

(No Model.)

W. T. O'BRIEN.
COLLAR PAD.

No. 539,291.

Patented May 14, 1895.

Fig. 1.

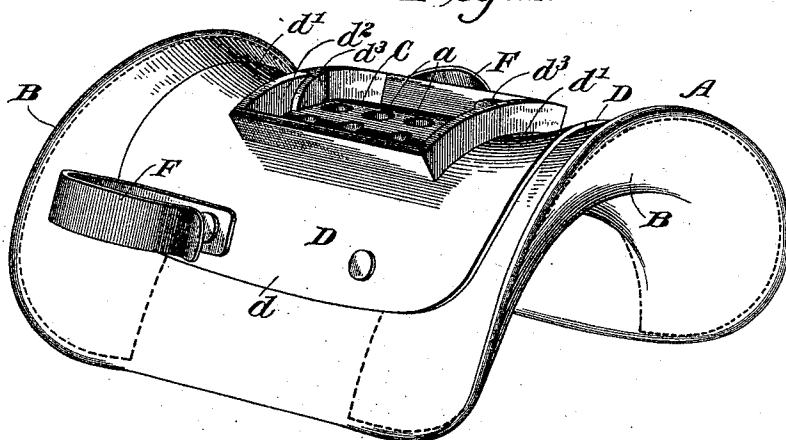


Fig. 2.

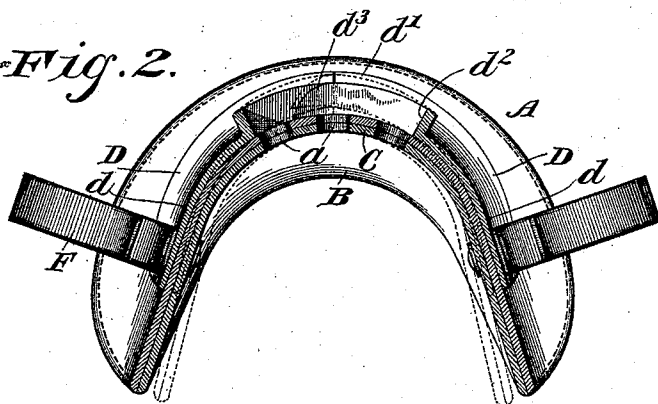
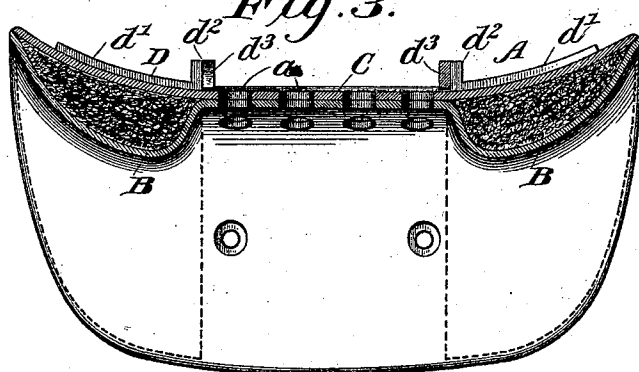


Fig. 3.



Witnesses;
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UNITED STATES PATENT OFFICE.

WILLIAM T. O'BRIEN, OF SOUTH BEND, INDIANA.

COLLAR-PAD.

SPECIFICATION forming part of Letters Patent No. 539,291, dated May 14, 1895.

Application filed January 5, 1895. Serial No. 533,967. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. O'BRIEN, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Collar-Pads; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention is an improved pad for horse-collars and harness-saddles. Its object is to make a flexible self adjusting pad that will accommodate itself to various sizes of horses' necks, and to the muscular movements of the neck, while the animal is in motion, and yet cannot be flattened down because of metallic reinforcing plates by which the contour of the pad is preserved, the weight of the collar uniformly distributed over the pad, and the exterior and interior air-chambers maintained, without interfering with the flexibility or self-adjusting properties of the pad.

I am aware that pads have been provided with metallic stiffening plates or frames to preserve the rigidity of the pad and reinforce it; and in my Letters Patent No. 439,678, dated November 4, 1890, is shown a pad having an adjustable metallic frame, by which the pad can be adjusted to varying sizes of necks, but such pad is not flexible or self-adjusting, and the frame is always rigid, which is the feature my present invention is designed to avoid, the rigidity destroying the self-adjusting capability and flexibility of the pad which is much to be desired.

My invention therefore consists in a flexible reinforced pad as set forth in the claims; and such a pad is described in detail as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the pad. Fig. 2 is a transverse sectional view thereof, showing the flexibility of the pad by aid of dotted lines; and Fig. 3 is a longitudinal section through the same.

A designates the pad proper formed preferably of two pieces of leather stitched together at their edges, and the lowermost one being padded across its ends forming two transverse cushions B, B, at opposite ends of the pad, the space between said cushions

forming a lower air-chamber C, into which air circulates through a series of perforations in the central part of the pad, as shown. 55

Two similar but opposite plates D, D, are riveted or otherwise secured to the upper face of the pad, on opposite sides thereof. These plates together have an exterior contour much like the pad, but smaller, and have between them an opening as large as the perforated portion in pad A, so that such perforations are uncovered. Each plate therefore consists of a side portion *d*, and end portions *d'*, the latter standing at substantially right angles to the former, and being curved laterally thereof, as shown. The inner edge of part D is flanged as at *d*² or at least much thicker than its outer edge, so that the sides of the plates at the opening therebetween stand above the top of pad A, as shown. These plates D uphold the collar or saddle, and distribute the weight thereof uniformly over the pad A, they prevent the pad bending longitudinally under the weight thereon and thus closing the inner air chamber, and they uphold the collar off the pad sufficiently to form an air chamber or space between the top of pad and collar, thereby insuring ample air circulation into the inner chamber through the openings, as described. 80

While longitudinal bending or breaking down of the pad is prevented by the plates they do not interfere with transverse bending thereof. They are ordinarily secured to the pad at such relative distances that the pad will be spaced to its fullest extent when the end portions *d'* of the opposite plates contact, but when the pad is bent on a lesser arc the plates separate accordingly. As they do this the extremities of parts *d'* will tend to hold the collar yet higher above the perforated portion of the pad, as will be obvious from the dotted lines in Fig. 2. Thus the plates D, D, are secured to the pad independently of each other, so that one side of the pad may rise or fall without necessarily affecting the opposite side, and the pad will therefore automatically adapt itself to the neck of the animal and yield under muscular contractions and expansions which always occur when a horse is pulling on a load. This flexibility of the pad lessens the irritation on the neck, and consequently liability to soreness, and causes 100

an equal distribution of the load on both sides of the neck, there being a compressing and expanding movement of the pad itself, a self-compensating or automatic adjustment to the load and varying strains incident to use, which were the pad stiff and unyielding laterally, as is the case with the rigid framed pads, would cause a rocking or see-sawing of the pad upon the ridge of the neck ultimately resulting in a sore.

F, F, are C-spring loops attached to the plates, to engage the collar and hold the pad in place, doing away with the use of securing straps, and facilitating the attachment or removal of the pad to or from the collar.

It will be noted that the only direct connection between the plates is the body of the pad A.

To obviate the possibility of the adjoining ends of flanges d^2 pinching the collar between them one or both ends may be provided with an extension d^3 which overlaps the end of the opposite flange so that when the pad is bent the flanges cannot pinch the collar between them when the pad is expanded. These extensions are clearly shown in the drawings.

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

1. The combination with a flexible collar-pad having a central perforated ventilating chamber on its under side; of the opposite similar disconnected metallic plates secured parallel with each other on opposite sides and on top of the pad, the inner edges of said plates abutting when the pad is extended laterally, to its full extent, and separating when the pad is flexed or bent laterally, all so arranged that the plates allow the pad to flex laterally, but not longitudinally, substantially as described.

2. The combination of a leather pad perforated at center and having transverse cushions on its under side at its opposite ends; with the disconnected metallic stiffening plates secured longitudinally on top, and to opposite sides, of the pad, surrounding the perforated portion of the pad, and each having inwardly bent end portions, which abut against like portions of the opposite plate when the pad is distended, said plates preventing longitudinal bending of the pad but allowing free lateral flexion thereof, substantially as described.

3. The herein described flexible pad consisting of the leather pad perforated at center, and having transverse cushions on its under side at its opposite ends; with the metallic plates D, D, each having side portion d and end portions d' , d' , and thickened or flanged inner edges d^2 , all constructed and arranged substantially as and for the purpose set forth.

4. The combination with a flexible pad, opposite similar plates D attached to the top thereof, having an opening between them, said plates having upstanding flanges d^2 around said opening, substantially as and for the purpose described.

5. In combination with a flexible pad, the opposite stiffening plates D, D, secured to the pad, said plates having upstanding flanges d^2 around the opening therebetween, provided with over-reaching extensions d^3 at their ends, all constructed and arranged substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM T. O'BRIEN.

Witnesses:

JAS. DU SHANE,
S. C. MARTIN.