

No. 630,050.

Patented Aug. 1, 1899.

S. K. GROVER.
SUSPENDER BUCKLE.

(Application filed May 18, 1899.)

(No Model.)

Fig. 1.

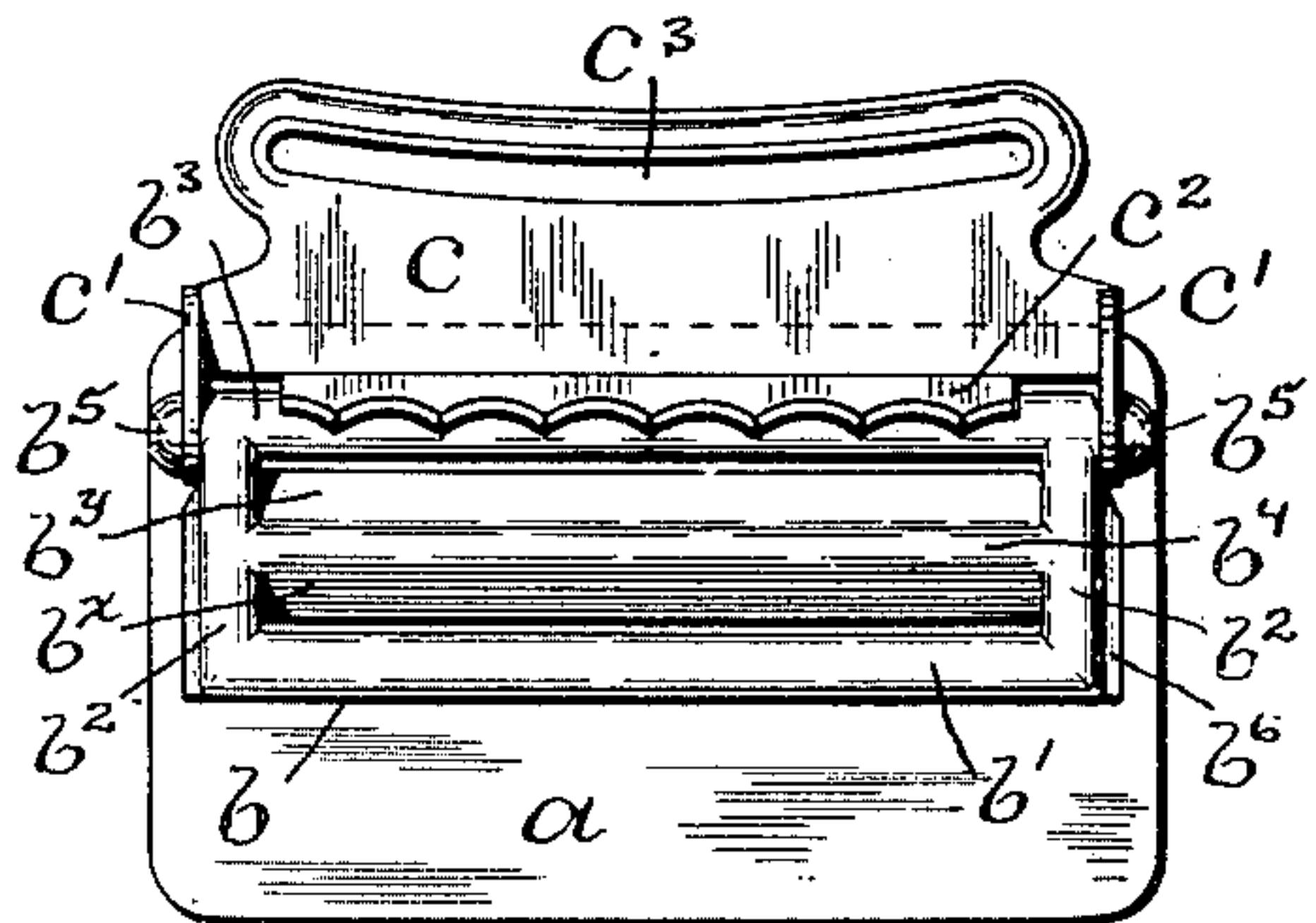


Fig. 2.

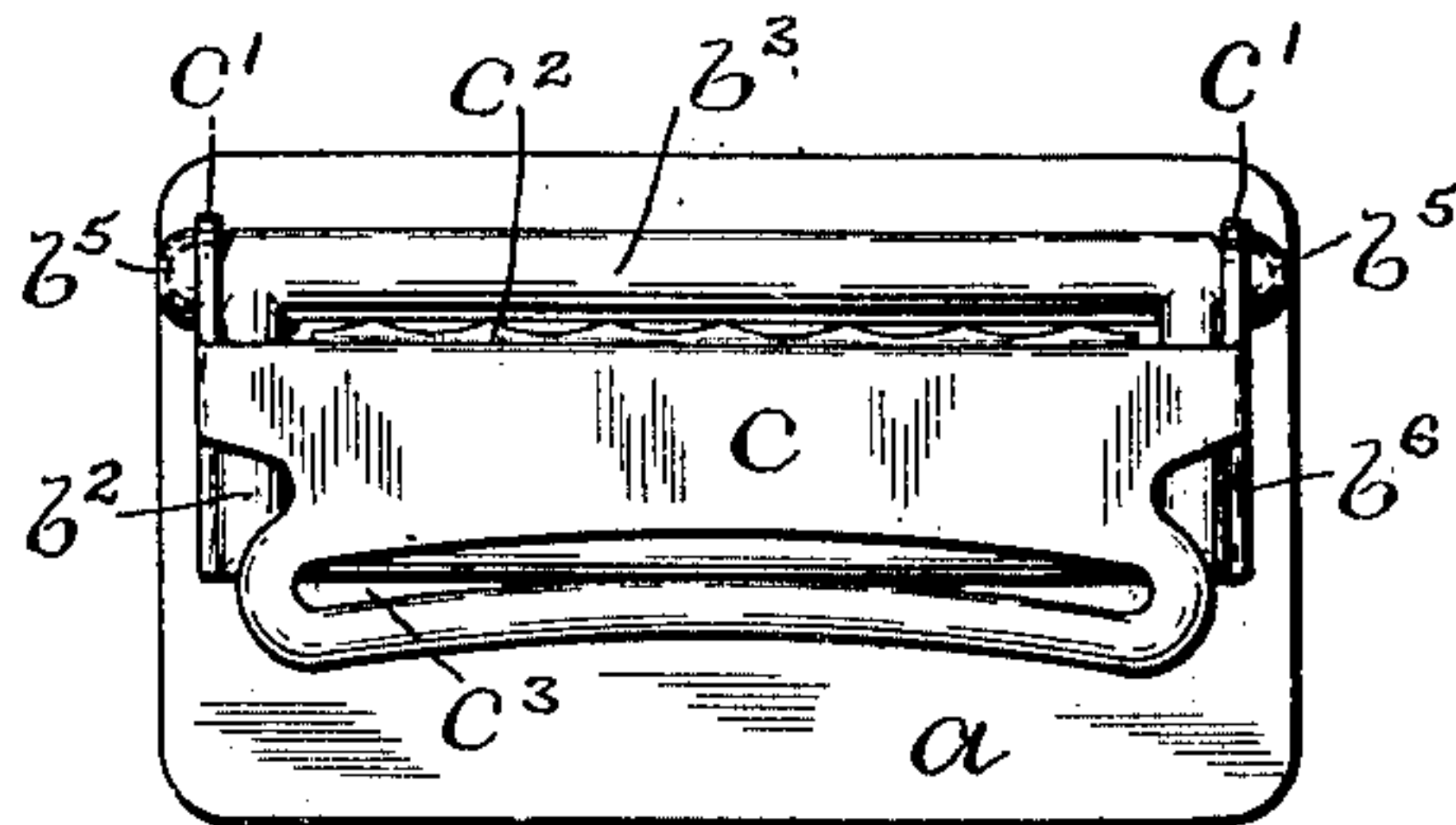


Fig. 3.

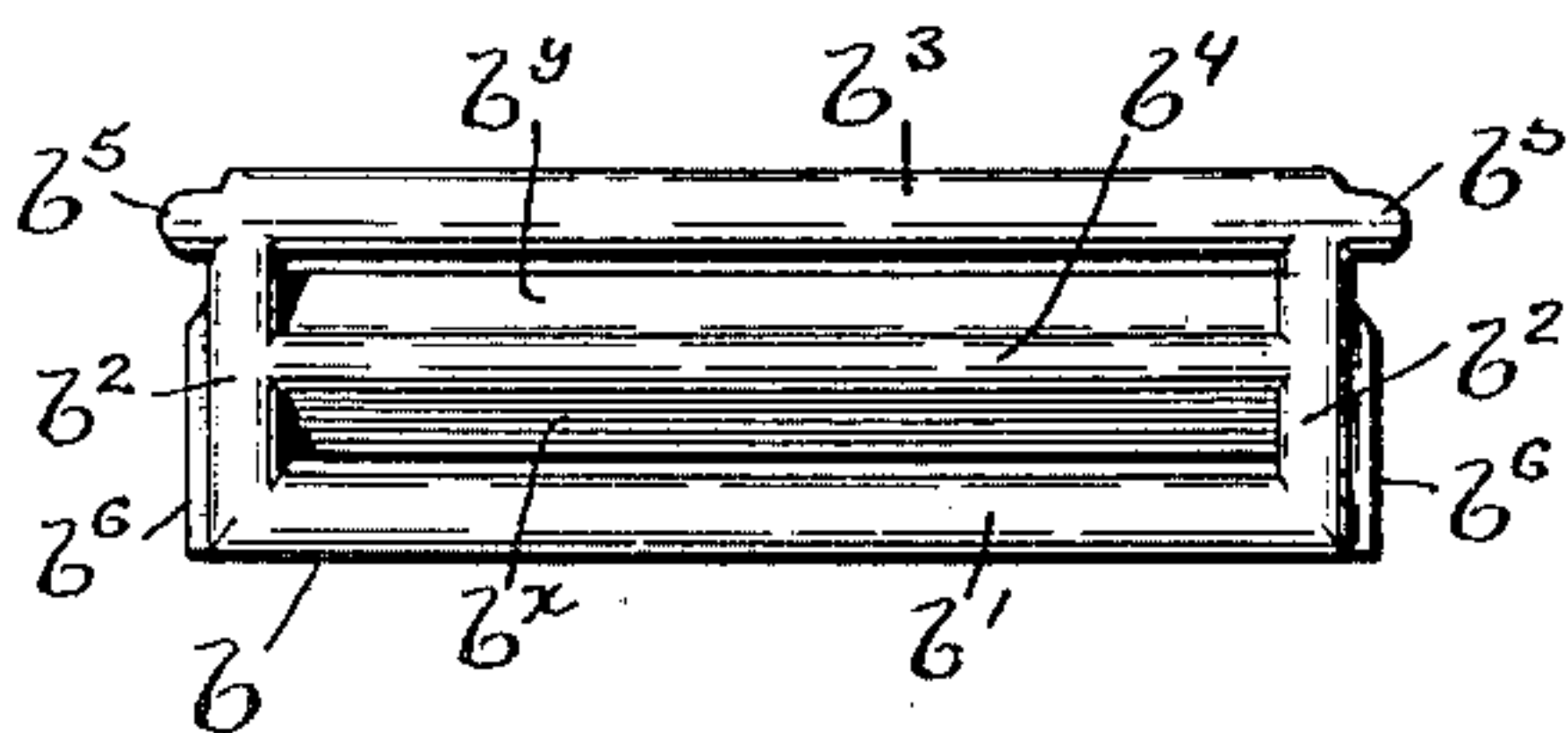


Fig. 5.

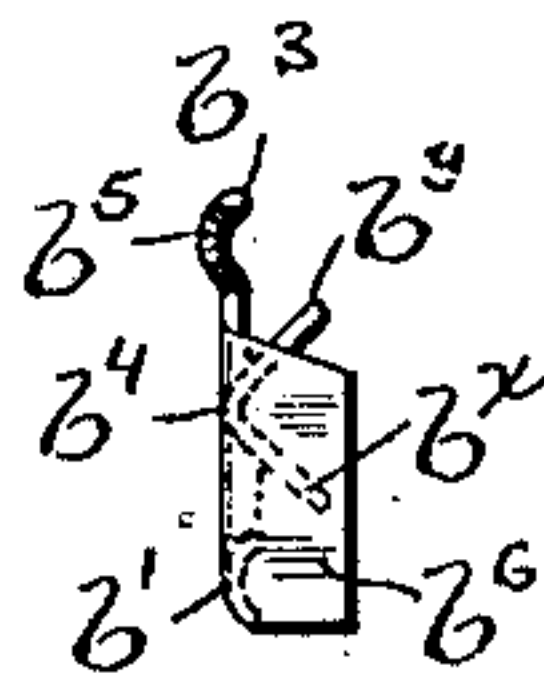


Fig. 6.

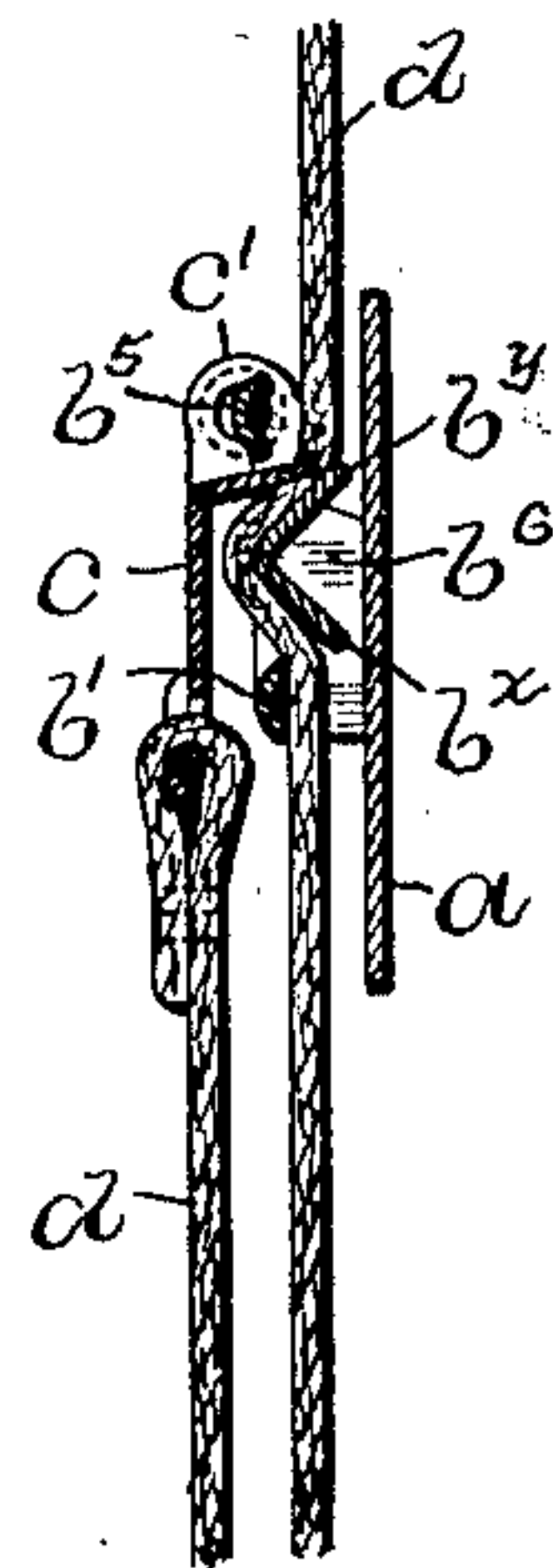
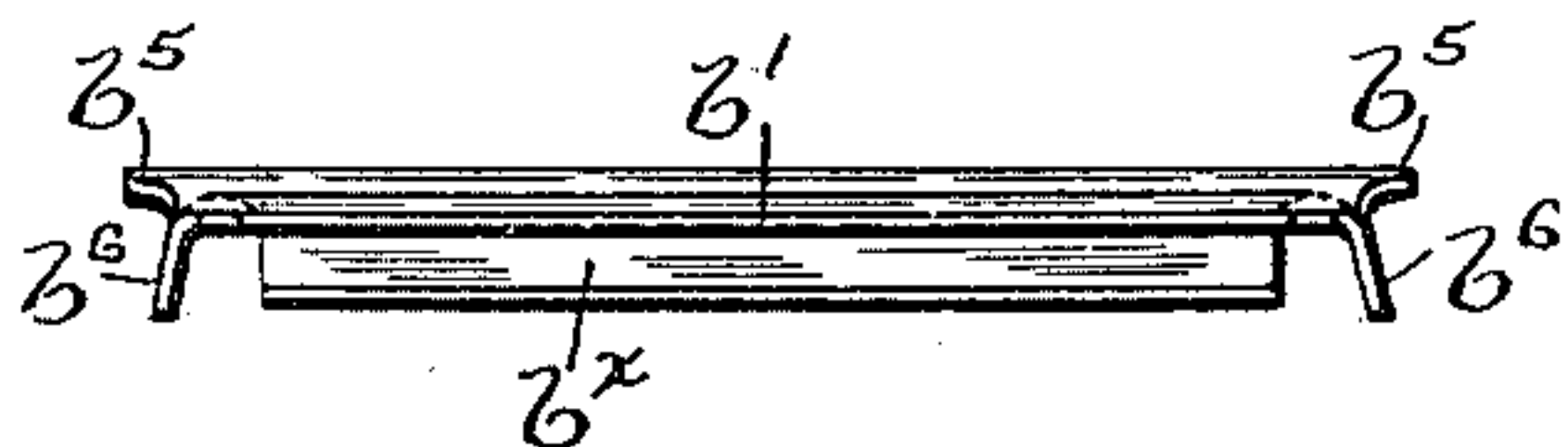


Fig. 4.



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SAMUEL K. GROVER, OF PROVIDENCE, RHODE ISLAND.

SUSPENDER-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 630,050, dated August 1, 1899.

Application filed May 18, 1899. Serial No. 717,337. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL K. GROVER, of Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Suspender-Buckles; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to the class of buckles in which a clamping-plate is provided with teeth for engagement with the webbing; and it consists in the peculiar and novel construction of the buckle whereby in securing the webbing the teeth are pressed into the webbing while supported on a yielding spring-surface, as will be more fully set forth hereinafter.

Figure 1 is a view of the back of the buckle, showing the clamping-plate raised. Fig. 2 is a view of the same, showing the clamping-plate in the locked position. Fig. 3 is a top view of the buckle-frame. Fig. 4 is an edge view, and Fig. 5 an end view, of the same. Fig. 6 is a sectional view of the buckle, showing the strap or webbing secured by the same.

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

In the drawings, *a* indicates the front plate; *b*, the frame of the buckle; *c*, the clamping-plate; *d*, the strap or webbing.

The front plate *a* may be of any desired shape and is preferably stamped up out of sheet metal into some ornamental shape. The buckle-frame *b* is also stamped up out of sheet metal. The bars *b'*, *b²*, and *b³* are convex on the upper surface and concave on the lower surface. The central bar *b⁴* is formed by separating the sheet metal along the bars *b'* and *b³* and bending the same into the V-shaped form shown in Figs. 5 and 6, presenting a rounded edge at the apex between the two inclined sides of the bar. On the opposite ends of the bar *b³* the pintles *b⁵* are formed, and the ends of the plate are bent down to form the supports *b⁶*. By stamping the frame *b* in suitable dies into the shape shown the sheet metal is hardened and a spring temper is imparted to the whole frame and particularly to the inclined surfaces of

the central bar *b⁴*. The clamping-plate *c*, which is also stamped up out of sheet metal, has the end plates *c'* bent at right angles to the plate and perforated, so as to extend over the pintles *b⁵* on the bar *b³* of the frame, and this forms a pivotal connection between the clamping-plate and the frame. The clamping-bar *c²*, provided with teeth, as it swings on its pivotal connection with the frame *b* has the points of its teeth in close contact with the inclined side of the central bar *b⁴*. The end supports *b⁶* of the frame are secured to the back of the plate *a* by solder or in any other suitable manner.

When the strap or webbing *d* of the suspender is to be passed through the buckle, it is inserted between the bar *b'* of the frame *b* and the inclined surface *b^x* of the central bar *b⁴*, which inclined surface *b^x* is pushed sufficiently away from the bar *b'* to permit the passage of the strap or webbing. The strap or webbing is now passed over the apex of the bar *b⁴* and between the inclined spring-surface *b^y* of the central bar *b⁴* and the bar *b³*, the inclined spring-surface *b^y* yielding to the passage of the strap or webbing *d*. The clamping-plate *c*, which has been raised into the position shown in Fig. 1, is now swung into the position shown in Figs. 2 and 6. The teeth on the clamping-bar *c²* penetrate the strap or webbing and the strap or webbing is firmly held in the teeth of the clamping-bar by the inclined spring-surface *b^y* of the central bar *b⁴*, as is shown in Fig. 6.

The clamping-plate *c* is provided with the slot *c³*, in which the end of the strap or webbing *d* is secured.

By the use of the inclined spring-surfaces *b^x* and *b^y* of the central bar *b⁴* the buckle is held in any position to which it may be adjusted on the strap, and in swinging the clamping-plate *c* into the locked position the teeth of the clamping-bar *c²* enter the strap or webbing and hold the same firmly against strain in the adjusted position. By reason of the yielding of the inclined surfaces on the central bar *b⁴* the operation of swinging the clamping-plate is materially facilitated, and the strain on the webbing when the teeth enter the same is not as liable to injure the webbing supported on the inclined spring-surface,

which slightly yields to the strain, as it was in buckles as heretofore constructed provided at this point with a groove or slot, the rigid edges of which formed an unyielding point, resisting the strain on the webbing or strap.

Having thus described my invention, I claim as new and desire to secure by Letters Patent--

1. In a suspender-buckle, the combination with the plate *a*, and the buckle-frame *b* provided with the bars *b'*, *b³* and the central bar *b⁴* having the inclined surfaces *b^x* and *b^y*, of the clamping-plate *c* provided with the clamping-bar *c²* pivotally connected with the frame; whereby the strap, or webbing, is supported

on the inclined spring-surfaces of the central bar, as described.

2. In a suspender-buckle, in combination with a clamping-plate, of the buckle-frame *b* having the bars *b'*, *b³* and the central bar *b⁴* having the inclined surfaces *b^x* and *b^y* extending from the apex of the central bar; whereby the webbing is supported on the spring-surfaces of the central bar, as described.

In witness whereof I have hereunto set my hand.

SAMUEL K. GROVER.

Witnesses:

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J. A. MILLER, Jr.