No. 630,524. Patented Aug. 8, 1899.

L. O. SNELL.

NECK YOKE HARNESS COUPLING.

(Application filed Apr. 10, 1899.)

(No Model.)

Fig. 2.

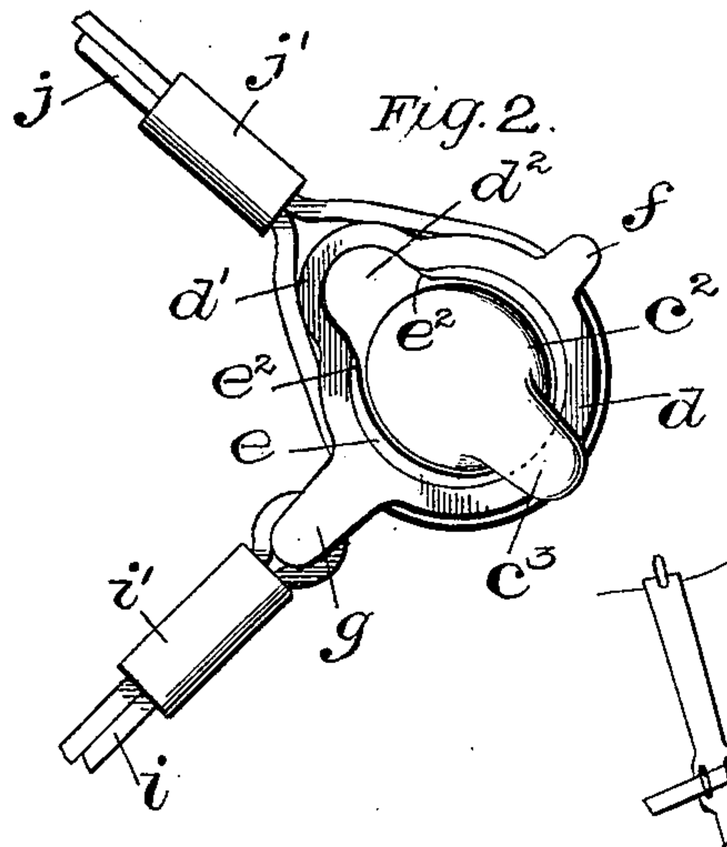


Fig. 1.

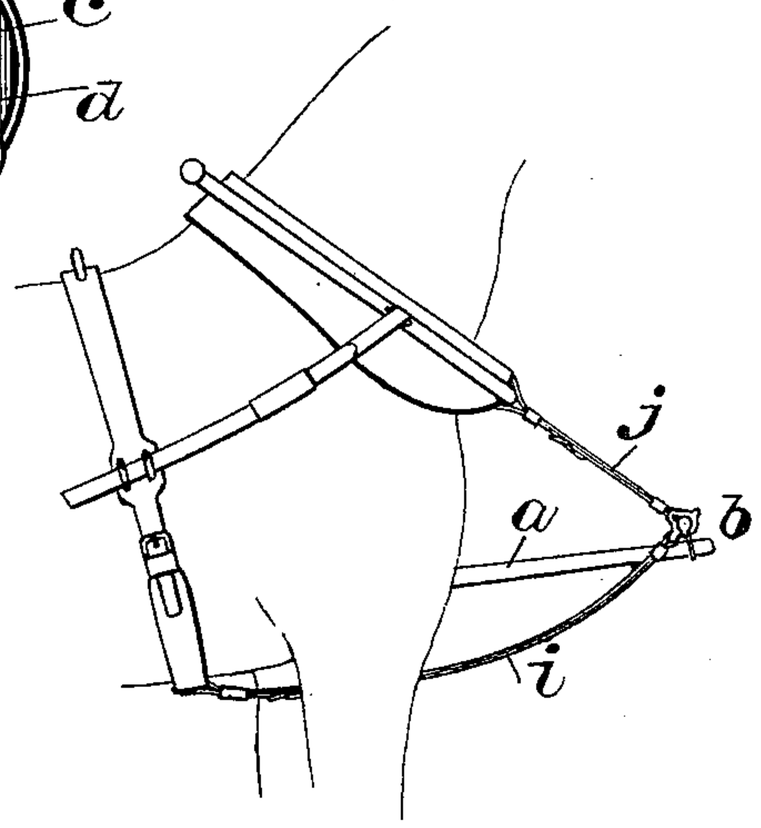


Fig. 3.

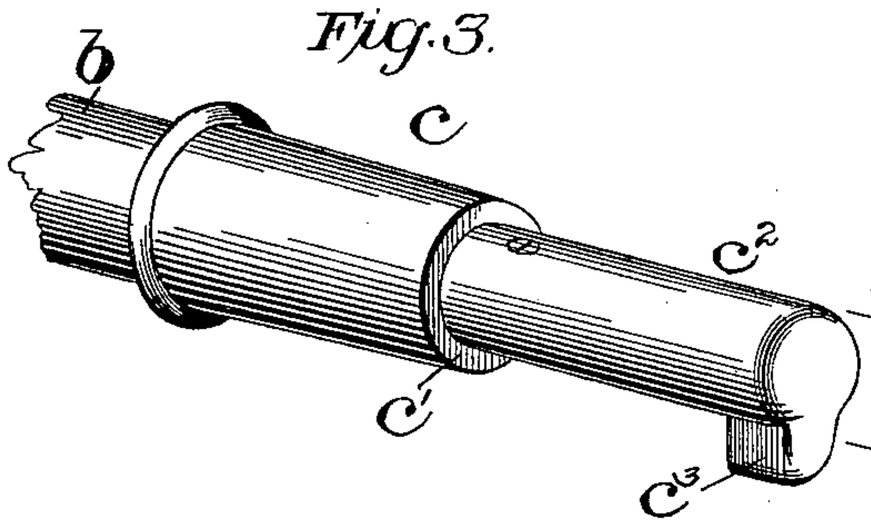


Fig. 4.

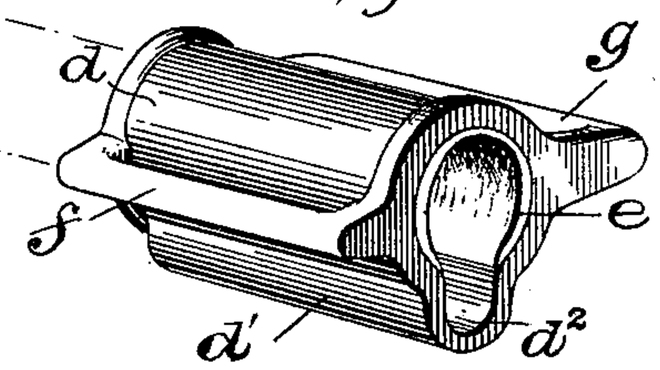
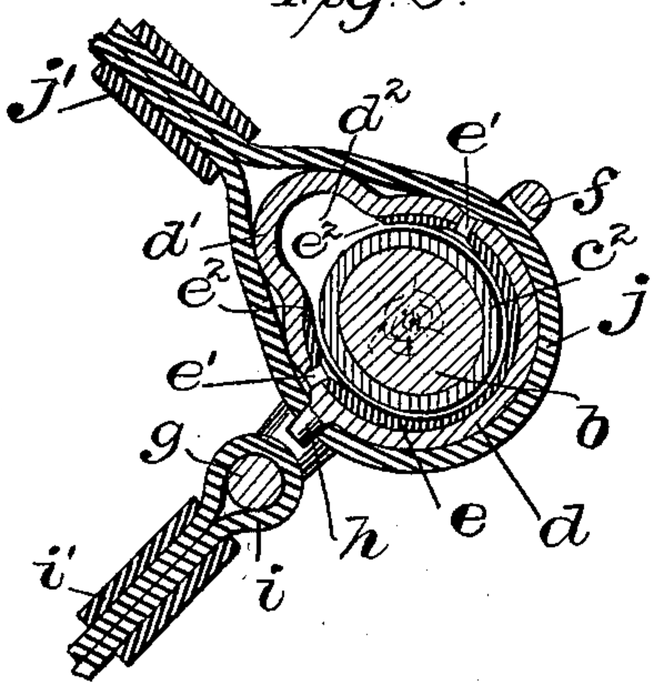


Fig. 5.



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UNITED STATES PATENT OFFICE.

LORD O. SNELL, OF ATHENS, PENNSYLVANIA.

NECK-YOKE HARNESS-COUPLING.

SPECIFICATION forming part of Letters Patent No. 630,524, dated August 8, 1899.

Application filed April 10, 1899. Serial No. 712,465. (No model.)

To all whom it may concern:

Be it known that I, LORD O. SNELL, a citizen of the United States, residing at Athens, in the county of Bradford and State of Pennsylvania, have invented certain new and useful Improvements in Neck-Yoke Harness-Couplings; 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.

This invention relates to harness-couplings for neck-yokes such as those used with poles in two-horse rigs; and the object is to provide a construction convenient to manipulate in harnessing and unharnessing, absolutely reliable, and proof against rattling.

To this end the invention consists in a number of novel features of construction and combinations of parts, the essential elements of which are recited in the appended claims and a preferred form of embodiment of which is illustrated in the accompanying drawings and specifically described hereinafter.

Of said drawings, Figure I represents in side elevation sufficient of a two-horse rig to show how the coupling of my invention is applied. Fig. II shows the coupling full size in end elevation as it would appear when locked. Fig. III represents one end of the neck-yoke in perspective with the tip-piece thereon, but without the balance of the coupling. Fig. IV similarly represents the member of the coupling to which the harness is attached. Fig. V shows the coupling in cross-section under the adjustment observed in Fig. II.

In Fig. I the reference-letter *a* designates the pole, to which the neck-yoke *b* may be applied in the customary or any suitable manner.

The construction of harness-coupling is the same at each end of the neck-yoke, and consequently it will be sufficient to describe that at one end only.

The letter *c* designates a tip-piece in the form of a ferrule of considerable length, which fits tightly over and is screwed or otherwise securely fastened to a suitably-prepared end portion of the yoke, this tip-piece being shouldered, as shown at c', and the reduced portion c^2 beyond said shoulder being somewhat oval in cross-section, as shown in Fig. V, for a purpose hereinafter explained. A lateral projection or lug c^3 is formed on one side of the tip-piece or ferrule at the outer end thereof and at one end of the oval, said projection merging into the outer rounded end of the ferrule and being beveled and rounded off at the outer corner, while its inner side or edge is squared off, forming an abrupt shoulder.

A sleeve *d* of generally cylindrical form is designed to slide over the reduced portion c^2 of the tip-piece and is formed with a longitudinally-extending ridge d', internally grooved to accommodate the lug c^3, the groove d^2 opening out of each end of the sleeve. The sleeve is provided with a lining *e*, of suitable frictional and compressible material, preferably leather, such lining being riveted to the sleeve at points e' and terminating along each side of the groove d^2, into the inner surface of which it merges by reason of its being beveled off, as shown at e^2. This lining is more or less oval in its interior cross-section, as shown in Fig. V, to correspond with the cross-sectional formation of the tip-piece. The oval formation of the latter and the sleeve-lining is employed to guard against accidental turning of either part to unlocked position. It will be understood that after the sleeve has been slid onto the tip-piece one part or the other is turned half-way around, so that the lug c^3 takes over the outer edge of the sleeve about opposite the groove d^2, as shown in Fig. II. Now it will be apparent that in so turning one of the parts the oval formation above referred to will make it necessary to employ some force to pass the longest diameter of the tip-piece by the shortest interior diameter of the lining. Hence while a desirable amount of play between the parts is allowed, yet they cannot move relatively by accident to the unlocked position. The compressible nature of the leather lining permits the crowding past of the longer diameter of the tip-piece, and this leather lining also serves as an effective antirattler.

At diametrically opposite locations on the exterior of the sleeve longitudinally-extending loops *f* and *g* are formed, these loops preferably extending the full length of the sleeve and each providing a substantially rectangular space through which straps may pass. The loop or keeper *g* stands out from the sleeve farther than the loop or keeper *f* and is somewhat heavier, and the sleeve is formed with a

short protuberance *h* in the nature of a tongue standing within the said loop *g* and extending about half-way across it, as clearly shown in Fig. V. The martingale *i* passes around the outer bar of the loop *g*, being held closely thereto by a band *i'*, and the pole-strap *j* completely encircles the sleeve, passing through both loops *f* and *g* and lying over the ridge *d'*, to which it is closely held by a band *j'*. This pole-strap is punctured, so as to engage the tongue *h*, which will thus prevent the sleeve from turning independently of the strap, or, in other words, said tongue will serve as a means for preventing rotary movement of the sleeve within the encircling strap, and the strap cannot be disengaged from the tongue without first removing the martingale.

It will thus be seen that an exceedingly secure form of coupling is provided and at the same time one capable of convenient manipulation.

I am aware that a neck-yoke coupling is not broadly new which comprises a tip-piece with a lateral projection and a sleeve adapted to slide over the tip-piece past the projection and turn to locking position, such sleeve having loops or keepers through which a pole-strap passes. However, I believe I am the first to devise the special features above described whereby rattling is prevented and increased security of the connection assured, while an effective hold for the martingale is afforded. Another advantage of my invention over the ordinary neck-yoke attachments is the fact that the martingale is held in position at all times and does not at any time chafe the horse's fore legs, which chafing is a source of great annoyance, particularly with young animals.

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

1. In a neck-yoke fastening, the sleeve having an external ridge or protuberance extending longitudinally thereof and internally grooved, and external loops or keepers arranged on said sleeve on opposite sides of said ridge substantially equidistant from the latter at diametrically opposite points on the sleeve, in combination with the tip-piece over which the sleeve is fitted having an end lug adapted to prevent endwise movement or removal of the sleeve except when registering with said groove; one of said keepers being adapted for the attachment of the martingale, while the pole-strap encircles the sleeve, straddling said ridge and extending therefrom substantially at right angles to the martingale, and means for preventing rotary movement of the sleeve within the encircling strap, whereby accidental disconnection of the parts in use is prevented and the martingale is maintained in the desired position, substantially as described.

2. In a neck-yoke fastening, the sleeve having an external ridge or protuberance extending longitudinally thereof and internally grooved, and external loops or keepers arranged on said sleeve on opposite sides of said ridge substantially equidistant from the latter at diametrically opposite points on the sleeve; said sleeve having an internal flexible lining, in combination with the tip-piece over which the lined sleeve is fitted having an end lug adapted to prevent endwise movement or removal of the sleeve except when registering with said groove; one of said keepers being adapted for the attachment of the martingale, while the pole-strap encircles the sleeve, straddling said ridge and extending therefrom substantially at right angles to the martingale, and means for preventing rotary movement of the sleeve within the encircling strap, whereby accidental disconnection of the parts in use is prevented and the martingale is maintained in the desired position, substantially as described.

3. A neck-yoke harness-coupling appliance comprising a tip-piece or ferrule with a lateral projection at the outer end and an increased diameter along the line of said lateral projection; together with a sleeve constructed to slide over said tip-piece to a position beyond the lateral projection thereof, said sleeve having a longitudinal slot or groove to accommodate the latter and also provided with a compressible lining, substantially as and for the purpose described.

4. A neck-yoke harness-coupling appliance comprising a tip-piece or ferrule oval in cross-section and having a lateral projection at the outer end, together with a sleeve adapted to slide over the said tip-piece to a position beyond the lateral projection thereof, said sleeve having a longitudinal groove or slot to accommodate the latter and a compressible lining oval in cross-section, substantially as and for the purpose described.

5. The combination of a yoke having a tip-piece somewhat oval in cross-section and formed with a lateral projection at the outer end, a sleeve adapted to slide over the said tip-piece to a position beyond the lateral projection thereof said sleeve having a longitudinal groove or slot to accommodate the latter and a frictional lining of a somewhat oval interior cross-section, and also formed with oppositely-located longitudinally-disposed loops with a tongue or projection in one of them which stands out a greater distance from the sleeve than the other, a martingale engaging the more projecting loop, and a pole-strap encircling the sleeve and passing through the two loops and engaged with the tongue or projection in the larger one of them.

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

LORD O. SNELL.

Witnesses:
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FRANK C. COLE.