(No Model.)

S. A. MARKER.

HARNESS SADDLE.

No. 383,741. Patented May 29, 1888.

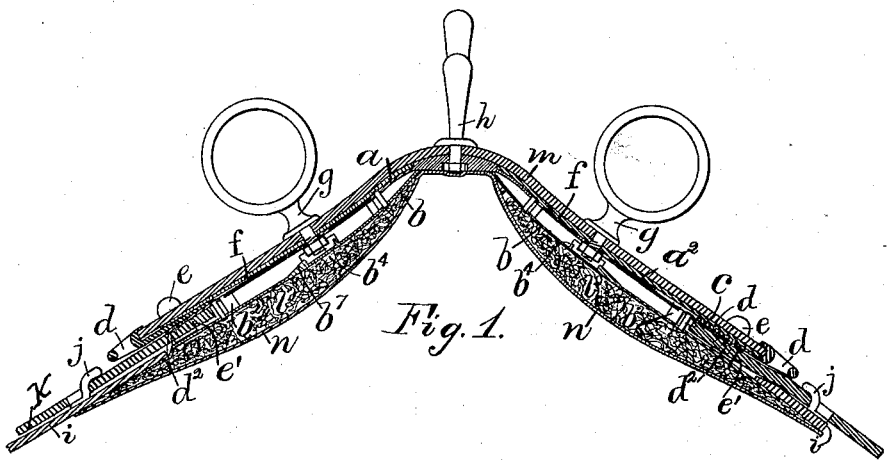

Fig. 1.

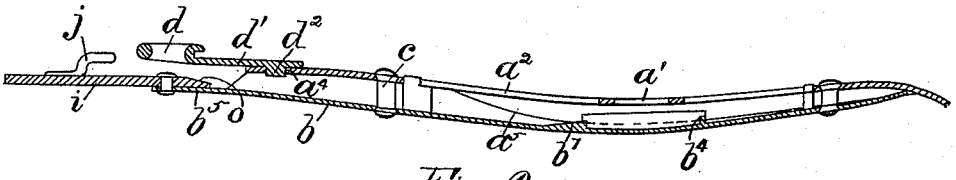

Fig. 2.

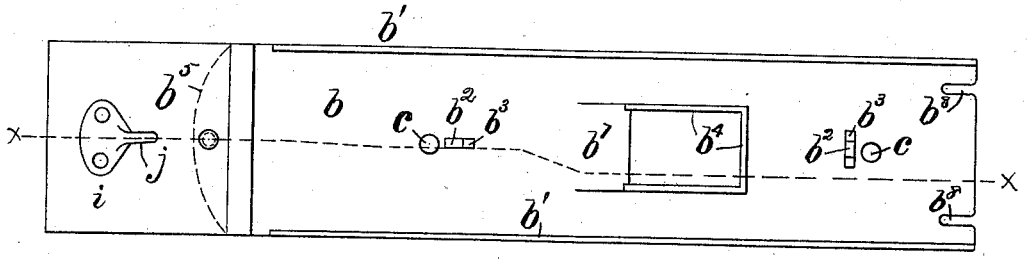

Fig. 3.

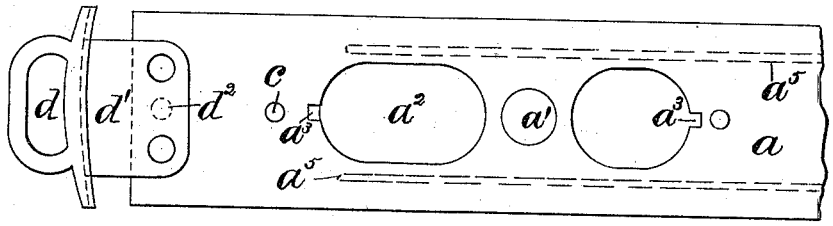

Fig. 4.

Attest:
L. Lege.
F. C. Fischer.

Inventor.
S. A. Marker, per
Crane & Miller, attys.

UNITED STATES PATENT OFFICE.

STEPHEN A. MARKER, OF NEWARK, NEW JERSEY.

HARNESS-SADDLE.

SPECIFICATION forming part of Letters Patent No. 383,741, dated May 29, 1888.

Application filed March 8, 1888. Serial No. 266,587. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN A. MARKER, a citizen of the United States, residing at Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Harness-Saddles or Coach-Pads, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention consists in the construction and arrangement of the various parts of a harness-saddle or coach-pad, hereinafter described and claimed.

In the annexed drawings, Figure 1 is a longitudinal section of a pad constructed with my improvements. Fig. 2 is a section on line *x x* in Fig. 3 of one side of the pad-plate and the shell with their attachments, but on a larger scale than Fig. 1. Fig. 3 is a plan of the upper side of the shell with the end piece attached thereto, and Fig. 4 is a plan of that part of the pad-plate shown in Fig. 2 with the pad end loop attached.

a is the pad-plate, provided with the usual openings, *a'* and a^2, for the insertion of the terret-shanks and their nuts, respectively.

b is the form or shell, provided with flanges *b'* along the edges of its upper side fitted to the under surface of the plate *a*. The shell is shown herein with lugs b^2 projecting from its upper side, near the holes, for the rivets *c*, and shouldered at b^3 to receive the under side of the plate, which is provided with notches or holes a^3, fitted to the ends of the lugs b^2 above the shoulder. These shoulders are made of the same height as the flanges *b'*, and the object of the lugs is to prevent the displacement of the shell upon the plate, and to prevent the rivets from drawing the plate and shell together between the flanges *b'*. Beside the lugs b^2, I have also shown in Figs. 2, 3, and 4 other means for preventing the lateral displacement of the shell at its inner end. This consists in flanges a^5 on the under side of the plate, and notches b^8 in the inner end of the shell fitted to such flanges. It will readily be seen that by the use of such device the lug b^2 nearest the notches b^8 in the shell may be dispensed with. The shell is provided upon its upper side with longitudinal and transverse ribs b^4, forming a rectangular space for the reception of the terret-nut to prevent its turning when the terret is being secured upon the pad. As shown in Figs. 2 and 3, an incline, b^7, is made from the surface of the shell to the top of one of the transverse ribs, to permit the nut to slide over such transverse rib into its proper position after being inserted through the opening a^2 in the plate.

d is the pad end loop, to which the trace-carrier is attached, having a flat shank, *d'*, secured upon the upper side of the pad-plate at its lower end. The shank *d'* is shown provided with a stud, d^2, on its under side, and a hole is made in the plate to receive the same. Such stud takes all the strain imposed upon the loop *d*, and the pad-screws serve to steady the loop and prevent its lateral motion.

The foundation-piece *f* is secured upon the plate, with its end covering the shank *d'*, and over this is fastened the pad-top *m*. The latter is fastened upon the plate by means of the pad-screws *e*, terrets *g*, the rein-hook *h*, and the binding, which is attached to the plate, but is not shown herein, as it forms no part of my present invention.

The shell is provided with an extension, b^5, beyond the ends of the ribs *b'* and the plate *a*, and upon such extension is secured the flexible end piece *i*, which is preferably skived down at its upper end, *o*. Upon the upper side of the flexible end piece is fastened the hook *j*.

It will be seen that a channel is formed between the plate and the shell by means of the flanges *b'*, and into the end of such channel is inserted the end of the side piece or skirt, *k*, having the pad screw-nuts *e'* embedded in the inner end of the same. The skirt is provided with a hole farther from its inner end, through which the hook *j* projects. The hook takes the strain that the pad-screws would otherwise be subjected to and prevents the lateral movement of the skirt.

Heretofore the upper side of the base of the hook *j* has been secured to the under side of the flexible end piece, a hole being cut in the same to allow the shank of the hook to pass through to the upper side of the end piece. By my construction labor is saved in avoiding the necessity of cutting the hole for the shank of the hook; and while in the former construction hooks were necessarily made with shanks of different lengths, to allow for the difference

in thickness of the end piece in the various kinds of harness-saddles, in my construction a uniform size of hook may be adopted for all forms of saddles, since the same is fastened upon the top of the end piece, *i*.

l is the stuffing of felt applied on the under side of the shell, which is covered by the pad bottom *n*.

Instead of making the extension of the shell as shown in Fig. 2, it may be offset to bring the upper side of the flexible end piece attached thereto flush with the inner side of the body of the shell, as shown on the left in Fig. 1. By the use of such construction it is unnecessary to skive the flexible end piece at its inner end, and the skirt is more easily introduced between the ends of the plate and shell.

The function of the lugs or studs b^2 is to sustain the shell at a fixed distance from the plate, as well as to prevent its displacement, and it is therefore immaterial whether they are formed upon the plate or shell, as they will operate in the same manner in either position. The same is true of the ribs *b'*, as their function also is to sustain the shell at a fixed distance from the plate.

To permit of the easy admission of the skirt between the ends of the plate and the shell, and to prevent the obstruction of the channel formed thereby, I secure the end piece, *i*, upon the extension of the shell a little beyond the mouth of such channel.

It is obvious that by securing the shank *d'* of the pad end loop upon the plate *a* under the foundation-piece *f* the pad end loop may be held in its operative position without the use of the pad-screws when the pad is being put together. Nor is it necessary to apply the pad-screws in securing the skirt in position, since the hook or lug *j* performs the function of holding the same in place. It is therefore evident that by my construction considerable inconvenience, caused by the necessity of securing these parts together simultaneously by means of the pad-screws only, is avoided. It will also be seen that even if the pad-screws should become loose and drop out the skirt and pad end loop would remain in position, since they are secured to the pad by other means. It is also immaterial whether the stud d^2 is formed upon the shank *d'* of the pad end loop or upon the pad-plate, since its operation would be the same in either position.

I am aware that it is not new to construct both the pad-plate and shell of a harness-saddle with ribs extending along their edges, thus forming a channel when such parts are secured together, as shown in United States Patent No. 235,506; but I am not aware that a channel formed by constructing only the pad-plate with such longitudinal ribs has been constructed which was adapted to receive the end of the skirt, and I therefore disclaim such construction.

I am also aware of United States Patent No. 356,912, in which the pad end loop is shown having studs on the lower side of its shank, which fit in holes in a metal strip secured under the skirt by means of the terret. Such stud upon the shank serves in this construction, as in mine, to take the strain to which the pad-screw is subjected in ordinary constructions; but in the former the shank of the loop is fastened upon the pad-top, while in my invention the shank is fastened upon the pad-plate under the foundation-piece. I therefore disclaim the said United States patent.

Having thus described my invention, what I claim herein is—

1. The combination, with the pad-plate *a* and shell *b*, provided with flanges *b'*, secured thereto to form a channel open at its outer end, of the skirt *k*, having its inner end attached to the plate within the said channel, the whole constructed and arranged as shown and described.

2. The combination, with the plate *a* and shell *b*, having flanges *b'*, of the shouldered lug b^2, and the hole or notch a^3, to fit the end of such lug, and means, substantially as described, for securing the plate and shell together, as and for the purpose set forth.

3. The combination, with the plate *a* and shell *b*, having the flanges *b'* secured together to form a channel between the same, of longitudinal and transverse ribs b^4 and incline b^7, as and for the purpose set forth.

4. The combination, with the plate *a*, provided with a hole, a^4, and the foundation-piece *f*, secured thereon, of the pad end loop, *d*, having shank *d'* inserted between the inner end portions of the plate and foundation-piece, and the stud d^2, as and for the purpose set forth.

5. The combination, with the plate *a* and shell *b*, provided with flanges *b'*, and extension b^5, of a flexible end piece secured to the said extension beyond the ends of the ribs *b'*, the whole constructed and arranged as and for the purpose set forth.

6. The combination, with the plate *a* and shell *b*, provided with flanges *b'*, and extension b^5, of a flexible end piece skived down at its inner end, as and for the purpose set forth.

7. The combination, with the plate *a* and shell *b*, of the extension b^5, offset from the body of the shell, and the flexible end piece, *i*, secured thereon, as and for the purpose set forth.

8. The combination, with the plate *a*, shell *b*, constructed as described, and the skirt *k*, of the flexible end piece, *i*, having the hook or lug *j* secured to its upper side, as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

STEPHEN A. MARKER.

Witnesses:
WM. J. KEARNS,
ALEXANDER BRADLEY.