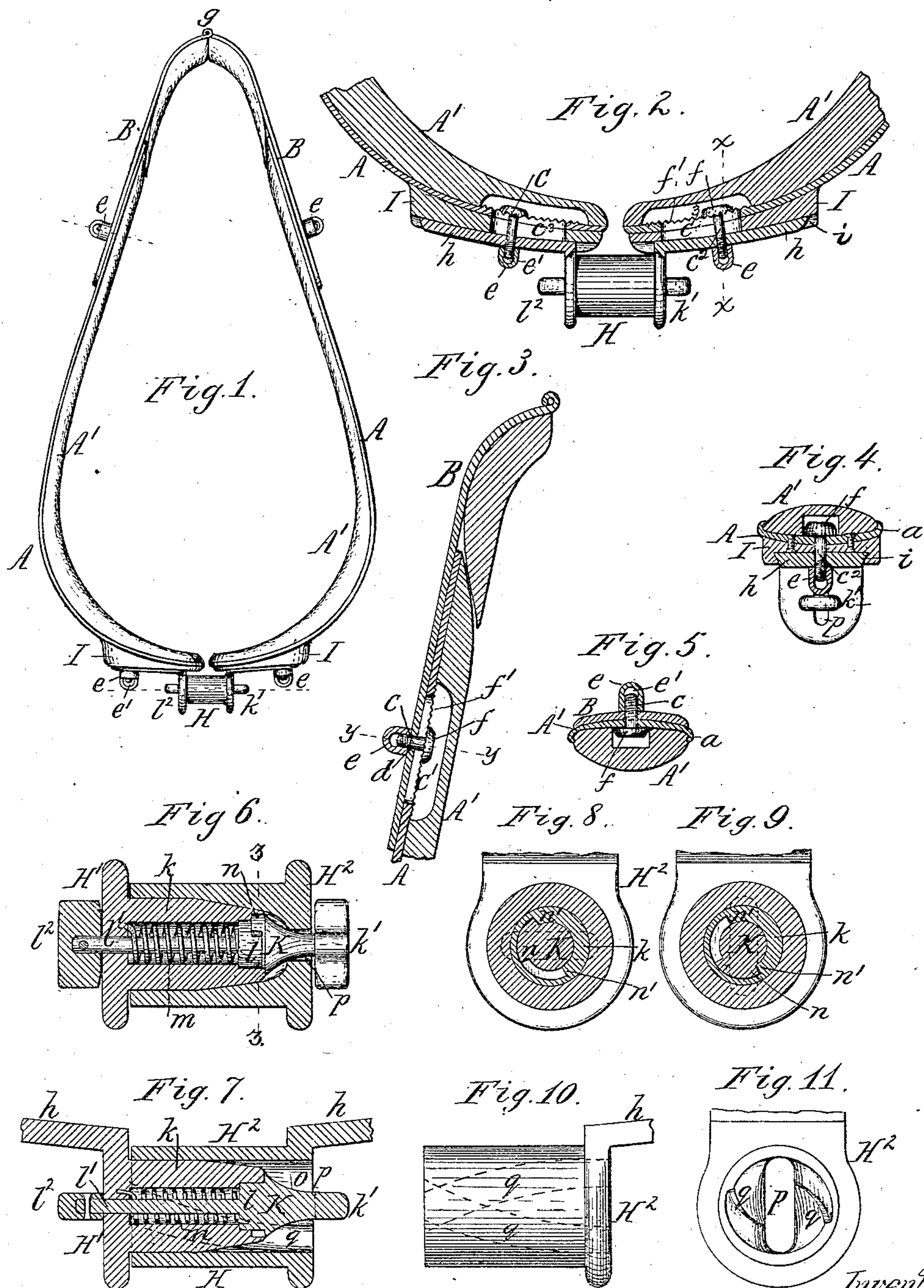


(No Model.)

C. ROEHL.
HORSE COLLAR.

No. 245,870.

Patented Aug. 16, 1881.



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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, CARL ROEHL, of Lockport, in the county of Niagara, in the State of New York, have invented new and useful Improvements in Horse-Collars, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to a horse-collar composed of metallic hame-plates provided with suitable padding and connected together adjustably, so that the size of the collar can be increased or reduced, and thereby adjusted to the size of the horse's neck. Collars of this description, in which the padding is directly secured to metallic hame-plates, are not as yielding or elastic as ordinary horse-collars, in which the hames are made separate from the collar proper, and it is more or less difficult to pass such a collar over the head of the horse in applying and removing the collar.

The object of my invention is to so construct the collar that it can be readily applied to and removed from the horse, and that it is easily adjusted to the size of the horse's neck.

My invention consists to that end, first, of a horse-collar composed of two metallic hame-plates connected at their upper ends by hinged adjustable extensions, and at their lower ends by a locking device composed of a bolt-and-socket portion, the two parts of which are adjustably secured to the hame-plates, whereby the two halves of the collar can be readily secured together, or separated and adjusted to the neck of the horse; also, in the particular construction of the locking device, and, finally, in the means whereby the locking device is adjustably secured to the hame-plates, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a front elevation of a horse-collar provided with my improvements. Fig. 2 is a sectional elevation of the lower ends of the hame-plates. Fig. 3 is a similar view of the upper portion of one hame-plate. Fig. 4 is a cross-section in line x x , Fig. 2. Fig. 5 is a cross-section in line y y , Fig. 3. Fig. 6 is a horizontal section of the locking device. Fig. 7 is a vertical section of the same. Fig. 8 is a cross-section in line z z , Fig. 6, showing the bolt with its head in a horizontal position. Fig. 9 is a similar view, showing the head of the bolt in a vertical position. Fig. 10 is an elevation of the socket portion of

the locking device. Fig. 11 is an end elevation thereof.

Like letters of reference refer to like parts in the several figures.

A represents two metallic hame-plates, constructed, preferably, of sheet-steel, and provided on their inner sides with padding A' , which is secured to each hame-plate. The hame-plates are provided with rows of perforations in the depressions or grooves a along their edges, through which the stitches are passed.

B represents a short extension attached to the upper end of each hame-plate, so as to be vertically adjustable thereon. As shown in the drawings, the extensions B are each secured to the hame-plate by a bolt, c , passing through a vertical slot, c' , in the hame-plate and a hole, d , in the extension.

e is a screw-nut applied to the outer end of the bolt c and bearing against the extension B.

f is the head of the bolt, which is provided on its under side with serrations, which engage with corresponding serrations, f' , formed on the inner side of the hame-plate, on both sides of the slot c' , and which serve to assist in holding the bolt in the desired position.

The screw-nut e is provided with a perforation, e' , through which any suitable rod, pin, or bolt can be passed and employed in turning the screw-nut when necessary.

g represents a hinge, whereby the upper ends of the extensions B of the hame-plates are connected, so that when the lower ends of the hame-plates are disconnected the two parts of the collar can be swung apart on this hinge.

H represents the locking device, applied to the lower ends of the hame-plates A, so that the same can be readily secured together or released, as may be desired. The locking device H consists of a bolt portion, H' , and a socket portion, H^2 , secured to the lower ends of the hame-plates, so as to engage with each other when the hames are swung together. Both portions H' H^2 are provided with leaves or flanges h , whereby the two portions are secured to the hame-plates A.

I are blocks which are interposed between the flanges h of the locking device H and the hame-plates, in order to retain the two portions of the locking device in a position in which the axis of each will lie as nearly as possible in the curve in which the two portions move in

opening and closing the hame. The blocks I are secured to the hame-plates by rivets or otherwise, as may be preferred, and each is provided with a dovetail groove, *i*, in which the flange *h* is adjustably held. Each part of the locking device is adjustably secured to the hame-plate by a screw-bolt, *c*², passing through a slot or elongated opening, *c*³, in the hame-plate, in the same manner in which the extensions B are secured to the upper ends of the hame-plates. By this means the width of the collar can be increased or reduced in the same manner in which the height of the collar is adjusted by changing the position of the extensions B.

The bolt portion H' of the lock consists of a hollow cylindrical stud, *k*, and a bolt, K, which is seated, by means of a collar, *l*, in the end of the stud *k*, so as to turn therein, and which is provided with a flat head, *k'*. The bolt K is provided with a shank, *l'*, which extends through the bore of the stud *k*, and is provided on the outer side of the stud with a thumb-piece, *l*².

m is a spring arranged in the enlarged portion of the bore of the stud *k*, and secured with one end to the stud and with the other end to the bolt K, so that when the latter is turned in its seat the spring will return it, when released, to its former position.

n is a projection formed on the bolt K, and *n'* are shoulders formed in the socket, in which the collar *l* turns in such manner that the rotary movement of the bolt K in its seat is restricted by the projection *n* and the shoulders *n'* to one-fourth of a revolution.

The socket portion H² is provided with a cavity, *o*, which is adapted to receive the stud *k*, and which is provided in its rear wall with a slot or elongated opening, *p*, through which the flat head *k'* of the bolt K passes.

q q are two spiral grooves formed in the cavity *o* of the socket, for the purpose of guiding the head *k'* of the bolt to the opening *p*. These grooves extend from the opening *p* to the forward end of the socket portion H and make a quarter-turn in their entire length. The parts are so arranged that the flat head *k'* of the bolt is held in a horizontal position by the spring *m*. Upon introducing the head of the bolt into the cavity *o* of the socket portion the head of the bolt enters the grooves *q*, and is turned by the same until it stands in a vertical position, in which position it passes through the opening *p* in the rear wall of the

socket portion. As soon as the head of the bolt has passed through the opening *p* the spring *m* returns the same to its horizontal position, whereby the parts are firmly locked together. Upon turning the bolt so that its head stands vertically or in line with the opening *p* the two parts of the locking device are readily disengaged.

The end of the hollow stud *k* is preferably made conical to facilitate its entrance into the socket *o* of the portion H².

My improved collar is readily adjusted to the horse by means of the adjustable extensions B and the similarly-adjustable locking parts H' H², and when so adjusted the adjustable parts need not be disturbed afterward.

In order to apply the collar to the horse, the locking device H is opened and the two parts of the collar are swung apart on the hinge and passed over the neck of the horse, when, by bringing the lower ends of the hame-plates together, the two parts of the locking device are engaged with each other, thereby firmly securing the parts together. The collar is readily removed upon opening the lock.

I am aware that hames have been hinged together at their upper ends and provided with locking devices at their lower ends, and this I do not broadly claim; but

I claim as my invention—

1. The combination, with the metallic hame-plates A, of the adjustable extensions B, connected by a hinge, *g*, and a locking device, H, composed of a bolt portion, H', and a socket portion, H², both attached adjustably to their respective hame-plates, substantially as set forth.

2. In a horse-collar, the locking device H, composed of a bolt portion, H', and a socket portion, H², the bolt portion being composed of a hollow stud, *k*, flat-headed bolt K, and spring *m*, and the socket portion being constructed with a cavity, *o*, provided with an elongated opening, *p*, and spiral grooves *q*, substantially as set forth.

3. The combination, with the hame-plates A, of the locking portions H' H², provided with flanges *h*, and secured to the hame-plates by bolts *c*² passing through elongated slots *c*³, substantially as set forth.

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Witnesses:

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