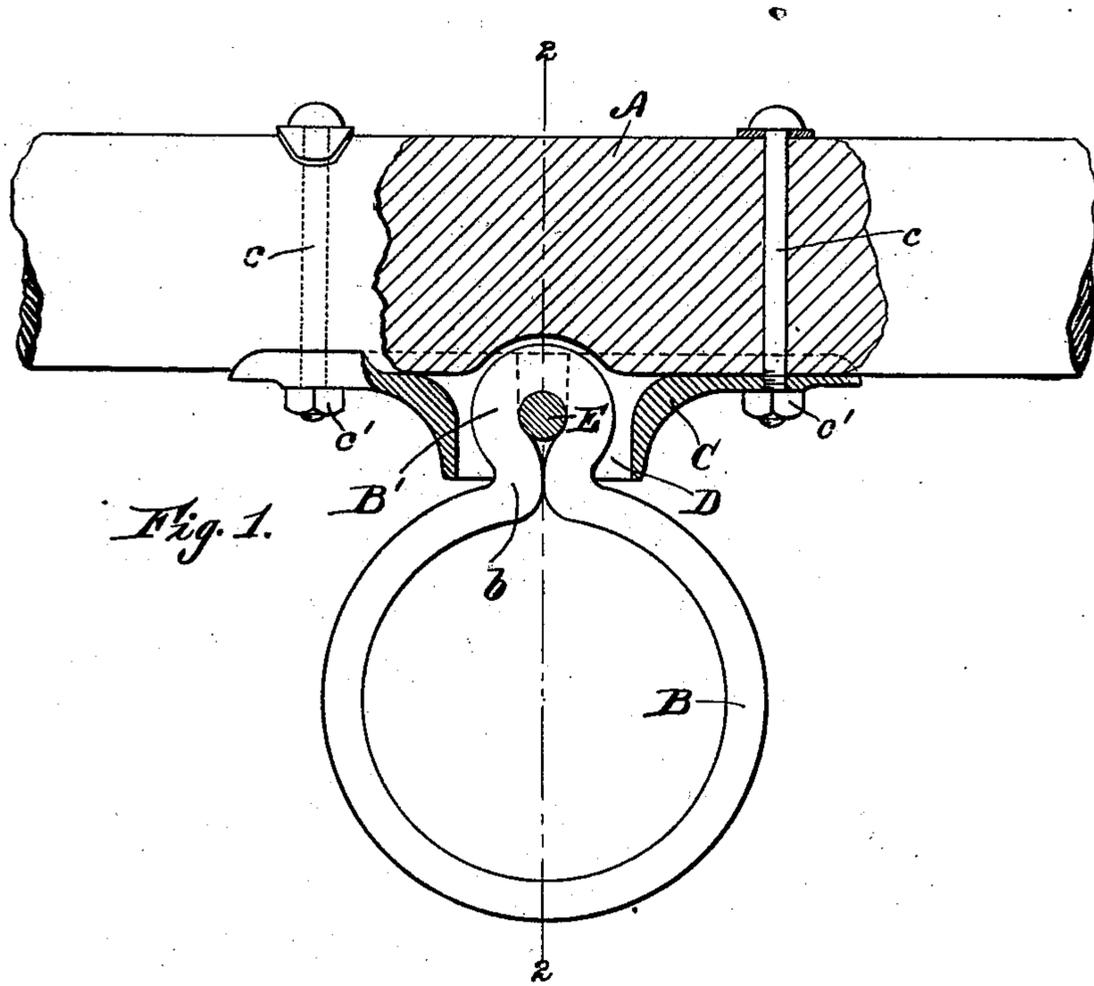


(No Model.)

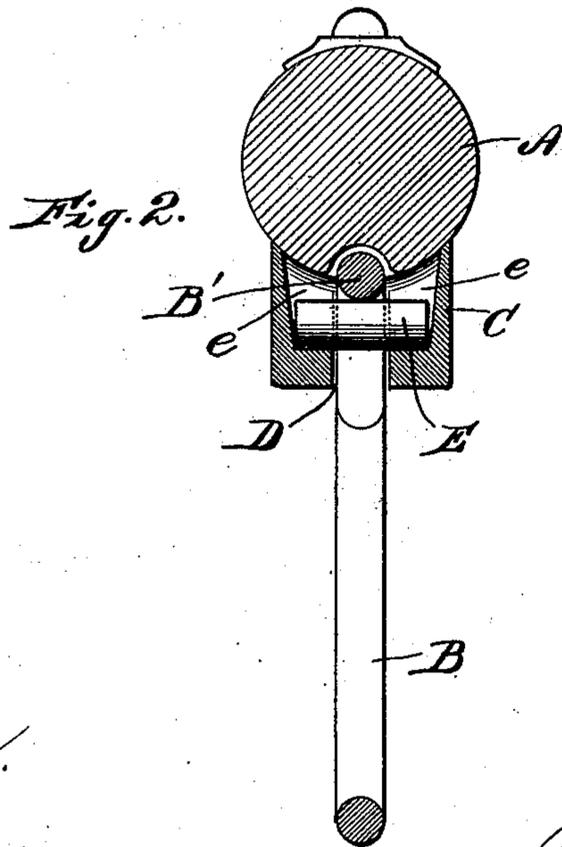
J. H. BAGNALL.  
NECK YOKE.

No. 506,898.

Patented Oct. 17, 1893.



*Fig. 1.*



*Fig. 2.*

Witnesses.  
Geo. W. Loring.  
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# UNITED STATES PATENT OFFICE.

JOHN H. BAGNALL, OF RACINE, WISCONSIN, ASSIGNOR OF ONE-HALF TO  
HANS P. SWENSEN, OF SAME PLACE.

## NECK-YOKE.

SPECIFICATION forming part of Letters Patent No. 506,898, dated October 17, 1893.

Application filed April 10, 1893. Serial No. 469,715. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. BAGNALL, a citizen of the United States, and a resident of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Neck Yokes; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to improvements in the construction of neck yokes, and consists in the matters hereinafter described and pointed out in the appended claim.

In the accompanying drawings illustrating my invention: Figure 1 is a side elevation of the central portion of a neck yoke provided with my improvements, and showing parts broken away to better illustrate the construction. Fig. 2 is a cross sectional view of the same taken on line 2—2 of Fig. 1.

Referring by letter to the drawings A represents the neck yoke and B the ring secured to the under side of the neck yoke, for engagement with the end of a vehicle pole. It has been common heretofore in order to provide a movable connection for the ring to secure said ring to the under side of the neck yoke by means of two smaller rings arranged adjacent to, and upon opposite sides of the center of the neck yoke and embracing said ring, these small rings being usually engaged with eye-bolts passed through the neck yoke and riveted down upon the upper side of the same. By this construction the lateral play of the pole causes the small rings and the sides of the large ring to continually wear against the under side of the neck yoke and the sides of the pole thereby defacing the surfaces of the neck yoke and pole and where the wear is excessive, materially weakening the pole.

It is the object of my present invention to provide means for securing the ring B to the under side of the neck yoke in such manner as to be freely movable, and at the same time, to prevent the ring from striking against and defacing the neck-yoke and pole. To this end I provide a suitable housing C having horizontally disposed flanges C' C' arranged to extend longitudinally beneath the neck yoke, and said housing is secured to the neck yoke by means of suitable bolts c c extending

through the yoke and engaged with nuts c' c' beneath said flanges. The upper side of the housing is suitably concaved to conform to the shape of the under side of the neck yoke as shown more particularly in Fig. 2. An opening or slot D is made in the under side of the housing for the reception of a loop or eye B' upon the upper side of the ring B and a transverse pivot pin E is engaged in suitable recesses e e within the housing C and is arranged to extend across the path of the loop or eye B' and adapted for engagement therewith in the manner shown in the drawings.

In assembling the parts of my device together the loop or eye B' is passed upward through the slot D in the housing C and the transverse pin E slipped through said loop or eye when the ring B is drawn downward so as to bring said transverse pin into engagement with the bearings or recesses e e in the manner shown in Fig. 2. The housing C is then secured to the under side of the neck yoke by means of the bolts or clips c c.

As shown in Fig. 1, I make the slot D of somewhat elongated form so as to permit of a vibrating motion of the contracted portion b between the ring B and the loop or eye B'.

By the described connection of the ring B with the transverse pin E within the housing C a very secure and strong fastening is provided while at the same time the ring B is rendered freely movable upon said pivotal connection. The lower edges of the walls of the housing at the ends of the slot D are so arranged as to limit the vibration of the ring B about the pivotal connection E, so as to prevent said ring from striking against the under side of the neck yoke and the sides of the pole in an obvious manner.

By my improved construction I am enabled to provide a neck yoke center possessing all the advantages gained by a movable connection between the ring and the neck yoke and at the same time so arranged as to effectually prevent the ring from wearing against the under side of the neck yoke and the sides of the pole.

My improved device presents a much more neat and tasty appearance than if the ring B were secured to the under side of the neck

yoke by the smaller rings and eye-bolts in the ordinary manner.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

5 The combination of a neck yoke, provided with a rounded longitudinal groove on its under side, a housing in direct contact with the under side of said neck yoke, and sur-  
10 rounding said groove, and provided with horizontally disposed flanges recessed to conform to the shape of the neck-yoke, bolts extending through said neck-yoke and said flanges with retaining nuts beneath the latter, the  
15 said housing having a longitudinal slot in line with the groove in the under side of the neck-yoke, and transverse recesses and bearings above said slot, a ring having a closed

loop integral therewith, said loop engaging with the described groove and slot, and a 20 transverse pin extending loosely through said loop and resting on said bearings in said recess above said slot, whereby said ring may have longitudinal movement in said slot and in the neck-yoke groove, but be prevented 25 from transverse movement, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Racine, in the county of Racine and State of Wisconsin, in 30 the presence of two witnesses.

JOHN H. BAGNALL.

Witnesses:

G. L. AINSWORTH,  
C. H. WASHBURN.