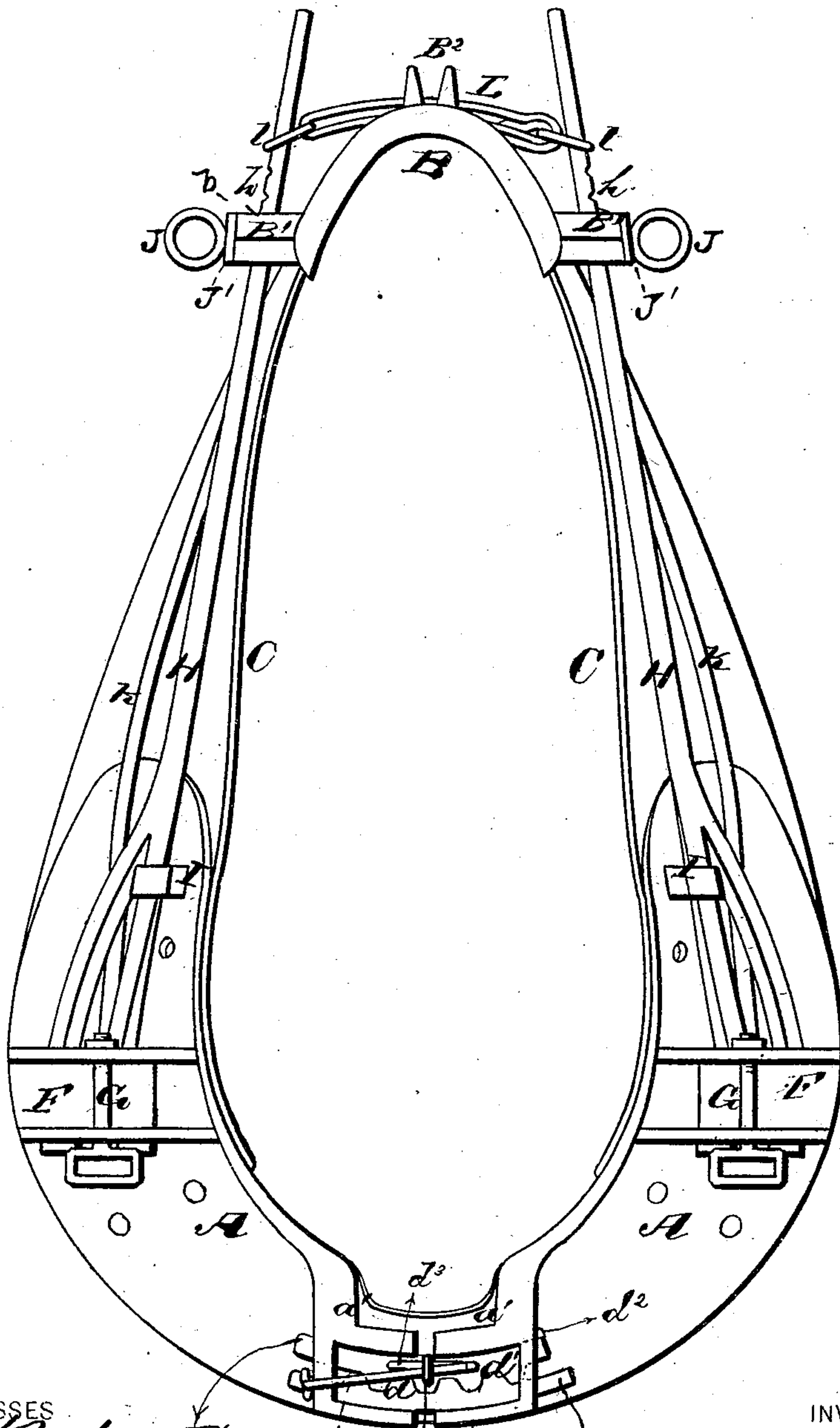


A. RUTHERFORD.
HORSE-COLLAR.

No. 188,191.

Patented March 6, 1877.

Fig. 1.



WITNESSES

H. Bates II
George E. Upham.

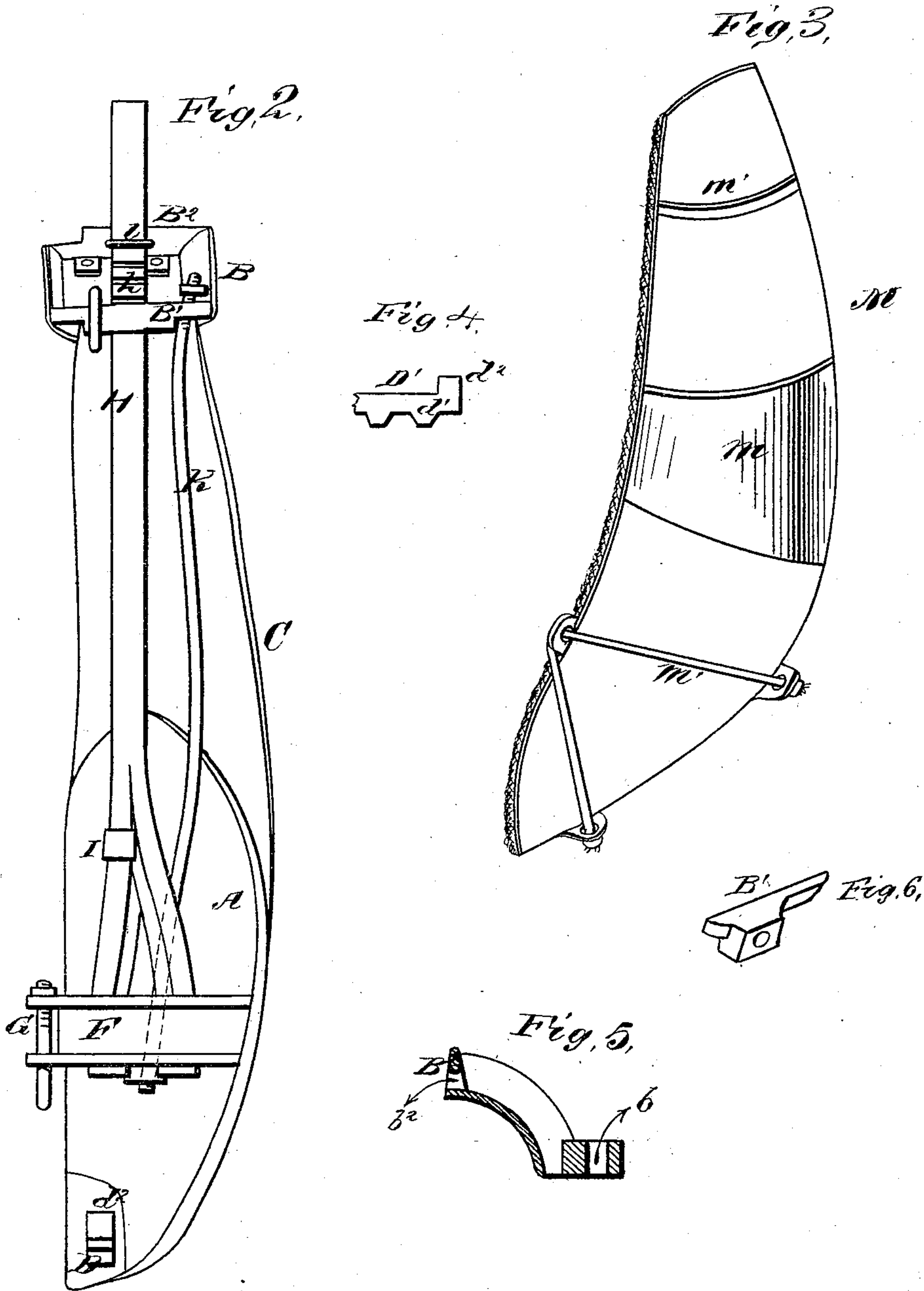
INVENTOR

D. Adams Rutherford
Gilmore, Smith & Co.
ATTORNEYS.

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UNITED STATES PATENT OFFICE

ADAM RUTHERFORD, OF WALLA WALLA, WASHINGTON TERRITORY.

IMPROVEMENT IN HORSE-COLLARS.

Specification forming part of Letters Patent No. 188,191, dated March 6, 1877; application filed November 4, 1876.

To all whom it may concern:

Be it known that I, ADAM RUTHERFORD, of Walla Walla, in the county of Walla Walla and Territory of Washington, have invented a new and valuable Improvement in Horse-Collars; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front elevation of my horse-collar, and Fig. 2 is a side elevation of the same. Fig. 3 is a plan view of the pad, and Figs. 4, 5, and 6 are detail views of parts of my horse-collar.

This invention is an improvement upon the horse-collar secured to me by Letters Patent No. 177,011, dated May 2, 1876.

The nature of said invention consists, chiefly, in certain adjusting devices applied to the withers and breast end of the said collar.

It also consists of an additional pair of rods connecting the draft-boxes with the withers or neck-cap.

It also consists in an attachment of the main rods directly to the body of the collar, for use in heavy draft.

It consists, finally, in various additional devices, arrangements, and combinations, hereinafter fully set forth.

In the annexed drawings, A designates the body or breast end of the collar; B, the neck-cap, and C C collar-leathers connecting said body and cap, and completing the outline of the collar. Body A is constructed in two pieces, which are connected at the bottom of the collar by means of two cogged bars or short adjusting-racks, D D', provided with intermeshing series of cogs $d d'$. These adjusting-racks set within a box, E, formed in the rear end of said collar-body, one half of said box being in the end of one section of said collar-body, and the other half of said box being in the other section of said collar-body. The ends of said box are provided with openings to allow the endwise adjustment of said racks, whereby the said collar-body is made narrower or broader at the bottom, so as to

conform to the shape of the horse. One of said racks, D, is provided at one end with a stop-lug, d^2 , which prevents it from being drawn too far within said box, and also with a staple, d^3 , which is on its upper face near its middle, and supports a small ring, d^4 . The other rack, D', has, at the end away from lug d^2 , a pivoted hook, d^5 , which is adapted to engage with ring d^4 .

The combined effect of said stop-lug, staple, hook, and ring is to lock the bottom of said collar-body solidly, whatever may be the width of its adjustment.

The inner side of collar-body A is recessed at a' , to guard against any danger of the horse being choked by the draft on the collar. The horse's windpipe sets into said recess, and the tendons of his throat press against the collar on either side thereof, so as to maintain sufficient breathing room. The inner side of the bottom of said collar-body is lined with a flexible leather strip or "safe," which prevents abrasion of the skin, and consequent soreness.

F F designate two draft-blocks or draft-boxes, which are secured to said collar-body at opposite sides thereof, and each of which is provided with an eyebolt, G, for the attachment of the traces. H H designate the two main bracing-rods of my collar, which are similar to those described in my patent hereinbefore mentioned. Rods H are detachably, but firmly, secured at their lower ends to draft-blocks or draft-boxes F by means of screw-threads or nuts, and their upper parts are secured to the sides of cap-piece B, as hereafter described. Said rods brace the said collar and assist in holding all its parts together.

I I designate metal bands or fastening-plates, which pass around or over said rods H, and secure them directly to the outside of said collar-body. These additional fastenings I are only necessary in cases of heavy draft. The lower edges of curved neck-cap B are provided on the outside with blocks or raised pieces B¹, one on each side, each of which is recessed at b . These recesses $b b$ allow rods H to set within them flush with the outer surface of the block. Said rods H are secured therein by means of the shanks of hame-rings J, which screw into said blocks B¹, one at each side, and which are provided with flanges J',

that set snugly against the openings of said recesses and the main bracing-rods H H confined therein.

Each flange J' may be made in one piece with its hame-ring J, or it may be made separate, if preferred; but the former construction is the cheaper, more convenient, and more durable.

K K designate two supplemental longitudinal bracing-rods, which also form draft-boxes or blocks F F to said blocks B', being secured at both ends by screw-threads and nuts. Their function is similar to that of main rods H H. The attachments both of rods H and of rods K allow the endwise adjustment of said rods, so as to conform to the various other adjustments of the collar herein described. Cap-piece B is made in two sections, which are riveted to an inner leather lining or safe, that acts as a hinge and at the same time prevents the horse's neck from being worn. The said cap-sections meet at the very top of the collar, and are there provided with divergingly-beveled raised flanges B² B², so as to allow a slightly-curvilinear adjustment of said cap-pieces to or from one another, whereby the upper end of the collar is widened or narrowed, as desired, without separating said sections or causing them to bind injuriously. Each of said flanges is provided with a perforation, b². These perforations are opposite to one another, and through them passes a strap, L, carrying at each end a metal loop, l. Said loops l are passed over rods H H, and catch in indentations or transverse grooves h h on the outside thereof. These grooves or indentations are arranged in series, so as to allow the adjustment of said strap L thereon (conforming to the widening or narrowing of the cap) without disturbing the firm attachment of the different parts of the collar.

Fig. 3 shows a pad, M, similar to those described in my previous patent. One of these pads is secured on the inside of each one of the collar leathers C by means of leather straps or fastening-loops m and looped fastening-cords m' m', the said leather loop and looped fastening-cords being slipped over the upper end of said collar-leather, so as to attach the said pad to the same on the side thereof near-

est to the animal. The construction and arrangement of the corresponding rods, boxes, blocks, side leathers, pads, body-sections, and cap-sections are substantially the same.

Various modifications may, however, be made, especially in the adjusting devices, without departing from the spirit and scope of my invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. A horse-collar body, A, consisting of two sections and provided with box E, in combination with cogged adjusting-racks D D', substantially as set forth.
2. In a horse-collar, the combination of adjusting-rack D, having stop-lug d², staple d³, and ring d⁴, with rack D', having hook d⁵ and a sectional collar-body, substantially as set forth.
3. In a horse-collar, the combination of supplemental bracing-rods K with main rods H, draft-boxes F, and sectional neck-cap B, having block B¹, substantially as set forth.
4. The combination of rods H with supplemental fastenings I attached to collar body A, substantially as and for the purpose set forth.
5. The combination of a rod, H, with a recessed block, B, a hame-ring, J, and a fastening-flange extending from said hame-ring, substantially as set forth.
6. The combination of a rod, H, with a hame-ring and a fastening-flange rigidly secured to said hame-ring, substantially as set forth.
7. Cap-piece B, consisting of two sections provided with outwardly-beveled flanges, for the purpose of allowing adjustment, as set forth.
8. Divergingly-beveled flanges B² on cap-piece B, perforated at b², in combination with strap L, metal rings or loops l l, and transversely grooved or indented rods H H, substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ADAM RUTHERFORD.

Witnesses:

R. E. BAUER,
J. D. LAMAN.