No. 832,491. PATENTED OCT. 2, 1906.

C. MAPLES.

NECK YOKE AND TONGUE SUPPORT.

APPLICATION FILED OCT. 19, 1905.

Fig. 1

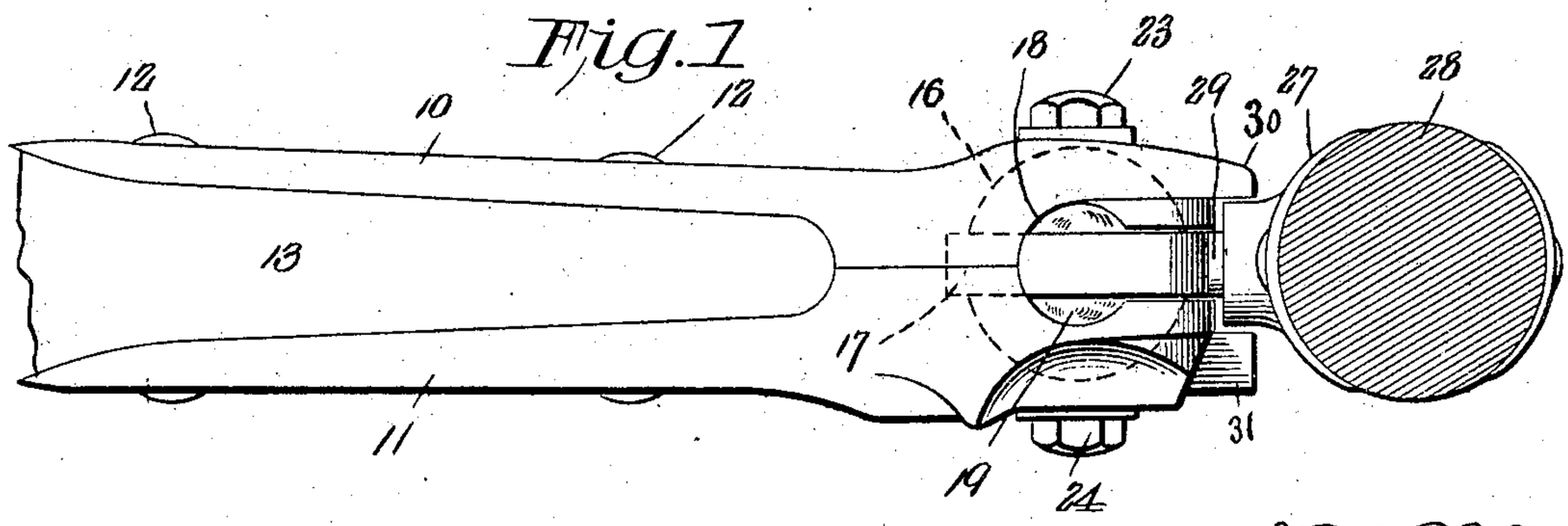


Fig. 2

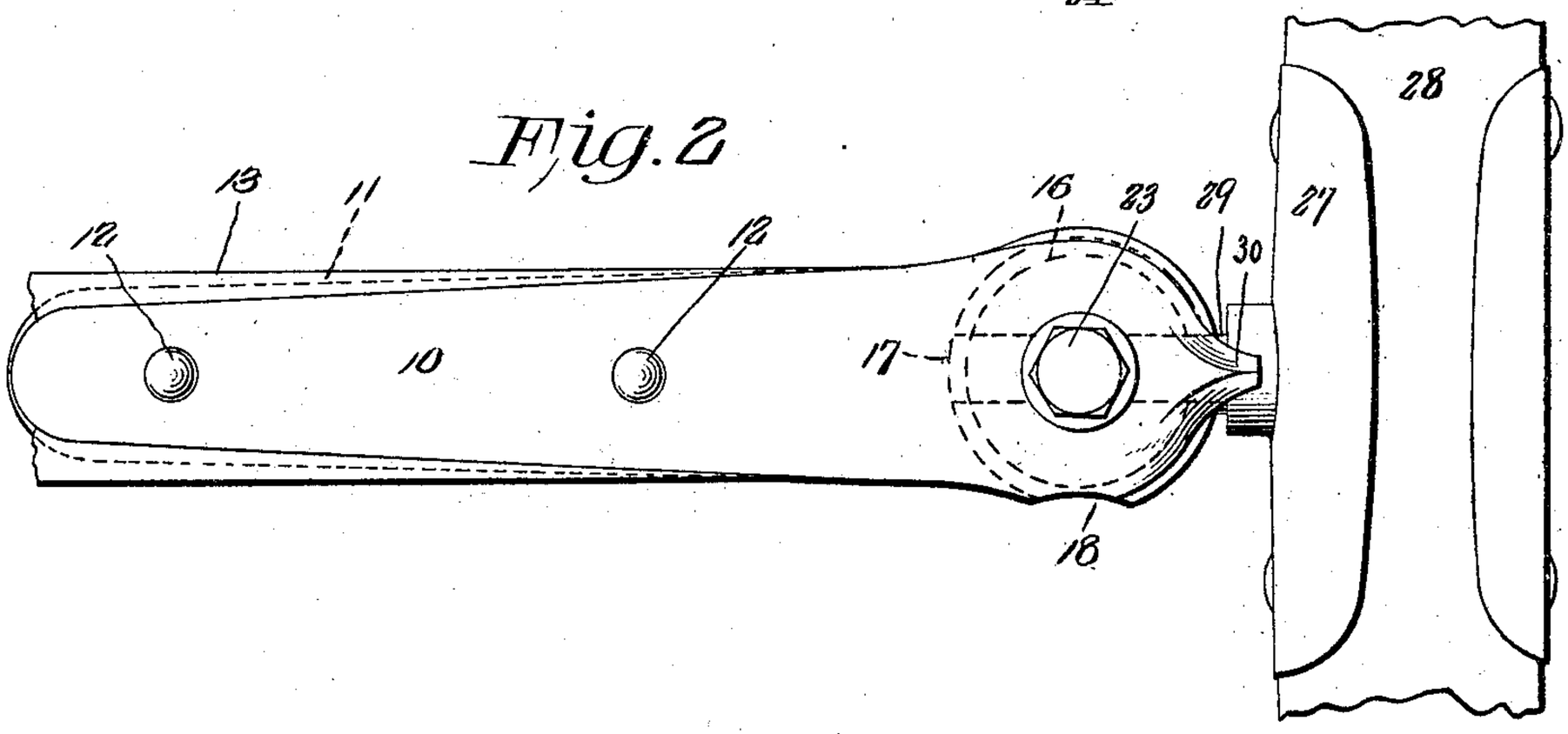


Fig. 3

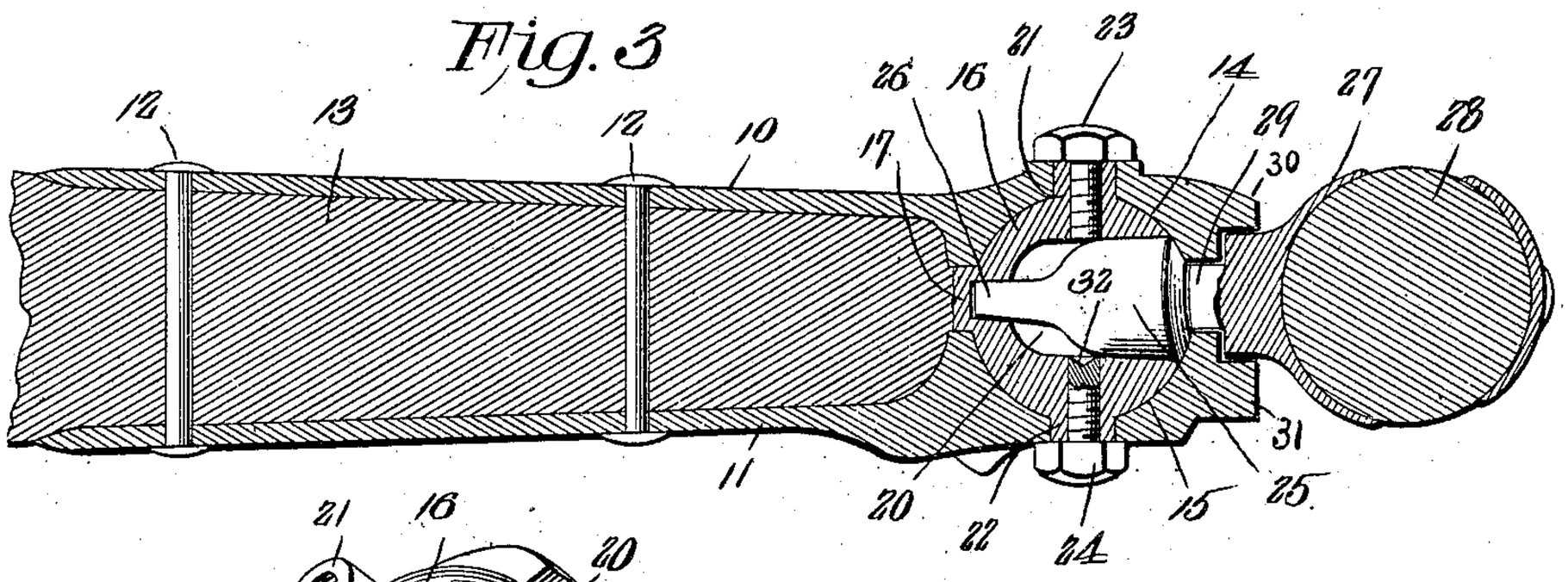
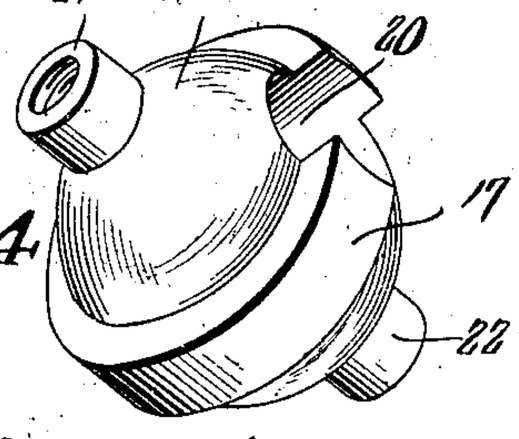


Fig. 4



Witnesses

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UNITED STATES PATENT OFFICE.

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NECK-YOKE AND TONGUE-SUPPORT.

No. 832,491. Specification of Letters Patent. Patented Oct. 2, 1906.

Application filed October 19, 1905. Serial No. 283,504.

To all whom it may concern:

Be it known that I, CASSIUS MAPLES, a citizen of the United States, residing at Laurens, in the county of Otsego and State of New York, have invented a new and useful Neck-Yoke and Tongue-Support, of which the following is a specification.

This invention relates to devices for coupling neck-yokes to draft-tongues, and has for its object to improve the construction and increase the efficiency of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages.

In the drawings thus employed, Figure 1 is a side elevation, partially in section; and Fig. 2 is a plan view of the improved device. Fig. 3 is a longitudinal sectional view. Fig. 4 is a perspective view of the globular connecting member detached.

The improved device comprises two plates 10 11 for clamping, as by rivets 12, to the upper and lower faces of the forward end of a draft-tongue, a portion of which is represented at 13. The forward ends of the plates 10 11 extend beyond the draft-tongues and are formed with inwardly-facing sockets 14 15, preferably semiglobular and bearing over a coupling member 16, preferably globular to correspond to the sockets. The member 16 is provided with an encircling band 17, extending between the spaced forward ends of the plates, the latter having semicircular recesses 18 19 at one side, as shown in Fig. 1, and the member 16 having a transverse socket 20 for registration with the recesses 18 19 when the member 16 is set in a certain predetermined position. The band 17 is preferably located above the central line of the member 16. Hence the socket 14 is smaller than the socket 15, as shown in Fig. 3. The member 16 is provided with trunnions 21 22 at right angles to the band 17 and extending through apertures in the bottoms of the sockets 14 15 and provided with central apertures internally threaded for receiving cap-screws 23 24, with their heads bearing over the adjacent portions of the plate members. By this means the member 16 is secured in position between the socketed plates and free to be rotated therein upon the trunnions as centers.

Rotatively engaging the socket 20 in the member 16 is a stud 25, having a reduced end 26 bearing in a correspondingly-reduced extension of the socket and with a curved plate 27 at the outer end for engagement with the neck-yoke member, a portion of which is represented at 28. The stud 25 at its larger part fills the socket 20 and is formed with a reduced neck 29 between the portions 25 and 27, the larger part 25 corresponding to the recesses 18 19 and the neck portions corresponding to the space between the forward ends of the plates 10 11, this space operating as a guideway for the "neck" of the stud, as hereinafter explained. By this means it will be obvious that the portion 25 of the stud can be entered into the recess 20 only when the member 16 is turned with its socket 20 registering with the recesses 18 19 in the plates 10 11, and as the recesses 18 19 are at one side of the plates the neck-yoke can be coupled to and uncoupled from the tongue 13 only when placed in position parallel thereto, a position it could not assume when in use. Thus to couple the neck-yoke to the tongue the member 16 is turned until the socket 20 is in alinement with the recesses 18 19, which will permit the stud 25 to be inserted when the yoke 28 is disposed parallel to the tongue 13. The yoke is then swung around transversely of the tongue, which will cause the neck portion 29 to move around between the forward spaced portions of the plates 10 11, and thus effectually lock the neck-yoke to the tongue, while leaving it free to be either rotated or swung laterally to one side to a parallel position relative to the tongue and nearly to a parallel position relative to the other side without uncoupling. When in use, the lateral movement will never be sufficient to bring the stud 25 opposite the recesses 18 19. Hence the parts will not be accidentally displaced when in use, as will be obvious.

The forward ends of the plates 10 11 are formed with lugs 30 31, projecting over the rear portion of the yoke-engaging plate 27, and thus increasing the wearing-surface. The forwardly-projecting ends of the plates 10 11 bear over the band portion 17 of the the member 16 and materially increase the bearing-surface and correspondingly increase the durability of the device.

The inner end of the screw member 24 is countersunk, as shown at 32 in Fig. 3, so that a suitable pinnacle having a pointed end may be inserted through the aperture for the screw member 23 after the screw member 24 is turned "home" in the trunnion 22 and the screw member 24 "upset" and riveted in its aperture to a sufficient extent to prevent its accidental displacement under the jars and concussions to which it is liable. The cap-screw 24 being below the tongue is not as readily observed as the cap-screw 23, which is above the tongue, hence the necessity for its greater security.

The parts may be of any suitable metal, but will preferably be of cast-steel or malleable iron. The parts being rounded and without large projections, the reins or other parts of the harness will not catch thereon.

Having thus described the invention, what is claimed is—

1. In a neck-yoke coupling, a member having a stud extending therefrom, a member having clamping means and with a recess in one side, an intervening member arranged for rotative movement relative to both the clamping member and stud and provided with a socket for receiving said stud when the socket and recess are in alinement.

2. In a neck-yoke coupling, a member having a stud extending therefrom and with a reduced neck, a member having clamping means and with recesses at one side and a guideway leading therefrom, an intervening member arranged for rotative movement relative both to said clamping member and stud and provided with a socket corresponding to the larger portion of said recesses and also to the larger portion of said stud, whereby the larger portion of said stud may be inserted into said socket when the socket and recesses are disposed in alinement and the neck portion of said stud inserted into said guideway when the intervening member is rotated within the clamping member.

3. In a neck-yoke coupling, a member having clamping means, an intervening member having a socket and with bearings rotatively engaging said clamping member, and a member having a stud extending therefrom for rotatively engaging said socket.

4. A neck-yoke coupling consisting of two plates for attachment to a draft-tongue and extending in advance of the same and spaced apart at the outer ends, said plates having sockets in the inner faces of the extended portions, and intervening member rotatively engaging said sockets and provided with a transverse socket of greater diameter than the distance between the plates, a stud engaging said intervening member-socket at one end and with means at the other end for attachment to a neck-yoke, and with an intermediate neck for movement between said plates.

5. A neck-yoke coupling consisting of two plates for attachment to a draft-tongue and extending in advance of the same and spaced apart at the outer ends, said plates having sockets in the inner faces of the extended portions, an intervening member rotatively engaging said sockets and provided with a transverse socket of greater diameter than the distance between the plates and with an encircling band bearing between said spaced plates, a stud engaging said intervening member-socket at one end and with means at the other end for attachment to a neck-yoke, and with an intermediate neck for movement between said plates.

6. In a neck-yoke coupling, a member having a clamping means and spaced apart at one end, an intervening member having a socket and with bearings rotatively engaging said clamping member, and a member having a stud extending therefrom for rotatively engaging said socket and with a reduced neck for movement between the spaced portions of said clamping member.

7. In a neck-yoke coupling, a member having a clamping means and spaced apart at one end, an intervening member having a socket and with bearings rotatively engaging said clamping member, a member having a stud extending therefrom for rotatively engaging said socket and with a reduced neck for movement between the spaced portions of said clamping member, and clamp-screws engaging said bearings and extending by their heads over said clamping members.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CASSIUS MAPLES.

Witnesses:
FRANKLIN C. KEYES,
WM. B. EDSON.