

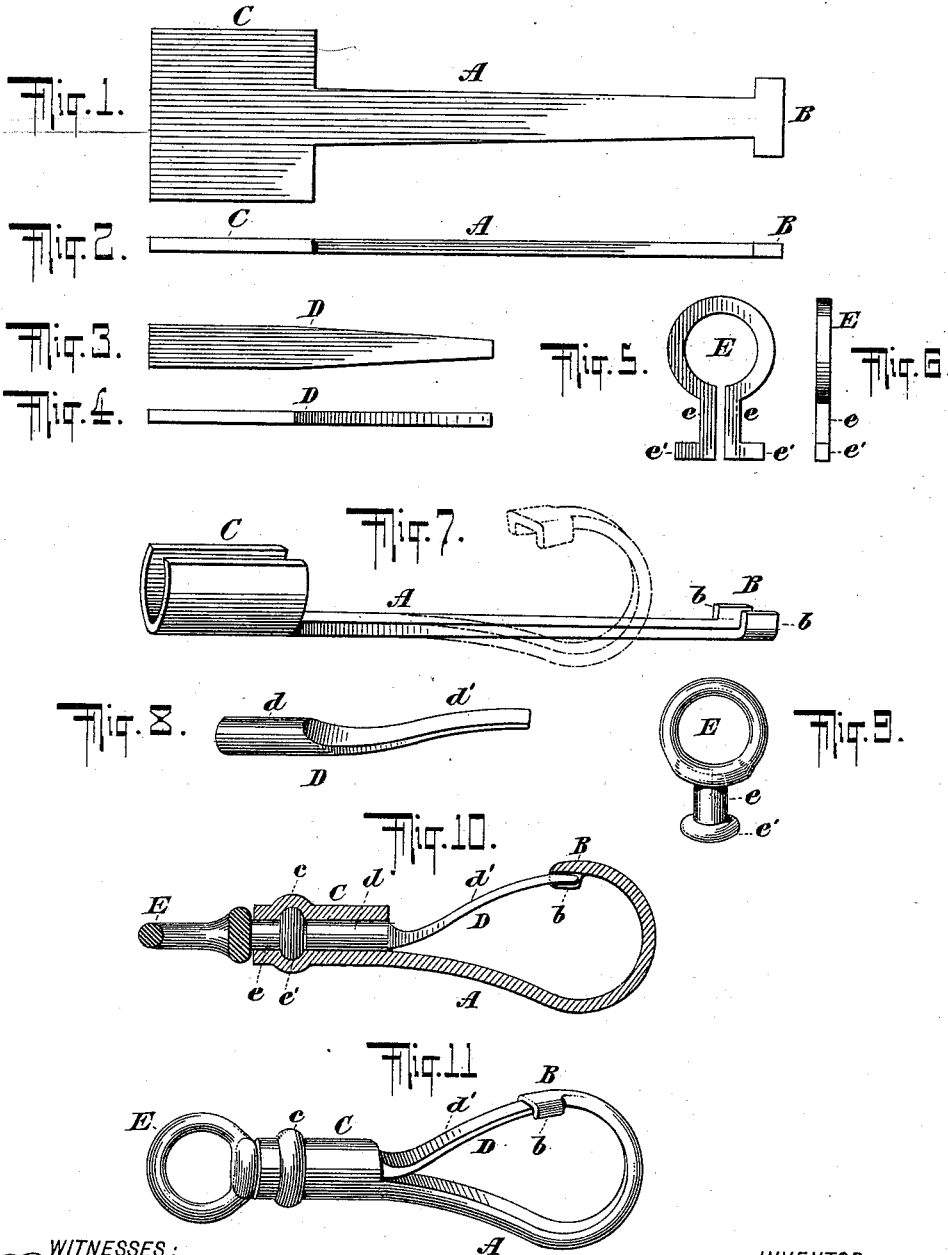
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Patented Apr. 17, 1900.

S. M. WELLS, JR.
SNAP HOOK.

(Application filed Oct. 28, 1899.)

(No Model.)



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STEPHEN MORGAN WELLS, JR., OF BRISTOL, CONNECTICUT.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 647,734, dated April 17, 1900.

Application filed October 28, 1899. Serial No. 735,120. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN MORGAN WELLS, Jr., of Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Snap-Hooks; and I 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 which it appertains to make and use the same.

This invention relates to improvements in snap-hooks; and the objects of the improvements are simplicity in strength and construction, the manufacture of a snap-hook that may be readily and economically made and assembled, one which will be strong because of the nature of the construction and assembling and because of the absence of rivets and bolts, and one in which effectiveness and certainty in use and lightness in weight are secured in comparison with other snap-hooks by reason of the superiority of this snap-hook over others in the proportions of the various parts to one another, as hereinafter described.

In the drawings, Figure 1 represents a blank of stock out of which is formed the body or main part of the improved snap-hook. Fig. 2 represents an edge view of said blank. Fig. 3 is a blank of spring-steel from which is formed the spring-tongue. Fig. 4 is an edge view of the same. Fig. 5 is a blank from which is formed the ring or loop and stud and head forming the male part of the swivel. Fig. 6 is an edge view of the same. Fig. 7 represents the main blank after the first operation with the ends turned up. The dotted lines represent the hook shaped into its ultimate form. Fig. 8 represents the spring ready for insertion in or engagement with the body. Fig. 9 represents the ring and stud and head shaped into form. Fig. 10 is a sectional view of the completed hook, and Fig. 11 is a view of the same in elevation.

In the manufacture of the improved snap-hook herein described there are necessary three separate blanks—one to constitute the body or main part of the hook, a second to constitute the spring, and a third the combined ring and stud and head. There are thus but three parts to the completed article,

and it will be observed that no rivet or bolt is required in its construction.

A denotes the first blank, which constitutes the body of the hook, with a rectangular broad enlargement C at one end and a smaller rectangular enlargement B at the other end.

D is a blank for the spring, enlarged at one end, so that under the operation of the press or similar machine it may be formed into a spring having a rounded end, so as to promote a rounded whole when the blank C is formed about it.

E is the blank for the ring, with a stud *e e* and longitudinal projections *e' e'* to form in the end a head or knob to complete the swivel.

The blank A is held in a power-press or suitable machine and struck in dies to change the blank into the form shown in Fig. 7, with the enlargements at the ends rounded. Similarly the blank for the ring and complementary swivel parts is struck in dies to change it to the rounded form, both as to ring and stud and head. (Shown in Fig. 9.)

The blank A (shown in Fig. 7) is again placed in a power-press and the end is curved or rounded to take the shape shown in dotted lines in Fig. 7. The blank of the spring D is placed in a press and formed in dies, so as to make a rounded end *d* and an upwardly-curving end *d'*. The end of the blank A is again placed in a press and a socket formed therein (shown in Fig. 10 as *c*) as the female complementary swivel part. The head *e'* of the swivel is placed in their socket, the stud being constructed of sufficient length, so that the shank will hold the ring beyond the end of C. The large end of the spring D is placed in the hollow of the blank beyond it and the whole swaged or formed into a complete whole under pressure, the part of the spring *d'* being adjusted so as that its end will fit within the ears *b*, formed on the end of the hook B.

It will be observed that, as heretofore remarked, there are only three pieces required in this snap-hook and that on account of the construction there are no rivets or bolts required in its construction, that few operations are required in its manufacture and that in the end we get a snap-hook that in its size is exceedingly small and simple and yet gives perfect freedom of action through the

swivel and ring and one that will work effectively, that the spring is held securely in the body of the hook at the same time that the end of the spring is held from motion
5 sidewise by its contact with the end of the body B coacting with the ears *b*, and, what is most important, that the highest degree of strength is secured by the employment of the minimum of material and processes of manu-
10 facture.

Having thus described my invention, I claim—

1. The herein-described snap-hook consisting of a body having at one end a shank provided with a socket and at the other end a
15 hook, a tongue-spring provided with a butt to be embraced and held fixedly by the shank of the body at one end and engaging the end of the aforesaid hook at the other end, and adapted to open and shut against said end, and a
20 ring, stud and head, said head revolving freely

within the socket of the body, all substantially as shown and described.

2. A snap-hook comprising in its construction a combined ring, stud and head; a body 25 part having a shank rounded over the aforesaid stud and head to form a swivel-joint, said body part on the other end being formed into a hook whose end is provided with ears, and a spring rounded at one end to be in-
30 closed within, and embraced by, the shank end of the body and the other end to be engaged with the end of the hook between the ears thereof so as to prevent sidewise motion, substantially as described. 35

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

STEPHEN MORGAN WELLS, JR.

In presence of—

LAURA R. PENFIELD,
ALICE E. BROWN.