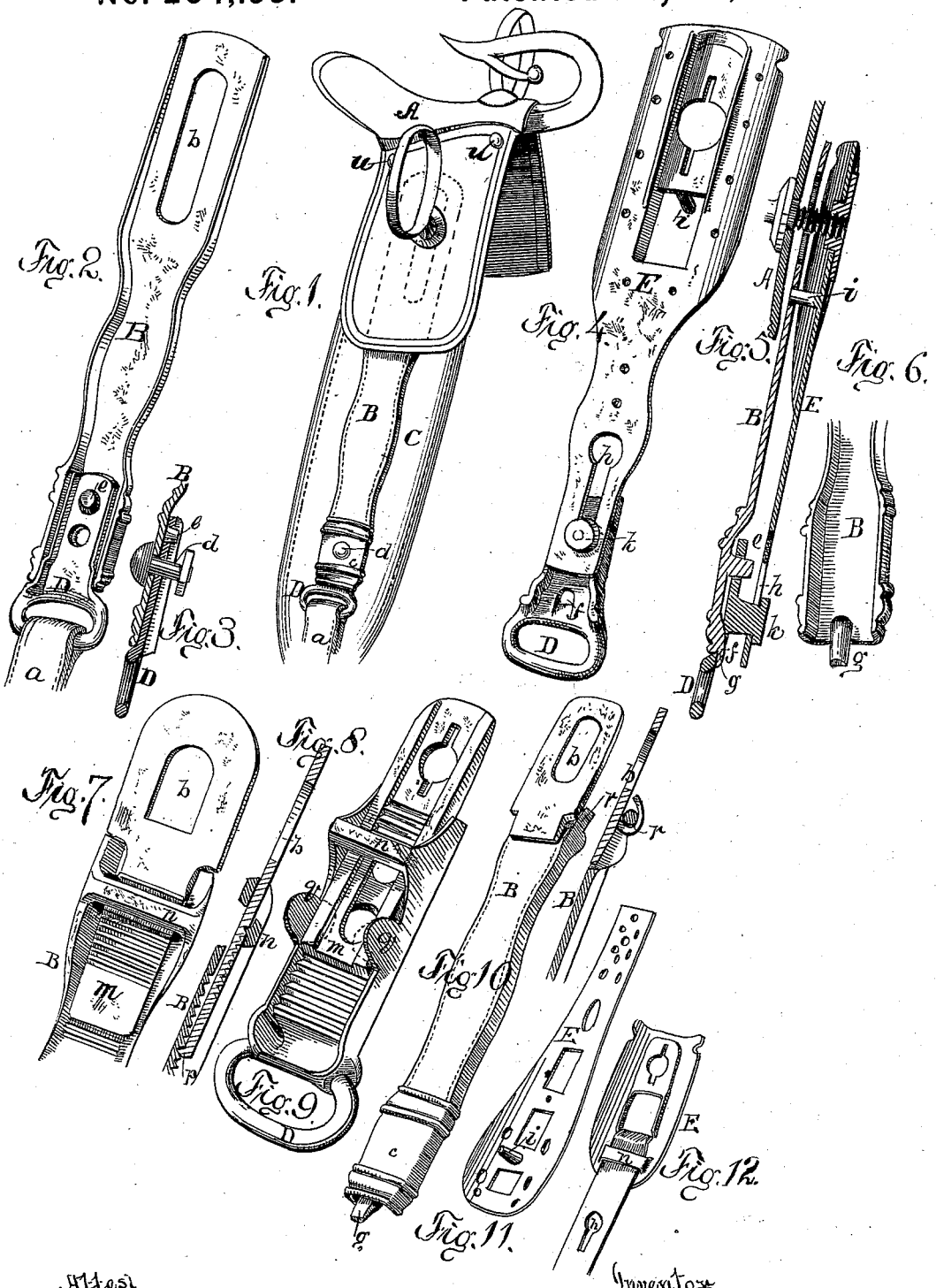
E. R. CAHOONE.
Harness.

No. 204,195. **Patented May 28, 1878.**



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EDWIN R. CAHOONE, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN HARNESS.

Specification forming part of Letters Patent No. **204,195**, dated May 28, 1878; application filed April 25, 1878.

To all whom it may concern:

Be it known that I, EDWIN R. CAHOONE, of Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Harness, of which the following is a full and clear description, having reference to the accompanying drawings, which, in twelve figures, represent my improvement in the various modifications of it which I propose.

That others may fully understand my invention, I will particularly describe it.

Like letters refer to the same parts in all cases.

My invention relates to a metallic saddle and its connected parts, also made of metal and finished in imitation of leather, whereby a highly-finished appearance is secured with cheapness of manufacture, and various advantages not attained either so well or so cheaply when leather is employed.

A is my saddle, cast in one piece and finished in imitation of leather. B is a metallic back-band, also finished in imitation of leather. Its upper end is provided with a slot, *b*, through which the terret-screw passes, and enables the back-band to project more or less below the skirt of the saddle, as may be desired. When put in place, the upper end of the back-band is placed underneath the skirt of the saddle, as shown in Fig. 1, and at its lower end it is attached to the flap C, which is made of leather in the usual way.

At the lower end of the back-strap B there is a removable loop, D, for the attachment of the strap *a*. This loop is made detachable for this reason, and it forms an important improvement in the art. In making up harness, as is now done, in large quantities, for the trade, it is important that finished metallic portions should not be subjected to handling to a greater extent than is necessary. If the loop D was formed integral with the strap B, as it might easily be made, it would be necessary to handle each strap B in sewing in the strap *a*, and an important percentage would become defaced, thereby entailing serious loss upon the manufacturer.

By my plan no part is handled excepting the loop D, which is nearly covered by the strap, and which, from its small size, is not liable to damage. The detachable loop D also enables the purchaser to select the back-straps from a variety of styles, and it is not necessary, therefore, to provide and keep on hand so large a number of straps *a* as would otherwise be the case.

The lower end of the strap B is finished in imitation of a leather loop, as shown at *c*, and the said strap and loop D may be secured together by an ordinary pad-screw, *d*, or in other ways, to be hereinafter described, as may be preferred. To make this attachment secure without causing a strain upon the pad-screw *d*, which would partly displace it and cause the head to present an unsightly appearance, I cast a pin, *e*, on the under side of the strap B, to project through a proper hole in the tang of the loop D, and receive all the strain of the connection.

In Figs. 4, 5, and 6 another method of attachment is shown. The tang of the loop D is formed with a hole or orifice, *f*, and a projecting finger or pin, *g*, is cast upon the end of the back-band, to enter and engage with said hole, extending below the loop-plate and out of view. When thus locked at the point or end of the strap B, and also secured by the re-enforce pin *e*, the fastening to hold the parts to the flap-leather may be applied below and to the loop-plate alone, and such fastening is shown in Figs. 4 and 5, wherein is introduced as an auxiliary the under plate E, which is fastened to the flap-leather, and has a seat for the terret-nut. At the lower end of said plate there is a button-hole, *h*, and on its upper side, just below the terret-hole, a pin, *i*. The back-strap B has a hole in which said pin engages, and the tang of the loop D has a button, *k*, which projects down through a slot in the flap and through the button-hole *h*. It is apparent that, the under plate E having been rigidly secured to the flap C, the back-band and loop-tip D will be securely locked in place, and yet that these outer trimmings may all be applied after the harness-maker's work has all been finished. As before stated, the ability to apply the exterior fittings after the

workman has completed the leather-work, is of great importance, because it permits a selection over a wide range of styles and methods of finish, and does not require the assembling of these external parts until the harness is being put up for the market.

It is frequently desirable to be able to lengthen or shorten the back-strap, or, in other words, back-straps of different lengths are required, and it is highly desirable that an unnecessary duplication of parts shall be avoided by making one set of parts adjustable upon each other, so as to serve either of several purposes. I therefore make the back-strap in two parts, as shown in Fig. 7. The upper end is detached and provided with a transversely-ribbed tang, *m*, and the strap B is constructed with a transverse bar or bridge, *n*, having a rib on its under side. The part *m* is slipped under this rib, as shown in Fig. 8, as far as may be required to produce the desired length, and the bar *n* is then forcibly depressed by a blow from a hammer, and the parts are all firmly locked together.

If thought advisable, as it will be for heavy harness and corresponding back-straps, such as shown in Fig. 9, a rib, *p*, may be formed on the under side of the tang *m*, near or at the end, to engage with transverse grooves in the under side of the strap B.

A second bridge, *n*, may be employed, or ears *q* may be substituted and beaten over upon the part *m*, as shown in dotted lines in Fig. 9.

In Fig. 12 the under plate E is shown constructed partly of sheet metal and partly of cast metal, and the two united by the means above described.

In Fig. 11 the under plate is shown with the pin *i* located differently from that shown in Figs. 4 and 5.

It is frequently desirable that the back-strap shall be flexible or jointed, and such provision is shown in Fig. 10.

It is evident the joint *r* may be arranged at any point in the length of the back-strap, and that it may be constructed differently from the method shown, although that is a good way, especially in the position shown, when the joint will be covered by the saddle-skirt.

Having described my improvement, what I claim as new is—

1. A metallic back-band provided at its lower end with a socket and a projecting stud, *e*, combined with a separate loop-plate, D, adapted to rest in said socket and lock over said stud, the whole being secured in the manner described.

2. A metallic back-band having a socket, with stud *e* and finger *g*, and a detachable loop-plate, D, adapted to engage with said pin and finger, and provided with the headed stud *k*, combined with the under plate E, having a slot, *h*, to receive said stud, whereby the metallic back-band and loop-plate are secured together and the back-band strap supported without reference to the flap-leather.

3. A metallic back-band or back-band loop-plate, constructed with a transverse bar or bridge, *n*, and transverse serrations, combined with a separate plate or end, adapted to slip under said loop and be forced to engage with said serrations by the forcible depression of said bridge, as set forth, whereby the length of said back-band or plate may be adjusted as to length.

4. A metallic back-band or metallic back-band loop-plate, constructed with a transverse bridge, *n*, having on its under side a rib and transverse serrations, as described, combined with the separate plate or end, adapted to slip under said loop, and provided with transverse serrations and a transverse rib, *p*, whereby the two parts may be immovably locked together by the forcible depression of said loop, as set forth.

5. A metallic back-band or back-band loop-plate, D, constructed with transverse serrations, bridge *n*, and side ears *q*, combined with a separate plate or end adapted to slip under said bridge and be secured at two points by the depression of said bridge and ears, as set forth.

6. An under plate and stiffener, all cast in one piece, and provided with the button-hole slot *h* at its lower end, adapted to receive and combined with the headed stud *k*, as set forth.

7. An under plate and stiffener, all in one piece, provided with a button-hole slot, *h*, at its lower end, adapted to receive and combined with the headed stud *k*, and a stud or pin, *e*, at its upper end to engage with a corresponding hole in the back-band, as set forth.

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Witnesses:
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