No. 885,064. PATENTED APR. 21, 1908.

H. W. LUHMANN.

BUCKLE.

APPLICATION FILED APR. 13, 1907.

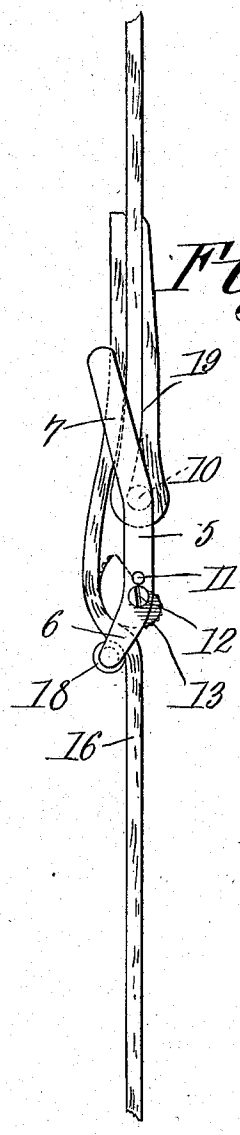


Fig. 1.

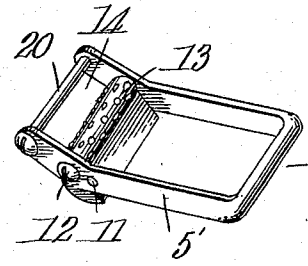


Fig. 3.

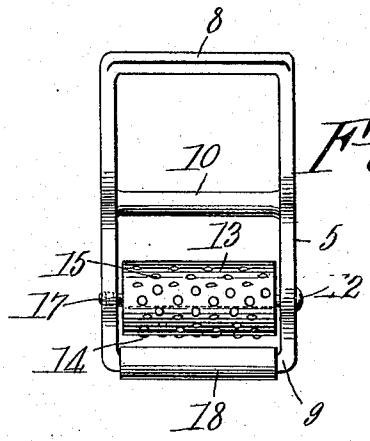


Fig. 2.

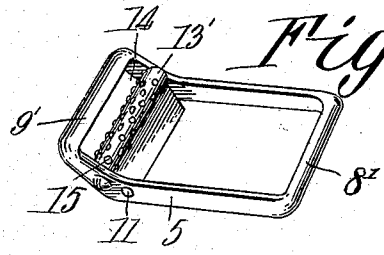


Fig. 4.

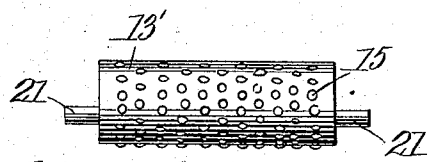


Fig. 5.

Henry W. Luhmann,
INVENTOR.

By C. A. Snow & Co.
ATTORNEYS

WITNESSES:
E. G. Steinmetz
L. P. Ackerson

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY W. LUHMANN, OF SAN FRANCISCO, CALIFORNIA.

BUCKLE.

No. 885,064. Specification of Letters Patent. Patented April 21, 1908.

Application filed April 13, 1907. Serial No. 368,125.

To all whom it may concern:

Be it known that I, HENRY W. LUHMANN, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Buckle, of which the following is a specification.

This invention relates to buckles and has for its object to provide a comparatively simple and inexpensive device of this character by means of which a strap or other flexible medium may be adjusted longitudinally of the buckle and securely clamped in adjusted position without the employment of the usual pivoted tongue.

A further object of the invention is to provide a buckle having a cam or eccentric pivotally mounted thereon and provided with projections adapted to engage and clamp the strap in contact with the adjacent buckle frame.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency as well as to reduce the cost of manufacture.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a side elevation of a buckle constructed in accordance with my invention showing the same in position on a strap. Fig. 2 is a top plan view of the buckle detached. Fig. 3 is a perspective view of a modified form of buckle. Fig. 4 is a similar view of a further modification. Fig. 5 is a top plan view of the cam or eccentric shown in Fig. 4 detached.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved buckle forming the subject matter of the present invention comprises a substantially rectangular frame preferably cast, stamped or otherwise formed of metal and consisting of longitudinal side bars 5 having their opposite ends deflected laterally to form inclined extensions 6 and 7 connected by end bars 8 and 9, there being an intermediate transverse cross bar 10 connecting the side bar at the juncture of the inclined extension 7 with said side bars, as shown. The intermediate straight portions of the side bars 5 are formed with a plurality of transversely alined openings 11 adapted to receive a transverse rod or pin 12 upon which is mounted for pivotal movement a cam or eccentric 13.

The cam or eccentric 13 is spaced from the adjacent end bar 9 of the buckle frame to form a strap-receiving opening 14, said eccentric being provided with a plurality of peripheral projections 15 adapted to engage and clamp the loose end of the strap 16 in engagement with the end bar 9 thereby to lock the strap against longitudinal movement.

One end of the pin 12 is provided with terminal threads 17 which engage corresponding threads in the adjacent opening or perforation 11 so that the pin may be removed and the cam or eccentric adjusted longitudinally of the buckle frame by means of a plurality of openings thereby to vary the width of the strap-receiving opening 14 to accommodate straps of different thicknesses.

A cylinder or roller 18 is preferably mounted for rotation on the end bar 9 to assist in guiding the strap through the opening 14 and also to permit the strap to be adjusted longitudinally preparatory to clamping the same in engagement with the buckle frame.

One end of the strap 16 is provided with a loop 19 for the reception of the transverse bar 10 while the opposite or free end of the strap passes beneath the end bar 8 of the buckle frame and is held in contact with the adjacent portion of the strap by engagement with said bar. It will thus be seen that the bar 8 constitutes a keeper and serves to prevent accidental displacement of the free end of the strap after the latter has been adjusted.

In using the buckle the free end of the strap is threaded through the opening 14 and said strap adjusted by exerting a longitudinal pull on the loose end of the strap after which a slight longitudinal pull is exerted on the strap in the opposite direction which causes the eccentric 13 to engage the strap and clamp the latter in contact with the roller 18 thus securing the strap in adjusted position without the employment of the usual pivoted tongue. By having the forward end of the buckle frame deflected laterally at 6 it prevents the buckle from tilting or swinging laterally when a longitudinal pull is exerted on the strap 16.

In Fig. 3 of the drawings there is illustrated a modified form of the invention in

which the buckle frame is stamped from sheet metal, the adjacent end of the side bars 5′ being connected by a bolt or pin 20 on which may be mounted a roller similar in construction to the roller 18.

In Figs. 4 and 5 there is illustrated a further modification in which the transverse cross bar 10 is dispensed with, one end of the strap being connected directly to the rear bar 8′ while the opposite end of the strap is threaded through the opening between the eccentric and the adjacent end bar 9′ in the usual manner. In this form of the device the eccentric 13′ is provided with oppositely disposed trunnions 21 which engage correspondingly shaped recesses in the side bars of the buckle frame.

It will of course be understood that a roller may be mounted on the end bar 9′ of the buckle shown in Fig. 4 of the drawings and that the eccentric may be adjusted longitudinally of the frame to accommodate straps of different thicknesses.

From the foregoing description it will be seen that there is provided an extremely simple inexpensive and efficient device admirably adapted for the attainment of the ends in view.

Having thus described the invention what is claimed is:

1. A buckle including a frame having spaced side bars the ends of which are deflected laterally and connected by transverse end bars, an eccentric pivotally mounted between the side bars and disposed at the angle of deflection of said bars at one end of the frame, and an intermediate transverse bar connecting the side bars and disposed at the angle of deflection of said side bars at the opposite end of the frame.

2. A buckle including a frame having spaced side bars the ends of which are deflected laterally and connected by transverse end bars, there being transversely alined perforations formed in the side bars at one end of the frame and disposed at the adjacent angle of deflection of said bars, the walls of one of the perforations being threaded, an intermediate transverse bar connecting the side bars and disposed at the angle of deflection of said bars at the opposite end of the frame, a pivot pin extending through one of the perforations and provided with terminal threads adapted to engage the threaded walls of the opposite perforation, an eccentric pivotally mounted on the pin and provided with circumferential projections, and a roller journaled on one of the end bars in advance of and co-acting with the eccentric.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

HENRY W. LUHMANN.

Witnesses:
J. D. BUCHAN,
E. V. WINNEK.