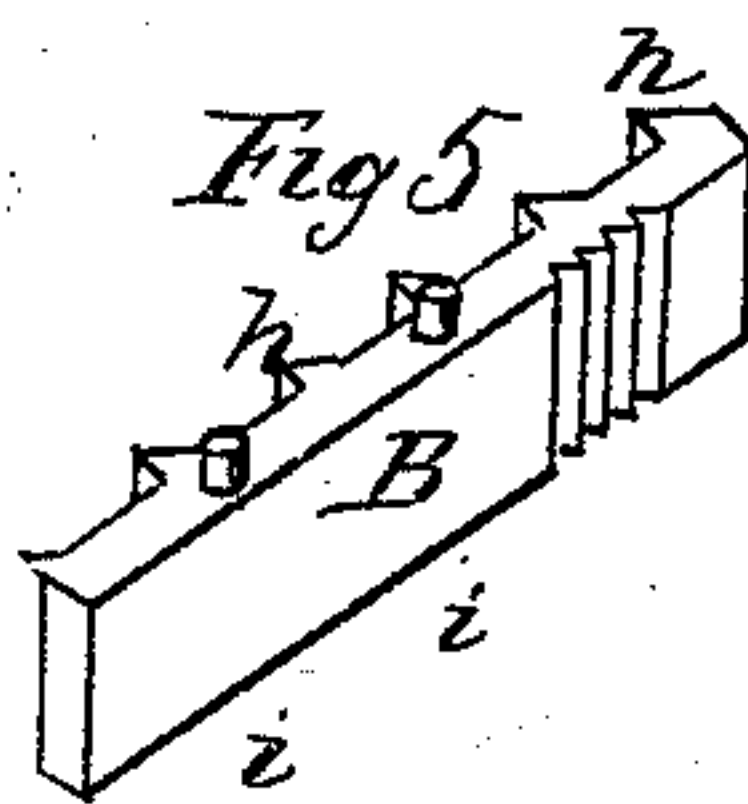
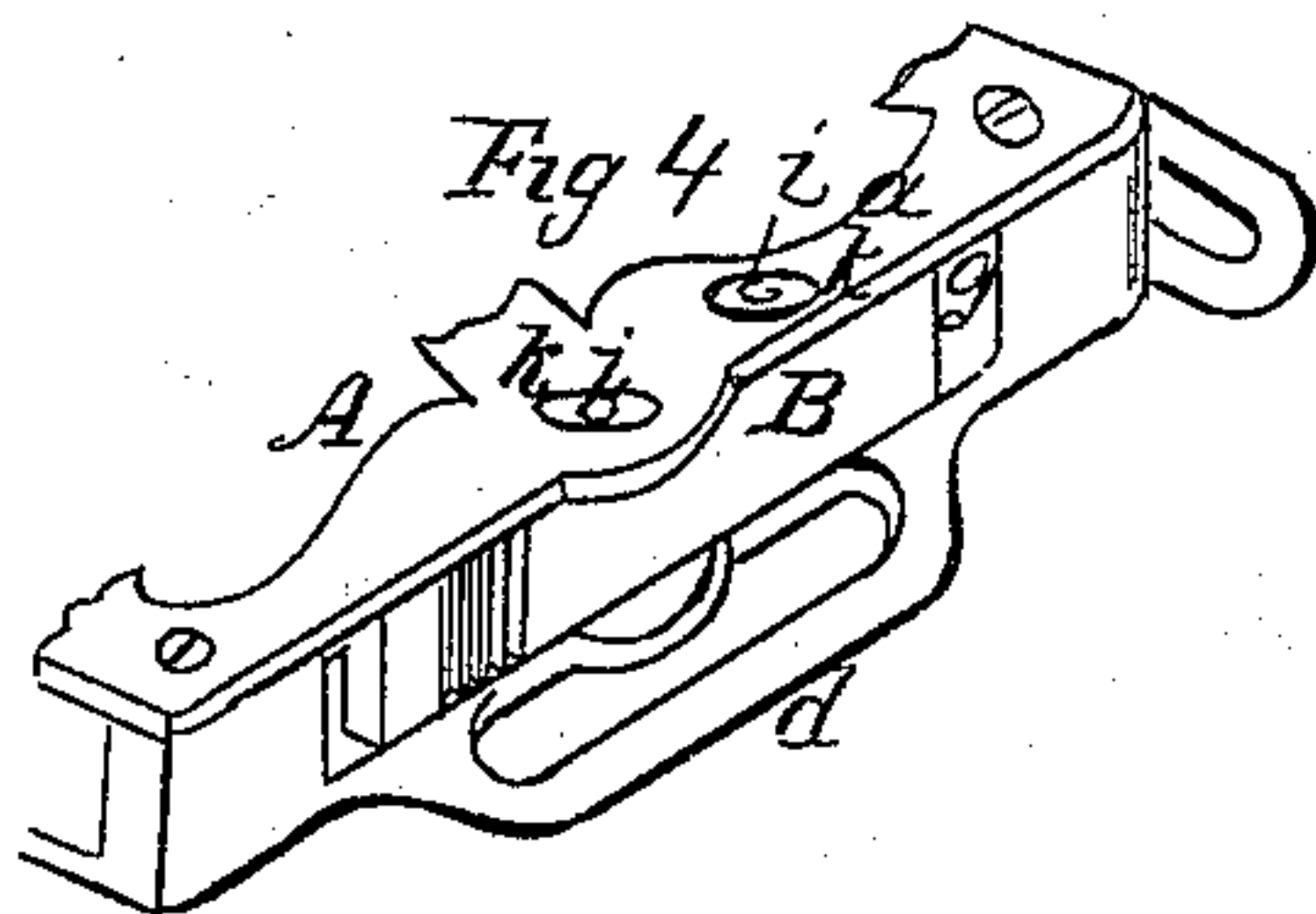
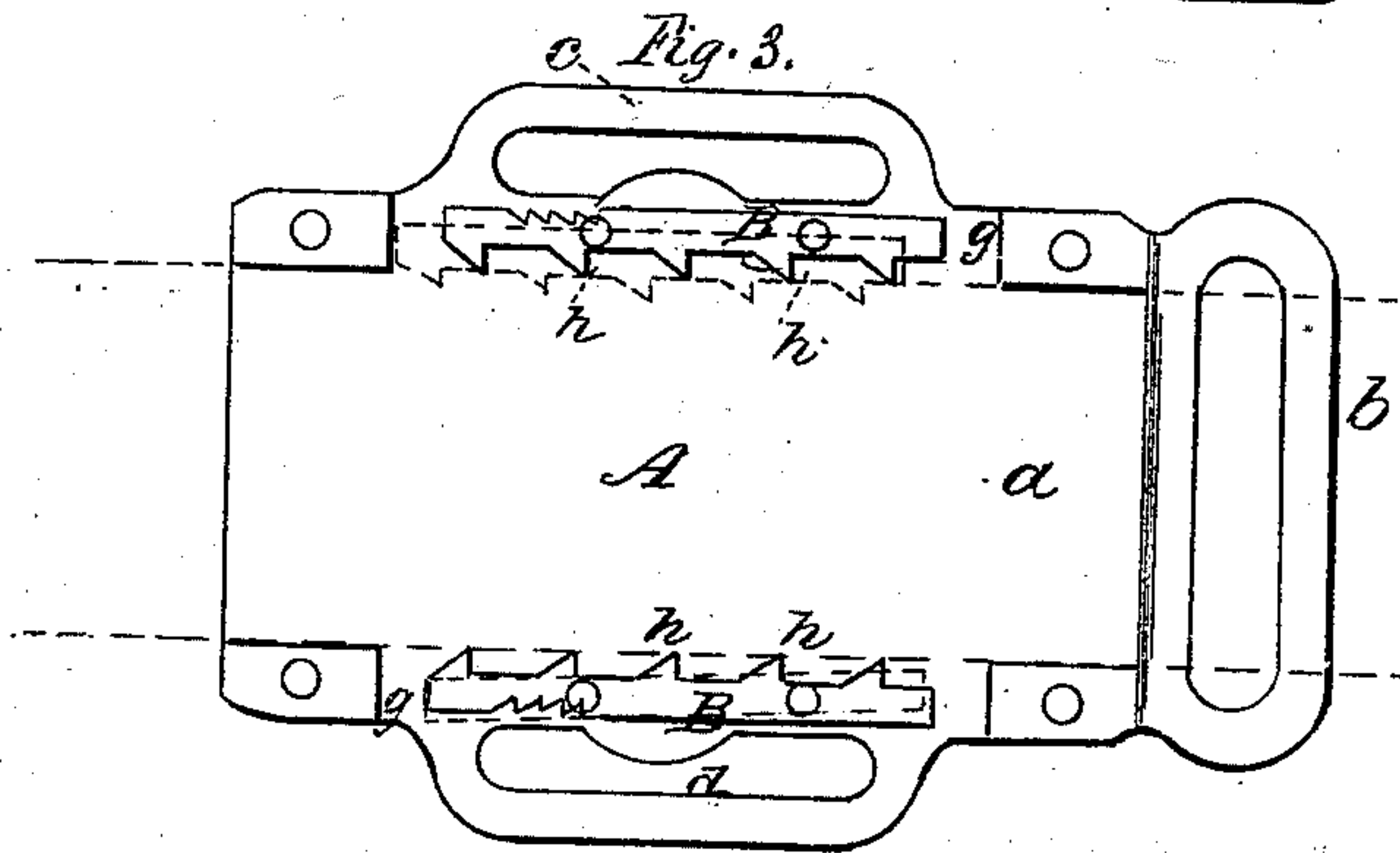
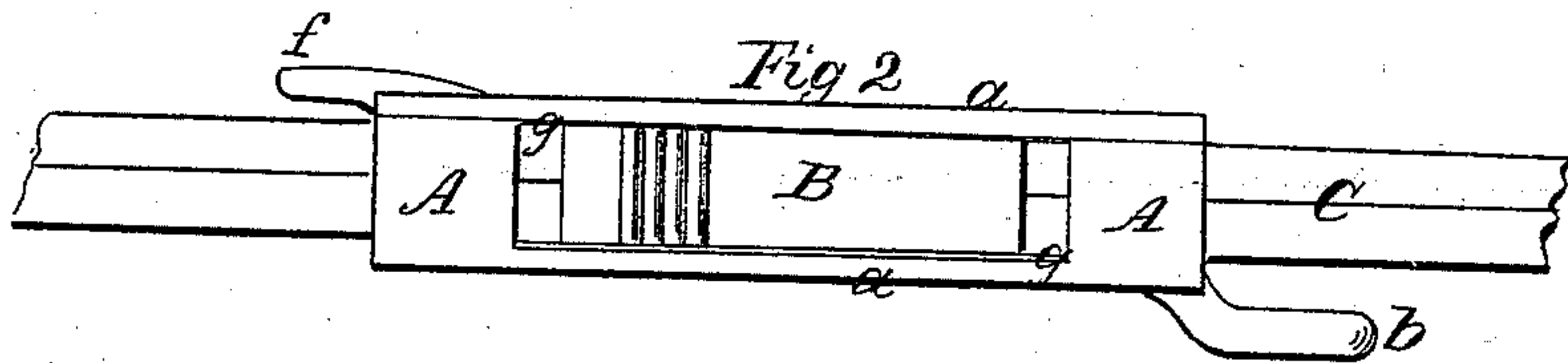
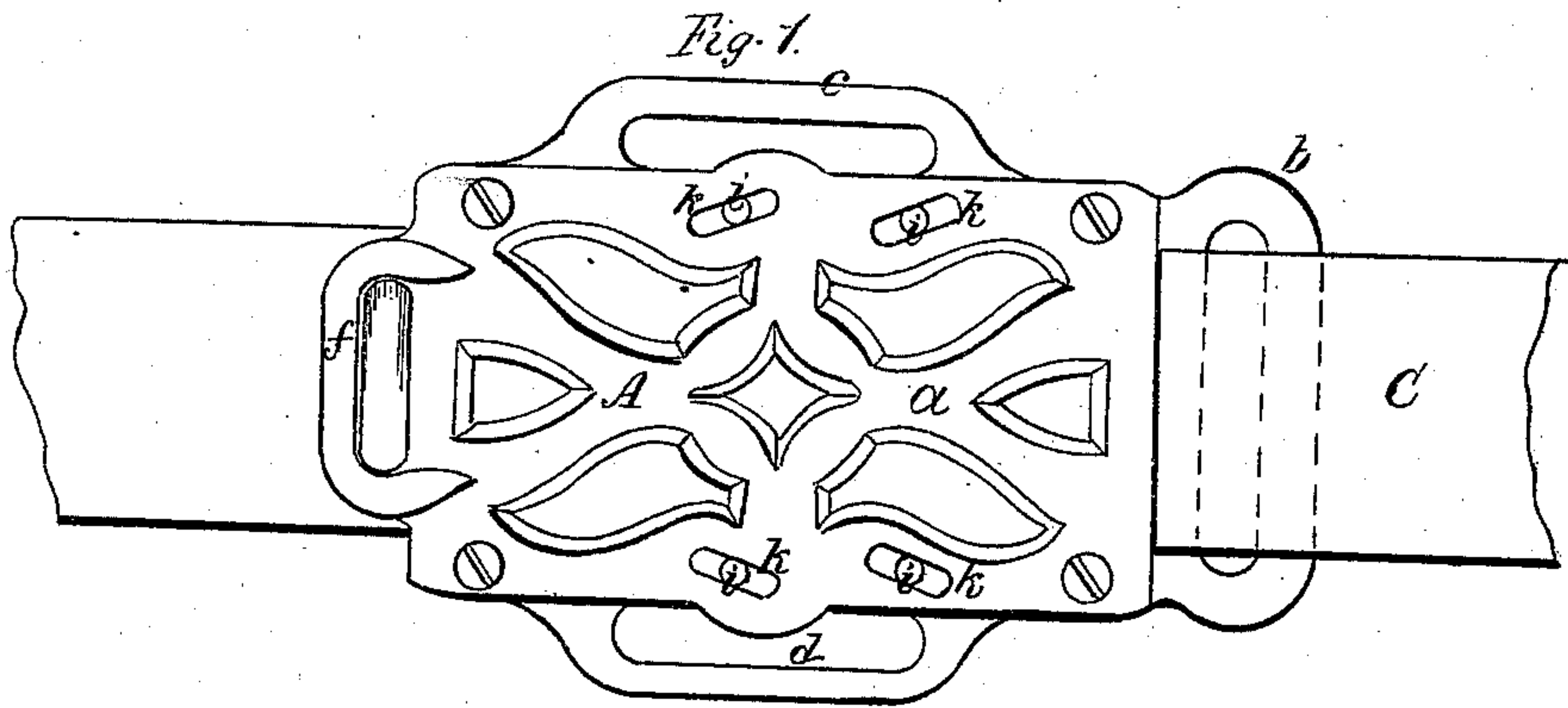


*G. S. Caldwell,*

*Buckle.*

*No. 63,782.*

*Patented Apr. 16, 1867.*



*Witnesses.*  
*Chas. H. Spencer*  
*Herb. Everest*

*G. S. Caldwell,*  
*By J. Francis & Co.,*  
*Attys.*

# United States Patent Office.

GEORGE S. CALDWELL, OF SYRACUSE, NEW YORK.

*Letters Patent No. 63,782, dated April 16, 1867.*

## IMPROVED HARNESS BUCKLE.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE S. CALDWELL, of Syracuse, in the county of Onondaga, and State of New York, have invented a certain new and useful Improvement in Buckles for harness tugs and other similar uses; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is an elevation of my improved buckle with a tug resting therein.

Figure 2, an edge view of the same.

Figure 3, a face view, with one side of the buckle removed.

Figure 4, perspective view of one edge of the buckle.

Figure 5, a similar view of one of the jaws, removed.

Like letters of reference indicate corresponding parts in all the figures.

This improved buckle is intended more particularly for holding the tugs of harness, though it is applicable for many other uses.

This invention consists in the combination and arrangement with the buckle frame of two toothed jaws, situated in the opposite edges of the frame, and having pins resting in inclined slots or arranged in an equivalent manner, so that when the tug or strap is applied between the jaws the drawing action will cause the jaws to approach each other and embed the teeth in the edges of the said tug or strap instead of in the faces, as in other clamping buckles, by which much wear and strain on the leather are prevented.

As represented in the drawings, A is the buckle frame, made up of the sides *a a*, preferably of skeleton form to lessen the weight, and having a central passage through for the reception of the tug or strap C. The frame is provided with loops or eyes *b c d f*, as shown, for the attachment, respectively, of the hame-strap, the pad-strap, the belly-band, and the breeching. In the edges of the buckle frame are made openings *g g*, of suitable size and extent to receive jaws B B. These jaws have sharp teeth *h h*, pointing forward or in such a direction as to catch the tug or strap as the horse draws forward. They are also provided with pins or bearings *i i*, which rest in inclined slots *k k* of the sides of the frame, or have some equivalent arrangement, so that when the tug catches the teeth the jaws will clamp down upon its edges.

The device thus constituted is very effective in holding the tug or strap in place and obviating wear upon the leather. It will be seen that the pins of the jaws playing freely allow the latter to adapt themselves exactly with the contact surface of the tug, so that a bearing is produced the whole length of the jaws. The teeth embed themselves directly in the edges of the tug and thus produce a firm hold.

Buckles have before been employed in which wedges are made to clamp on the face or broadside of the leather as it runs through, but since the bearing comes on the flat part or at right angles to my bearing, the strain at a given point soon wears the leather through or weakens it so as to cause it to break. In my arrangement there is no difficulty of this kind, for the bearing coming directly against the edges, instead of the broadside of the leather, leaves an extended thickness between the bearing jaws which can never wear out or break. The hold is also much more effective. The jaws, by being situated at the edges of the frame, leave the whole central space free for the reception of the tug; therefore the buckle can be made much thinner than in those devices where a wedge is employed bearing against the flat sides of the strap.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination and arrangement of the buckle, as herein set forth, viz, with the toothed jaws B B resting in the edges of the frame and bearing upon the edges of the tug or strap by means of the pins and inclined slots *i k*, or equivalent, as specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

GEO. S. CALDWELL.

Witnesses:

R. F. OSGOOD,

FRED. A. HATCH.