

(No Model.)

D. L. SMITH.

SNAP HOOK.

No. 382,495.

Patented May 8, 1888.

Fig. 1

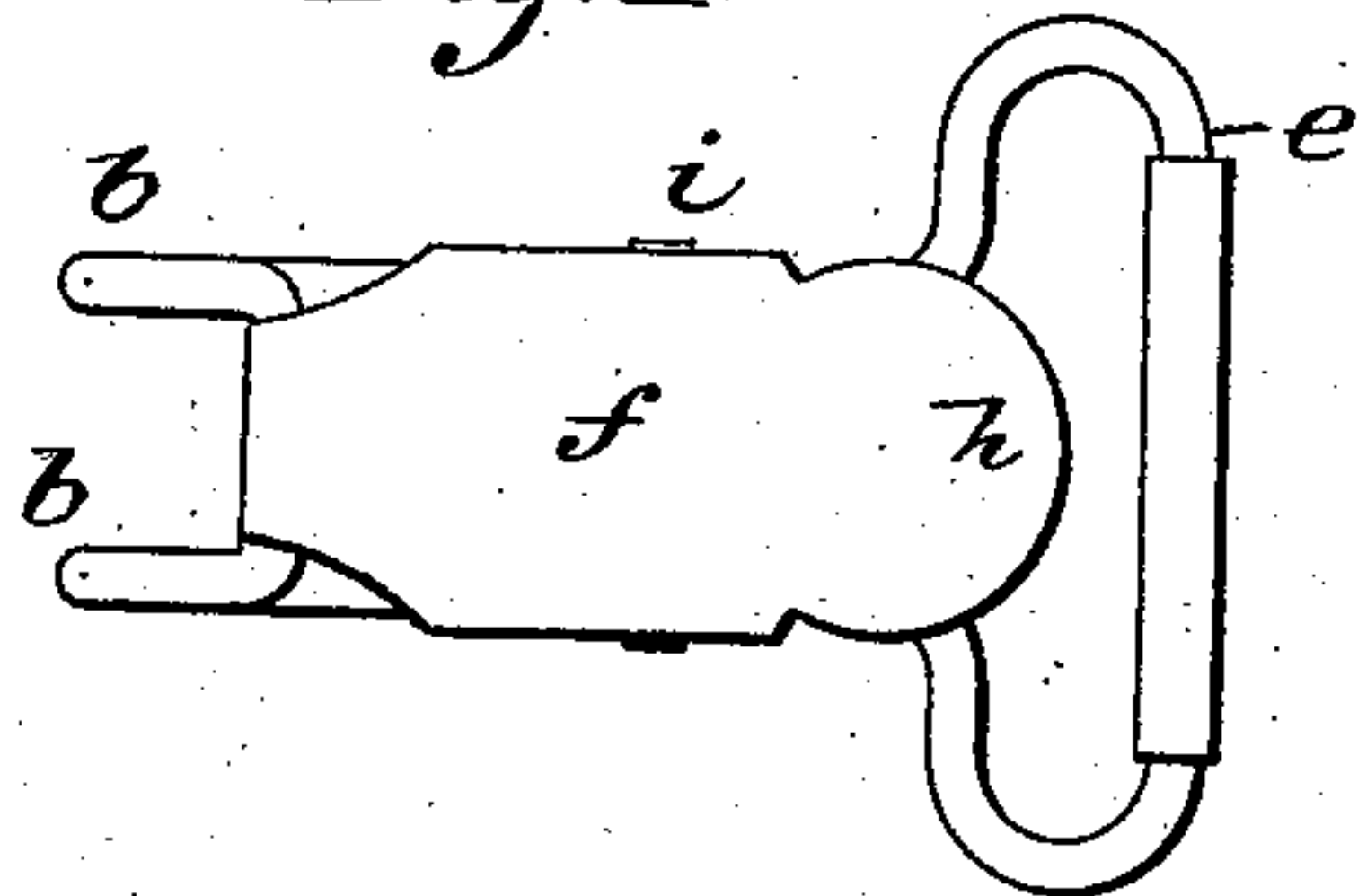


Fig. 2

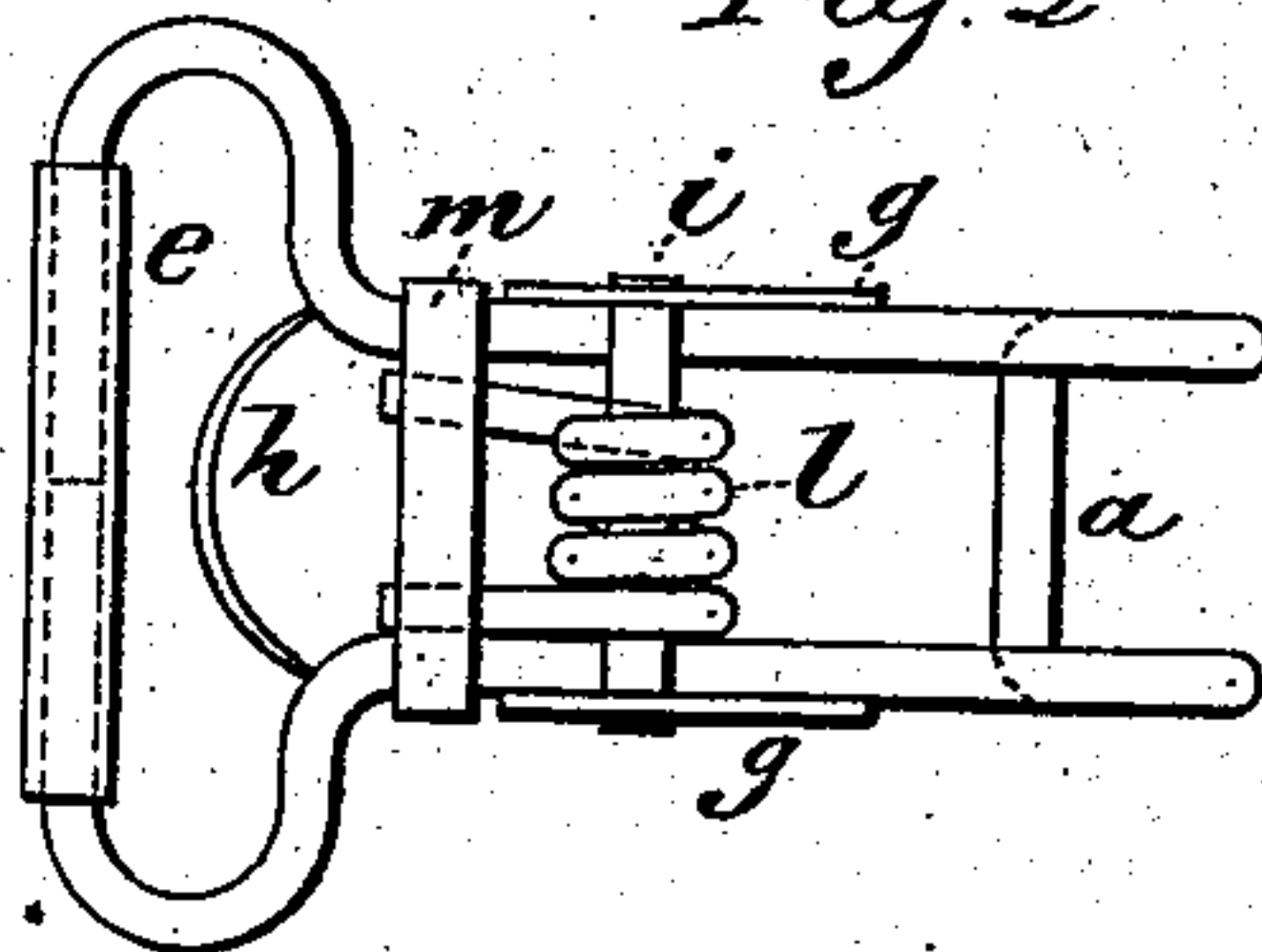


Fig. 3

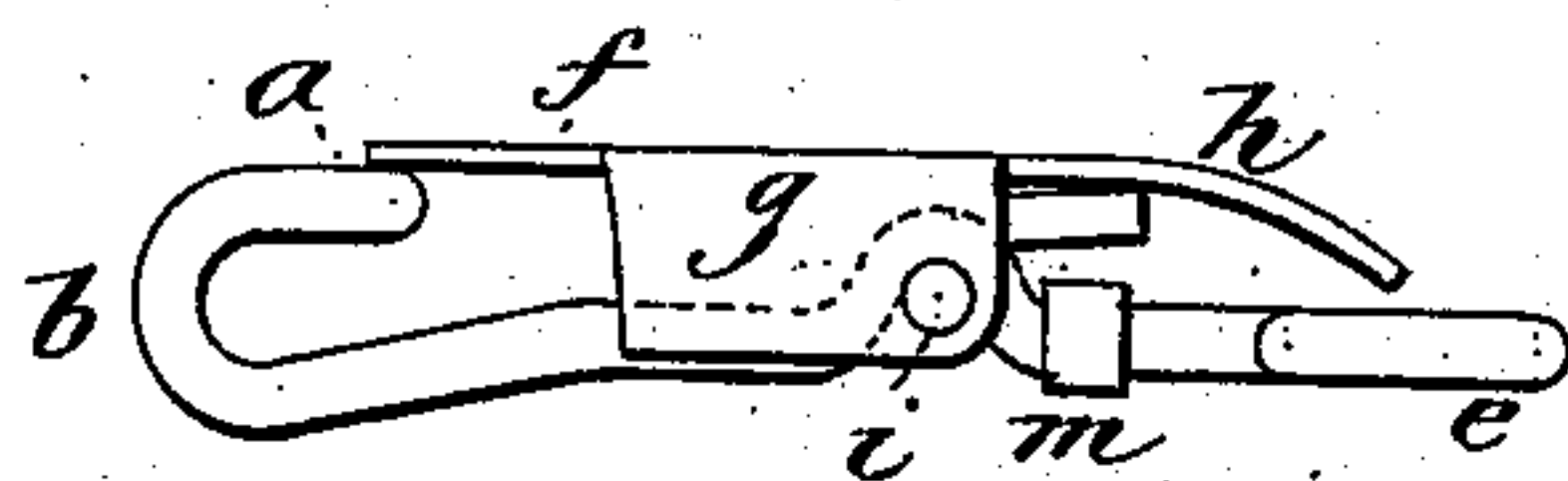


Fig. 4

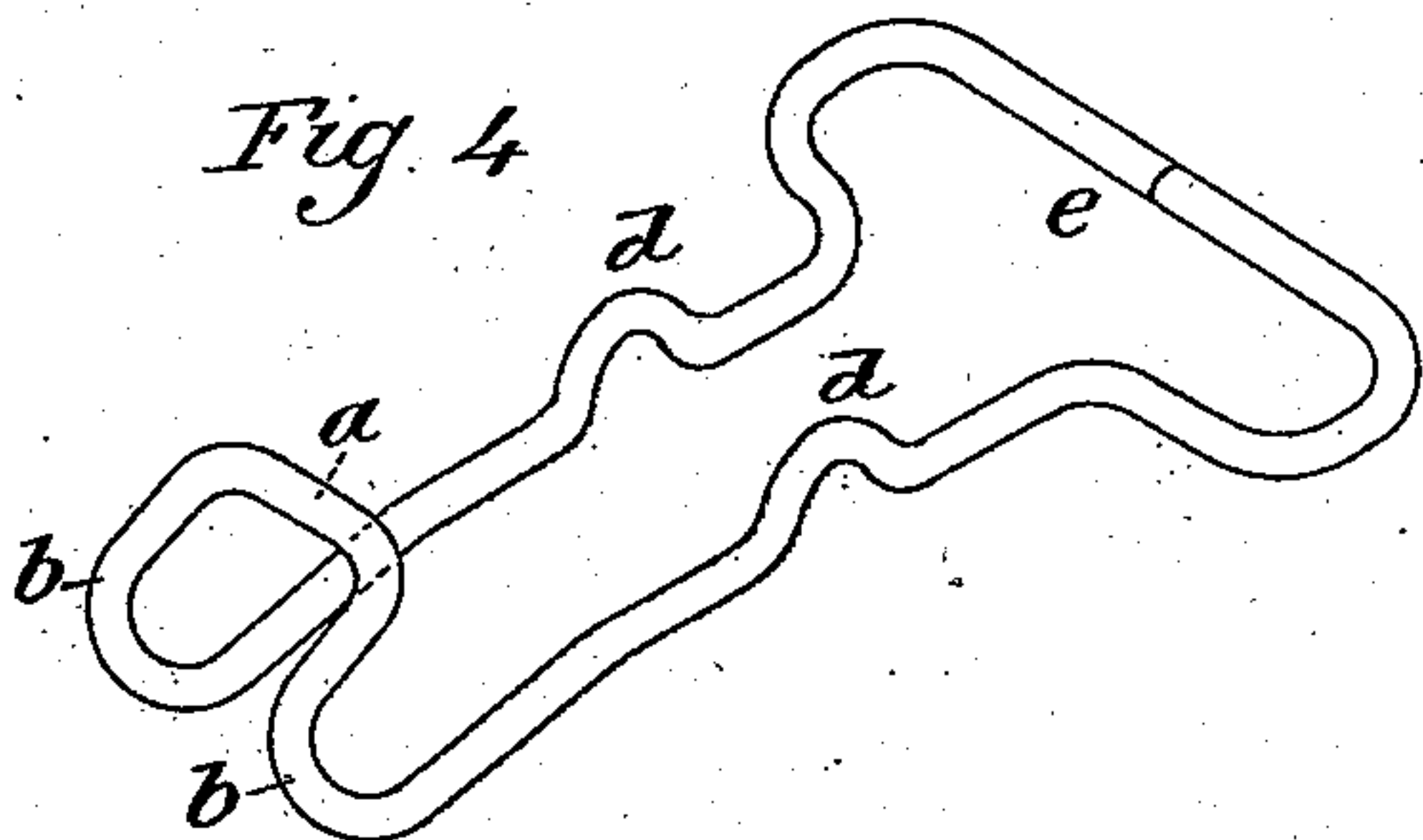


Fig. 5



Fig. 6

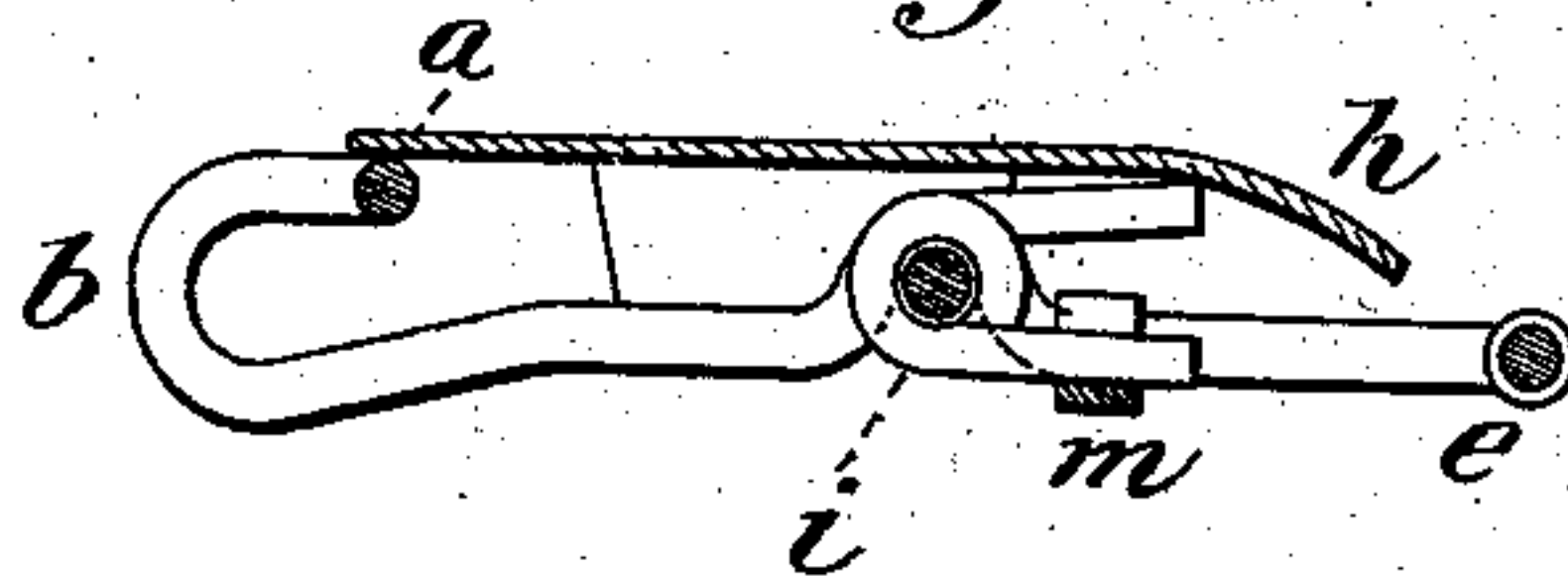
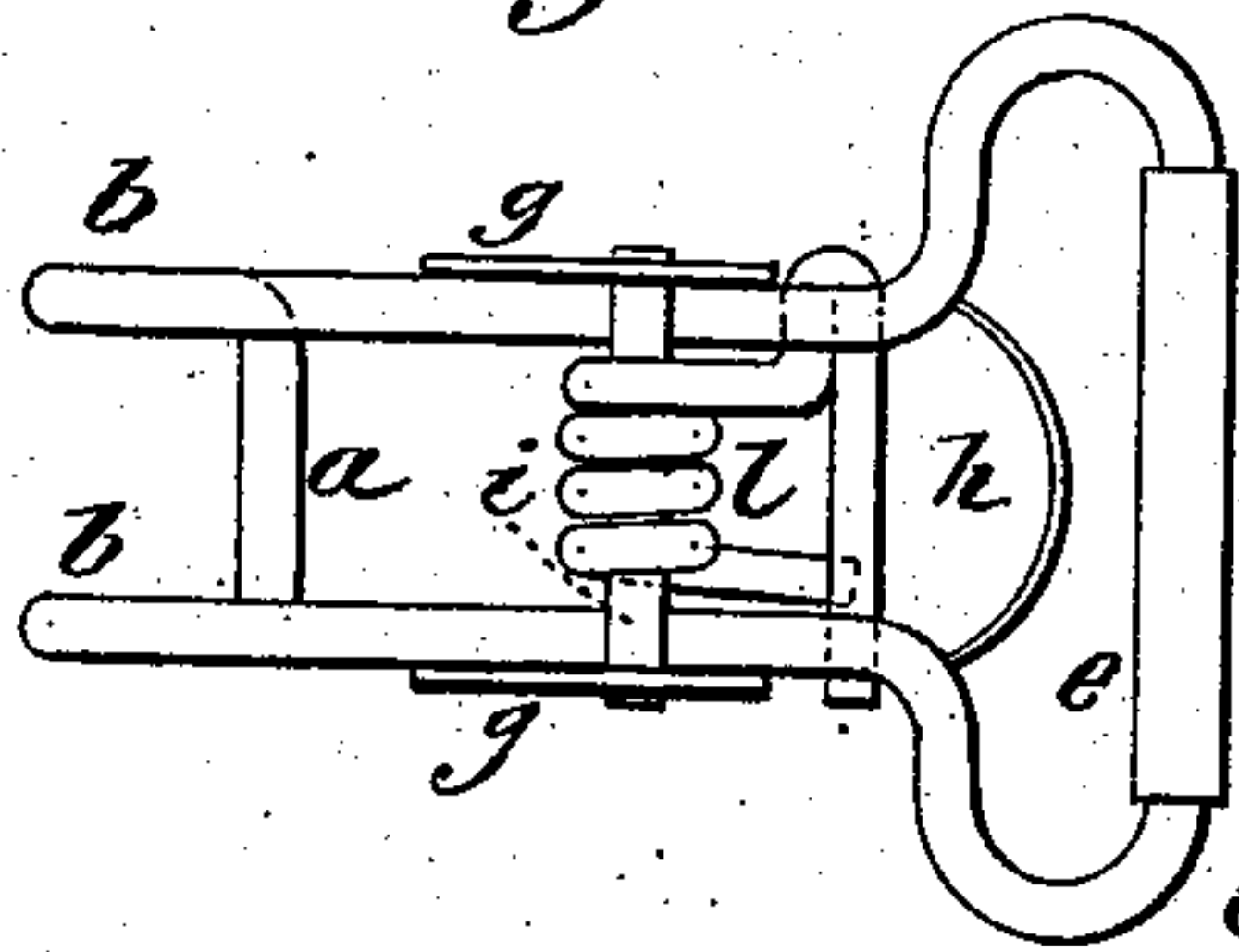


Fig. 7



Witnesses.
J. H. Shumway
Fred C. Earle

Dwight L. Smith.
By atty.
Fred C. Earle.

UNITED STATES PATENT OFFICE.

DWIGHT L. SMITH, OF WATERBURY, CONNECTICUT, ASSIGNOR OF ONE-HALF
TO EARL A. SMITH, OF SAME PLACE.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 382,495, dated May 8, 1888.

Application filed March 26, 1888. Serial No. 262,507. (No model.)

To all whom it may concern:

Be it known that I, DWIGHT L. SMITH, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new Improvement in Snap-Hooks; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a front view of the hook complete; Fig. 2, a rear view of the same; Fig. 3, a side view of the same; Fig. 4, a perspective view of the body detached; Fig. 5, a transverse section at the pintle, showing the spring; Fig. 6, a longitudinal section; Fig. 7, a modification in the spring.

This invention relates to an improvement in that class of snap-hooks which are designed especially for the engagement of the braces of suspenders, and are applied directly or indirectly to the buckle, so that the hook stands ready to engage a corresponding loop or eye on the braces, or are attached to the braces, and so that the hook may engage a corresponding eye on the buckle, but are also used and adapted to be used for other and various purposes.

These hooks are more generally made from sheet metal, the body forming a loop at one end and turned into hook shape at the opposite end, with a tongue also formed from sheet metal, having ears turned therefrom toward the body and corresponding to ears on the body, with a pintle introduced through the ears of both the body and tongue as a pivot for the tongue, and a torsion-spring arranged around the pivot between the body and the tail end of the tongue to force the tongue into the closed position.

The object of my invention is to form the body of the hook from wire in a simple and cheap manner, and whereby the strength and durability of the hook is very greatly increased; and the invention consist in the construction, as hereinafter described, and more particularly recited in the claims.

The body of the hook (represented detached in Fig. 4) is made from a single piece of wire doubled to form the tip *a* for the hook, the two

branches then curved to form the two parts *b* of the hook, the branches then extending in the same plane and substantially parallel with each other, bent upward, and returned—that is, at right angles to the plane of the body and in the same direction as the hook—to form U-shaped pintle-bearings *d d*. Thence the two branches extend and are turned to the right and left and returned to form the loop *e*. The tongue *f* is constructed in the usual manner from sheet metal, with an ear, *g*, each side, and with an extension, *h*, therefrom to form the tail or handle. The ears are pierced for the introduction of the pintle *i*, also in the usual manner. The position of the piercings for the pintle *i* correspond to the position of the pivot-bearings *d d* on the body. The distance between the two ears corresponds substantially to the width of the body of the hook. The usual torsion-spring, *l*, is arranged upon the pintle. The parts are assembled by setting the tongue over the body of the hook so that the ears pass down each side the respective bearings *d d* in the body. Then the spring is introduced between the two bearings *d d* and the pintle passed through the ears and through the spring between the bearings *d d*, as represented in Figs. 5 and 6. The pivot being riveted or otherwise secured, the hook is complete. Its operation is the same as other hooks of this class.

To form a bearing on the body for one leg of the spring, a bar is preferably placed across the two sides of the body, as indicated at *m* in Fig. 2. The ends of this bar are closed around the two sides, so that it not only serves as a support for the spring, but also supports the two sides and prevents their being forced toward or from each other; or the end of the spring may be bent, as seen in Fig. 7, so as to take a bearing upon the two sides, it only being necessary that the torsion-spring shall take a bearing both upon the body and the tongue, with a tendency to force the tongue to its closed position, as represented in Fig. 6.

By making the body from wire, which is readily done by automatic machinery, a much greater strength for the same weight is attained than can be with a sheet-metal body, and the hook has a very much lighter appearance because of the open character of the

body. The two ends of the wire preferably meet in the loop, and the two ends are inclosed by a sheet-metal tube in the usual manner of uniting the two ends of wire in the manufacture of this class of articles.

I claim--

1. The herein-described snap-hook, consisting of a body made from wire doubled to form the tip *a* of the hook, the two branches then bent to form the hook *b b*, the two branches extending substantially parallel to the opposite end, where the branches are bent to form the loop *e*, and the two sides bent at a point between the loop and hook at right angles to the plane of the two sides to form the pivot-bearings *d d*, combined with the tongue *f*, constructed with ears *g g*, the pintle *i* through said ears and resting in the said bearings *d d*, and a torsion-spring, *l*, between said body and tongue adapted to take a bearing between the body and the tongue in rear of the pivots, substantially as described.

2. The herein-described snap-hook, consisting of a body made from wire doubled to form

the tip *a* of the hook, the two branches then bent to form the hook *b b*, the two branches extending substantially parallel to the opposite end, where the branches are bent to form the loop *e*, and the two sides bent at a point between the loop and hook at right angles to the plane of the two sides to form the pivot-bearings *d d*, the two sides of the body connected by a bar, *m*, combined with a sheet-metal tongue, *f*, constructed with ears *g g*, pierced corresponding to the bends *d d* of the body, a pintle, *i*, through said ears and within said bearings *d d*, and a torsion-spring, *l*, around said pintle, one arm of the spring resting upon said bar *m* and the other resting at a corresponding point on the tongue, the tendency of said spring being to yieldingly hold the tongue in the closed position, substantially as described.

DWIGHT L. SMITH.

Witnesses:

C. E. WILCOX,
H. L. SLAUSON.