

No. 620,396.

Patented Feb. 28, 1899.

J. WILSON.
SNAP HOOK.

(Application filed Apr. 16, 1897.)

(Model.)

Fig. 1.

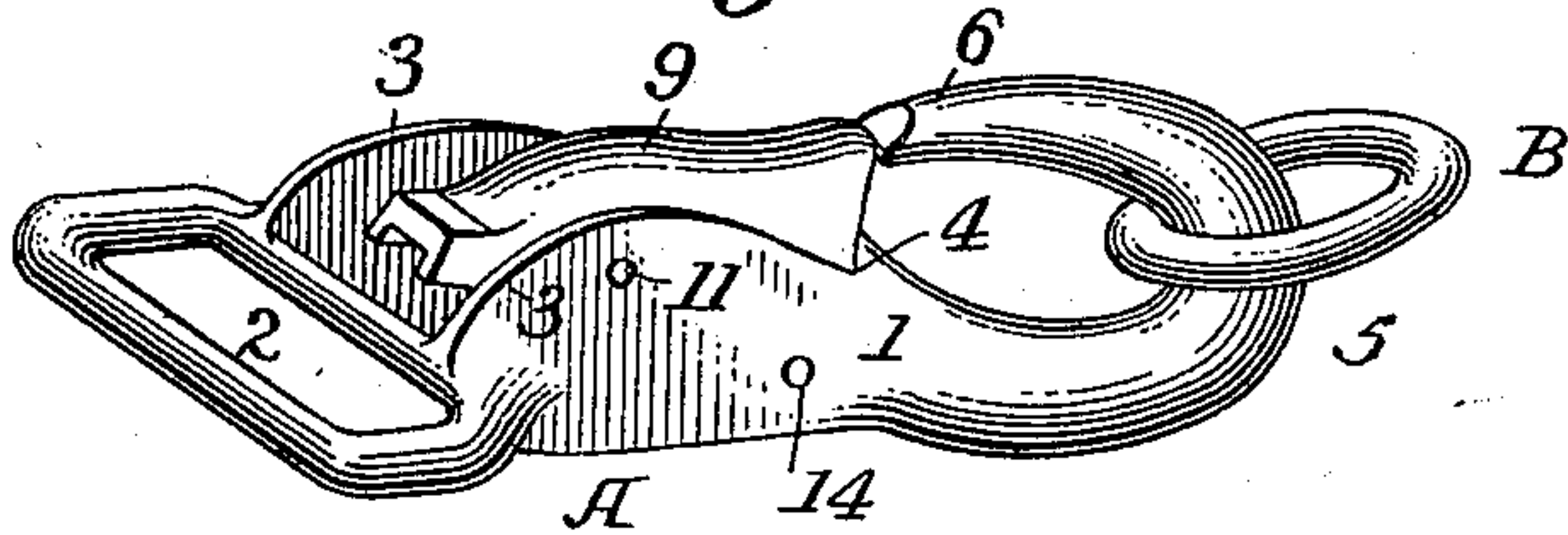


Fig. 2.

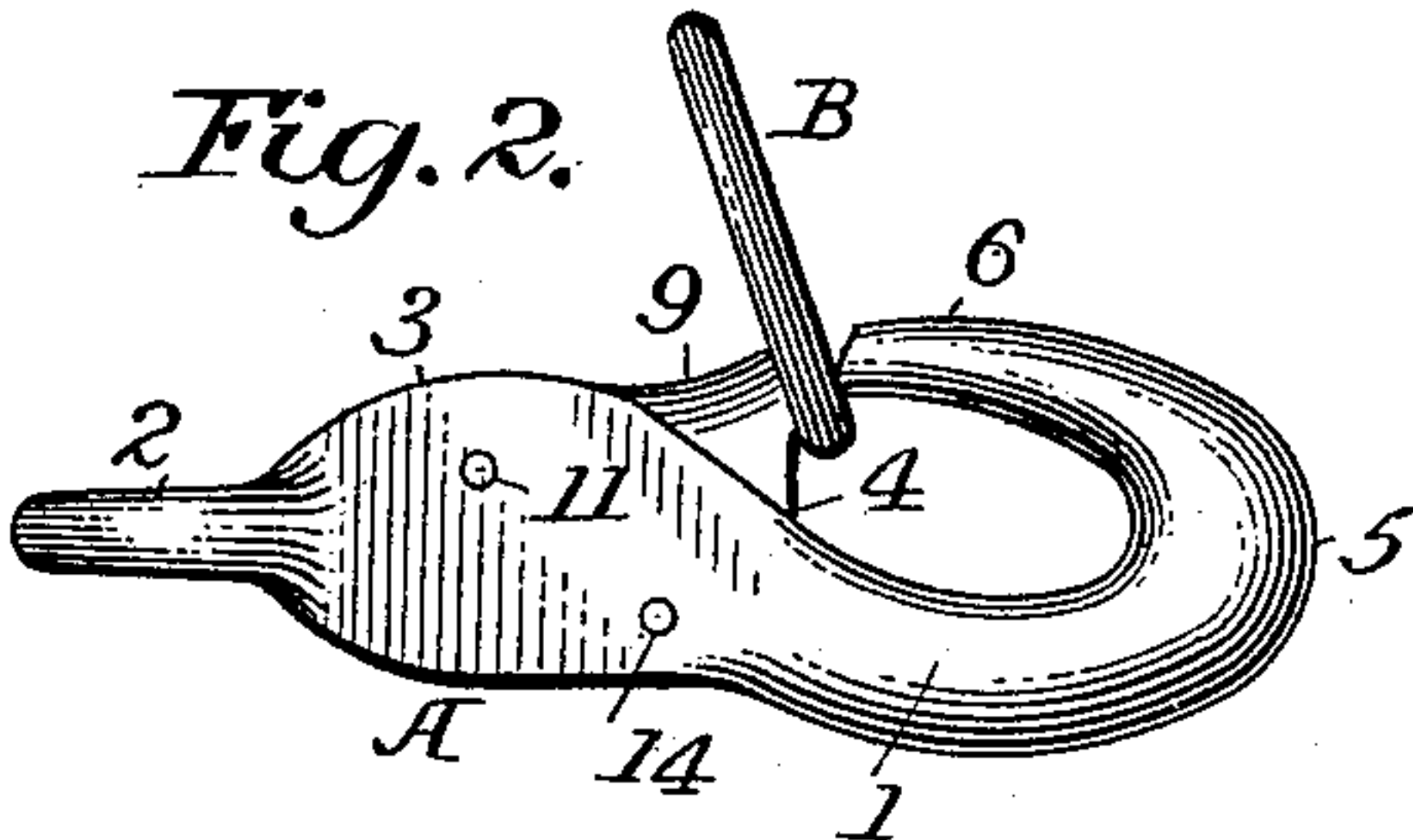


Fig. 3.

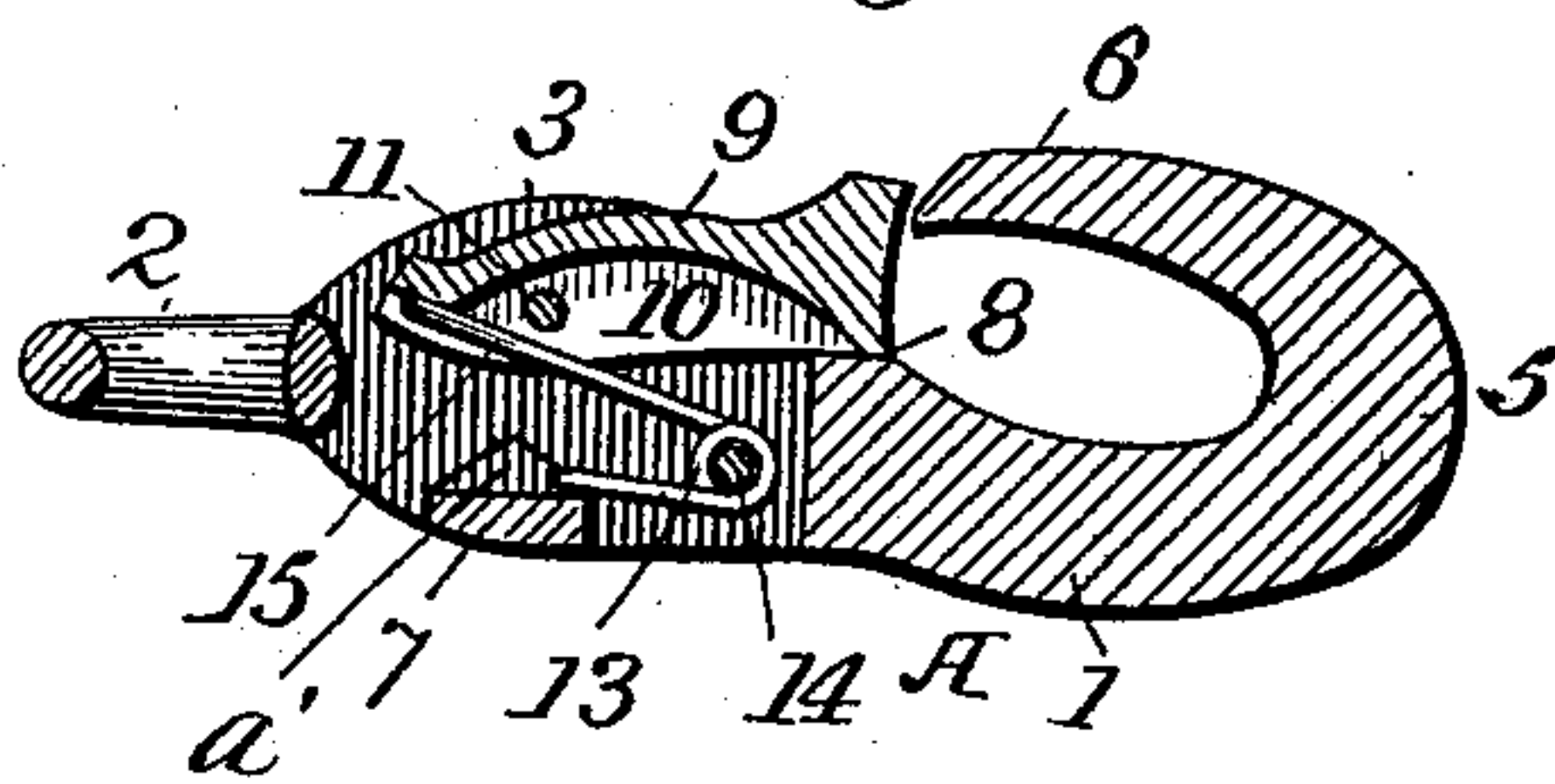


Fig. 4.

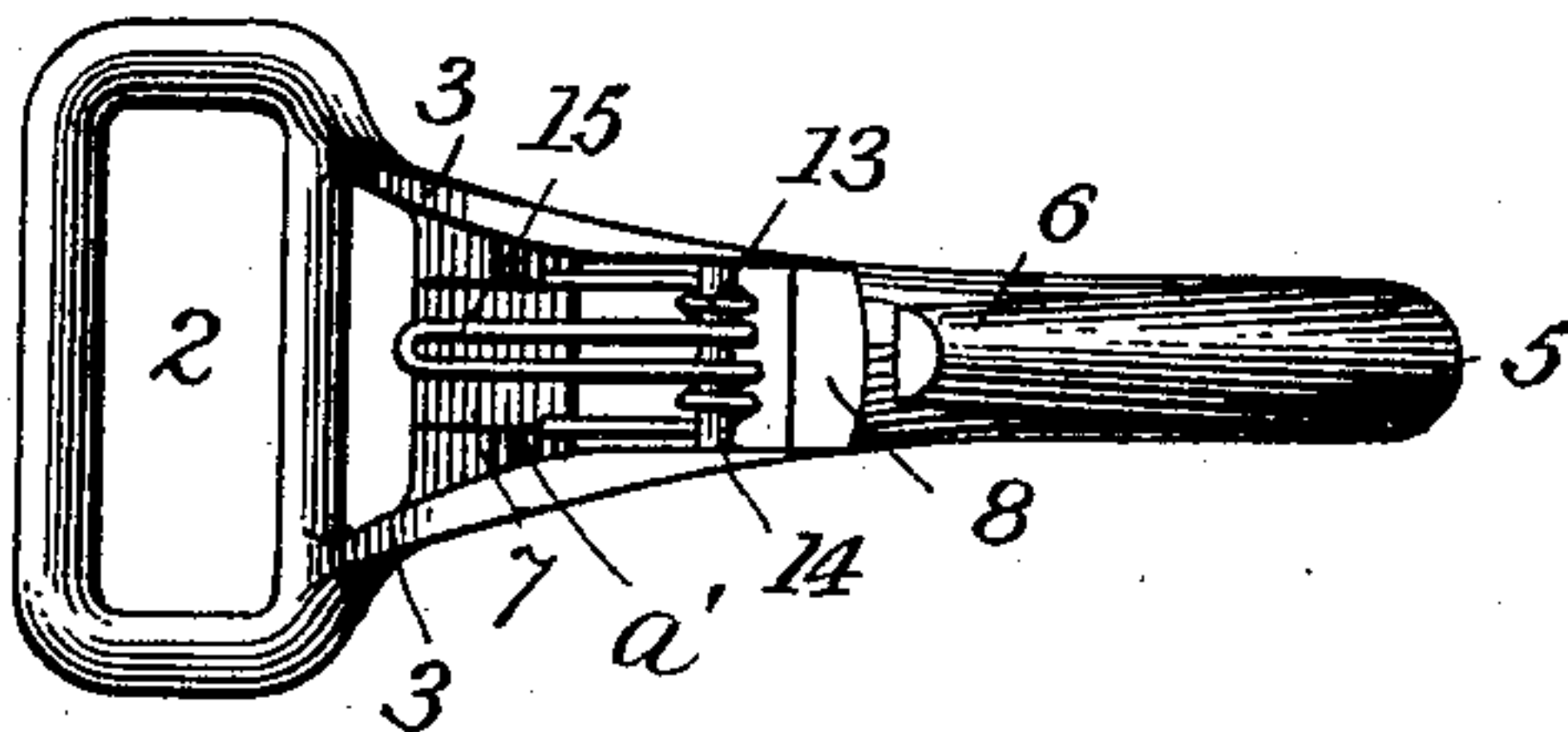
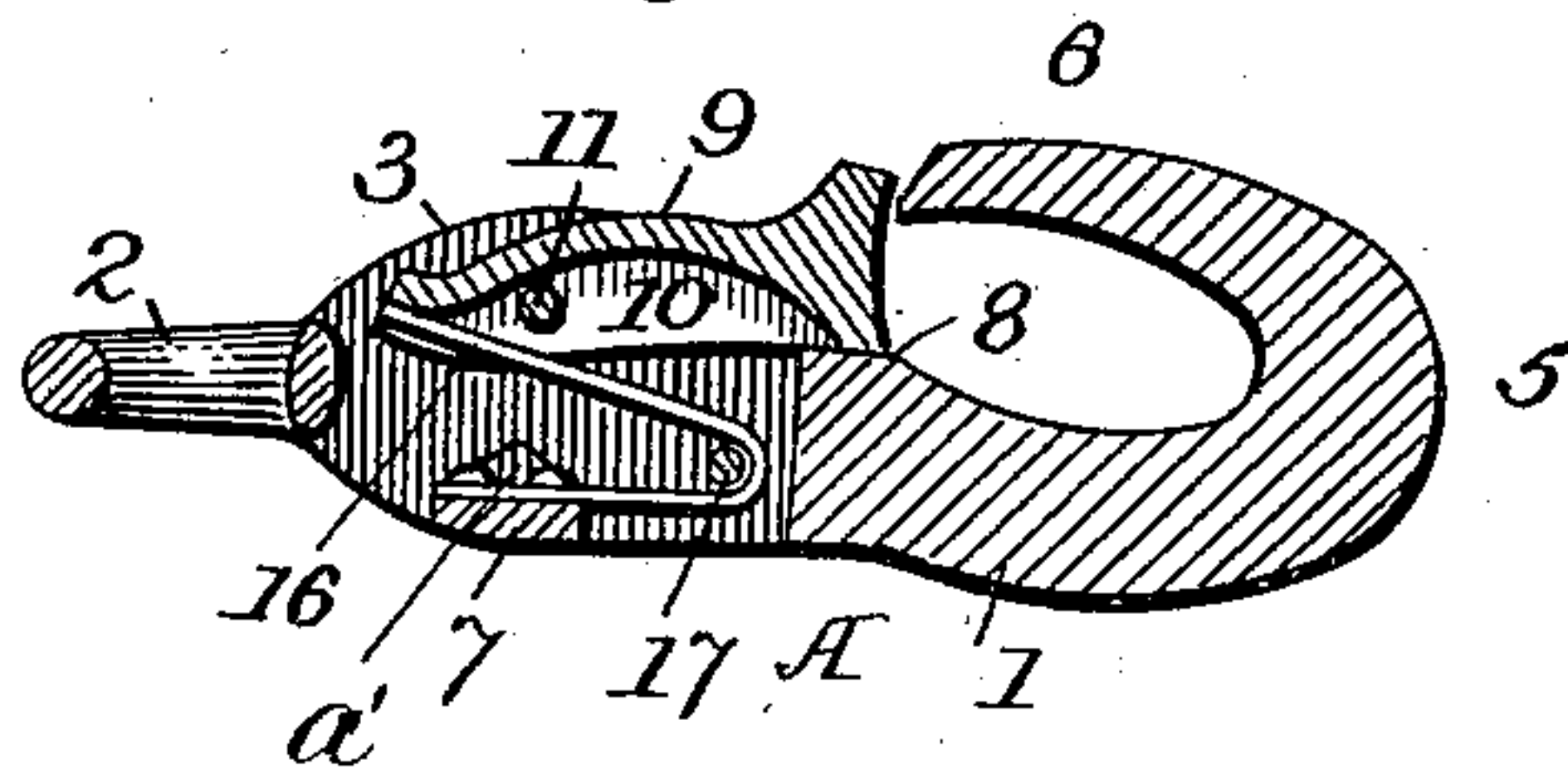


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

JEFFERSON WILSON, OF BEAVER FALLS, PENNSYLVANIA.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 620,396, dated February 28, 1899.

Application filed April 16, 1897. Serial No. 632,483. (Model.)

To all whom it may concern:

Be it known that I, JEFFERSON WILSON, a citizen of the United States, residing at Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Snap-Hooks, of which the following is a specification.

This invention relates to certain new and useful improvements in snap-hooks; and it consists, substantially, in such features of construction, arrangement, and combinations of parts as will hereinafter be more particularly described.

The invention has reference more particularly to that class of snap-hooks in which the latch-piece opens outward relative to the bill of the hook and is held in its closed relation with the hook by means of a cam, a spring, or other equivalent device. The great objection to this class of snap-hooks has been the insecurity thereof, due to the fact that unless special means were provided to prevent it the latch-piece would very often become accidentally opened or released by a mere outward pull upon the ring or other device attached to the hook.

The object of the present invention is to provide a snap-hook of the character mentioned in which the latch-piece is prevented from being opened or released accidentally and can only be opened or released by manipulating the same in a particular way.

A further object of the invention is to increase the strength and security of the hook and also to simplify the construction and cheapen the cost of manufacture.

These and other objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of a snap-hook constructed and arranged in accordance with my invention. Fig. 2 is a side view thereof, and Fig. 3 is a longitudinal sectional view. Fig. 4 is a top or plan view with the latch-piece removed. Fig. 5 is a view in detail, representing a modification in the form of a spring which actuates the latch-piece.

My invention is capable of a great many different embodiments in use, and while I have herein represented a certain preferred form it is to be understood that I do not limit myself thereto in detail, since various imma-

terial changes could be made therein and still be within the scope of my invention.

The principal feature of my improvements consists in so constructing and disposing the latch-piece relative to the bill of the hook that to pull outward upon the bridle-ring or other attached device will have no effect or tendency whatever to displace or release the latch-piece. The end of the latch-piece is allowed to pass beyond the free end of the bill, coming to its final position upon a stop-bearing formed upon the shank. In this movement of the latch-piece all parts of its end move so close to the end of the bill that a closure is made as soon as the first portion of the latch-piece comes to a position adjacent to the end of the bill, but the latch-piece continues its movement until coming to rest on the stop-bearing, leaving no surface exposed which can be acted upon by forces within the bill to open the latch-piece. The stop-bearing is so located upon the shank with respect to the pressure of the latch-piece against it and the location of the latch-pivot in case the latch is pivoted in the shank that certain forces within the bill, acting on the latch end, will tend rather to force the end of the latch more firmly against the bearing than to move it toward its open position.

In the accompanying drawings, A represents my improved snap-hook as a whole, and B designates the harness-ring or other device, which is attached or applied to the hook to effect a fastening—as, for instance, between a hitching-strap and a post. The body of the hook is represented at 1, and, as usual, an eye 2 is provided for the permanent attachment of the hook to a strap or the like. The said hook is formed or constructed with the cheeks or side pieces 3 3, which extend lengthwise of the hook from the point of intersection of the eye 2 therewith to the point 4, which is substantially intermediate of the eye and the curved portion 5 of the bill of the hook, which is indicated at 6. The cheeks or side pieces 3 3 are connected at the bottom by means of a connecting-bar 7, and intermediate or between said cheeks at their inner ends the body of the hook is formed with a rest or bearing 8, on which the inner end of the latch-piece 9 is supported when the said latch-piece is closed or locked. The bill of the hook ter-

minates, substantially, in line with said rest or bearing 8, and it will be observed that the inner end of the latch-piece is so supported that it is impossible to move the ring B beneath any portion of said piece, and consequently there is no danger of the said ring or other device becoming accidentally released or disconnected. It will be also observed that at the rear end of the hook the cheek-pieces 3 3 diverge from each other in such manner that the thumb or finger may be placed between the same to depress the outer end of the latch-piece, and it is in this way alone that the ring B or other attached device can be disconnected.

The latch-piece 9 could be supported in position between the cheeks in different ways, and it could also be constructed in different ways; but, preferably, I recess the same on its under side at 10, and as a support therefor I mount the same upon a rivet or pin 11, passing through the said cheeks or side pieces, as shown. In this way the said latch-piece rests snugly in place, with its inner end on the bearing 8, and normally it is held in this position by means of a spring 12, acting thereon from beneath. This spring could be constructed and disposed in position in various ways; but, as shown in Figs. 3 and 4, the said spring is formed into several coils 13, passing around a supporting-pin 14, the ends thereof bearing against the connecting-strip 7 and the central portion of the spring being formed into a loop portion 15, which extends upward beneath the outer end of the latch-piece, and by exerting a pressure on said piece the latter is held in place, as described. It is by bearing on the outer end of the latch-piece and overcoming the pressure of this spring that the inner end of the latch-piece is thrown up to release the ring B.

Instead of the form of spring described I sometimes employ a simple flat spring 16, as shown in Fig. 5. In this instance the lower end of the spring is supported by the connecting bar or strip 7 between the cheeks or side pieces, and the spring is carried forward and bent around the connecting-pin 17, thence returned rearwardly, so as to have the free end thereof exert a pressure on the latch-piece from beneath and at the outer end of said latch-piece.

I am not obliged to recess the latch-piece on its under side, but do so for the purpose of lightness, as well as to partially receive the operating-spring in a manner to assist in maintaining the same in place. In like manner I am not confined to the precise construction of the remaining parts, but can deviate therefrom within reasonable limits.

From the foregoing description, taken in connection with the accompanying drawings, it will be seen that the ring B or other similar attached device cannot be carried beyond the end of the bill of the hook while the latch-

piece is closed, and hence said latch-piece is not liable to become opened or released accidentally, no matter in what direction the strain may be brought to bear upon the ring. This and other advantages of my improvements will be apparent without further description.

It may be added that the connecting-bar 7 is provided with lugs a' on its upper surface adjacent to the inner sides of the cheek-pieces, which lugs are for the purpose of acting as a stop to the tail of the latch-piece, and thus prevent the latter from being turned back too far on its pivot.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. A snap-hook comprising a shank, a bill, a latch-piece mounted upon said shank extending to the free end of said bill, means for forcing the closing end of said latch-piece into contact with said shank, the end of said latch-piece forming a closure between the free end of the bill and the shank and adapted to move in a line substantially tangent to the free end of the bill when the latch-piece is moved positively into its open position, substantially as described.

2. A snap-hook comprising a shank, a bill, a latch-piece mounted in said shank, extending to the free end of the bill, a stop-bearing on said shank, means for forcing the end of said latch-piece against said stop-bearing, the said end of the latch-piece forming a closure between the free end of the bill and the stop-bearing and adapted to move in a line substantially tangent to the free end of said bill, substantially as described.

3. A snap-hook comprising a shank, a bill, a pivot in said shank, a latch-piece on said pivot, a spring bearing against one end of said latch-piece, and a stop-bearing on said shank for the closing end of said latch-piece, said stop-bearing being located on the shank with reference to the position of said pivot and the effect of said spring, whereby forces acting within the bill cannot swing the latch-piece on its pivot, substantially as described.

4. A snap-hook comprising a shank terminating in a bill, cheek-pieces on said shank, a cross-bar in said cheek-pieces, a pivot-bar bearing in said cheek-pieces, a latch-piece on said pivot, a spring supported on said cross-bar and bearing against one end of said latch-piece, and a stop-bearing on said shank for the closing end of said latch-piece, the location of said stop-bearing being determined by the position of the pivot and the effect of said spring, substantially as described.

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

JEFFERSON WILSON.

Witnesses:

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H. C. MCCLINTON.