

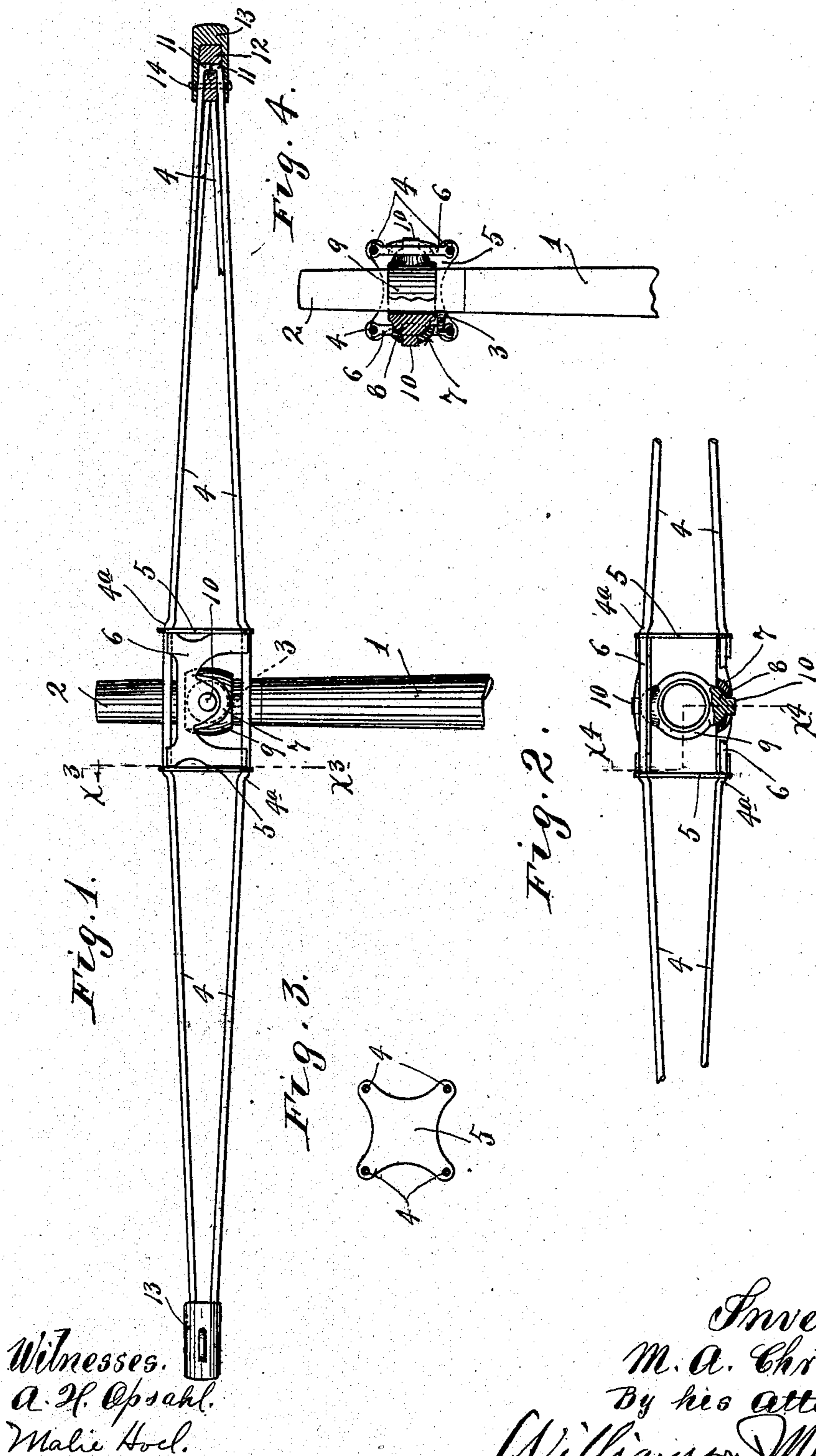
No. 885,837.

PATENTED APR. 28, 1908.

M. A. CHRISTENSON.

NECK YOKE.

APPLICATION FILED SEPT. 30, 1907.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

MARTIN A. CHRISTENSON, OF SPRING VALLEY, MINNESOTA.

## NECK-YOKE.

No. 885,837.

Specification of Letters Patent.

Patented April 28, 1908.

Application filed September 30, 1907. Serial No. 395,102.

*To all whom it may concern:*

Be it known that I, MARTIN A. CHRISTENSON, a citizen of the United States, residing at Spring Valley, in the county of Fillmore and State of Minnesota, have invented certain new and useful Improvements in Neck-Yokes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide an improved trussed metallic neck yoke, and to this end it consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views. Referring to the drawings, Figure 1 is a plan view showing the improved neck yoke applied to the end of a pole, some parts being sectioned and some parts being broken away. Fig. 2 is a view in elevation, showing the neck yoke removed from the pole, with some parts thereof sectioned and some parts broken away. Fig. 3 is a sectional view taken on the line  $x^3 x^3$  of Fig. 1, looking in a direction from the right toward the left; and Fig. 4 is a section taken approximately on the irregular line  $x^4 x^4$  of Fig. 2, and showing the neck yoke applied to the pole, as in Fig. 1.

The numeral 1 indicates a wagon or other vehicle pole, the same having at its outer end the usual pole cap 2, and the said cap having on its under side a depending stop lug or projection 3.

The body of the neck yoke is made up chiefly of four metal rods 4, the intermediate portions of which, on the longitudinal center of the neck yoke, are spaced apart and held in rectangular arrangement, by a pair of laterally spaced tie plates 5. Said rods 4 are preferably kinked or pressed slightly inward, just outward of these plates 5, as indicated at 4<sup>a</sup>, so that the said plates are positively held against outward slipping movement. The rods 4 are inserted through perforations in the projecting portions of the tie plates, and the said tie plates are held against sliding movements toward each other by vertically spaced brackets 6. Each bracket 6 has four projecting arms, the outer ends of which are bifurcated or grooved so that they receive and straddle the horizontally aligned rods 4 and are thus securely held in position by the

said rods and the said tie plates 5. At their central portions, the bearing brackets 6 are formed with concave sockets 7 that receive convex bearings 8 of a pole engaging ring 9. The convex bearings 8 are provided with axially projecting trunnions 10 that are swiveled in suitable perforations or seats formed in the sockets 7. The pole engaging ring 9 is thus mounted for pivotal or oscillatory movements in an approximately horizontal plane.

The converging ends of the rods 4 are bent laterally inward, as shown at 11, and are seated in suitable perforations or radial seats formed in slightly tapered metallic hubs 12. Metallic caps 13 fit over the hubs 12 and over the ends of the rods 4, and hold the latter interlocked with the said hubs. Suitable pins or keys 14 driven through the cooperating hubs 12 and the caps 13 hold the latter in working position and against endwise displacement in respect to the said hubs.

By reference to Figs. 1 and 4 it will be seen that when the neck yoke is in working position on the pole, the pole cap 3 engages between one of the sockets 7 and the innermost of the lower rods 4 and 6 holds the neck yoke against lateral sliding movement either forward or rearward on the pole. To apply the neck yoke to the pole or to remove the same therefrom it is necessary to move the neck yoke into a position at a considerable angle to a horizontal so as to cause the lug 3 to clear the rearmost lower rod 4 and thus permit the necessary lateral sliding movement of the neck yoke on the pole.

A neck yoke designed as above described, while comparatively light and very strong and durable, may be constructed at small cost.

It will, of course, be understood that various other devices, such as swingle-trees and draft equalizers, may be constructed on the same plan, or substantially on the same plan, as the neck yoke above described.

What I claim is:

1. A device of the kind described, comprising a multiplicity of rods having inwardly bent ends, hubs having a multiplicity of radial seats with which the bent ends of said rods are interlocked, caps telescoped over said hubs and the ends of said rods, and means rigidly securing said caps on said hubs, substantially as described.

2. A device of the kind described comprising a multiplicity of rods, devices securing

the ends of said rods together, upper and lower spacing brackets engaging the upper and lower rods, and perforated tie plates located at the ends of said spacing brackets  
5 and through which the said rods are passed, substantially as described.

3. A neck-yoke comprising a multiplicity of rods rigidly secured together at their ends, a pair of sockets secured to the intermediate  
10 portions of said rods, and a neck-yoke ring swiveled in said sockets, in combination with a pole having a lateral projection adapted to be moved laterally between certain of the

rods of said neck-yoke when the neck-yoke is turned into an angular position, and to be  
engaged between said pole ring and one of  
the rods of said neck-yoke when the neck-  
yoke is turned into a substantially horizontal  
position, to thereby lock the neck-yoke to the  
pole, substantially as described. 15

In testimony whereof I affix my signature  
in presence of two witnesses. 20

MARTIN A. CHRISTENSON.

Witnesses:

L. D. HAMLIN,  
PETER CUSICK.