(No Model.)

J. H. LANGE.

BUTTON FASTENER.

No. 303,648. Patented Aug. 19, 1884.

Fig. 1.

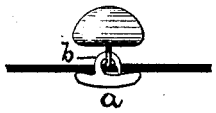
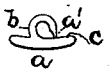


Fig. 2.

Fig. 3.

Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES H. LANGE, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE HEATON BUTTON FASTENER COMPANY, OF SAME PLACE.

BUTTON-FASTENER.

SPECIFICATION forming part of Letters Patent No. 303,648, dated August 19, 1884.

Application filed December 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. LANGE, a citizen of the United States, and a resident of Providence, in the county of Providence and State of Rhode Island, have invented an Improvement in Button-Fasteners, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention belongs to that class of button-fasteners which are adapted to secure or hold a button to a fabric, shoe, or other article without the aid of a setting-instrument.

Button-fasteners of the class mentioned have heretofore been so constructed or formed from metal or metal blanks that that portion thereof which projects from the retaining head or base, and which is designed to hold the button, must be bent or otherwise manipulated to form it into a hook or partial loop to adapt it for use, thereby affecting the strengh of the metal and changing the condition in which it existed in the metal blank or in the sheet. Further, in such button-fasteners the free end of the hook or partial loop has been so disposed with relation to the other parts of the fastener that when it is intended to pass the said free end into the shank-eye of a button it is found that the curve or bulge of the hook or partial loop, or the base or one arm thereof, or the material to which the button is to be fastened, interferes with and prevents the easy and quick insertion of said free end into the shank-eye, as stated; and, lastly, in button-fasteners of the kind designated the free end of the hook or partial loop being sufficiently removed from the adjacent parts of the fastener to permit the passage of the wire shank between the parts to engage the shank-eye with the hook, it is found that by reason of such disposition of the free end of the hook or partial loop with relation to the other parts of the fastener, and the enlargement by wear of the hole in the fabric, in which the hook is more or less housed, the fastener and its secured button soon become disengaged and lost. It has been sought to overcome this last objection after the button has been secured to the fabric by forcing the free end of the hook or partial loop down onto or against the base, or in some cases onto the material itself, with the aid of various tools—such as pliers, pinchers, &c.—thereby weakening the fastener by giving a sharper bend to the hook and requiring the use of comparatively soft metal in the manufacture of such fasteners.

The object of my invention is to overcome the defects mentioned, and to provide a button-fastener which is practically without bends, and being of metal substantially of the strength in which it existed in the sheet, said fastener being adapted to engage the shank-eye of a button when secured to a fabric and to be locked thereto, so as to prevent loss of parts upon enlargement by wear of the hole in the fabric.

To these ends my invention consists of a button-fastener having substantially a base and hook integral therewith, the said hook projecting from the edge of the base with its fixed end and loop in line therewith, and its free end curved or bent laterally or to one side, to throw it out of line with said base, and to permit the passage of the wire shank of a button between the parts, substantially as hereinafter described, and particularly pointed out in the claims.

Figure 1 is an elevation showing one of my improved button-fasteners as retaining a button upon a piece of fabric, shoe, or other article. Fig. 2 is a perspective view of one of my improved button-fasteners. Fig. 3 is a plan of a blank cut from sheet metal, from which my fastener is formed; and Fig. 4 is a similar view of the blank, with one of the arms of the hook severed from the base, so as to provide the free end.

The base *a* and hook *b* are integral, and the blank, Figs. 3 and 4, is cut or stamped from sheet metal of suitable thickness. The hook *b* projects from the cut edge *c* of the base *a*, preferably in a curvilinear manner, with its fixed end and loop in line with the base *a*, and its free end *a'* of a length to meet the cut edge *c*, and bent or curved laterally or to one side, to throw it out of line with said base, and to permit the passage of the wire shank of a button between said free end *a'* and edge *c*.

The free end a' of the hook is narrowed or tapered, substantially as shown in the drawings, to permit it to be more easily bent laterally during the process of manufacture, and for the more important purpose of adapting it to be easily bent by hand back over the base a, to bring it in line therewith after the shank-eye of a button has been passed onto the hook, to lock or hold the button to said hook and prevent its disengagement therefrom. In this case the bend previously given to the free end a', so as to permit the passage of the eye of the button onto the hook, is removed.

The locking of the button can easily be accomplished by holding the button with one hand and the base a with the other, and then turning or twisting the parts in opposite directions, so as to cause the shank-eye of the button to bear or press laterally upon the narrowed free end a' of the hook, to remove the bend therein and bring it in line with the base a, as shown in Fig. 1. The free end a' of the hook b, which projects laterally from the main portion of said hook and its base, adapts it to be quickly and easily inserted into the shank-eye of a button, so as to engage the fastener with the button. In this case neither the curve of the hook nor either end of the base is so disposed with relation to the free end a' of said hook as that they are brought into contact with the material or fabric to which the button is to be secured before the said free end engages the eye of the button.

It is apparent that beneficial results will be had should the free end a' of the hook not be narrowed or tapered, as described, although I prefer the construction shown.

It will be noticed that, so far as concerns any strain exerted upon the hook b or its base a, when my improved button-fastener is in use to secure a button to a fabric, shoe, or other article the metal in said fastener is of the same strength and in the same condition in which it existed in the sheet, since the said strain is exerted upon the base a and fixed end and loop of the hook b, the metal in which, under all circumstances, being in the condition in which it existed in the sheet, while the bend is limited entirely to the narrowed free end a' of said hook. It will be noted, further, that the shank-eye of the button engages the edge of the hook, and the cut edge c of base a is in contact with the material when strain is exerted on the button. Furthermore, my fastener is strong and rigid at the junction of the hook with its base, instead of being weakest at that point, as is the case with a number of bent fasteners of the class mentioned.

I do not claim anything shown or described in the application of Franklin A. Smith, Jr., for patent for improved hook filed November 21, 1883, Serial No. 112,333.

What I claim is—

1. An improved sheet-metal button-fastener, consisting, essentially, of a base and hook integral therewith, the hook projecting from the cut edge of the base, with its fixed end and loop in the plane of said base, and its free end substantially of the same length as, and equally distant from, the fixed end or post, and bent or curved, as described, to permit the passage of the wire shank of a button between said free end and the base, substantially as and for the purposes specified.

2. The herein-described metallic one-piece button-fastener, consisting, essentially, of the base a and hook b, projecting from the cut edge c of said base, with its fixed end and loop in line with the base, and its free end a' tapered or narrowed, and curved or bent laterally and out of line with the base, and of a length to meet the cut edge c of said base, all as shown and described, and for the purpose set forth.

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

JAMES H. LANGE.

Witnesses:

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GEO. W. PRENTICE.