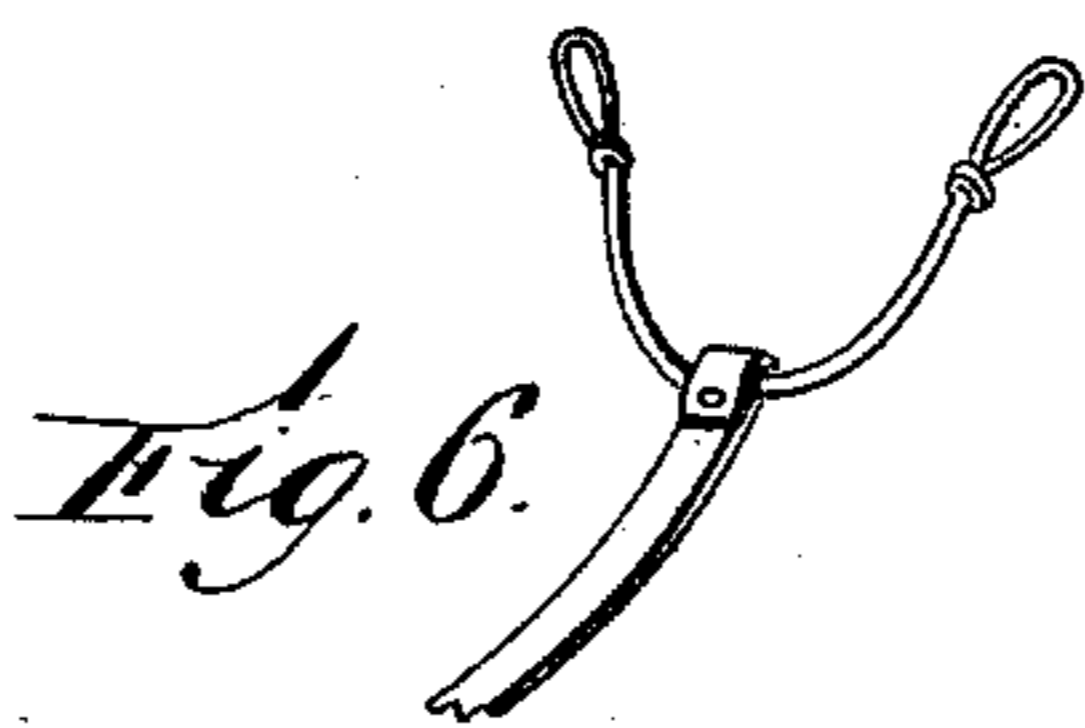
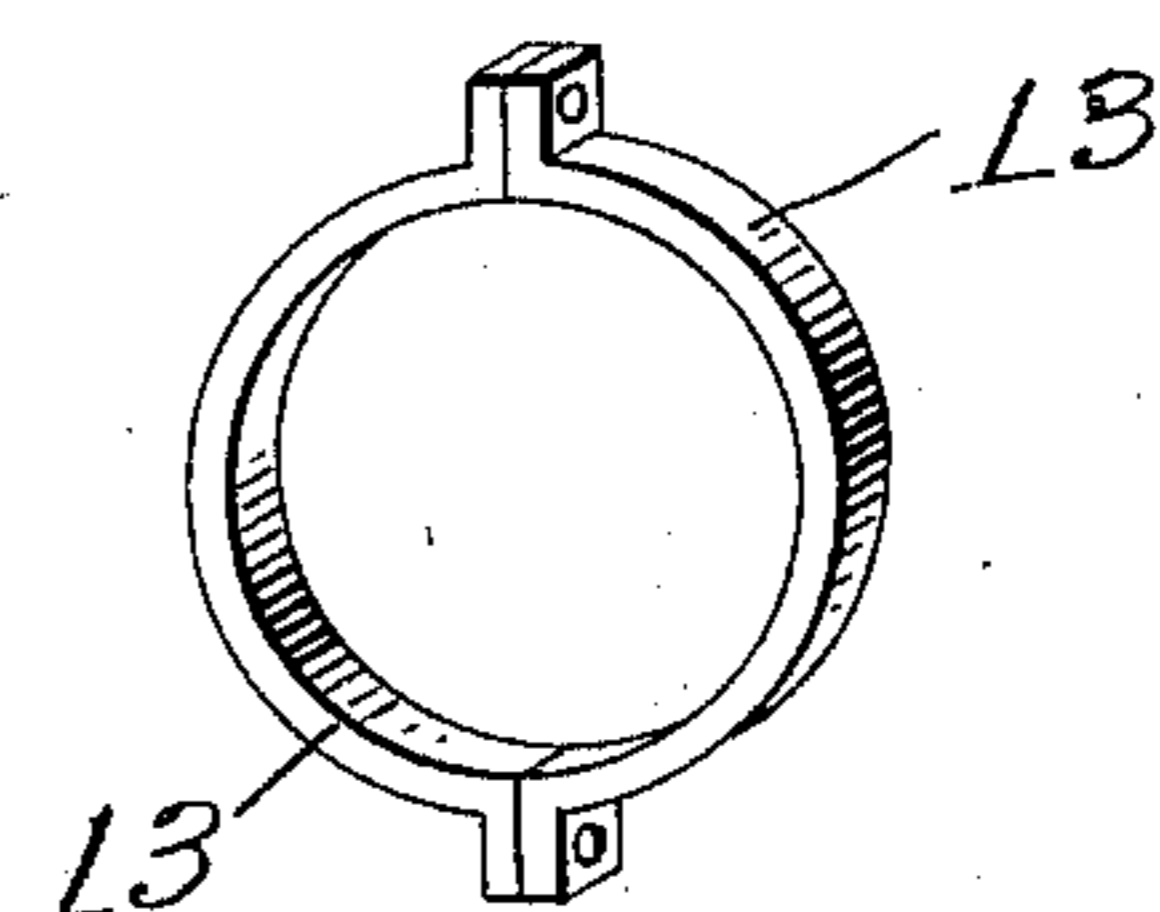
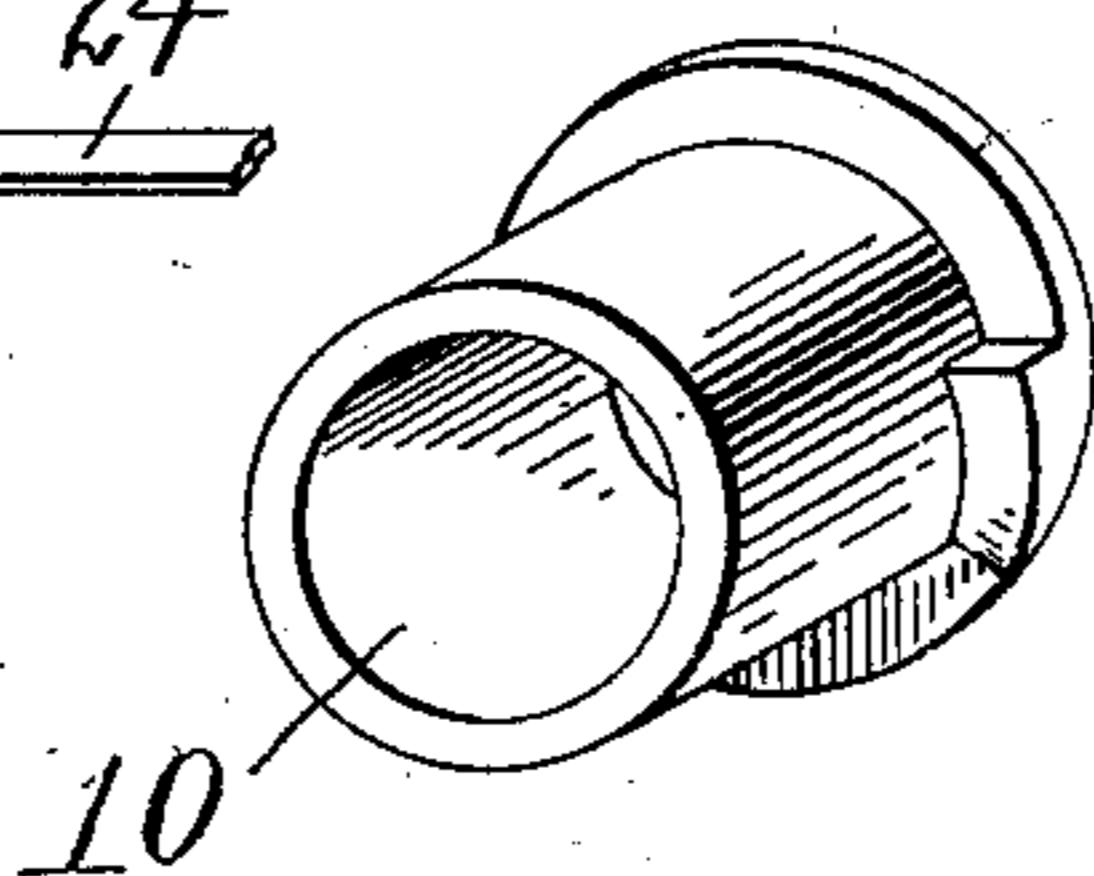
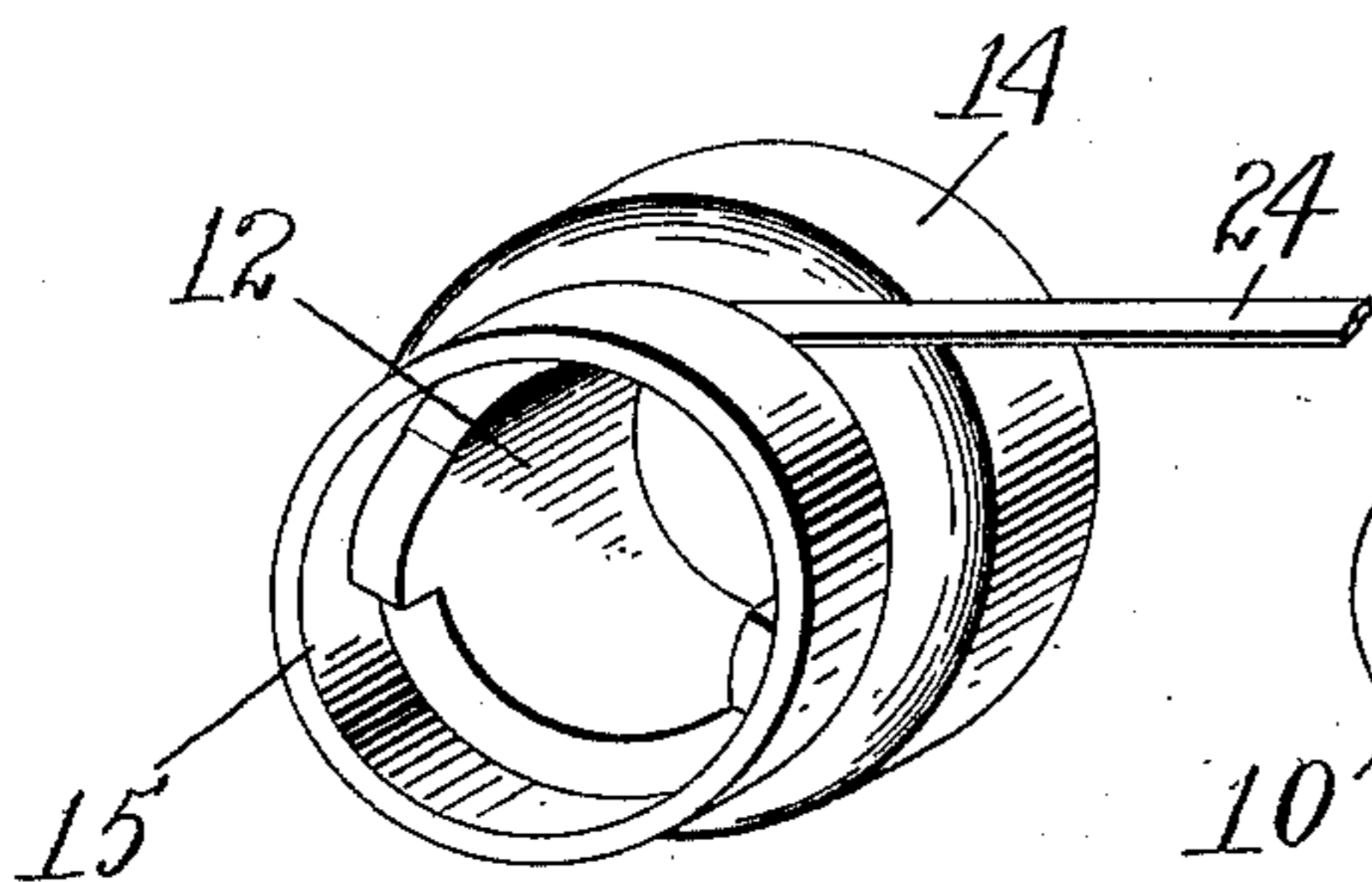
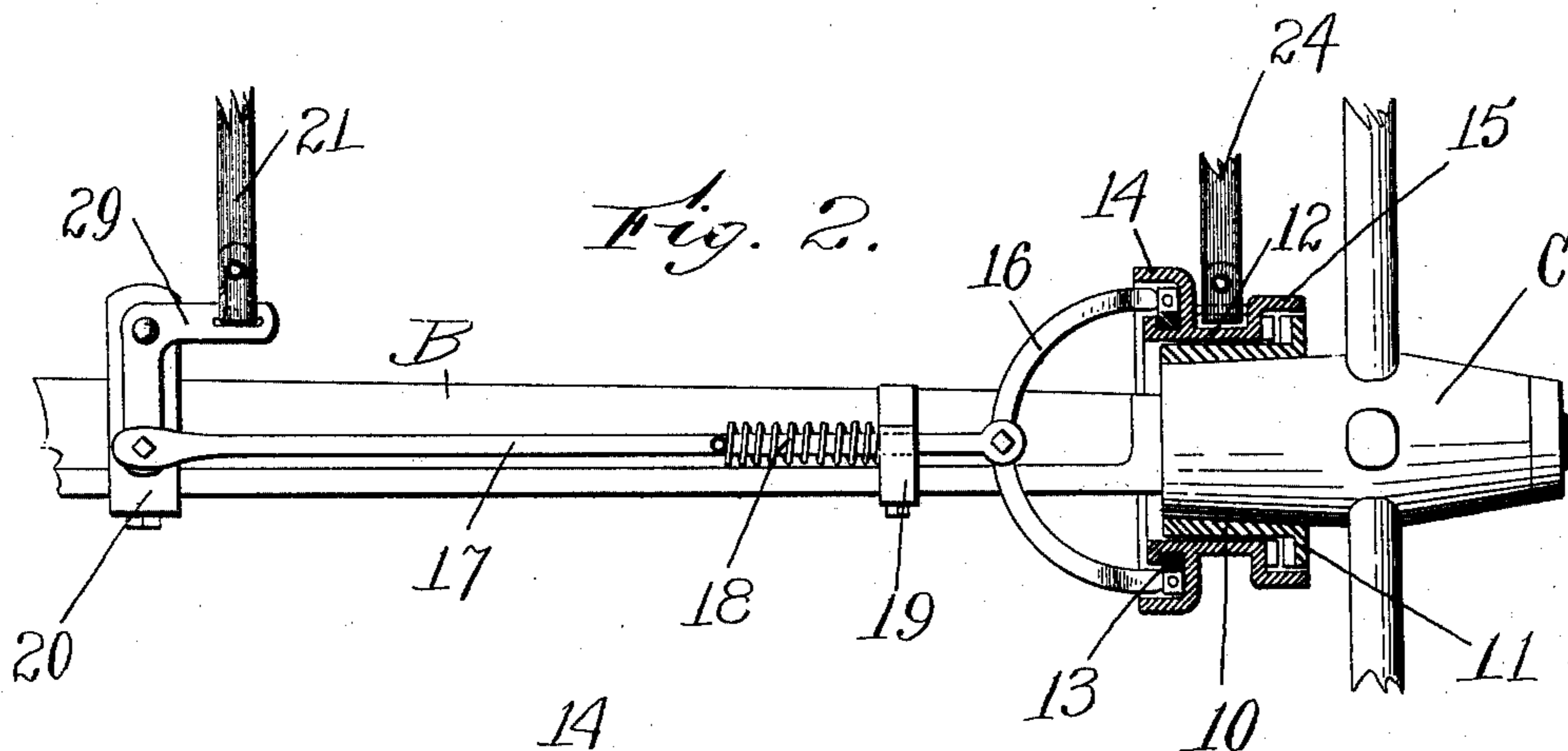
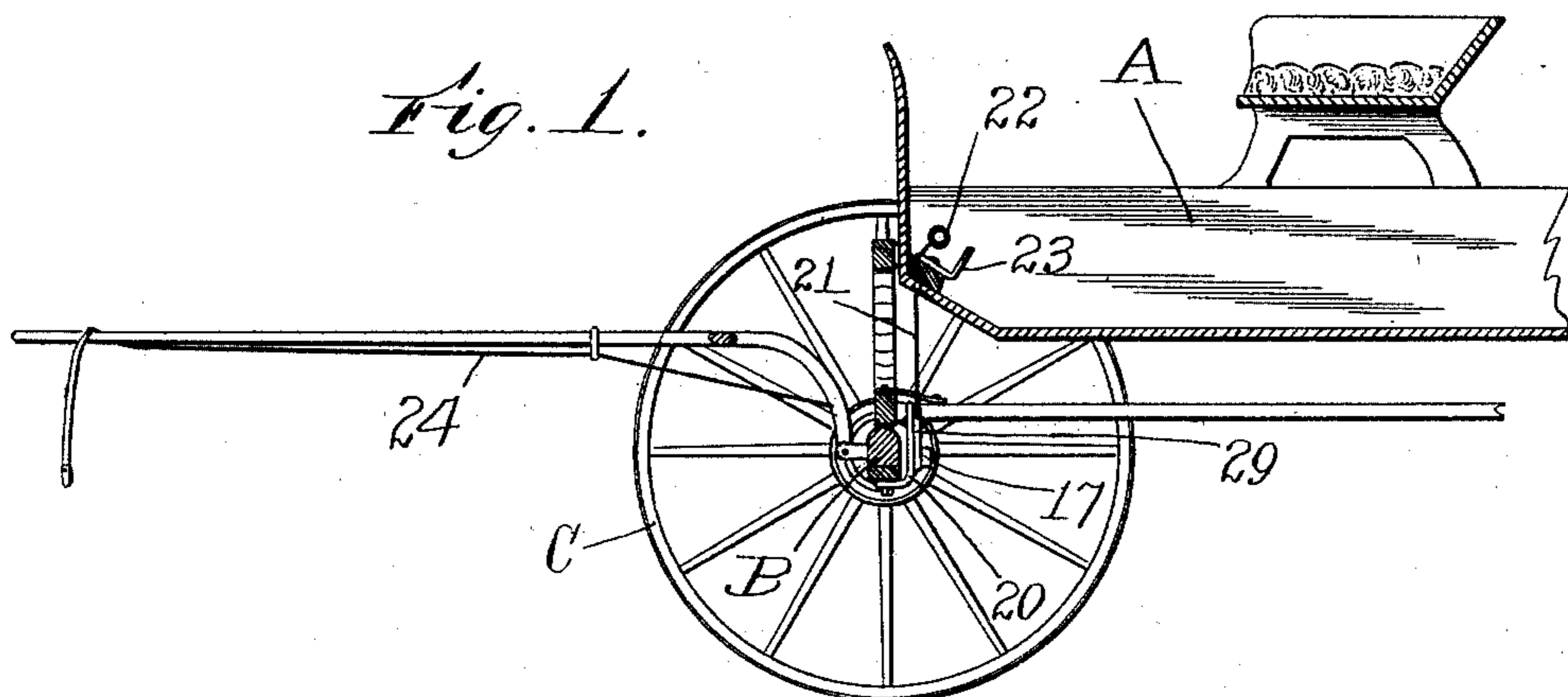


No. 719,731.

PATENTED FEB. 3, 1903.

C. BOULARD.  
HITCHING ATTACHMENT FOR VEHICLES.  
APPLICATION FILED AUG. 9, 1902.

NO MODEL.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

CYRIL BOULARD, OF WORCESTER, MASSACHUSETTS.

## HITCHING ATTACHMENT FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 719,731, dated February 3, 1903.

Application filed August 9, 1902. Serial No. 119,015. (No model.)

*To all whom it may concern.*

Be it known that I, CYRIL BOULARD, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Hitching Attachment, of which the following is a specification.

This invention relates to that class of attachments for vehicles which are intended to provide means operated from the vehicle-wheels for reining up and stopping a horse, so as to prevent the horse from moving when it is desired to leave the vehicle standing or hitched.

To these ends this invention consists of the hitching device and of the combinations of parts therewith, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a sectional view of sufficient parts of a vehicle to illustrate the application of my invention thereto. Fig. 2 is an enlarged view, partly in section, showing the application of my invention to the front axle of a vehicle. Fig. 3 is a perspective view of the winding-drum on which the check-strap may be wound. Fig. 4 is a perspective view of the operating-sleeve which turns with the wheel-hub. Fig. 5 is a perspective view of the split ring which is connected to the shifted winding-drum, and Fig. 6 is a detail view showing a connection between the check-strap and both ends of a bit where a single horse is to be checked.

In that class of wagon attachments to which this invention relates it has already been proposed to provide a check-strap having a winding device operated by clutch mechanism from the vehicle-wheels, so that the tension of the check-strap will stop the horse when the parts are in their operative position, the clutch-sections being separated when the vehicle is to be moved. In constructions of this class one of the clutch-sections has heretofore been provided with fixed teeth, while the other clutch-section is provided with a spring-pawl, and the parts have usually been arranged to be applied to the rear wheels of the vehicle. A construction of this class is shown in United States Patent No. 455,031, granted to F. S. G. Bonneau June 30, 1891.

The especial object of my present invention is to improve the hitching device which is disclosed in the patent to Bonneau above referred to by providing the clutch-sections with fixed teeth, so as to render the device more reliable than when a spring-tooth connection in the clutch is employed, to protect the parts from grit and dirt, and to so construct the operating connections that the device may be applied to the front wheels of a vehicle.

Referring to the accompanying drawings for a detail description of this invention, as shown in Fig. 1, A designates the body of a wagon or other vehicle, B designates the front axle thereof, and C one of the front wheels. Fastened on one of the front wheels C, as most clearly illustrated in Fig. 2, is an operating-sleeve 10. The operating-sleeve 10 is provided at its outer end with a flange 11, and extending in from the flange 11 are inclined clutch-teeth for operating the winding-drum 12. The winding-drum 12 fits loosely on the sleeve 10 and is provided at its inner end with a groove for receiving the split ring 13. Extending out over the split ring 13 from the winding-drum 12 is a protecting flange or cover 14 for protecting this connection and preventing dust or dirt from accumulating thereon. At its opposite end the winding-drum 12 is provided with clutch-teeth coöperating with the teeth of the operating-sleeve 10, and extending out over the clutch-joint is a protecting-flange 15 for protecting the parts from dust or dirt. The split ring 13 is connected to a yoke 16. Extending from the yoke 16 is an operating-rod 17, which passes through a guide-piece 19 on the front axle and has a spring 18 for normally holding the clutch-teeth out of engagement. The operating-rod 17 is connected at its inner end to a bell-crank lever 29. The bell-crank lever 29 is pivoted on a support 20, substantially at the center of the front axle, so that by means of this construction the front wheels may be cranked or turned without substantially affecting the hitching device.

I prefer to operate my hitching device from the forward wheels of the vehicle rather than having the same applied to the rear wheels, as in the Bonneau patent before referred to,

because by means of this arrangement when the device is applied to only one of the wagon-wheels the horse will be free to move or swing the front axle sidewise without substantially changing the tension of the check-strap which is operated by the winding-drum, as hereinafter described, whereas if the check-strap is connected to one of the rear wheels the tension of the check-strap will be varied by cranking the front wheels toward or away from the side to which the attachment is applied.

As shown most clearly in Fig. 2, a check-strap 24 is connected at its end to the winding-drum 12. At its forward end the check-strap may be connected to the bit or to a horse's head in any desired manner. For example, when a single horse is to be stopped the check-strap may be connected to both ends of the bit, as shown in Fig. 6.

To set the hitching device, any desired form of connection may be employed for operating the bell-crank lever 29. For example, as illustrated in Fig. 1, the bell-crank lever 29 may be operated by a pull-strap 21, the pull-strap 21 being provided with a ring 22, which may be secured on a pin or finger 23 when the hitching device is to be locked or fastened in its operative position—that is to say, in operating a hitching device constructed according to my invention I preferably provide positively-operating connections for holding the clutch-sections together when the hitching device is to be operated rather than having the parts held together by spring-pressure, as in the Bonneau construction above referred to.

In operating a hitching device constructed according to my invention when the clutch-sections are fastened by the pull-strap in their operative position any forward travel of the wagon will tighten the check-strap to rein in and stop the horse. On the other hand, if the vehicle is moved back the clutch-teeth will ratchet past each other, as I have found in practice that the operating connections

will have sufficient flexibility to permit the ratcheting back of the clutch-teeth although said clutch-teeth are formed rigidly with the clutch-sections. I consider this a feature of advantage in my construction, as I secure a ratcheting action without depending upon spring pawls or catches, which cannot always be relied upon in operation.

I am aware that changes may be made in practicing my invention by those who are skilled in the art without departing from the scope thereof as expressed in the claims. I do not wish, therefore, to be limited to the construction I have herein shown and described; but

What I do claim, and desire to secure by Letters Patent of the United States, is—

1. In a hitching device, the combination of a winding-drum, a check-strap connected thereto, an operating-sleeve turning with one of the vehicle-wheels, a clutch connection between said sleeve and winding-drum, operating connections for setting and releasing said clutch, and protecting-flanges extending out from the winding-drum to protect the clutch mechanism and operating connection.

2. In a hitching device, the combination of a winding-drum, a check-strap connected to the winding-drum, an operating-sleeve turning with one of the vehicle-wheels, said winding-drum and sleeve being provided with rigid clutch-teeth, a split ring fitting into a groove in the winding-drum and connecting said drum with its operating devices, flanges extending out from opposite ends of the winding-drum to protect the clutch mechanism and operating connection respectively, and a pull-strap having a catch or ring for engaging a finger to hold the parts in operative position.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CYRIL BOULARD.

Witnesses:

PHILIP W. SOUTHGATE,  
HENRY E. HILL.