(No Model.)

J. FORSHEIM.

BUCKLE.

No. 562,953. Patented June 30, 1896.

Fig. 1.

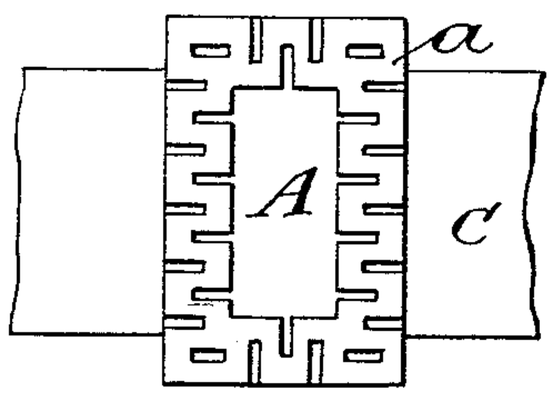


Fig. 2.

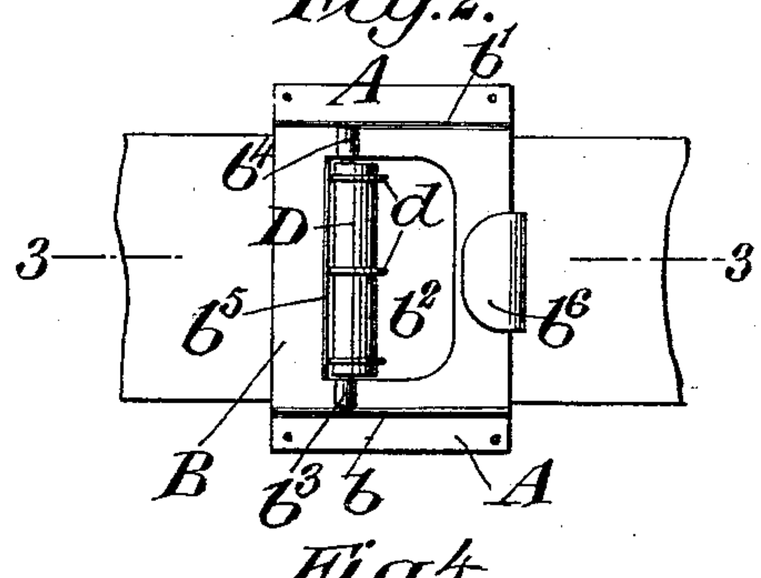


Fig. 3.

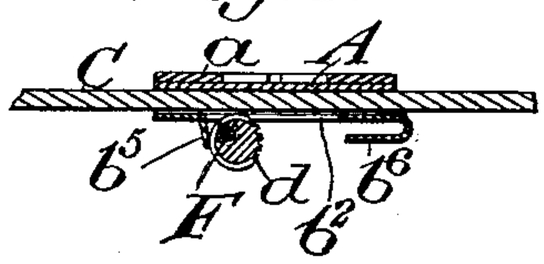


Fig. 4.

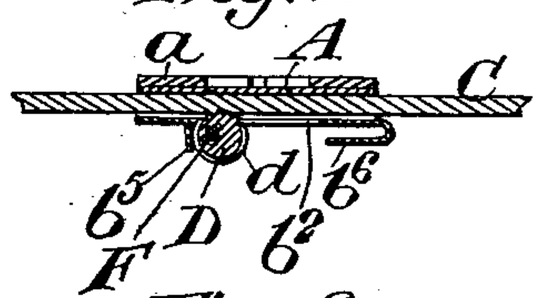


Fig. 5.

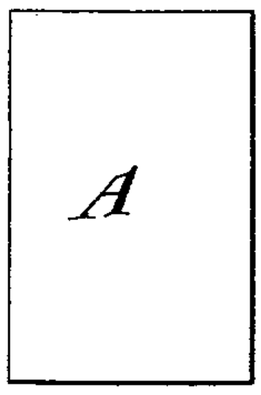


Fig. 6.

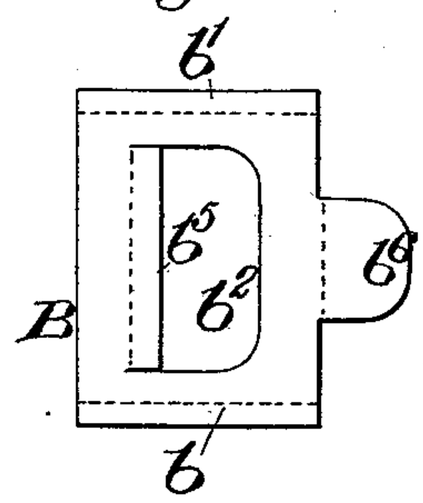


Fig. 7.

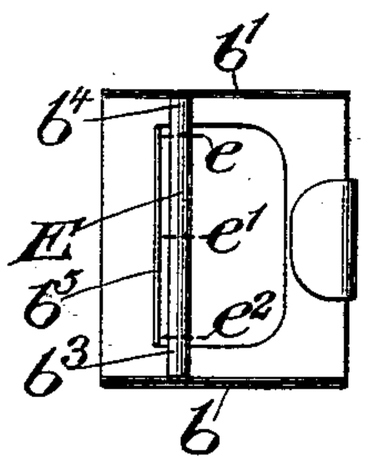
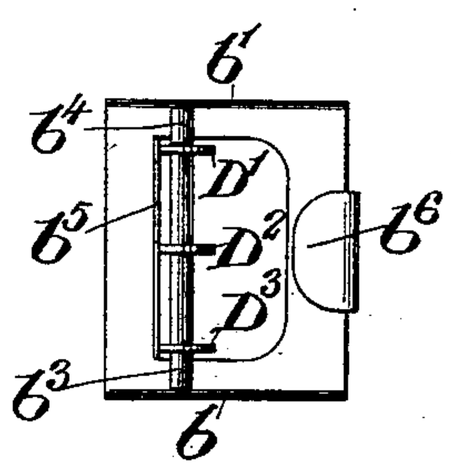


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOSEPH FORSHEIM, OF NEW YORK, N. Y.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 562,953, dated June 30, 1896.

Application filed March 24, 1896. Serial No. 584,601. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH FORSHEIM, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Buckles, of which the following is a specification.

My invention relates to an improvement in buckles in which the strap or belt is arranged to pass back of a front plate and to be locked and released at pleasure between the front plate and one or more cams supported by a back plate spaced from and fixed to the front plate.

In the accompanying drawings, Figure 1 is a front view of the buckle as it appears in use. Fig. 2 is a back view. Fig. 3 is a transverse section from front to rear on the line 3 3 of Fig. 2, showing the cam swung out of engagement with the strap or belt. Fig. 4 is a similar section showing the cam swung into engagement with the strap or belt. Fig. 5 is a plan view in detail of the front plate. Fig. 6 is a plan view in detail of the blank which forms the back plate as the latter appears after it is cut and before it is struck up into shape. Fig. 7 is a view of the back plate, showing it struck up into shape and showing the tube which is to form sockets for mounting the cams in position thereon; and Fig. 8 is a similar view showing the cams in position on the spindle inserted through the tubular sockets.

The front plate is denoted by A. In the form shown in Fig. 1 it is embellished by a Grecian border *a*, secured to its face. The back plate is denoted by B. Its central portion to the width of the belt or strap C is spaced from the front plate a sufficient distance to permit the belt or strap to render freely between the two, and its ends *b b'* are soldered or otherwise secured to the back of the front plate. The back plate is provided with a central opening b^2, in which there is mounted an eccentric, shown in Figs. 1, 2, 3, and 4 as an elongated cylinder D, provided at intervals with projecting ridges *d* for gripping the strap or belt, the cylinder D being pivoted in sockets b^3 b^4, made fast to the back plate B.

In proximity to the eccentric D there is provided a back-stop b^5, projecting rearwardly from the edge of the opening b^2 and in position to prevent the eccentric from swinging over or away from the surface of the strap or belt sufficiently far to carry it past center out of gripping contact with the strap or belt, and yet permitting the eccentric a sufficent amount of movement away from the strap or belt to release it when desired to adjust the buckle along the strap or belt. The back-stop b^5 is preferably formed integral with the back plate in the manner which will hereinafter more particularly appear. The advance edge of the belt B is provided with a hook b^6 for engaging a gripping-eye of any well-known or approved form, secured to the opposite end of the strap or belt. (Not shown.)

To insure a ready grip upon the surface of the strap or belt, the peripheries of the rods *d* on the eccentric D may be serrated.

The method of constructing the buckle, which I have found from experience to be economical and consistent with strength and durability, is as follows: The front plate A, exclusive of the ornamentation, is cut in the form which the buckle is intended to assume, in the present instance an oblong rectangular form. The back plate B is cut of a width corresponding to or less than the width of the front plate A and of a length greater than the width of the strap or belt to be held, by twice the distance which the two plates are to be separated, so as to allow for striking up the shoulders. (Indicated by dotted lines in Fig. 6.) The part b^5, which is to form the back-stop for the eccentric, is severed from the body of the blank at its ends, as represented in Fig. 6, and the part which is to form the hook b^6 is cut as a projection from the edge of the body of the blank. The blank as represented in Fig. 6 is then struck up into the form shown in Figs. 7 and 8, throwing the back-stop rearwardly from the surface of the plate and turning the portions of the plate, indicated by dotted lines in Fig. 6, at right angles to the body of the plate to form the spacing ends *b b'*. The hook b^6 is also formed by bending the projection at the edge of the plate over toward its rear face. The next step is the securing of the socket-pieces b^3 b^4 to the rear plate. It is essential that these

socket-pieces be perfectly in line, in order that the eccentric may be mounted so as to swing evenly toward and away from the surface of the strap or belt and particularly so that the pintle which extends through the sockets and eccentrically through the cam or eccentric can be inserted without difficulty. To insure the alinement of the said sockets with great facility and with absolute certainty, I first secure to the back of the back plate a tube E, from which the two sockets are to be subsequently formed. After the tube E is mounted in its position I cut it at suitable intervals, depending upon the particular form of cam or eccentric that I propose to employ.

By the form shown in Fig. 7 I have represented in dotted lines e e' e^2 three cuts, the two cuts e and e^2 being sufficient to remove the central portion of the tube, leaving the two sockets b^3 b^4 in position and in perfect alinement. An eccentric similar to the eccentric D (shown in Fig. 2) may then be inserted between the two socket-pieces b^3 b^4 and a pintle F (see Figs. 3 and 4) may be inserted through the sockets and their eccentric to complete the structure.

In the form shown in Fig. 8 the additional cut e' will divide the central portion of the tube E into tubular sections, which may be utilized as spacing-sleeves to separate a series of thin disk eccentrics D' D^2 D^3, through which the pintle may be inserted in the same manner as the eccentric D; or the central portion of the tubes between the cuts e e^2 might be left integral and the thin disk eccentrics D' D^2 D^3 secured in position on it, after the manner of the ridges d on the eccentric D, and the pintle then passed through the sockets and tube. The structure is completed by securing the back plate, with its eccentric mounted thereon, to the front plate, either with or without attaching to the face of the front plate the ornamental border.

By the above structure the buckle may be adjusted along the strap or belt to take up slack or to lengthen the strap or belt, and when adjusted it may be hooked and unhooked from the opposite end of the belt as though it were permanently secured thereto. The back-stop b^5 will hold the eccentric or eccentrics at all times swung far enough toward the belt, so that the slightest pressure thereon will be sufficient to move them into gripping contact under the strain of the belt.

What I claim is—

1. A buckle, comprising a front plate, a back plate secured to and spaced from the front plate to permit a strap or belt to pass between them, the said back plate being provided with an opening therethrough, a cam or eccentric mounted on the back plate in position to swing through the opening into engagement with the strap or belt, the said back plate being further provided with a back-stop projecting from its surface to limit the throw of the cam or eccentric away from the surface of the belt, substantially as set forth.

2. The buckle, comprising a front plate, a back plate secured to and spaced from the front plate and provided with an opening therethrough, a cam or eccentric mounted on the back plate in position to swing through the opening into engagement with the surface of the strap or belt, the said back plate being provided with a stop struck up from its surface into position to limit the throw of the cam or eccentric away from the surface of the belt, substantially as set forth.

JOSEPH FORSHEIM.

Witnesses:
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