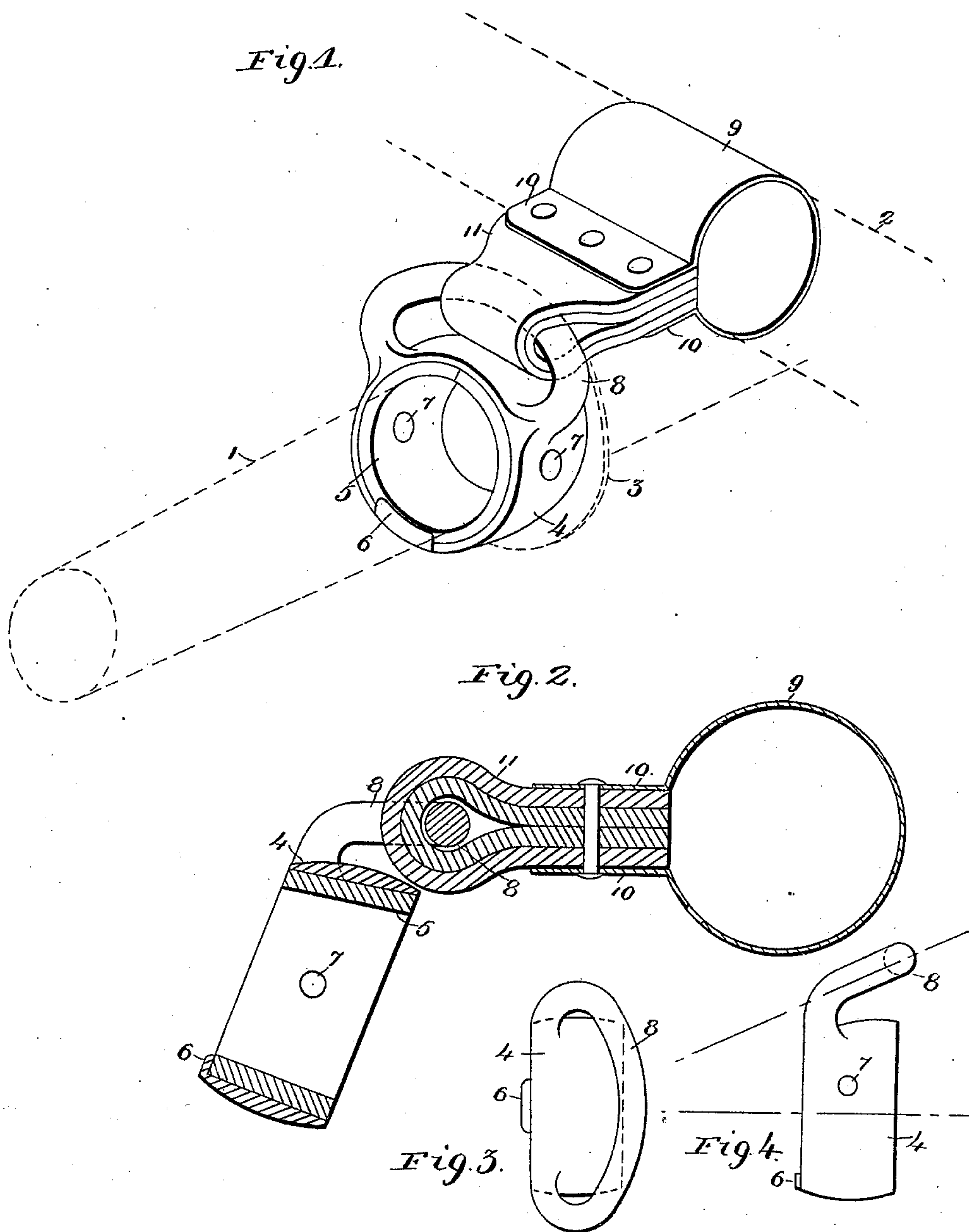


(No Model.)

C. SHUMAN.  
NECK YOKE COUPLING.

No. 587,513.

Patented Aug. 3, 1897.



Witnesses  
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# UNITED STATES PATENT OFFICE.

CHARLES SHUMAN, OF ST. LOUIS, MISSOURI.

## NECK-YOKE COUPLING.

SPECIFICATION forming part of Letters Patent No. 587,513, dated August 3, 1897.

Application filed September 8, 1896. Serial No. 605,150. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES SHUMAN, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Neck-Yoke Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in neck-yoke couplings; and it consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my improved coupling. Fig. 2 is a middle vertical longitudinal section of the same. Fig. 3 is a top plan view of the pole-ring detached; and Fig. 4 is a side elevation of the same, showing the angular disposition of the rigid loop thereof.

The object of my invention is to construct a neck-yoke coupling which will be simple in construction, cheap, durable, perfectly anti-rattling, and one which will freely admit both of the swinging of the neck-yoke bar in a vertical plane and its oscillation in a horizontal plane, the connection between the neck-yoke bar and the pole-ring being such as to permit these movements with a minimum amount of resistance. These advantages will be apparent from a detailed description of the coupling, which is as follows:

Referring to the drawings, 1 represents the cast-iron pole-tip or the tip carried by the free end of the vehicle-pole, 2 the neck-yoke bar, and 3 a limiting-collar or peripheral ridge forming a part of the said pole-tip. Adapted to be passed over the pole-tip and limited in its movement thereon in one direction by the collar 3 is the closed pole-ring 4, having an inner lining of leather 5 of sufficient thickness to yieldingly embrace the pole-tip, the said lining being of sufficient width to bring the opposite ends thereof flush with the adjacent ends or faces of the pole-ring, the forward face of the ring being provided with an inwardly-deflected lip 6, of suitable length and of a width to form a sufficient bearing-surface for the full thickness of the lining, said lip projecting beyond the plane of the end or face carrying the same. The

said lip 6 prevents the lining from working out of the pole-ring from the front side thereof when the device is in use. The lining is additionally secured to the walls of the pole-ring by rivets 7. Forming part of or secured to the outer peripheral wall of the ring 4 is a rigid substantially semicircular loop 8, concaved rearwardly and disposed at an angle of from thirty-five to forty-five degrees to the axis of the pole, this angle being the one that the line of draft between the pole-ring and the horses' breasts forms with the axis of said pole. This angle is indicated in Fig. 4 of the drawings. At the same time the said loop 8 is disposed at an angle to the plane of the circle (or perimeter) of either face or end of the pole-ring.

Carried by the neck-yoke bar 2 is an open clasp 9, adapted to embrace the bar, the said clasp having outwardly-deflected ends 10, between which are securely clamped and fastened the opposite ends of a yielding loop 11, formed of a strip or series of strips of leather passed about the rigid loop 8, the ends being subsequently brought together and riveted between the deflected ends of the clasp. The connection between the rigid loop 8 and the leather loop 11 is yielding and noiseless, making the coupling perfectly anti-rattling and permitting the yoke-bar 2 to freely swing about the pole-ring 4 in a vertical plane and to oscillate horizontally about the same, the leather loop readily slipping along the rigid loop 8 with the lateral oscillations to which the yoke-bar 2 is subjected; the resistance to the slipping of the leather loop along the rigid loop 8 being reduced to a minimum or practically eliminated by reason of the disposition of said rigid loop in the plane in which the line of draft is disposed.

It is to be observed that any equivalent or other arrangement by which is permitted the vertical oscillation and simultaneous horizontal oscillation of the yoke-bar 2 about the pole-ring 4 is within the spirit of my invention and that any equivalent means for the rearwardly-concave and angularly-disposed rigid loop 8 may be substituted for the present construction. It is to be understood also that I do not limit myself to the nature of material used for the various parts of my device. It is further to be understood that the



pole-ring 4, its deflected lip 6, and rigid loop 8, which herein are shown as cast in one piece, may be made of two or more pieces subsequently united and put together in any mechanical manner. It is obvious, furthermore, that many other minor changes might be made without departing from the spirit of my invention.

As seen in the drawings, the loop 8 is carried by the pole-ring 4 adjacent to the front face of the ring, being deflected rearwardly, so as to bring the base of the loop substantially in line with or over the opposite or rear face of the pole-ring. Under this arrangement the upper peripheral surface of the pole-ring acts as a shield, preventing the leather loop 11 from ever coming in contact with the wagon-pole and thus avoiding the wearing of the leather of said loop 11 by constant abrasion with the wagon-pole. In other words, the rear peripheral portion of the ring 4 stands as a shield between the loop 11 and the wagon-pole. A function is thus imparted to the ring 4 and loop 8 so disposed thereon which other rings, so far as I am aware, are not susceptible of, and it is practically for this reason, too, that I make my ring closed, thereby making it serve as a shield in the manner indicated and yet allow the loop 11 to slide along the loop 8 by reason of the deflection of the latter and by reason of its concavity, as shown.

Having described my invention, what I claim is—

1. In a neck-yoke coupling, a suitable closed pole-ring adapted to be carried by the pole, a rigid loop carried along the outside of the same, an inwardly-deflected lip formed adjacent to the outer face of the ring and projecting beyond the plane of the same, a suitable leather lining carried by the ring and bearing at one end against the lip, and suitable rivets for additionally securing the lining to the walls of the ring, substantially as set forth.

2. In a neck-yoke coupling, a suitable closed pole-ring, a leather or equivalent lining for the same, a rigid loop carried by the ring along the outside of the same and disposed at an angle to the planes of the faces of the ring, rivets for partially securing the lining to the inside of the ring, a clasp adapted to be secured to the neck-yoke bar, and a suitable yielding antirattling connection between the clasp and rigid loop, substantially as set forth.

3. As an article of manufacture, a closed pole-ring, an inwardly-deflected lip formed on, or carried by, the same adjacent to the front face thereof, a rigid loop carried along the outside of the ring and deflected substantially in the line of draft between the neck-yoke bar and the horse's breast, substantially as set forth.

4. In a neck-yoke coupling, a suitable closed pole-ring adapted to be carried by the pole of the carriage, a loop disposed along the outside of said ring and carried adjacent to the front face of said ring, said loop being deflected or disposed substantially in the line of draft between the neck-yoke bar and the horse's breast and extended rearwardly to bring the base of the loop substantially over the opposite or rear face of the ring, substantially as set forth.

5. In a neck-yoke coupling, a suitable closed ring adapted to be carried by the pole of the carriage, a rigid loop disposed along the outside of or carried by said ring and carried adjacent to the front face thereof, said loop being deflected or disposed substantially in the line of draft between the neck-yoke bar and the horse's breast and extended rearwardly to bring the base of the loop substantially over the rear peripheral surface of the ring, and being further disposed at an angle to the plane of the circle of either end of the pole-ring and an inwardly-deflected lip carried along the outer face of the pole-ring, substantially as set forth.

6. In a neck-yoke coupling, a suitable closed pole-ring adapted to be carried by the pole of the carriage, a rigid loop disposed along the outside of or secured to said ring and carried adjacent to the front face thereof, said loop being deflected substantially in the line of draft between the neck-yoke bar and the horse's breast and extended rearwardly to bring the base of the loop substantially over the rear peripheral surface of the ring, and being further disposed at an angle to the plane of the circle of either end of the ring, a suitable leather lining carried by the pole-ring, an inwardly-deflected lip formed adjacent to the outer face of the ring and projecting beyond the plane of the same, said lip serving as a bearing for the leather lining, and additional means for securing the leather lining within the pole-ring, substantially as set forth.

7. In a neck-yoke coupling, a suitable closed pole-ring, a rigid loop disposed along the outside of the same and deflected rearwardly substantially in the line of draft between the neck-yoke bar and the horse's breast, a suitable clasp adapted to be carried by the neck-yoke bar, and a flexible looped connection interposed between the clasp and the rigid loop carried by the pole-ring, substantially as set forth.

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

CHARLES SHUMAN.

Witnesses:

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