No. 830,528. PATENTED SEPT. 11, 1906.

A. B. REID.

HOOK AND EYE.

APPLICATION FILED MAY 26, 1902.

Fig. 7.

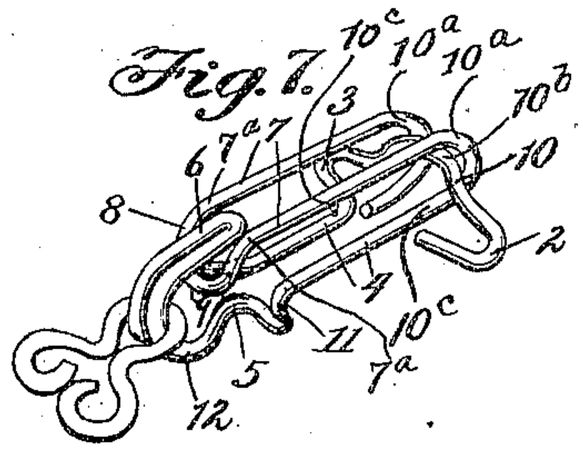


Fig. 8.

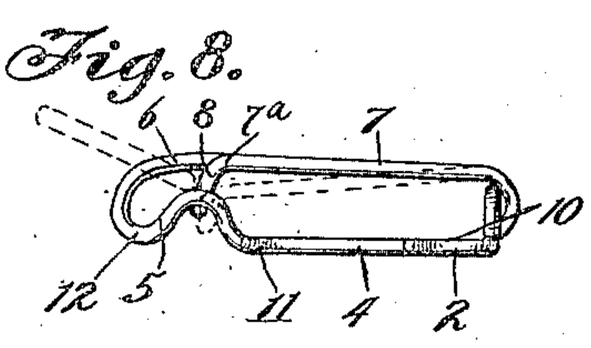


Fig. 9.

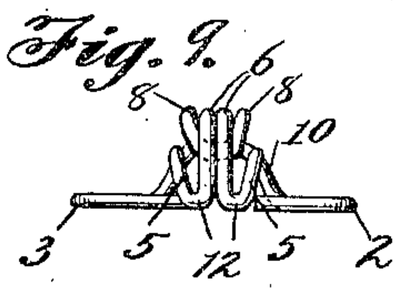


Fig. 4.

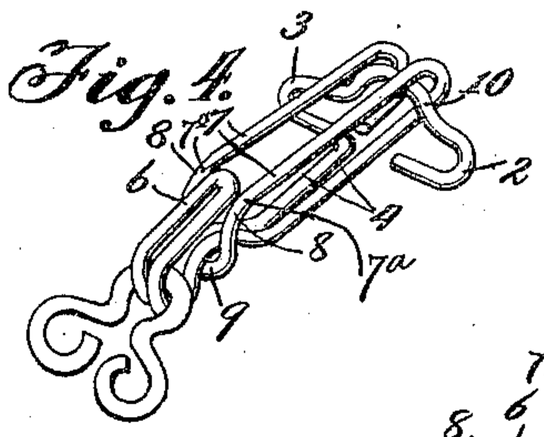


Fig. 6.

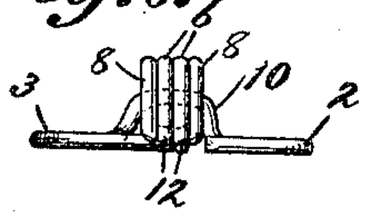


Fig. 5.

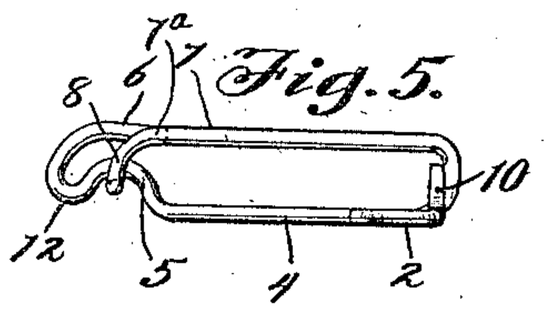


Fig. 1.

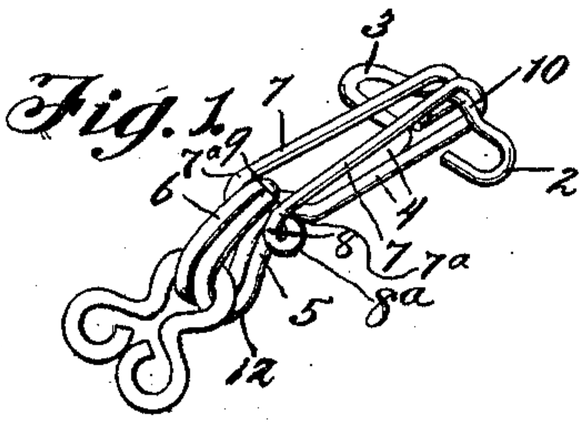


Fig. 3.

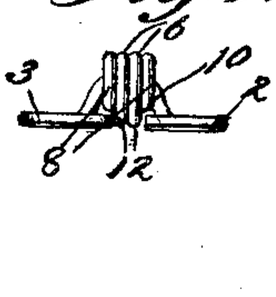
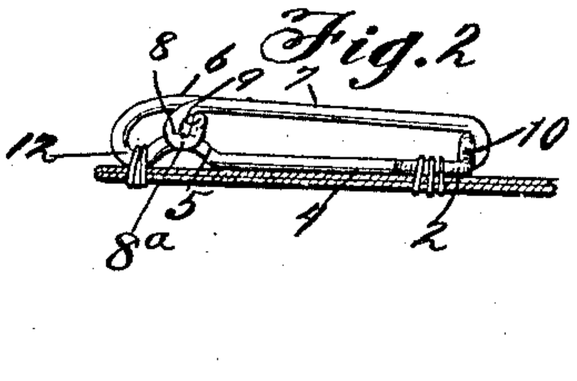


Fig. 2.



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UNITED STATES PATENT OFFICE.

ARTHUR B. REID, OF CHICAGO, ILLINOIS.

HOOK AND EYE.

No. 830,528. Specification of Letters Patent. Patented Sept. 11, 1906.

Application filed May 26, 1902. Serial No. 109,058.

To all whom it may concern:

Be it known that I, ARTHUR B. REID, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Hooks and Eyes, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to a new and improved form of hook and eye having a tongue to shield and protect the bill and in which a hump is provided, the hump and tongue being coacting, whereby the eye may be readily engaged and disengaged from the hook and is prevented from passing beneath the end of the tongue in any position thereof, and whereby the tongue is prevented from displacement and is limited in both its upward and downward movements.

The invention further consists in the novel features hereniafter described, and particularly pointed out in the appended claims.

In the accompanying drawings, in which the same reference characters designate like parts throughout the several views, Figures 1, 2, and 3 are respectively perspective, side, and end views of one form of the invention. Figs. 4, 5, and 6 are similar views of a different form, and Figs. 7, 8, and 9 are like views of still another form.

Referring to Figs. 1, 2, and 3, the hook is preferably formed of a single piece of wire bent as shown and having the eyes 2 and 3 at the rear end and the shank formed of the two lengths 4 4 side by side, a hump 5 being formed at the forward portion of the shank and beneath the tip of the bill and the bill 6 being formed from a reversely-bent intermediate portion of wire. The resilient tongue 7 extends forward from the rear portion of the hook in two members spaced a slight distance apart at their forward ends, so as to pass upon the opposite sides of the tip of the bill 6 and form guards 7^a to prevent extraneous objects from engaging the bill. The forward ends 8 of the members of the tongue are curved downwardly, as shown more clearly in Fig. 2, and are then curved backwardly to form a reverse loop or curve 8^a, and the intermediate portion 9 extends transversely across beneath the tip of the bill. This transverse portion 9 limits the upper movement of the tongue by striking beneath the point of the bill and also limits the downward movement by striking against the hump 5, while the ends 8 pass at the sides of the hump and are guided thereby at all times, so that the forward end of the tongue cannot be laterally displaced. The incline given to the forward end of the tongue coacts with the forward incline of the hump, as shown in Fig. 2, in such manner that the eye cannot pass beneath the end of the tongue. In detaching the eye from the hook it will be noted that as the same is moved to disengage the same from the hook the eye will be moved into engagement with the downwardly-extending portion 8 and depress the same so that the eye may freely pass from beneath the bill of the hook. At the same time when the tongue is in normal position, as shown in Fig. 2, whether the eye is connected with the tongue or not the point of the bill is shielded and protected in such manner that thread or other extraneous matter cannot catch thereon. The eyes 2 and 3 are connected by a portion 10 of the wire which extends transversely to the shank. The rear end 10^a of the tongue is hooked upon this transverse portion of the wire, and said transverse portion of the wire is bowed, as at 10^b, so that the lower portion 10^c of the shank which extends beneath the same will lie in the same plane as the lower face of the shank. The hook may be secured to the fabric, as shown in Fig. 2, by sewing, at 12, in front of the hump at the forward end and at the eyes at the rearward end.

In the form shown in Figs. 4, 5, and 6 the same general construction is involved, except that the transverse portion 9 of the tongue 7 extends beneath the hump 5 of the hook and is thereby prevented from rising too high. Sufficient room is provided by the hump to permit the tongue to be depressed sufficiently to admit the eye into the bill without injury to the fabric. In this form of the invention the hump guides the free end of the tongue in its vibration as above and prevents its displacement, while when in normal position the point of the bill is fully shielded and protected, as shown in Figs. 5 and 6. The same mode of construction is involved as previously, and the hook may be secured to the cloth as before.

Figs. 7, 8, and 9 show a form of the invention embodying a slightly different arrangement and in which the forward end 8 of the

tongue 7 is depressed between the members forming the hump 5. In this form the shank of the hook is slightly different, in that the longitudinal portions 4 do not lie closely side by side, but are spread apart. The hump 5 is connected with the said portions 4 of the shank by means of a transverse bend 11, while the bill is similarly connected therewith by a tapering transverse portion 12, so that the bill members lie side by side. The point of the bill is shielded and protected by the tongue in its normal position, as shown in Fig. 8, while when depressed the side portions of the hump serve to guide and prevent the displacement of the free end of the tongue and finally to limit its downward movement. The inclined portion of the forward end of the tongue coacts with the hump, as shown in Fig. 9, to permit the eye to be readily withdrawn from the hook by a simple push on the eye without otherwise depressing the said tongue. The eye is also prevented from passing beneath the tongue by means of the forward portion of the hump. In this case also the downwardly-turned end of the tongue is tapered sufficiently to strike the sides or edges of the bill in rising to prevent the same rising higher than shown in Fig. 8. This tapered portion therefore constitutes a transverse portion of the tongue to limit its movement in both directions.

By the structure of my invention I am enabled to procure a number of advantages not heretofore accomplished. The bill of the hook is thoroughly protected and shielded by the flexible tongue, and the tongue itself is protected from displacement and disarrangement. The hump insures the proper position of the thread at the forward end of the hook-body. It guides the tongue and prevents lateral displacement thereof. It coacts with the end of the tongue to prevent the eye from getting beneath the tongue, and in the preferred form, such as is shown in Figs. 1, 2, 3, the hump limits the downward movement of the tongue, the abnormal upward movement of the tongue being prevented by the bill. The eye may thus be inserted by a pull and withdrawn by a push. One hand will grasp the body of the hook or the fabric in proximity thereto and the other hand will grasp the eye. By pressing the eye upon the tongue and exerting a slight pull the eye is attached. By pushing the eye back against the tongue the eye rides up on the downwardly-extending end of the tongue to depress the tongue, and the eye is disengaged from the bill. The flexible tongue need never be depressed by the hand. The pressure exerted by the eye is always sufficient to hook and unhook the eye.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A hook formed from a continuous piece of material and provided with suitable parts for securing the same in position, a bill, a depressible tongue having guards upon opposite sides of the end of the bill to prevent extraneous objects from engaging the bill, the shank of the hook being provided with a hump, said hump coöperating with the tongue to prevent the eye from passing beneath the tongue and to aid the eye in depressing the tongue as it is detached from the bill.

2. A hook formed from a continuous piece of material and provided with suitable parts for securing the same in position, a bill, a depressible tongue having guards at its forward end and upon opposite sides of the end of the bill to prevent extraneous objects from engaging the bill, the shank of the hook being provided with a hump, said tongue having a downwardly-extending part which coöperates with said hump to prevent the eye from passing beneath the tongue and to aid the eye in depressing the tongue as it is detached from the bill.

3. A hook formed from a continuous piece of material and provided with parts for securing the same in position, a bill, a depressible tongue having guards at its forward end and upon opposite sides of the end of the bill to prevent extraneous objects from engaging the bill, the shank of the hook being provided with a hump on the side toward the bill, said tongue having a downwardly-turned end which coöperates with the hump to prevent the eye from passing beneath the tongue and to aid the eye in depressing the tongue as it is detached from the bill.

4. A hook provided with a shank, suitable parts for securing the same in position, a bill, a depressible tongue having suitable parts upon opposite sides of the end of the bill to prevent extraneous objects from engaging the bill, said tongue and shank having interacting parts which guide the tongue when depressed.

5. A hook provided with a shank, suitable parts for securing the same in position, a bill, a depressible tongue having suitable parts upon opposite sides of the end of the bill to prevent extraneous objects from engaging the same, said tongue and shank having interacting parts which guide the tongue when depressed and prevent the eye from passing beneath the tongue, said interacting part of the tongue being adapted when depressed by the eye to separate the tongue from the bill.

6. A hook formed from a continuous piece of material and provided with suitable parts for securing the same in position, a bill, a tongue adapted to be depressed by the eye and having parts coöperating with the bill to guide extraneous objects away from and over the bill to prevent their catching upon the point thereof and thereby to shield and protect the bill, the shank of the hook being provided with a hump on the side toward the

bill, the said tongue having downwardly-turned parts the side edges of which are adapted to engage the hump to prevent lateral displacement of the tongue, substantially as described.

7. A hook formed from a continuous piece of material and provided with suitable parts for securing the same to the fabric, a bill, a tongue adapted to be depressed by the eye and to shield and protect the bill, the shank of the hook being provided with a hump, said tongue having a pair of downwardly-turned parts passing outside of the hump and engaging the edges thereof to guide the tongue and prevent lateral displacement thereof, substantially as described.

8. A hook formed from a continuous piece of material and provided with suitable parts for securing the same to the fabric, a bill, a tongue to shield and protect the bill, the shank of the hook being provided with a hump, said hump and tongue being interacting, and the tongue being provided with a transverse portion to prevent the same from rising too high, substantially as described.

9. A hook formed from a continuous piece of material and provided with suitable parts for securing the same to the fabric, a bill, a tongue to shield and protect the bill, the shank of the hook being provided with a hump, the forward end of the tongue being downwardly inclined and coöperating with said hump, said tongue having a transverse portion engaging beneath the bill to prevent the same from rising too high, substantially as described.

10. A hook formed from a continuous piece of material and provided with suitable parts for securing the same to the fabric, a bill, a tongue to shield and protect the bill, the shank of the hook being provided with a hump and the tongue having a downwardly-inclined end coöperating with the hump and having a transverse portion extending above the shank of the hook to prevent depressing the same too far, substantially as described.

11. A hook formed from a continuous piece of material and provided with suitable parts for securing the same to the fabric, a bill, a tongue to shield and protect the bill, the shank of the hook being provided with a hump, the forward end of the tongue being inclined downwardly to coöperate with the hump and having a transverse portion passing between the bill and shank to limit the movement of the tongue in both upward and downward directions, substantially as described.

12. A hook formed from a continuous piece of material and provided with suitable parts for securing the same to the fabric, a bill, a tongue to shield and protect the bill, the shank of the hook being provided with a hump, the forward end of the tongue being inclined downwardly to coöperate with the hump and having a transverse portion passing above the shank to limit the downward movement of the tongue, substantially as described.

13. A hook formed from a continuous piece of material and provided with suitable parts for securing the same to the fabric, a bill, a tongue to shield and protect the bill, the shank of the hook being provided with a hump, the forward end of the tongue having a transverse portion passing between the bill and the hump to limit the movement of the tongue in both directions, substantially as described.

14. A hook formed from a continuous piece of material and provided with suitable parts for securing the same to the fabric, a bill, a depressible tongue having guards upon opposite sides of the end of the bill to prevent extraneous objects from engaging the bill, the shank of the hook being provided with a hump, the forward end of the tongue being inclined downwardly to coöperate with said hump in preventing the passage of the eye beneath the tongue and to aid the eye in depressing the tongue as it is detached from the bill.

15. A hook formed from a continuous piece of material and provided with means to secure the same to the fabric, a bill, a tongue to shield and protect the bill, the shank of the hook being provided with a hump beneath the bill, and the tongue being formed of two lengths of wire each having a reverse curve at its forward end, said curves being at the sides of the hump and coöperating therewith, substantially as described.

16. In a hook and eye, a hook formed from a continuous piece of material and provided with means to secure the same to the fabric, a bill, a tongue to shield and protect the bill, the shank of the hook being provided with a hump beneath the bill, and the tongue being formed of two lengths of wire each having a reverse curve at its forward end and a transverse portion joining them, said curves passing at the sides of the hump so as to be guided thereby and coöperating to prevent the passage of the eye beneath the tongue, said transverse portion striking the hump in its downward movement and the bill in its upward movement to limit the vibration of the tongue, substantially as described.

17. A hook formed from a continuous piece of material and having a coöperating bill and tongue at the front end, the latter adapted to be depressed by the eye and having parts adapted to prevent extraneous objects from catching upon the point of the bill and guide them away from and over the same, and a transverse portion at the rear end of the hook, said tongue at its rear end being hooked over the said transverse portion, substantially as described.

18. A hook formed from a continuous piece of material and having a coöperating bill and tongue at the front end, the latter adapted to be depressed by the eye and having parts adapted to prevent extraneous objects from catching upon the point of the bill and guide them away from and over the same, and a bowed-up transverse portion at the rear end of the shank, the rear ends of the tongue members being bent around and beneath said bowed-up portion, substantially as described.

19. A hook formed from a continuous piece of material and having a coöperating bill and a two-part tongue at the front end, and a shank composed of two longitudinal portions lying side by side in the same plane, one of said shank portions at its rear end being bent outwardly to form an eye on one side of the shank and thence transversely across to form an eye on the other side of the shank, said transverse portion being bowed up out of the plane of the shank, the other shank portion extending rearwardly beneath said bowed-up portion and thence forwardly over the same to the forward end of the hook and forming one member of the two-part tongue, the other or return member of said tongue being bent at its rear end around beneath the said bowed-up portion, whereby no objectionable parts protrude beneath the lower face of the hook and a strong and durable structure is obtained, substantially as described.

20. A hook formed of a continuous piece of wire having an interacting bill and tongue, the latter consisting of two members adapted to extend on opposite sides of the bill to shield and protect the same, the forward ends of said members being reversely curved or looped and joined by a transverse member, substantially as described.

21. A hook comprising an interacting bill and tongue, the latter formed with two members to receive and shield the bill, the forward ends of said members being reversely curved or looped and joined by a transverse member, and a hump formed upon the shank and coöperating with said curved or looped portion, substantially as described.

22. A hook formed from a continuous piece of material and provided with a bill, a tongue having two members adapted to extend on opposite sides of the tip of said bill to shield and protect the same, the ends of said members being reversely curved or looped and joined by a transverse member, the shank of the hook being provided with an upwardly-extending portion which coöperates with the curved or looped end of said tongue to prevent the eye passing beneath the tongue, substantially as described.

23. A hook formed from a continuous piece of material and provided wth suitable parts for securing the same to the fabric, a bill, a tongue adapted to be depressed by the eye and arranged to shield and protect the bill, the shank of the hook being provided with a hump, said tongue having a pair of downwardly-turned parts passing outside the hump and coöperating therewith to prevent the eye passing beneath the tongue substantially as described.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

ARTHUR B. REID.

Witnesses:

W. CLYDE JONES,

ROBERT LEWIS AMES.