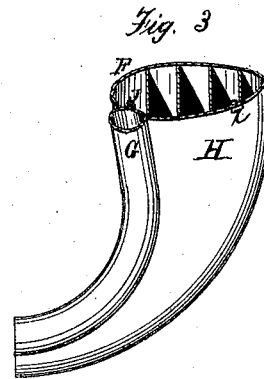
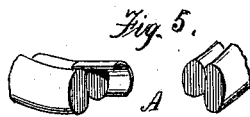
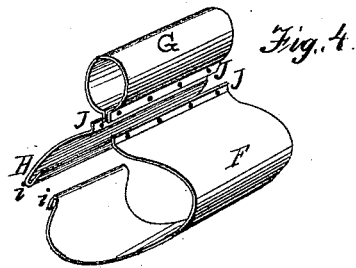
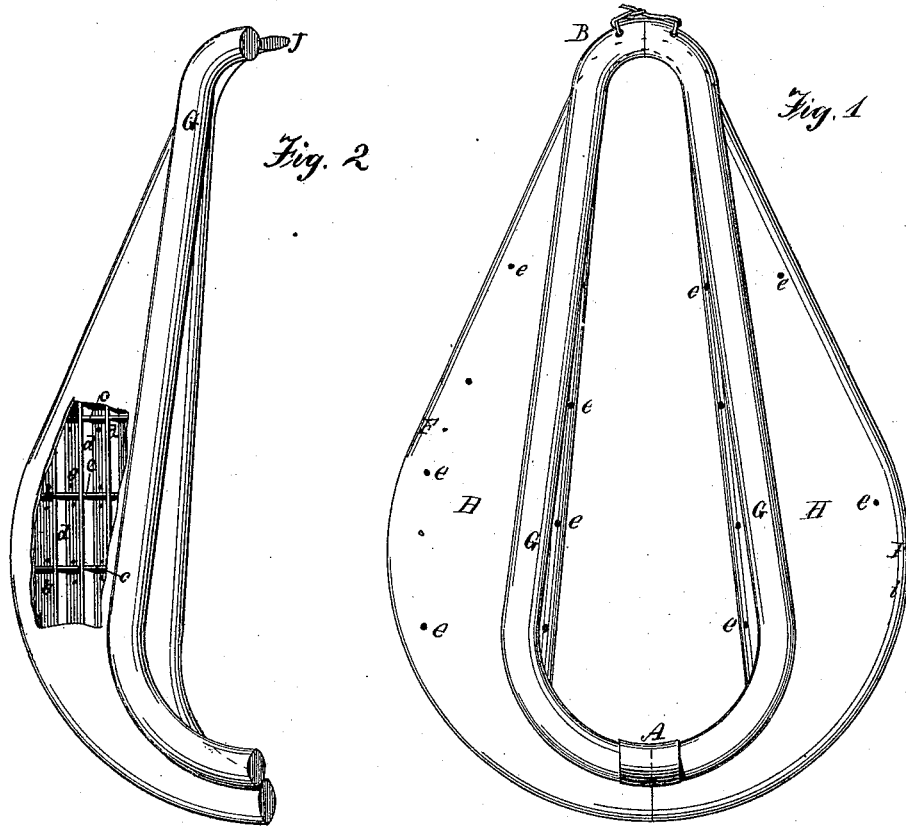


J. FLETCHER.  
HORSE-COLLARS.

No. 185,436.

Patented Dec. 19, 1876.



Witnesses;  
Grenville Lewis  
A. Church

Inventor  
Joseph Fletcher

# UNITED STATES PATENT OFFICE.

JOSEPH FLETCHER, OF COOK COUNTY, ILLINOIS.

## IMPROVEMENT IN HORSE-COLLARS.

Specification forming part of Letters Patent No. 185,436, dated December 19, 1876; application filed June 14, 1876.

*To all whom it may concern:*

Be it known that I, JOSEPH FLETCHER, of the county of Cook and State of Illinois, have invented a new and useful Metallic Horse-Collar; 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, in which the same letters indicate like parts in different figures.

Figure 1 represents a horse-collar, constructed of zinc or other sheet metal—zinc being preferred—the inside of which is hollow, the same being made in two parts or sections joined at A and B, the lower ends of which are connected by a sliding or ferrule joint, as seen at A, in this and Fig. 5, and the upper ends by metallic loops and a leather strap and buckle, as seen at B; or, in place of the foregoing, fastenings for the bottom and top of the collar may be made in any other convenient manner.

In order to give the necessary strength to collars used by draft and working horses, brackets or braces of the same or different metal are designed to be used, as shown in Figs. 2 and 3, which are different sectional views of the collar, representing longitudinal braces *d d*, running the full length of the same, one of which is intended to be placed directly under the hame, while the others run parallel with it. The section is also crossed with three or more like braces, *c c c*, two or more of which are placed under the tug, and the remainder at such distances therefrom as will insure the necessary amount of strength to other portions of the collar.

Instead of brackets or braces, as indicated, the metallic plates may be doubled, or metallic bands inserted to give the necessary strength to the parts over which the greatest strain is produced; or a filling of wood or plaster-of-paris or other suitable substance may be used; but as the latter method would prevent ventilation, the metallic brackets or double sheets of metal are deemed preferable.

In small collars for carriage and other light use, it is not deemed necessary to use the braces or to adopt any of the modes men-

tioned in the foregoing for stiffening the metallic shell.

*e*, in Figs. 1 and 2, represent holes in the brackets and outer rim of the collar for the purposes of ventilation.

Fig. 4 is a cross-sectional view, and represents the mode in which the collar is constructed. F, G, and H, are pieces of sheet metal pressed or swaged in the shape indicated in the drawings. F (constituting the pad, or inner surface of the collar) is made to fit the shoulders and neck of the horse. G is the rim for supporting the hame, while H is placed immediately under the hame, and is joined with F at *i* by a flange-joint, while the three pieces, F G H, are riveted and soldered together at J.

The method here indicated is not the only method in which my collar can be constructed, and I do not intend to confine my claim to this specific method of construction.

This collar is intended to remove, among others, the following objections to the ordinary leather or padded collar: In hot weather, a collar having soft pads retains a great amount of heat, and, as a consequence, scalds the shoulders of the horse, which, by continued irritation, soon galls to such an extent as to under him useless.

The metallic shell or mold F, constituting the pad, is made smooth, and of the exact shape to fit the shoulders of the horse, while the hard convex surface, detaching itself naturally from the shoulder whenever the horse changes his position, or is at rest, liberates the intense heat otherwise retained by the ordinary soft pad, while the holes *e* allow a free circulation of air through the interior of the collar, and always keep its surfaces cool. Again, a metallic collar is more readily cleaned and kept free from all foreign substances which irritate the flesh and cause sores, while the same is more easily and cheaply constructed than any other collar in use.

All the parts exposed, or indeed the entire collar, may be plated or plain to suit taste and character of use.

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

1. The metallic horse-collar F G H, with

longitudinal brackets *d d d*, cross-brackets *c c c*, holes for ventilation *e*, and connections A and B, substantially as set forth in the foregoing specification.

2. The combination of the metallic shell F G H, with the brackets or braces *c c c* and *d d d*, and the ventilating-holes *e*, in the construction of horse-collars, substantially as set forth in the foregoing specification.

3. The metallic shell or hollow frame-work of metal, provided with suitable apertures or openings for ventilation, substantially as indicated in the foregoing drawings and specification.

JOSEPH FLETCHER.

Witnesses:

M. CHURCH,

FRANK McKENNY.