

No. 670,701.

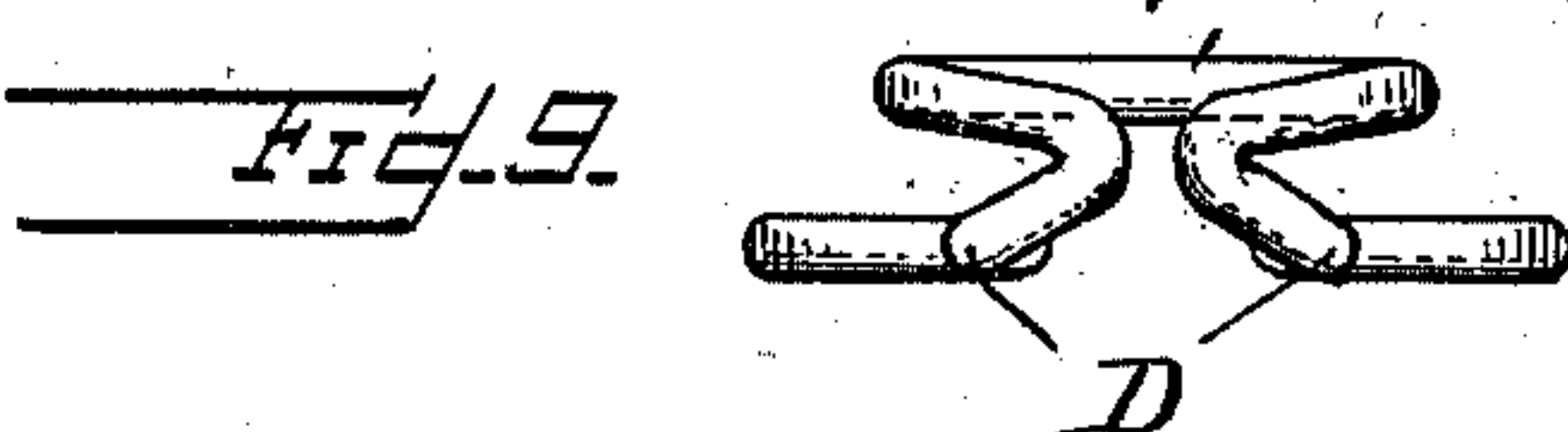
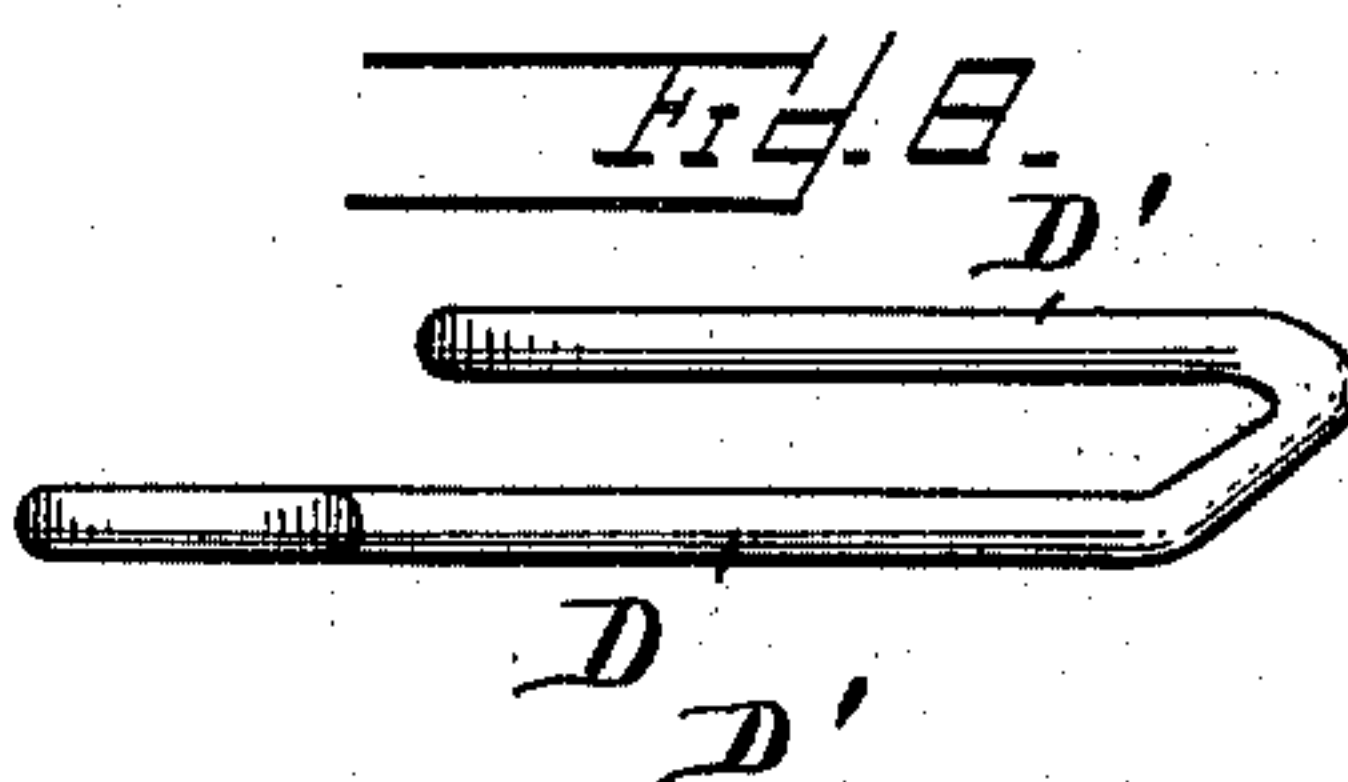
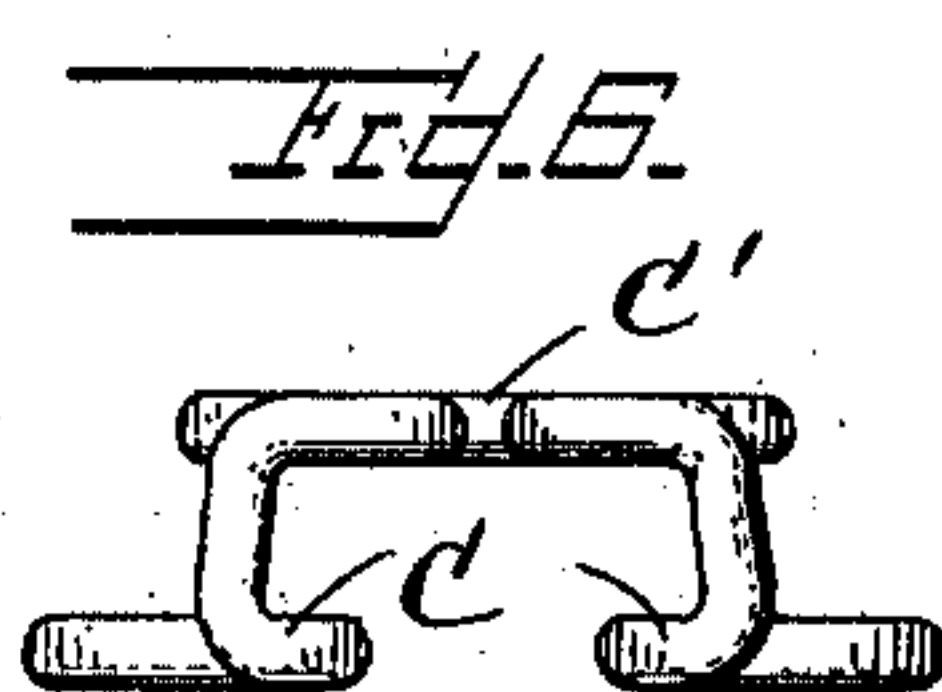
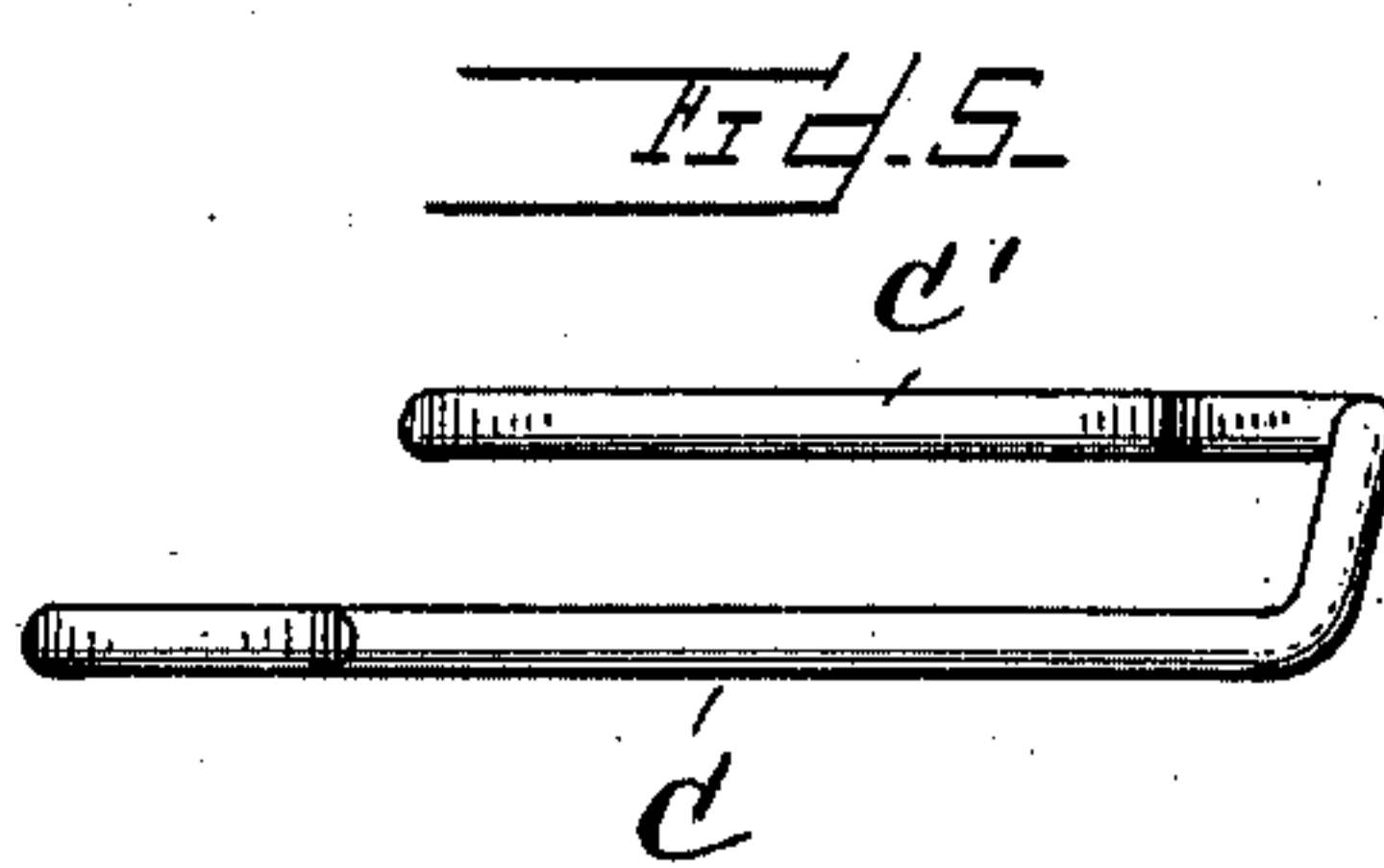
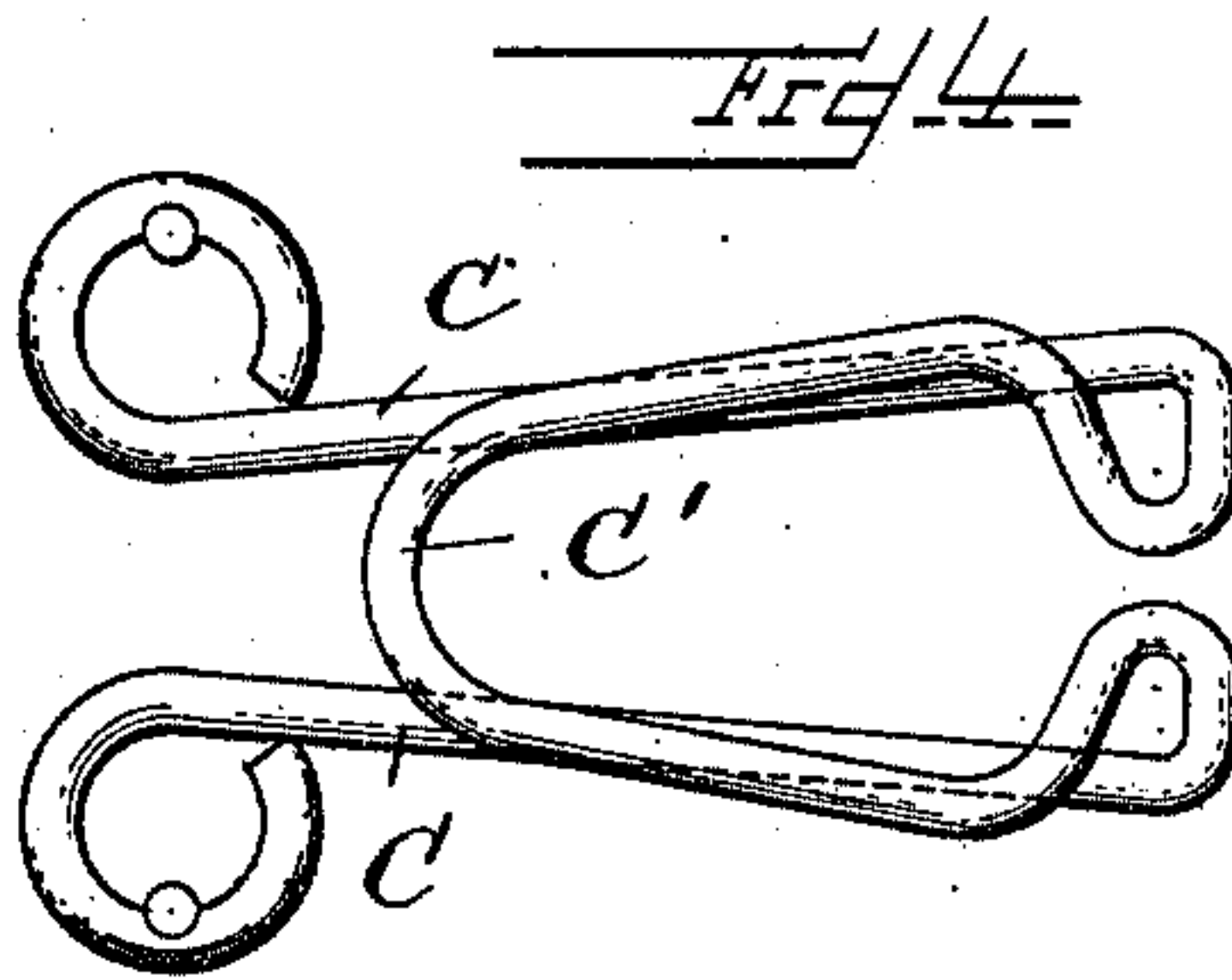
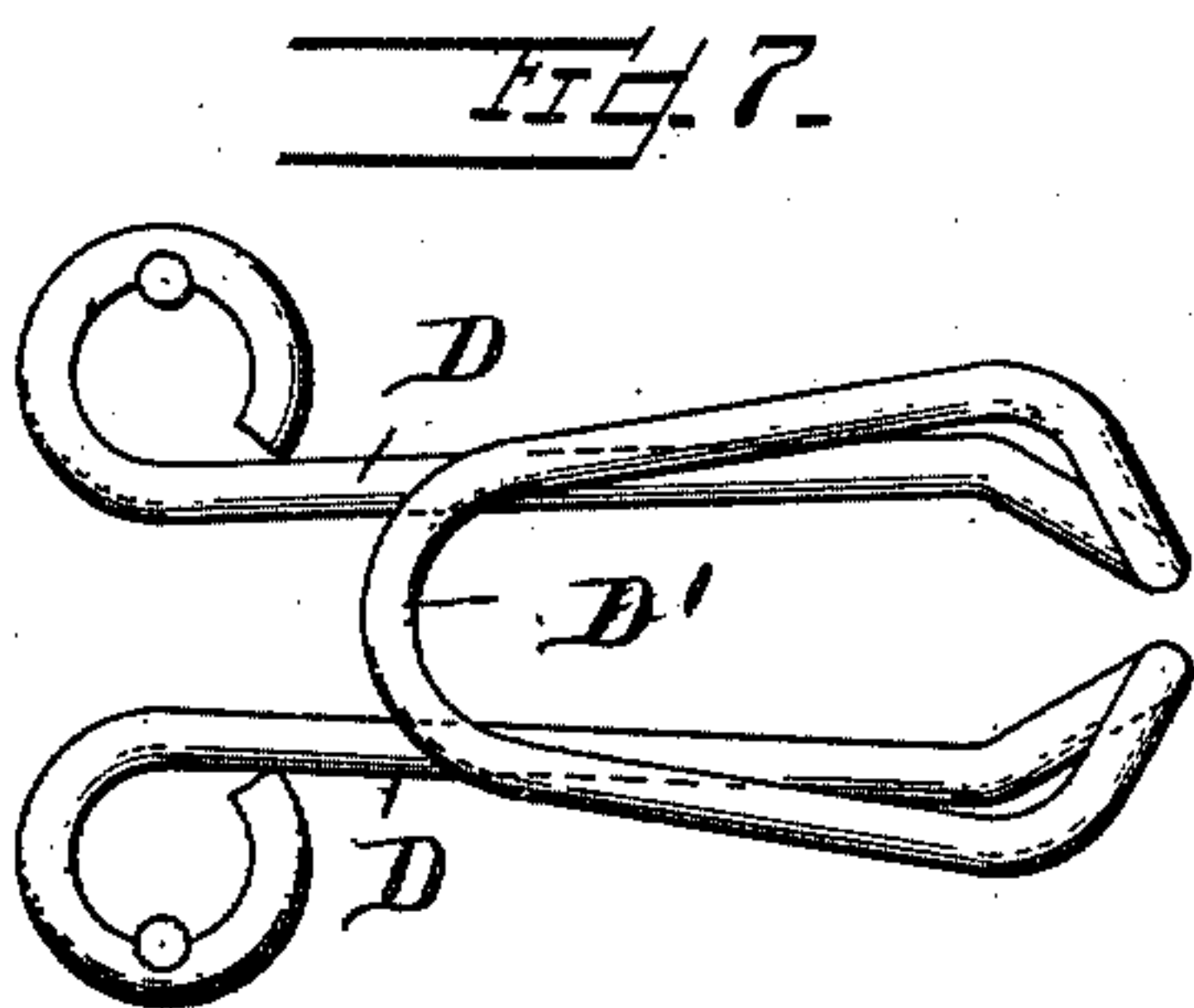
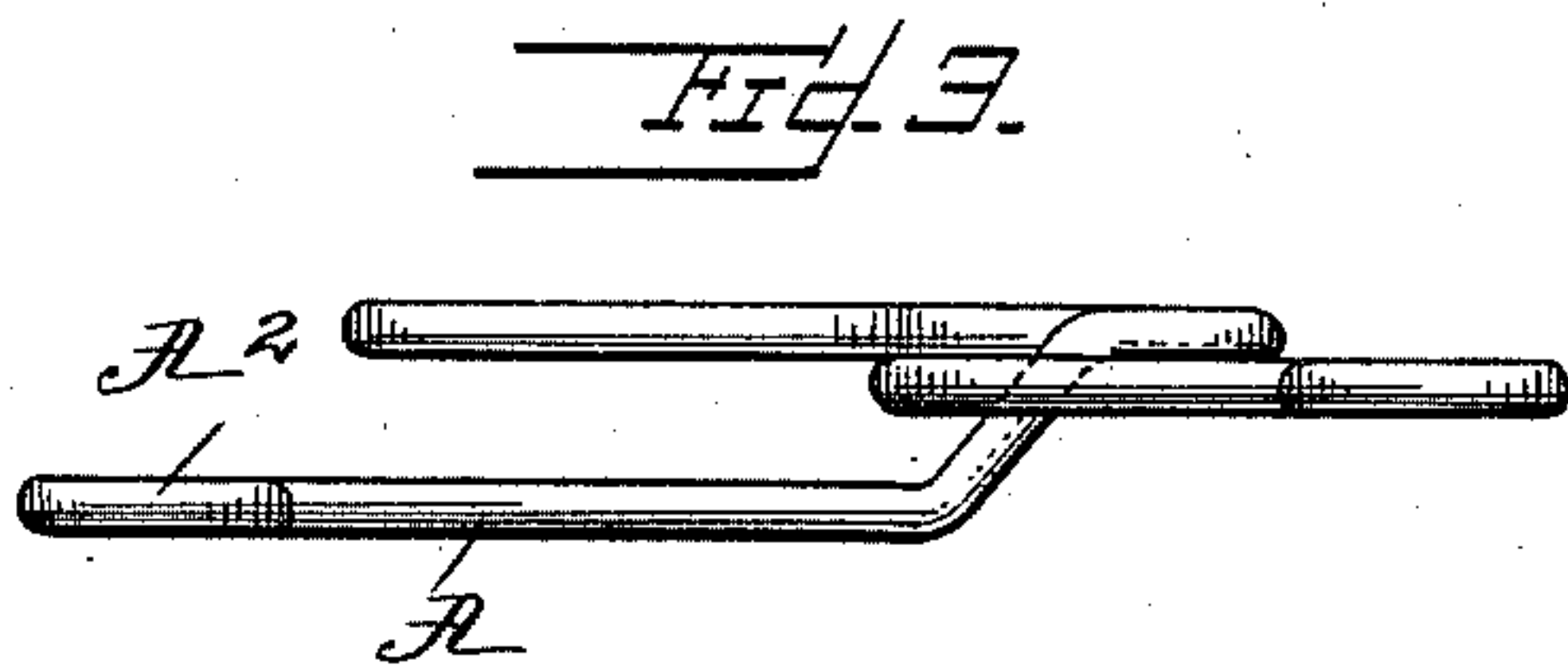
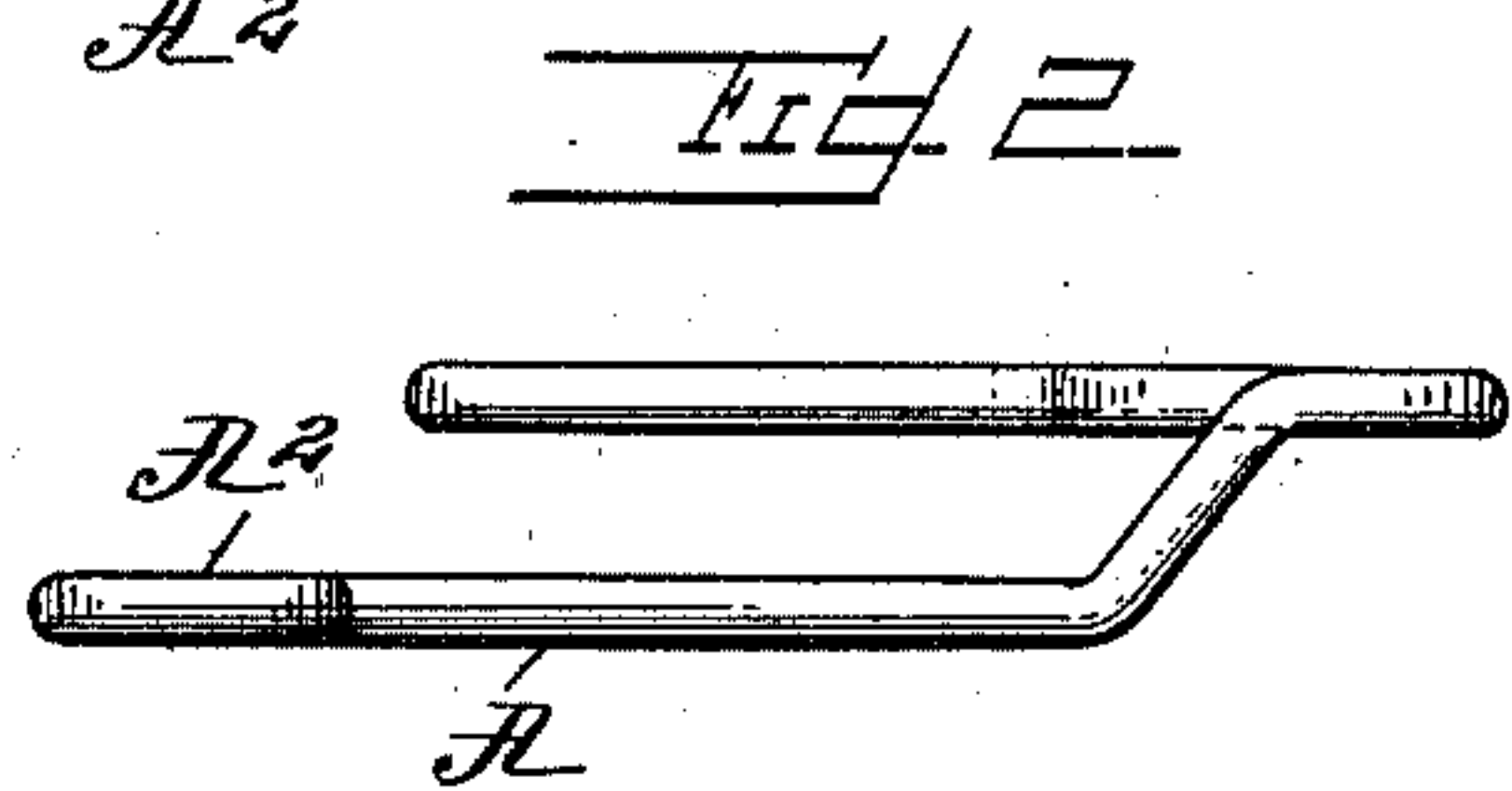
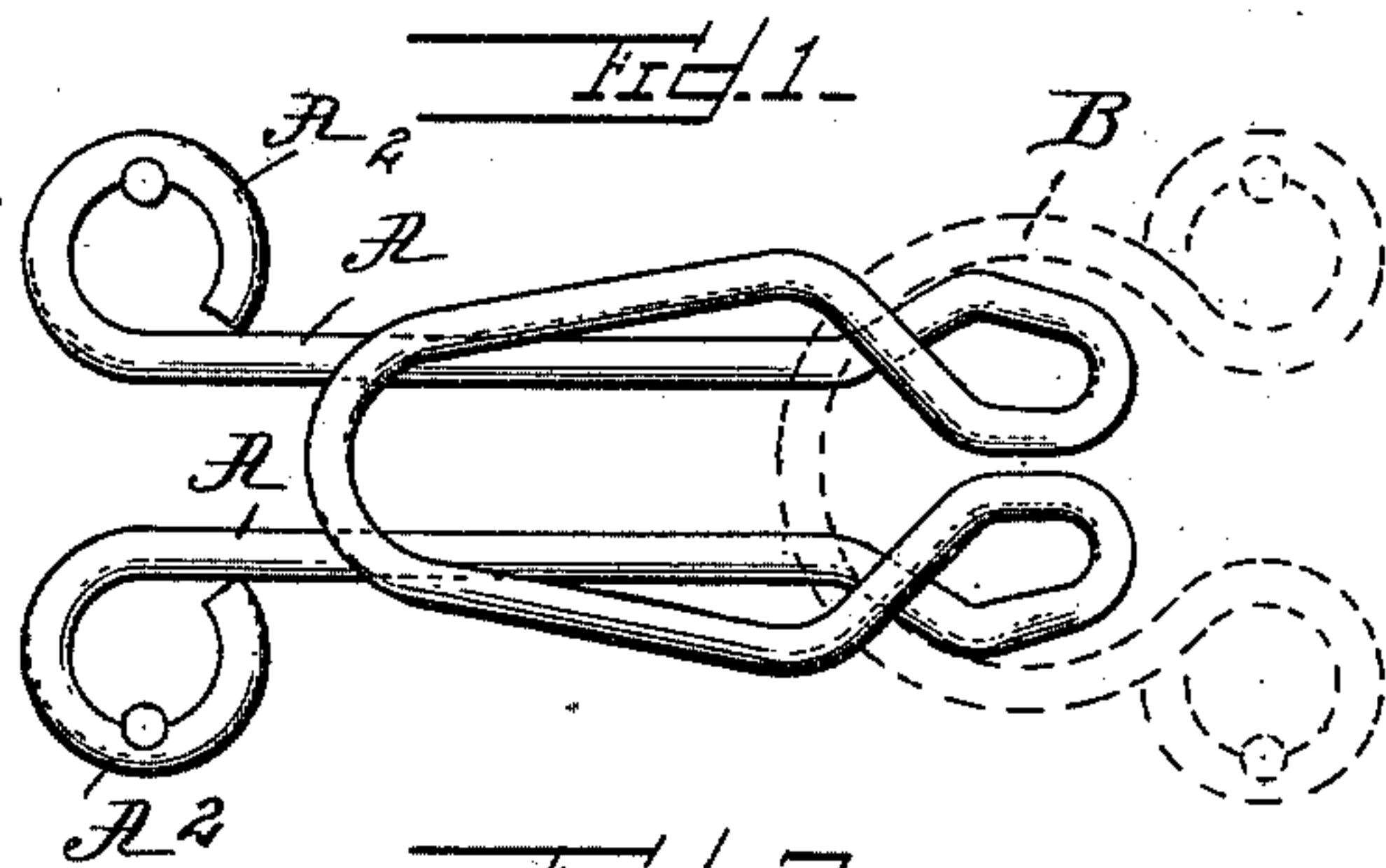
Patented Mar. 26, 1901.

T. J. BROWNING.

HOOKE AND EYE.

(Application filed Nov. 30, 1900.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

TILLIE J. BROWNING, OF FRANKFORD, PENNSYLVANIA.

HOOK AND EYE.

SPECIFICATION forming part of Letters Patent No. 670,701, dated March 26, 1901.

Application filed November 30, 1900. Serial No. 38,254. (No model.)

To all whom it may concern:

Be it known that I, TILLIE J. BROWNING, a citizen of the United States, residing at Frankford, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Hooks and Eyes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

One object of my invention is the production of a hook which shall be so constructed that in securing the same to the garment in the ordinary manner the fabric adjacent to the front end of the hook will be drawn up on a substantial level with the bill of the hook, thereby causing the hook, in effect, to rest in a sort of pocket or relatively-depressed portion of the fabric.

Another object of my invention is to prevent the eye of the hook when in use contacting with the thread.

Another object of the invention is to provide a spring-bill which will effectively aid in holding the eye in place.

Another object of the invention is to combine these advantages or a plurality of them in a unitary structure, thereby providing a hook which I believe has a marked superiority to those heretofore on the market.

One of the objections to the ordinary hook and eye is that when the parts are in engagement the front bend of the hook, or the connecting portion between the shank and the bill, is exposed to view. This produces an unsightly appearance, as it is obviously desirable that no part of the fastening devices on a garment should ever be exposed to view. In attempting to obviate this objection it is customary to attach the hook to the garment at some distance from the edge thereof. This minimizes, but does not eliminate, the objectionable feature, and therefore it is quite common to wholly conceal the hook by pinning the edges of the contiguous fabrics together by an ordinary pin after the hook and eye have been engaged. Another serious objection to the ordinary hook is that the eye when slipped in position contacts with the thread and by constant friction wears the thread away, causing the hook to be detached

from the garment at the eye-engaging end. Another objection to the ordinary construction is the tendency of the eye to slide back on the hook after it is in engagement, which objection is only partially obviated by the usual swell or hump between the shank members. By the use of my improvements the hook, after the front end is secured to the garment merely in the ordinary way, will draw up that portion of the fabric beyond its front end, so as to wholly conceal the front end of the hook from view, and at the same time the spring-bill, shaped substantially as hereinafter described, prevents a backward movement of the eye, while the eye is also confined from moving to the extreme front of the hook, where the securing-thread is located. This wholly eliminates the objectionable features above stated and also makes it quite feasible to secure the hook to the fabric close to the edge thereof. I accomplish the results stated, in the specific constructions shown, by bending the wires forming the shank upwardly and inwardly and thence backwardly to form the bill of the hook, that part of the inward bend at the front of the hook and contiguous to the front of the bill being located substantially above the level of the shank or substantially on a plane with the bill. In my preferred construction the upward and inward bend is formed by first bending the wires forming the shank upwardly to a substantial level with the bill of the hook, thence forwardly, and thence backwardly to form the bill. In the last-named construction the eye when in place will rest against the upward bends of the shanks. In all my illustrated constructions the bill is shown as formed by bending the wires extending beyond the shank outwardly and thence backwardly, the width of the bill being greatest at its junction with the outward bend and being at that point substantially equal to the diameter of the eye. When the thread is secured to the front of the hook, it will interlock the hook with the garment at this point in such a way as to conceal that end of the hook and will, besides, prevent any movement of the thread or hook with relation one to the other, while the eye will be confined from moving to the

front of the hook by its engagement with the upward bends of the shank when engaged therewith and will also be prevented from slipping back on the hook by its engagement with the spring-bill.

I will now describe the specific embodiment of my invention illustrated in the accompanying drawings, in which—

Figures 1 and 2 are respectively plan and side views of the preferred form of hook. Fig. 3 is a side view of the same with the eye in place. Figs. 4, 5, and 6 are respectively plan, side, and end views of a modified form. Figs. 7, 8, and 9 are respectively plan, side, and end views of another modified form.

In my preferred construction (shown in Figs. 1, 2, and 3) the wires A A, forming the shank, are shown as first bent upwardly and somewhat outwardly and then forwardly and inwardly. Then the wires are bent outwardly and then backwardly and somewhat inwardly, these bends forming a spring-bill. The widest part of the bill is shown as at the junction of the outward and rear bends thereof, and at this point the width of the bill is substantially equal to the diameter of the eye B, or, in other words, the external diameter of the bill at this point is no less than or slightly greater than the internal diameter of the eye. The hook may be made with the ordinary swell or hump or without it, the drawings not showing such swell or hump.

A² represents the usual loops at the rear of the hook.

The hook is secured to the garment at the front by passing the thread around the portion of the wire joining the shanks and the bill and also under or around the extreme front of the bill.

By this improved construction of hook I obviate many of the defects of the hooks now in common use. With the ordinary construction the thread is apt to slip back upon the shank, as it is secured to the front of the shank portion. In my improved hook this cannot occur, as I am enabled to pass the thread around the front and top of the hook and preferably around and under the front of the bill also, thus making slippage impossible. The goods in front of the hook being drawn by the stitches substantially above the level of the shank, the goods are thereby raised close to the level of the top of the hook, so that the hook is entirely hidden from view while in engagement with the eye, thus making an invisible hook. In the ordinary hook after the thread has been secured the eye when engaged with the hook is in contact with the thread and tends to fray or cut it. In the hook described the eye when engaged with the hook will not contact with the thread. In the ordinary hook no means are provided to prevent the eye from slipping backward from the front of the hook after it has engaged therewith, or else a swell or hump located between the shank portions is relied upon to hold the eye in engagement. This provision is, how-

ever, unsatisfactory, as it permits a certain range of movement between the swell and the front of the hook. In the hook described the eye is held stationary, as the junction between the outward and rear bends of the hook is immediately back of the desired engaging position of the eye. Independently of this advantage the necessity of providing an additional member between the shank portions is dispensed with, as the spring-bill performs all the functions of the ordinary swell or hump and in a more satisfactory manner.

The modifications shown in Figs. 4 to 6 and 7 to 9 differ from the preferred construction in that no special means are provided for preventing the eye from contacting with the thread which secures the front of the hook to the fabric, although the other specified advantages of the preferred construction are present.

In the modifications shown in Figs. 4, 5, and 6 the wires C C, forming the shank, are shown as first bent upwardly, and then inwardly toward each other, and then (to form the bill C') backwardly and outwardly away from each other, and then backwardly in converging lines, joining at the rear of the bill.

In the modification shown in Figs. 7, 8, and 9 the wires D D, forming the shank, are shown as first bent upwardly, inwardly, and forwardly toward each other, and then (to form the bill D') outwardly, and then backwardly in converging lines, joining at the rear of the bill. This construction provides a spring end at the front of the hook and holds the eye rigid when in engagement, or, in other words, prevents the eye from upsetting or its outer end from swinging down below the level of the hook.

I do not confine myself to the exact forms shown, as these may be varied without departing from the invention, nor do I confine myself to any particular construction of eye.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. As a new article of manufacture, a hook for garments, in which the wires forming the shank are, toward the front of the hook, bent upwardly, thence forwardly at an elevation substantially above that of the portion of the shank back of the upward bend, and thence backwardly to form the bill of the hook, substantially as described.

2. As a new article of manufacture, a hook for garments in which the wires forming the shanks are bent upwardly, thence forwardly and inwardly and thence backwardly to form the bill of the hook, substantially as described.

3. As a new article of manufacture, a hook for garments in which the wires forming the shank are bent upwardly to a substantial level with the bill of the hook and thence forwardly, inwardly and backwardly, the backward extension being prolonged to form the bill of the hook, thereby permitting the at-

tachment of the garment to the hook at a point on a substantial level with the bill and confining the eye from movement to the extreme front end of the hook, substantially as described.

4. As a new article of manufacture, a hook for garments, in which the wires forming the shank are, toward the front of the hook, bent upwardly, thence forwardly, and thence backwardly to form the bill of the hook, the plane of the forward and backward bends being substantially coincident.

5. As a new article of manufacture, a hook for garments in which the wires forming the shank are bent upwardly and inwardly toward each other, and thence, to form the bill, outwardly and backwardly, that part of the inward bend at the front of the hook and contiguous to the front of the bill being located substantially above the level of the shank, substantially as described.

6. As a new article of manufacture, a hook for garments in which the wires forming the shank are bent upwardly, forwardly and inwardly, and thence, to form the bill, outwardly and backwardly, substantially as described.

7. As a new article of manufacture, a hook for garments provided with a spring-bill consisting of a backward extension from the front of the hook, said backward extension consisting of the two side portions whose forward extremities are adjacent, and which, from their forward extremities extend outwardly

away from each other and thence backwardly in converging lines toward each other, substantially as described.

8. The combination, with an eye, of a hook in which the wires forming the shank are bent upwardly and inwardly toward each other, and thence, to form the bill, outwardly and backwardly away from each other, that part of the inward bend at the front of the hook and contiguous to the front of the bill being located substantially above the level of the shank, and the width of the bill, at the junction of its outward and rear bends, being substantially equal to the width of the eye, substantially as described.

9. The combination, with an eye, of a hook, provided with a spring-bill consisting of a backward extension from the front of the hook, said backward extension consisting of the two side portions whose forward extremities are adjacent, and which, from their forward extremities extend outwardly away from each other and thence backwardly in converging lines toward each other, and the width of the bill, at the junction of its outward and rear bends, being substantially equal to the width of the eye, substantially as described.

In testimony of which invention I have hereunto set my hand, at Philadelphia, Pennsylvania, on this 22d day of November, 1900.

TILLIE J. BROWNING.

Witnesses:

M. F. ELLIS,

M. M. HAMILTON.