

M. LAUTERBACH.
HORSE COLLAR.
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978,907.

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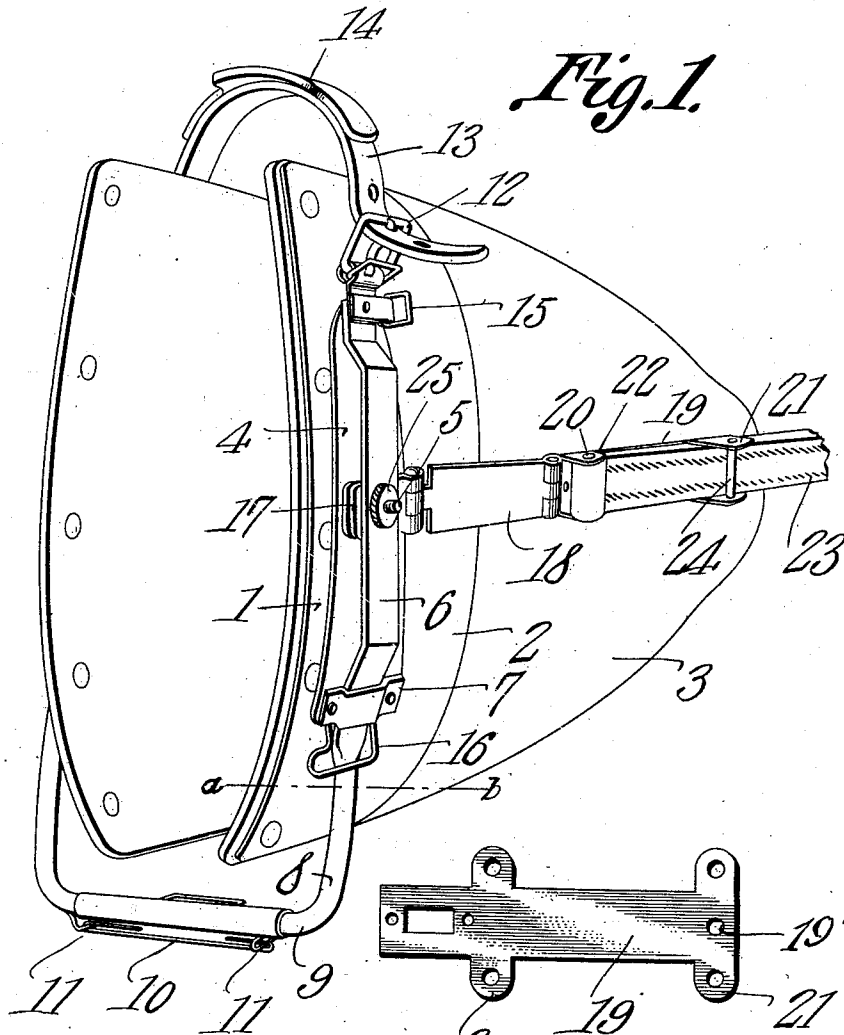


Fig. 1.

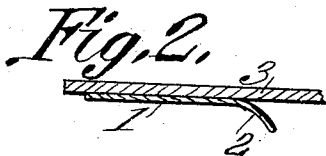


Fig. 2.

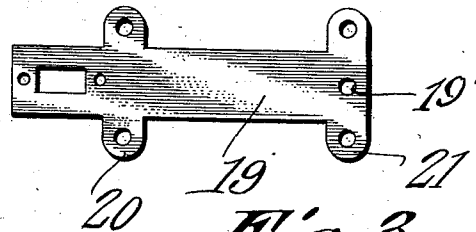


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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HORSE-COLLAR.

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To all whom it may concern:

Be it known that I, MAX LAUTERBACH, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented a new and useful Horse-Collar, of which the following is a specification.

This invention relates to horse collars of that type in which pressure is distributed through broad draft leathers designed to bear against the shoulders of the horse.

One of the objects of the invention is to provide a hingedly mounted draft iron at each side of the collar and to which the traces are to be connected.

Another object is to provide a collar in which the draft leathers are pivotally mounted relative to the neck pad and the frame or hames.

A further object is to provide a collar the draft leathers of which will automatically adjust themselves to the horse.

With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claim.

In the accompanying drawings the preferred forms of the invention have been shown.

In said drawings, Figure 1 is a perspective view of a collar constructed in accordance with the present invention. Fig. 2 is a section through a portion of one of the side plates and showing the outturned edge thereof, said section being taken on the line *a-b* Fig. 1. Fig. 3 is a detail view of the blank from which one of the hinge members of the draft iron is formed.

Referring to the figures by characters of reference 1 designates an elongated semi-elliptical shoulder plate bowed in the direction of its length and having its curved edge outturned as shown at 2. Draft leathers 3 are riveted or otherwise secured to the inner surfaces of these shoulder plates and extend rearwardly therefrom, the said leathers being tapered toward their rear ends. A metal strip 4 is pivotally mounted upon each of the shoulder plates, there being a threaded stud 5 extending from each of said plates and on which the said strip is mounted. Another strip 6 is mounted on said pivot stud and has its upper end inclined toward the ends of the strips 4 and riveted

thereto. The lower portion of the strip 6 is preferably held to the strip 4 by means of a strap 7 of metal and which is riveted or otherwise fastened to the strip 4, said lower portion of strip 6 merging into a rod 8 having a right angle extension 9 projecting under the lower edge of the shoulder plate 1.

The extension 9 of one of the strips 6 is tubular and is designed to receive the extension of the other strip, the two extensions being held against movement away from each other by a strap 10 extending through loops 11 secured to the respective extensions. Buckles 12 are secured to the upper ends of the strips 4 and 6 and are adjustably engaged by the ends of a neck strap or pad 13 the middle portion of which is preferably broadened as shown at 14. A loop 15 is secured adjacent each of the buckles 12 and designed to receive a rein. A loop or ring 16 for engaging a breast strap, is secured in any suitable manner to the lower end of each of the strips 4.

The stud 5 constitutes a pivot on which is mounted a metal hinge member 17 to which is hingedly connected one member 18 of a draft iron. The other member 19 of this draft iron has ears 20 and 21 extending from the end portions thereof and arranged in pairs, the ears 20 being connected by a pin 22 on which is looped or otherwise fastened one end of a trace 23 while the ears 21 are connected by a pin 24 which extends across the trace and holds it against the member 19. That end of the member 19 farthest removed from the member 18 is attached to the leather 3 by means of a rivet or the like extending through an opening 19' but it is to be understood that the member 18 is not connected to said leather or to the plate 1. It will be obvious therefore that the plate 1, shoulder leather 3 and the draft iron are free to swing relative to the strips 4 and 6 and about the pivot studs 5 so as to adjust themselves to the movement of the shoulders of the animal on which the collar is arranged. Moreover the draft irons transmit the power directly from the shoulder plates to the traces and this power is not transmitted to said traces through the shoulder leathers as heretofore. It will be apparent therefore that these leathers may be flexed laterally to become properly seated upon the shoulders of the animal and excessive rubbing

bing as a result of the movement of the animal is thus avoided.

Under ordinary conditions the neck strap 13 supports the weight of the collar, but when a pull is exerted upon the collar through the draft irons, this strap will become slack and all of the weight of the collar will be supported by the shoulders of the animal.

The nut 25 screwed onto the stud 5 serves to prevent the strip 6 from springing away from the hinged member 17 and the strip 4 and moreover enables the wear between the parts to be taken up when necessary.

As shown in Fig. 3 the member 19 of the draft iron is preferably cut from a single piece of metal, the ears 20 and 21 being integral therewith and the hinge member at one end of the metal strip being also integral therewith and formed by slotting one end of the strip and folding it back upon itself and then riveting it.

It will be seen that the shoulder plates are mounted to swing relative to the connections between the two plates, these connections consisting of the strips 4 and 6 and their extensions 8 and 9. By thus mounting the parts the two shoulder plates and the leathers thereon can shift relative to each other to follow the movements of the two shoulders of the animal and the rubbing action of the collar is thus reduced to the minimum. It will be noted however that the draft is always transmitted directly from said connection to the traces and irre-

spective of the relative positions of the shoulder plates to the connections.

Instead of forming the member 19 from a blank of sheet metal, as indicated in the drawings, the said member can be cast or otherwise formed. Moreover the improvements shown in Fig. 2 can be applied to light metal hames instead of to wooden ones if desired.

Various changes can of course be made in the construction and arrangement of the parts without departing from the spirit or sacrificing any of the advantages of the invention as defined in the appended claim.

What is claimed is:—

A collar including side strips, strips bearing thereon and spaced therefrom at intermediate points, pivot bolts extending through the strips at each side of the collar, a shoulder plate mounted upon each of said bolts, a draft leather secured to each shoulder plate, a draft iron secured to each pivot bolt, each draft iron being made up of hingedly connected sections, one of the sections extending between the strips at one side of the collar.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

MAX LAUTERBACH.

Witnesses:

J. F. O'CONNELL,
J. J. DE LAY.