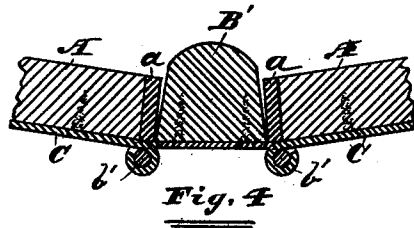
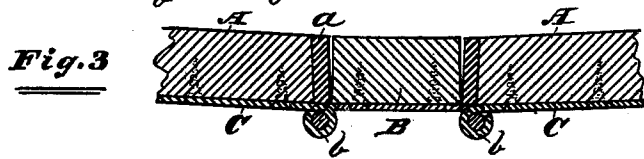
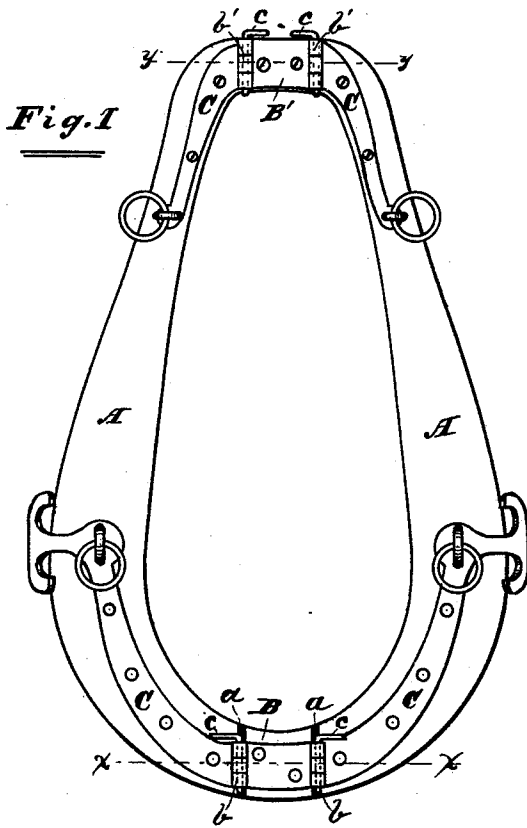


B. PALMER.
Horse-Collar.

No. 222,364.

Patented Dec. 9, 1879.



Attest

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INVENTOR:

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UNITED STATES PATENT OFFICE.

BENJAMIN PALMER, OF DANVILLE, ASSIGNOR TO LYMAN GUINNIP, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN HORSE-COLLARS.

Specification forming part of Letters Patent No. **222,364**, dated December 9, 1879; application filed September 29, 1879.

To all whom it may concern:

Be it known that I, BENJAMIN PALMER, of Danville, county of Vermillion, and State of Illinois, have invented certain new and useful Improvements in a Horse-Collar, of which the following description will enable others skilled in the art to which my invention appertains to construct and make use of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation or face view of my improved collar; Fig. 2, a longitudinal side view of the same; Fig. 3, a detail transverse section in the plane *x x*, Fig. 1; and Fig. 4 a detail transverse section in the plane *y y*, Fig. 1.

The object of this invention is an improvement in the construction of horse-collars, and relates more especially to collars which are made of wood, whereby a more practical and efficient device of this nature is produced than any now in use, the exact construction and operation of which will be hereinafter more fully explained in detail.

In referring to the drawings, A represents the collar constructed in two parts or sections, and united at the top and bottom in the manner herein shown. B is an independent part or piece which is made to fit into and is inserted between the two lower ends of the collar, and is of proper dimensions to preserve the symmetry of the same.

The ends of the two sections, both top and bottom, are faced with leather, as shown at *a*; but I do not strictly confine myself to leather for this purpose, but may make use of any other elastic material that I may find to be suitable for this purpose, or employ a metal spring to increase the flexibility of these parts, as practical experience may require.

The independent connecting-piece B, instead of being made of wood, may be constructed of rubber, thus dispensing with the intermediate facings *a*. The piece B, when inserted in its proper place, is held in position by the double-hinged joints *b b*. The movable pins *c*, forming the bearings for the hinge-joints *b b*, are easily removed and replaced,

making it a very convenient task to quickly place the collar on the neck of the horse.

B' represents the piece inserted between the upper ends of the collar, and is connected thereto by means of the double hinges *b' b'*, which are the same in construction and operation as that employed in the lower connections of the collar.

The metal facings or plates C are attached to the collar, as shown, and carry the necessary rings and hooks for the reception of the several parts of the harness which requires to be attached to the collar, the outer ends of these facings or plates being constructed and bent to form the central portion of the several hinged joints, as herein shown.

The metal plates C may be provided with oblong apertures in place of round holes, for the reception of the screws which secure the same to the collar, for the purpose of adapting the parts to be adjusted to have a collar of a variable size, by inserting a larger or smaller connecting-piece between the ends of the sections. This form of construction imparts an oscillating movement to the collar, and adapts the sections to adjust their parts to the movement of the horse. Each section working independent of the other prevents the strain or all of the load being alternately thrown first upon one shoulder and then upon the other as the horse moves forward, and the collar at all times retains its proper position and bearings to equally distribute the weight of the load on the shoulders, and there is no possibility of the edge of the sections or traces coming in contact with the shoulders, to gall or chafe the same, and the concussion is greatly lessened when starting a heavy load.

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

1. In a horse-collar, the independent parts or pieces B B', when arranged as and for the purpose herein described.

2. In a horse-collar, the combination, with the collar A, or the two sections forming the same, of the independent parts or pieces B B',

when interposed between the ends of the sections, and attached thereto by means of the double-hinged joints *b b' b'*, as herein set forth.

3. In a horse-collar, the combination of the following elements, consisting of the collar *A*, metal plates *C*, the double-hinged joints *b b' b'*, the removable pins *c*, the parts or pieces

B B', and the flexible facings *a*, all constructed, combined, and arranged substantially as and for the purpose herein described.

BENJAMIN PALMER.

Witnesses:

EBEN H. PALMER,
HENRY C. FORTH.