

(No Model.)

J. C. HYDE.

BUCKLE.

No. 379,515.

Patented Mar. 13, 1888.

Fig. 1

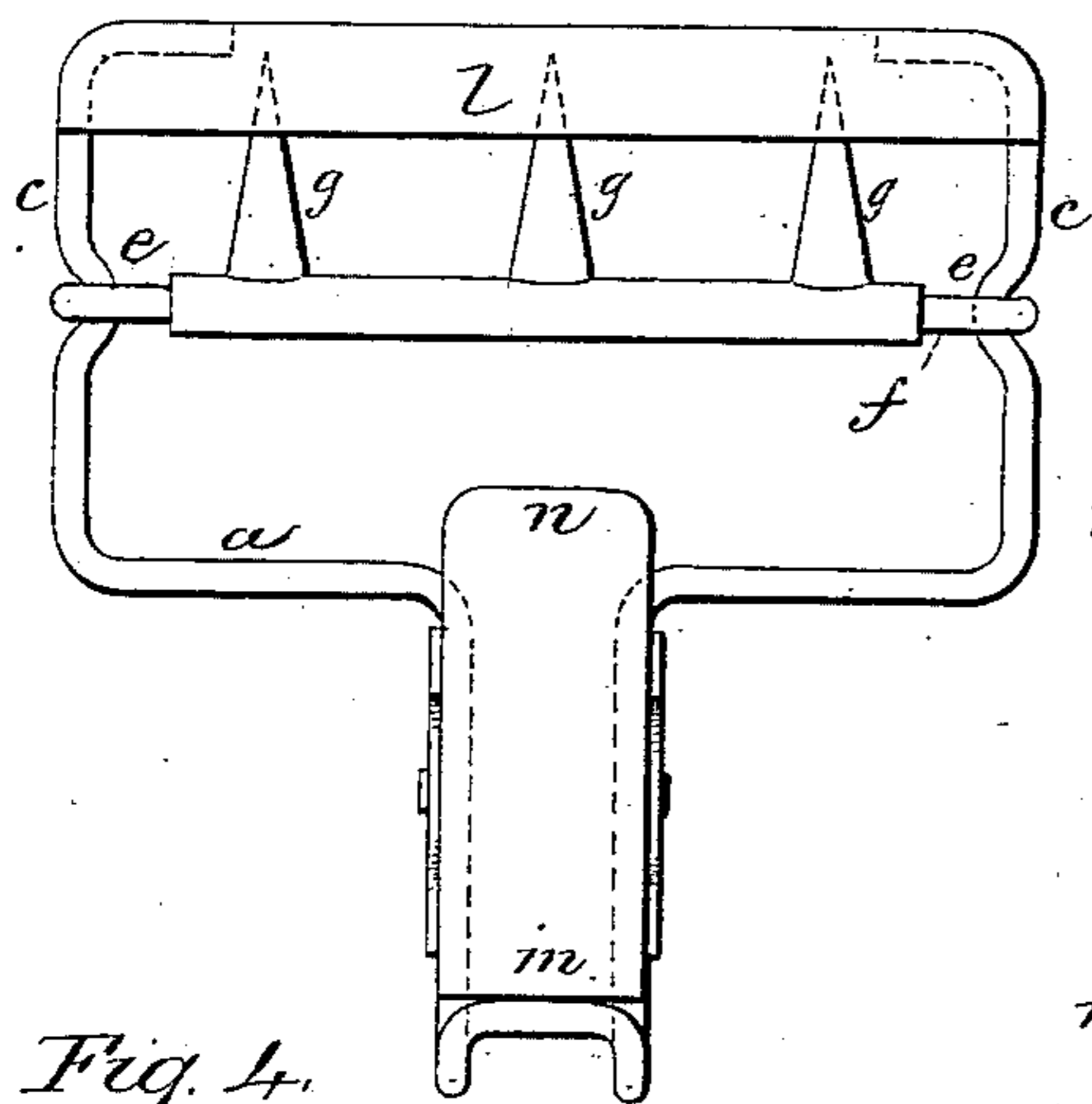


Fig. 2

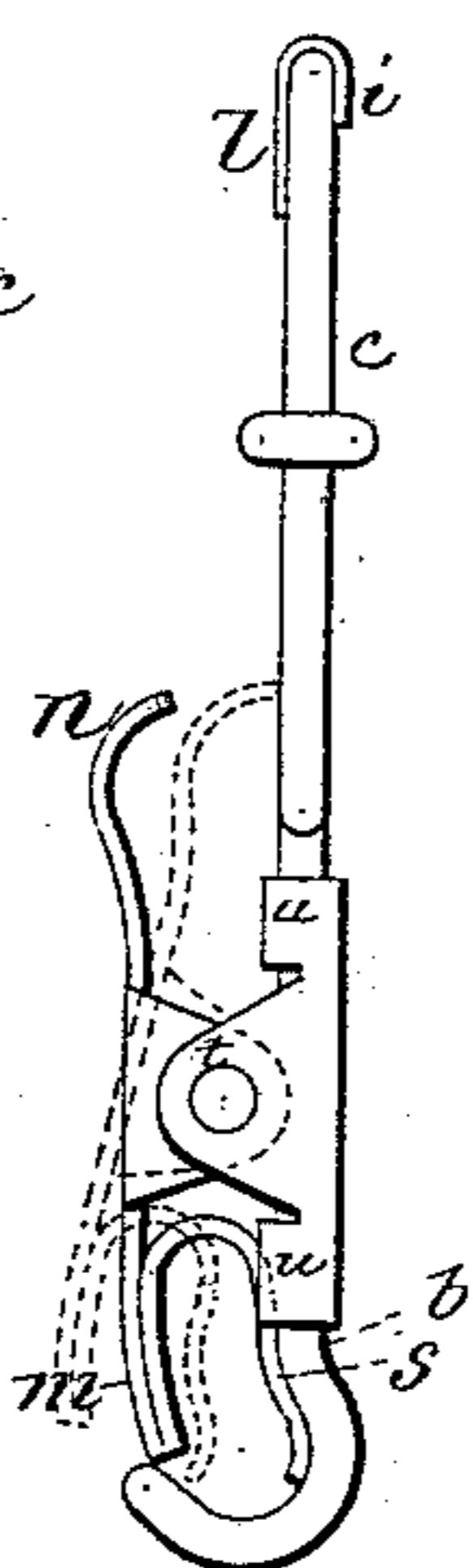


Fig. 3

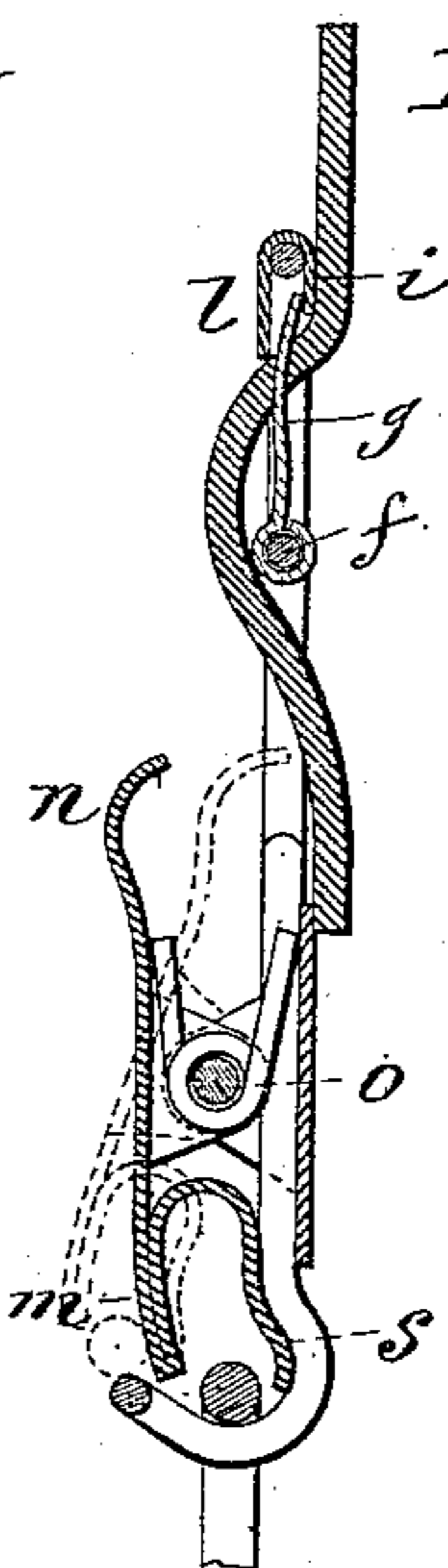


Fig. 4

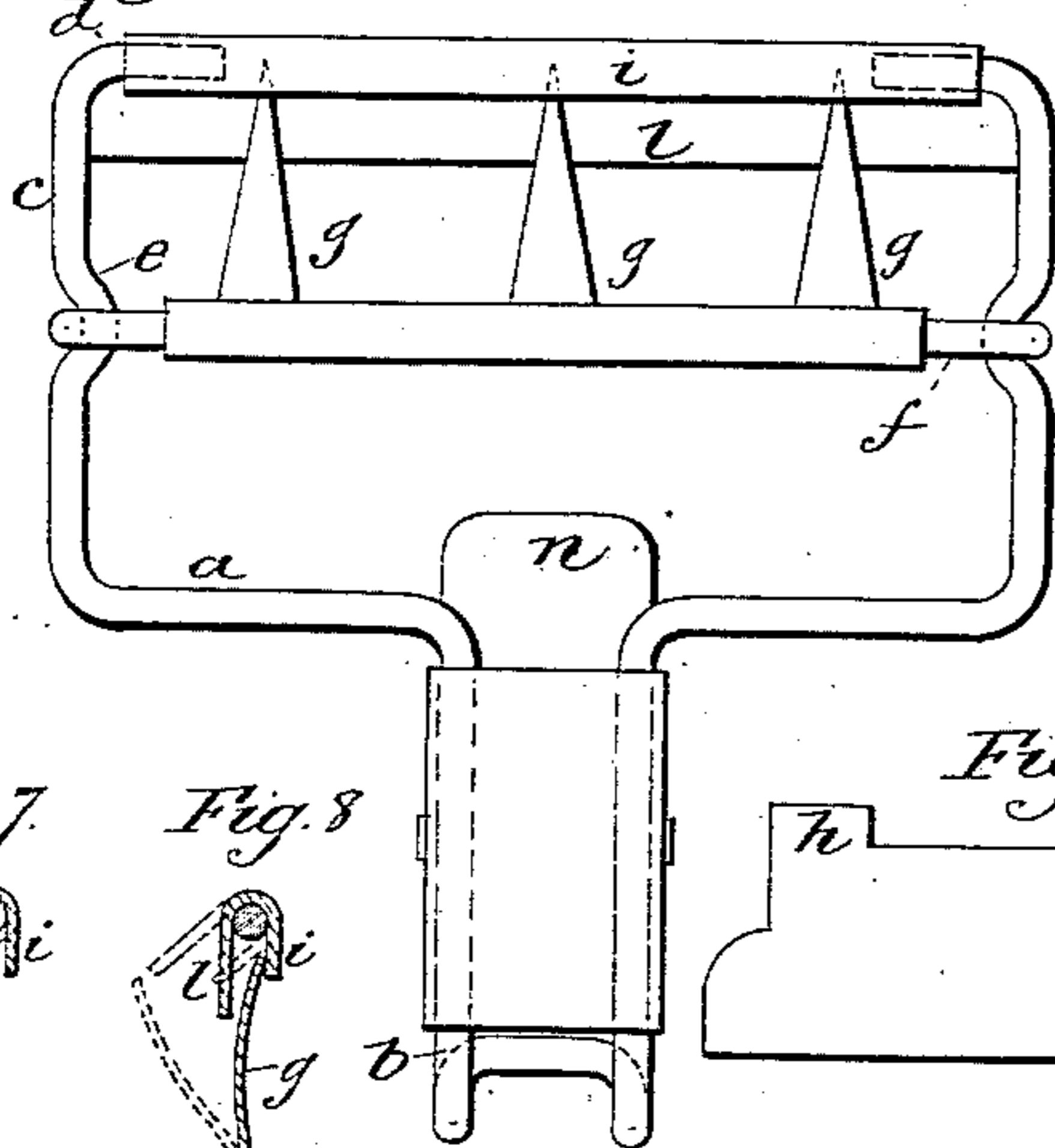


Fig. 5

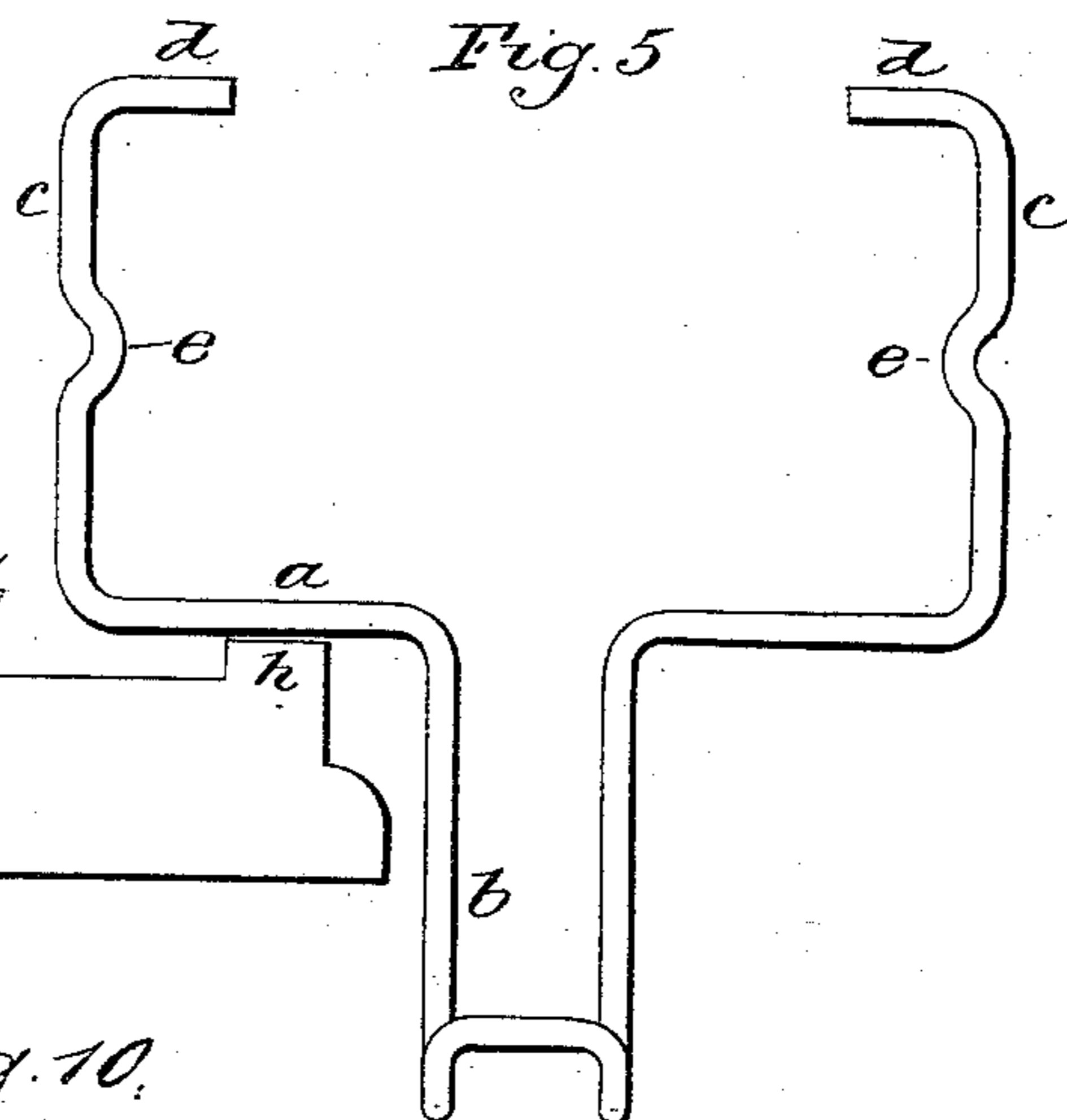


Fig. 7

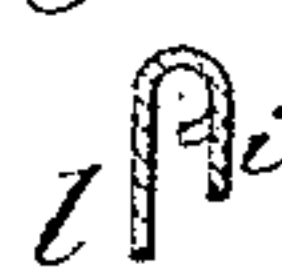


Fig. 8

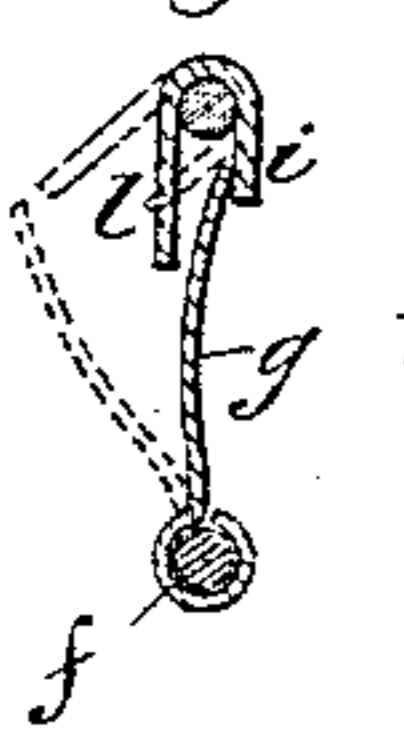


Fig. 6

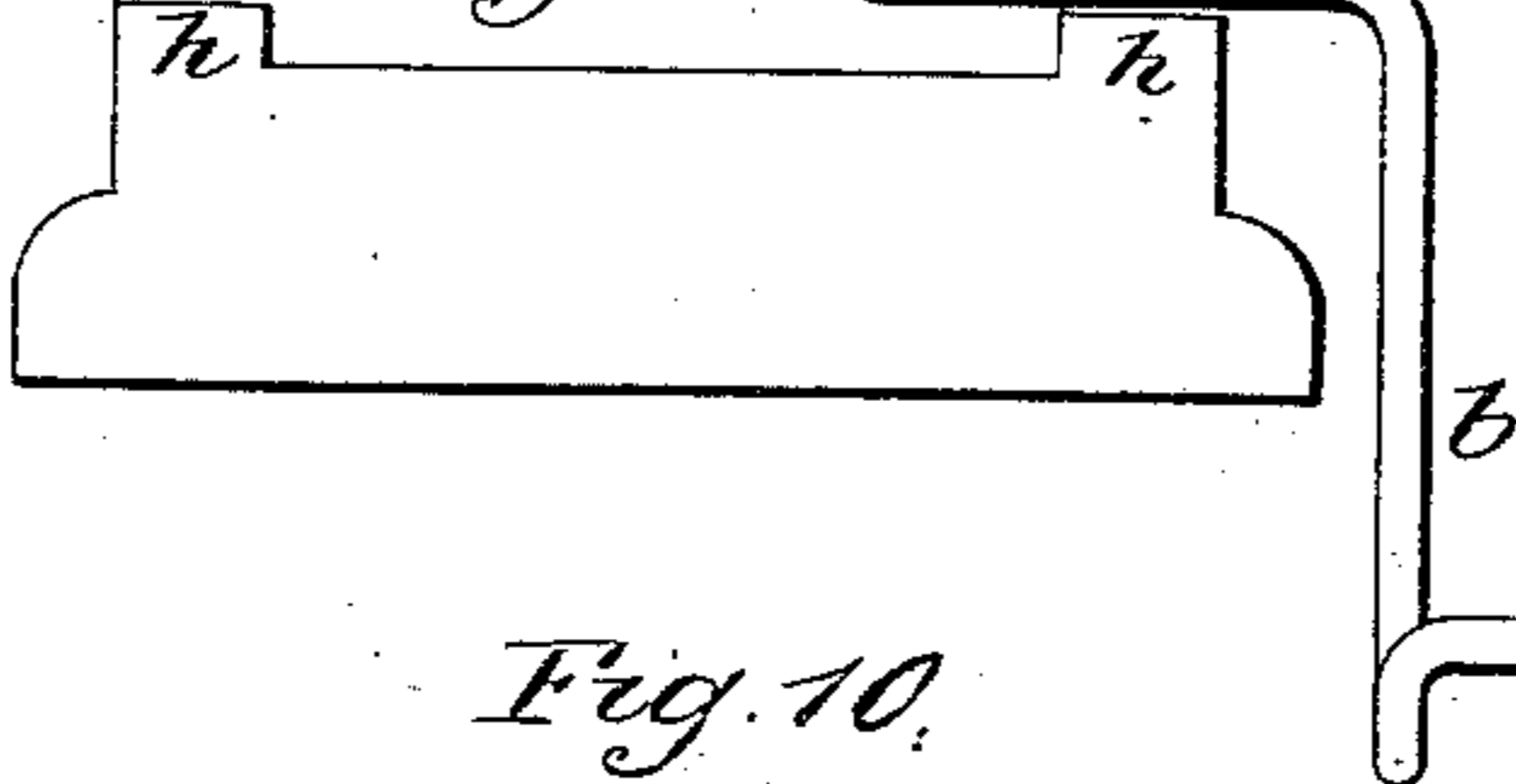


Fig. 10

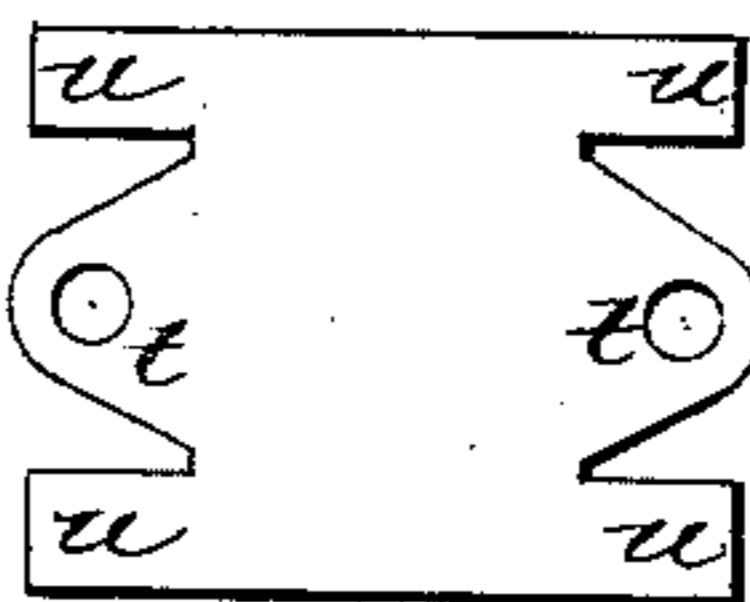


Fig. 9

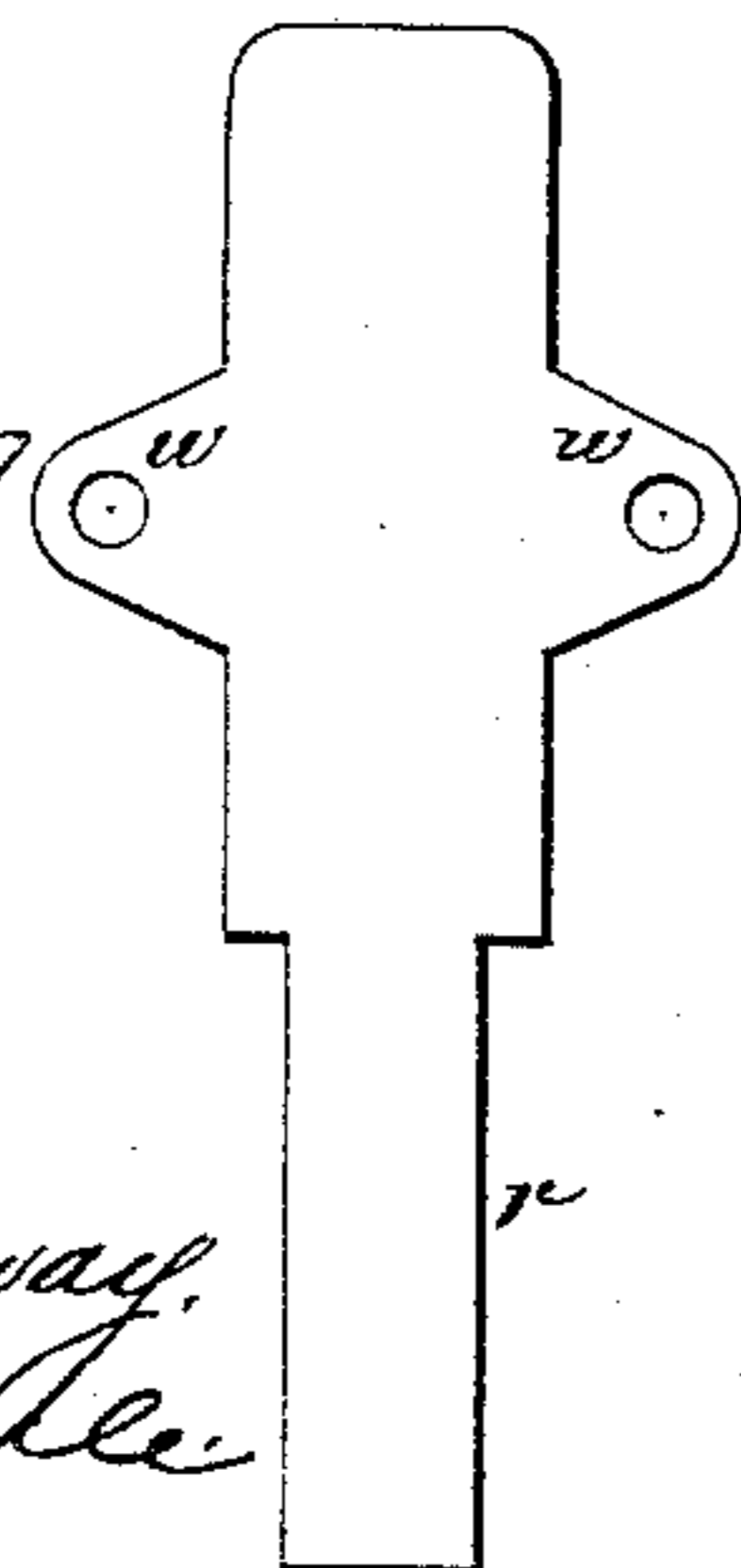
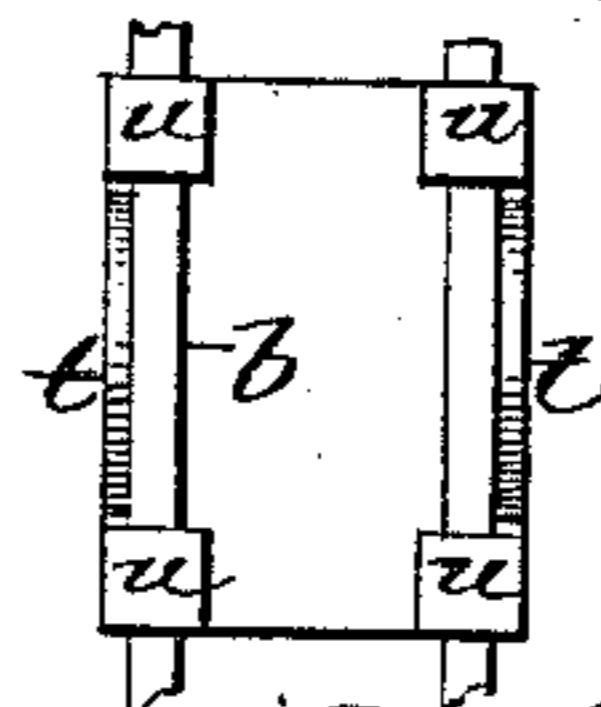


Fig. 11



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UNITED STATES PATENT OFFICE.

JAMES C. HYDE, OF WEST HAVEN, CONNECTICUT, ASSIGNOR TO THE WEST HAVEN BUCKLE COMPANY, OF SAME PLACE.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 379,515, dated March 13, 1888.

Application filed November 21, 1887. Serial No. 255,711. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. HYDE, of West Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Buckles; 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 buckle complete; Fig. 2, a side view of the same; Fig. 3, a vertical central section with the suspender or strap engaged; Fig. 4, a rear view of the buckle complete; Fig. 5, the frame detached as made from a single piece of wire; Fig. 6, the bearing-bar detached; Fig. 7, a vertical section of the bearing-bar; Fig. 8, a vertical section illustrating the operation of the bearing-bar with the tongues; Fig. 9, the blank from which the tongue of the engaging-hook is made; Fig. 10, the clip by which the tongue is secured to the engaging-hook; Fig. 11, an inside view of the engaging-hook with the clip attached.

This invention relates to an improvement in that class of buckles used for suspenders or other garment attachments and in which the engaging device is in the form of a tongue hinged in the frame, with one or more points adapted to pierce the strap and impinge upon a bar on the frame, from the reverse side of which the strap is drawn, and to buckles in which an attaching device is applied in the form of a hook as a convenient means for engaging the buckle with the suspender-ends or braces, parts of the invention being applicable to other classes of buckles.

In buckles in which the tongues are pointed, so as to readily pierce the strap and rest upon the bar of the frame to resist the strain upon the strap, the point or points of the tongue extend so far through the strap as to be liable to catch upon outer garments, and many times the hand of the wearer is injured because of these projecting points.

The object of the first part of the invention is to provide a guard for the points of the tongue; and it consists in hinging the bar of the frame upon which the tongues impinge

upon an axis substantially parallel with the axis upon which the tongues turn, the said bar being of J shape in transverse section, the shorter side serving as the impinging bar for the tongues and the longer side as a guard or cover to close over the tongues as the tongues press upon the shorter or bearing side of the hinge-bar.

The object of the second part of the invention is to provide a tongue for closing the hook with which the suspender-ends are engaged, and so that the said tongue may serve as a convenient means for throwing the suspender-ends out of engagement with the hook; and it consists in a tongue hinged to the body above the nose of the hook, with an extension above the pivot, by which the tongue may be operated, the tongue being also constructed with an extension turned forward beneath the end of the tongue and returned toward the tip of the hook to form a guard or ejector, as hereinafter described.

The frame is best made from wire, as represented in Fig. 5, *a* representing the lower bar of the frame, from which the usual hook, *b*, depends. The two ends *c c* are bent at right angles to the lower bar, *a*, and upon the upper side the ends of the wire are turned inward into line with each other to form pivots *d d*. Under this construction the two ends *c c* of the frame have central inward bends, *e*, formed therein, which serve as the means for holding the hinge-bar *f* in place, the hinge-bar being made from wire, its ends bent around the ends of the frame in the bends *e*, and so as to securely locate the bar *f* in a line parallel with the top of the frame. Onto this bar the tongues *g* are hinged, the illustration showing three tongues. These tongues are made from sheet metal and bent around the bar *f* as a pintle, upon which the tongues may turn in the usual manner, and so that the tongues may impinge upon the upper bar as a support. The upper bar is made from sheet metal, as seen in Fig. 6, of a length corresponding to the length of the frame. The sheet-metal blank, Fig. 6, is constructed with a projecting lip, *h*, upon one edge and near each end. The blank is bent longitudinally into inverted-J shape, as seen in Fig. 7, the bend corresponding to the diameter of the pivots *d d*, the

shorter leg or narrower side, *i*, upon the back side of the frame, and the longer leg or wider side, *l*, on the front of the frame, as indicated in Fig. 7. The narrower side projects into the path of the points of the tongue, and so that the tongues may rest thereon, as indicated in Fig. 8, as a support for the tongues and to resist the strain of the strap. The broader side, *l*, overlaps the ends of the tongues, as seen in Fig. 8, and serves as a guard therefor.

The bar *l i* is secured to the pivots by bending the lips *h* around the pivots, as seen in Fig. 4, so as to form a hinge upon which the said bar may swing, as from the closed position seen in Fig. 8 to the open position indicated in broken lines, same figure.

In the closed position the points of the tongues lie upon the inner side of the part *i* of the bar, while the other part, *l*, of the bar covers the points as a guard. Now, if the tongues be turned toward the open position, they will strike the inner side of the part *l* of the bar and cause the bar to turn upon its pivots until the tongues may escape therefrom, and as indicated in broken lines, Fig. 8. In this condition the strap is introduced from the rear side under the part *i* of the bearing-bar, over the points of the tongues, and below the part *l* of the bearing-bar. Then, when the desired adjustment is attained, the strap is drawn taut, which causes the tongues to pierce the strap in the usual manner, and the tongues in closing strike the inner side of the part *i* of the bar and force the tongues and the bar to the extreme closed position, the tongues then bearing upon the portion *i* of the bearing-bar, and as represented in Fig. 3. Thus engaged the tongues are supported in the usual manner to sustain the strain upon the strap, and the part *l* covers the points and overlaps the strap, so as to protect the points from possible interference.

The hook *b* may be of less depth than under the usual construction of the hook device in this class of buckles. *m* represents the tongue, which is hinged to the body of the hook, as represented in Fig. 2, and in the usual manner for hinging the parts of a spring-clasp, as clearly shown in Fig. 2. Above the pivot there is a projection, *n*, from the tongue, which serves as a finger-piece by which the tongue may be turned upon its pivot, the spring *o* serving to hold the tongue in its closed position, as indicated in Figs. 2 and 3. In this closed position the end of the tongue stands close to the tip of the hook, and so as to close the mouth of the hook. When access to the hook is desired, the tongue is turned upon its pivot, as indicated in broken lines, Fig. 2.

The tongue is constructed with an extension, *r*, (see Fig. 9,) from its end, which is bent back beneath the tongue in U shape, as seen in Fig. 2, and which bent-back portion forms an ejector, *s*, of U shape, the opening of the U being toward the hook, but so that as the tongue is opened the ejector is brought out

nearly into a plane with the tip of the hook, and as indicated in broken lines, Fig. 3. Then the ring, loop, or whatever it may be is passed over the tip of the hook and onto the ejector *s*. The tongue is then permitted to return to its closed position, where the engaging-loop stands, with its hook against the ejector, and so that when the tongue is again opened the ejector will throw the ring or loop from engagement with the hook. This is a convenience in disengaging the suspender-ends from the buckle, as the wearer has only to press upon the handle end *n* of the tongue to turn the tongue outward, and the loop of the suspender-ends is automatically ejected from engagement with the hook.

The hook is usually made from wire doubled at the tip and returned to form the two sides of the body of the hook, as seen in Fig. 5. To attach the tongue to this body, a clip is made from sheet metal, as seen in Fig. 10, the width of the body of the clip corresponding to the width of the body of the hook, and with a projection, *t*, on each side, which are to form the pivot-ears for the tongue, and also constructed with laterally-projecting lips *u* at each end. These lips are bent around the respective sides of the body, as seen in Fig. 11, and serve to securely attach the clip thereto. The ears *t* are bent forward at right angles, as seen in Fig. 2. The tongue is constructed with similar ears, *w*, upon opposite sides, which are bent backward, and so as to set between the ears *t* of the clip, and then a pivot is introduced through the ears of the clip and tongue, and around this pivot the spring is arranged, as represented in Fig. 3, and in the usual manner for applying the spring to the jaws of spring-clasps. This construction of hook, it will be understood, is applicable to buckles having an engaging device of various constructions.

The hinged bearing-bar, with the guard, is also applicable to buckles of various construction, but in which the tongues are of a pointed character and hinged, so as to swing toward and from the bearing-bar. I therefore do not wish to be understood as limiting the invention to the necessary combination in the same buckle of the peculiar construction of hook and the hinged bearing-bar.

I am aware that the tongues of snap-hooks have heretofore been constructed with a guard or cast-off which normally lies at the back of the hook, and which guard, as the tongue is opened, serves as an ejector to throw the engaging device from the hook, such being seen in United States Patent No. 171,361. I therefore do not claim, broadly, such an ejector, the essential feature of this part of my invention being the peculiar manner in which the ejector is formed on the end of the hook.

I claim—

1. In a buckle in which the engaging-tongues are pointed and hinged to swing toward and from the bearing-bar, the combination therein of a bearing-bar hinged in the frame upon an

axis parallel with the axis upon which the
tongues are hinged, the said bearing-bar being
of J shape in transverse section, the shorter or
narrower side of the bar forming the bearing
5 for the tongues and the longer side a guard to
cover the tongues, substantially as described.

2. In a buckle having a hook depending
from the lower side of the frame, the hook
made from wire doubled at the tip of the hook
10 and so as to form two sides of the body of the
hook, the combination therewith of a clip
constructed with ears *t t*, closed upon the said
two sides of the hook, with a tongue, *m*, con-
structed with ears *w w*, corresponding to the
15 ears *t t* of the clip, a pivot extending through
the ears of the clip and tongue as a pintle, upon

which the tongue is hinged, and a spring be-
tween the tongue and clip, the said tongue ex-
tending from the pivot to the tip of the hook
and constructed with an extension, *n*, in the 20
opposite direction as a handle for operating
the tongue, the tongue also constructed with
an extension, *r*, from its end, the said exten-
sion turned upward beneath the end of the
tongue and returned toward the tip of the 25
hook to form a guard, *s*, substantially as de-
scribed.

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