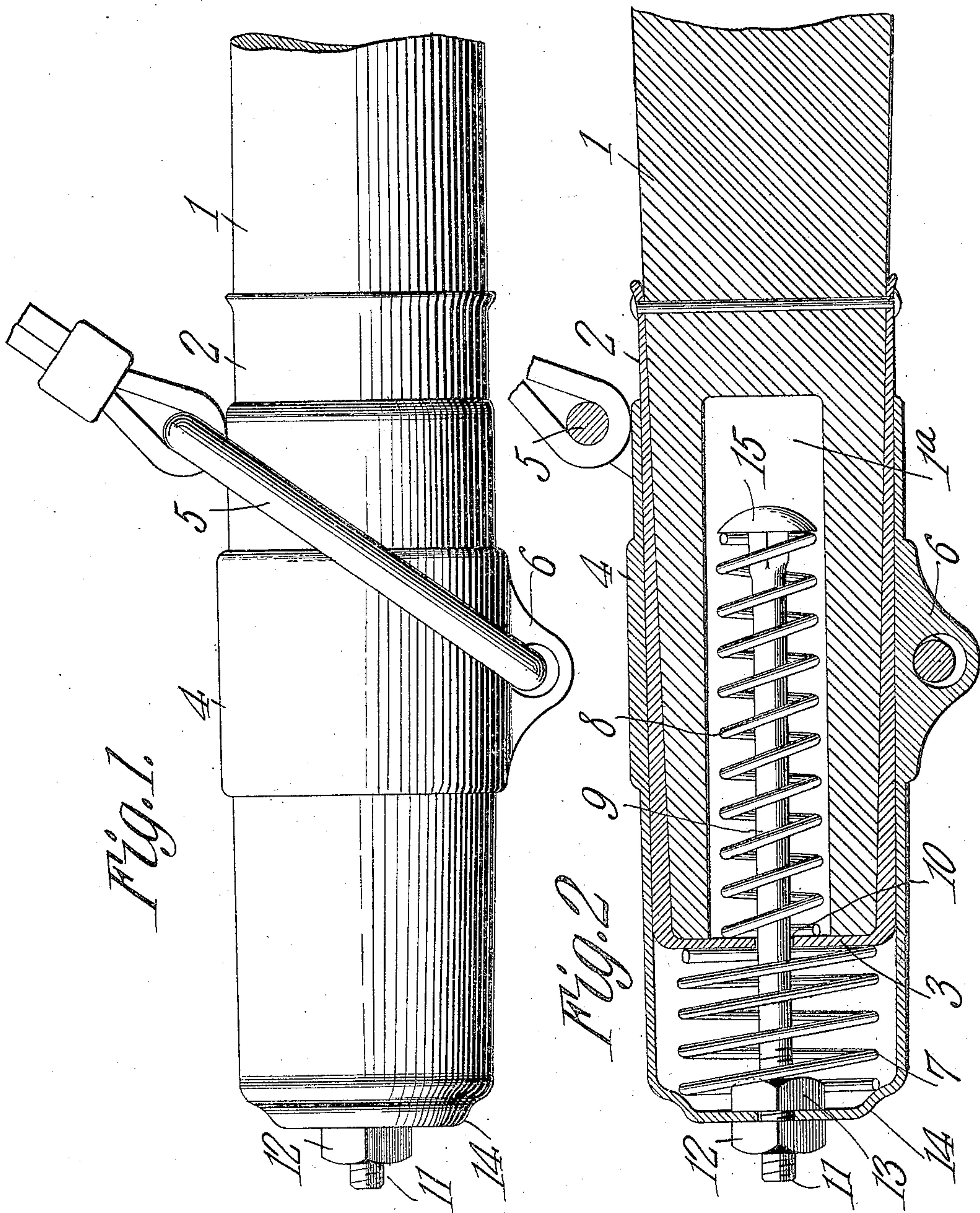


No. 875,146.

PATENTED DEC. 31, 1907.

P. E. BRECKHEIMER.  
SHOCK ABSORBER FOR NECK YOKES.  
APPLICATION FILED JULY 3, 1907.



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WITNESSES:

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# UNITED STATES PATENT OFFICE.

PETER E. BRECKHEIMER, OF ELKHART LAKE, WISCONSIN.

## SHOCK-ABSORBER FOR NECK-YOKES.

No. 875,146.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed July 3, 1907. Serial No. 382,043.

*To all whom it may concern:*

Be it known that I, PETER E. BRECKHEIMER, a citizen of the United States, residing at Elkhart Lake, in the county of Sheboygan and State of Wisconsin, have invented a new and useful Shock-Absorber for Neck-Yokes, of which the following is a specification.

This invention relates to improvements in neck yokes of the character shown and described in my prior patent No. 833,822, granted Oct. 23, 1906, and it has for its object to provide an improved shock absorber which is adapted to be arranged between the horses and vehicle pole and serves to absorb the shocks produced by the lateral motion of the vehicle pole due to the wheels encountering ruts and other obstructions, and which would otherwise not only cause fatigue of the horses, but the friction between the collars and their necks would also produce soreness that would prevent working of the horses, the present invention providing a device of this character that is capable of relieving the shock due to the relative lateral movements between the pole and horses in both directions.

To these and other ends, the invention comprises the various novel features of construction and combination and arrangement of parts, which will be hereinafter more fully described and pointed out particularly in the appended claims.

In the accompanying drawings: Figure 1 is an exterior view of a portion of a neck yoke provided with a cushioning device constructed in accordance with the present invention. Fig. 2 represents a longitudinal section of the device shown in Fig. 1.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

Cushioning devices constructed in accordance with the present invention are adapted to be applied to the opposite ends of the usual neck yoke which extends transversely of the outer end of the usual vehicle pole and is employed for the purpose of directing the course of the vehicle, the horses being attached to the yoke in order that the course of the vehicle will follow that of the horses, and the purpose of the present invention is to provide devices which are capable of absorbing or relieving lateral vibrations or shocks which are imparted to the neck yoke by sudden swinging movements of the pole due to

the front wheels of the vehicle striking ruts and other obstructions, the cushioning devices serving to absorb the shocks or vibrations that would otherwise impair the working efficiency of the horses and preventing friction between the collar and the shoulder and neck of the horse that would cause soreness.

In the present embodiment of my invention, each end of the neck-yoke 1 is provided with a guide 2 which may be of any suitable construction, that shown in the present instance being composed of a tubular casing which is preferably provided with a tapered bore open at one end to receive the correspondingly shaped end of the neck yoke, and having its opposite end substantially closed to form a transversely extending spring seat or abutment 3. Coöperating with the guide is a slide 4, the latter being of any suitable construction and arranged to operate longitudinally of the neck yoke, the slide shown in the present instance being composed of a sleeve which fits over the guide and is provided with a suitable harness attaching device whereby the yoke may be attached in the usual or any desired way to the harness of the horse, the attaching device shown in the present instance embodying a ring which encircles the slide and coöperates with an eye 6 formed at one side thereof, the latter serving to transmit relative longitudinal movements of the slide to the harness of the horse, and vice versa.

In order to absorb the sudden vibrations between the guide and slide, which occur more or less constantly during the movement of the vehicle, especially on rough roads, a pair of cushioning devices are interposed between the slide and its coöperating guide, whereby the movements between these parts will be minimized or eased, the cushioning devices shown in the present instance comprising a pair of helical compression springs 7 and 8 having their proximate ends engaging the spring seat 3 of the guide on opposite sides and encircling a stem 9, the latter passing loosely through an opening 10 in the spring seat and having threads at its outer end to receive a pair of nuts and 13, the latter engaging on opposite sides of a head 14 formed in the outer end of the slide, the inner end of the stem being provided with a head or follower 15 which is arranged to operate in a longitudinal opening 1<sup>a</sup> in the adjacent end of the neck yoke



and coöperates with the inner end of the spring 8 to transmit an outward movement of the slide, relatively to the guide, to the spring 8 in a direction that will compress it.

5 The outer end of the spring 7 has a seat against the head 14 on the outer end of the slide, and the relative inward movements of the slide produce a compression of this spring, and the strength or action of both  
10 springs may be adjusted simultaneously by moving the nuts 12 and 13 longitudinally of the stem 9.

In practice, the springs or cushion devices provide a yielding connection between the  
15 harness of the horses and the neck yoke and pole, so that a constant strain will be transmitted between these parts, although comparatively sudden vibrations will be absorbed by the springs or cushioning devices,  
20 so that vibrations of the pole, due to irregularities in the surface of the road and from other causes will not be transmitted to the harness of the horse, so that the working efficiency of the horses is not impaired and  
25 the harness is not liable to produce soreness, the cushioning devices being capable of absorbing the vibrations of the vehicle pole in both directions.

What is claimed is:—

30 1. In a device of the character described, the combination with the neck yoke having a guide thereon, of a slide mounted to operate longitudinally of the guide, cushioning devices for easing the relative movements of  
35 the guide and slide in both directions longitudinally of the yoke, and means for simul-

taneously adjusting the resisting power of both cushioning devices.

2. In a device of the character described, the combination with a neck yoke having a  
40 guide thereon, of a slide mounted to operate longitudinally of the guide, cushioning devices of different degrees of resistance for easing the relative movements of the guide and slide in both directions longitudinally  
45 of the yoke, and means for simultaneously adjusting the resisting power of both of the cushioning devices.

3. In a device of the character described, the combination with a neck yoke or other  
50 support, and a tubular casing secured thereon and having a transversely arranged spring seat at its outer end provided with an aperture, of a sleeve mounted to slide longitudinally of the casing and having a head  
55 closing its outer end, a stem connected to the head of the sleeve and extending through the aperture of the spring seat and having a follower on its inner end, a helical spring interposed between the follower and spring  
60 seat of the casing, and a second helical spring interposed between the said spring seat and the head at the outer end of the sleeve, the springs resisting the movements of the sleeve in opposite directions. 65

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

PETER E. BRECKHEIMER.

Witnesses:

LOUIS LAUN,  
R. C. HUGO.