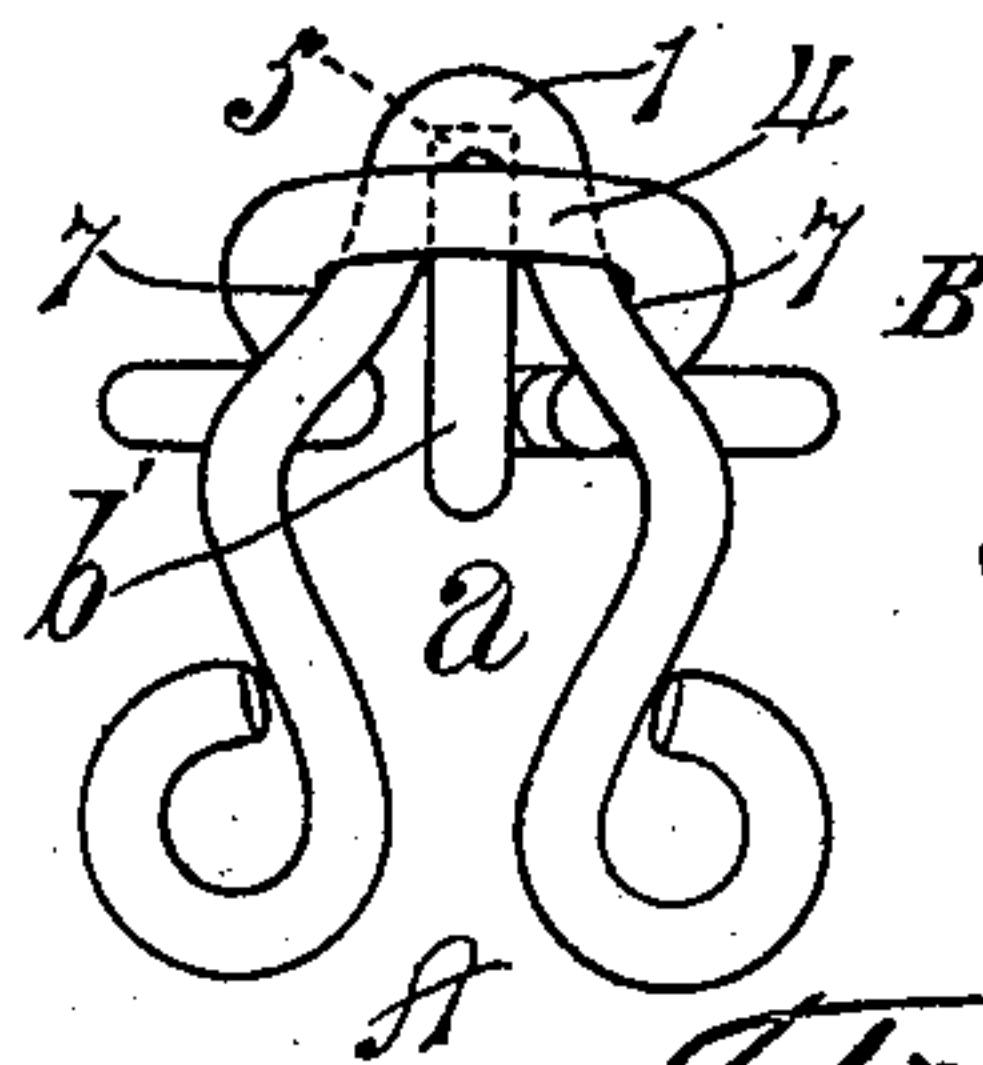
(No Model.)



Witnesses
Derry Kingman.

J. Townsend

Fig. 6.



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By

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UNITED STATES PATENT OFFICE.

ARTHUR T. SNELL, OF LOS ANGELES, CALIFORNIA.

HOOK AND EYE.

SPECIFICATION forming part of Letters Patent No. 644,153, dated February 27, 1900.

Application filed October 7, 1899. Serial No. 732,961. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR T. SNELL, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Hook and Eye, of which the following is a specification.

The object of my invention is to provide a superior hook and eye which can be readily connected and disconnected when this is done by design, but will otherwise remain permanently connected.

It is an object of my invention to prevent any accidental unhooking, and yet provide for very ready and convenient hooking and unhooking.

My invention includes the hook and eye and both parts thereof. The part commonly known as the "hook" is formed of a wire bent intermediately to form an eye-socket and extending thence to form the side members of the hook and inwardly bent in a continuation of one of the side members and returned to form a spring-tongue and upturned substantially at a right angle at the edge of the eye-socket, and the portion of the loop which forms the socket is bent upward, so that the cross-bar which forms the end of the hook-loop and likewise the outer edge of the eye-socket is above the plane of the main body of the hook. The eye is provided with a loop which terminates in a narrow forward extension, with shoulders at the base of such extension, so that the extension will fit in the eye-socket of the loop or body of the hook and the shoulders at the base of the extension will engage with and be fulcrumed thereon when the eye is being hooked, and said extension will engage with the other side of the socket and be fulcrumed thereon when the eye is being unhooked. The free end of the tongue of the hook terminates in an upturned point at the inner edge of the eye-socket, leaving just sufficient space between the tip of the upturned end and the cross-bar of the loop of the hook to allow the narrow extension of the eye to pass over the end of the spring-hook, which end is rounded, so as to be sprung down sufficiently by the eye extension to allow the extension to pass over the tip of the hook.

The accompanying drawings illustrate my invention.

Figure 1 is a perspective view of my newly-invented hook and eye unhooked. Fig. 2 is an axial section of the hook with tongue in contact. Fig. 3 is an end elevation of the hook. Fig. 4 is a sectional elevation of the hook and eye in the act of hooking. Dotted lines indicate different positions of the eye hooked and in the acts of hooking and unhooking. Figs. 5 and 6 are different views of the hook and eye in the hooking position. Dotted lines, Fig. 5, show it in the unhooking position. Fig. 7 is a view of the hook and eye hooked.

My newly-invented hook and eye comprises an eye A, provided with a pointed and shouldered loop *a*, and a hook B, provided with a loop *b* to receive the point 1 of the eye-loop and also provided with a tongue *b'* between the members 2 3 of the loop *b* and extending toward the cross member 4 of the loop and provided with an upturned point 5 near such cross member, with a space 6 between the cross member of the loop and the upturned end 5 of the tongue, of a width to allow the insertion of the point 1 of the loop of the eye between the upturned point and the cross member 4 of the hook. Said upturned point of the tongue is rounded at the end and terminates at a point which is substantially in the path of the inner face of the narrow bend of the loop-extension point 1 of the eye when the same has been inserted in the loop of the hook and is being brought into hooking position. The eye is shouldered, as at 7 7, at the base of the point 1 of the loop, and the hook is shouldered, as at 8 8, approximately in line with the front of the upturned point, thus forming an eye-socket, as at 6, between the cross-bar 4 and the shoulders 8, so that when the point 1 of the loop has been inserted into the eye-socket space 6 of the hook the cross-bar 4 and the shoulders 8 8 of the hook will form fulcrums for the shoulders 7 7 of the eye for the hooking and unhooking operations, respectively. The point 5 of the tongue terminates substantially on the arc described by the point 1 of the loop when the shoulders 7 are pressed forcibly against the side members of the hook and the eye is moved as a lever upon either of these fulcrums.

The shoulders 7 of the eye slope laterally from the base of the point 1, so that when

the point is forcibly pressed into the space 6 the eye wedges into the loop of the hook, thus tending to spring the members of the eye slightly closer together and the members of the hook slightly farther apart, thus allowing an appreciably-greater insertion of the point 1 into the space 6 when pressure is applied than when not, so that in case the upturned point 5 is slightly longer than normally required the hooking and unhooking can be accomplished by pressing the point of the eye forcibly into the space 6. It is the intention, however, in manufacturing the hook and eye that the parts shall be uniformly constructed, so that when the point 1 is fully inserted into the space 6 the inner side of the point of the loop will engage the upturned point of the tongue of the hook when the eye is being brought into the same plane as the body of the hook.

The point 5 is rounded at front and back to assist the passage of the loop-point 1 over the tongue-point 5, so that when the rounded face of the wire of which the eye is made engages with the end of the upturned point of the tongue the eye will readily press the tongue down sufficiently to readily pass thereover in either direction.

In practical use to fasten the hook and eye together the eye is brought at a suitable angle with the hook, the point 1 of the loop is inserted into the space 6 while the hook and eye are at this angle, and the point 1 of the loop is inserted as far as possible and then brought forward into the extended plane of the body of the hook. In passing from the one position to the other the point 1 of the loop presses the upturned point 5 of the hook-tongue out of its path and passes in and hooks behind the same, so that a strain in the line of the body of the hook will not suffice to separate the parts. When it is desired to unhook the eye, this is done by bringing the eye into an angle with the hook and pressing the point of the loop forcibly into the space while the point of the loop and the point of the tongue are passing each other. When the point of the loop has passed the point of the tongue, an endwise movement of the eye away from the hook will withdraw it. A twisting motion of the eye can also be given, if desired, to bring the side of the point of the loop over the point of the tongue.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A hook and eye comprising an eye provided with a pointed and shouldered loop and a hook provided with a loop to receive the point of the eye-loop and also provided with a tongue between the members of the loop and extending toward, and upturned near the cross member of the loop with a space between the cross member of the loop and the upturned end of the tongue of a width to allow the insertion of the pointed loop of the eye between the upturned point and the cross member of the hook; said upturned point of the tongue terminating at a point which is substantially in the path of the inner face of the bend of the loop of the eye when the same has been inserted and is being brought into hooking or unhooking position, substantially as set forth.

2. A hook formed of a wire bent intermediately to form an eye-socket and extending thence to form the side members of the hook and inwardly bent in a continuation of one of the side members and returned to form a spring-tongue and upturned at the edge of the socket to form a hook.

3. A hook provided with a loop having an eye-socket at one end and a tongue terminating in an upturned point at the edge of said socket, and shoulders at the junction of the eye-socket with the side members of the loop adjacent said upturned end.

4. A hook comprising a tongue upturned at its free end and a loop upturned at the front of said free end of the tongue and there provided with an eye-socket.

5. A hook comprising a centrally-disposed spring-tongue integral with one of the side members; said tongue upturned at its free end; and a loop upturned at the front of the said free end of the tongue and there provided with the eye-socket substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, at Los Angeles, California, this 29th day of September, 1899.

ARTHUR T. SNELL.

Witnesses:

JAMES R. TOWNSEND,
FRANCIS M. TOWNSEND.