(No Model.)

# C. W. GOBLE.

## THILL COUPLING.

No. 567,090. Patented Sept. 1, 1896.

*Fig. 1*

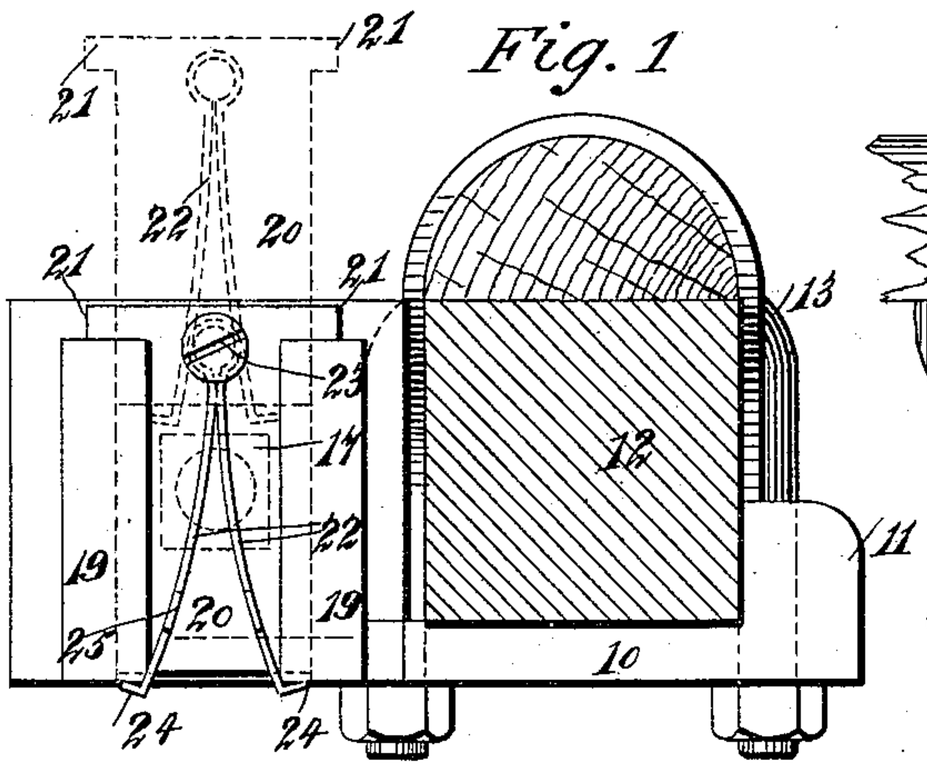



*Fig. 2*

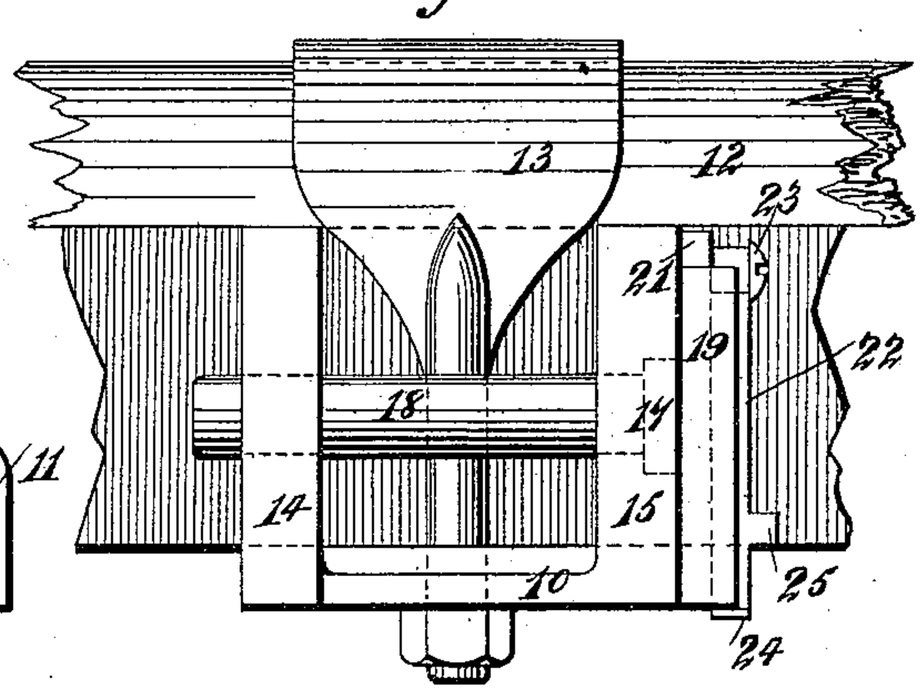



*Fig. 3*

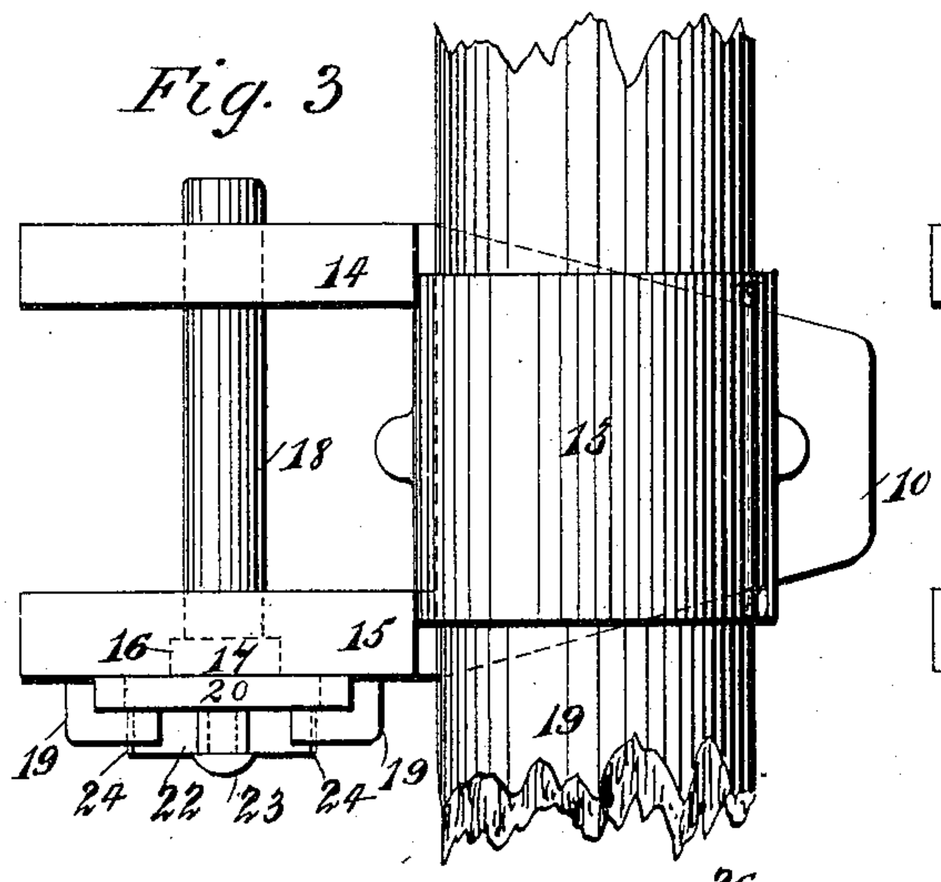



*Fig. 4*

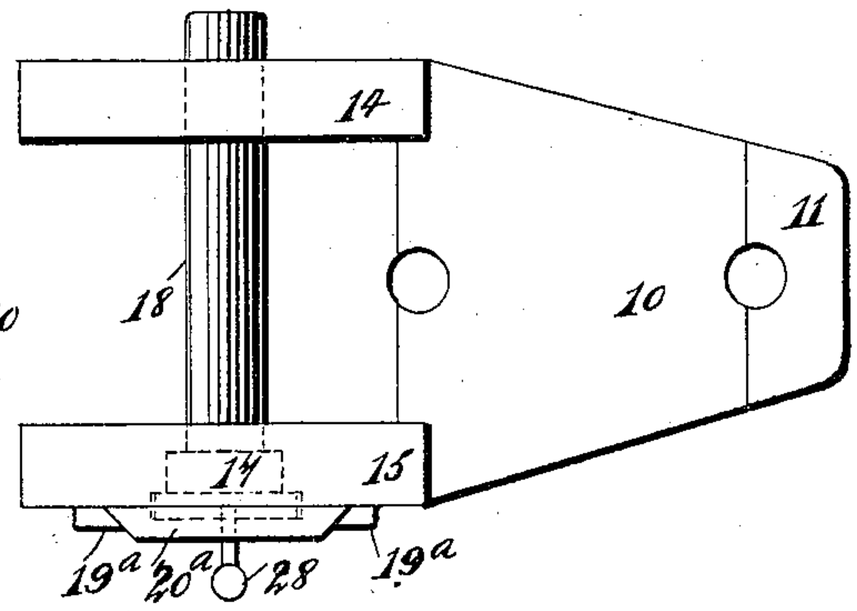



*Fig. 5*

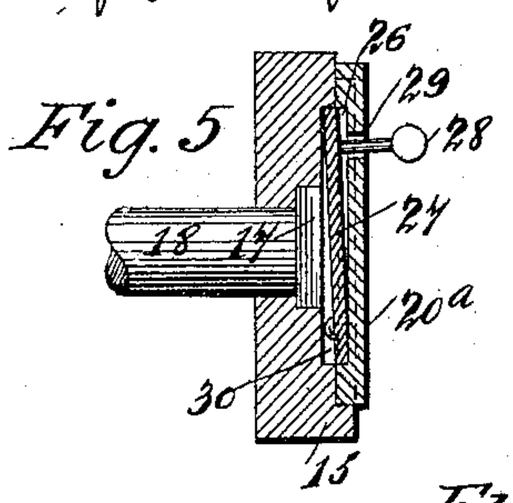



*Fig. 6*

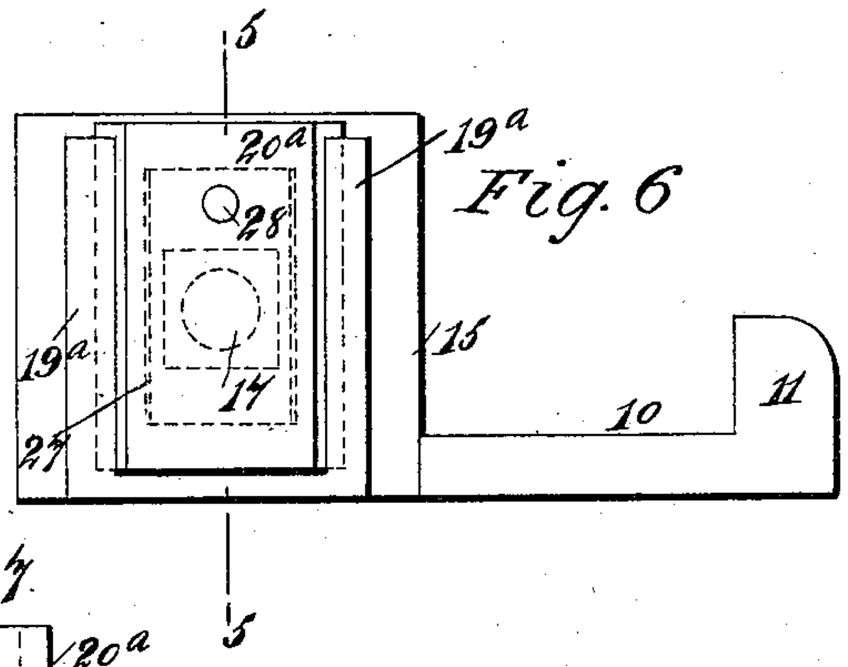
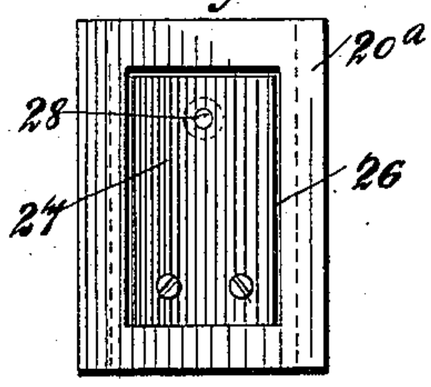



*Fig. 7.*

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# UNITED STATES PATENT OFFICE.

CHARLES W. GOBLE, OF CANYON, COLORADO, ASSIGNOR OF ONE-HALF TO LEWIS A. LANHAM, OF SAME PLACE.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 567,090, dated September 1, 1896.

Application filed January 9, 1896. Serial No. 574,813. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES W. GOBLE, of Canyon, in the county of Fremont and State of Colorado, have invented a new and useful Improvement in Thill-Couplings, of which the following is a full, clear, and exact description.

My invention relates to thill-couplings; and it has for its object to provide such a coupling which will be simple, durable, and economic and capable of attachment to any axle, the coupling being so constructed as to enable a person to expeditiously and conveniently change from a thill to a pole, or vice versa, when desired.

A further object of the invention is to provide a thill-coupling in which there will be no necessity of burs and in which the head of the coupling-pin will be concealed and whereby also there will be comparatively no portion of the device liable to produce rattling or an unpleasant noise.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a transverse section of an axle to which the coupling is attached, the coupling being shown in side elevation. Fig. 2 is a front elevation of the coupling and a portion of the axle. Fig. 3 is a plan view of the same. Fig. 4 is a plan view of the coupling disconnected from the axle and illustrating a slight modification in the lock for the coupling-pin. Fig. 5 is a vertical section taken substantially on the line 5 5 of Fig. 6. Fig. 6 is a side elevation of the coupling having a modified form of block applied, and Fig. 7 is a rear elevation of the locking-slide shown in Figs. 4, 5, and 6.

In carrying out the invention the body portion of the coupling consists of a base-plate 10, having a lug 11 upon its upper surface at its rear end, the said base-plate being adapted for engagement with the bottom of the axle 12 and the lug for engagement with the rear of the axle, the plate being secured upon the axle by means of a clip 13 or an equivalent device, and the construction of the body of the clip may be said to be completed by the addition of two jaws 14 and 15, one being at each side of the forward portion of the base-plate. These jaws preferably extend beyond the forward end of the plate and at their rear ends abut against the axle 12.

The jaw 15 is provided with a recess 16 in its outer face, adapted to receive the head 17 of the bolt or coupling-pin 18, the said pin being passed likewise through the opposing jaw, and the head of the bolt is flush with the aforesaid outer face of the jaw 15. At each side of the center of the jaw 15, upon its outer face, a slideway 19 is produced, and these slideways are adapted to receive a locking-slide 20, its downward movement being limited usually by lugs 21, formed at the top and engaging with the upper edges of the said ways. The locking-slide when in position in its ways will cover or conceal the head of the bolt or coupling-pin 18 and effectually prevent the said pin from working out from the jaws. The plate is held in locking position on the jaws by means of a bifurcated spring 22, having its upper end attached to the upper portion of the outer face of the slide by means of a screw 23 or its equivalent, while at the bottom of each member of the spring a shoe 24 is formed, the shoes extending in opposite directions; and the body portion of each member of the spring is provided with a handle 25, whereby the said members may be conveniently drawn together in order that the slide may be manipulated in its ways, and after the slide has been carried down to its normal position on the jaw 15 the shoes 24 of the spring will engage with the bottom portions of the ways 19 and prevent the dislodgment of the slide until it is to be purposely removed. The coupling-pin 18 is passed through a thill-iron after the said iron has been entered between the jaws 14 and 15 and after the slide 20 has been withdrawn from the body of the coupling.

In Figs. 4, 5, 6, and 7 I have illustrated a slight modification in the locking mechanism or device. The slideways 19ª are beveled upon their inner faces instead of being of angular construction, as shown in Fig. 3, and the slide

20ª is correspondingly beveled, so that there is practically a dovetail connection between the slide and its ways. The bifurcated spring is omitted in this form of the slide, and in the back of the slide a recess 26 is made, as is best shown in Figs. 5 and 7, of sufficient size to receive a plate-spring 27, and this spring is secured at its lower end within the slide-recess 26 and is provided at or near its upper end with a handle 28, firmly secured to the central upper portion of the spring and extending outward through an opening 29 in the slide, while in the outer face of the jaw 15 an additional recess 30 is produced, and in the base-wall of this recess the recess 16 is made, adapted to receive the head of the bolt. By drawing the spring 27 outward the slide may be raised or lowered, and when carried to its lower position the handle of the spring is released and the spring will enter the recess 30 in the jaw 15, and by engagement with the upper wall of this recess will prevent the plate from being removed until such removal is desired. The relation of the spring to the upper wall of this recess is clearly shown in Fig. 5.

It is evident from the foregoing description that this coupling may be readily manipulated either by an inexperienced person or by one possessing but little strength, and that the thills or poles may be coupled to the axle in an exceedingly convenient and expeditious manner.

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

1. The combination with a separate clip, of a thill-coupling having a base-plate provided at its rear end with an upwardly-projecting lug and forward spaced-apart jaws having holes therethrough, one of said jaws being provided with a recess adapted to receive the head of the coupling-pin, vertical slideways on said latter jaw on each side of said recess, a slide movable in said ways arranged to cover the head of said pin, a bifurcated spring attached at one end to said slide, the members thereof having locking engagement with said ways and handles secured to each member of said spring adapted to free said spring from locking engagement with said slideways and raise said slide from said ways, as and for the purpose set forth.

2. A thill-coupling comprising a body portion adapted for attachment to an axle, forward spaced-apart jaws, one of said jaws having a recess within which the head of the coupling-pin is designed to fit, slideways on the outer face of said recessed jaw at each side of the recess therein, a slide movable in said ways designed when in position to retain said pin in said jaws, a spring having bifurcated arms or members forming at their lower ends opposing shoes, said shoes engaging the lower portions of said ways when said slide is in its lowermost position, and means for disengaging said shoes from said ways, as and for the purpose set forth.

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Witnesses:
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