(No Model.)

L. A. MELBURN.

WHIFFLETREE COUPLING.

No. 386,257. Patented July 17, 1888.

FIG. 1.

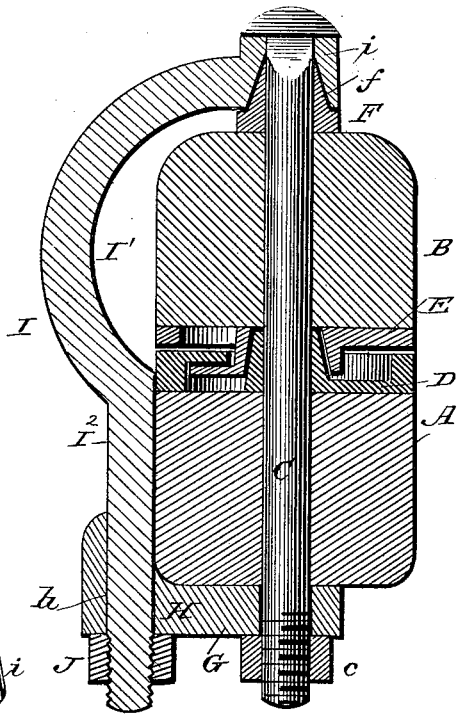


FIG. 2.

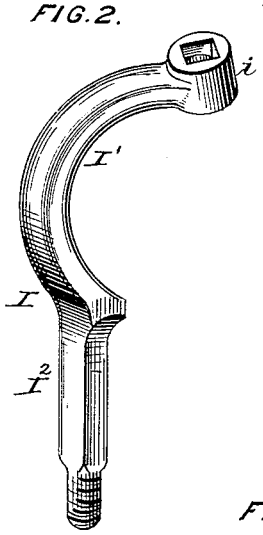


FIG. 3.

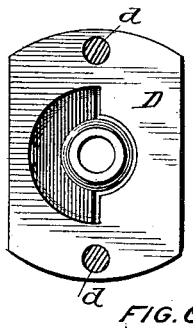


FIG. 4.

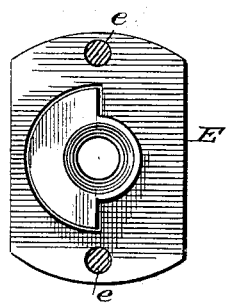


FIG. 5.

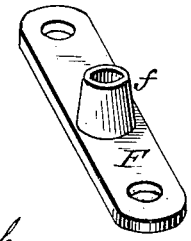
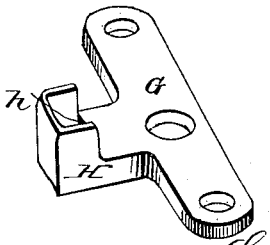


FIG. 6.



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UNITED STATES PATENT OFFICE.

LAFAYETTE A. MELBURN, OF DENVER, COLORADO.

WHIFFLETREE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 386,257, dated July 17, 1888.

Application filed November 22, 1887. Serial No. 255,867. (No model.)

To all whom it may concern:

Be it known that I, LAFAYETTE A. MELBURN, of Denver, in the county of Arapahoe and State of Colorado, have invented a new and useful Improvement in Whiffletree-Couplings, of which the following is a specification.

My invention is an improved whiffletree-coupling; and it consists in certain features of construction and novel combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a cross-section. Fig. 2 is a detail perspective view of the clip. Figs. 3 and 4 are detail views of the inner plates; and Figs. 5 and 6 are views, respectively, of the upper and lower plates.

The bar A, which I term the "support," may be the cross-bar of thills on which singletrees are ordinarily pivoted, or it may be a doubletree or lever on which singletrees are pivoted.

The whiffletree B may be of ordinary construction, it and the support having suitable openings for the pivot-bolt C, which may be secured by a nut, *c*, or in other suitable manner.

Between the bars A B, I arrange the center plates, D E, secured the one to the bar A and the other to the bar B. These plates may be of any ordinary locking construction and form interlocking bearings between the whiffletree and its support. In the use of such center plates it has been found that they will be tilted forward by the draft, and that practically all the wear will come upon the faces of the plates near the front edge thereof. By my invention I seek to provide a brace to keep the whiffletrees from tilting and to thereby cause the wear on the center interlocking plates to be even on all sides, and at the same time so form such brace and combine it with other parts suitably constructed that as the brace is tightened up from time to time it will tend to take up the wear at its bearing on the whiffletree and so avoid any looseness and consequent rattling of the parts.

The upper plate, F, is secured on the upper side of the whiffletree, preferably by the bolts *e e*, which serve to secure the center plate E to such bar. On this plate F, I form, surrounding an opening for the pivot-bolt C, a hub, *f*, the exterior of which is tapered in toward its upper end, forming a conical bearing for the clip, presently described. The lower plate, G, is secured to the under side of the support or bar A, preferably by the bolts *d*, which secure the center plate D to such bar. This plate G has an arm, H, which projects rearwardly beyond the bar, and has a non-circular opening, *h*, to receive the non-circular portion of the clip. The front wall of this opening *h* is in line with the rear face of the bar A, and the side and rear walls of such opening extend for a short distance upward along the rear face of the bar A, for the purpose of increasing the bearing for the clip-bar therein.

The clip-bar I is provided at its upper forward end with a ring, *i*, having an opening formed through it and made tapering at its lowering portion to fit the conical hub of the top plate, while the upper portion of such opening is squared to receive the squared portion next the head of the pivot-bolt. The upper part of the clip is arched rearwardly at I′ to permit the necessary movement of the whiffletree, while the lower part or shank of the clip at I^2 is straight and has its front edge arranged to bear flat against the rear face of the bar A and project through the opening in the lower plate, the lower end of the clip being threaded to receive the nut J. Manifestly nut J may be replaced by any other suitable means by which the bolt may be secured and tightened up from time to time.

It will be seen that when the parts are adjusted to position for use, as shown in Fig. 1, the clip will serve as a brace and prevent any forward tilting of the whiffletree. As the parts wear, the nut J may be turned up to tighten the clip, and the conical bearing thereof, fitting the conical hub of the top plate, will take up any wear at such part, so that there will be no looseness and consequent rattling of the coupling.

Having thus described my invention, what I claim as new is—

1. In a coupling substantially as described, the combination of the support, the whiffletree, the top plate having a conical hub, the central interlocking plates, the pivot-bolt, the lower plate, and the clip having its upper portion arched rearwardly and its upper forward end formed with a tapering opening

fitted over the conical hub of the top plate, the lower portion of such clip being formed straight and non-circular and terminating in a threaded portion, and the nut for securing such clip and by which it may be tightened up, substantially as set forth.

2. In a coupling substantially as described, the combination of the support, the whiffletree, the pivot-bolt C, the plates between said whiffletree and support, the lower plate secured to the under side of the support and having an extension projected in rear of said support and provided with an opening for the shank of the clip, the top plate secured on the whiffletree and provided with a hub having an opening for the bolt C and its exterior made conical, forming a tapering bearing, the clip having its shank extended through the opening in the rear extension of the lower plate and threaded to receive the securing-nut, and provided at its upper end with a ring-like portion having its opening formed with a tapering portion fitted to the tapering hub of the top plate and with a portion fitted to the angular portion of bolt C, all being substantially as and for the purpose specified.

LAFAYETTE A. MELBURN.

Witnesses:

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