

No. 665,749.

Patented Jan. 8, 1901.

C. W. McDONALD.
NECK YOKE CENTER.

(Application filed May 23, 1900.)

(No Model.)

Fig. 1.

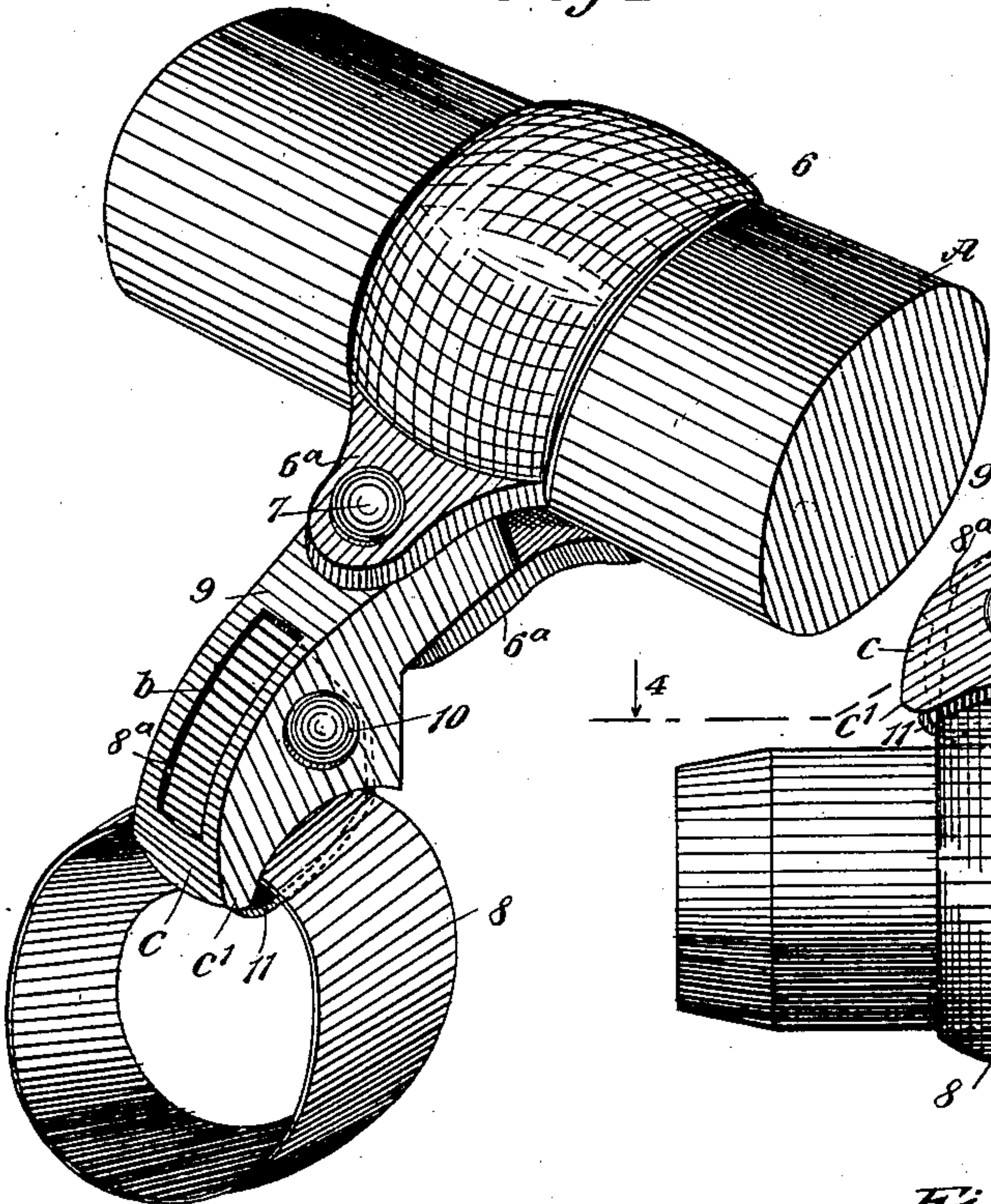


Fig. 2.

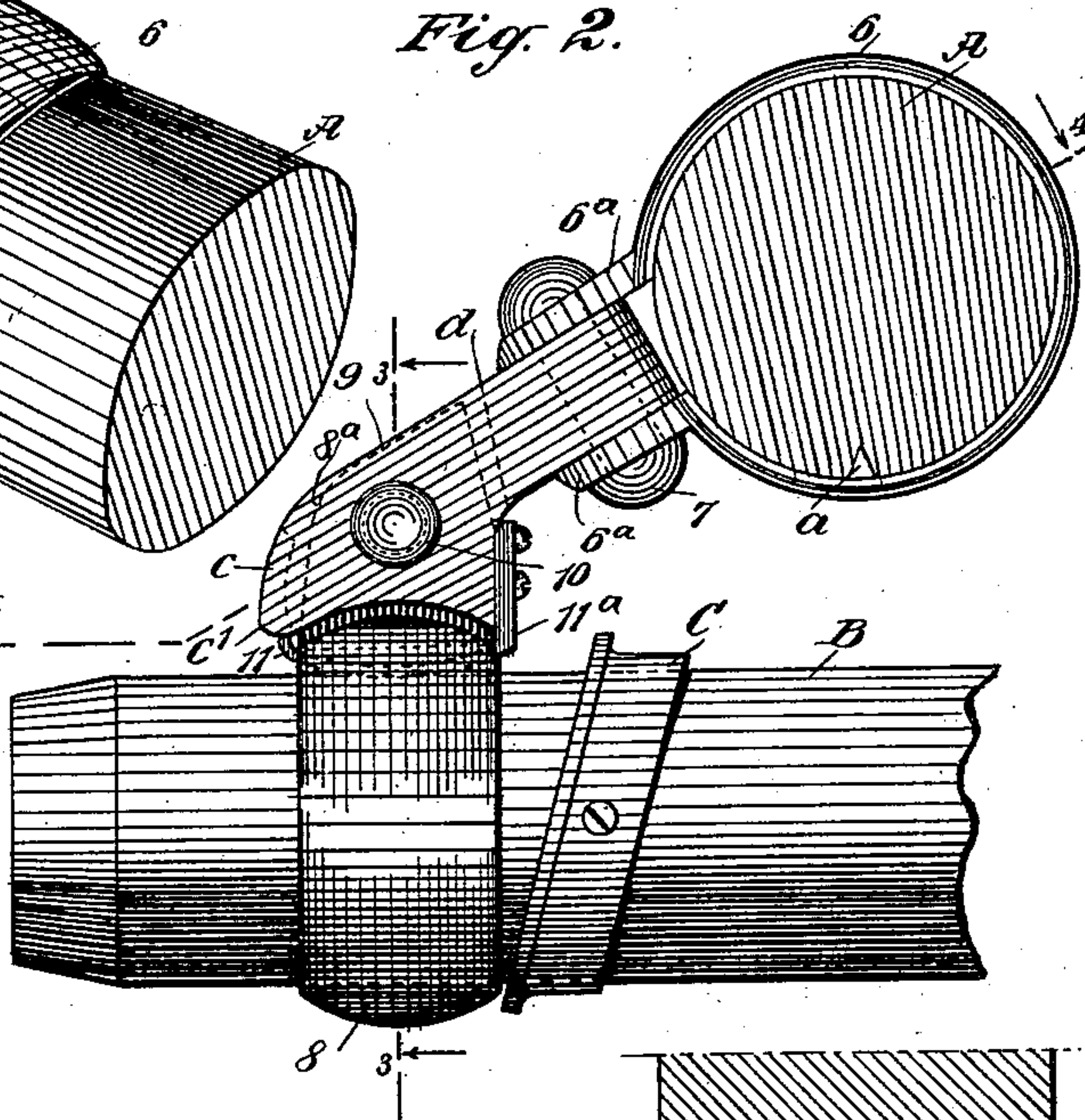


Fig. 4.

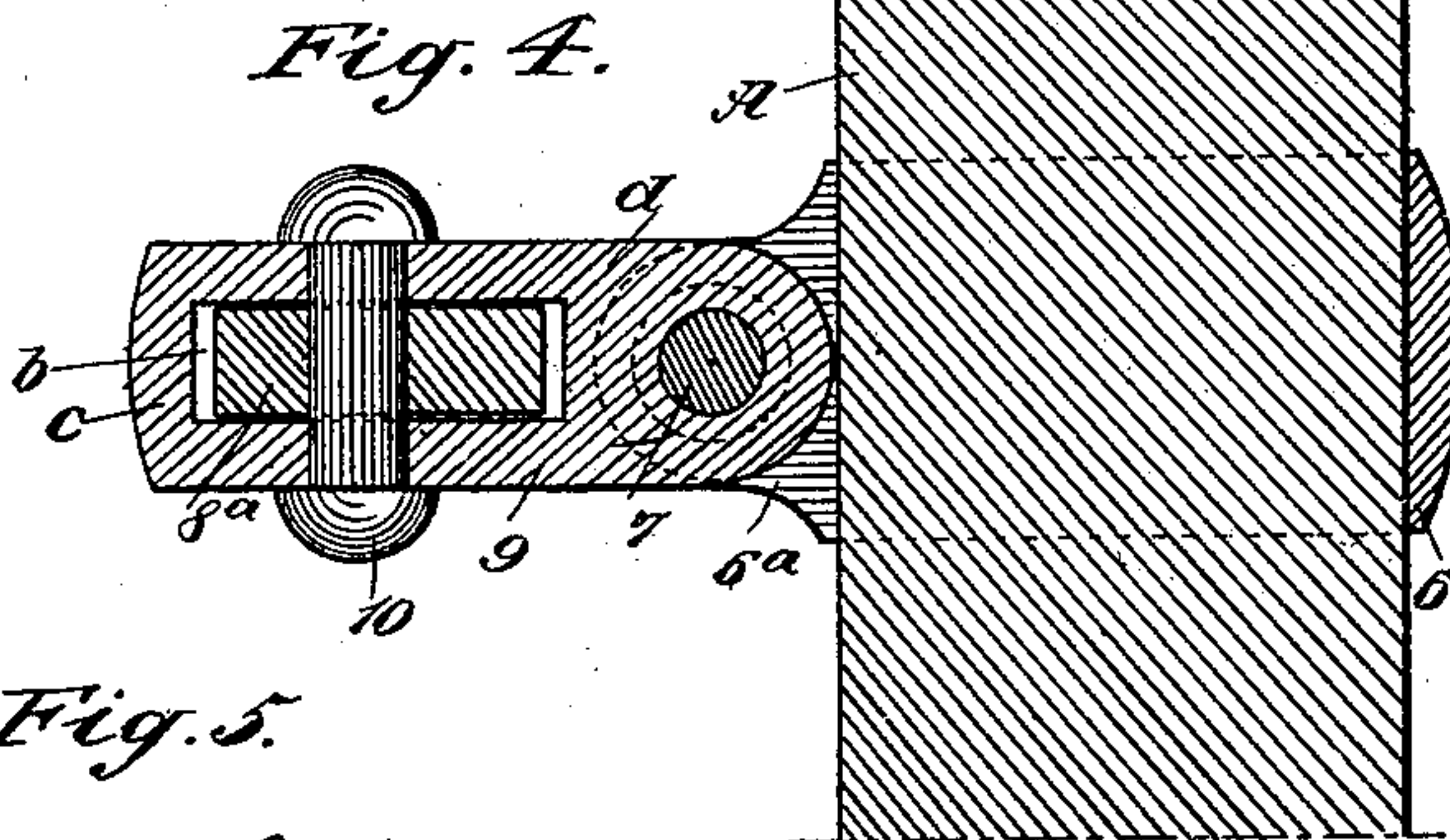


Fig. 3.

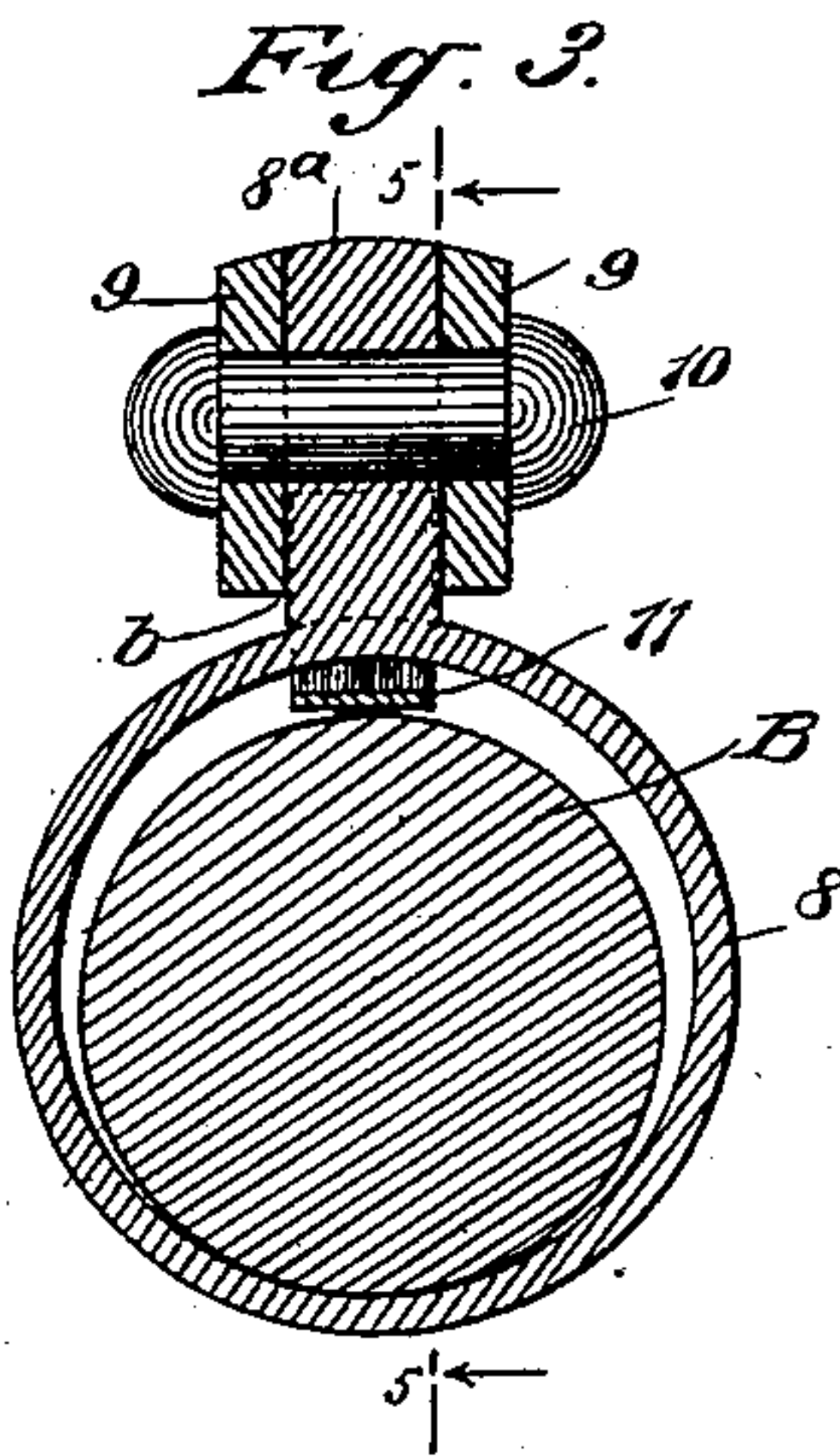
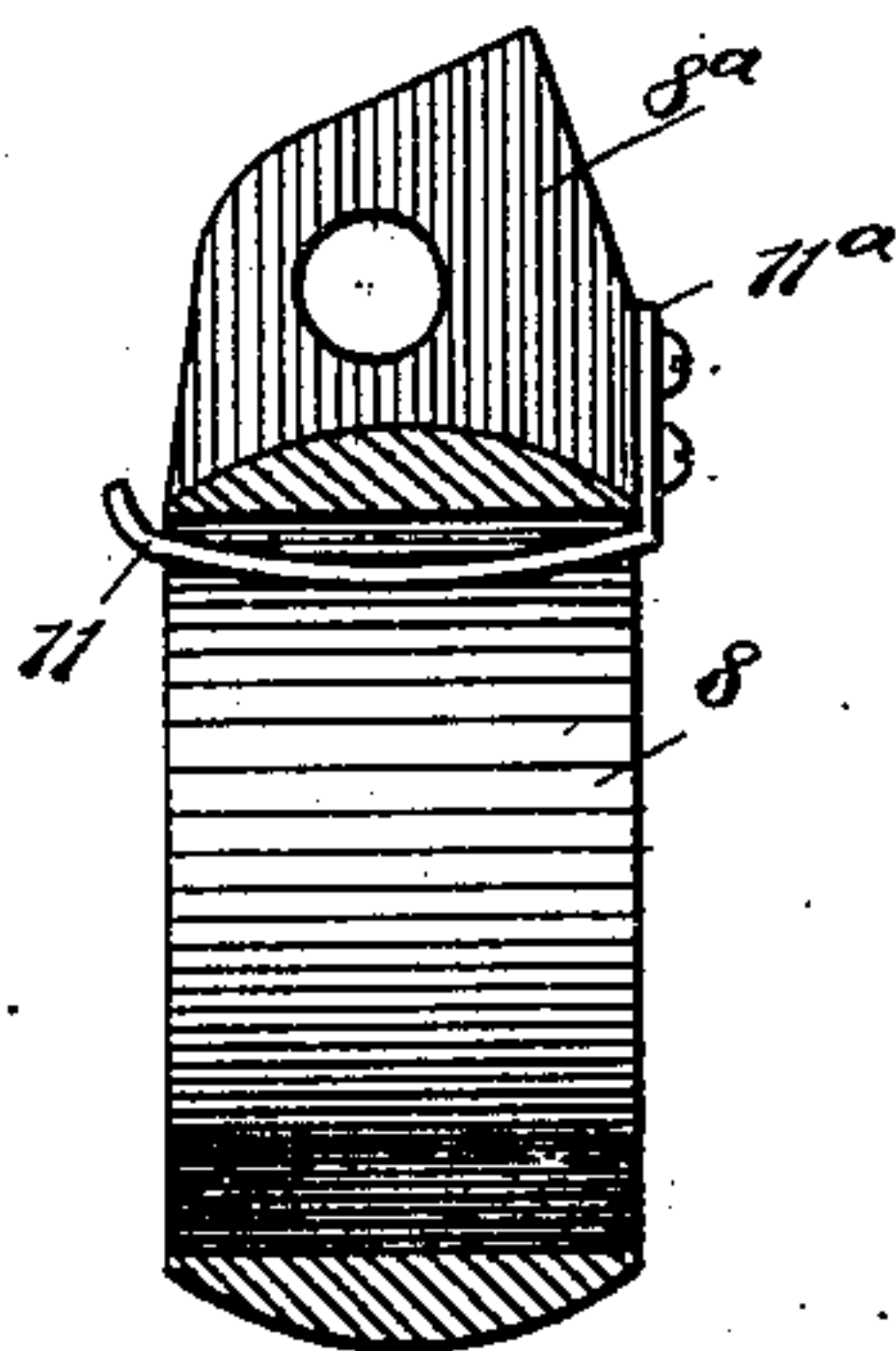


Fig. 5.



WITNESSES:

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CHARLES WALTON McDONALD, OF GALLATIN, MISSOURI, ASSIGNOR TO
GEORGE AID AND FRED AID, OF SAME PLACE.

NECK-YOKE CENTER.

SPECIFICATION forming part of Letters Patent No. 665,749, dated January 8, 1901.

Application filed May 23, 1900. Serial No. 17,681. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WALTON McDONALD, a citizen of the United States, and a resident of Gallatin, in the county of Daviess and State of Missouri, have invented a new and Improved Neck-Yoke Center, of which the following is a full, clear, and exact description.

This invention has for its object to provide a novel, simple, and practical neck-yoke center which will afford lateral and vertical movement to the neck-yoke for a limited distance, check the neck-yoke from objectionable rocking movement, and prevent rattling noise incidental to ordinary neck-yoke centers.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improvement in position on the middle portion of a neck-yoke. Fig. 2 is a side view of the improvement mounted upon the end of a vehicle-pole and upon a neck-yoke shown in cross-section. Fig. 3 is a vertical transverse sectional view of the improvement in position on a vehicle-pole, substantially on the line 3 3 in Fig. 2. Fig. 4 is a sectional plan view substantially on the line 4 4 in Fig. 2; and Fig. 5 is a sectional side view of the pole-ring, substantially on the line 5 5 in Fig. 3.

In the drawings, which illustrate the construction and application of the invention, A indicates a neck-yoke of the usual construction, and B the forward portion of a vehicle-pole. The neck-yoke A is cylindrical in its body, and at its longitudinal center a band 6, which is a portion of the improvement, is adapted to clasp said middle portion of the neck-yoke.

As shown, the yoke-band 6 is in the form of an open ring and at its ends is provided with two parallel flanges 6^a, which are projected forwardly, as indicated in Figs. 1 and 2.

A V-shaped rib *a* is formed integral with the yoke-band 6, on the innerside thereof and

across said ring, this rib serving to lock the band in place by its embedment in the neck-yoke when the band is drawn tight thereon by a bolt 7, that passes through perforations in the flanges 6^a.

The pole-ring 8 is of an internal diameter which permits the loose insertion therein of the free front end of the vehicle-pole, such as B, and from the upper side of the ring 8 an arm 8^a projects for a coupled engagement with a link 9.

The link 9 is flattened at and near one end to provide parallel upper and lower faces and has such a thickness thereat as adapts this end of the link-piece to loosely fit between the flanges 6^a when the yoke-band 6 is drawn closely upon the neck-yoke bar A by the bolt 7. The other end of the link 9 is bent downward and is wider than the breadth of the pole-ring 8, so that a slot *b*, which extends upward through the bent depending portion of the link 9, will permit a wall *c* to stand intact with the side walls of said slot at the front face of the link.

The arm 8^a fits loosely in the slot *b* and is pivoted therein by the transverse bolt 10, which passes through aligned perforations in the arm and link, as clearly shown in Figs. 3 and 4.

The arm 8^a is proportioned in width so that its front and rear edges will have proper clearance from the wall *c* at the front of the link 9 and the rear wall *d*, which defines the rear terminal of the slot *b*, as shown by dotted lines in Fig. 2. The lower edges of the side walls of the slot *b* are preferably concaved and have sufficient clearance from the exterior surface of the pole-ring 8 to allow the latter to rock slightly upon the pivot-bolt 10 before the rear edge of the arm 8^a contacts with the rear wall *d* of the slot *b*, and it is preferred that said edge and wall be given a slight inclination forwardly, as shown in Fig. 2.

The lower termination of the transverse front wall *c* is preferably rounded to give it convexity, thus adapting said edge *c'* to have proper bearing upon the upturned end of a spring 11.

The spring 11 is bent from an elastic plate-metal strip and at the rear end is provided

with an upwardly-trending flat limb 11^a, secured upon the rear edge of the arm 8^a near the body of the pole-ring, as shown by full lines in Figs. 2 and 5 and by dotted lines in Fig. 1. The plate-spring 11 is curved downwardly a suitable degree and has its forward end bent upwardly to contact with the lower edge *c'* of the wall *c* of the link 9, as before mentioned.

The curved body portion of the spring 11 passes through the pole-ring 8 when the parts of the improvement are assembled and the pole B is in contact with the convex surface of the spring 11, so that rattle between the pole and pole-ring is prevented. At a point near the rear edge of the pole-ring 8 a check-collar C is mounted and secured upon the pole B, said collar, which in service defines the rearward sliding movement of the pole-ring, being preferably inclined from the lower portion of its front face upward and rearward, thus greatly reducing the frictional contact of these parts.

In operation it will be seen that the neck-yoke bar A may rock freely on the pivot-bolt 7, so that the pair of horses held spaced apart by the neck-yoke are not fretted by their connection therewith. The link 9 is also adapted to rock a limited degree on the arm 8^a at right angles to the rocking movement of the neck-yoke bar A.

It will be obvious that the spring 11 by its bearing upon the pole B will hold the ring 8 from too free lateral rocking movement on the pole and also that a lifting movement of the neck-yoke A will enforce the contact of the spring 11 upon the pole, so that there will be a twofold rocking movement of the neck-yoke center upon the pole B and an avoidance of noise in the operation of the improvement.

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

1. In a neck-yoke center, the combination with a yoke-band having two parallel flanges, a link pivoted by one end between said flanges to rock laterally, the link having a vertical slot through its other end, of a pole-ring, an arm thereon pivoted in the slot of the link, and a spring held by one end on the arm and having its free end contacting with the front portion of the link.

2. In a neck-yoke center, the combination with a yoke-band in open-ring form having two parallel flanges on its ends, a bolt passing through said flanges to clamp the band on the neck-yoke, and a link pivoted by one

end between the flanges by said bolt, of a pole-ring having an arm pivoted in a slot formed in the other end of the link and thus adapted to rock on the link at a right angle to the plane of rocking movement of the yoke-ring on the link, and a plate-spring held by one end on the arm, and extending through the pole-ring, so as to have contact at its free end with a depending edge of the link.

3. In a neck-yoke center, the combination with a neck-yoke and a vehicle-pole, of a clip-band on the neck-yoke at its center, flanges on said band, a link pivoted to rock laterally between said flanges, the other portion of the link-bar bending downwardly and having a vertical slot therein, a pole-ring, an arm on said pole-ring, pivoted in the slot of the link so as to permit a limited rocking movement of the pole-ring, and a check-spring attached by one bent end upon the rear edge of the arm of the pole-ring, thence extending through the pole-ring to bear upon a vehicle-pole, and having contact at the front end thereof with the lower edge of a cross-wall at the front end of the link.

4. In a neck-yoke center, the combination with a pole-ring, an integral arm thereon, and a slotted link in which the arm is pivoted so as to rock a limited degree, of a plate-spring the body of which is curved downward and its free end curved upward to contact with the front lower edge of the link, an upwardly-bent limb at the rear end of the spring being secured upon the rear edge of the arm.

5. In a neck-yoke center of the character described, the combination with the pole-ring having an integral arm, of a plate-spring secured by one end so as to project its body through the pole-ring and thus be adapted to contact with a vehicle-pole on which said ring is placed.

6. In a neck-yoke, a pole-ring, a yoke-band, a link pivotally connected with the ring and the band, and a spring device at the lower end of the link, to exert a spring-pressure on a pole.

7. A neck-yoke center, comprising a pole-ring, a yoke-band, and a link pivotally uniting the said ring and band, the link having a stop projection in the rear of its pivot limiting the downward movement of the link.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES WALTON McDONALD.

Witnesses:

J. A. SELBY,
J. A. CARAWAY.