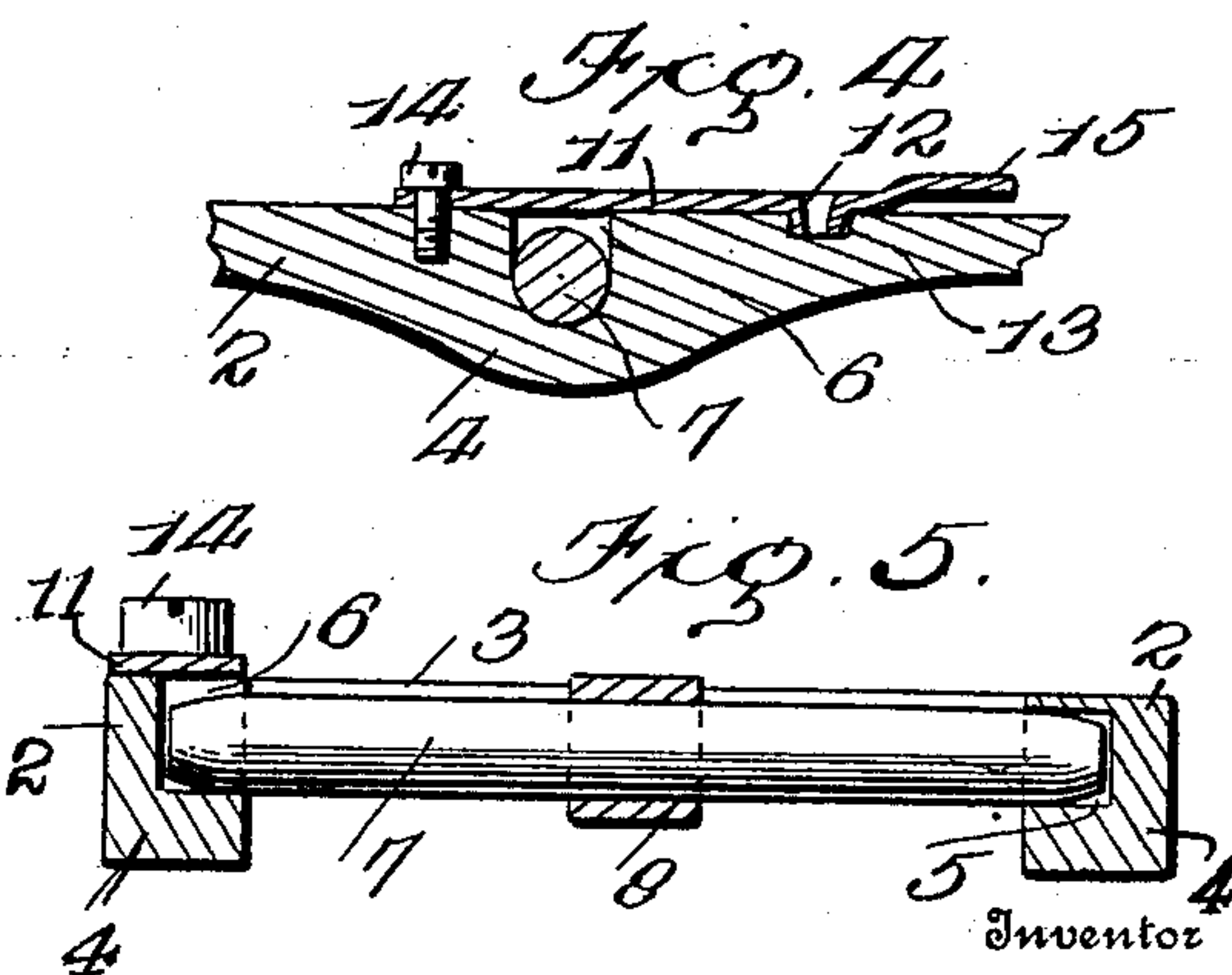
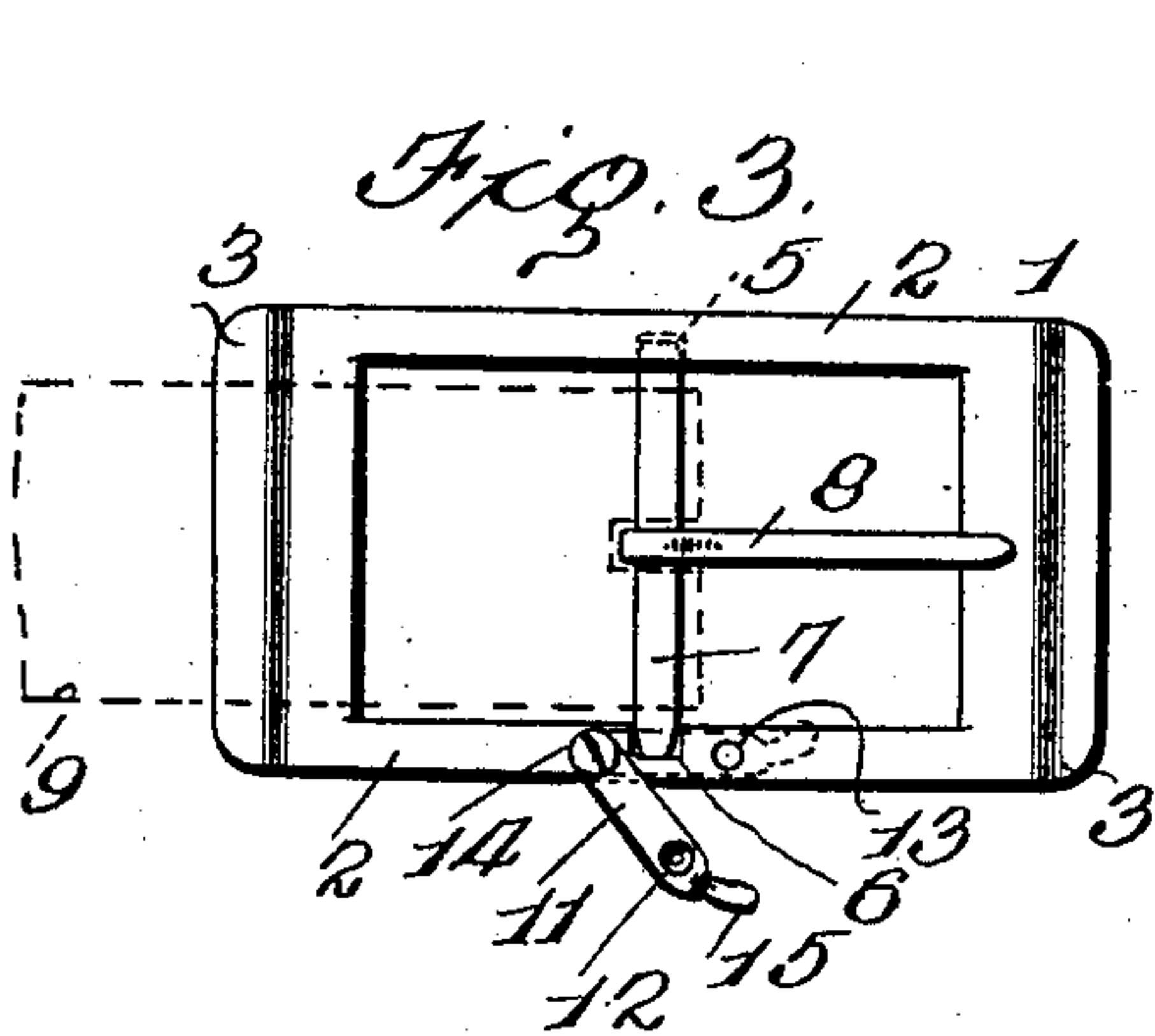
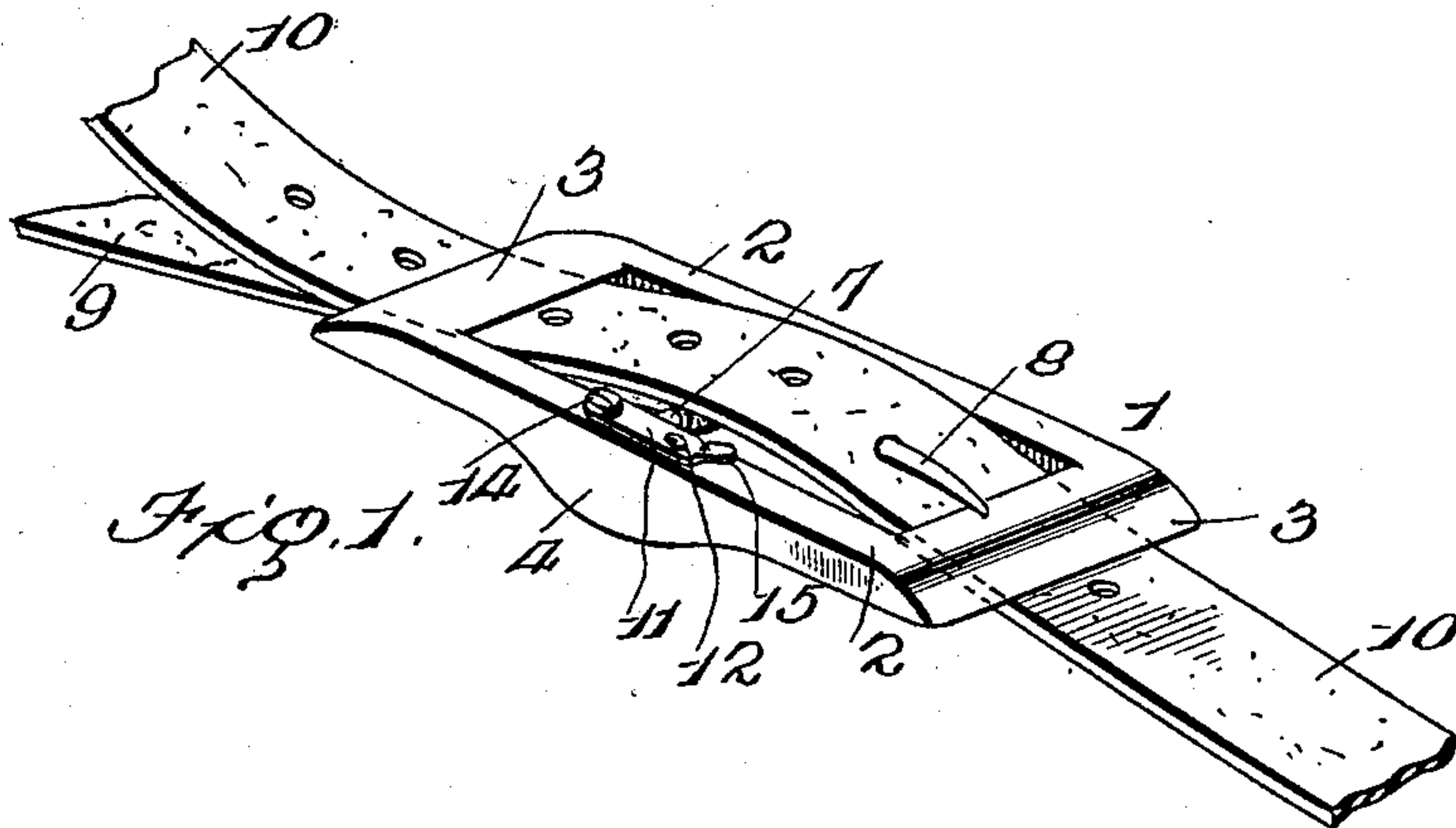


W. R. SMITH.
CROSS LINE BUCKLE.
APPLICATION FILED JUNE 3, 1908.

910,878.

Patented Jan. 26, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM R. SMITH, OF COLOMA, MICHIGAN.

CROSS-LINE BUCKLE.

No. 910,878.

Specification of Letters Patent.

Patented Jan. 26, 1909.

Application filed June 3, 1908. Serial No. 436,453.

To all whom it may concern:

Be it known that I, WILLIAM R. SMITH, citizen of the United States, residing at Coloma, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Cross-Line Buckles, of which the following is a specification.

The present invention has for its object to devise a cross-line buckle designed in its particular adaptation for use in connection with reins of harness to connect the cross-lines with the long lines in such a manner as to permit disengagement of the cross-lines from the long lines without necessitating the threading of the whole line, which causes much trouble.

Another object is to produce a device which is simple in construction, durable in use, and which may be cheaply manufactured.

The invention further consists of the novel features and details of construction which hereinafter will be set forth, illustrated and claimed.

Referring to the drawings forming a part of the specification: Figure 1 is a perspective view of my improved buckle, showing it applied. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a top plan view, the long line being omitted. Fig. 4 is a detail longitudinal sectional view of the central portion of one of the longitudinal side bars. Fig. 5 is an enlarged transverse sectional view through the central portion of the buckle.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The frame 1 of the present buckle is substantially rectangular in form and includes longitudinal side bars 2 and end bars 3. The central portions of the side bars are vertically thickened or enlarged as at 4, and one of said thickened portions is formed with a socket 5 on its inner side. A vertical groove or slot 6 is formed in the inner side of the other thickened portions 4, which slot is open at its upper end and extends only partly down the depth of the buckle, thus being closed at the lower end.

In the socket 5 and groove or slot 6 are journaled the ends of the cross-bar 7 to which the tongue 8 is rigidly secured. The tongue may be formed integral with the cross-bar. The cross-line 9 is intended to be at-

tached to the cross-bar 7 in any suitable manner, and the tongue 8 is adapted to fix the adjustment of the long line 10 in relation to the frame 1. A catch 11 covers the open side of the groove 6 and prevents displacement of the cross-bar. This catch is pivoted at one end to the side bar having the groove, upon one side of said groove, and has a projection 12 near its other end adapted to engage a depression 13 in said side bar at the opposite side of the groove 6. The pivot for the catch may be secured permanently to the buckle-frame or may be in the form of a detachable screw as indicated at 14. The end of the catch 11 is slightly offset to form a finger-engaging portion 15.

To apply my buckle to any point of the strap, pass a loop formed in any part of the strap 10 up through the buckle-frame 1, insert the cross bar 7 in a position longitudinally with the length of the frame by means of the short strap 9, turn said cross-bar into an approximately transverse position, which then enables one end of the cross-bar to be inserted in the socket 5 which is effected by a longitudinal movement of the cross-bar transversely of the frame, then draw the other end of the cross-bar 7 down to cause the end to engage in the slot or groove 6, swing the catch 11 to its normal position so as to cause the projection 12 to engage the depression 13 when the buckle is ready for use.

To remove the strap from the buckle, it is only necessary to exactly reverse the operation: Push the loop of the long strap up through the frame of the buckle between the ends thereof, thereby withdrawing the tongue 8 from the perforations in said strap, swing the catch 11 outwardly from the frame far enough to leave the end of the groove 6 open, raise the cross-bar, to which the end of the short strap 9 is attached, by pressing upwardly upon the said short strap until the ends of the bar are free from the groove and socket, turn the cross-bar to prevent the ends thereof reengaging in the frame, draw the cross-bar out of the frame of the buckle, and the loop of the long strap, not having any cross-bar to hold it in, will also slip out of the frame, and the buckle will be free.

From the above description, taken in connection with the accompanying drawings, it will be understood that I have devised a cross-line buckle which may be readily applied, is simple, and which may be cheaply manufactured, and is both reliable and

adapted to be easily manipulated when adjustment is to be effected, and which furthermore is safe and not liable to become easily loosened and detached.

5 Having thus described the invention, what is claimed as new is:

1. As an improved article of manufacture, the herein described buckle, comprising a frame embodying end and side bars, one of
10 said side bars having a socket, and the other a groove, a cross-bar provided with a tongue and having one end inserted in said socket and its opposite end slipped into the groove, and a catch for closing the open end of said
15 groove to retain the cross-bar in place therein.

2. As an improved article of manufacture, the herein described buckle, comprising a

frame embodying end and side bars, one of said side bars having a socket, and the other 20 a groove, a cross-bar provided with a tongue and having one end inserted in said socket and its opposite end slipped into the groove, and a catch for closing the open end of said groove to retain the cross-bar in place there- 25 in, said catch being pivoted at one end and having a projection near its opposite end to engage with a depression of the buckle-frame to form interlocking means and to hold said catch in place. 30

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM R. SMITH. [L. S.]

Witnesses:

WILLIAM W. HOCKER,
ALLEN W. BAKER.