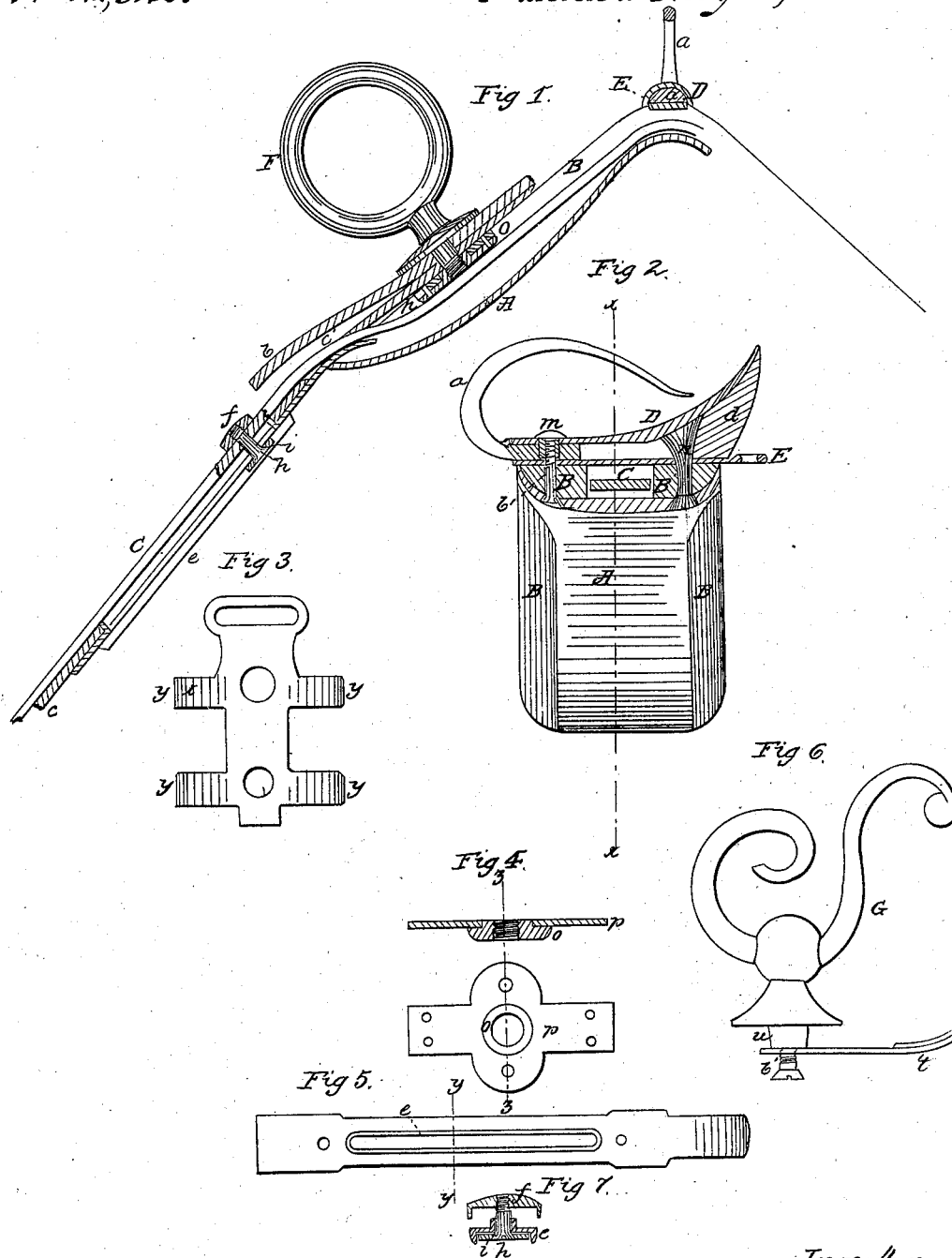


E. E. Hardy Harness Saddle.

N^o 47,949.

Patented May 30, 1865.



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IMPROVEMENT IN HARNESS.

Specification forming part of Letters Patent No. 47,949, dated May 30, 1865.

To all whom it may concern:

Be it known that I, E. E. HARDY, of the city, county, and State of New York, have invented certain new and useful Improvements in Harness for Horses; and I do hereby declare that the following is a clear, full, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a longitudinal vertical section of the back-strap, saddle, and fixtures of a harness in the line of *x x*, Fig. 2; Fig. 2, a transverse vertical section of the same in the line of *z z*, Fig. 1; and Figs. 3, 4, 5, and 6 are detailed views of portions of the same detached.

The nature of my invention consists in a light metallic body or frame for the saddle, constructed in a novel manner, for the purpose of combining strength, durability, lightness, and a neat finish.

It further consists in attaching the back-strap that supports the thills so as to permit it to play freely back and forth therein; and, further, in the manner of securing the terrets, check-hooks, &c., thereto.

To enable others skilled in the arts to construct and use my invention, I will proceed to describe it.

A represents a metallic strap or frame, which may be made of cast-iron or other suitable material, and formed longitudinally in such a shape as to adapt it to the configuration of the animal. This piece A constitutes the main portion or frame-work of the back piece or saddle. At its central part this piece A is made wider than elsewhere, as clearly shown in Fig. 2, where it is represented cut across through its center.

B and B' represent blocks of wood fitted upon A in such a manner as to come flush with the lower face thereof, while their outer edges extend out in a line even with the widest portion of A, as shown in Fig. 2. These blocks B and B' are of such a width and so placed as to leave between a longitudinal groove or channel for the strap C to play in, as shown in Fig. 2. The object of these blocks is to fill the saddle out, so as to give it the required form, furnish means for securely and readily attaching the pad and trimmings, and form a channel for the strap C.

D represents a metallic piece, made in the form of a riding-saddle, as usual, and having the projecting lug or bolt *n* cast thereon, as shown in Fig. 2. In order to give it a finished appearance and form and not render it too heavy, its rear portion may be made hollow or convex and filled with a wooden block, *d*, as shown in Fig. 2.

E is a metallic piece made in the form shown in Fig. 3, with the elongated opening at its rear portion for attaching the strap extending back and connecting the back-strap to the breeching and crupper. This piece E is made of such a length as to correspond with the width of the saddle and permit the loop at its rear end to protrude, as shown in Fig. 2, while the arms *y* are curved to fit the upper surface of the blocks B and B', upon which it rests, and to which, as well as to the frame A, it is securely attached by the bolts *l* and *n*, which pass through the holes therein, when in place with the other parts, as seen in Fig. 2.

F represents a terret or ring through which the rein passes, and which, instead of having its shank project through the frame A and being secured by nuts on the underside thereof, as is usual, is held in place by having its shank made shorter than usual and screwed into the nut *o*, the form of which is clearly shown in Fig. 4. This nut *o* is held firmly in place by being attached to metallic piece *p*, which extends across the blocks B and B', and is firmly attached thereto in such a manner as to bring its upper surface flush therewith. If desired, the nut *o* and piece *p* may be made so as to constitute a single solid piece. A wide strap, *c*, is secured to the upper surface of blocks B and B' by means of F, and through this strap *c*, at *c'*, is cut an oblong transverse hole large enough to permit the narrower strap C to pass readily through it, as shown in Fig. 1.

To the strap *c* is secured the metallic piece *e*, the form of which is clearly shown in Fig. 5. This piece *e* is slotted longitudinally, and is so attached to *c* as to cause its upper end to project up past the lower end of A, as shown in Fig. 1, the upper end resting in the channel between the blocks B and B'. The strap C (which is the one that supports the thills of the vehicle) is placed in the channel between the blocks, as shown in Fig. 2, and, passing through the opening *c'* in strap *c*, has a small bolt or

screw, *h*, secured to it by means of the nut *f*, which has flanges on its sides or edges projecting down over the edges of strap C, as shown in Fig. 7. This screw *h* is provided with a washer, *i*, and passes through the slot in *e*, by which means the strap C is permitted to have a movement across the horse's back equal to the length of the slot in *e*, while it is prevented from moving laterally, the piece *e* being held in place by the strap *c*, to which it is riveted or otherwise securely fastened, and which strap is held in place by being buckled tightly around the horse in the usual manner. The metallic plate *e* thus forms a guide for the movements of strap C, and at the same time protects the strap *c* from being cut and worn by the screw *h*, as it otherwise would be. The strap *b* extends over and covers the whole, forming a finish thereto.

A check-hook, *a*, is secured to the front of the frame or saddle by having one end placed between D and E, where it is firmly held by the bolt *l*, which is screwed from the under side into the body of nut *m*, which is made square to fit in a hole of similar shape in D and *a*, the bolt *l* not passing entirely through *m*, the upper surface of which is left solid and smooth, as shown in Fig. 2.

Fig. 6 represents a check-hook of the ordinary pattern, so constructed as to adapt it to be used in place of the hook *a*, if desired. The shank or stem *w* of hook G is made square, and of proper size to fit in place of the nut *m*, the stem *w* having a hole bored in its lower end, with a screw-thread cut therein, the same as in nut *m*, for the reception of bolt *l'*. When the hook G is used, the plate E may be dispensed with and the simpler one, *t*, substituted. If desired, D may also be dispensed with, a proper finish being given to the saddle by a suitable covering of leather or other material. By this construction and arrangement of parts I am enabled to produce a strong, light, and neat article, having no nuts, bolts, or screw-heads

projecting from the under surface to bruise or otherwise injure the animal. It is also fitted to the animal's back, so that but little padding or cushioning is needed, thereby rendering the saddle far less liable to injure the animal by heating, scalding, or blistering its back, as is often the case with those formerly in use. Another and very important advantage gained is, that the thills, which are held up by the strap C, which plays freely in the channel, are permitted to adapt themselves to the inclination of the ground over which the vehicle may be passing, and which cannot be done with the back-strap as ordinarily arranged in harness.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The plate A, constructed in the form and manner shown, and connected to the other parts, as herein set forth.

2. In combination with plate A, the blocks B and B', when so arranged as to form the channel for the strap C, and otherwise constructed as described.

3. The crupper-plate E, when constructed and fastened in place, as shown and described.

4. The slotted plate *e*, screw *h*, and nut *f*, or their equivalents, when constructed and arranged to operate as and for the purpose set forth.

5. The method of securing the terret F, as shown, whereby an open space or channel is left underneath it for the strap C.

6. The self-adjusting back-strap C, when arranged to operate in connection with the other parts, as herein shown.

7. In combination with the strap C, the slotted plate *e*, clamp *f* and *i*, and screw *h*, constructed and operating substantially as described.

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Witnesses:

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