

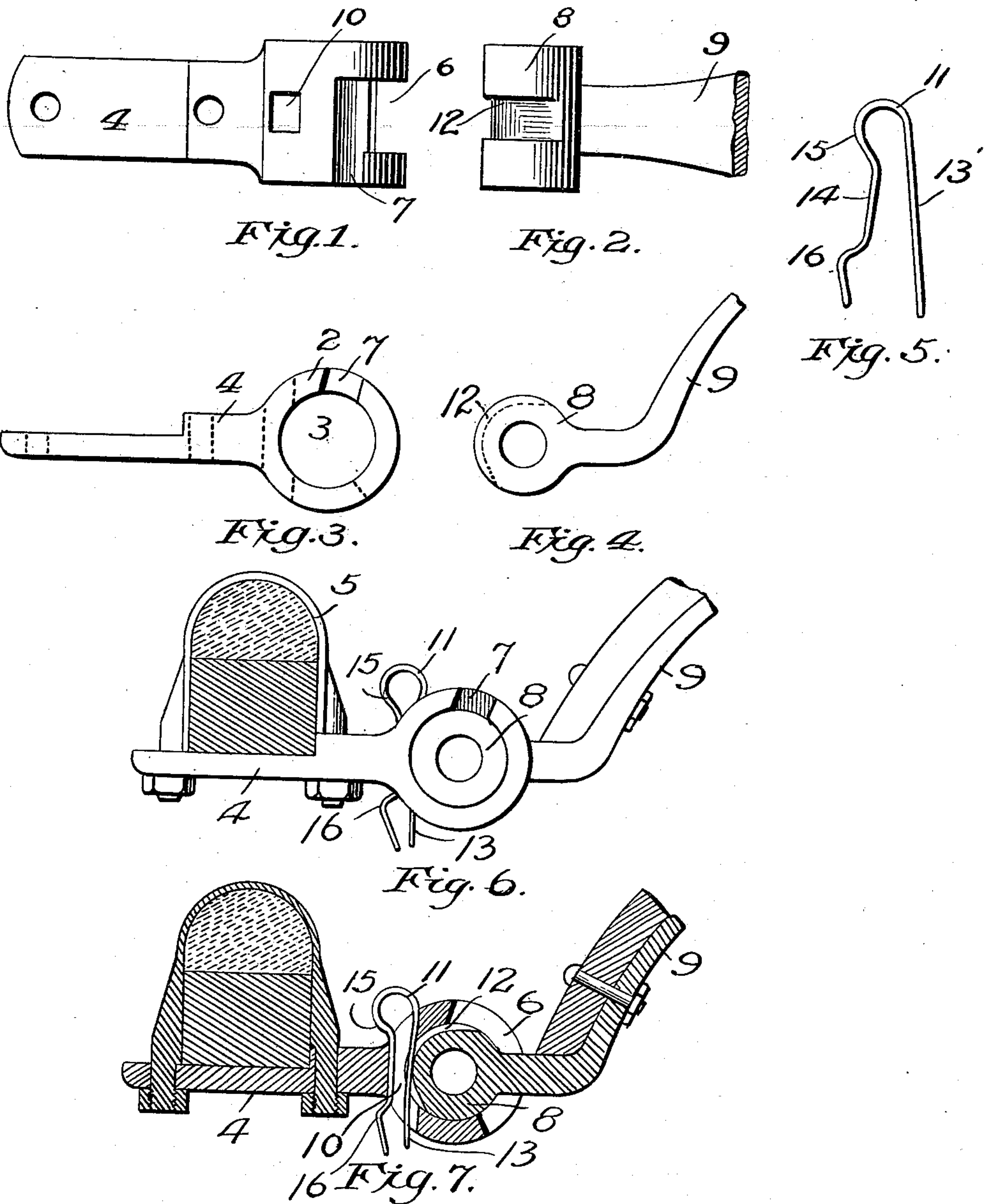
No. 623,091.

Patented Apr. 11, 1899.

J. MEALEY.  
THILL COUPLING.

(Application filed May 17, 1898.)

(No Model.)



Witnesses;  
O. E. Van Doren  
Richard Paul.

Inventor;  
Johnston Mealey,  
by *Paul Ottaway*  
his attorneys.



# UNITED STATES PATENT OFFICE.

JOHNSTON MEALEY, OF HOWARD LAKE, MINNESOTA, ASSIGNOR OF ONE-HALF TO JOHN F. McDONALD, OF MINNEAPOLIS, MINNESOTA.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 623,091, dated April 11, 1899.

Application filed May 17, 1898. Serial No. 680,915. (No model.)

*To all whom it may concern:*

Be it known that I, JOHNSTON MEALEY, of Howard Lake, Wright county, State of Minnesota, have invented certain new and useful  
5 Improvements in Thill-Couplings, of which the following is a specification.

This invention relates to thill-couplings; and the object of the invention is to provide a  
10 thill-coupling which will be strong and which will permit of the easy detachment or attachment of the thills to the vehicle while dispensing with the ordinary eye and shackle bolt.

Another object of the invention is to provide  
15 a thill-coupling which will not rattle.

The invention consists generally in the combination of a shackle to receive the thill-eye and having a slot in its end whereby the eye may be inserted endwise into the shackle,  
20 the two parts together forming a self-locking joint or coupling, and means bearing upon the eye within the shackle to prevent the accidental detachment of the parts, all as hereinafter described.

25 The invention will be more readily understood by reference to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a plan view of the shackle of  
30 my device. Fig. 2 is a plan view of the thill-eye. Fig. 3 is a side view of the shackle. Fig. 4 is a side view of the thill-eye. Fig. 5 is a separate view of the locking spring or pin. Fig. 6 is a side view of the thill-coupling with the parts assembled or placed together. Fig. 7 is a vertical section of the coupling as shown in Fig. 6.

As shown in the drawings, the shackle comprises the cylinder or barrel 2, having a large  
40 opening 3 through it. This barrel or cylinder is arranged upon the forward end of the plate 4 and is integral therewith. Said plate 4 is secured upon the vehicle-axle by means of the usual clip 5. (See Fig. 6.) In the  
45 front of the cylinder or barrel I provide the vertical slot 6, and in one end there is a slot 7. The thill-eye 8 on the end of the thill-iron 9 fits the barrel, and the shank of the iron next to the eye is adapted to pass through the  
50 end slot 7 into the main slot or opening 6 in the barrel, which slot is of sufficient width to

admit of the movement of the thill-iron 9 therein. In this position the thill-eye becomes a T-head that is securely held within the shackle. The parts are made nicely, so that  
55 the eye or head 8 fits snugly in the barrel or shackle, and the surface of contact is so great, compared with that upon the usual bolt, that rattling is practically avoided. The end notch or slot 7 is made at the top of the shackle, and it  
60 is evident that the thill-eye cannot be removed from the shackle except when the thill-iron and the shafts or pole to which the same is attached are lifted and thrown back toward the  
65 vehicle to bring the shank of the iron in line with the slot 7. This can never occur while the horse is hitched to the vehicle, but the shafts or pole are often thus raised when the vehicle is in the barn for the purpose of plac-  
70 ing the shafts out of the way. To prevent the accidental and annoying detachment of the shafts from the shackles when thus raised, I prefer to employ a spring or pin in the shackle and which enters a groove in the  
75 back of the thill-eye to prevent the longitudinal movement of the eye in the barrel or shackle.

As shown in the drawings, the rear part of the shackle or barrel is provided with a hole  
80 10, which may be either round or square, to receive the spring-pin 11, and the thill-eye 8 is provided with a peripheral groove 12 midway between its ends, and upon the back and top and into which the spring or pin projects to engage with the eye and prevent its re-  
85 moval from the shackle until the pin is removed.

I prefer to use a spring-pin of the construction shown in Figs. 5, 6, and 7. The straight  
90 part 13 of this spring-pin enters the groove 12 in the eye to lock the eye in the shackle, and also presses against the eye to prevent the rattling thereof in the shackle. The rear leg 14 of the pin is provided with bends 15 and 16 to lock the spring in the shackle, as  
95 well illustrated in Fig. 7.

It is obvious that the detail construction of my device may be altered in several respects without departing from the spirit of  
100 my invention, and I therefore do not confine the invention to the specific construction herein shown and described.



Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the barrel-shackle 5 2 having a large central opening 3 and a vertical slot 6 in its forward part and provided with an entrance slot or notch 7 in its upper part, of an eye adapted to fit within said central opening 3, the shank of said eye passing 10 through said slot 7, and normally resting within said vertical slot 6 at a point distant from said entrance-notch whereby said eye is locked in the shackle by the solid portions thereof, and a spring-pin 11 carried by said 15 shackle and adapted to engage said eye substantially as described.

2. The combination, with a barrel or cylinder shackle 2, having a central opening 3, a vertical slot 6 in its forward part and provided 20 with an entrance slot or notch 7 in its upper part, of an eye fitting within said central opening and having a shank to enter said entrance-slot and play vertically in said vertical slot and normally locked therein at a 25 distance from said entrance-notch by the

solid portions of said shackle, said shackle being provided with a pin-opening 10 and said eye with a groove 12, and a pin 11 adapted to enter said pin-opening and said groove in the eye of said shackle, substantially as described. 30

3. The combination, with a barrel-shackle having a central opening 3 and a vertical slot 6 in its forward part and the entrance-slot 7 in its upper part, of an eye 8 having a shank 35 9 adapted to enter said slot 7 and play vertically in said slot 6, said shackle also having a hole 10 and said eye a groove 12 in its rear side, and a spring-pin 11 in said opening 10 and having a straight part 13 to enter said 40 groove 12 and a bent leg 14 whereby said spring is locked in said shackle, substantially as described.

In testimony whereof I have hereunto set my hand, this 20th day of April, 1898, at Minneapolis, Minnesota. 45

JOHNSTON MEALEY.

In presence of—

C. G. HAWLEY.

M. E. GOOLEY.