

(No Model.)

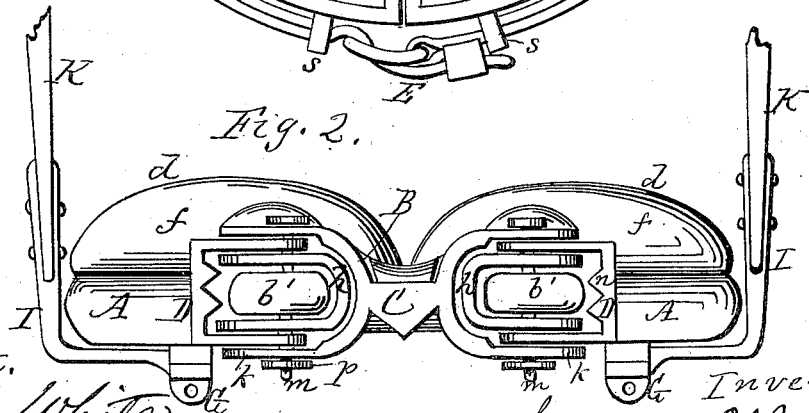
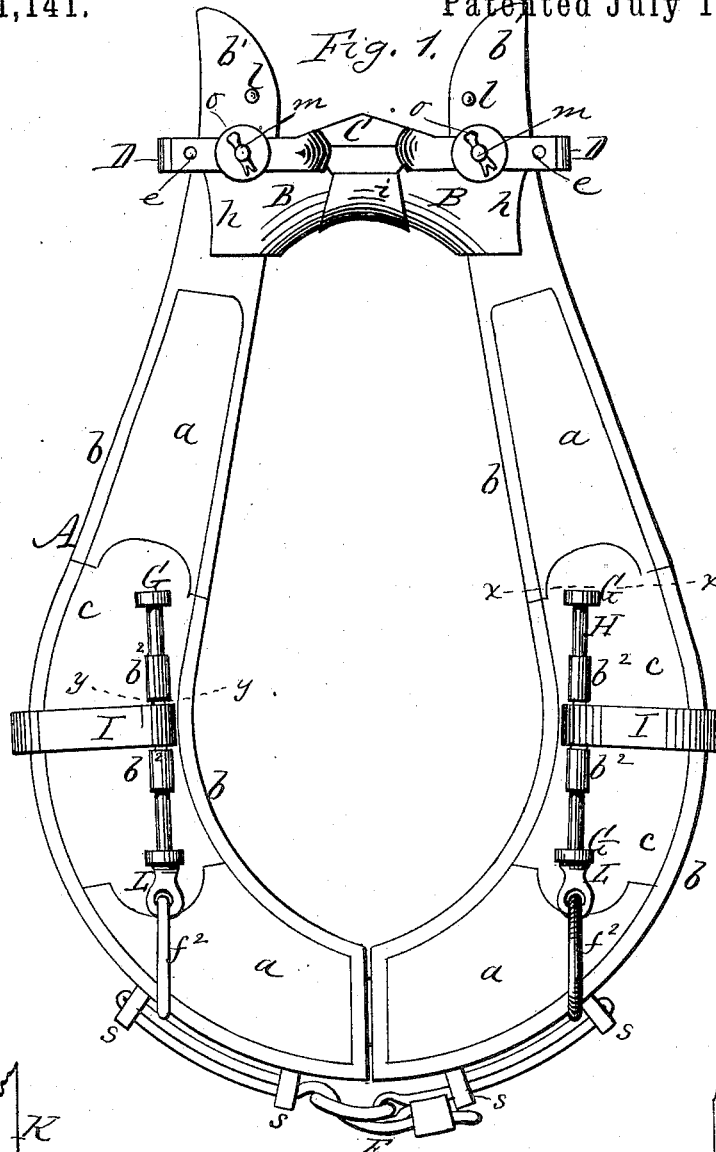
2 Sheets—Sheet 1.

L. O'CONNOR.

HORSE COLLAR.

No. 301,141.

Patented July 1, 1884.



Attest.  
*R. E. White*  
*P. A. Heustich*

Inventor,  
*Lawrence O'Connor,*  
*per R. F. Osgood,*  
*Att'y.*

(No Model.)

2 Sheets—Sheet 2.

L. O'CONNOR.

HORSE COLLAR.

No. 301,141.

Patented July 1, 1884.

Fig. 3.

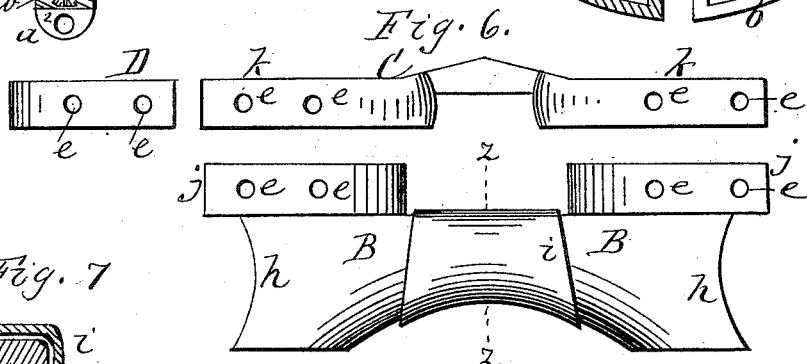
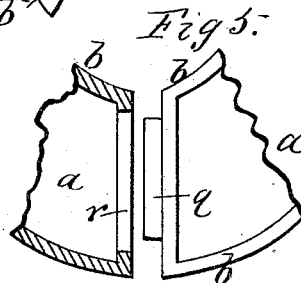
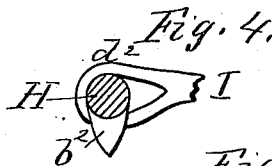
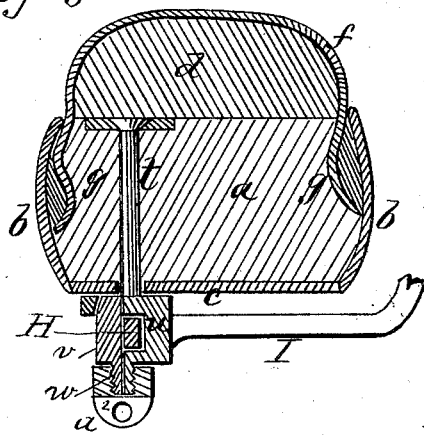


Fig. 7.

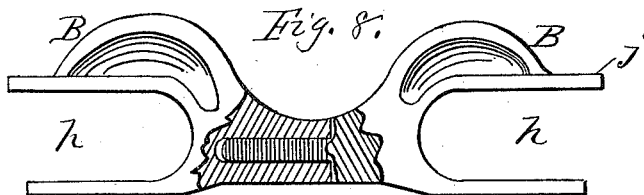
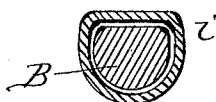


Fig. 8.

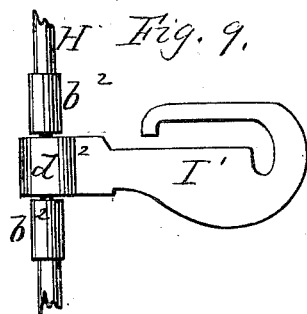
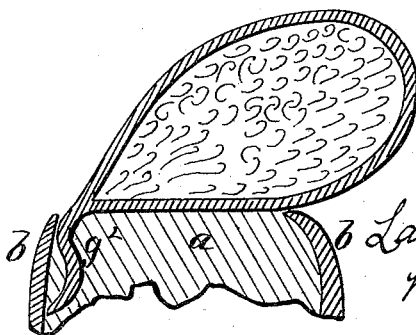


Fig. 9.

Fig. 10.



Attest.  
R. E. White  
A. Costich

Inventor.

Laurence O'Connor,  
per R. Y. Orger,  
att'y

# UNITED STATES PATENT OFFICE.

LAWRENCE O'CONNOR, OF LOCKPORT, NEW YORK.

## HORSE-COLLAR.

SPECIFICATION forming part of Letters Patent No. 301,141, dated July 1, 1884.

Application filed August 11, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, LAWRENCE O'CONNOR, of Lockport, Niagara county, New York, have invented a certain new and useful Improvement in Horse-Collars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation. Fig. 2 is a top view. Fig. 3 is an enlarged cross section in line *x x*, Fig. 1. Fig. 4 is a cross-section in line *y y*, Fig. 1. Fig. 5 is an elevation, partially in section, of the bottom of the collar. Fig. 6 is an enlarged front elevation of the parts B C D, at the top of the collar, detached and separated from each other. Fig. 7 is a cross-section in line *z z* of Fig. 6. Fig. 8 is a plan of part B. Fig. 9 is an elevation showing a modification of draft-iron I. Fig. 10 is a cross-section showing a modification of the pad.

My improvement relates to horse-collars in which no hames are used, the collar being made in halves suitably connected together and answering the purpose of hames.

The invention consists in the construction and arrangement of parts hereinafter more definitely described and claimed.

In the drawings, A A show the two halves of the collar. Each of these halves consists of a wood foundation or center piece, *a*, surrounded at the edges by metallic straps *b b*, and partially or wholly covered in front by metallic plates *c c*, which, if desired, may be nickel-plated or otherwise ornamented, as may be desired. On the back is a rubber pad, *d*, covered with a lining, *f*, of sheet-zinc or other suitable material. The two opposite edges of the wood foundation are grooved, as shown at *g g*, and the zinc lining, when fitted over the pad, has its edges turned down into these grooves, where they are fastened in place by screws or other means, after which the metallic straps *b b* are fitted in place, covering the grooves and edges of the lining, and are fastened to the wood by other screws. By this means the pad is held securely in place, and a smooth surface is presented to the shoulders of the horse, which will prevent galling. At the top of the collar the straps *b b* unite in a common length, *b'*, which has great strength

and stiffness, and allows the adjustment of the collar at the top, as will be presently described. The halves of the collar are connected by the following means:

B is a yoke at the top, extending across from side to side, and having open sockets *h h* at the ends, which receive the ends of the collar. On the inner side next to the shoulder the sockets are swelled out to fit the shoulder and prevent the collar from working up out of place, as it would otherwise do. In work-collars the swells are made more prominent, as shown in Fig. 8, and the yoke is made in two parts, which are screwed together, facilitating the manufacture. On the center of the yoke is fitted a hollow thimble, *i*, which is curved on the under side to fit on top of the horse's neck, and which has a loose and rolling motion to a certain degree, so that as the collar works under the motion of the horse's walking there will be no rubbing friction on the neck, but the thimble will roll and take the friction away. This is of very great advantage. The making of the yoke in two parts, as before described, allows the thimble to be applied and removed. *j j* are flanges forming the top of the sockets *h h*, and conforming in shape thereto.

C is a supplementary yoke, consisting of a cross-bar having forks *k k*, open at the ends, and fitting outside of the flanges *j j*, and receiving the tops of the collar between them. The supplementary yoke rests on top of the main yoke, as shown.

D is a stirrup forming a half-loop, which incloses the top of the collar on the outside, and together with the forks of the supplementary yoke, forms an inclosure. A series of adjusting-holes, *e e*, are made in the forks of the supplementary yoke, in the arms of the stirrup, and in the flanges of the main yoke, which holes stand in a horizontal line; and in the top of each half of the collar are also made a series of holes, *l l*, which stand in a vertical line. Pins *m m* pass through the holes, and thereby pivot the top of the collar to the yoke. This allows each side of the collar to work freely, and also allows adjustment. To adjust the width of the collar, the pins are moved from one to another of the holes *e e*, the stirrup D, by being moved out or in, allowing this to be

done. To adjust the height of the collar, the pins are changed from one to another of the holes  $l$   $l$  in the top of the collar, and by this means the collar is readily fitted to a large or small horse, or to shoulders of different sizes or forms.

$n$   $n$  are V-shaped teeth on the inner side of the stirrups, between which the top of the collar fits, and which hold it centered and in place. The pins  $m$  are held by means of a split key,  $o$ , which passes through a hole in the pin, a washer,  $p$ , being inserted between the key and the yoke, as shown.

At the bottom of the collar  $q$  is a projecting lug on one half, and  $r$  is a socket on the other half, into which the lug shuts when the collar is closed. The socket is made of greater length than the lug, so that the latter has a degree of vertical play therein, for a purpose presently to be described.

$E$  is a strap-connection at the bottom of the collar, provided with a buckle, by which the sides of the collar are secured together by buckling. The straps are secured to studs or loops  $s$ , which are screwed into the collar, or attached in any other suitable way. By connecting the top and bottom of the collar, as described, the collar can not only be adjusted horizontally and vertically, but the sides have a certain degree of independent vertical play, so that as the horse walks and throws the shoulders up and down alternately the sides of the collar can follow and prevent the rubbing friction that occurs where a stiff collar is used. The lug at the bottom of the collar, being made shorter than the slot in which it rests, allows this action to take place, yet it connects the halves so that they cannot get out of place.

$G$   $G$  are two eyes or bearings on each side of the collar, in which rest rods  $H$   $H$ . Each of the eyes is attached to the collar by a pin,  $t$ , which passes through the wood and is riveted down upon a washer, as shown in Fig. 3. By this means the eye is held in place. The eye consists of a stationary part,  $u$ , and a movable part,  $v$ , which is in the shape of a pin, that fits in a socket of the stationary part. At the outer end is a divided screw,  $w$ , formed from both parts, on which screws a nut,  $a^2$ . By this means the eye can be separated for the insertion of the end of the pin, and can then be locked together again, holding the pin fast in place. The upper eye only is prepared in this way, the lower one being fixed and the bottom of the pin made fast to it.

$b^2$   $b^2$  are two or more enlargements or stops on the pin, with intervals between. They are wedge-shaped and elongated in cross-section, and stand outward at right angles to the collar.

$I$   $I$  are draft-irons of right-angled form, attached to the pins, extending around the edge of the collar, and split at the outer ends, forming the attachment for the traces or tugs  $K$   $K$ .

The ends of these irons, which fit upon the pins, are provided with wedge-shaped elongated eyes  $d^2$   $d^2$ , Fig. 4, of a size which will just slip over the enlargements  $b^2$ . By this means the draft-irons can be adjusted higher or lower on the pins, thereby adapting the draft to the shoulders, as may be required in different horses. To adjust the iron it is turned out till the eye coincides with the enlargement, when it is slipped over it, either up or down. When in place, the iron is turned around, when the eye rides on top of the enlargement and is retained in place by it. This is a convenient and effective means for adjusting the draft.

In Fig. 9 is shown a hook,  $I'$ , arranged in a similar way, but adapted to receive a trace-chain instead of a tug.

$L$   $L$ , Fig. 1, are attachments for holding the straps of the neck-yoke. The straps are attached to the rings  $f^2$   $f^2$ , and are made more effective than the ordinary attachment to the collar, as they obviate any tendency of choking.

If desired, the ordinary stuffed pad may be employed, as shown in Fig. 10. In such case the inner thin edge,  $g^2$ , of the pad is carried down into the groove and held in the same manner as the zinc lining before described.

By the means above described an improved collar is produced, hames are dispensed with, and the galling of horses is in a great degree obviated, as the collar is much easier in wear and will adapt itself to the shoulder under all circumstances.

Having described my invention, I claim—

1. In a hameless horse-collar, the combination of the two sides  $A$   $A$ , the tongue-and-socket connection  $q$   $r$  at the bottom, the socket being longer than the tongue that fits therein, and the pivoted yoke at the top connecting the two sides, as set forth.

2. In a hameless horse-collar, the combination of the two sides  $A$   $A$ , the tongue-and-socket connection  $q$   $r$  at the bottom, the socket being longer than the tongue that fits therein, and the adjustable connection at the top of the collar, consisting of the yoke  $B$ , provided with the loose thimble  $i$ , the supplementary yoke  $C$ , and the stirrups  $D$   $D$ , pivoted to the ends of the collar, as shown and described, and for the purpose specified.

3. In a horse-collar, the combination, with the rods  $H$ , provided with stops  $b^2$ , of the eyes  $G$ , consisting of the stationary part  $u$ , the movable part  $v$ , fitting therein, and the nut  $a^2$ , turning upon a screw formed from both parts, as herein shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LAWRENCE O'CONNOR.

Witnesses:

JAMES R. GRAVES,

JOHN B. SULLIVAN.