

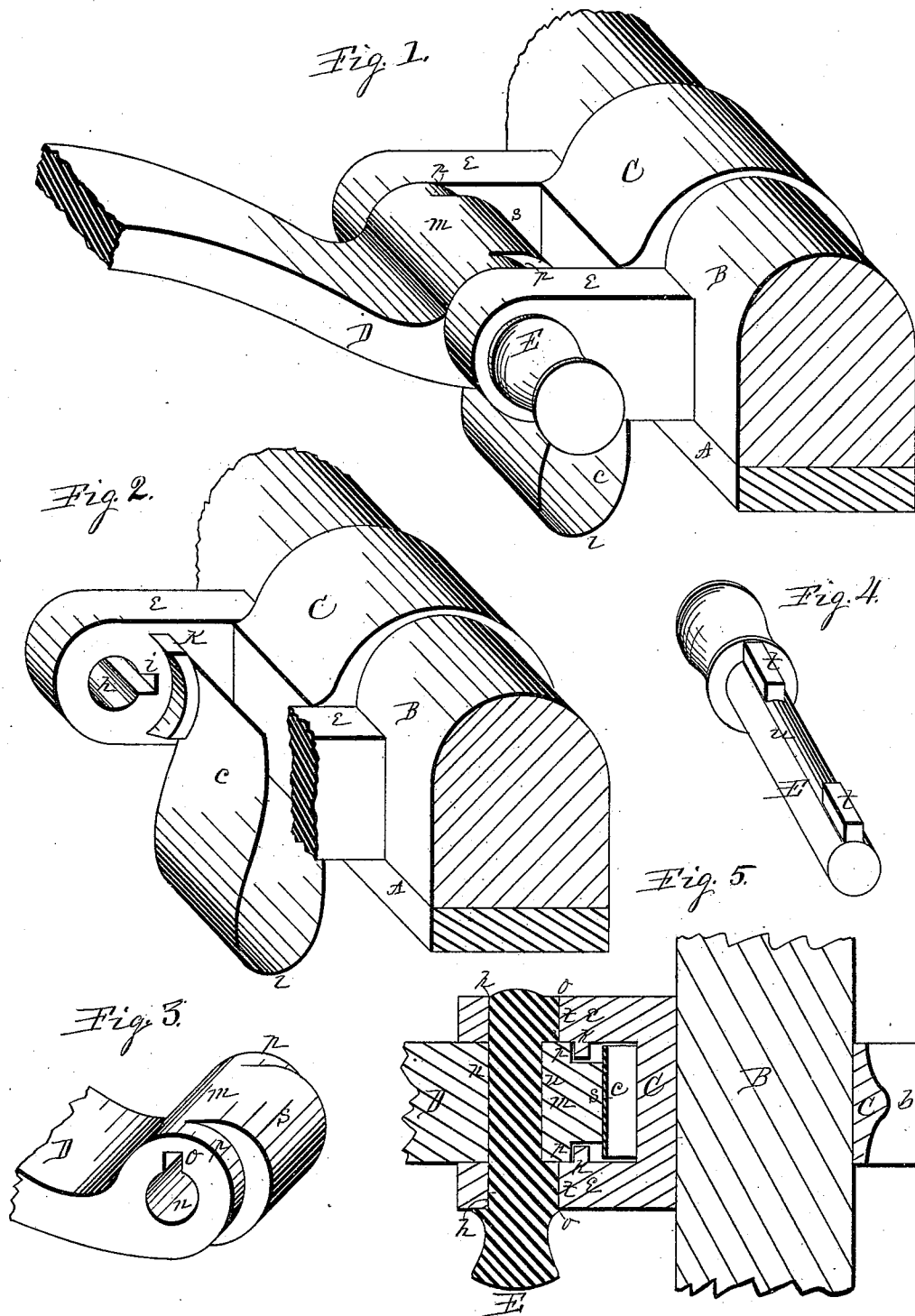
(No Model.)

2 Sheets—Sheet 1.

P. D. PECK.
THILL COUPLING.

No. 297,442.

Patented Apr. 22, 1884.



Witnesses.
Geo. Perkins
A. O. Behl

Inventor
Palmer D. Peck,
Per Jacob Behl,
Atty.

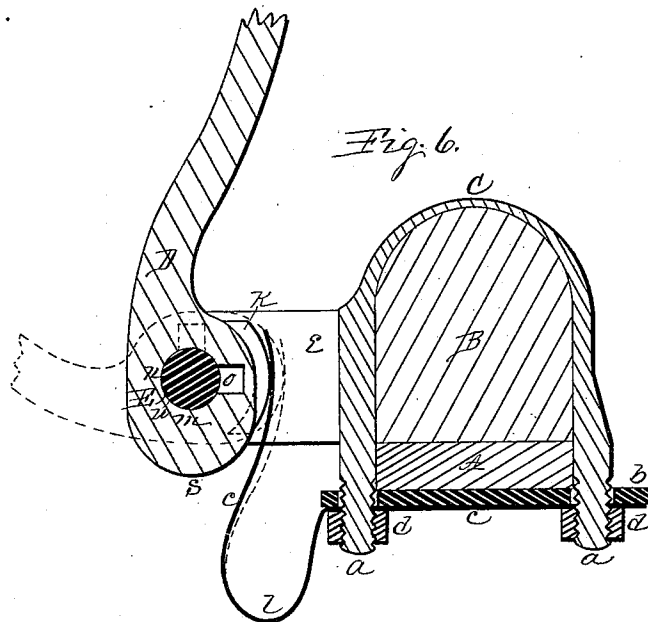
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UNITED STATES PATENT OFFICE.

PALMER D. PECK, OF COLESBURG, IOWA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 297,442, dated April 22, 1884.

Application filed February 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, PALMER D. PECK, a citizen of the United States, residing at Colesburg, in the county of Delaware, in the State of Iowa, have invented a new and useful Thill-Coupling, of which the following is a specification.

This invention relates to that class of thill-couplings known as the "self-locking detachable thill-coupling."

The object of this invention is to produce a detachable self-locking thill-coupling capable of being connected and disconnected without the use of tools. To this end I have designed and constructed the coupling represented in the accompanying drawings, in which—

Figure 1 is an isometrical representation of a thill-coupling embodying my invention in place on a portion of an axle-tree of a vehicle. Fig. 2 is also an isometrical representation of the coupling, in which portions are broken away to more clearly show its construction. Fig. 3 is an isometrical representation of the coupling portion of the thill-iron. Fig. 4 is an isometrical representation of the coupling-pin. Fig. 5 is a horizontal section cut through the center of the coupling-pin, and Fig. 6 is a vertical central section cut transversely of the axle-tree.

In the figures, A represents the iron portion of the axle-tree, and B the wood portion thereof, mounted upon the iron portion in the usual manner.

At C is represented a clip of bow-staple form, fitted to encircle the upper portion of the axle-tree, and its depending arms *a* are cylindrical and are screw-threaded. These screw-threaded arms extend through a clamping-plate, *b*, placed on the under side of the iron portion of the axle-tree, and through a plate-spring, *c*, placed on its under side, and by means of screw-nuts *d*, fitted to the screw-threaded arms *a*, the parts are firmly fixed in place. The clip C on its front side is provided with ears *e*, projecting forward from its edge portions. The ears *e* are suitably separated to receive the knuckle end of the thill-iron, and their projecting end portions are perforated, as at *h*, to receive a suitable coupling-pin. The perforations *h* are provided with a groove, *i*, in key-seat form. The ears *e* are provided with stops *k*, in this instance of seg-

ment form, projecting from their inner faces rearward of the perforation *h*, and concentric therewith. The plate-spring *c*, from its connection with the clamping-plate, is bent downward, having its depending portion *l* produced in an easy curve in such a manner that its uprising free end will engage the rear face of the stops *k* to resist its spring action and hold it in position to receive the knuckle of the thill-iron or permit its removal.

At D is represented a portion of the thill-iron, having its rear end portion, *m*, fitted in knuckle form to enter snugly between the projecting ears of the clip. The knuckle D is bored, as at *n*, to correspond with the perforations *h* in the ears, to receive a coupling-pin, and it is also provided with a groove, *o*, of key-seat form, to correspond with the like groove, *i*, formed in the ears of the clip. The rear portion, *p*, of the side ends of the knuckle is concentric with the perforation therein, and its rear center portion, *s*, is elongated, and is eccentric with the perforations, extending rearward to freely enter between the stops *k* and engage the free end of the spring *c* when the thills are in working position.

At E is represented a coupling-pin fitted to enter the perforations or openings *h* in the ears and *n* in the knuckle of the thill-iron. The end portions of the coupling-pin E are provided with a feather or spline, *t*, of suitable dimensions to freely enter and pass through the key-seat-formed grooves *i* in the ears and *o* in the knuckle of the thill-iron in such a manner that when in place the splines will engage the ears to prevent the pin from turning, and its center portion, *u*, thereof, minus the spline, will support the knuckle of the thill-iron between the ears and permit it to oscillate thereon freely. When the thills are brought to their working position, as in Fig. 1, the groove in the knuckle will be removed from the splines of the coupling-pin, and will securely lock the parts.

To connect or disconnect the thills from the vehicle, the thills must be raised to a vertical position, as represented in Fig. 6, in which position the grooves in the knuckle and ears will be brought to coincide, when the coupling-pin can be inserted to connect the parts, or can be withdrawn to disconnect them.

In the operation of connecting or discon-

necting the parts, it will be seen that when the
thills are in the vertical position shown in
Fig. 6 the enlarged eccentric rear portion, *s*,
of the knuckle will be in such position as to
5 permit the knuckle to be inserted between the
ears in position to receive the coupling-pin
without engaging the spring, which is sup-
ported against the stops *k*, and when the thills
are lowered to their working position, as in
10 Fig. 1, and as in the position as shown in the
dotted lines in Fig. 6, the enlarged eccentric
portion *s* will engage the spring *c*, which will
operate to produce a still coupling.

I claim as my invention—

The combination, with the perforated and 15
slotted ears, of a thill-iron bored and slotted,
as described, and formed with an enlarged ec-
centric portion, a splined pin to secure the
parts, a spring upon which the thill-iron bears,
and stops to limit the movement of the spring, 20
substantially as set forth.

PALMER D. PECK.

Witnesses:

E. E. DODGE,

Mrs. H. DUNSMOOR.