

(No Model.)

W. P. QUENTELL.

LACE CATCH.

No. 309,981.

Patented Dec. 30, 1884.

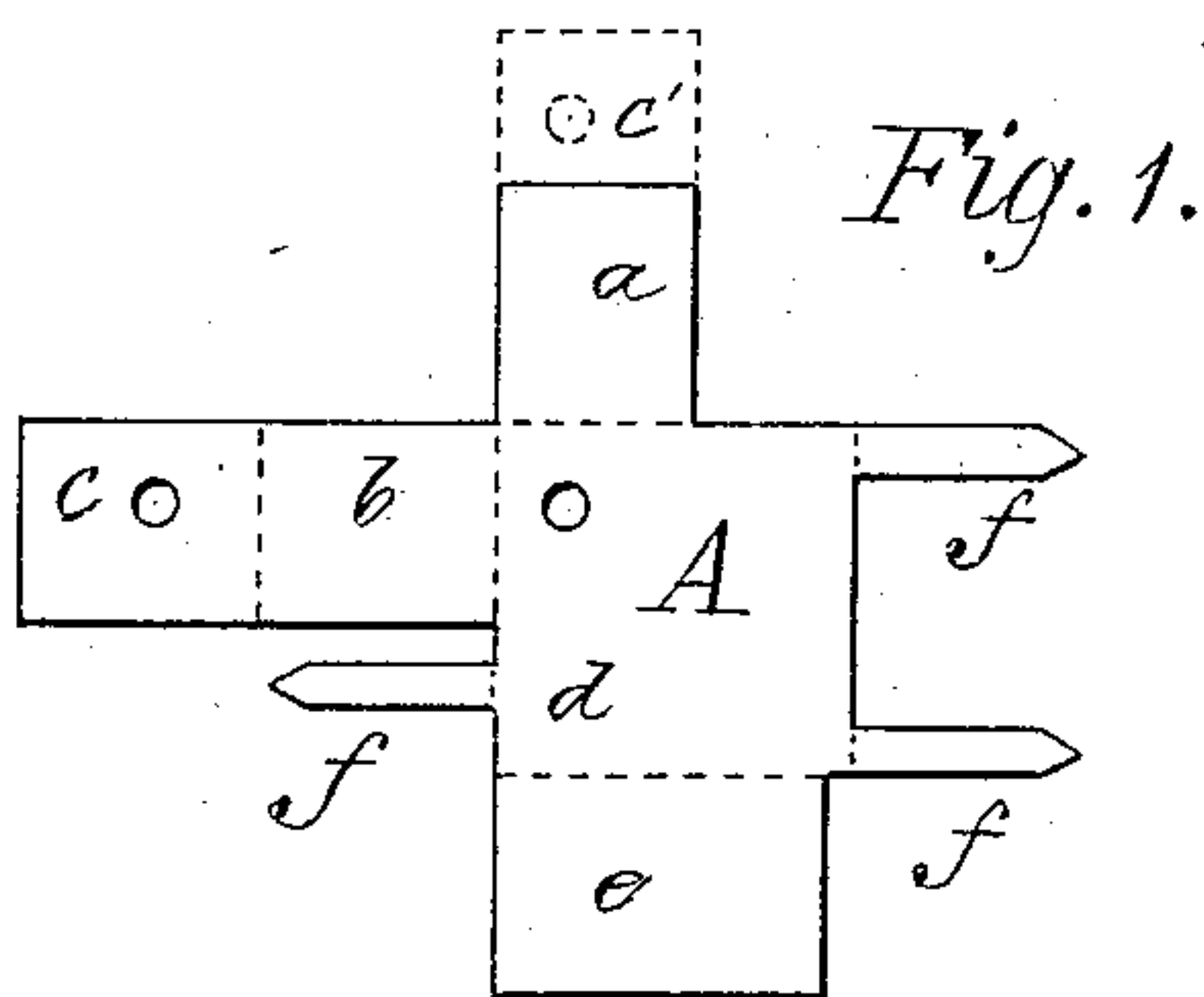


Fig. 1.

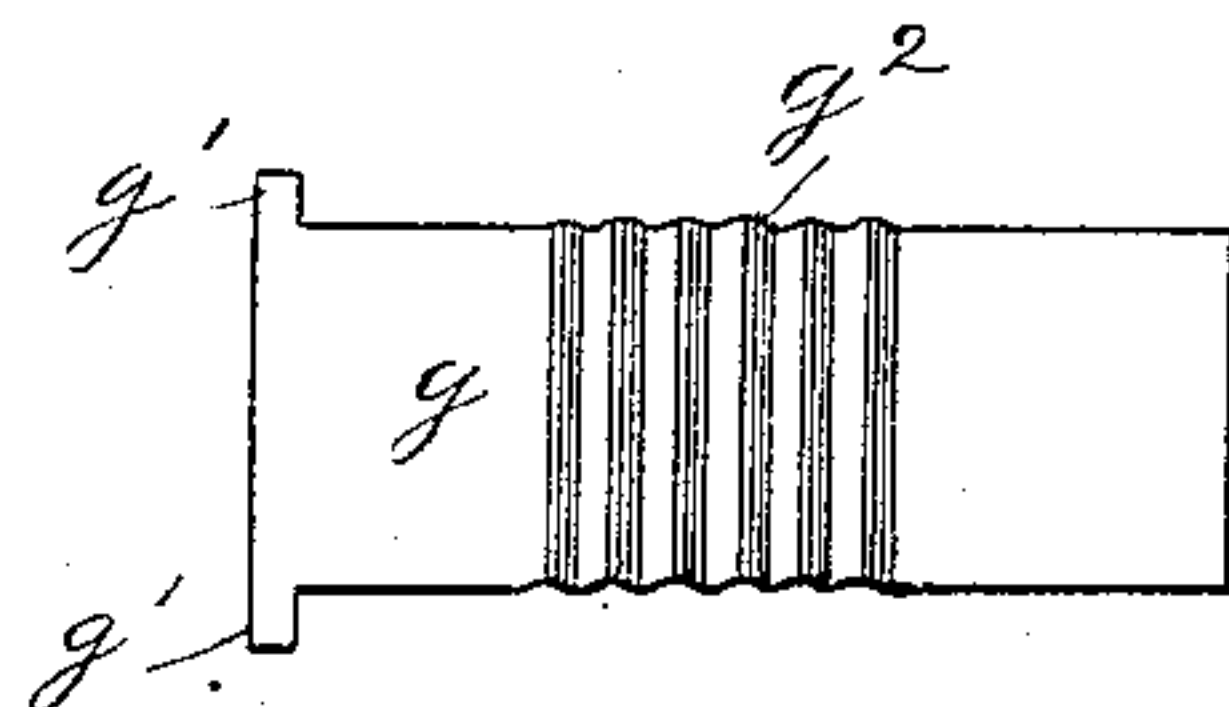


Fig. 2.

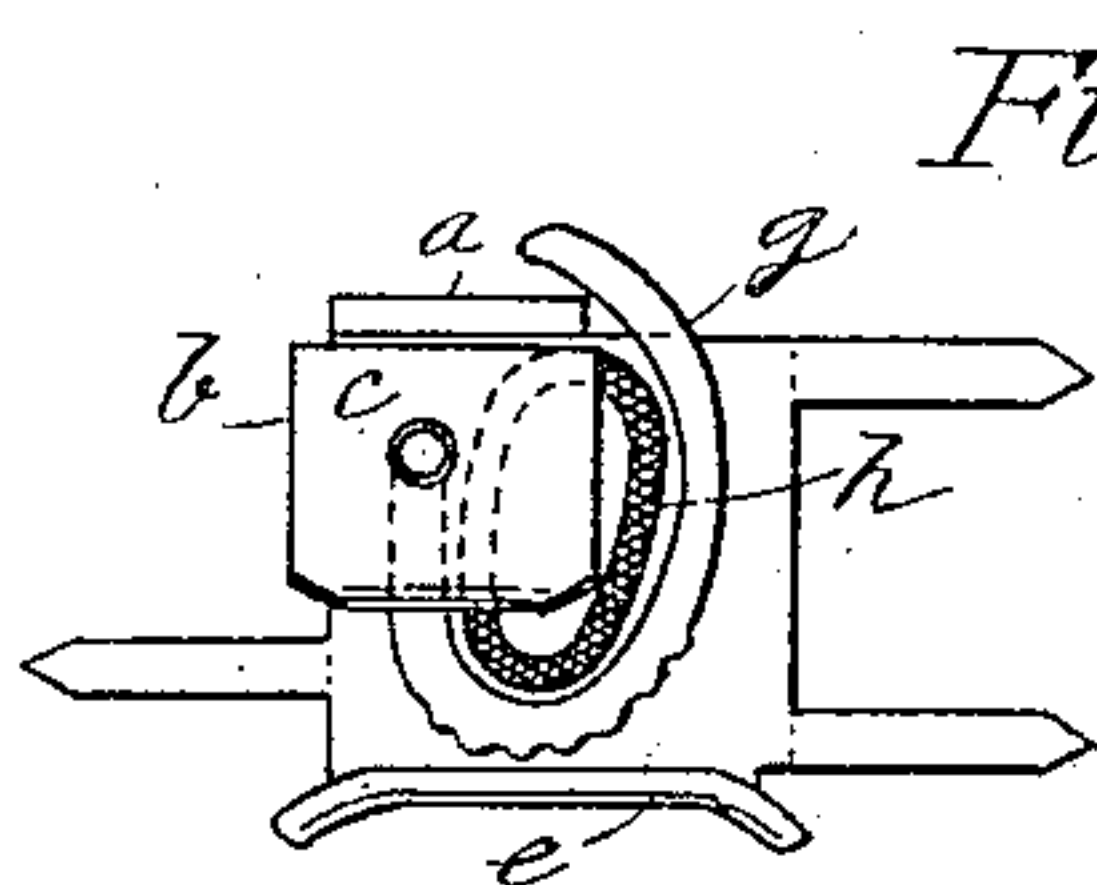


Fig. 5.

Fig. 3.

Fig. 4.

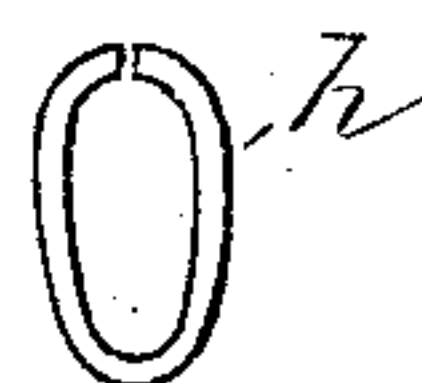
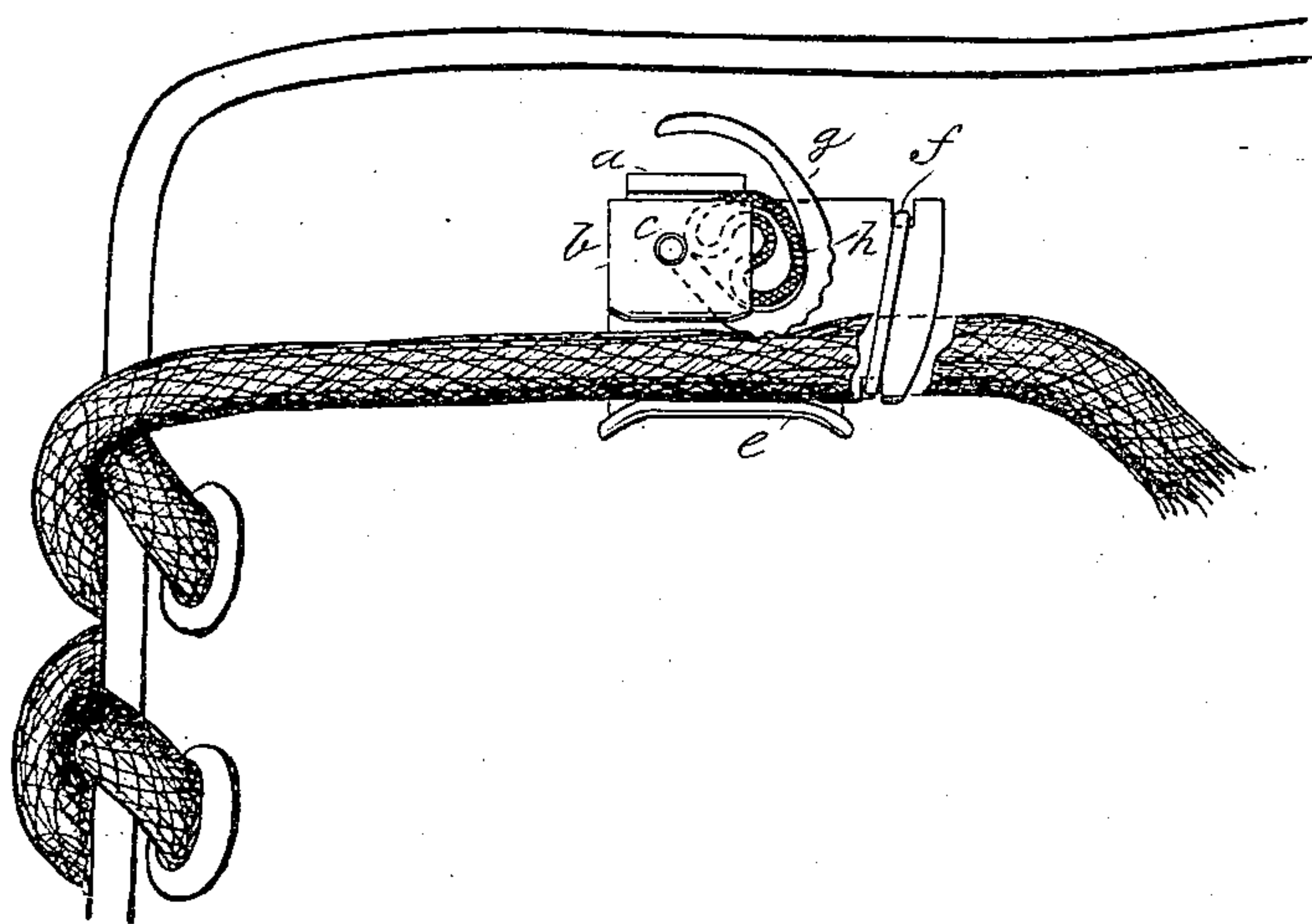


Fig. 6.



WITNESSES

Wm. A. Lowe

Jallmange H. Foster.

INVENTOR

William P. Quentell

by Augustus P. Gurlitz
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM P. QUENTELL, OF NEW YORK, N. Y.

LACE-CATCH.

SPECIFICATION forming part of Letters Patent No. 309,981, dated December 30, 1884.

Application filed September 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. QUENTELL, a citizen of the United States, residing at the city of New York, in the county and State of New York, have invented a new and useful Improvement in Lace-Catches and in the Method of Making the Same; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and the letters of reference thereon, which form part of this specification.

The object of my invention is a catch to hold fast in position the lace used on shoes, corsets, and other garments employing laces or cords; and it consists of a holding device adapted to readily receive the lace or cord by simply drawing it against and into the opening in the catch, to grasp it automatically, to retain it in position, and to permit of ready and easy disengagement by simply drawing or pulling the cord or lace away from the catch, thereby avoiding the tying and untying of knots, which on shoes are often soiled; and which are frequently troublesome to untie; and my invention further consists of an improved method of making such catches.

Figure 1 represents a blank forming the base of my catch before the parts have been bent into position. Fig. 2 represents a blank forming the eccentric *g* before being bent into shape. Fig. 3 represents the eccentric *g* formed into shape. Fig. 4 represents the spring *h*. Fig. 5 represents the parts adjusted to each other, and Fig. 6 represents the completed catch applied to a shoe.

A is what I call the "base-piece" or "plate," as the other parts are adjusted to or within it, and it forms the means of attachment to the garment. This plate may be struck or cut out of a sheet of metal or any suitable material, and it may have the portions formed into the pins or spurs *f f f*, which are convenient for attaching my device to garments. It has also the upper part, *a*, which is bent downward at right angles to the part *d*; the lower part, *e*, which is bent upward at right angles to the part *d* and forms the bearing-plate; the part *b*, which is also bent at right angles to the part *d* and parallel to the parts *a e*, while the portion *c* is further bent at right angles to the

part *b*, and parallel to the part *d*, so that the eye-holes in the parts *c* and *d* will come opposite to each other; or, if desired, the parts *b c* may be omitted and the part *a* extended to form the eye-piece *c'*, as shown by dotted lines in Fig. 1, and this part *c'* further bent downward, so that the eye-hole in it will come opposite to the eye-hole in the part *d*. If desired, the corners of the part *e* may be bent downward, or they may be hammered out thin, or otherwise bent rounded, so as to leave no sharp point for the cord to catch on or chafe against.

g is the eccentric, which is formed of a blank of metal or other suitable material, having portions thereof formed into the pivots *g' g'*, which operate in the eye-holes in the parts *c d*, and it is suitably corrugated, as shown, to give it greater holding power. It is formed into the shape shown in Fig. 3, and a suitable spring, *h*, Fig. 4, is inclosed within it when it is in position on the base-plate A. The spring may be made of any suitable material having sufficient resiliency, preferably metal; but I have found that sections of small soft-rubber tubing, and also pieces of solid rubber, will answer the purpose very well for a time.

The pins *f f f* form convenient means for attaching the catch to garments, &c.; but any suitable device may be employed—such as a staple, *i*, as shown in Fig. 6, or any other appropriate fastening.

The method of operation is as follows: When the garment or other article is to be laced, or when the lace has been drawn to about the tension desired, it is drawn against the lace-catch and into the opening between the plate *e* and the eccentric *g*. This raises the eccentric and permits the lace to be drawn inward laterally, and to lie between the eccentric *g* and plate *e* and against the side of the part *d*, and when the loose end of the lace is released the eccentric bears down upon it and holds it firmly against the plate *e*. The loose end may then be tucked into the garment or otherwise suitably adjusted. To release the lace, it is only necessary to draw it away from the catch laterally, when it readily slips out.

In catches or fasteners as heretofore made, which have been open to permit the engagement of the cord at any part of its length, the

structures have been organized to support the eccentric or other holding device only on one side, and this in such small devices as lace-catches is a serious objection, as the parts
5 are necessarily small, and the pivot when supported on one side only soon bends, and the catch binds in operation by reason of not being supported on both sides and becomes useless. On the other hand, when such structures
10 have been provided with supports for the cam on both sides, it has been done by inclosing the cam in a box and soldering or riveting the spring in place and soldering or riveting the parts together, providing only a
15 small opening through which the cord must be inserted endwise, and the cam held away from the lace by independent action to permit disengagement, such structures being expensive to make and inconvenient to use. To
20 overcome these objections, I have reorganized the structure entirely; and my invention consists, essentially, of a lace-catch in which the parts are contrived so that the carrying portion of the structure can be struck out of
25 one piece of metal and bent into shape to form the base-plate *A*, bearing-plate *c*, and providing two eye-holes on opposite sides, to support the eccentric on both sides, in combination with an eccentric, *g*, also struck out of one
30 piece of metal, having the pivots *g' g'*, and bent into shape to inclose the operating-spring *h*, no soldering or riveting being required anywhere in the structure, whereby the same is made with less labor and much more quickly
35 and cheaply than other similar structures, the spring is not likely to be broken off, as in cases where the spring is soldered onto some part, there are fewer parts, they are simpler,

can be made stronger, and occupy less space, are less liable to get out of order, will wear 40 better, and are more convenient in use than any similar structures heretofore made.

This device can be cheaply made and easily applied, and, if desired, can be made so small as not to project more than an ordinary shoe- 45 button.

I am aware of Letters Patent No. 213,666, in which a shoe-fastener is described having a cam operated by a spring; but in that structure it is necessary to push the lace in end- 50 wise between the cam and the bearing, and it is therefore practically convenient only for stiff laces or cords, and in such structure, also, it is necessary to hold the cam away from the bearing, in order to effect a disengagement 55 of the lace and while effecting such disengagement, and I do not claim any such structure; but,

Having thus described my invention, what I claim as new, and desire to secure by Letters 60 Patent, is—

As an improved article of manufacture, the lace-catch described, consisting of the carrying part *A*, having bearing-plate *c*, a portion, as *b*, uniting two pivot-supports, *c d*, to sup- 65 port the eccentric on both sides, in combination with the eccentric *g*, having pivots *g' g'*, and inclosing the spring *h*, and provided with an exposed opening between the bearing-plate and the eccentric to receive the lace, substantially as specified.

WILLIAM P. QUENTELL.

Witnesses:

ERNEST H. PILSBURY,
FRANK W. ELY.