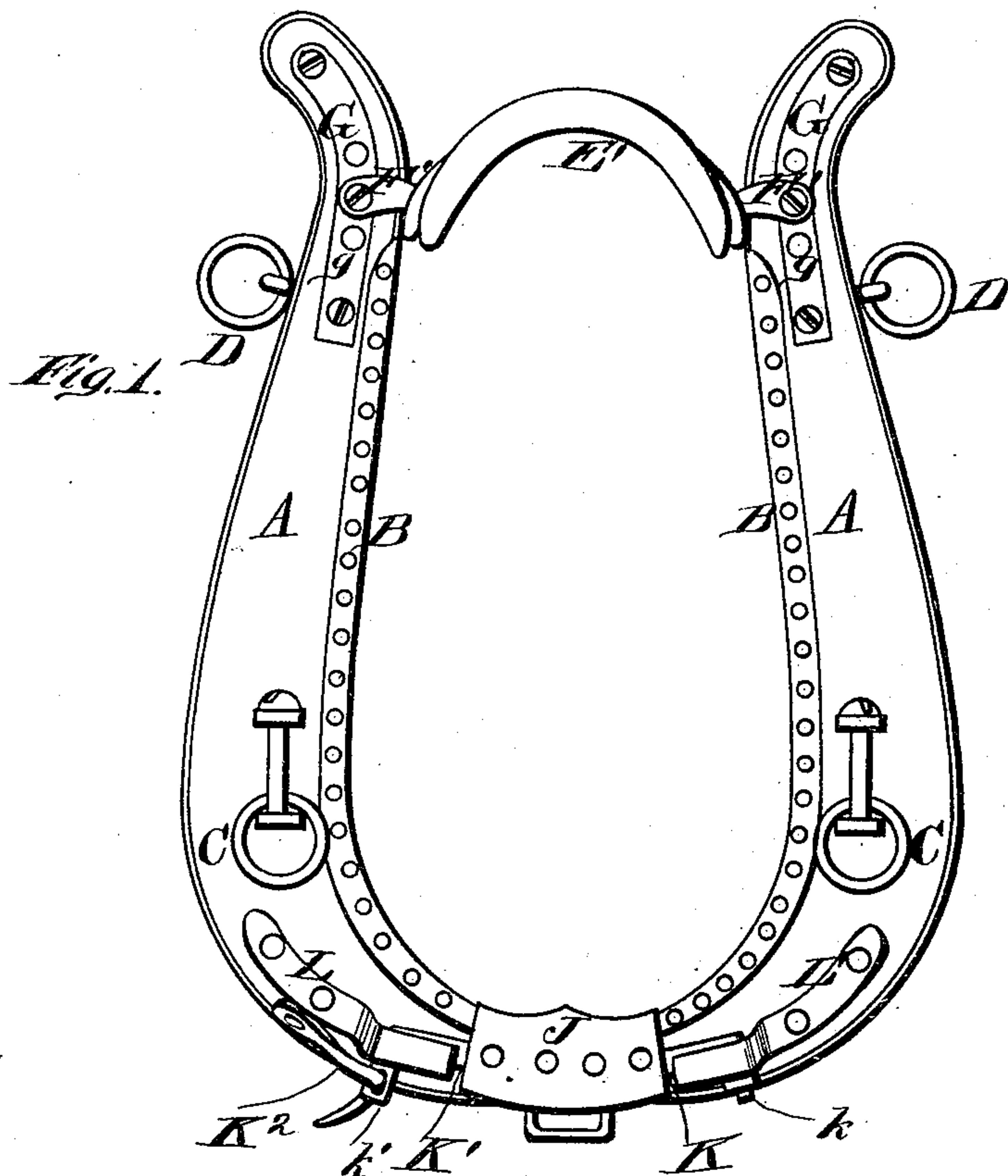


J. N. SCHMITZ.

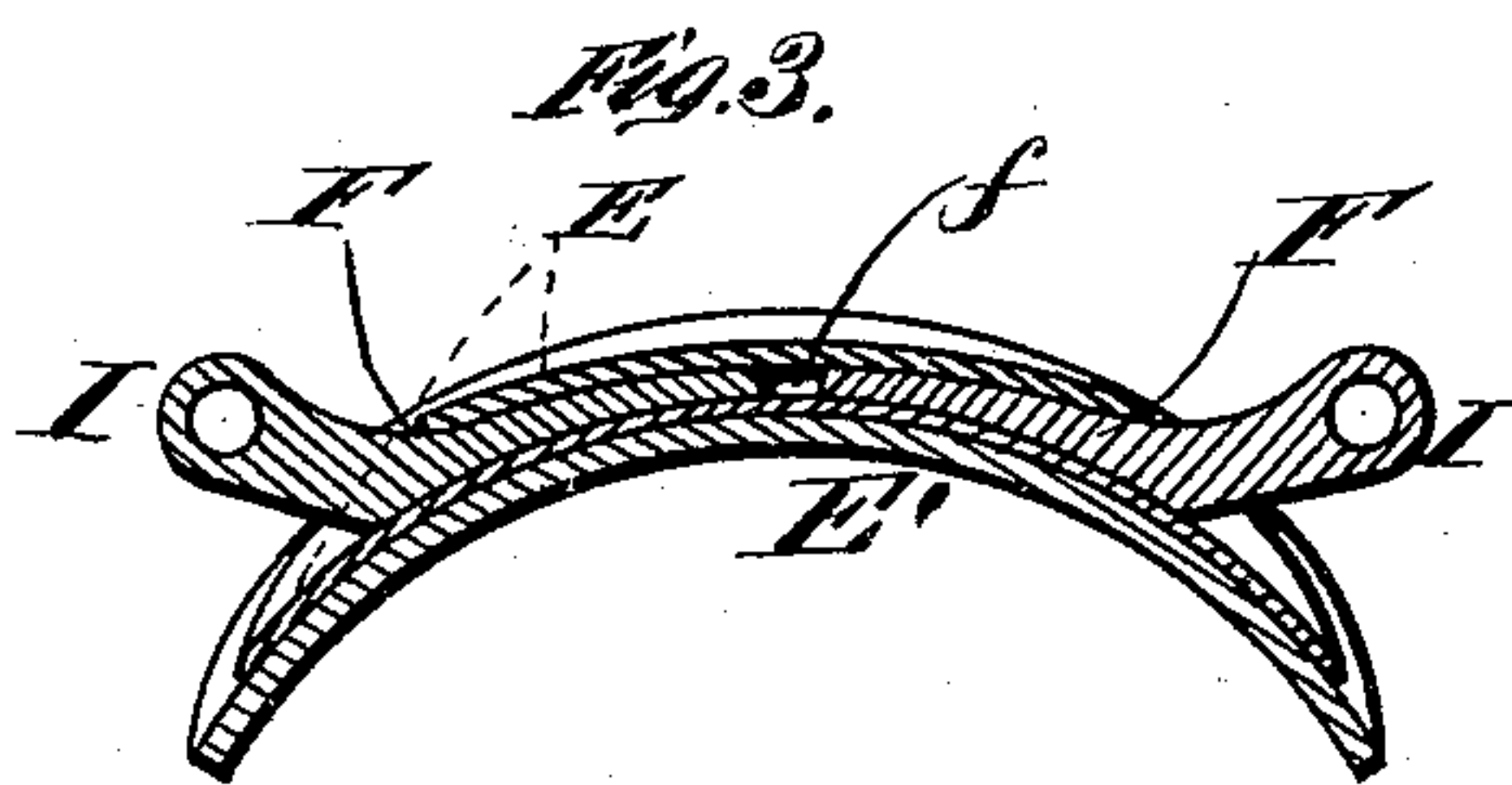
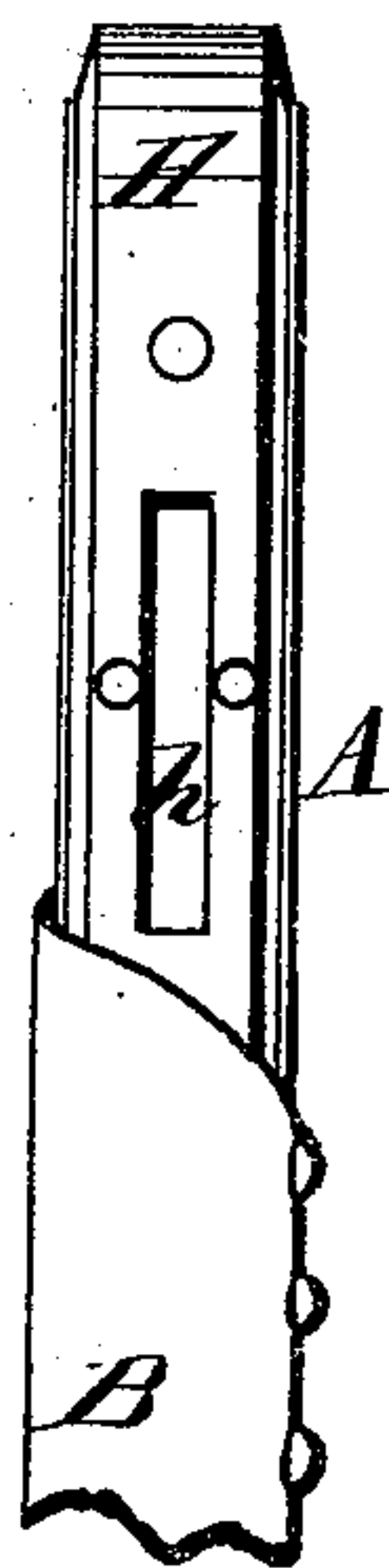
HORSE-COLLAR.

No. 188,193.

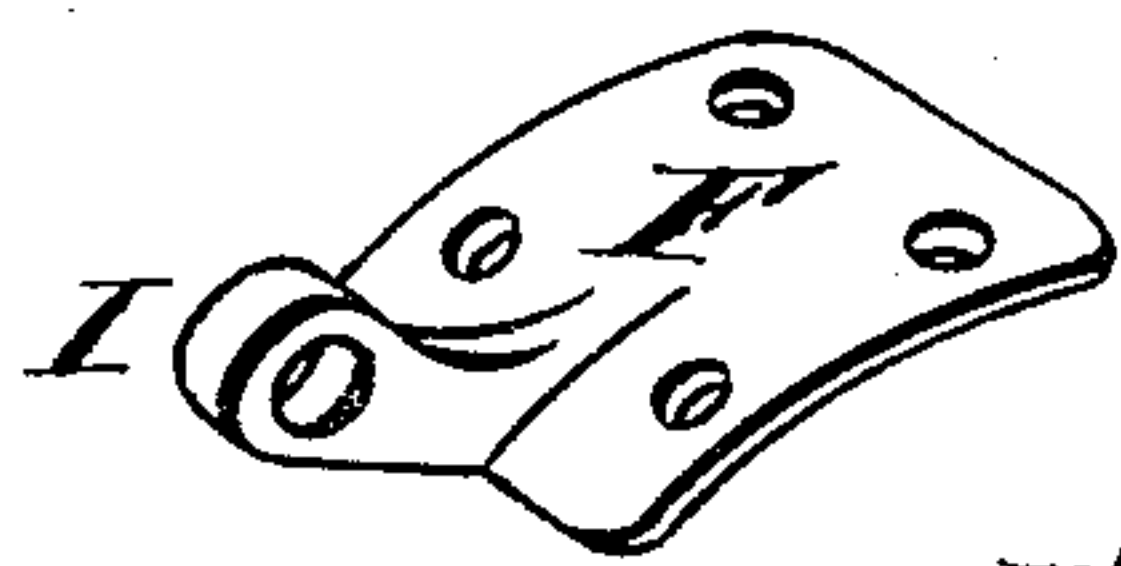
Patented March 6, 1877.



*Fig. 2.*



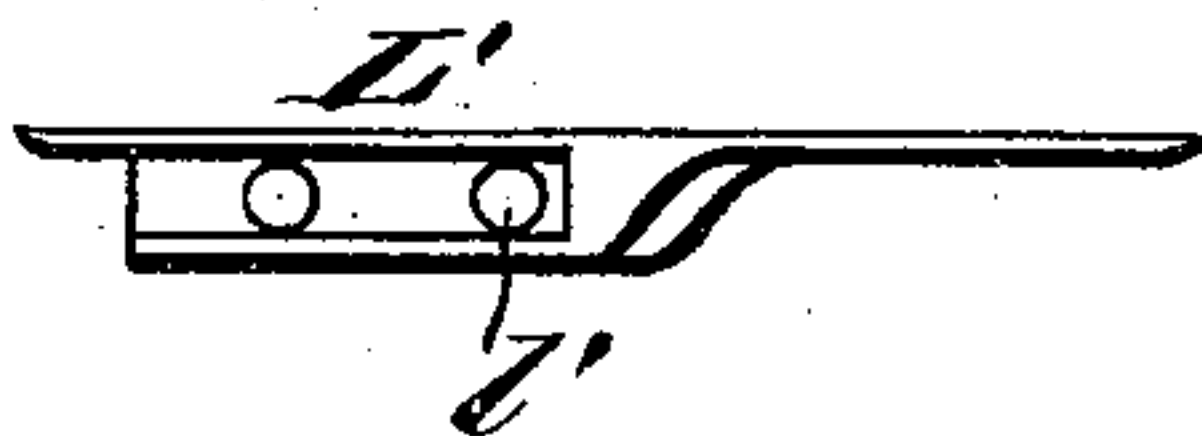
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



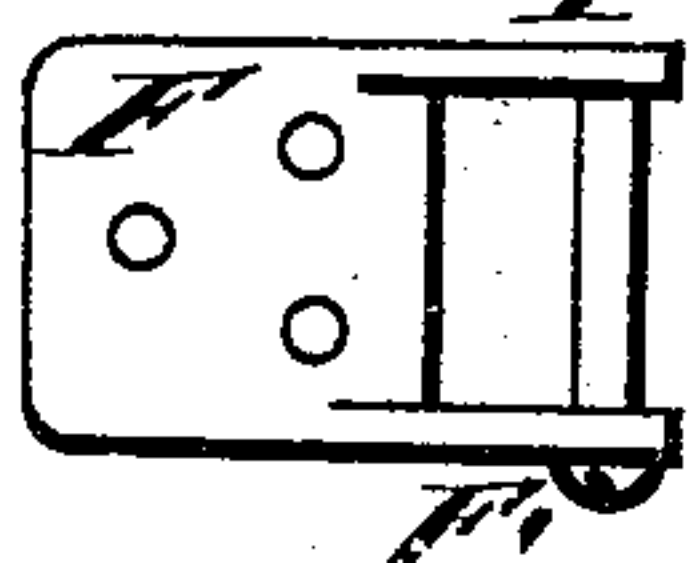
*Fig. 7.*



*Fig. 8.*



*Fig. 9.*



WITNESSES

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INVENTOR.

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*Chilmore, Smith & Co.*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JOHN N. SCHMITZ, OF KILBOURN CITY, WISCONSIN.

## IMPROVEMENT IN HORSE-COLLARS.

Specification forming part of Letters Patent No. 188,193, dated March 6, 1877; application filed January 20, 1877.

*To all whom it may concern:*

Be it known that I, JOHN N. SCHMITZ, of Kilbourn City, in the county of Columbia and State of Wisconsin, 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 view of my hame; and Fig. 2 is an inside view of my hame. Fig. 3 is a central vertical sectional view of a modification of the upper connection of the collar; and Figs. 4, 5, 6, 7, 8, and 9 are detail views of the same.

This invention relates to horse-collars; and it consists in the peculiar construction and arrangement of the connecting devices at the top and bottom thereof, substantially as herein-after fully set forth.

In the accompanying drawings, A designates the hames of a horse-collar, to which are attached the pads B B forming the body of the collar; also draft-rings C C, and hame-rings D D. I claim no novelty in the arrangement or attachment of the foregoing parts. The upper connection of said collar is made by means of two curved leather incasing-strips, E, which are secured to the upper and under sides of two plates, F F, Figs. 1 and 3, that extend inward toward each other from said hames A, leaving a small space, *f*, between their proximate ends. E' designates an additional protecting layer of leather secured to the under side of E. The upper ends of hames A are constructed so that plates F can be attached thereto in two different ways. To effect this, plates G G are attached to the sides of the hames, as shown in Fig. 1, and a similar plate or shield, H, is carried over the top of each one of said hames, protecting the front thereof. Protecting-plates G are provided with perforations *g*, which also extend through hames A from one of said plates to the other. The front part of each plate H is in like manner provided with a vertical slot, *h*, which extends into its hame A beyond perforations *g* that communicate with it. Fig. 1 shows plates F provided with clevises F' F', each pair of which embraces

one of said hames. Each clevis is transversely perforated, so as to allow the passage of a fastening-bolt through it and through one of the perforations *g* of hame A and its side-protecting plates G G. Fig. 3 shows the substitution for said clevises of perforated tongues I I, one of which is attached to the middle of the outer end of each withers-plates F. Said tongues set into slots *h* and are fastened as before. This modification is chiefly used where the draft is light. The above-described upper connection may be moved up or down on said hames A by shifting the attaching-bolts from the upper perforations *g* to lower ones, or the reverse, thus practically varying the length of the collar. Fig. 4 shows in detail one of said withers-plates F with perforated tongue I attached thereto; and Fig. 9 shows similarly the other form of said plate having clevis attachment F'. The lower connection of said collar is made by a leather strip, J, which is attached to plates or bars K K'. (Shown in detail in Figs. 7 and 8.) The outer ends of said bars are provided with arms *k k'* at right angles therewith, which arms, respectively, pass through perforations *l l'* in the lower side of small guide-casings L L', which are rigidly attached to hames A. Said casings are open on their upper side, and said bars K K' set within them. Arm *k* is screw-threaded, so as to form a bolt for the attachment of bar K to its casing. Arm *k'* is made broader and slotted at its outer end, so as to allow the passage through it of the free end of a small thong, K<sup>2</sup>, which is attached to one of said hames A, whereby said bar K<sup>1</sup> is detachably but firmly secured in its proper position. The perforations through which arm *k'* passes are elongated, as shown. Casings L L' are shown in detail in Figs. 5 and 6, and the perforations *l l'* are at least two in number in each casing, to allow the movement of said bars K K' toward or from each other, thereby widening or narrowing the lower end of the collar.

The construction above described possesses a number of advantages. Among others, it allows the collar to be adjusted in size and shape to the dimensions of the horse's neck on which it is to be applied. It allows an independent up-and-down motion of the sides of the collar as the shoulders are successively



advanced, and thus, prevents wear upon the animal's neck. The clevis-fastening prevents the rolling of the collar when under heavy draft.

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

1. The combination of leather bow E, plates F F, and hames A A, said plates and hames being attached substantially as and for the purpose set forth.

2. Hame A, provided with cross-perforations arranged in series, a vertical slot in its inner

face, and protecting-plates G G H, substantially as and for the purposes set forth.

3. The combination of leather strip J, bars K K<sup>1</sup>, casings L L', and thong K<sup>2</sup>, substantially as and for the purpose set forth.

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

JOHN N. SCHMITZ.

Witnesses:

J. BOWMAN,

H. H. DRINKER.