No. 728,206. PATENTED MAY 19, 1903.

W. F. CRAFTS.

BUCKLE.

APPLICATION FILED OCT. 30, 1901.

NO MODEL.

Fig. 1.

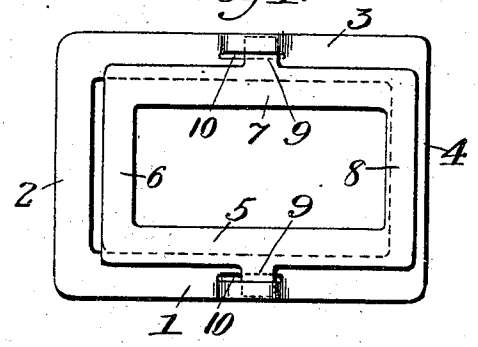


Fig. 2.

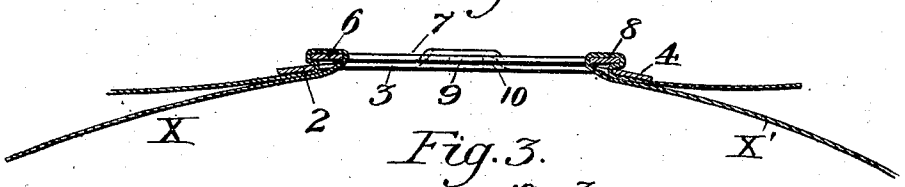


Fig. 3.

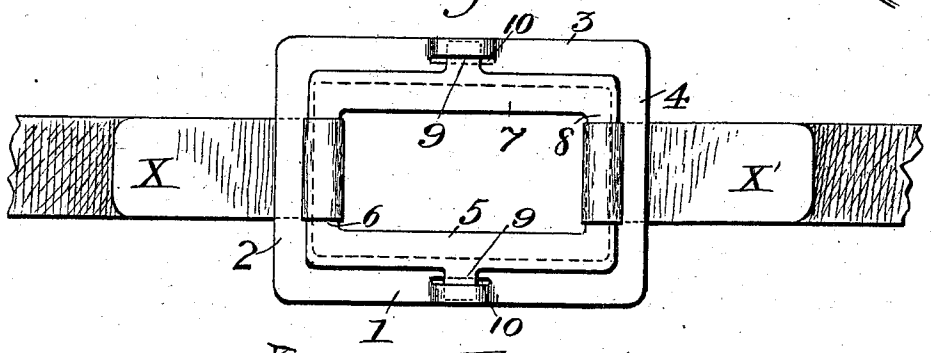
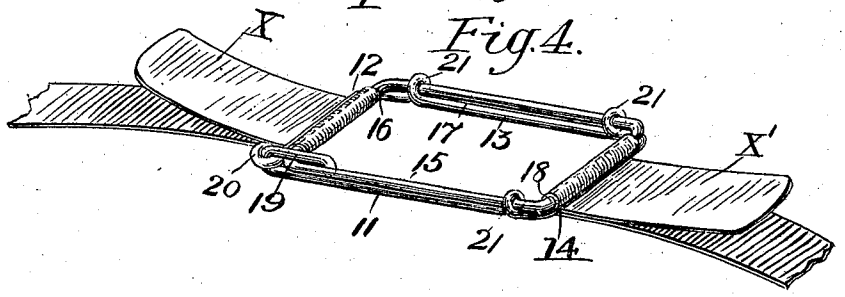


Fig. 4.



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No. 728,206. Patented May 19, 1903.

UNITED STATES PATENT OFFICE.

WILBUR FISK CRAFTS, OF WASHINGTON, DISTRICT OF COLUMBIA.

BUCKLE.

SPECIFICATION forming part of Letters Patent No. 728,206, dated May 19, 1903.

Application filed October 30, 1901. Serial No. 80,474. (No model.)

To all whom it may concern:

Be it known that I, WILBUR FISK CRAFTS, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Buckles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a double-grip tongueless buckle to be entitled "self attaching and detaching elastic buckle or grip" for uniting the ends of a strap or band or cord to form an adjustable loop or for connecting the adjacent ends of different straps or bands to form a continuous length from the two sections or for splicing.

The invention consists, essentially, of two superposed frames or sections having a limited reciprocating movement with respect to each other, the outer edges of the upper frame overlapping the inner edges of the lower frame, so as to constitute clamps at the opposite ends of the buckle to receive and secure the ends of a strap or band passed between the coöperating edges when said frames are centrally disposed with respect to each other, the relation of the clamping edges being such that when the outer frame is moved from its central position the coöperating edges of the frames, which are opposite the direction of movement, will be disengaged, and the corresponding clamp will be released, thereby permitting the ready removal or adjustment of the strap or band.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the buckle, showing the relative position of the parts when one of the clamps is released. Fig. 2 is a transverse section of the buckle with the parts in clamping engagement with the ends of the strap or band. Fig. 3 is a plan view corresponding to Fig. 2. Fig. 4 is a view in perspective of a modified form of buckle or grip.

Referring to Figs. 1, 2, and 3, my improved buckle comprises a lower member, preferably formed of metal, comprising a rectangular frame having the sides 1, 2, 3, and 4 and preferably formed with a slight bend or curve in the sides 1 and 3 in the direction of the length of the frame, as indicated in Fig. 2. Coöperating with and superposed upon the said frame is a second frame similar in contour, but having exterior dimensions a little in excess of those of the space inclosed by the first-mentioned frame, so that said superposed frame comprises a rectangle having sides 5, 6, 7, and 8, whose outer edges slightly overlap the inner edges of the lower frame when the two frames are centrally disposed with respect to each other, as shown in Fig. 3. The upper frame is provided with two lateral tongues 9 9, projecting from the opposite sides and engaging slots 10 in the sides 1 and 3 of the lower frame in such relation that the upper frame has a limited reciprocatory movement on the lower frame, whereby when said upper frame is moved to the right or left with respect to the lower frame the coöperating edges of the respective frames—as, for instance, the edges of sides 2 and 6 in Fig. 1—will be disengaged. In applying this form of buckle for uniting the ends of a strap or band the upper frame is moved to its extreme position to one side, as shown in Fig. 1, and the end X of the strap or band passed from below through both frames over the upper face of side 6, then between sides 6 of the upper frame and the coöperating side 2 of the lower frame, and finally under the lower face of side 2 and between the same and the opposite face of the strap or band. The upper frame is then shifted to its other extreme position, whereby the side 6 slides over the side 2 of the lower frame and securely clamps the strap or band in position and at the same time moves the opposite end 8 of the upper frame out of engagement with the corresponding side 4 of the lower frame, permitting the opposite end X′ of the strap or band to be applied between the clamping edges of the sides 8 and 4 in a manner exactly similar to that just described and as clearly illustrated in Fig. 2. The upper frame is then moved to its central position, as shown in Fig. 3, when the outer edges of the sides 6 and 8 of the upper frame project over and beyond the inner edges of the sides 2 and 4 of the lower frame, thereby securely clamping the ends X and X′ of the strap or band in position.

In order to tighten the strap or band, it is

only necessary to grasp the free ends thereof on either side of the buckle and draw them forcibly apart, when it will be found that the slack in the strap or band may be quickly taken up. Any attempt to draw the strap from the buckle when the latter is in its clamping or central position will be effectually resisted by the upper frame being drawn down with great pressure against the lower frame, and thereby tightening the band more securely. To release the strap, it is only necessary to move the upper frame to its extreme position in either direction, thereby moving the coöperating sides of the two frames opposite to the direction of movement out of engagement and permitting the strap to be slackened or withdrawn. A corresponding movement of the upper frame in the opposite direction will permit the other end of the strap to be removed or adjusted.

The modification shown in Fig. 4 embodies the same general features as the form of my invention hereinbefore described; but as it is capable of being constructed of wire or small metal rods it will commend itself to the user particularly because of its simplicity and cheapness. This form of my invention comprises the lower rectangular frame having four sides 11, 12, 13, and 14, formed of bent wire. At the point of jointure of said frame there is formed a slot-like loop 19 by passing one end of the wire through an eye 20, formed in the opposite end, and bending it back substantially parallel with the side 11 of the frame. Adjacent to each of the other corners in the sides 11 and 13 said frame is formed with loops 21, which, in connection with the slot 19, serve to retain and guide the upper frame in operative relation with the lower frame. The latter comprises a simple rectangle of bent wire bounded by the sides 15, 16, 17, and 18, equal or somewhat less in length than the lower frame, and is held adjacent to and in parallel relation with the lower frame by the slot 19 and loops 21, the former serving the same function as slot 10 in Fig. 1 of limiting the reciprocation of the upper frame on the lower frame in the act of clamping and unclamping the band in the buckle. In applying this form of buckle to secure the ends of a strap the same mode of operation is followed as in the case hereinbefore described, and the end of the strap to be secured is passed up through both frames, over the side 16 of the upper frame, and under the side 12 of the lower frame, after which the upper frame is moved toward the strap or band, thereby clamping it between the coöperating sides of the upper and lower frames. This movement of the upper frame may be accomplished by grasping the free end of the strap and drawing it backward or away from the buckle, thereby causing the upper frame to slide in the guiding-loops and the slot 19 until side 16 bears firmly against side 12 of the lower frame, with the material of the band clamped securely between them. The opposite end of the band is secured in the same way, whereupon the upper frame occupies a central position with respect to the lower frame, with both ends of the band locked in the desired relation. By grasping both ends of the band and drawing them outward or away from the buckle the tension of the band on the part which it surrounds may be increased at will, and by moving the upper frame on the lower in either direction one or the other end of the band may be freed from the buckle and the whole band loosened as desired.

The foregoing constructions of buckles are adapted to various uses, among which may be mentioned the securing of documents, files, and the like and general application in connection with belts, suspenders, and other articles of apparel where buckles are commonly employed to secure a strap, band, or cord under tension.

Having thus described my invention, what I claim is—

1. A double-grip buckle comprising two frames, one superposed on the other, the outer edges of the upper frame projecting over and beyond the inner edges of the lower frame when in operative position, and means connecting the two frames to permit a limited sliding movement of one frame on the other.

2. A double-grip buckle comprising, two frames, one superposed on the other, a slotted connection between said frames to permit a limited sliding movement between them, the outer edges of the upper frame overlying the inner edges of the lower frame when in operative position and constituting coöperating gripping-surfaces for the ends of a strap or band.

3. A double-grip buckle comprising two rectangular frames, one superposed and sliding on the other, the transverse outer edges of the upper frame overlying the corresponding inner edges of the lower frame when in operative position, means connecting said frames to permit a limited movement of said upper frame on the lower frame, whereby the contiguous edges of the two frames at one end may be moved out of clamping engagement.

4. A double-grip buckle, comprising two rectangular frames, one superposed on the other, a slotted connection between said frames to permit a limited movement between them, the distance between the outer edges of the upper frame being slightly greater than the distance between the inner edges of the lower frame, whereby both sets of edges are in clamping relation when the frames are centrally disposed, and one set of edges is disengaged when the upper frame is moved out of central position.

5. A double-grip buckle comprising two frames, one superposed on the other, the outer edges of the upper frame overlapping the inner edges of the lower frame when in operative position and tongues on one frame engaging coöperating slots in the other frame,

whereby the upper frame may be moved on the lower frame to separate the engaging edges at one end of the buckle.

6. A double-grip buckle, comprising two frames, one superposed on the other, the outer edges of the upper frame overlying the inner edges of the lower frame when in operative position, tongues on the upper frame engaging coöperating slots in the lower frame, whereby the upper frame may be moved on the lower frame to separate the engaging edges at one end of the buckle.

7. A double-grip buckle comprising two rectangular frames, one superposed on the other, tongues on the upper frame engaging slots in the lower frame to permit a limited longitudinal movement of the upper frame on the lower frame, the outer edges of the upper frame slightly overlapping the inner edges of the lower frame when the former frame is centrally disposed on the latter and the contiguous edges at one end of said frames being disengaged when the upper frame is moved from central position on the lower frame.

8. A double-grip buckle comprising two frames, one superposed on the other, the lower frame being curved in the direction of its length, the outer edges of the upper frame overlying the inner edges of the lower frame, tongues on the upper frame engaging slots formed in the curved sides of the lower frame whereby the upper frame may be moved on the lower frame to separate the engaging edges at one end of the engaging buckle.

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

WILBUR FISK CRAFTS.

Witnesses:

CHAS. J. O'NEILL,

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