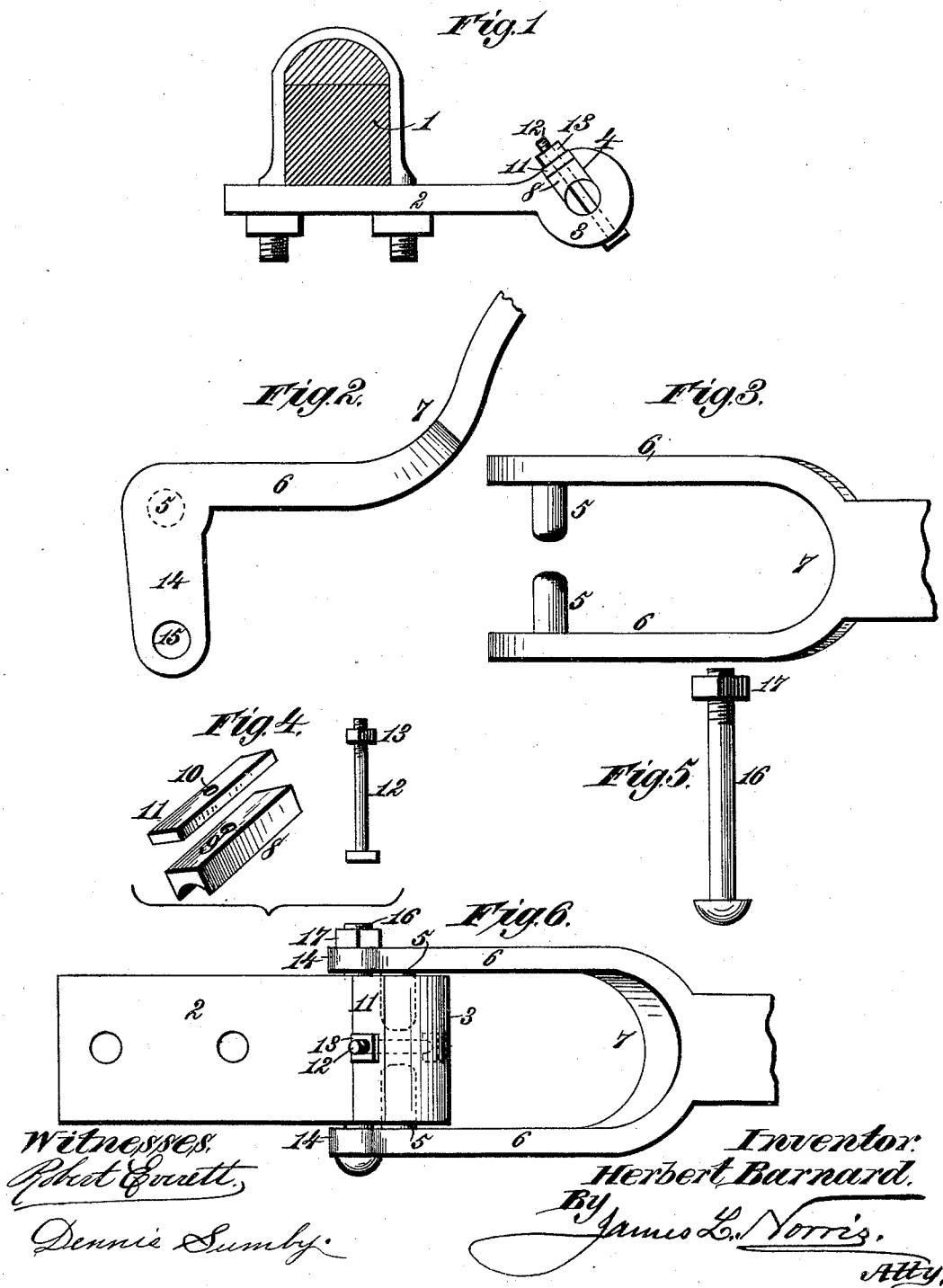


(No Model.)

H. BARNARD.
THILL COUPLING.

No. 417,969.

Patented Dec. 24, 1889.



UNITED STATES PATENT OFFICE.

HERBERT BARNARD, OF LOTUS, INDIANA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 417,969, dated December 24, 1889.

Application filed September 5, 1889. Serial No. 323,048. (No model.)

To all whom it may concern:

Be it known that I, HERBERT BARNARD, a citizen of the United States, residing at Lotus, in the county of Union and State of Indiana, have invented new and useful Improvements in Thill-Couplings, of which the following is a specification.

The object of my invention is to provide an improved non-rattling thill-coupling of simple and durable construction adapted to take up wear and maintain a tight connection that can be readily adjusted at any time.

My invention consists in the construction and combination of parts in a thill-coupling provided with an elastic anti-rattling cushion, as hereinafter described and claimed.

In the annexed drawings, illustrating the invention, Figure 1 is a view of that part of the coupling which is attached to the vehicle-axle. Fig. 2 is a side elevation of that part of the coupling which forms the shaft end. Fig. 3 is a plan of the shaft end of the coupling. Fig. 4 is a detail view of the cushion and its retaining and adjusting devices. Fig. 5 is a view of a bolt for preventing lateral spread of the thill-iron and taking up lateral wear between said part and the socket or eye with which it is engaged. Fig. 6 is a view of the thill-coupling, showing the several parts connected and in proper relation.

Referring to the drawings, the numeral 1 designates a vehicle-axle, and 2 a metal plate or bar that is clipped or otherwise secured thereto. In the forward end of the metal plate or bar 2 is formed an eye or socket 3, from which an open-ended slot 4 extends diagonally upward and backward. The slot 4 affords passage into and from the eye or socket 3, in which are inserted two horizontal lugs 5, that project toward each other from the opposite prongs 6, that form the bifurcated end of the thill-iron 7. After the lugs 5 have been passed through the slot 4 into the eye or socket 3 an elastic cushion 8, of rubber or other suitable material, is inserted in said slot, so as to bear on said lugs. The cushion 8 is concaved on its under or inner side, as shown, to correspond to the cylindrical form of the lugs 5 on which it rests. In the center

of the cushion 8, at a point corresponding with the space between the lugs 5, is an opening 9, which corresponds also with an opening 10 in the center of a retaining bar or plate 11, that is inserted in the slot 4 above said cushion. The parts are then securely connected by passing a bolt 12 through the eye or socket 3 in line with the diagonal slot 4, and through the cushion 8 and plate 11, and then turning down a nut 13 on the end of said bolt. The bolt 12 passes between the ends of the lugs 5 and through the openings 9 and 10, respectively, of the elastic cushion and its retaining-plate. Instead of a centrally-perforated cushion 8, it is obvious that two short cushions might be employed, each of sufficient length to cover one of the lugs. By tightening the nut 13 wear of the parts can be readily taken up, while the elastic cushion forms an effective device for preventing rattling.

In order to obviate spreading of the prongs 6, and at the same time provide means for taking up lateral wear on the eye or socket, each prong 6 is provided with a depending flange or ear 14, having an opening 15 for passage of a bolt 16, by which said flanges are connected, a nut 17 being placed on one end of said bolt to afford a ready means for drawing the prongs of the thill-iron together, so as to exert any desired degree of friction on the socket-piece.

It will be seen that the various parts of the coupling can be readily adjusted as required to take up wear and prevent rattling, while the parts being few and simple can be replaced at slight expense whenever it becomes necessary.

What I claim as my invention is—

1. A thill-coupling consisting of a socket-piece having an eye and an open-ended slot, a bifurcated thill-iron having each arm provided with a separate lug, said lugs being separated by an intervening space, an elastic cushion in the slot above the two separated lugs, a plate on the cushion, and a bolt extending through the space between the ends of the lugs and through the cushion and plate, substantially as shown and described.

2. A thill-coupling composed of a socket-piece having an eye provided with an open-ended slot, a bifurcated thill-iron having lugs engaged in said eye and provided with de-
5 pending flanges connected by a screw-bolt to prevent spreading of the thill-iron prongs, an elastic cushion located in the slot of the socket-piece and bearing on the engagings-lugs of

the thill-iron, and means for holding the said cushion in place, substantially as described. 10

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

HERBERT BARNARD.

Witnesses:

C. W. SMITH,

L. W. FREEMAN.