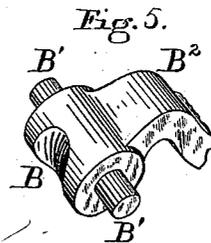
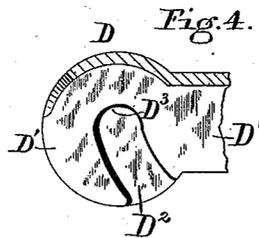
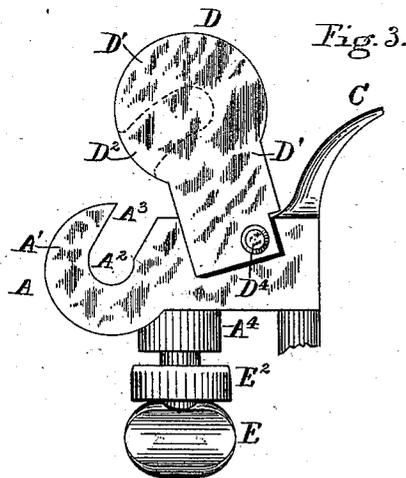
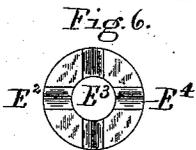
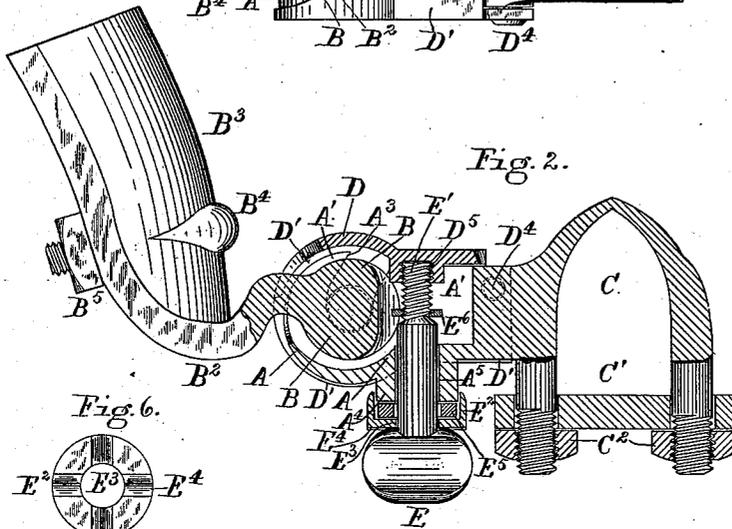
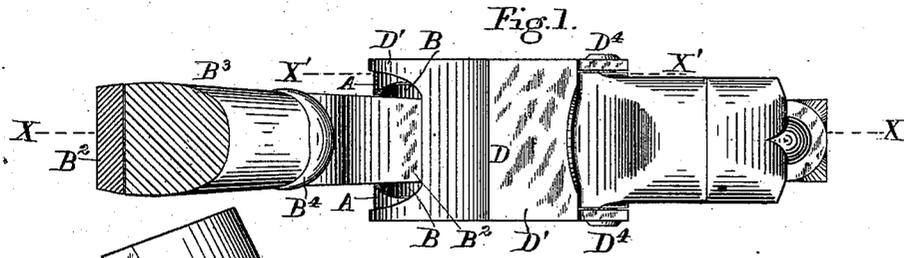


(No Model.)

B. E. WADE.
THILL COUPLING.

No. 400,526.

Patented Apr. 2, 1889.



Witnesses:
W. N. Myers.
E. T. Dowling.

Inventor:
Bryant E. Wade,
 per *L. L. Morrison,*
 Attorney

UNITED STATES PATENT OFFICE.

BRYANT E. WADE, OF ROCKFORD, ILLINOIS.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 400,526, dated April 2, 1889.

Application filed November 22, 1888. Serial No. 291,602. (No model.)

To all whom it may concern:

Be it known that I, BRYANT E. WADE, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented a certain new and useful Improvement in Non-Rattling Thill-Couplings for Vehicles, of which the following is a specification.

The object of this invention is to produce a non-rattling thill-coupling, by means of which thills may be quickly coupled with and uncoupled from vehicles without the aid of a wrench or other tool.

This invention consists of certain new and useful features of construction and combinations of parts, hereinafter described, and pointed out in the claims.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 is a plan view of my improved thill-coupling. Fig. 2 is a vertical partial section of the same through the dotted line X X in Fig. 1. Fig. 3 is a side elevation of the thill-coupling with the cap raised. Fig. 4 is a partial section through the dotted line X' X' in Fig. 1 of the coupling-cap. Fig. 5 is an isometric view, in detail, of the knuckle and pintles of the coupling. Fig. 6 is a view of the under side of a cap that will be fully described hereinafter.

Like letters of reference indicate corresponding parts throughout the several views.

A is a coupling-socket having end plates, A', provided with pintle-bearings A², and slots A³ opening out of the latter.

A⁴ is a bearing having a vertical tubular passage, A⁵, extending therethrough, depending from the under side of the socket A, the office whereof will be fully described hereinafter.

B is a coupling-knuckle of proper form and dimensions to be contained in the socket A, and provided with pintles B', adapted to enter the bearings A² in the end plates, A', through the slots A³ therein of said socket.

B² is a thill-iron integral with the knuckle B, and secured to the thill B³ by means of a T-bolt, B⁴, and nut B⁵.

C is a fore-axle clip integral or rigidly connected with the socket A, and provided with a clip-tie, C', and nuts C², all of which parts

are too well known to require further description.

D is a coupling-socket cap having end plates, D', provided with curved recesses D² in their inner faces adapted to admit the free ends of the pintles B' and furnish upper bearings, D³, for the same. The socket-cap D is hinge-jointed to the rear end of the socket A by means of a pintle, D⁴.

D⁵ is a cylindrical recess sunk in the under side of the cap D and threaded to receive a part to be described hereinafter.

E is a set-screw for holding the cap D securely down over the knuckle B in the socket A. The upper end of the set-screw E is provided with a thread, E', to adapt it to engage with the inside of the recess D⁵ in the cap D.

E² is a cap having a circular opening, E³, therein to admit the set-screw E therethrough, and provided with radial grooves E⁴, to prevent said set-screw from working loose.

E⁵ is a washer of some yielding substance, preferably rubber, included in the cap E², and perforated centrally to admit the set-screw E therethrough. The office of the washer E⁵ is to allow by its elasticity a little upward motion to the cap D, and to prevent the parts secured together by means of the set-screw E from rattling.

E⁶ is a washer, which prevents the set-screw E and its attachments from becoming detached from the socket A when the cap D is released for the purpose of uncoupling the thills B³.

To couple the thills, I raise the cap D to the position shown in Fig. 3, and introduce the knuckle B into the socket A, and the pintle B' into the bearings A² via the slots A³. Next lower the cap D and turn the set-screw E until the coupling will not rattle. Reverse the operations just detailed to uncouple the thills.

I claim as new and desire to secure by Letters Patent—

1. In combination, the coupling-socket A, having end plates provided with pintle-bearings A², and slots A³ opening out of the latter, and a bearing, A⁴, having a tubular passage therethrough, a coupling-knuckle of proper form and dimensions to be contained in said socket A, and provided with pintles B', adapted to enter the bearings A² in the

end plates, A', through the slots A³ therein, a
thill-iron integral with said knuckle, a coup-
ling-socket cap having end plates, D', pro-
vided with curved recesses D² in their inner
5 faces, adapted to admit the free ends of the
pintles B' and furnish upper bearings, D³, for
the same, said cap also having a threaded re-
cess, D⁵, therein, and being hinge-jointed to
10 the coupling-socket A, and a set-screw inserted
through the passage in the bearing A⁴ into the
recess D⁵ in the cap D, and securing all of the
aforesaid parts together to prevent them from
rattling, substantially as set forth.

2. In combination, the coupling-socket A,
having end plates provided with pintle-bear- 15
ings A² and slots A³, the coupling-socket cap
D, having end plates provided with curved
recesses D², to receive said pintles, the set-
screw E, the cap E², the washers E³ E⁴, and
clip C, with its tie C', substantially as de- 20
scribed, and for the purpose set forth.

BRYANT E. WADE.

Witnesses:

L. L. MORRISON,
E. F. DOWLING.