

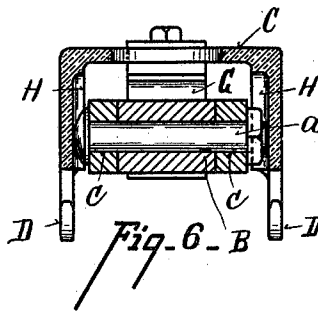
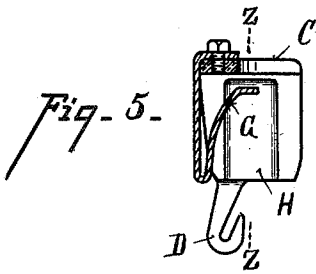
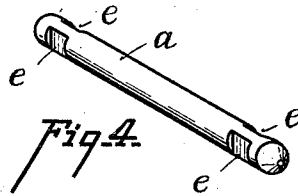
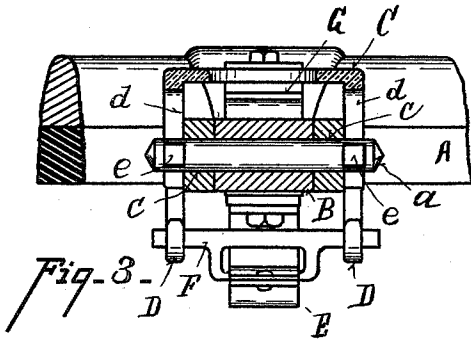
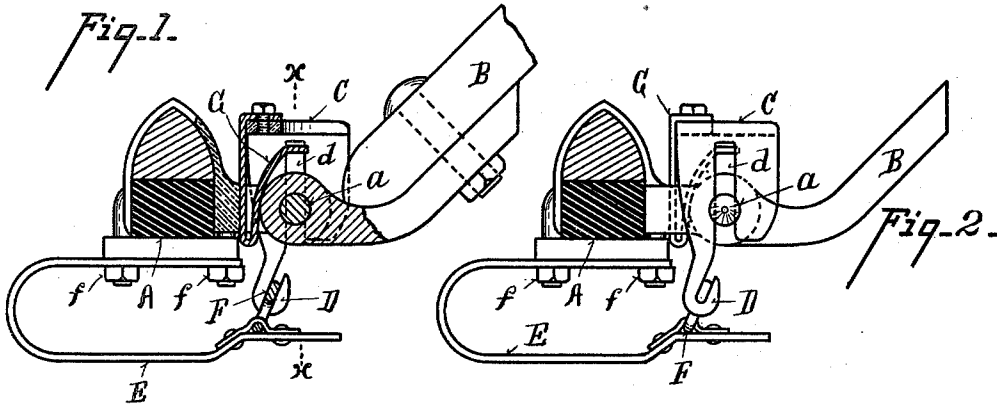
No. 626,548.

Patented June 6, 1899.

L. G. MAYER.  
THILL COUPLING.

(Application filed Mar. 21, 1899.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

LOUIS G. MAYER, OF CINCINNATI, OHIO.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 626,548, dated June 6, 1899.

Application filed March 31, 1899. Serial No. 711,200. (No model.)

To all whom it may concern:

Be it known that I, LOUIS G. MAYER, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

The object of my invention is to provide an antirattling device which can be applied to the ordinary form of shaft-coupling without particular change.

The features of my invention are more fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a central vertical section of my device. Fig. 2 is a side elevation of the same. Fig. 3 is a section on line *xx*, Fig. 1. Fig. 4 is a plan view of the coupling-bolt. Fig. 5 is a sectional view of a modification of the cap. Fig. 6 is a section on line *zz*, Fig. 5.

A represents the axle; B, the shaft, of ordinary construction, and *a* the shaft-coupling bolt passing through the orifices *cc* of the ears of the coupling-head, attached to the shaft in the usual way.

C represents a cap adapted to fit over the coupling-head. In the preferred form it is provided with slots *dd* in its depending sides. These slots pass over the ends of the bolt which project beyond the coupling.

In the preferred form the bolt *a* is provided with parallel flat surfaces *ee*, grooved therein, which seat in these slots, and as the flat edges of the slots engage the flattened faces of this bolt at each end they lock the bolt against rotation or endwise displacement and also prevent the depending sides from spreading apart under strain. The cap is provided with depending hooks D.

E represents a spring attached by bolts *ff* to the under side of the axle and projecting upward, being provided with a bail F, adapted to engage the hooks D. There is seated inside the cap a curved spring G, curved forward and upward and adapted to form an upper bearing against the shaft when the cap is in position. Leather, rubber, or other similar packing material may be used instead of the spring to bear against the shaft-eye under pressure of the lever-spring E. This cap may

instead of being slotted pass completely over the coupling-head, provided the coupling-bolt terminates even with coupling-head and does not project beyond the orifices *cc*, or where the bolt-head *g* and nut *h* are employed, as shown in Figs. 5 and 6, the cap may be provided with recesses H, grooved on the insides of the side walls and adapted to pass over the bolt part projecting beyond the coupling-head.

In operation the coupling is effected as usual. The cap is then inserted over the head and pressed downward and the spring E pulled upward until the bail engages over the hook. This brings the spring G against the bolt from above, so the coupling-joint is subjected to spring-pressure from below, and the spring G forms a yielding bearing in rear of the thill-eye. The bolt will be held not only from rotation, but the shaft will be held from longitudinal movement on the bolt and all rattling of the parts effectively prevented.

My device is cheap in construction, strong, and easily applied to the ordinary shaft-couplings.

Having described my invention, what I claim is—

1. In a thill-coupling the combination of a cap provided with depending sides open on the bottom, hooks formed on the ends of said sides, a bearing device located in said cap adapted to bear against the thill-eye, and a spring secured to the axle and adapted to engage over said hooks, substantially as specified.

2. In a shaft-coupling, the coupling-head, the shaft and coupling-bolt through said parts, a cap provided with slotted sides adapted to fit over said head, recessed flat surfaces formed in said bolt adapted to be engaged by said slots to lock the said bolt against rotation, a bearing device seated in said cap adapted to bear against the shaft, a spring secured to the axle, and means for attaching said spring to the said cap, substantially as specified.

3. In a shaft-coupling the combination of a coupling-head, shaft and coupling-bolt, a bearing-cap provided with depending sides, hooks formed on the ends of said sides, flat

recesses formed in the ends of said bolt, recesses formed in the depending sides of said cap adapted to engage the recesses of the bolt, whereby the bolt is locked against rotation and the sides against spreading, and a  
5 spring attached to the axle and adapted to engage said hooks, substantially as specified.

In testimony whereof I have hereunto set my hand.

LOUIS G. MAYER.

Witnesses:

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