G. A. De ZENG.

Horse-Collar.

No. 208,516. Patented Oct. 1, 1878.

Fig. 1

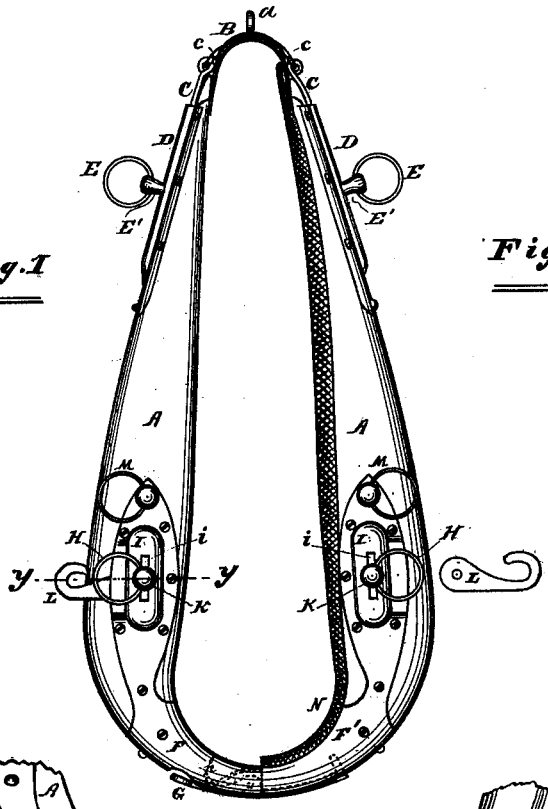


Fig. 2

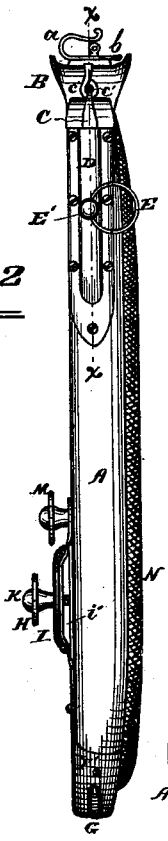


Fig. 3

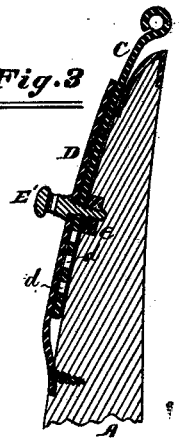


Fig. 4

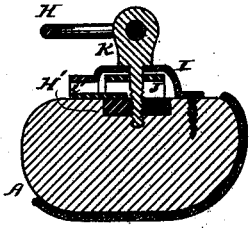


Fig. 6

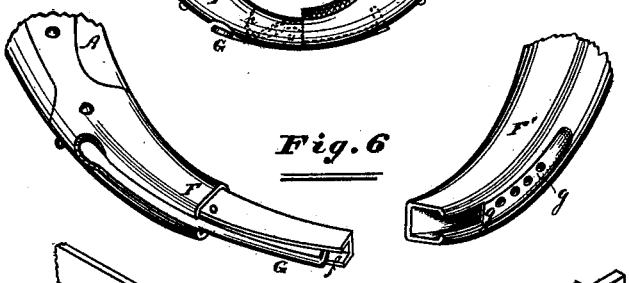


Fig. 5

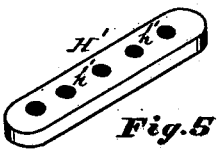


Fig. 9

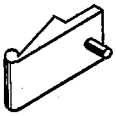


Fig. 7

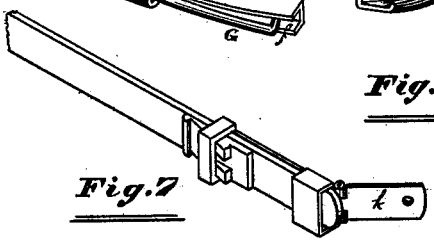
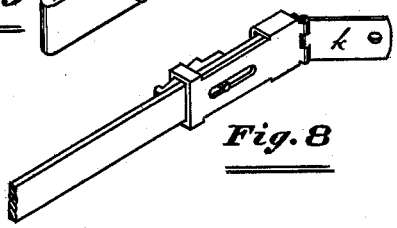


Fig. 8



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UNITED STATES PATENT OFFICE.

GEORGE A. DE ZENG, OF CHICAGO, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN D. DE VELING, OF CHEBANSE, ILLINOIS.

IMPROVEMENT IN HORSE-COLLARS.

Specification forming part of Letters Patent No. **208,516**, dated October 1, 1878; application filed April 22, 1878.

To all whom it may concern:

Be it known that I, GEORGE AUGUSTUS DE ZENG, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Horse-Collars, of which improvements the following, in connection with the accompanying drawings, is a full, clear, and exact description.

Figure 1 in the drawings is a front elevation of a horse-collar embodying my invention; Fig. 2, a side view thereof; Fig. 3, a section in the plane of the line *x x*, or of the upper end of one side of the collar; Fig. 4, a section in the plane of the line *y y;* Fig. 5, a perspective of one of the perforated nuts; Fig. 6, a perspective view of the lower end of the collar detached; and Figs. 7, 8, and 9 are perspective representations of the friction-clasp or buckle.

Like letters of reference indicate like parts.

The object of my invention is to render horse-collars easily adjustable in length and width, and to render various parts thereof adjustable, so that the same collar may be fitted with facility to horses having necks varying considerably from each other in size, and so that the tug-straps and other parts of the harness connected to the collar may be properly adjusted. I also aim to improve the construction and operation of horse-collars in the several other respects hereinafter set forth, thereby adapting them either to light or heavy work, and rendering them strong, durable, light, cheap, and suitable for either light or heavy work, as well as ornamental in appearance, all of which will be hereinafter more particularly described.

In the drawings, A represents the body of the collar. I make this part in two pieces or sections, approximating the form of pads, of ordinary soft or stuffed collars. I deem it best to make the body A of wood, paper, or other hard material, so that the parts to be applied to it may be fastened thereon by means of screws.

B is a pad, provided with a check-rein hook, *a*, and a breeching-loop, *b*. Two arms, *c c*, extend laterally from the pad B, and terminate at their lower ends in the eyes *c' c'*. C C are metallic straps, the upper ends of which are hooked or linked into the eyes *c' c'*, and in the lower ends of which are perforations *d d*, arranged one above the other. On the upper ends of the sections of the body A are the metallic strips D D, which are raised centrally and longitudinally above the sections to which they are applied, so as to form pockets or recesses, into which the lower ends of the straps C C may be pushed.

E E are the rein-rings. These rings pass through eyes in the heads of the screw pins or bolts E' E', and the inner or screw-threaded ends of the bolts E' E' pass through the raised parts of the strips D D, through one of the perforations *d d*, and into a nut, *e*, resting in a pocket in the body A.

The pad B, by being linked, as shown and described, to the upper ends of the straps C C, is thereby rendered capable of rocking as the horse moves his neck up or down, and is thus prevented from chafing the neck. The pad may also be raised and lowered by raising and lowering the straps C C and passing the rein-bolts through different perforations *d d*, thus altering the length of the collar and widening or decreasing its width according to its length.

F and F' are ferrules on the lower ends of the sections of the body A. These ferrules extend considerably beyond the ends of the parts to which they are applied, and the ferrule F is grooved on its under or outer side, as shown at *f*. G is a lever, pivoted in the groove *f*. The ferrule F' is hollow, and adapted to receive the projecting end of the ferrule F. The ferrule F' is also grooved and perforated, as shown at *g*, and the outer end of the lever G is bent to enter the perforations *g g*. By depressing the upper or rear end of the lever G and pushing the ferrule F into the ferrule F', the bent end of the lever, when the rear end thereof is released, will enter a perforation or eye, *g*, and the lower ends of the sections of the body A will thus be attached or connected firmly to each other, a spring, *h*, holding the lever in the hole, which its bent end engages. The lower ends of the sections of the body A may be easily separated by depressing the upper or rear end of the lever G until the opposite end is disengaged, and the width of this part of the collar may be varied by causing the bent end of the lever to enter any of the holes *g g*, according to the width which may be desirable or necessary.

H H are the pole-strap rings, and H′ H′ are nuts resting in mortises in the body A. The nuts H′ H′ are elongated, and *h′ h′* are perforations arranged longitudinally therein. I I are metallic pockets or caps, rigidly fastened to the body A, and arranged directly over the nuts H′ H′. The caps or pockets I I are perforated or slotted longitudinally, as shown at *i i*, and also slotted at the sides or edges, as shown at *i′ i′*. J J are slides arranged in the parts I I. K K are the bolts or screw-pins in which the rings H H are hung. The bolts K K pass through the slots *i i*, through the slides J J, and into any of the perforations *h h*, which are screw-threaded to receive the bolts K K. L L are draft-hooks, also perforated to receive the bolts K K. The hooks L L are applied to the body A by arranging their perforated ends in the parts I I, the said ends entering the slots *i′ i′*. The bolts K K may then be passed through the holes in the inner ends of the hooks L L, and secured by being screwed into the nuts H′ H′. By this means the draft-hooks may be set either high or low, as may be desired. To effect this adjustment, the bolts K K are only to be placed in a higher or lower perforation or female screw, *h′*, as may be necessary. Instead of the hooks L L, friction-clasps or wedge-buckles may be employed, the latter being adapted to enter the parts I I and to receive the bolts K K.

Figs. 7, 8, and 9 represent a friction-clasp or buckle now in use, and adapted, by means of the leaf or extension *k*, hinged thereto, to be employed in the place of the hooks L L. M M are the breeching-strap rings.

It will be perceived from the foregoing description that the construction and arrangement of parts described render the collar and draft adjustable, and that a combined collar and hame (or parts serving their functions) is thus produced.

A light or thin pad, N, may be applied to the collar, if thought desirable.

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

1. The tilting pad B, when arranged between and pivoted laterally to the rigid side sections of a horse-collar, substantially as and for the purposes specified.

2. The vertically-adjustable straps C C, in combination with the tilting pad B, the said pad pivoted laterally to the said strips, all arranged substantially as specified with relation to each other and the body of a horse-collar, for the purposes set forth.

3. The body A of a horse-collar made in sections, the lower ends of the sections being adjustably connected by means of the hooked or bent lever G, pivoted to one of the said ends, and the perforated ferrule F′, applied to the other of the said ends, substantially as and for the purposes specified.

4. The combination of the removable bolts K K, the elongated and perforated nuts H′ H′, and the caps or pockets I I, the latter applied to a horse-collar, and all operating together in connection therewith and with each other, substantially as and for the purposes specified.

5. The combination of the body A, made in sections, the pad B, the adjustable straps C C, carrying the pad B and applied to the upper ends of the sections of the body A, the lever G, applied to the lower end of one of the sections, and the perforated ferrule F′, applied to the lower end of the other section, all substantially as and for the purposes specified.

GEORGE AUGUSTUS DE ZENG.

Witnesses:
F. F. WARNER,
JAMES H. COYNE.