

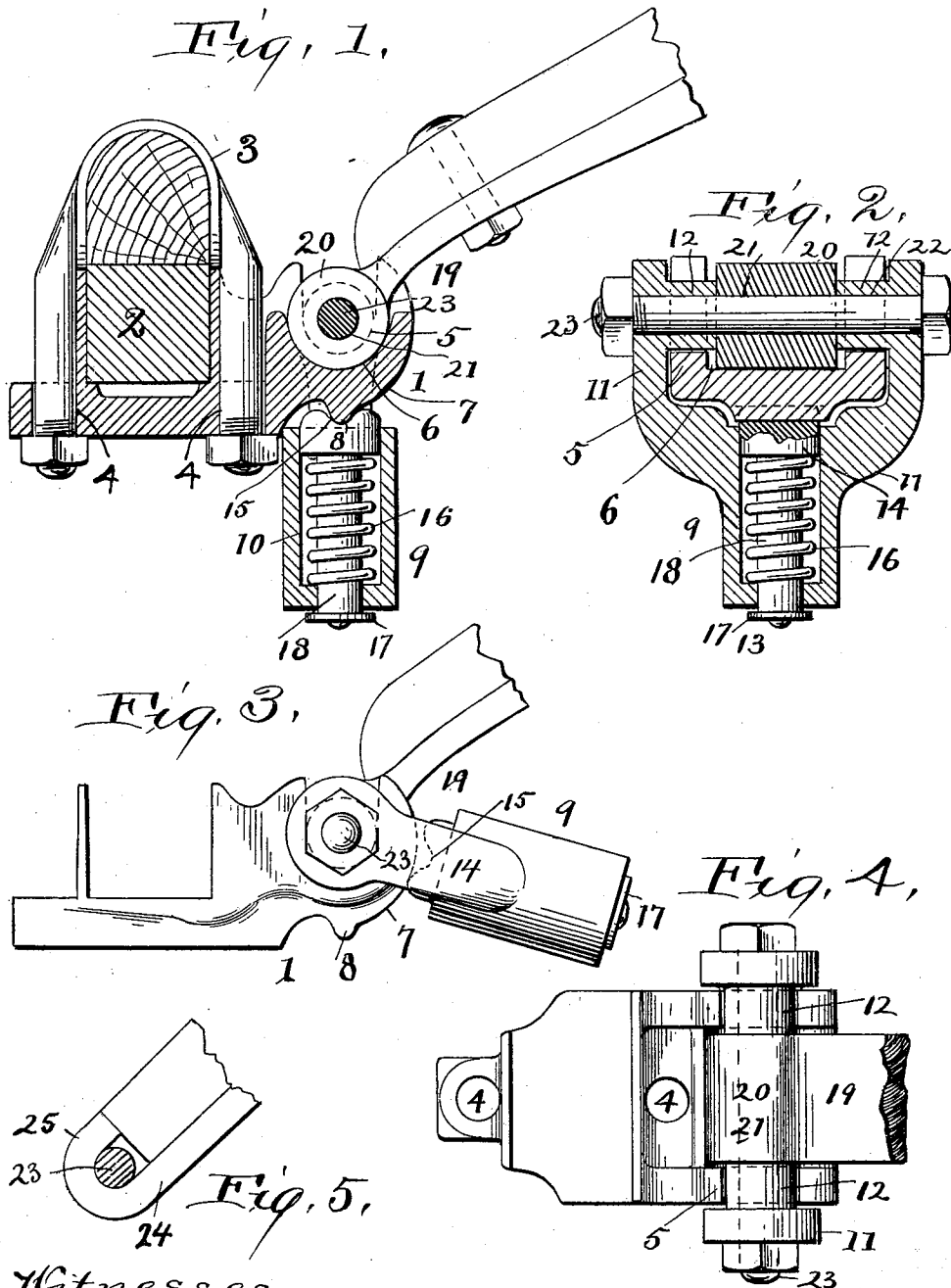
No. 628,255.

Patented July 4, 1899.

H. C. SWAN.
THILL COUPLING.

(Application filed Jan. 16, 1899.)

(No Model.)



Witnesses,
E. B. Gilchrist
G. M. Wilkins

Inventor,
Henry C. Swan
by *Quaintance*
his atty.

UNITED STATES PATENT OFFICE.

HENRY C. SWAN, OF OSHKOSH, WISCONSIN.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 628,255, dated July 4, 1899.

Application filed January 16, 1899. Serial No. 702,215. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. SWAN, a citizen of the United States of America, residing at Oshkosh, Winnebago county, State of Wisconsin, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

The annexed drawings and the following description set forth in detail one mechanical form embodying the invention, such detailed construction being but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings, Figure I represents a side elevation in section of my improved thill-coupling; Fig. II, a front elevation in section; Fig. III, a side elevation showing the shifter disengaged; Fig. IV, a plan view of my device, and Fig. V another form of thill attachment.

The bracket 1 is attached to the axle 2 of the vehicle by means of suitable flanges and a clip 3, that passes over the axle and is secured in bores 4, provided in the bracket. A thill-seat 5 is formed integral with the bracket and is recessed, as at 6, in its central portion to form a bearing for the thill end. The bottom of said bracket is suitably curved and is provided with an eccentric way 7, having a rib 8 formed thereon.

The shifter 9 consists of a hollow barrel 10, provided with arms 11, each having an inwardly-projecting thimble 12 for the purpose of centering the thill end. A movable plunger 13 is mounted within the barrel and is provided with a head 14, having a recess 15 formed therein to engage the rib 8. The plunger is pressed outwardly by means of a spring 16, contained within the barrel, and is held against outward displacement by a washer 17, secured to the shank 18.

The end of the thill 19 is formed with a head 20, provided with an eye 21. Bores 22 are formed through the ends of the arms and the thimbles of the shifter, and the thill 25 is secured to the shifter by means of a bolt or rivet 23 passing through said bores and the eye of the thill. Another form of attachment between the thill and the shifter is illustrated in Fig. V. The end of the thill-iron 24 is formed into a hook 25, and the wooden part

of the thill abuts against same, thus forming the eye.

The shifter is attached permanently to the thill, and in order to secure the thill in the bracket the shifter is brought into the non-operative position shown in Fig. III and the thill is placed in its seat. The shifter is then forced downwardly and rearwardly until the recess on the head of the spring-bolt engages the rib formed on the bottom of the bracket, where it will be held firmly in place by the spring. In order to remove the thill, the operation is simply reversed, the shifter being pulled forwardly and upwardly until in its non-operative position, when the thill can be lifted out of the bracket.

By this construction thills, poles, and similar attachments can be secured to or taken from a vehicle without removing any bolts or otherwise changing the parts after they have once been adjusted. The shifter is fastened securely to the thill and practically becomes a part thereof. It is immaterial whether the thill end seats in the recessed portion of the bracket or whether the bearing between the parts is provided by the thimbles of the shifter and the sides of the thill-seat. Looseness between the thills and bracket, and consequent rattling, is prevented by the action of the spring. The coupling is also adapted to be used in connection with numerous other articles and for a variety of purposes other than the ones particularly pointed out.

What I claim is—

1. The combination with a bracket and a thill, of a shifter pivotally secured to said thill, said shifter being provided with movable means engaging automatically with the bottom of the bracket to secure said thill to the bracket, substantially as described.

2. The combination of a bracket, a thill, and a shifter pivotally secured to said thill, said shifter being provided with a movable plunger adapted to automatically engage with the bottom of said bracket, and secure said thill to the bracket, substantially as described.

3. In a thill-coupling, a bracket provided with a thill-seat having an eccentric way on its bottom, a thill, and a shifter secured to said thill, provided with a plunger movable

on said eccentric way, and interlocking with said bracket to secure said thill to the same, substantially as described.

4. In a thill-coupling, the combination with
5 a bracket provided with a thill-seat, and having an eccentric way on its bottom, of a shifter having inwardly-projecting thimbles, and provided with a plunger, movable on said eccentric way, and having interlocking engagement therewith, and a thill pivotally secured
10 to said shifter between said thimbles, and rotatable thereon, substantially as described.

5. In a thill-coupling, the combination of a
15 bracket provided with a seat having a thill-bearing formed therein, and an eccentric way

and a projection on its bottom, a thill mounted in the bearing formed in said seat and rotatable therein, and a shifter secured to said thill and provided with a plunger having a recessed head adapted to engage said projection and lock the thill to the bracket, substantially as described.

In testimony whereof I sign this specification, in the presence of two witnesses, this 14th day of January, 1899.

HENRY C. SWAN.

Witnesses:

E. B. GILCHRIST,

G. M. WILKINS.