

No. 616,065.

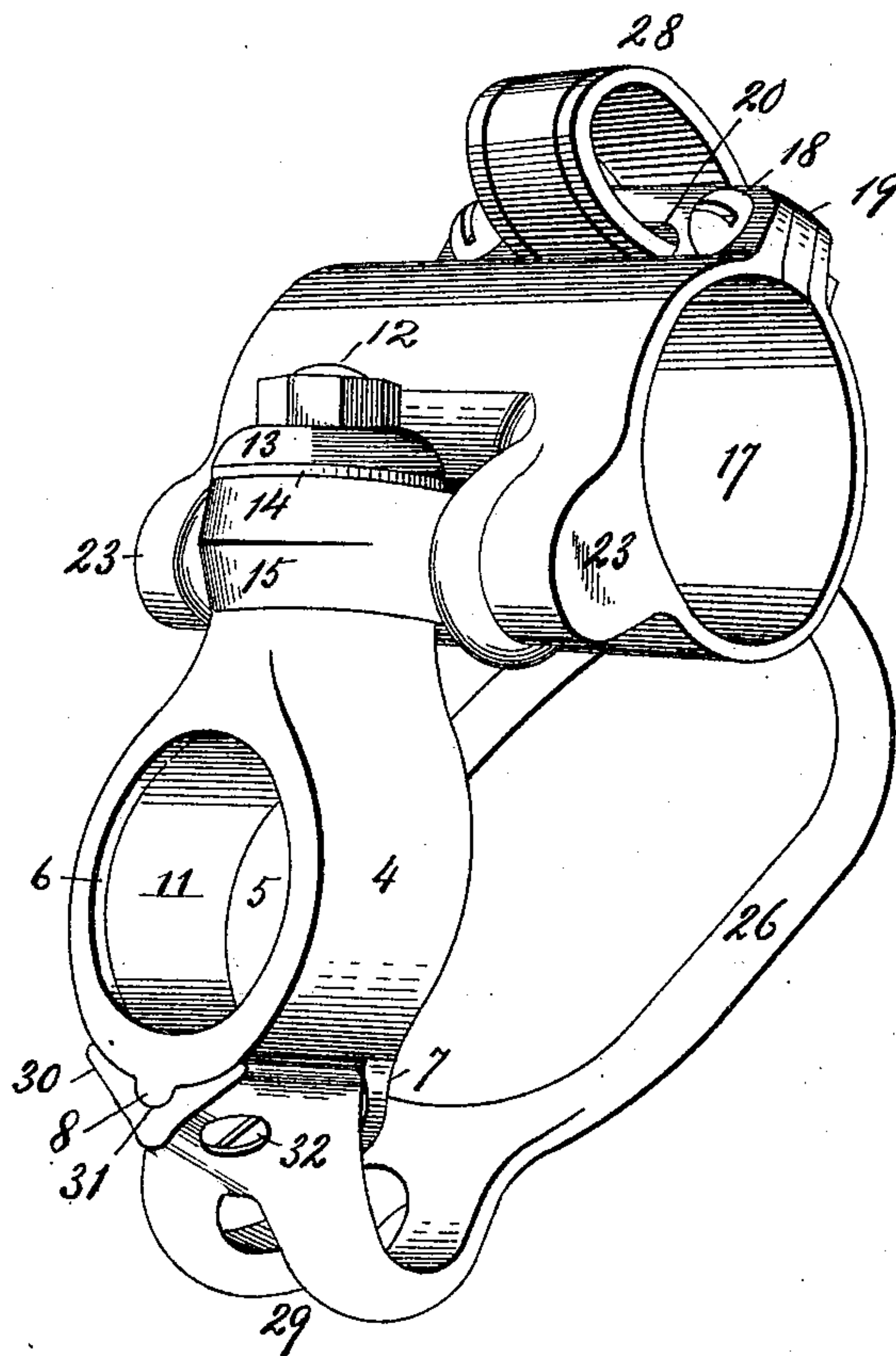
Patented Dec. 13, 1898.

S. PEARSON.  
NECK YOKE CENTER.  
(Application filed Jan. 6, 1898.)

(No Model.)

2 Sheets—Sheet 1.

*Fig. 1.*



Witnesses:

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Inventor:

*Swain Pearson*

*By Higdon & Higdon*  
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2 Sheets—Sheet 2.

Fig. 2.

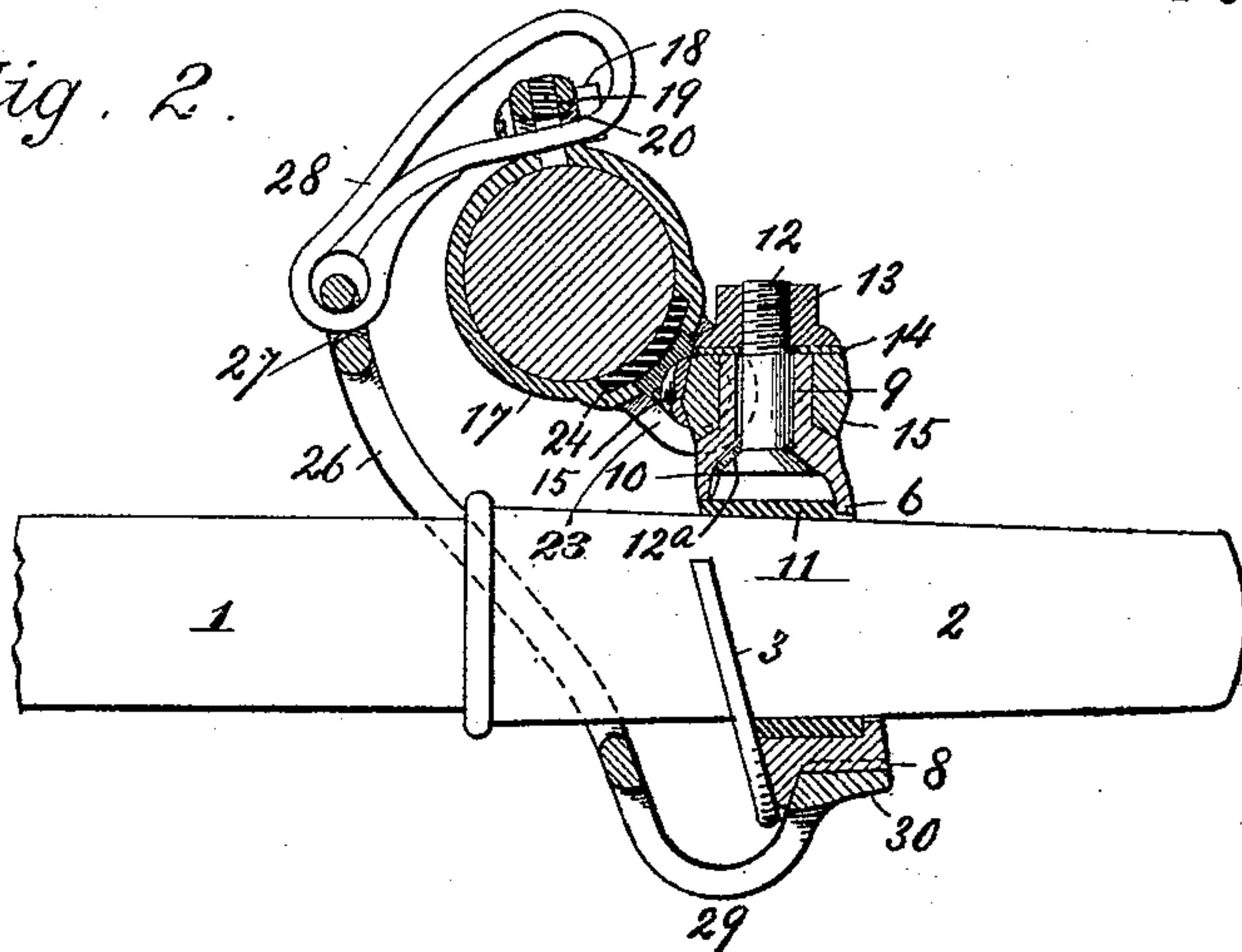


Fig. 3.

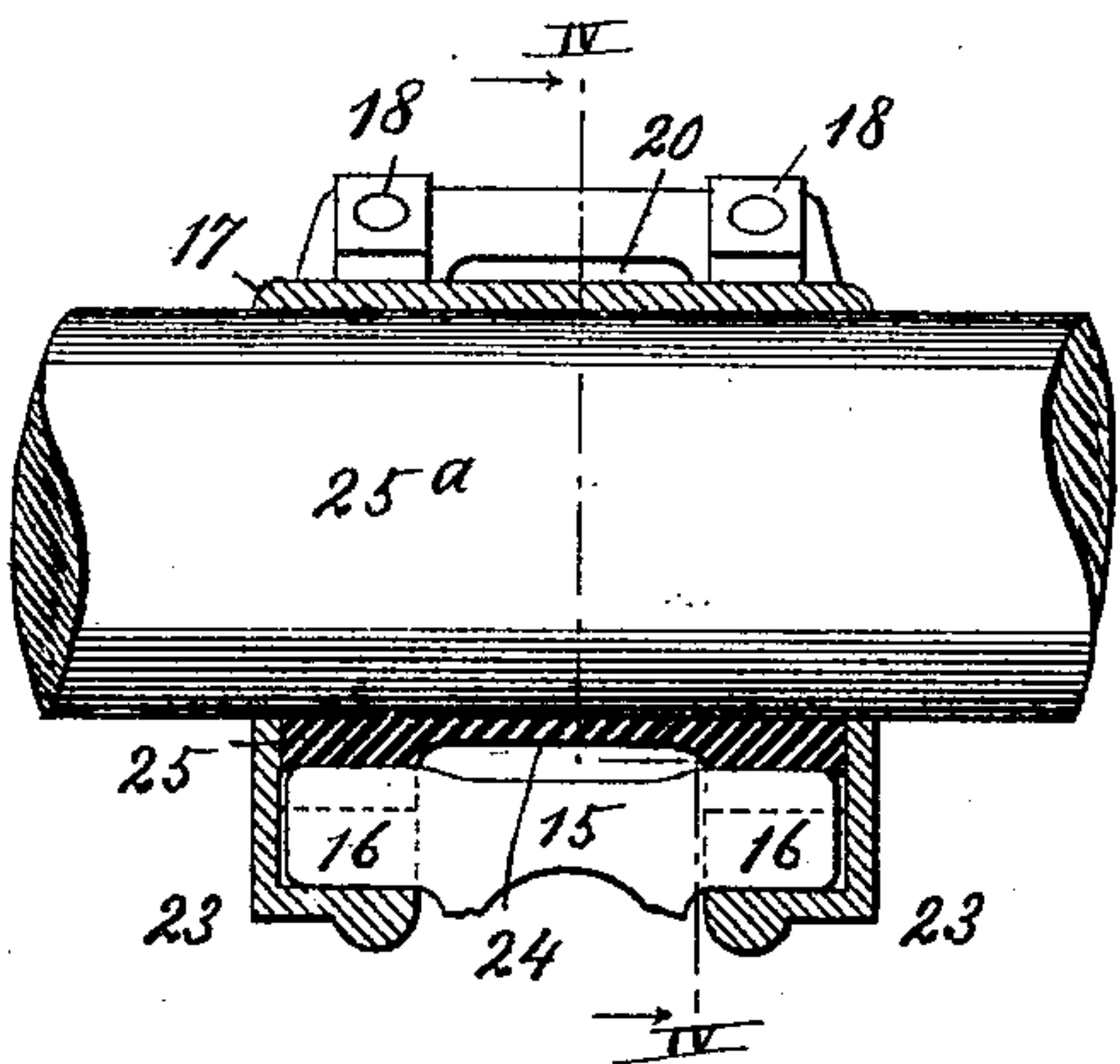


Fig. 4.

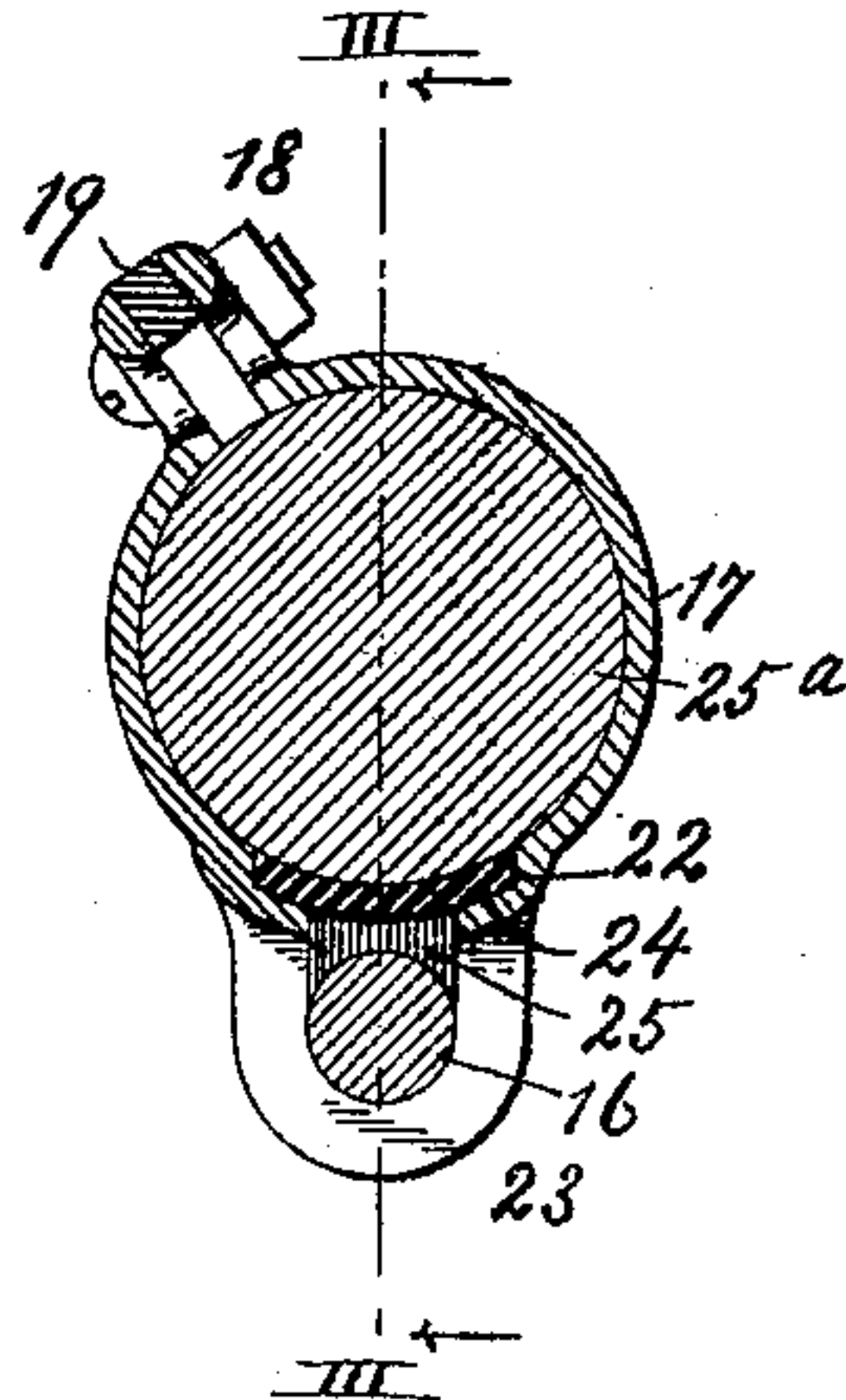


Fig. 5.

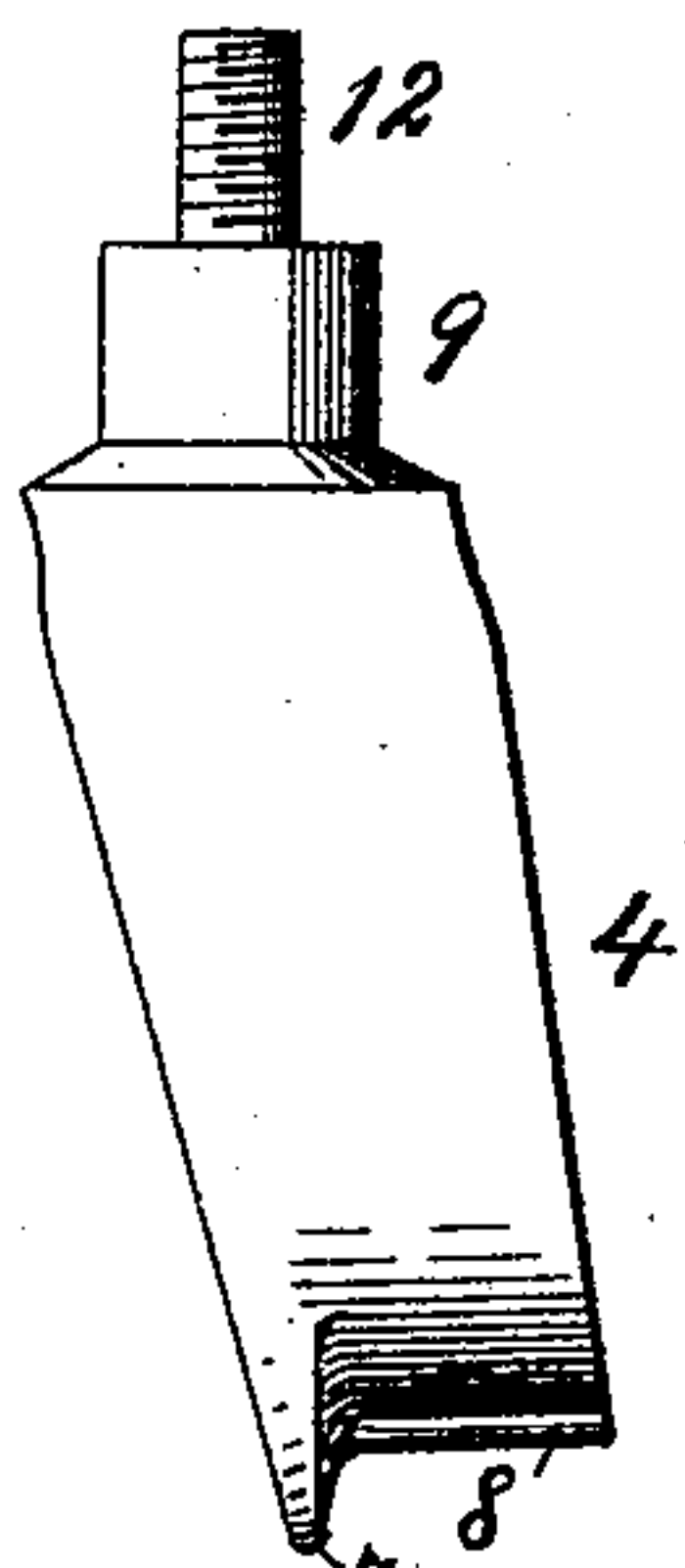
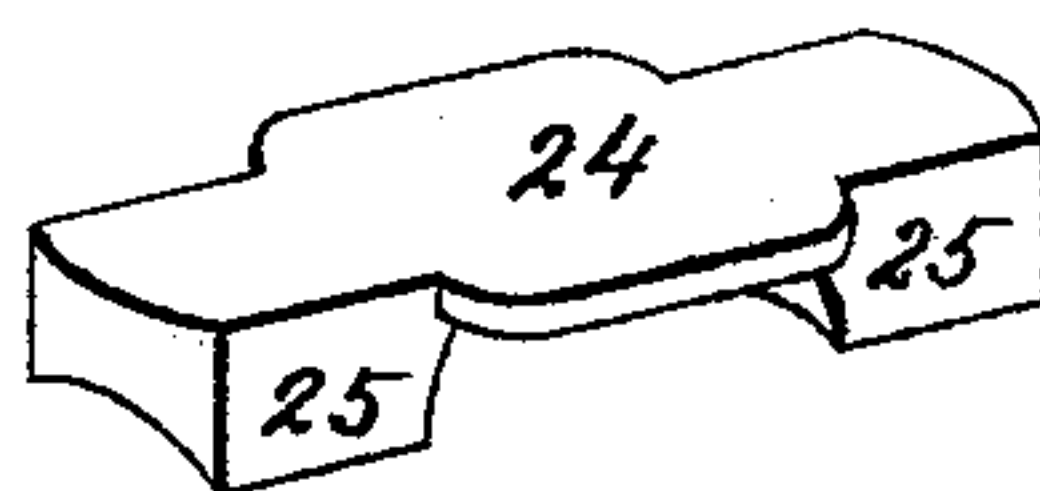


Fig. 6.



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# UNITED STATES PATENT OFFICE.

SWAIN PEARSON, OF ROCK ISLAND, ILLINOIS, ASSIGNOR TO ANNA PEARSON, OF SAME PLACE.

## NECK-YOKE CENTER.

SPECIFICATION forming part of Letters Patent No. 616,065, dated December 13, 1898.

Application filed January 6, 1898. Serial No. 665,726. (No model.)

*To all whom it may concern:*

Be it known that I, SWAIN PEARSON, of Rock Island, Rock Island county, Illinois, have invented certain new and useful Improvements in Neck-Yoke Centers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to neck-yoke centers, and is designed particularly as an improvement on the neck-yoke center numbered 548,326 and patented to Anna Pearson, assignee, October 22, 1895, it being found in practice that said neck-yoke center is objectionable, first, on account of weakness at the point of connection of the collar 4 with the annulus 30; secondly, because the head of the bolt 12 soon wears off, rendering the connection between the collar 4 and clasp 16 unreliable, and, thirdly, because the connection between said collar and clasp after short service becomes so loose as to constantly rattle while in service. The object of the invention, as above suggested, is to obviate these defects and to otherwise improve the device; and to this end it consists in certain novel and peculiar features of construction and arrangement hereinafter described and claimed.

In order that the invention may be fully understood, reference is to be had to the accompanying drawings, in which—

Figure 1 is a perspective view of the neck-yoke center detached from the tongue and neck-yoke bar. Fig. 2 is a central vertical section of the same as applied to the tongue and neck-yoke bar. Fig. 3 is a section taken on the line III III of Fig. 4. Fig. 4 is a section taken on the line IV IV of Fig. 3. Fig. 5 is a side elevation of the collar for engagement with the pole or tongue. Fig. 6 is a detail perspective view of the compressible or antirattling key.

In the said drawings, 1 designates the front end of the pole or tongue, and 2 the customary pole-tip, provided with a depending crescent-shaped flange 3.

4 designates a collar, the passage 5 of which, through which the pole-tip projects, extends at an angle to the collar in order to cause the latter to assume an oblique position to the pole-tip—that is to say, to incline down-

wardly and forwardly and consequently bear firmly against the correspondingly-inclined pole-tip flange.

The collar at its front side is provided with an inwardly-projecting annular flange 6, for a purpose which will hereinafter appear, and with a shoulder 7, depending from its rear and under side. It is also provided centrally with a central longitudinal rib 8 at its under side, which rib extends from the shoulder to the front face of the collar. The collar at its upper side is furthermore provided with a tubular neck 9, extending vertically, and therefore at an angle to the body of the collar, and at the point of communication of the passage of said tubular neck with the interior of the collar a groove 10 is formed, for a purpose which will presently appear.

The collar is provided with a lining 11, of rawhide or any other suitable material, to protect it from wear due to frictional contact with the metallic pole-tip, and said lining is prevented from working forwardly upon the tapering pole-tip and out of the collar by means of the flange 6, hereinbefore referred to, and is prevented from working rearwardly by means of the crescent-shaped flange of the pole-tip. It may also be riveted in position, if desired.

12 designates a pivot-bolt which extends up through the neck of the collar and has its headed end provided with a rib 12<sup>a</sup>, engaging the groove 10, hereinbefore referred to, in order to keep the bolt from turning, and consequently the head from wearing off, thereby insuring a reliable connection between the collar 4 and the coupling member, presently described, which connects said collar with the neck-yoke clasp hereinbefore described. The upper or threaded end of this bolt is engaged by a nut 13, which clamps the washer 14 firmly down upon the upper end of the neck and also upon the sleeve of the swivel member, said sleeve being rotatably mounted upon said neck and between the washer and the body of the collar. Said swivel member also comprises the laterally-projecting arms 16.

17 designates a clasp or sleeve, the ends of which are reliably secured together by a bolt-and-nut connection 18, and in order that said clasp may be enabled to fit neck-yoke bars of



varying diameters it is constructed of spring-metal and a filling in the shape of a leather strip interposed between said flanges, so as to prevent the clasp from contracting beyond  
 5 a certain amount, it being understood, of course, that this filling may be varied in thickness to correspond with the diameter of the neck-yoke bar with which the clasp is designed to be used. The ends or terminals of  
 10 said spring-clasp are provided with registering slots 20, for a purpose which will presently appear.

The clasp is provided with an elongated opening 21 in its front and lower side, and  
 15 communicating with the sides of the same are the internal recesses 22 of the clasp and with the ends of the same the depending U-shaped pockets 23, whereon are journaled the cylindrical arms or trunnions 16 of the coupling  
 20 member of the device.

A plate 24, of rubber or other resilient material, bridges the opening 21 and rests in the recesses 22. Said plate is also provided with the shoulders 25, depending into the  
 25 U-shaped pockets 23 and pressing firmly down upon the arms or trunnions 16, said shoulders being concave in their under sides, preferably, so as to have a more extended bearing upon said arms or trunnions, to the  
 30 end that the swivel member shall be prevented as it rocks up and down in practice from rattling in the clasp. The upper side of this resilient plate 24 is concaved, so as to conform to the interior surface of the clasp and  
 35 fit snugly and tightly against the neck-yoke bar 25<sup>a</sup>, which as it is forced into the clasp presses the shoulder of said resilient plate down upon the arms or trunnions of the coupling.

26 designates an elliptical or elongated annulus which surrounds the pole or tongue and is provided at its upper end with a loop 27, to which is connected the lower and rear end of a strap 28, the opposite end of said strap  
 45 being looped through the slots 20 of the ends or terminals of the clasp. In order to prevent any possible chance of disconnection between the annulus and the collar, the lower end of the annulus is provided with a bifurcated or skeleton hook 29, which finds a bearing against the front side of the depending  
 50 flange 7 and the under side of the collar 4 and is locked in such position from lateral movement by means of the tongue 8 of the collar engaging the groove 31 of the hook. Vertical  
 55 disconnection is prevented by means of screw-bolts 32, which extend through openings in the hook at opposite sides of said tongue-and-groove connection into the collar.  
 60 By this arrangement it is obvious that a strong, durable, and reliable connection is made, owing to the fact that the tongue-and-groove connection relieves the bolts 32 of all lateral or twisting strain, leaving the bolts to  
 65 sustain only the weight of the annulus.

In assembling the parts of this neck-yoke center in operative position the annulus is

first secured to the collar 4 and to the clasp. The coupling member must then be inserted into the clasp and pushed through the opening 21 until its cylindrical arms or trunnions  
 70 16 enter the pockets 23. The sleeve portion 15 is then fitted upon the neck of the collar and secured in position by the bolt 12, nut 13, and washer 14. The antirattling plate 24  
 75 is then slipped into the clasp and pressed down into the recesses 22 until its shoulders bear upon the trunnions of the coupling member. The device as a whole is then inverted and slipped upon the pole-tip until the crescent-shaped flange has passed through the  
 80 annulus 26, this inversion being necessary in order to dispose the crescent-shaped flange opposite the hook of the annulus and against the rear side of the top. The device is then  
 85 rotated upon the pole-tip to bring said flange squarely against the rear side of the lower end of the collar. The neck-yoke bar being now slipped into the clasp, the connection is complete.

In removing the neck-yoke center from position the device must be rotated until it assumes a vertical position before it can be  
 90 slipped over the end of the pole-tip, as will be readily understood.

From the above description it will be apparent that I have produced a neck-yoke center which embodies the features enumerated as desirable in the statement of invention.

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

1. In a neck-yoke center, the combination with a collar for engagement with a pole-tip, a clasp for engagement with a neck-yoke bar,  
 105 and a coupling between the collar and the clasp, of an annulus looped to the clasp and provided at its lower end with a hook having a tongue-and-groove connection with the under side of the collar, substantially as described.

2. In a neck-yoke center, the combination with a collar for engagement with the pole-tip, a clasp for engagement with a neck-yoke bar,  
 115 and a coupling between the collar and the clasp, of an annulus looped to the clasp and provided at its lower end with a hook having a tongue-and-groove connection with the under side of the collar, and devices, such as rivets or screws, connecting said hook and collar at opposite sides of the tongue-and-groove connection, substantially as described.

3. In a neck-yoke center, the combination of a collar for engagement with a pole-tip, and provided in its under side with a central longitudinal rib, an annulus surrounding the  
 125 pole-tip and provided at its lower end with a hook, having a central longitudinal groove fitting snugly upon said rib, and screws extending upwardly through said hook and into the collar at opposite sides of said rib, substantially as described.

4. In a neck-yoke center, the combination with a collar, a neck-yoke-bar clasp provided



with journal-pockets 23 23, and elongated  
openings 21 communicating with the same,  
and internal recesses 22 22 at opposite sides  
of said opening, and a swivel member coup-  
5 ling the collar and the clasp together, and  
comprising a sleeve journaled upon the collar  
and cylindrical arms or trunnions journaled  
in said journal-pockets of the clasp, and a  
plate 24, engaging the recesses and bridging  
10 the opening of the clasp, and provided with

depending shoulders 25, which press firmly  
down upon the trunnions of said coupling,  
substantially as described.

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

SWAIN PEARSON.

Witnesses:

JNO. J. INGRAM,

CHAS. L. WALKER.