

(No Model.)

D. W. SMITH.

BUCKLE.

No. 266,908.

Patented Oct. 31, 1882.

Fig. 1.

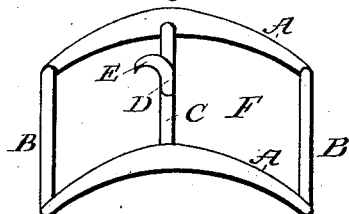


Fig. 2.

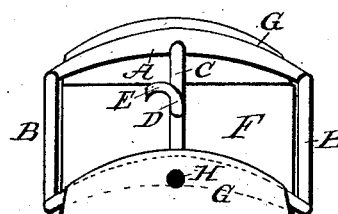


Fig. 3.

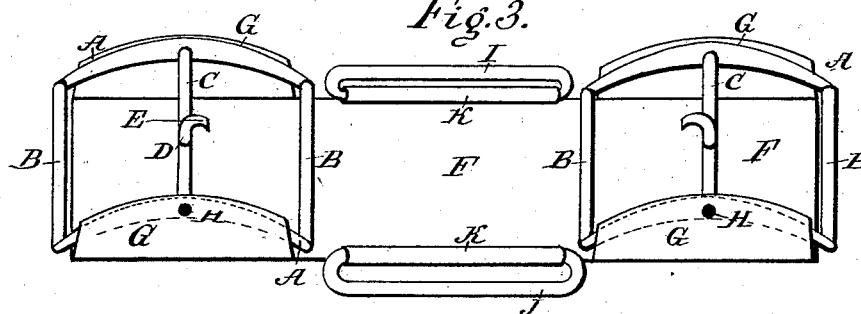


Fig. 4.

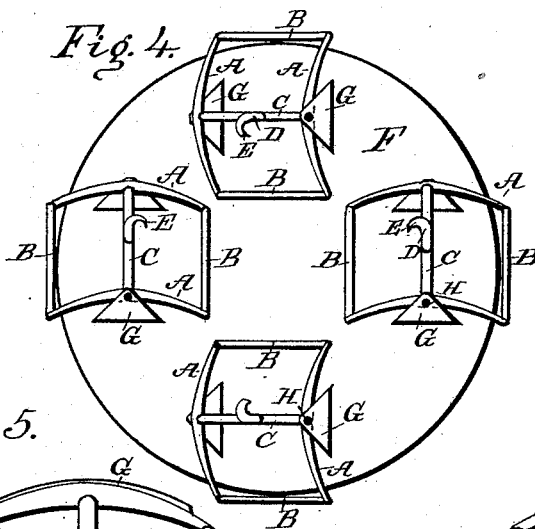


Fig. 5.

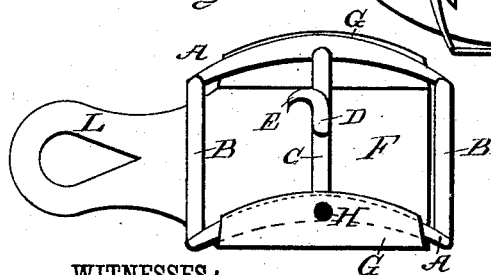
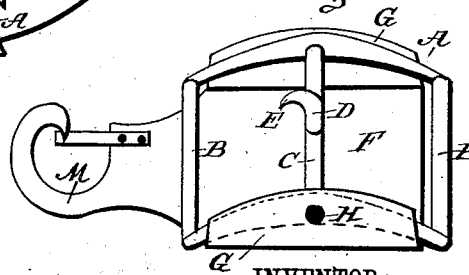


Fig. 6.



WITNESSES:

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Fig. 7.



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# UNITED STATES PATENT OFFICE.

DAVID W. SMITH, OF PORT TOWNSEND, WASHINGTON TERRITORY.

## BUCKLE.

SPECIFICATION forming part of Letters Patent No. 266,908, dated October 31, 1882.

Application filed May 26, 1882. (No model.)

*To all whom it may concern :*

Be it known that I, DAVID W. SMITH, of Port Townsend, in the county of Jefferson and Territory of Washington, have invented a new and Improved Buckle for Straps, of which the following is a full, clear, and exact description.

This invention consists of improvements in the construction of buckles for harness and other straps, whereby it is designed to provide a buckle to which one or more straps can be secured, and by means of which a strap can be attached to a bit, ring, or other place without being stitched or riveted, and which may be safely used on harness and other straps, all as hereinafter more fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my improved buckle. Fig. 2 is a similar view of the buckle and a shoe applied to it. Fig. 3 is a perspective view of a double shoe-plate and two buckles, showing how the tug, trace, back-band, and belly-band connection can be made in one device by this improved form of buckle. Fig. 4 is a perspective view of a device comprising a shoe-plate and four of the said buckles, showing how several straps may be joined on a plate around a center. Fig. 5 is a perspective view of a buckle and shoe attachment comprising a cockeye, and Fig. 6 is a perspective view of a buckle and shoe attachment comprising the butt of a snap. Fig. 7 is a perspective view of the same of a modified construction.

The buckle consists of the two slightly arched and tapering side arms, A, two end cross-bars, B, middle cross-bar, C, and upright nipple or stud D, curved at the top, with a nearly-vertical beak, E, all being cast or otherwise constructed solidly together without any joint. In practice the side arms, A, will be thicker in the middle and tapering toward the ends in the proper proportions for equalizing their strength relative to the strain along their different points, and arched sufficiently, according to the length of the buckle and the distance the bars are apart, to give said bars the required holding-power on the strap, and the

end cross-bars, B, will be the same size as that of the side bars where they join the end bars. The middle cross-bar will be equal in size to that of the side bars where it joins them. The nipple rises up from the middle of the middle cross-bar, and is curved over from near the top toward one of the end bars, and constructed with the beak E turned downward nearly vertically.

The buckle constructed in this form may be attached to a strap by passing the strap under one end cross-bar, over the nipple, under the other cross-bar, and passing the nipple through a hole in the strap. Then by passing in another strap from the opposite direction and similarly connecting it to the nipple it will be seen that two straps may be readily and securely connected together without sewing or riveting either strap; and it will also be seen that the strap is much more securely fastened on the buckle than in the ordinary buckle, because, instead of drawing on the nipple alone, as it draws on the tongue alone in the old buckle, the strap draws by reason of the arched form of the buckle, and being reeved under and over the cross-bars on all three of the cross-bars in a manner to produce more holding-power than a simple nipple or tongue could afford.

It will be further seen that as no stitching or riveting is required the strap is not thereby weakened, nor are there any stitches to rip or rivets to break. On the contrary, the whole strength of the strap is preserved, and not a single fiber in it can escape its proportion of the strain (as is the case in other buckles) when the strap is under tension.

A strap may also be attached to a bit or ring or anything desired by passing the end of the strap through the buckle, as before shown, then around through the ring and back through the buckle again, and then passing the nipple up through the straps. Thus adjusted, a loop is formed in the strap.

Although this buckle will not chafe a horse more than other buckles, I propose to combine a metal wearing shoe-plate, F, with it for the purpose of lessening the liability to chafe and for other purposes, the said plate being placed under the buckle, as shown, and attached there-

to in a hinged position, so as to swing, by ears G, cast on the plate F, provided with holes that receive the journals H, cast on the side arms, A, on a line with the middle cross-bar, C.

5 When the buckle is combined with a snap, cockeye, or hook, used where it cannot chafe—as on the bit—the ears G of the plate F may project beyond said plate (in order to make the combination lighter and more convenient) 10 far enough so that the cross-bar B next to the snap will fall just on the end of said plate, and sufficient only to catch and clamp the strap, as shown in Fig. 7. Some of the other purposes of this shoe-plate are represented in the 15 drawings, as follows: For instance, by extending the length of the plate, as in Fig. 3, and connecting two buckles with a space between, to the sides of which plate, at the middle, back-band loop, I, and belly-band loop J are respectively connected by rolled lips K of the plate, 20 a device is provided by which the tug and trace may be connected together and to the back-band and belly-band.

In Fig. 4, the plate being of any desired form, 25 and having the ears G attached to the surface of said plate, four buckles are represented in suitable arrangement for attaching four straps in a common center, as on the rump or at the flank of a horse. In Fig. 5 the shoe-plate also 30 forms a cockeye, L. In Figs. 6 and 7 it forms the butt of a snap, M.

The advantages of this buckle, in combination with the shoe attached to, connected with, and forming part of a cockeye or snap or ordinary hook or hook and swivel, will be apparent 35 when it is noticed that it is only required to connect the line or strap with the buckle in either case simply by reeving the end of the line, strap, tug, or trace through the buckle and inserting the nipple, as hereinbefore described, whereas other devices all require to be 40 sewed, riveted, or buckled into a loop in the strap. It will be remembered that the curve in the nipple and the nearly-vertical beak prevent the strap from disengaging itself from the nipple, so that once the strap is put over the 45 nipple no amount of rubbing will get it off.

The following are some of the advantages of this buckle:

50 First. No stitching or riveting is necessary to its use.

Second. By its use the full strength of the strap is preserved. Every fiber in it has got to bear its due proportion of the strain.

55 Third. It is durable and strong.

Fourth. It is always safe.

Fifth. It is easily adjusted.

Sixth. A strap cannot get foul in it.

Seventh. It divides and distributes the friction on the strap where it binds to four points, 60 thereby making the strap wear longer.

Eighth. It presents a smooth metallic surface to the animal, that is an almost absolute guarantee against chafing him.

Ninth. Its use will greatly simplify and reduce the cost of manufacturing harness and 65 other gear, inasmuch as an entire harness may be put together by it without sewing or riveting on a single ring or buckle.

Having thus fully described my invention, 70 what I claim as new, and desire to secure by Letters Patent, is—

1. The improved rigid buckle herein described, consisting of the slightly arched and tapering side arms, A, end cross-bars, B, middle 75 cross-bar, C, upright nipple D, curved at the top, and the nearly-vertical beak E, constructed substantially as hereinbefore described.

2. The combination, with the buckle-frame, of a rigid upright nipple, D, curved at the top 80 toward one of the end cross-bars, B, and the nearly-vertical beak E, forming the point of said nipple, substantially as described.

3. The combination of a shoe-plate, F, provided with ears G and journal-holes, as shown, 85 with the buckle, substantially as specified.

4. The combination of the shoe-plate F, having the buckle, substantially as herein described, attached at each end, and loops I J, 90 attached to said plate to the lips K between said buckles, substantially as specified.

5. The combination, with a buckle, substantially as herein described, of the shoe-plate having an attaching device, substantially as 95 set forth.

6. The combination of two or more buckles, 100 substantially as herein described, and the shoe-plate, said buckles being arranged around a central point, substantially as described.

7. The combination of the buckle and shoe-plate, substantially as described, the said shoe-plate having ears G, attached to journals H of 100 the buckle, as set forth, so that said buckle shall be pivoted in said shoe, substantially as herein described.

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Witnesses:

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