No. 822,204. PATENTED MAY 29, 1906.

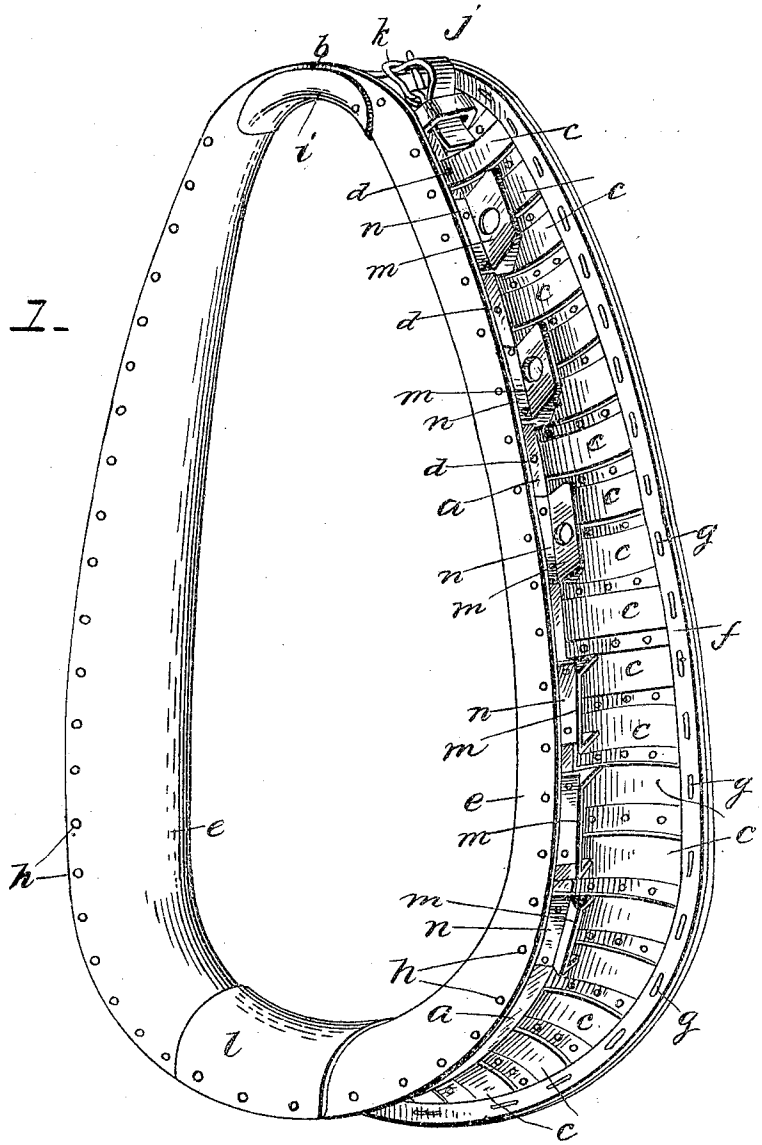
H. A. FONTEINE.

HORSE COLLAR.

APPLICATION FILED SEPT. 19, 1905.

3 SHEETS—SHEET 1.

Fig. 1.



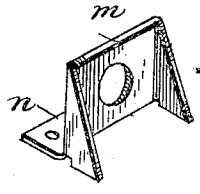


Fig. 5.

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3 SHEETS—SHEET 2.

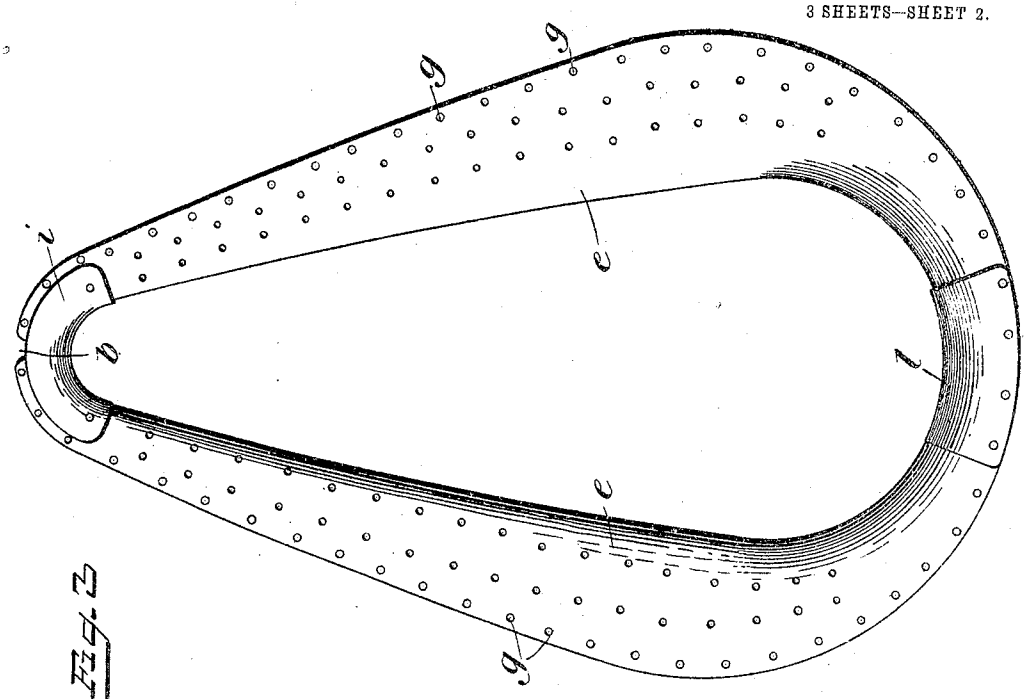

Fig. 2.

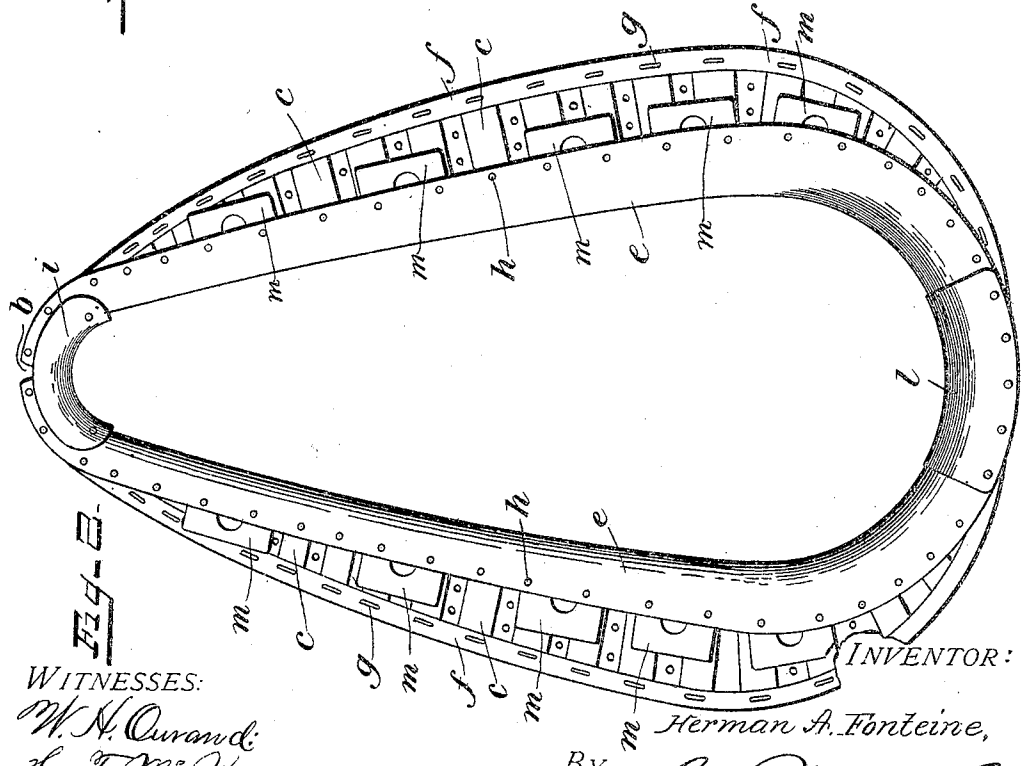

Fig. 3.

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3 SHEETS—SHEET 3.

Fig. 6.

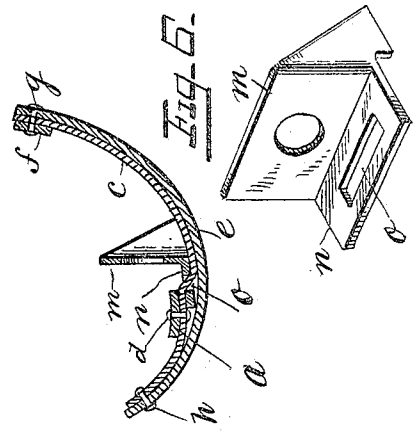
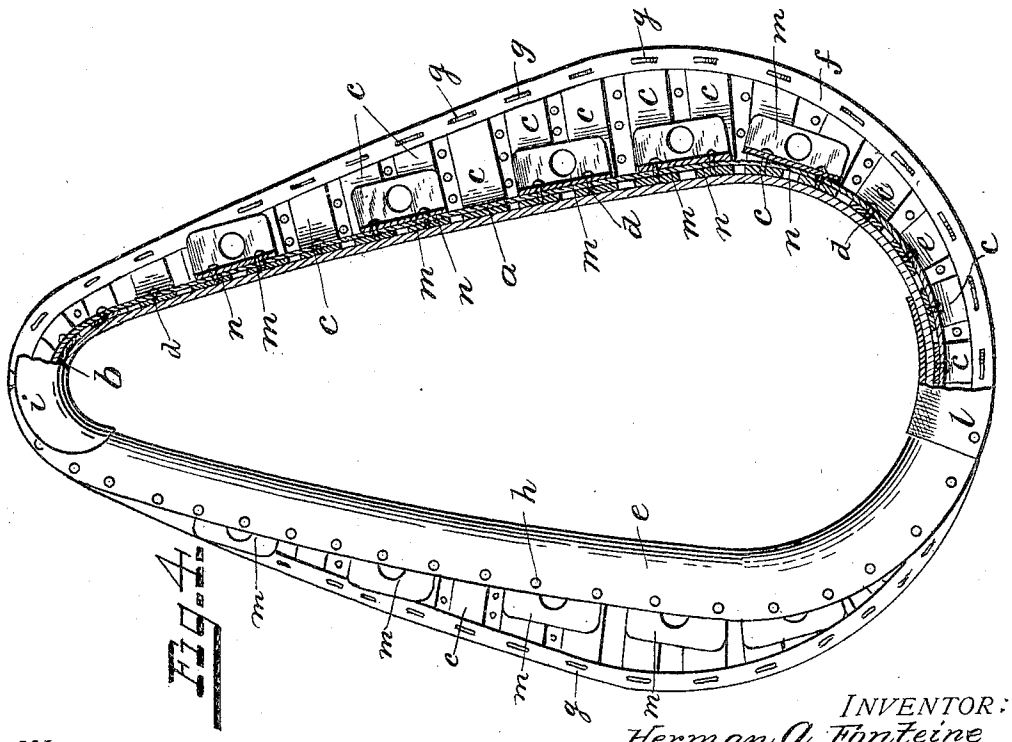


Fig. 4.



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UNITED STATES PATENT OFFICE.

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HORSE-COLLAR.

No. 822,204. Specification of Letters Patent. Patented May 29, 1906.

Application filed September 19, 1905. Serial No. 279,171.

To all whom it may concern:

Be it known that I, HERMAN A. FONTEINE, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented new and useful Improvements in Horse-Collars, of which the following is a specification.

This invention has relation to that class of horse-collars in which metallic springs covered with leather form the shoulder-pads, the rests or bearings for the hames being formed of metal pieces or parts attached to or forming a part of the metallic shoulder-pad frame.

It is the object of the invention to so improve the shoulder-pad springs as that they will bear with greater evenness and ease upon the shoulders of the horse and also to improve the construction and arrangement of the hames-rest so that it will have a leverage bearing on the springs in such manner as will enhance the aforesaid even bearing, strengthen their fastening, and increase their usefulness generally.

The invention consists of the parts and combination of parts hereinafter described as being new and useful in their construction and mode of operation and set forth with particularity in the subjoined claims.

The drawings hereto annexed form a part of this specification and are to be referred to as such.

Of the said drawings, Figure 1 is a perspective view of a horse-collar embodying my improvements, the view being particularly designed to show the outside of one side of the collar. Fig. 2 is a front view of the collar. Fig. 3 is a face view looking at the collar from the rear. Fig. 4 is a sectional view through the shoulder-pads on the line of the springs, showing their gradated thicknesses. Fig. 5 is a perspective view of a single hames-support detached. Fig. 6 is a detail view of a modified construction.

Like letters designate like parts or features wherever they occur.

In creating my improved horse-collar I provide a frame of galvanized or other suitable metal, which frame consists of a ring *a* of suitable size and form, preferably separated at the top, as at *b*, and of a number of flat springs *c*, which are of such varied length and form as that when they are riveted to the ring *a* at the point *d* they will touch or bear evenly on a horse's neck and shoulders when placed thereover. The said frame I cover on its inner side with a sheet or piece or pieces of leather *e* of suitable character by riveting the ends of the springs thereto, and on the outer ends of the springs I rivet in addition a strap *f*, of leather, on the outside of the ends of said springs, so that the latter are secured by rivets *g* between leather covering *e* and strap *f*. The covering is also riveted to the inner or forward ends of the springs *c* by the rivets *h*, forming a very firm and at the same time easy and well-fitting structure for the neck of a horse.

i designates the neck-pad arranged on the inside of the top of the collar and suitably secured thereto, a strap *j* on the outside being riveted to the opposite open ends and provided with a buckle *k*, by means of which the ends are brought and connected together in an efficient and desirable manner. The throat-piece *l* is riveted to the frame as may be convenient and desirable.

The shoulder pieces or pads are provided with numerous perforations along lines and throughout portions where they will best subserve the purpose of preventing sweating and galling of the horse. These features in a collar having the other structural characteristics of my collar are quite useful and important.

The hames-rests are designated by the letter *m* and consist of pieces of metal the bases *n* of which are bent at substantially a right angle to the body portion and are riveted to the ring *a* and the springs *c*, and the sides of the said hames-rests, which are of triangular form, are bent inward laterally and rest loosely at their bases on the said spring-strips *c*. This construction and mode of fastening forms the hames-rests into a kind of truss or brace, so that while the flanged base *n* is securely fastened to the ring and other portions of the frame the lateral triangular flanges have slight play, as hereinbefore indicated, at their lower ends, where they rest on the spring-strips *c*. This construction tends, furthermore, to make the collar conform with greater nicety to the shoulders when draft is put upon the hames than would be the case if all the bearings of the hames-rests were rigid, since provision is made for the parts to yield where the strain is heavy and

for the same to maintain their place where there is no draft or strain on them or where it is light.

The hames-rests may be as numerous or as few along the sides of the shoulder-pads as is desired. About five on each side has been found sufficient on an ordinary collar or a collar for ordinary use.

The thickness and consequent stiffness of the springs *c* may be regulated to suit circumstances or requirements. I have found it most satisfactory to make them as thin and resilient as is consistent with strength and durability, since under these conditions the shoulder-pads are made soft and yielding and easy under draft upon the neck of a horse. In graduating the springs to suit circumstances, as stated, I do, for example, make the said springs thicker in the line of the hame tug or draft and sometimes where the hames-rests are located, for these instrumentalities are in the draft-lines also. Elsewhere, as at the throat and where the draft is light, the springs are made lighter. By this gradation of springs I am enabled to make the collar fit with the utmost ease on the neck and shoulders of the horse. This is a most important point in my improvements.

Instead of riveting the angular flanges *n*, forming the base of the hames-rest, on the ring *a* I may form a slot *o* in the said angular base-flange and pass the forward part of a spring-strip through it, fastening it in place by one or two rivets, if desired, and bending the lateral triangular flanged supports inward, so that one may rest upon a strip at one side of the hames-support and the other upon a strip at the other side. In this case it would be proposed to have the ring *a* pass over the base-flange, all as is clearly indicated by Fig. 5 of the drawings.

Other changes may be made in the form and arrangement of parts without departing from the nature or spirit of the invention.

I claim—

1. A hames-rest for a horse-collar consisting of a plate on which the hames may bear, a right-angular flanged base provided with perforations for attachment to the collar, and triangular side flanges the bases of which are adapted to bear loosely on a part of the collar.

2. A hames-rest for a horse-collar having a flat plate or part on which the hames may bear, a right-angular flanged base provided with perforations, and a slot, and triangular lateral flanges the bases of which are adapted to bear loosely on the collar, combined with a collar-pad spring a part of which is adapted to be passed through the said slot in the base, and means for securing the base to the spring-strip.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

HERMAN A. FONTEINE.

Witnesses:
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E. C. AIKEN.