(No Model.) 2 Sheets—Sheet 1.

F. E. DE LONG.

GARMENT HOOK.

No. 492,744. Patented Feb. 28, 1893.

FIG. 1.

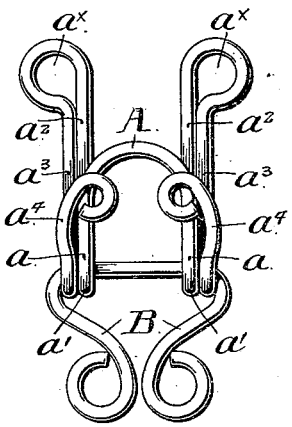


FIG. 2.

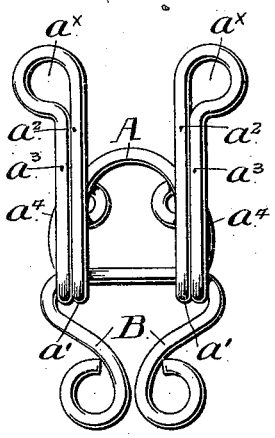


FIG. 3.

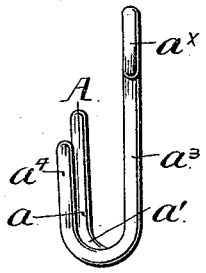


FIG. 4.

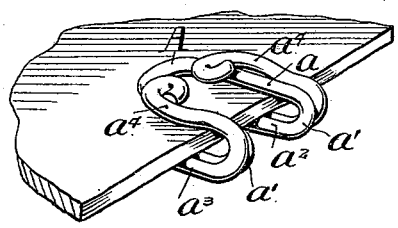
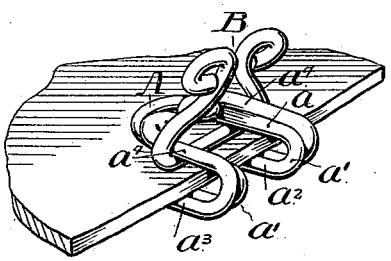


FIG. 5.



WITNESSES:

Bradbury Bedell

F. Norman Dixon

Frank E. De Long, INVENTOR

By his Attorneys,

Wm C. Strawbridge

Bonsall Taylor

(No Model.) 2 Sheets—Sheet 2.

F. E. DE LONG.

GARMENT HOOK.

No. 492,744. Patented Feb. 28, 1893.

FIG. 6.

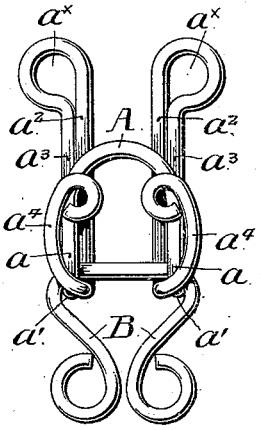


FIG. 7.

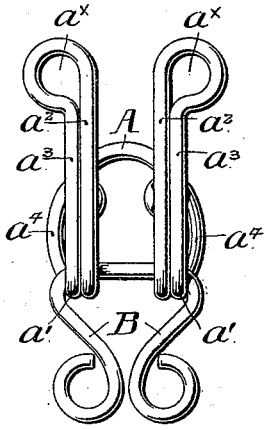


FIG. 8.

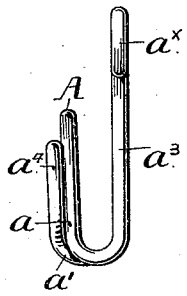


FIG. 9.

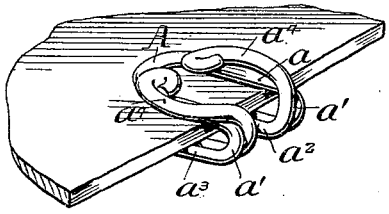
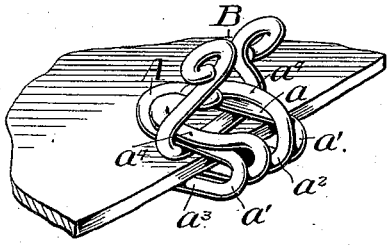


FIG. 10.



WITNESSES:

Rodney Bedell

F. Norman Dyson

Frank E. De Long, INVENTOR

By his Attorneys,

Wm C. Strawbridge

Bonsall Taylor

UNITED STATES PATENT OFFICE.

FRANK E. DE LONG, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO RICHARDSON & DE LONG BROTHERS, OF SAME PLACE.

GARMENT-HOOK.

SPECIFICATION forming part of Letters Patent No. 492,744, dated February 28, 1893.

Application filed December 19, 1892. Serial No. 455,579. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. DE LONG, a citizen of the United States, residing in the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Garment-Hooks, of which the following is a specification.

My invention relates to garment hooks which are made from a single piece of wire bent to the desired form, and which are employed, in connection with eyes, for fastening wearing apparel, and for kindred purposes;—and further relates, and is especially applicable, to that class of the same in which both the hook and the eye are intentionally made quite wide, so as to cause them to present a broad bearing upon or with respect to, and to prevent the puckering of, the material to which they are applied. In the use of these hooks, as in the use of the ordinary hooks and eyes, it is a desideratum to provide as a part or member of the hook itself some device or means to prevent accidental or too easy disengagement of the eye. It is the object of my invention to secure this desirable result, and to such end my invention comprehends a garment hook formed of a single piece of wire bent to form a bill a shank and thread-eyes, and also bent to form and embody two laterally-disposed inwardly-compressible spring guards or eye-detaining keepers, which are so formed and disposed relatively to the bill as to perform the function of slightly obstructing both the engagement and the disengagement of the eye with respect to the hook.

In the accompanying drawings I have represented preferred forms of hooks alike embodying my improvements, and differing only from each other in the formal arrangement of the component wires,—all of the hooks represented being hooks having considerable breadth, although it is not to be understood that my invention is confined to wide hooks.

In the drawings, Figure 1 is a top plan view, and Fig. 2 a bottom plan view, of a hook embodying a good form of my improvements, and of an eye engaged therewith. Fig. 3 is a right hand side view of the hook as represented in Fig. 1. Fig. 4 is a view in perspective of the hook represented in Fig. 1, as it appears when applied to the edge of a fabric in the ordinary mode of applying the hook to a garment. Fig. 5 is a view similar to Fig. 4 of the same hook, representing the position which the parts occupy during the operation of engaging or disengaging the eye. Fig. 6 is a top plan view, and Fig. 7 a bottom plan view, of a hook embodying my improvements in a slightly modified form, and of an eye engaged therewith. Fig. 8 is a right hand side view of the hook as represented in Fig. 6. Fig. 9 is a view in perspective of the hook represented in Fig. 6, as it appears when applied to the edge of a fabric in the ordinary mode of applying the hook to a garment. Fig. 10 is a view similar to Fig. 9 of the same hook, representing the position which the parts occupy during the operation of engaging or disengaging the eye.

Similar letters of reference indicate corresponding parts.

Referring first to the hook represented in the first five figures of the drawings: The bill of the hook is formed of a single piece of wire, continuous as the bill-side-bars, a a, in each direction from its apex or point A, conveniently in the form shown, to the eye-engaging bends a' a', where upon each side it returns upon itself, so to speak, and passes back to form the shank-bars a^2 a^2, which together constitute the shank portion of the hook, and which at the rear are respectively bent around, preferably outwardly, to form the thread-eyes $a^\times$, which may be made either in the form represented or in any other preferred form,—from which the wires are then carried outward and forward, outside of, in substantial parallelism with, and approximately in the plane of said shank-bars, to form what I term the guard-base-bars a^3 a^3, which are carried forward as far as the eye-engaging bends a', and are then bent upwardly with a curvature preferably generally correspondent to that of said bends, and are then as the counterpart spring-guard-bars a^4 a^4 carried backward along the bill-bars, and laterally slightly bellied outward in opposite correspondence, and conveniently provided, preferably but not restrictively above the bill-bars, with in-turned bends or folds a^5 a^5, such, for instance, as those shown.

In the application of the eye B to a hook embodying the construction above described, the eye as represented in Fig. 5 embraces both the bill proper and the spring-guard-bars, a^4 a^4, and is intentionally of such width as, in its passage over the bellied portions of the latter, to occasion against the stress of their natural resilience, the temporary opposite inward forcing or compression of said bars, until it has passed over said bellied portions and seated itself in the eye-engaging bends of the bill, with the result that it will be retained by said spring-guard-bars, which, after its passage, assume their normal set, and can only be disengaged by the exercise of such slight force as will again occasion opposite compression of said spring-guard-bars.

The entire hook being, as explained, made of a continuous piece of wire, it is immaterial what form the thread-eyes assume, and they may be either central, so to speak, or bent inward or outward, and may moreover possess any desired form.

As already explained, I prefer to dispose of the spring-guard-bars in the manner shown in the hook represented in the first five figures, in which organization the guard-base-bars from which said spring-guard-bars emanate are disposed outside of the side-bars of the shank. This arrangement or relationship of the parts is not, however, of the essence of the invention, and in Figs. 6 to 10 I have represented a hook embodying my improvements in which the guard-base-bars are disposed inside of the side-bars of the shank, although the spring-guard-bars occupy the same relationship relatively to the bill that they do in the structure first described.

In the operation of a hook embodying the structure last referred to, the spring movement of the spring-guard-bars may be considered as relegated to the thread-eyes, whereas in the structure first described the movement has its axis of origin in the region of the bend which connects each spring-guard-bar with its guard-base-bar.

Such being a description of a hook made from a single piece of wire embodying my improvements, it will be apparent that its breadth will be dependent upon the distance apart of the side-bars of the shank, and may be varied according to the lateral extent or breadth of bearing which it is desired that the hook shall possess. Thus, the distance may be greater or less than that represented in the drawings.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A hook formed, substantially as set forth, of a single piece of wire bent to form a bill, a shank, thread-eyes, and the oppositely-disposed outwardly-bellied inwardly-compressible spring-guard-bars hereinbefore described.

2. A hook formed of a single piece of wire bent to form a shank and a bill, and a portion of which is extended from the region of the eye-engaging bends along the bill and is bellied laterally away from said bill, substantially as set forth.

3. A hook formed of a single piece of wire bent to form a shank and a bill, and a portion of which is extended from the region of the eye-engaging bends along the bill and is bellied laterally away from said bill on each side thereof, substantially as set forth.

4. A hook formed of a single piece of wire bent to form a shank and a bill, and portions of which wire are extended along the shank to the region of the eye-engaging bends, are curved upward in the vicinity of said bends, are extended along the bill, and are bellied laterally outward one on each side of said bill, substantially as set forth.

5. A hook formed of a single piece of wire bent to form a shank and a bill, and portions of which wire are extended along the shank to the region of the eye-engaging bends, are curved upward in the vicinity of said bends, are extended along the bill, are bellied laterally outward one on each side of said bill, and are formed with return bends, substantially as set forth.

In testimony that I claim the foregoing as my invention I have hereunto signed my name this 15th day of December, A. D. 1892.

FRANK E. DE LONG.

In presence of—
J. BONSALL TAYLOR,
F. NORMAN DIXON.