(No Model.)

E. P. ROBBINS.

HORSE COLLAR PAD ATTACHING DEVICE.

No. 342,931. Patented June 1, 1886.

Fig. 1.

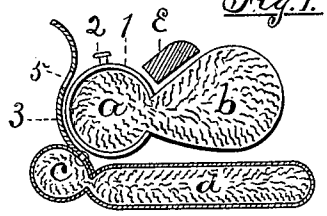


Fig. 2.

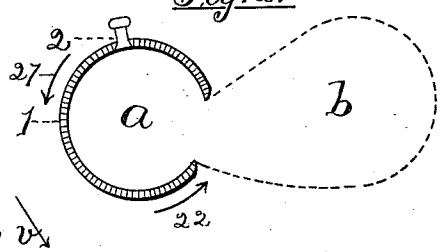


Fig. 9.

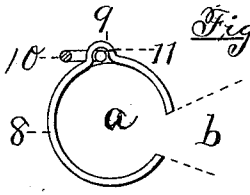


Fig. 3.

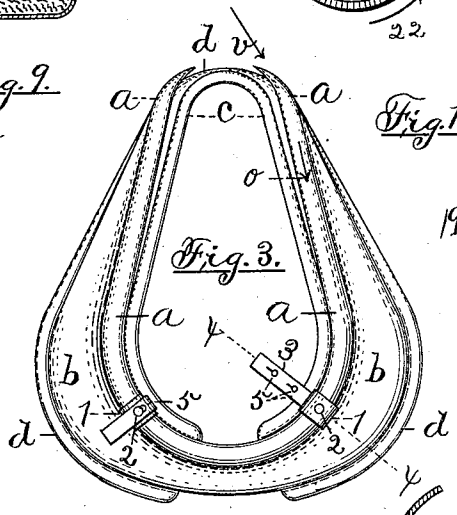


Fig. 11.

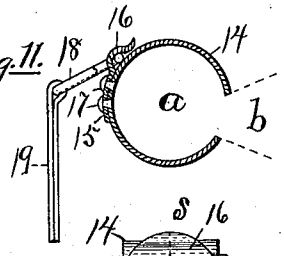
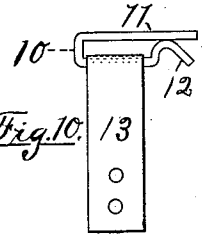


Fig. 10.



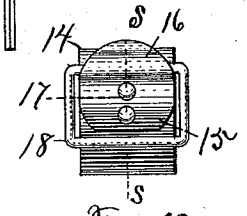


Fig. 12.

Fig. 8.

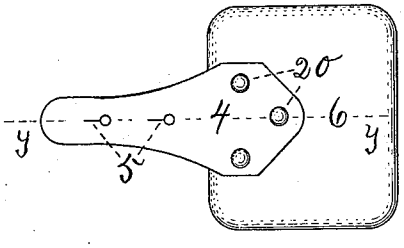


Fig. 4.

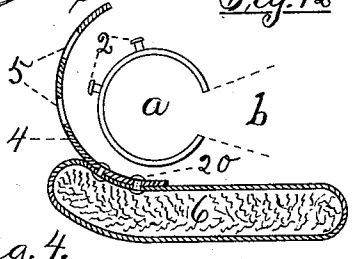


Fig. 5.

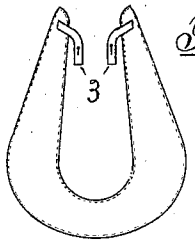


Fig. 7.

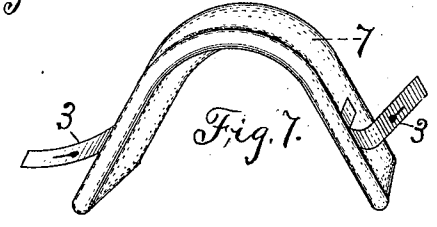
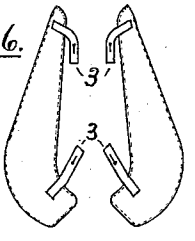


Fig. 6.



Witnesses:
Milton Washiell
P. A. Treadway

Inventor:
Edward P. Robbins.

UNITED STATES PATENT OFFICE.

EDWARD P. ROBBINS, OF CINCINNATI, OHIO, ASSIGNOR TO EDWARD L. McCLAIN, OF SAME PLACE.

HORSE-COLLAR-PAD ATTACHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 342,931, dated June 1, 1886.

Application filed August 18, 1885. Serial No. 174,768. (No model.)

To all whom it may concern:

Be it known that I, EDWARD P. ROBBINS, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Horse-Collar-Pad Attaching Devices, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in horse-collar pads, and pertains to means of removably attaching the pads to collars.

The object of my invention is to produce a simple device to be removably attached to the fore roll of the horse-collar, and provided with means for connecting with the pad in a manner such that the said device may remain permanently attached to the fore roll of the collar during the time it is necessary to use a pad under the collar, and that the pad may be temporarily attached to the said device during the time the horse is harnessed and worked. When the horse is unharnessed, the pad is or may be removed from the collar; but the said device is or may be left attached to the fore roll of the collar.

Figure 1 is a sectional view of a horse-collar, *a b*, pad *c d*, and hame *e*, and a side view of the device or holdfast 1 and the connecting-strap 3. The section is on the line *x x* of Fig. 3. Fig. 2 is a side view in section of the holdfast 1, the collar-body *b* being indicated by the dotted outline. Fig. 3 is a front view of a horse-collar, *a b*, placed upon a neck and shoulder-pad, *c d*, open at the bottom, and shows the holdfasts 1 in place upon the fore roll, *a*, of the collar, and shows the flexible strap 3 on the right with holes 5 not yet attached to the holdfast, while that on the left is attached. Fig. 4 shows a holdfast with two stud-buttons, 2, a sectional view of a sectional or "spot" pad, 6, and of the flexible connecting-strip 4, having holes 5. The sections are along the line *y y* of Fig. 8. Fig. 5 shows a shoulder-pad open at the top and having straps 3 with holes, adapted to fasten onto the stud-buttons 2 of the holdfasts. Fig. 6 shows such a pad open at both top and bottom. Fig. 7 shows a neck-pad having straps 3, also for fastening onto the stud-buttons 2 of the holdfasts. Fig. 8 shows a side or plan view of the pad and other parts shown in section in Fig. 4. Fig. 9 is a side view of a modified holdfast, 8; and Fig. 10 is a view of a spring-hook, 10, and strap 13, to be used with the holdfast 8. Fig. 11 is a side view of another modified holdfast; and Fig. 12 is a front view of the same, the sections of Fig. 11 being along the line *s s* of Fig. 12.

The same letters indicate the same parts in all of the figures.

By referring to Figs. 1, 2, 3, 4, 9, and 11 it will be seen that the holdfast, which is the essential invention, is an open band or a curved piece of metal having a curve corresponding to that of the outline of a cross-section of the fore roll of the collar. The inner or free ends come quite close together, and when the holdfast is placed upon the fore roll of the collar, which it exactly fits, they press against the collar at the juncture of the fore and back rolls, *a* and *b*, as clearly shown in Figs. 1 and 2.

The holdfast proper may be made of malleable iron or spring metal. When it is to be attached to the fore roll of the collar, it is brought to the top end of the roll and moved toward, and then upon and along the roll, and as indicated by the arrows *v* and *o* in Fig. 3.

Since the fore roll of a horse-collar has approximately the same cross-section throughout its length, a holdfast having a curvature corresponding to a given section of the roll will fit that roll at any desired position; consequently the holdfast may be moved along the roll to the place where required.

In removing the holdfast it is simply pushed along the roll until it slips off of the end.

Since the fore rolls of horse-collars for the same class of work have approximately the same sized cross-sections, there will be no difficulty in using the holdfasts on different collars.

If the holdfasts are made of spring metal, as steel, they may have a curvature such as to clamp the roll slightly, in which case they will be adapted to fit slightly different sized rolls. If they are made of malleable iron or

other rigid metal, they may be bent slightly, so as to just snugly fit the fore rolls on which they are to be used.

The holdfast shown in Figs. 1, 2, and 3 has a single stud-button, 2, projecting outward and in a position out of the way of the hame and of the horse's neck.

When the holdfast is made of malleable iron, this stud-button may be in common with the holdfast proper; when of spring metal or when very thin the stud-button may be riveted to it.

The stud-button may be a short stud having a round or an oblong head; but a simple stud without a head when placed near the hame would answer.

The pad adapted to be secured to the collar by means of my holdfasts may be any such pad as indicated in the figures, and as are now well known in the art.

The figures show straps 3, which are sewed or riveted to the pads. These straps have one or more holes, 5, adapted to fasten onto the stud-button 2 of the holdfasts, as seen in Figs. 1 and 3. The holes 5 are larger at their inner ends, as clearly shown in Fig. 8, and have narrow prolongations extending outward from the pad.

In attaching the straps to the stud-buttons the larger parts of the holes are passed over the button-heads, after which the straps are pulled endwise into place when the narrow parts of the holes come under the button-heads.

When a stud without a head is used, the end of the strap 3 could be placed under the hame, to prevent its being disengaged from the stud.

Figure 1 shows the several parts—collar, pad, holdfast, strap, and hame—approximately as when in adjustment.

Fig. 3 shows the strap on the right loosened from the holdfast, and that on the left fastened onto the stud-button 2.

The neck-pad shown in Fig. 7 is placed on top of the horse's neck, and as its ends extend down the sides of the collar sufficiently a strap, 3, at each end may be secured to a holdfast on the fore roll of the collar.

Figs. 4 and 8 show what I call a "spot-pad," since it is intended to be put any place between the pad and the collar where a sore or the like occurs.

The pad 6 is a plain pad without rolls, and is provided with a stiff piece of leather, 4, widened near where it fastens to the pad, and is provided with two holes, 5, adapted to fasten onto two corresponding stud-buttons, 2, as indicated in Fig. 4.

When a sore comes on a horse's shoulder, one of the holdfasts is slipped along the fore-roll to the position of the sore, and one of these spot-pads is then placed under the collar and over the sore, and the two holes 5 of the piece 4 are fastened onto the corresponding stud-buttons, 2.

When the piece 4 is stiff, and there are two stud-buttons on a holdfast, as shown in Fig. 4, the pad will be prevented from slipping up or down or forward. The piece 4 might be made of thin spring metal, as such stiff material might hold the pad in place better. In fact metal straps could be substituted for the flexible leather straps 3 in Figs. 1 and 3.

The holdfast proper, 1, may be constructed otherwise than with one or more studs or stud-buttons, 2, as set forth. A few other ways will now be set forth.

The modification of the holdfast shown in Fig. 9 has a crimp or short bend, 9, near its middle, adapted to hold a pin or a part of a hook or buckle, or the like, when the holdfast is in place on the collar. The rectangular spring-hook 10 (shown in Fig. 10) has one straight side, 11, adapted to pass under the crimp 9 of the holdfast 8, and the other side bent, as shown, close to the end of the side 11, and then bent away from it, so as to be easily sprung apart when the straight side 11 is passed under the crimp 9. The strap 13 is attached to the pad the same as the strap 3 of Figs. 1 and 3, and the closed end of the hook is placed uppermost. While the strap 13 cannot slip through the opening in the hook, the ends of the hook branches are easily sprung apart to permit the straight side 11 to pass under the crimp. When once in place, the hook is prevented from slipping out of the crimp on account of the spring of the metal.

When the holdfast is made of malleable iron, it may have a hole through it for the spring-hook 10, instead of a crimp.

The modification of the holdfast shown in Figs. 11 and 12 is made of two pieces, 14 and 15, riveted together, as shown, with one or more rivets, 17. The upper end, 16, of the piece 15 is first bent away from the piece 14, and then bent down upon it or close to it, and then the extremity of the projection 16 is bent outward, as shown. This construction of the holdfast provides a hook upon the exterior of the holdfast, into which a link, 18, may be fastened. The link 18 may be attached to a strap, 19, which may be secured to the pad, the same as the straps 3 and 13 of the other constructions.

The open band or holdfast herein set forth is different from the clasping or clamping devices previously invented, in that it is placed upon the fore roll of the horse-collar by being slipped onto the roll at the open end of the collar, and then slipped along lengthwise of the roll to the required position, and that it is removed from the roll by being slipped along the roll until it comes off of the end. Having this principle of construction and operation, and where but little or no bending of the holdfast is required to fit it to a given roll, my holdfast may be made of malleable iron where previous integral clamping devices could not. When made of spring metal, the flexure required is so small that the elasticity is never impaired nor the holdfast broken, since the holdfast is

never sprung around the body of the fore roll, as is the case with the "elastic clasps" previously invented.

One particular principle embodied in the construction of my holdfast is that the end on the inner side of the collar presses against the collar at the juncture of the fore roll and the body, and is thus prevented from rotating about the roll, and consequently retains the fastening-point for the pad stationary.

The arrow 21 in Fig. 2 indicates the direction of the pull on the stud-buttons 2, and the arrow 22 that of the pressure against the collar.

I claim—

1. A horse-collar-pad-attaching device consisting of an open band or holdfast having a curvature corresponding with that of the cross-section of the fore roll of the collar, and adapted to clamp or adhere to the roll, and having an exteriorly-projecting part or parts integral with or attached to its body, to which the pad or a suitable projecting device belonging to the pad may be detachably connected, substantially as and for the purposes set forth.

2. The combination of a horse-collar, a collar-pad, the holdfast for attaching the pad to the collar, adapted to be detachably connected with either the collar or pad, or both, and a projecting part integral with or attached to the pad, whereby the pad may be connected to the holdfast, the holdfast consisting of an open band, and having a curvature corresponding with that of the cross-section of the fore roll of the collar, and adapted to clamp or adhere to the roll, and having an exteriorly-projecting part or parts integral with or attached to its body, to which the pad or the projecting part integral with or attached to it may be detachably connected, substantially as and for the purposes set forth.

In testimony whereof I now affix my signature in presence of two witnesses.

EDWARD P. ROBBINS.

Witnesses:
MICHAEL HORNBACH,
S. J. KING.