(No Model.)

C. A. BROWN.

OX YOKE.

No. 349,565. Patented Sept. 21, 1886.

Fig. 1.

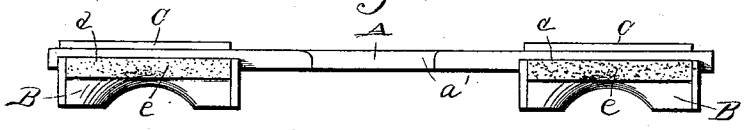


Fig. 2.

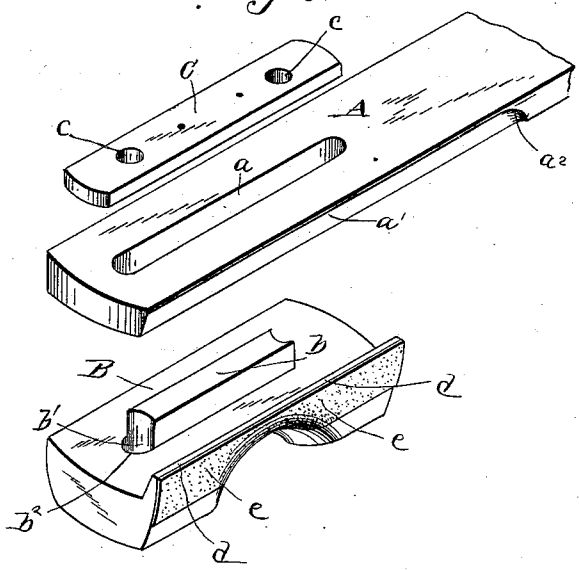


Fig. 3.

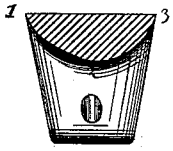
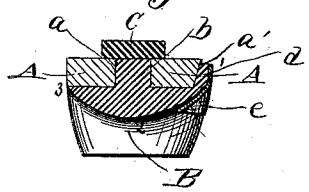


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES ALMOND BROWN, OF PITTSFIELD, VERMONT.

OX-YOKE.

SPECIFICATION forming part of Letters Patent No. 349,565, dated September 21, 1886.

Application filed August 2, 1886. Serial No. 209,785. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ALMOND BROWN, a citizen of the United States, residing at Pittsfield, in the county of Rutland and State of Vermont, have invented a new and useful Improvement in Ox-Yokes, of which the following is a specification.

My invention relates to improvements in ox-yokes; and it consists of the peculiar construction and novel combination and arrangement of the various parts for service, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

The object of my invention is to provide a neck-yoke of peculiar form, which shall properly fit the animal's neck and work thereon with great ease, so that all excessive galling or rubbing of the animal is avoided when it is laboring.

A further object of my invention is to provide an ox-yoke with improved means for permitting the parts thereof to be extended without sacrificing the requisite features therein of strength and durability of construction, and at the same time prevent the yoke from galling the animal, and from becoming displaced from its proper position in drawing the load.

With these and such other ends in view as are inherent upon the use of my invention, it consists of a neck-yoke of peculiar configuration and shape at the point where it bears upon the animal's neck, and in the novel connection between the yoke and the cross-bar of an extension-yoke with a pliable or flexible bearing-surface, which will throw the strain on the solid part of the yoke, all as hereinafter set forth.

In the drawings hereto annexed, which illustrate an ox-yoke constructed in accordance with my invention, Figure 1 is a rear elevation of an extensible yoke embodying my improvements. Fig. 2 is a view of one end of the cross-bar, and also of the yoke-piece detached from the said bar. Figs. 3 and 4 illustrate the peculiar form of the under surface of a fixed and an extensible yoke constructed in accordance with my invention.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates the cross-bar of an extensible yoke embodying my improvements. This cross or connecting bar is provided at or near each of its extremities with a longitudinal slot, *a*, of a suitable length, and on its rear side this connecting-bar is beveled or inclined downwardly and forwardly, as at *a'*, as shown. The rear side of this bar is provided with the longitudinal bevel *a'* at each of the ends thereof, and the bevels are of a suitable length and terminate in an oblique shoulder, a^2, at its inner end, as clearly shown, against which shoulder a^2 the inner end of the sliding yoke abuts, so that the movement or play of the yoke in one direction is limited by the said shoulder. These beveled rear edges at the extremities of the connecting-bar bear upon or against the shoulders of the animal when it is laboring in drawing the load, and they relieve the animal of the chafing and galling action of yokes constructed heretofore with square sides, to a very great extent, and render the yoke much easier to the animal, which is very desirable.

B designates the sliding yokes, which are arranged at the extremities of the cross or connecting bar, and are movably attached thereto in the following manner: On its upper side each of the yokes is provided with a rib or flange, *b*, of less length than the slot *a* in the extremity of the connecting-bar A, and of very nearly the same width of the said slot, so that the said rib can work very freely and easily in the slot when it is fitted therein. The rib or projection *b* is provided at each extremity with a semicircular recess, *b'*, which aligns with one of the sides of one of two transverse perforations or openings, b^2, which are formed in the yoke to receive the bow.

C designates a cap-plate, which is secured to the rib or projection *b* on its upper side by means of screws, bolts, or other suitable fastening devices; and this cap-plate bears against the cross or connecting-bar so that the rib or projection of the yoke cannot be disconnected from the connecting-bar, the said cap-plate bearing and sliding against the connecting-bar A simultaneously with the movement of the rib and yoke, as will be very readily understood, the cap-plate being provided with transverse holes or openings *c*,

which align with the corresponding openings in the yoke and semicircular recesses in the ends of the projecting rib *b*.

At its rear edge the yoke B is formed with an upwardly-extending shoulder, *d*, which is equal in length to that of the yoke, and bears against the beveled rear side, *a'*, thereof, hereinbefore referred to. The piece which forms the said upwardly-extending shoulder *d* of the movable yoke is very firmly and rigidly secured or connected to the yoke in any suitable or preferred manner; and to the said shoulder *d* of the yoke is affixed yielding bearing surface or pad *e*, of any suitable yielding or pliable material, leather being preferably employed. This yielding bearing surface or pad is affixed to the rear side of the shoulder *d* by screws or other suitable fastenings, and it is designed to yield or give to any uneven or irregular pressure from the ox when drawing the load, and the said bearing-surface and the shoulder cannot be broken off or displaced. The upwardly-extending shoulder *d* rests or bears very firmly against the beveled side *a'* of the connecting-piece when the animal is drawing the load, and the flexible bearings yield or give to the strain or pressure of the animal.

By virtue of the construction above described the yokes are free to work or move longitudinally of the connecting-bar, but are at the same time strongly attached to the said cross-bar, as if rigid thereon. The shoulders a^2 *d* serve to relieve the projection *b* from a great portion of the pulling and leaning strains of the animals, and to transfer such strains to the connecting-bar.

Referring now to Figs. 3 and 4, the peculiar form of the under surface of the yoke will be described. The portion of the under surface of the yoke which bears or rests upon the animal's neck is cut or formed nearly on the segment of a circle, beginning at the rear upper edge of the yoke and extending just in front of the middle point of the width of the yoke, the limits of this peculiar curvature being denoted by the numerals 1 and 2. From 2 and 3 on the upper front edge of the yoke the form of the cut is more erect or vertical and of less curvature than the cut 1 2. The purpose of thus forming the under side of the yoke is to cause the same to fit properly against the animal's withers when pulling or drawing the load, to slide easily upon the animal's neck when holding back the load, and to properly fit against the base of the animal's horns when stopping the load, and to also properly tilt the bow against the animal's jaw to assist in stopping or backing the load. This peculiar form of the under surface of the yoke utilizes the prominence of the animal's withers, as well as the forward and downward slant of the neck, and the shape of the base of the horns, for the purpose above described, more than has been possible in yokes as heretofore constructed, and renders the yoke less galling to the animal.

As shown in Figs. 3 and 4, the form of the under side of the yoke is applicable to both fixed and extensible yokes.

I attach especial importance to the beveled or inclined edge of the bar B, combined with the extensible yokes having the projection or rib *d* bearing against the same, and having the elastic or yielding surface, and also to the peculiar form of the under side of the yoke, as therein lies the gist of my invention.

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

1. An improved neck-yoke having its under side cut on substantially the segment of a circle, beginning at the upper rear edge of the yoke and ending in front of the middle width of the same, and continuing from the latter point in a curve of less convexity, substantially as and for the purpose set forth.

2. The combination of the connecting-bar provided with the beveled rear edge and a shoulder, and the movable yokes connected with the connecting-bar, and having a rib, *d*, bearing against the beveled side of the bar, and having the yielding surface *e*, substantially as and for the purpose set forth.

3. The combination of a slotted connecting-bar provided with the beveled rear side and a shoulder, the movable yoke having a rib working in the slot of the connecting-bar and provided with the projecting rib bearing against the beveled side of the connecting-bar, and a yielding bearing-surface, and the cap-plate secured to the rib that works in the slot of the connecting-bar, substantially as described, for the purpose set forth.

4. The combination, with a yoke having the curved under surface of the form described, of the yielding or elastic pad forming the bearing-surface, substantially as described.

5. The combination of the connecting-bar having the beveled edge, and the movable yoke secured to the bar and having the rib *d*, bearing snugly against the rear beveled edge thereof, substantially as described, for the purpose set forth.

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

CHARLES ALMOND BROWN.

Witnesses:
HENRY H. SMITH,
THOS. C. ROBBINS.