

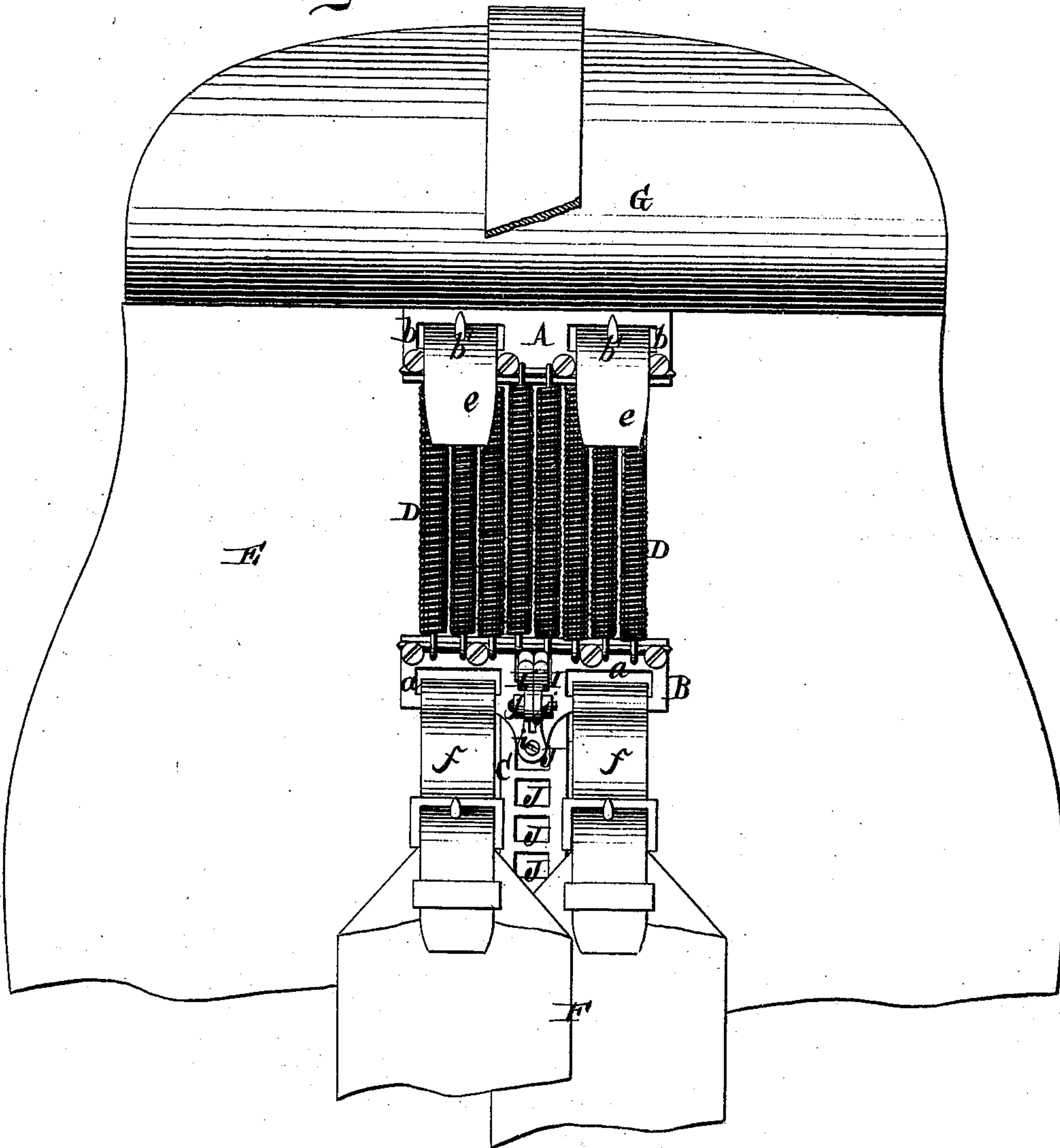
A. STEINBACH & H. ZWANZIGER.

BUCKLE.

No. 176,702.

Patented April 25, 1876.

Fig. 1.



Witnesses.

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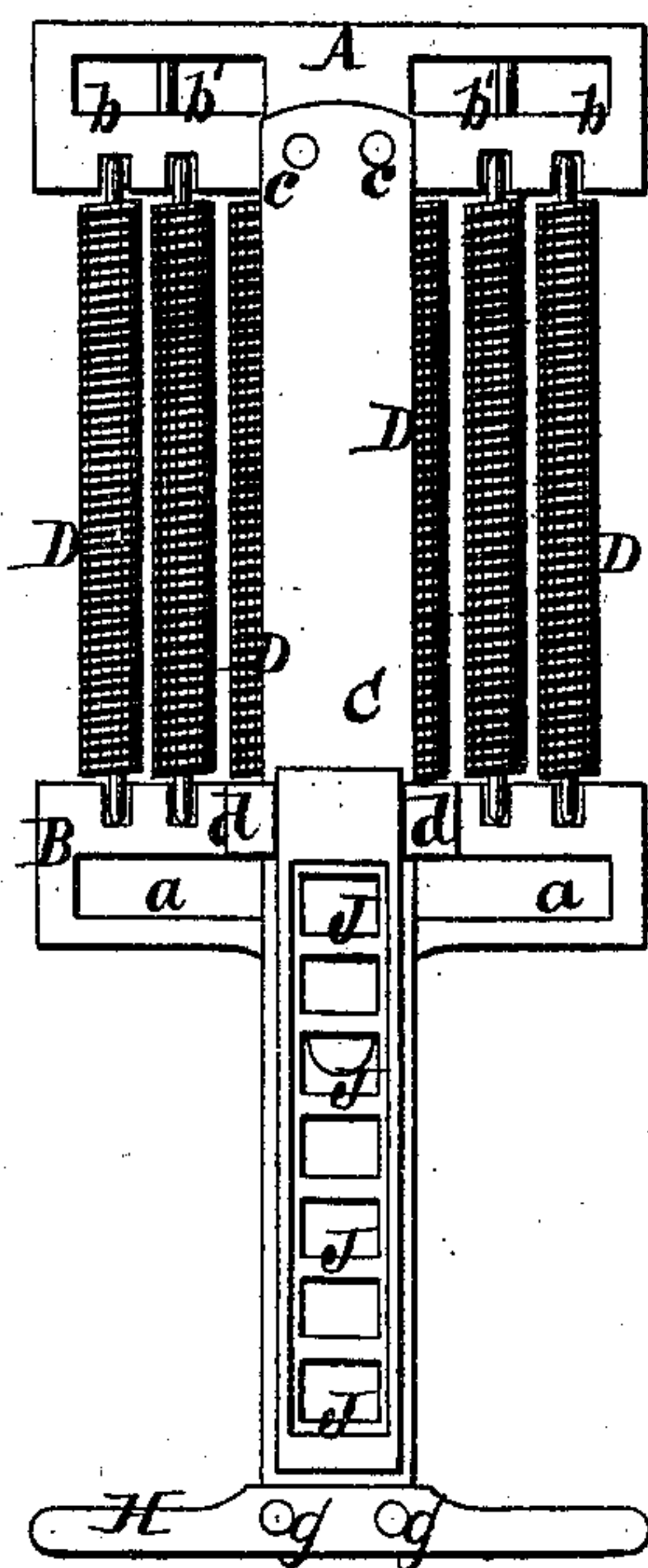
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Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

ALOIS STEINBACH AND HEINRICH ZWANZIGER, OF VIENNA, AUSTRIA.

IMPROVEMENT IN BUCKLES.

Specification forming part of Letters Patent No. **176,702**, dated April 25, 1876; application filed April 6, 1876.

To all whom it may concern:

Be it known that we, ALOIS STEINBACH and HEINRICH ZWANZIGER, both of Vienna, in the Empire of Austria, have invented a new and Improved Buckle, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a front view of our buckle applied to a saddle. Fig. 2 is a rear view thereof detached. Fig. 3 is a longitudinal central section.

Similar letters indicate corresponding parts.

Our invention relates to a buckle which is especially adapted to securing saddle-girths, but which is applicable to a variety of other uses. It consists in two cross-heads, each of which is so made as to be capable of receiving the end of a strap or straps, and one of which is fixedly secured to a longitudinal bar, while the other is arranged to move back and forth on such bar, the last-named movable cross-head being, moreover, connected to spiral springs, one or more, which are so arranged that if the fixed cross-head is attached to a saddle, and the movable cross-head is attached to the end of a girth by which the saddle is fastened on a horse, the girth is kept always in a taut condition by the action of the spiral springs on the movable cross-head, and particularly when, during the act of riding, the abdomen of the horse becomes smaller. It consists, also, in combining, with the longitudinal bar and concomitant parts of the buckle, a stop, which is adapted to limit the forward movement of the movable cross-head, and thus prevent overstraining of the springs. Further, in combining, with the movable cross-head, one or more hooks, which are so arranged as to catch in a rack formed in or on the longitudinal bar, in such a manner as to prevent a forward movement of the movable cross-head after it has been adjusted in the desired position, and thereby obviate any laxity in the girth. These hooks, however, are so arranged that they do not interfere with the tightening of the girth by the action of the springs.

In the drawings, the letters A B designate the two cross-heads of our buckle, and C is the longitudinal bar. The cross-heads are

provided, respectively, with slits *a b*, the slits *b* of the head A having tongues *b* arranged therein, so that the cross-heads are adapted to receive the ends of buckling-straps, as seen in Fig. 1. If desired, the slits *a* of the cross-heads B may also be provided with tongues. The longitudinal bar C is, in this example, made flat. The cross-head A is fixedly secured to the longitudinal bar by means of screws or rivets *c*, (see Fig. 2;) or it may be formed in one piece with the bar, while the cross-head B is provided with lips *d*, which are bent over the edges of the longitudinal bar, so that such head is adapted to move back and forth thereon. The letter D designates a series of spiral springs, which form a stay or support for the movable cross-head B.

Any desired number of springs may be used; or, if seen fit, only a single spring may be used. The respective ends of the springs are, in this example, fastened to the cross-heads A and B, and I prefer this arrangement; but, if seen fit, one of the ends thereof may be fastened to a suitable part of the longitudinal bar C.

The manner of using our buckle is represented in Fig. 1, where it is interposed between a saddle, E, and saddle-girth F, the fixed head A being attached to the saddle through straps *e*, while the movable head B has attached to it the ends *f f* of the girth. When the saddle is placed on a horse, and the girth has been passed under his abdomen, the end of the girth is secured to the movable head B.

In case the abdomen of the horse becomes smaller after or during the act of riding, the spiral springs D, acting on the cross-head B, will take up any laxity that may occur in the girth in consequence of such diminution. The girth, hence, is always adapted to the state of the horse's abdomen, and is kept always at the proper tension to prevent shifting of the saddle.

When our buckle is applied to a saddle, it is placed under the flap G, which, in the drawing, is shown as being lifted up to expose the buckle. In order to prevent overstraining of the springs D in the act of tightening the girth, we apply to the longitudinal bar C a stop, H, (see Fig. 2,) which, by limiting the forward

movement of the movable head B, serves to effect this object. The stop H has the form of a cross-piece, which is secured to the longitudinal bar by means of screws or rivets *g*, or formed with the bar.

It is desirable that after the girth has been tightened it be prevented from yielding or loosening automatically beyond a certain point, and to this end hooks are attached to the movable head B, in such a manner as to catch in a rack formed by a series of holes, J, in the longitudinal bar C. Two hooks are, in this example, used, which are placed side by side, and pivoted between lugs *j*, projecting from the surface of the movable head. The hooks, moreover, are subjected to the action of a spring, *i*, which has a tendency to throw and retain them in engagement with the rack J.

When the girth is secured to the buckle, the hooks I are thrown back, so that the movable head B is free to be moved forward against the action of the springs, while if, after the girth has been properly tightened, the hooks I are returned to their normal position, and made to catch in the rack J, a farther forward movement of the movable head is prevented.

It will be noticed that while the hooks I serve to prevent a forward movement of the movable cross-head B, they do not interfere

with its rearward movement or tension by the action of the springs. The object of using more than one hook I is simply to increase the effect thereof, and, if desired, the hooks may be made of different lengths, so as to catch in different parts of the rack J.

Our improved buckle is adapted to be used as an attachment to straps for securing packages of various kinds, besides being used on saddle-girths.

What we claim as new, and desire to secure by Letters Patent, is—

1. A buckle constructed of the fixed cross-head A, movable cross-head B, longitudinal bar C, and spiral springs D, one or more, the whole being combined and adapted to operate substantially as described.

2. The combination of a stop, H, with the longitudinal bar C, substantially as described, and for the object specified.

3. The combination of one or more hooks, I, and a rack, J, with the movable cross-head B and longitudinal bar C, when arranged to operate substantially as described.

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Witnesses:

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