F. BOCKEMEYER.

SHAFT COUPLING.

APPLICATION FILED MAR. 10, 1908.

917,842.

Patented Apr. 13, 1909.

Fig. 1.

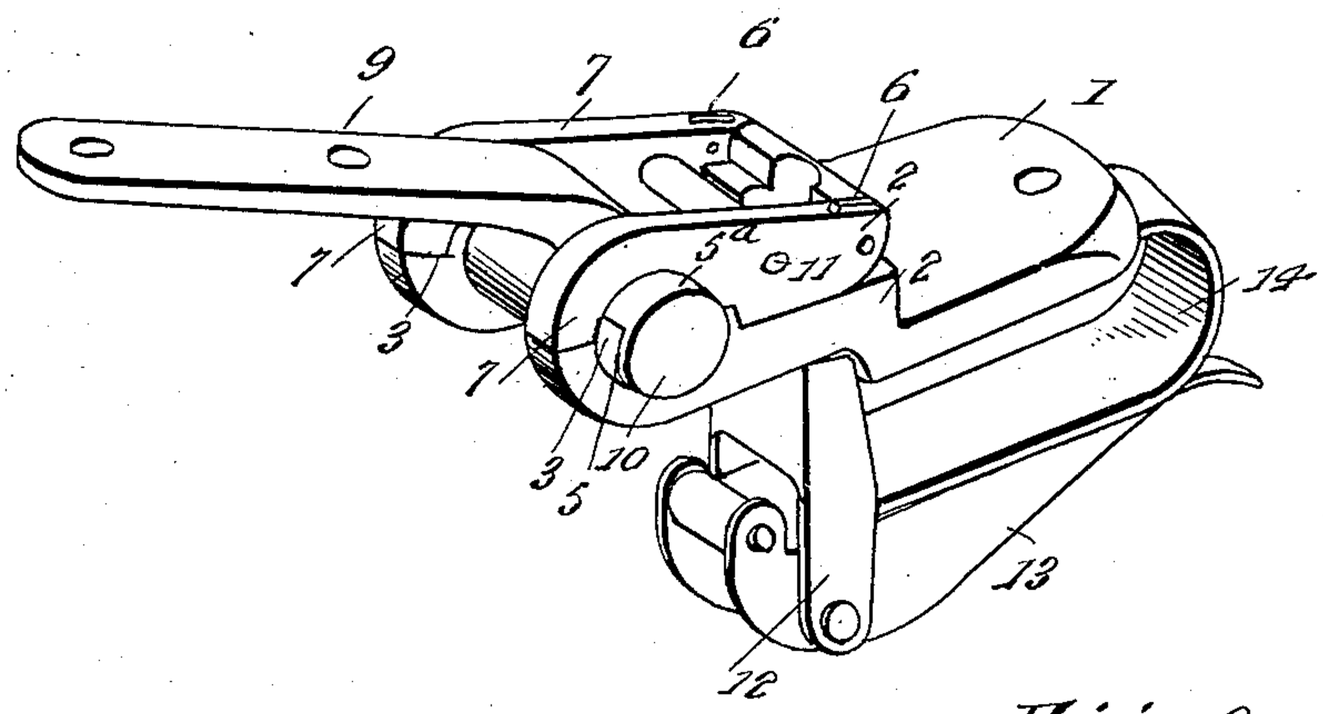

Fig. 2.

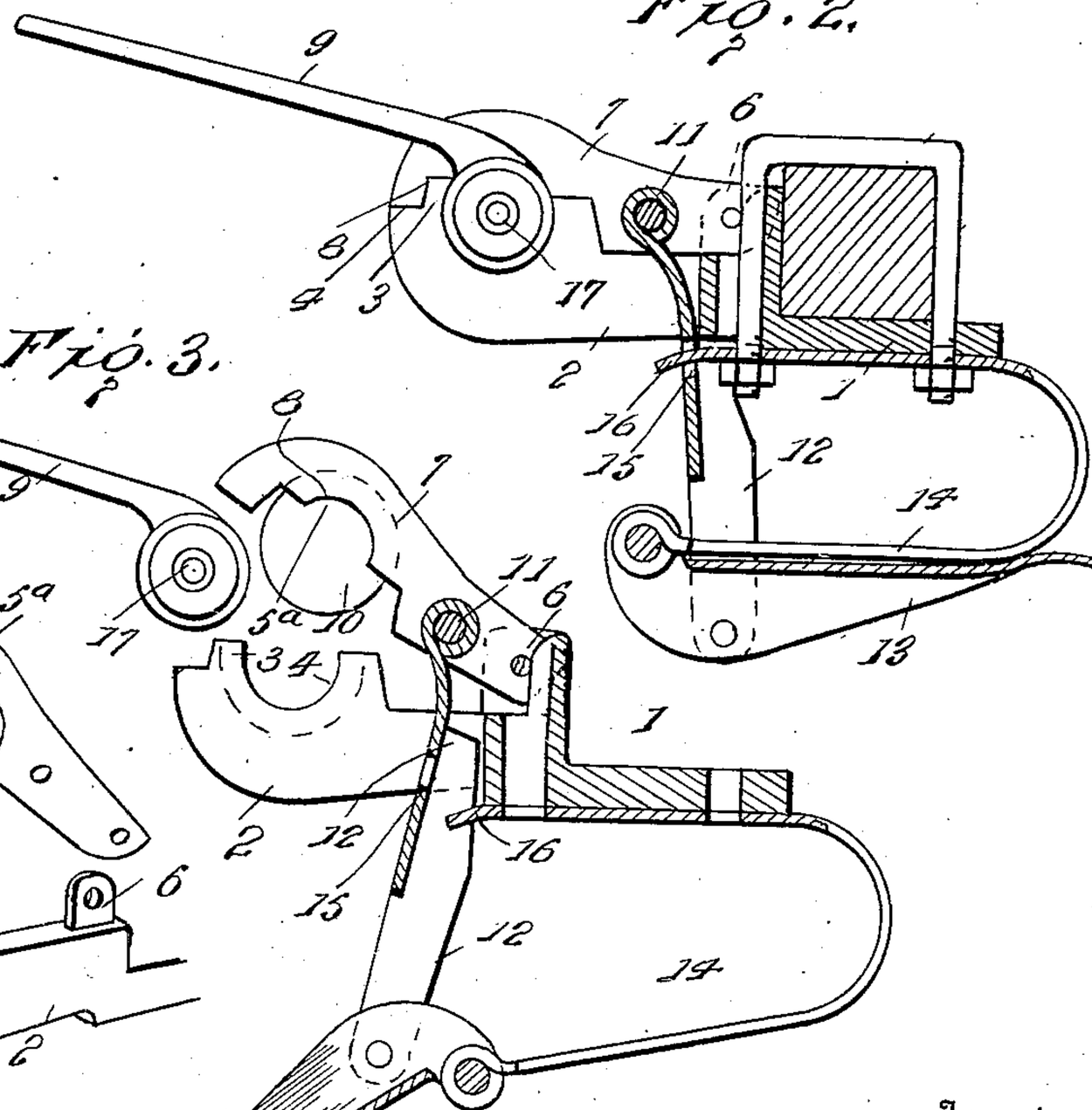

Fig. 3.

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

FRANK BOCKEMEYER, OF ASSUMPTION, ILLINOIS.

SHAFT-COUPLING.

No. 917,842. Specification of Letters Patent. Patented April 13, 1909.

Application filed March 10, 1908. Serial No. 420,271.

To all whom it may concern:

Be it known that I, FRANK BOCKEMEYER, citizen of the United States, residing at Assumption, in the county of Christian and State of Illinois, have invented certain new and useful Improvements in Shaft-Couplings, of which the following is a specification.

The present invention relates in general to vehicles and more particularly to a novel means for attaching the shaft or tongue to the axle.

The object of the invention is the provision of an improved shaft coupling which is peculiarly constructed to admit of a quick engagement or disengagement of the shaft and which locks the shaft securely in position when in use.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a shaft coupling embodying the invention. Fig. 2 is a longitudinal sectional view through the same showing the jaws locked together in coöperative relation. Fig. 3 is a similar view with the jaws separated. Fig. 4 is a detail perspective view of the jaws and the rear end of the shaft, portions being removed.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawing, the numeral 1 designates the stock which is in the nature of a plate and is designed to be secured to the axle of the vehicle in any suitable manner. Integral with the stock 1 and projecting forwardly therefrom is a fixed jaw which is bifurcated and comprises the spaced and parallel arms 2. These arms 2 are provided upon their upper faces with the enlargements 3 having the semicircular depressions 4 formed therein which are surrounded by the outwardly projecting flanges 5. An ear 6 projects upwardly from the rear end of each of the arms 2 and pivotally mounted upon these ears is the movable or swinging jaw which comprises the two arms 7 corresponding to the two arms of the fixed jaw. Each of these arms 7 of the swinging jaw is recessed to receive the corresponding enlargement 3 of the fixed jaw and a depression 8 is formed at the base of the recess for coöperation with the corresponding depression 4 to receive the bolt or pivot member upon which the tongue 9 is mounted. Each of the depressions 8 is also surrounded by an outwardly projecting flange 5^a and these flanges 5^a carry the cover plates 10 which project over the flanges 5 when the jaws are closed and serve to exclude dirt from the bearings. The two arms 7 of the swinging jaw are connected by a pin or transverse bar 11 engaging a link 12 which in turn is pivotally connected to the operating lever 13. This operating lever is mounted upon a spring 14 carried by the stock 1, and in the present instance this spring has a U-formation, one of the arms being secured to the lower face of the stock while the opposite arm has the lever 13 pivotally mounted upon the extremity thereof. When the lever 13 is swung rearwardly against the spring the link 12 operates to draw the swinging jaw downwardly into coöperative relation to the fixed jaw, while when the lever is swung forwardly the link forces the swinging jaw upwardly away from the fixed jaw. The invention also contemplates means for coöperation with the link to lock the swinging jaw against accidental disengagement and for this purpose it will be observed that the link 12 is provided at an intermediate point with an opening or cut away portion 15 designed to receive a tongue 16 projecting between the arms of the fixed jaw. In the present instance this tongue 16 constitutes an extension of that arm of the U-shaped spring 14 which is secured to the stock 1. In this connection it will be observed that when the operating lever 13 is moved forwardly the link 12 is first swung forward until the tongue 16 is disengaged from the opening 15, and then moves upwardly to swing the movable jaw away from the fixed jaw.

A bolt 17 passes through the eye at the rear end of the shaft and is provided upon opposite sides of the shaft eye with the bearing sleeves or collars 18 which are designed to be received within the corresponding depressions 4 and 8 of the fixed and movable jaws of the device. Attention may be directed to the fact that the collars 18 are locked with the shaft so as to move therewith and in the present instance are provided upon their inner faces with the teeth 19 which engage corresponding depressions in the shaft. With this construction it will be readily apparent that the shaft can be quickly

attached to the vehicle or removed therefrom, and that it is securely locked in position when in use.

Having thus described the invention, what is claimed as new is:

1. In a shaft coupling, the combination of a stock, a fixed jaw projecting from the stock, a movable jaw for coöperation with the fixed jaw, a spring upon the stock, a lever carried by the spring, and a link connecting the lever and the movable jaw and having an interlocking connection with the stock for locking the movable jaw in a closed position.

2. In a shaft coupling, the combination of a stock provided with a fixed jaw, a movable jaw for coöperation with the fixed jaw, a projection upon the stock, a spring carried by the stock, a lever mounted upon the spring, and a link connecting the lever to the movable jaw, the said link being formed with an opening designed to engage the projection upon the stock to lock the movable jaw in an operative position.

3. In a shaft coupling, the combination of a stock provided with a fixed jaw, a movable jaw for coöperation with the fixed jaw, a U-shaped spring secured to the stock, one of the arms of the said spring being provided with a projection, a lever mounted upon the opposite arm of the U-shaped spring, and a link connecting the lever to the movable jaw, the said link being designed to have an interlocking connection with the before mentioned projection upon the spring for locking the movable jaw in a closed position.

4. In a shaft coupling, the combination of a stock provided with a fixed jaw comprising spaced arms formed with enlargements having depressions therein, the said depressions being surrounded by outwardly projecting flanges, a movable jaw comprising arms corresponding to the arms of the fixed jaw and formed with notches to receive the enlargements of the fixed jaw and also with depressions at the base of the notches corresponding to the before mentioned depressions in the enlargements, the said depressions of the movable jaw being also surrounded by outwardly projecting flanges, the outwardly projecting flanges of one of the jaws carrying cover plates which are designed to extend over the flanges of the opposite jaw, and means for locking the movable jaw in an operative position.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK BOCKEMEYER. [L. S.]

Witnesses:

A. CONNER,

A. H. CORZINE.