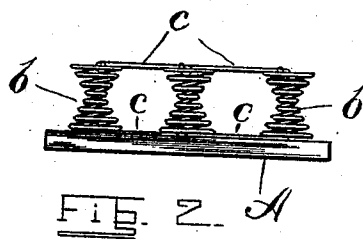
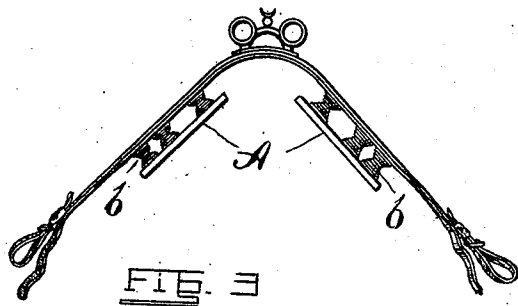
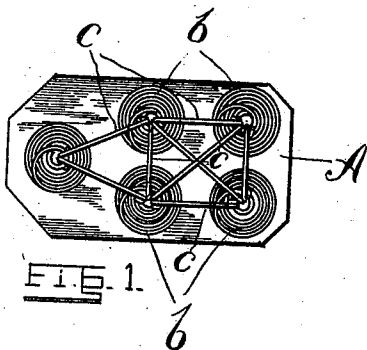


(No Model.)

L. B. HILL.
HARNESS SADDLE.

No. 502,121.

Patented July 25, 1893.



WITNESSES.
Arthur F. Randall
Robert Wallace.

INVENTOR.
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UNITED STATES PATENT OFFICE.

LEONARD B. HILL, OF BOSTON, MASSACHUSETTS.

HARNESS-SADDLE.

SPECIFICATION forming part of Letters Patent No. 502,121, dated July 25, 1893.

Application filed October 10, 1892. Serial No. 448,334. (No model.)

To all whom it may concern:

Be it known that I, LEONARD B. HILL, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Harness-Saddles, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has for its object to provide an improved harness saddle so arranged that the saddle proper will rest upon a spring support which is interposed between it and the back of the horse, and the construction of which is such that the back of the horse may be kept cool and in a healthy state while the weight resting thereon is more evenly distributed, and it consists in the combination with a harness saddle, of pads such as hereinafter specified which are placed under the sides of the said saddle and between the latter and the back of the animal to which the saddle is applied.

The novel features of my invention are pointed out in the claim which is appended hereto and made a part hereof.

My invention in the best form now known to me is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view and Fig. 2 is a side view of one of the pads. Fig. 3 is a side view showing a harness saddle with the pads in position.

A is a piece of suitable material preferably of thick felt which may be of any convenient size and shape. Spiral springs of metal *b* which are shown as of hour-glass shape, but the shape of which may be varied without departing from my invention, are secured to the piece A in any well-known manner. I prefer to secure them by stitching with strong thread or cord. This manner of fastening leaves the surface of the piece A which comes in contact with the animal smooth and not liable to cause irritation. These springs *b* are preferably five in number for each pad, although the number of springs employed may be varied as will be obvious. In order to prevent the springs from lateral displacement, or from getting out of position in any manner they are tied together by a series of cross-pieces *c* which may be made of the same

material as the springs. These cross-pieces *c* are employed at both ends of the springs, the springs being in this manner thoroughly tied together, preferably before they are secured to the piece A.

The piece A may consist of a continuous sheet underlying all the springs or it may be cut away or perforated to any extent so long as the holes or perforations do not expose the back of the animal to the pressure of the springs or cross-pieces. The holes or perforations in the felt serve to allow the air to circulate over the back of the animal and so keep it cool and in a healthy condition. If the piece A were not employed the pressure of the metal of the springs and cross-pieces on the back of the animal would very soon make the back sore. The purpose therefore of the piece is to distribute the pressure of the springs or to form a soft cushion between the springs and the animal. By tying the springs together by means of cross-pieces *c*, as shown, a greater pressure on one of the springs than on the others cannot displace the spring and will be borne to a greater or less degree by the other springs. The device therefore not only operates better by reason of these cross-pieces but is much more durable.

The saddle is placed on top of the springs, a pad comprising the felt backing with its set of springs being employed on each side of the saddle, that is, on each side of the back bone of the animal. The saddle is secured to the springs by being strapped thereto or in any other well-known manner or the springs may be permanently secured to the saddle when the latter is constructed as shown in Fig. 3. In such case if the top of the saddle were of metal and the top of each spring were secured thereto, the cross-pieces *c* connecting the tops of the springs would not be required.

As will be obvious instead of a series of springs being secured to one piece of felt which is provided with holes or perforations, each spring may be provided with a separate piece of felt, the intermediate space between the pieces of felt thus employed being left open and serving substantially the same purpose as the perforations in a large piece of felt upon which all the springs are secured. In case a horse has a sore back such a pad is

of especial importance since it can be constructed of a shape to bear only on the healthy parts thus keeping the pressure off the sore part and leaving it exposed to the air. It will
5 be clear that the size and strength of the springs may be varied to suit harnesses of different weights and designed for different classes of work.

What I claim is—

10 The combination with a harness saddle, of pads applied to the sides thereof and each consisting of a series of springs on which the sides of the saddle rest, the said springs be-

ing tied together by a cross-piece or cross-pieces and having secured to the free ends 15 thereof felt or similar material for contact with the back of the animal to which the harness saddle is applied, substantially as described.

In testimony whereof I affix my signature in 20 presence of two witnesses.

LEONARD B. HILL.

Witnesses:

WM. A. MACLEOD,
ROBT. WALLACE.