J. H. MARTIN.

Harness-Tree.

No. 206,594. Patented July 30, 1878.

Fig. 7.

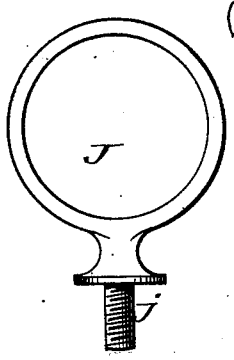


Fig. 1.

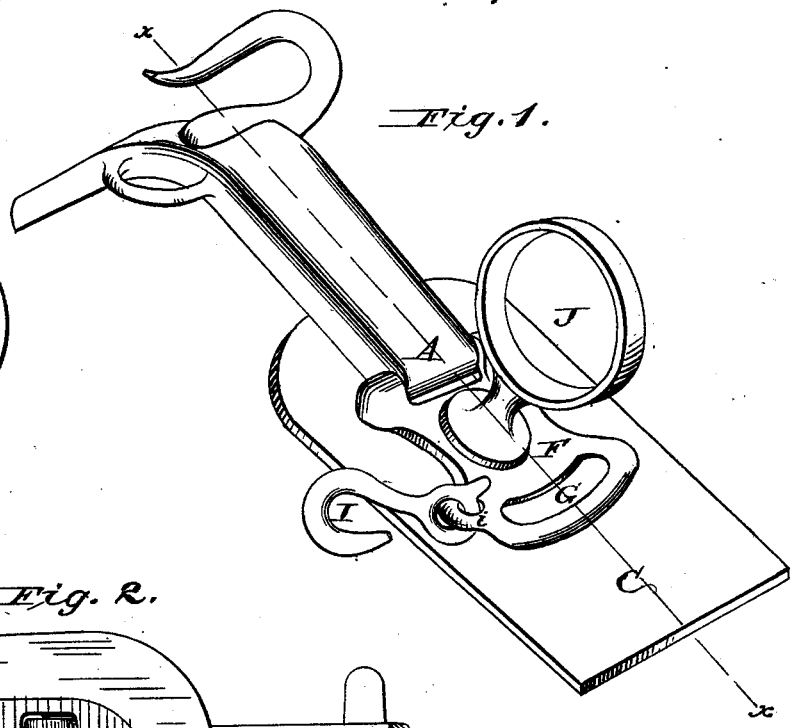


Fig. 2.

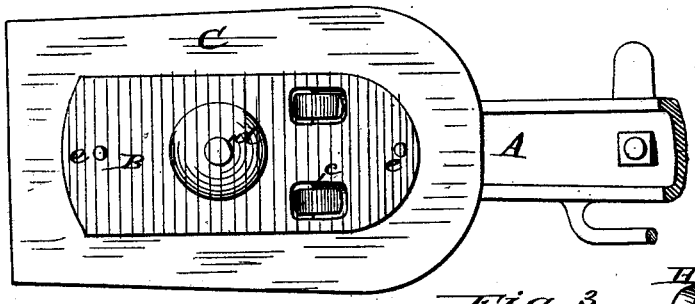


Fig. 5.

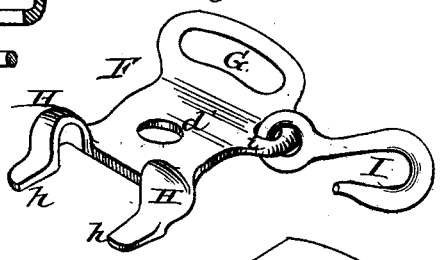


Fig. 3.

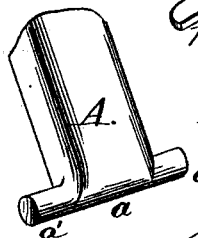


Fig. 6.

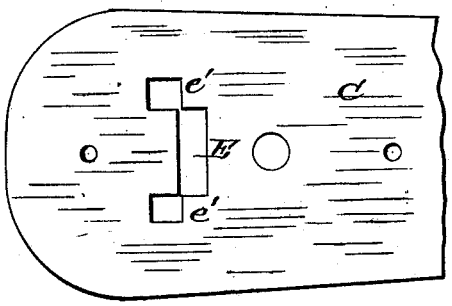


Fig. 4.

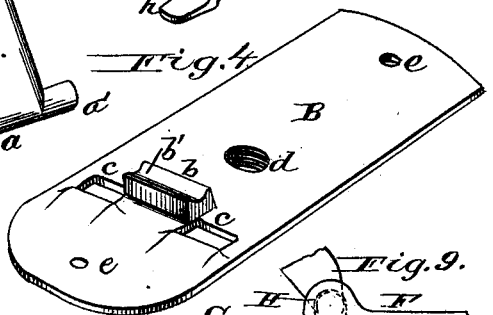


Fig. 9.

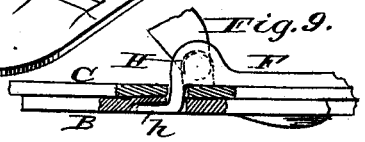
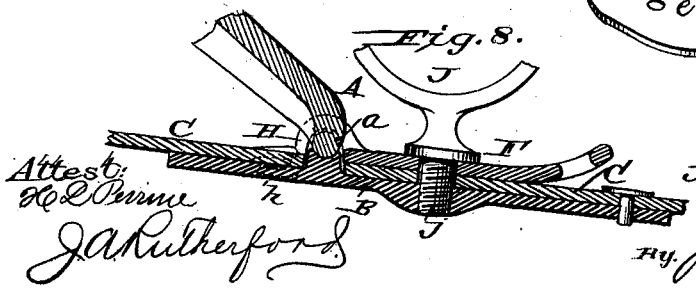


Fig. 8.



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Atty.

UNITED STATES PATENT OFFICE.

JOHN H. MARTIN, OF COLUMBUS, OHIO.

IMPROVEMENT IN HARNESS-TREES.

Specification forming part of Letters Patent No. **206,594**, dated July 30, 1878; application filed June 8, 1878.

To all whom it may concern:

Be it known that I, JOHN H. MARTIN, of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Harness-Trees, of which the following is a specification:

This invention relates to that class of harness-trees in which the yoke is attached to the pads by flexible joints; and its object is to secure on top of the pads the plates which hold the pivoted ends of the yokes to their bearings and which carry the loops by which the trace-supporting-straps are hung, thereby reducing the cost of the leather connections and producing a neater article than heretofore; also, to provide for the convenient disposition of the traces when not in use in that class of harness not having hip-straps for supporting the ordinary forms of trace-carriers.

It consists in the combination, with a harness-tree yoke having its ends provided with transverse pivots or journals, of lower pad-plates having screw-holes and upward-projecting seats, the tops of which form bearings for said pivots or journals, upper retaining-plates having screw-holes to coincide with those of the lower plates, and each provided at one end with hooks or cups for fitting over the yoke-pivots or their bearings, and at the other end with a loop for the attachment of the trace-supporting strap, and suitable screws for holding said upper and lower plates together, all so arranged that the top leathers or skirts of the pads may be firmly secured between the lower pad-plates and upper retaining-plates, and the necessity for stitching around the trace-strap loop avoided. The top leather or skirt of the pad has an opening cut through it for fitting around the bearing-seat of the lower pad-plate.

It consists, further, in the combination, with a harness-tree yoke having pivots or journals formed at its ends, of lower pad-plates provided with terret-screw holes and having upwardly-projecting seats, the tops of which form bearings for the yoke pivots or journals, and openings at each end of said seats, upper or retaining plates having also terret-screw holes, and each provided at one end with cups or hooks for fitting over the yoke-pivots, and terminating in tongues for fitting into the openings at the ends of the bearing-seats, and at the other end having a loop for the attachment of the trace-supporting strap, and suitable terret-screws for holding the retaining-plate and lower pad-plate together, all being arranged so that when the top leathers or skirts of the pads are clamped between the said upper and lower plates the pads will be prevented from turning laterally and the yoke-pivots will be securely retained upon their bearings, as more particularly hereinafter described and explained.

The invention further consists in providing a harness-tree with a suitable supplemental hook for suspending the traces when not in use.

It consists, finally, in the novel construction of certain of the devices hereinbefore mentioned, and which will be hereinafter more particularly described, and pointed out in the claims.

In the accompanying drawing, Figure 1 is a top perspective view of a portion of a harness-tree constructed according to my improvement, and having the top leather or skirt of the pad attached. Fig. 2 is a bottom view of the same. Fig. 3 is a view of one end of the yoke. Fig. 4 is a perspective view of the lower pad-plate detached. Fig. 5 is a perspective view of the upper or returning plate with trace-carrier attached. Fig. 6 is a plan view of the skirt or top leather of the pad. Fig. 7 is a view of a terret. Fig. 8 is a section on line *x x*, Fig. 1.

The letter A indicates the end of the yoke, provided with the pivots or journals *a*. B indicates the lower pad-plate, upon the top of which rests the top leather or skirt, C, of the pad. This pad-plate has an upward-projecting seat, *b*, in the top of which is a longitudinal depression, *b'*, constituting a bearing for the journal or pivot of the yoke. In this plate B are openings *c* at each end of the seat *b* and at the upper corners thereof. The seat *b* is of a height slightly greater than the thickness of the leather used for the top or skirt of the pad.

d is a terret-screw hole at about the center of the plate B, and *e* are rivet-holes in each end of said plate. C indicates the top leather or skirt of the pad, having cut through it an

opening, E, of sufficient size to fit around the bearing-seat *b*, and this opening has cut extensions *e'* at right angles from each end, which coincide with the openings *e* in the plate B when the skirt or top leather and plate B are placed together, as shown in Fig. 8.

F indicates the upper or retaining plate, which has formed at one end a loop, G, and at the other end cups or hooks H, terminating in tongues *h*. This plate has also a central terret-screw hole, *d'*. At one edge of this plate, and that which will be the rear edge, is formed a loop, *i*, to which is fastened the shank of a hook, I, which serves as a trace-carrier, as will be hereinafter explained.

I have now described the separate elements of my improvement, and the manner of their assembly or putting together in the proper position is as follows:

The top leather or skirt of the pad is placed upon the top of the plate B, its opening E fitting around the bearing-seat *b*. Suitable holes are then formed through this top leather at each end and through its middle portion, to coincide with the rivet-holes *e e* and terret-hole *d* of the plate B, and the said top leather is secured to said plate by rivets. The pivotal bearing of the yoke is then placed with its central portion, *a*, resting in the depressed top of the bearing-seat *b*, and the laterally-projecting pivots or journals *a'* projecting somewhat beyond each end of said seat. The retaining-plate F is now placed upon the top of the top leather, C, with its cups or hooks H fitting over and embracing the projecting pivots or journals *a'* of the yoke, and the tongues *h* passed through the extensions *e'* of the opening in the top leather, C, and through the openings *e* in the plate B, and projecting under said plate, preferably resting in the recesses therein, as shown in Fig. 2, so that they will be flush with the under surface of this plate; but this is not essential. The parts now being in this position, the screw *j* of the terret J is engaged in the holes provided for it in the plates F and B, and passing through the intermediate top leather or skirt, C. This terret now being screwed firmly home, the next step is the attachment of the pad, which is performed in the usual manner familiar to harness-makers, and which need not here be particularly described.

By the construction which I have now described, it will be seen that I achieve quite an important object by locating the metal loop to which is attached the trace-supporting strap on top of the pad, thereby considerably reducing the trouble and expense of securing the pad to the tree, as, when this loop is formed on the end of the lower pad-plate B, as heretofore, it is necessary to stitch leather over the pad, leaving the loops projecting and requiring careful stitching around them. It will also be seen that in this improvement, owing to the manner in which the top leather of the pad is secured to the tree, the pad is utterly prevented from working laterally or becoming displaced from its proper position.

By my combination of the trace-carrying hooks I with and at each end of a harness-tree, I provide for the convenient disposition of the traces when not in use in that class of harness not adapted to carry the ordinary forms of trace-carriers. These ordinary forms of trace-carriers are usually placed on the horse's back near the croup, at the junction of the back and hip straps; but, as is well known, back and hip straps are now omitted from several kinds of harness in very popular use, and my new trace-carrier will be an important addition to such harness.

The hooks I are located so near the terrets, through which the lines pass, that there is no danger whatever of the entanglement of the lines by these hooks, and they are, besides, so far forward that they cannot catch the horse's tail, which is a very serious objection to trace-carriers located on the back.

In engaging the hitching device of the trace with its carrier each trace is passed over the horse's back to the opposite side from that where the trace is located when in use, and is engaged with the trace-carrier on said opposite side, so as to be held well up out of the way of the horse's feet, and so that it will not be liable to catch upon projections by which the horse may pass.

Having now fully described my invention, I claim—

1. The combination, with a harness-tree yoke having its ends provided with transverse pivots or journals, of lower pad-plates having screw-holes and upwardly-projecting seats, the tops of which form bearings for said pivots or journals, upper retaining-plates having screw-holes to coincide with those of the lower plates, and each provided at one end with hooks or cups for fitting over the yoke-pivots or their bearings, and at the other end with a loop for the attachment of the trace-supporting strap, and suitable screws for holding said upper and lower plates together, all so arranged that the top leathers or skirts of the pads may be firmly secured between the lower pad-plates and upper retaining-plates, substantially as and for the purpose set forth.

2. The combination, with a harness-tree yoke having pivots or journals formed at its ends, of lower pad-plates provided with terret-screw holes and having upwardly-projecting seats, the tops of which form bearings for the yoke pivots or journals, and openings at each end of said seats, upper or retaining plates having also terret-screw holes, and each provided at one end with cups or hooks for fitting over the yoke-pivots, and terminating in tongues for fitting into the openings at the ends of the bearing-seats, and at the other end having a loop for the attachment of the trace-supporting strap, and suitable terret-screws for holding the retaining-plate and lower

pad-plate together, substantially as described, and for the purpose set forth.

3. A harness-tree provided with a supplemental hook, I, for suspending the traces when not in use.

4. The combination, with the end of a harness-tree yoke having a pivot or journal formed thereon, of a pad-plate, B, having an upwardly-projecting seat for said pivot or journal, and a suitable cap or caps for retaining said pivot or journal upon said seat.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

JOHN H. MARTIN.

Witnesses:
JAS. G. BULL,
LUKE CLARKE.