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O. C. DICKERMAN  
WHIFFLETREE CONNECTION.  
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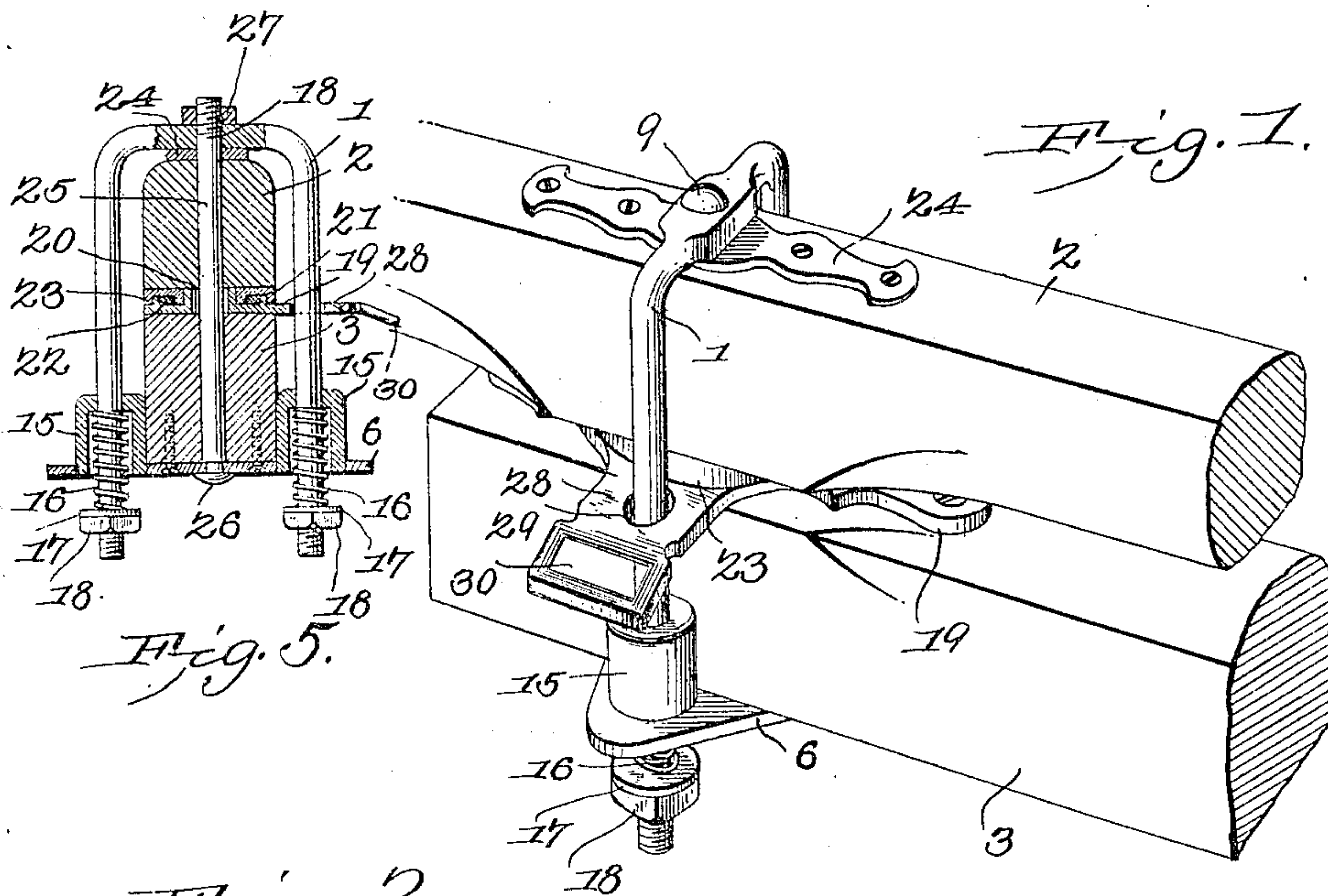
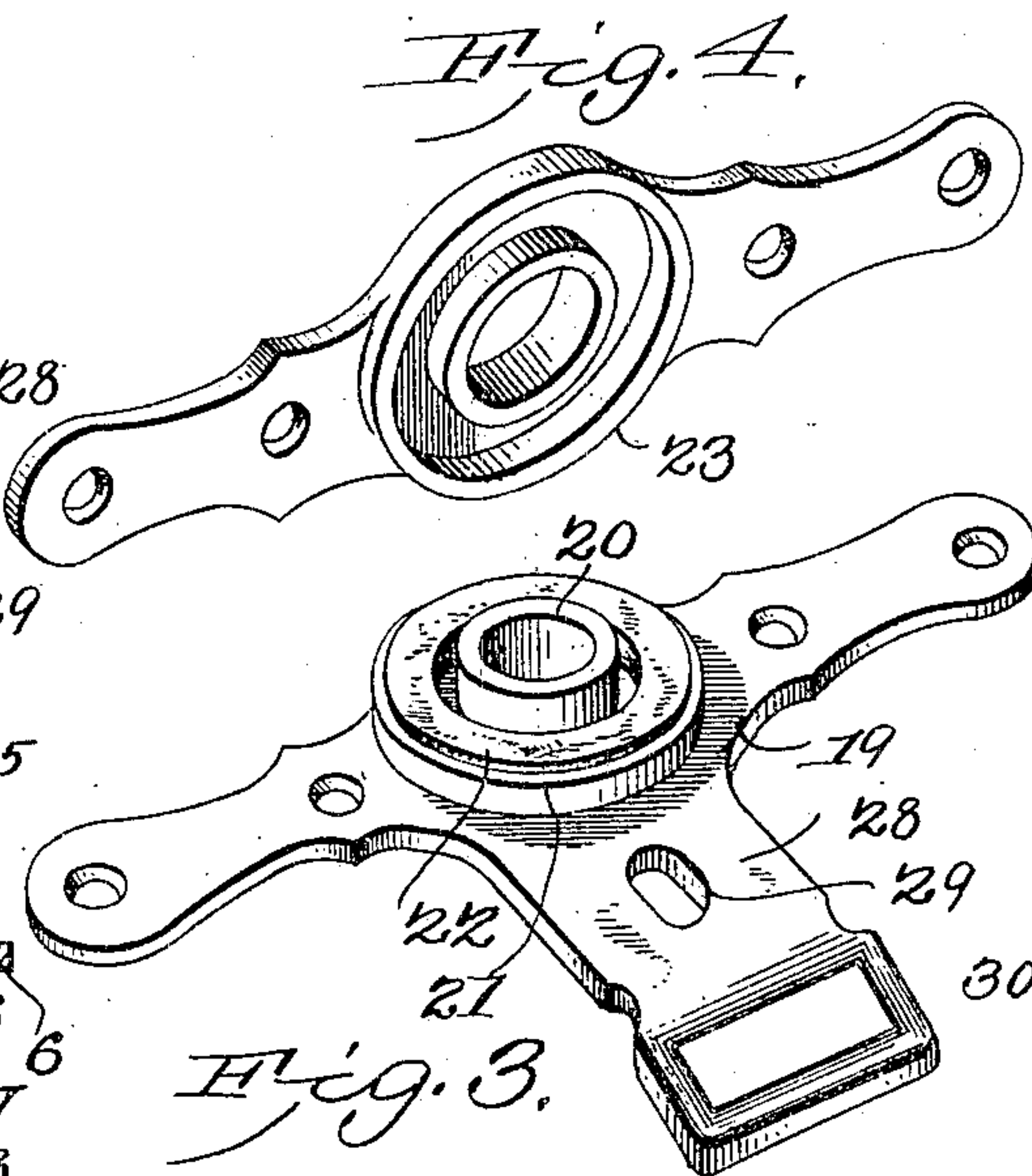
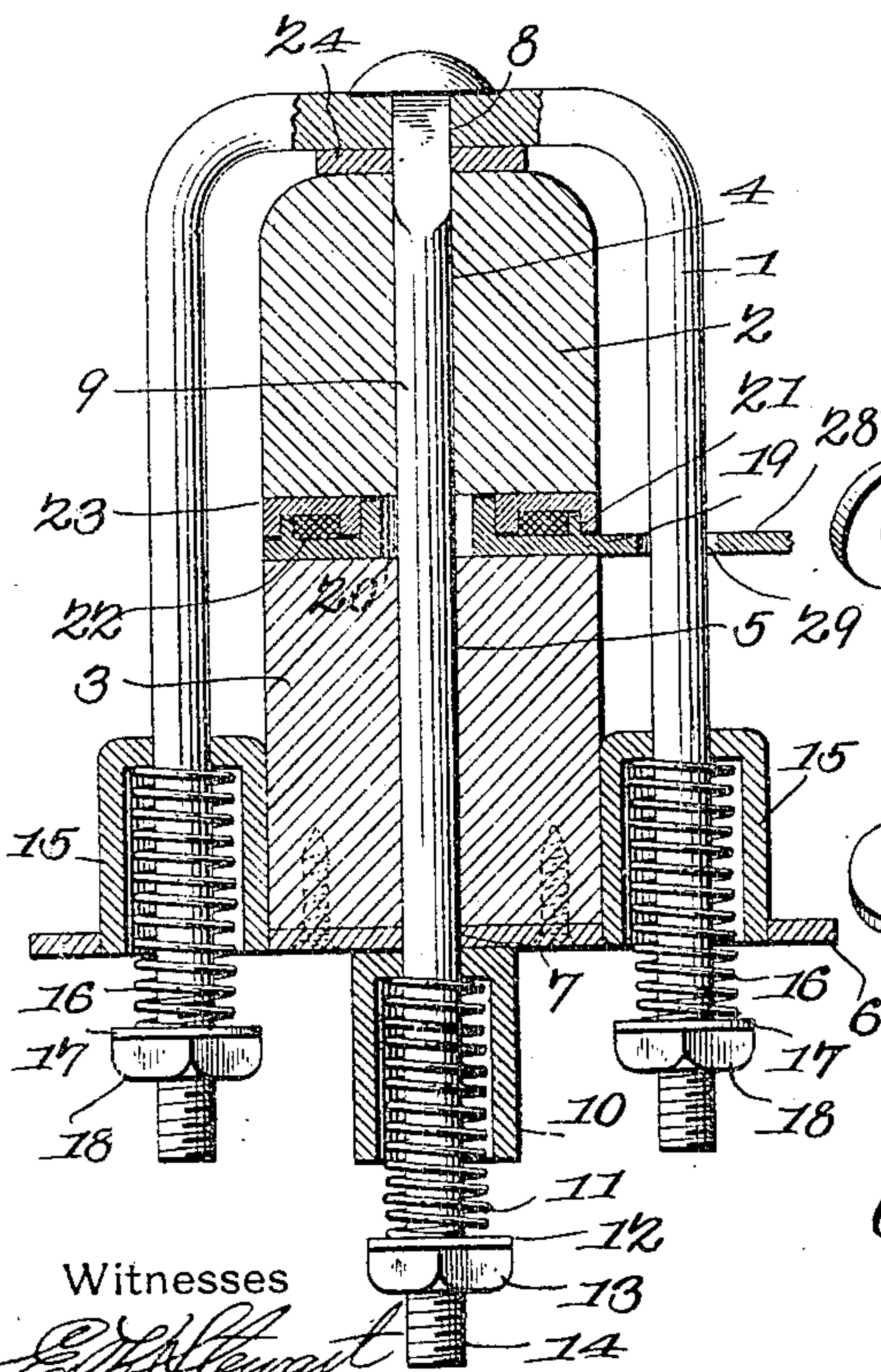


Fig. 2.



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# UNITED STATES PATENT OFFICE.

OSCAR C. DICKERMAN, OF GAINESVILLE, TEXAS.

## WHIFFLETREE CONNECTION.

No. 812,188.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed July 26, 1905. Serial No. 271,309.

*To all whom it may concern:*

Be it known that I, OSCAR C. DICKERMAN, a citizen of the United States, residing at Gainesville, in the county of Cooke and State of Texas, have invented a new and useful Whiffletree-Connector, of which the following is a specification.

This invention relates to whiffletree-connectors, and has for its object to provide a connector presenting novel and improved features of utility and reliability.

A further object of my invention is to provide a connector with means for automatically taking up all wear and prevent rattling.

A further object of my invention is to provide a connector having an elastic wear-plate interposed between the whiffletree and the member to which it is connected and with a spring for holding the bearings in elastic coöperation.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a perspective view of my improved whiffletree-connector mounted upon a fragment of a whiffletree and a fragment of a cross-bar or evenner to which the whiffletree is attached. Fig. 2 is a transverse sectional view of my improved whiffletree-connector and whiffletree. Fig. 3 is a perspective detail view of the bearing-plate forming a part of the improved whiffletree-connector and showing the elastic wear-plate. Fig. 4 is a detail perspective view of a bearing-plate forming a part of the improved whiffletree-connector and adapted for coöperation with the bearing-plate shown at Fig. 3. Fig. 5 is a transverse sectional view of the improved whiffletree-connector and whiffletree shown with the center pin rigidly secured to the plate.

Like characters of reference designate corresponding parts throughout the several views.

The device of the present invention includes a yoke 1, designed to loosely embrace the whiffletree 2 and the member 3, to which

the whiffletree is to be pivotally coupled. The form of support shown in Fig. 1 of the drawings is one end portion of a doubletree; but it will of course be understood that the coupling is also capable of use in connecting a whiffletree to the middle portion of the rigid cross-bar commonly employed to connect the rear portions of a pair of shafts, and as this application of the device is perfectly apparent it has not been deemed necessary to illustrate the same. The whiffletree and the support 3 are provided with central pivot-openings 4 and 5, and a plate 6 is secured to the under side of the member 3 and provided with an opening 7, registering with the pivot-opening thereof.

The yoke 1 is provided with an opening 8 centrally of the bow, and a pivot-pin 9 is inserted through the openings 8, 4, 5, and 7 and of a length sufficient to extend beyond the plate 6. Upon the extended end of the pivot-pin 9 is disposed a sleeve 10, bearing against the plate 6 with a spring 11 within the sleeve and encircling the pin. Upon the pin is placed a washer 12, bearing against the spring 11, and the washer held in position by any approved means, as the nut 13 engaging the screw-threads 14.

Adjacent the sides of the member 3 are disposed sleeves 15, rigidly secured to and opening through the plate 6 and through which pass the arms of yoke 1. Within the sleeves 15 are disposed the springs 16, surrounding the arms of yoke 1 and held in position by the washers 17 and nuts 18.

Upon either of the members 2 and 3, preferably on the top of the lower member, there is secured a bearing-plate 19 with a central opening 20 encircling the pivot-pin and having an upturned annular flange 21, within which is inclosed an elastic wear-plate or washer 22. A second bearing-plate 23 is secured to the whiffletree and of proper conformation to coöperate with the plate 19. Upon the top of the whiffletree may be secured a wear-plate 24, upon which bears the bow of the yoke 1.

Instead of extending the pivot-bolt through the plate and providing a spring 11, as shown in Fig. 2, the pin 25 may be rigidly secured to the plate 6, as by riveting, as shown at 26 in Fig. 5, with its upper projected end provided with a head, preferably in the nature of a nut 27, which is normally set down tight against the top of the yoke 1. For many purposes



and in many positions the form shown at Fig. 5 is preferable to the form shown at Fig. 2.

It will be understood that with the parts assembled as shown in Fig. 2 the springs 11 and 16 exert an elastic tension upon the whiffletree 2, holding the bearing-plates 19 and 23 in coöperative relation and preventing rattling. With the parts assembled as shown in Fig. 5 the springs 16 will exert the elastic pressure on the whiffletree, which will move longitudinally with the yoke 1 upon the pin 25. If for any reason the whiffletree is lifted against the tension of the springs, the interposed elastic washer 22 will prevent any noise when the plates 19 and 23 are again drawn together by the action of the springs, thus making an entirely noiseless connection and one of unusual strength, as well as neat in appearance.

When the present device is employed to connect a whiffletree to one end of a double-tree, the wear-plate 19 is provided at its middle with a rearwardly-directed ear or projection 28, having an opening 29 and terminating at its rear extremity in a downwardly-deflected loop or eye 30, with which is designed to be engaged the forward end of one of the stay-straps commonly employed between the ends of a doubletree and the tongue circle of the vehicle to limit the swinging movements of the doubletree. When the device is used to connect a whiffletree with the cross-bar of a pair of shafts, the projection 28 and loop 30 have no function; but at the same time they do not interfere with the functions of the other portions of the coupling. However, I contemplate the omission of the members 28 and 30 when the device is to be manufactured expressly for connecting a whiffletree to a fixed cross-bar.

In the form of the device shown in Figs. 1 and 2 the pivot-pin 9 is provided at its upper end with an integral or permanent head, and in assembling the parts the pin 9 is passed downwardly through the opening in the top of the yoke 1 and the openings in the whiffletree 2 and the cross-bar 3, after which the spring 11 and nut 13 are applied to the lower end of the pivot-pin, the nut being screwed up against the spring, so as to draw the head of the pin down against the top of the yoke. As wear takes place between the wear-plates 19 and 23 it is automatically taken up by the springs 11 and 16, whereby the top of the yoke is always held down against the wear-plate 24 on the top of the whiffletree, and the head of the pin is always maintained against the top of the yoke.

Upon reference to Fig. 5 it will be noted that the pivot-pin 25 is fixed to the plate 6, wherefore as wear takes place between the plates 19 and 23 and is automatically taken up by the springs 16 the top of the yoke will of course gradually settle downwardly from

the nut 27, which is then screwed down against the top of the yoke, so as to prevent looseness of the several parts of the coupling. It will now be understood that when the pivot-pin is fixed to the plate 6, as shown in Fig. 5 of the drawings, it is necessary to have its head 27 adjustable in order that it may be set down against the yoke as the latter is fed downwardly by the springs 16 to take up wear.

From the foregoing description it will be understood that the device of the present invention is entirely complete in itself and may be fitted to any ordinary whiffletree arrangement without requiring any change or alteration therein and when fitted in place presents a neat, compact, and attractive appearance without in any manner interfering with the usual functions of the whiffletree. Moreover, the parts are so arranged as to prevent tilting of the whiffletree under draft strains, whereby there is a uniform wear upon the plates 19 and 23, and as this wear is automatically taken up by the springs the coupling will be maintained in a satisfactorily working condition and the life of the coupling is materially prolonged.

Having thus described the invention, what is claimed is—

1. A whiffletree-connector comprising a yoke to straddle a whiffletree and its support, a cross-bar connecting the ends of the yoke and movable longitudinally of the latter, and a spring exerting tension between the yoke and the cross-bar.

2. A whiffletree-connector comprising a yoke embracing the whiffletree, a plate provided with openings through which the ends of the yoke extend, and springs disposed to exert a tension between the plate and the yoke.

3. A whiffletree-connector comprising a yoke embracing the whiffletree, a plate provided with sleeves disposed upon opposite sides of the whiffletree and through which the ends of the yoke pass, and springs disposed within the sleeves and arranged to exert a tension between the plate and the yoke.

4. A whiffletree-connector comprising a yoke embracing the whiffletree, a plate engaging the ends of the yoke, a pivot-pin passing through the bow of the yoke through the whiffletree and through the plate, and a spring arranged to exert a tension upon the yoke.

5. A whiffletree-connector comprising a yoke embracing the whiffletree, a plate provided with sleeves disposed upon opposite sides of the whiffletree and through which the ends of the yoke are passed, springs disposed within the sleeves and arranged to exert a tension between the plate and the yoke, a pivot-pin passing through the bow of the yoke through the whiffletree and through the plate, and a spring arranged to exert a pressure upon the yoke.



6. In a whiffletree-connector, bearing-plates secured to the whiffletree and to the member to which the whiffletree is connected, an elastic washer carried by one plate, and means for holding the plates in elastic coöperative relation.

7. In a whiffletree-connector, a yoke embracing the whiffletree and the member to which the whiffletree is connected, a plate secured to the member and provided with openings through which the ends of the yoke pass, bearing-plates disposed between the whiffletree and the member, an elastic washer carried by one plate, a spring arranged to exert a pressure upon the whiffletree and the bearing-plates.

8. In a whiffletree-connector, a bearing-plate secured to the whiffletree, a bearing-plate secured to the member to which the whiffletree is pivoted and having a rearwardly-extending rigid loop, and means for holding the plates in elastic coöperative relation.

9. In a whiffletree-connector, a bearing-plate secured to the whiffletree, a bearing-plate secured to the member to which the whiffletree is pivoted and having a rearwardly-extending rigid loop provided with an intermediate opening, a yoke embracing the whiffletree and the member to which the whiffletree is connected, and an arm passing through the opening of the bearing-plate and a spring arranged to exert an elastic pressure upon the whiffletree and the bearing-plate.

10. A whiffletree-coupling comprising a yoke to straddle the whiffletree and its support, a cross-bar for connection with the support and engaged by the sides of the yoke, and a pivot-pin rigidly carried by the plate and engaging the bow of the yoke.

11. A whiffletree-coupling comprising a yoke to straddle the whiffletree and its support, a cross-bar for connection with the support and provided with openings for the slid-

able reception of the arms of the yoke, tension devices between the arms of the yoke and the cross-bar, and a pivot-pin piercing the bow of the yoke and engaged with the cross-bar.

12. A whiffletree-coupling comprising a yoke to straddle the whiffletree and its support, a cross-bar for connection with the support and provided with openings for slidably receiving the arms of the yoke, springs embracing the arms of the yoke and engaging the cross-bar, adjustable nuts fitted to the ends of the yoke and engaging the springs to vary the tension thereof, and a pivot-pin piercing the bow of the yoke and engaging the cross-bar.

13. A whiffletree-coupling comprising a yoke to straddle the whiffletree and its support, a cross-bar for connection with the support and engaging the ends of the yoke, a pivot-pin rigidly carried by the plate and piercing the bow of the yoke, and a removable head carried by the top of the upper end of the pin and bearing against the top of the yoke.

14. A whiffletree-coupling comprising a yoke to straddle the whiffletree and its support, a cross-bar for connection with the support and having the ends of the yoke engaged therewith, a pivot-pin piercing the bow of the yoke and engaged with the cross-bar, and a wear-plate having an opening loosely receiving the pivot-pin and provided with a rearward extension having an opening receiving one of the arms of the yoke and terminating at its outer end in a brace-strap-receiving loop.

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

OSCAR C. DICKERMAN.

Witnesses:

W. H. DOUGHERTY,  
C. O. TURNER.