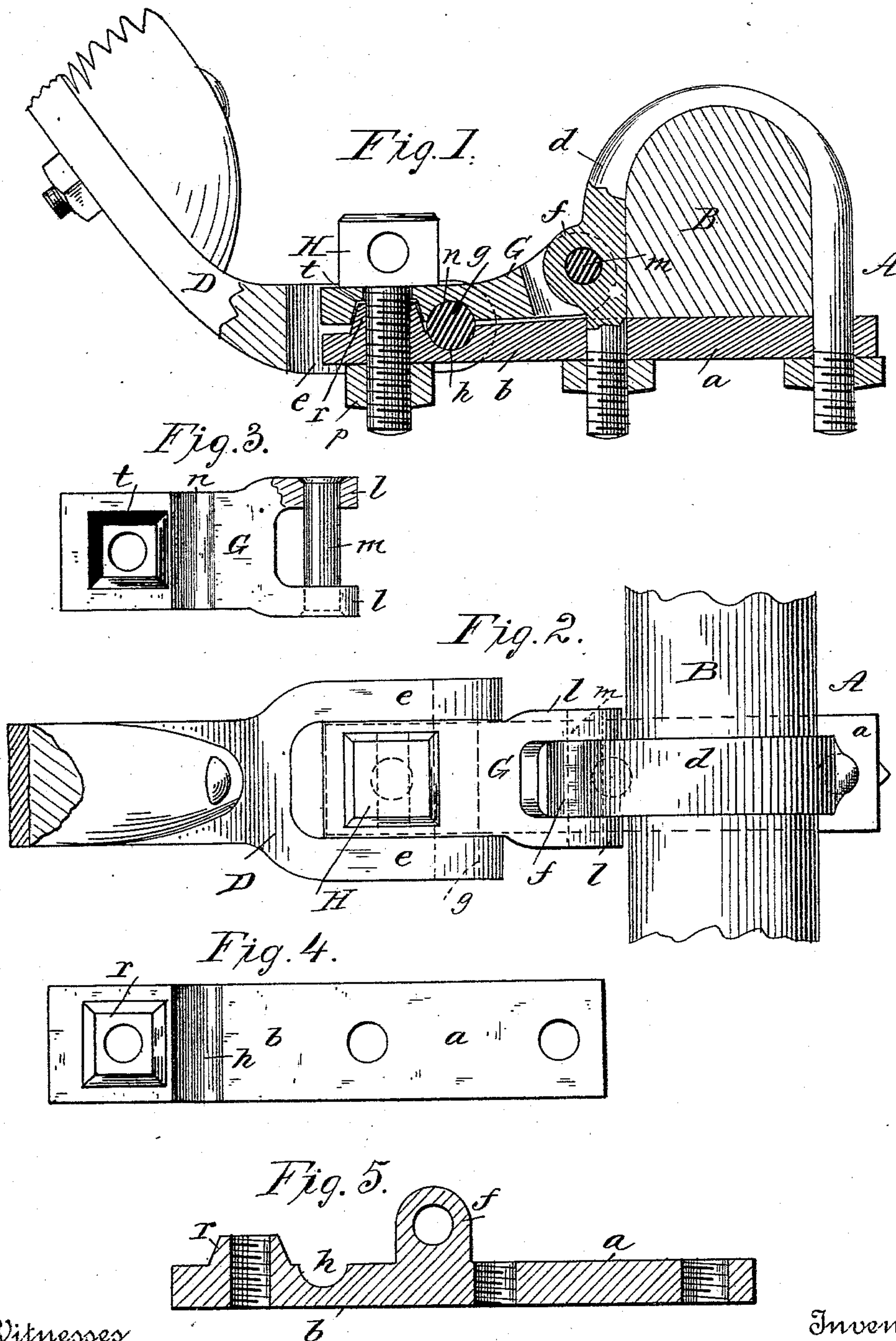


(No Model.)

F. R. WILSHIRE.
THILL COUPLING.

No. 414,666.

Patented Nov. 5, 1889.



UNITED STATES PATENT OFFICE.

FREDERICK R. WILSHIRE, OF BERRIMA, NEW SOUTH WALES, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-HALF TO WILLIAM FLEMING, OF SYDNEY, AUSTRALIA, AND GEORGE C. EWING, OF ENFIELD, MASSACHUSETTS.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 414,666, dated November 5, 1889.

Application filed January 31, 1889. Serial No. 298,278. (No model.) Patented in New South Wales August 9, 1888, No. 849.

To all whom it may concern:

Be it known that I, FREDERICK R. WILSHIRE, a subject of the Queen of Great Britain, residing at Berrima, in the county of Camden and Colony of New South Wales, have invented new and useful Improvements in Thill-Couplings, (for which I have obtained a patent in the Colony of New South Wales, No. 849, dated August 9, 1888,) of which the following is a specification.

This invention relates to improvements in thill-couplings, the object thereof being to secure in devices of this class, in addition to most effective anti-rattling capabilities, also the features of durability, simplicity, cheapness, and ease of being manipulated for attachment, detachment, or adjustment; and the invention consists in the construction and combination of parts, all substantially as hereinafter described and shown, and set forth in the claim.

Reference is to be had to the accompanying drawings, forming part hereof, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a central vertical section through the coupling and the thill-iron and axle, between which the coupling is applied. Fig. 2 is a plan view of same. Fig. 3 is a view of the under side of the upper pivoted bar of the coupling. Fig. 4 is a plan view of the axle-clip or tie-plate, which also forms a portion of the coupling. Fig. 5 is a view in detail illustrative of a modification in construction, to be hereinafter referred to.

The clip A for embracing the axle B is formed and applied as usual, with the exception that the tie-plate *a* thereof is provided with a forward extension *b*, and the U-shaped strap *d* has a forwardly-extending ear-piece *f*, and in the present form of coupling the thill-iron D, instead of having a transverse hole in its rear end, is formed bifurcated or U-shaped, and between the ends of the branches *e* thereof a cross-pin *g* is rigidly fixed by riveting or otherwise, and in this coupling said pin forms the pivotal support for the thill-iron. The forward extension *b* of the tie-plate has formed in its upper side toward its end a transverse groove

or channel *h*, of semicircular cross-section, and a flat bar G, which by its rear bifurcated ends *l* is pivoted to the ear-piece of the clip by the pin or rivet *m*, has on its under side a transverse groove or channel *n*, to come, when said bar is swung down, into proximity with the extension *b* opposite the said groove *h*, and thereby a clamp-socket is formed for the thill-iron pin *g*. A bolt H is passed loosely through the outer end portion of the pivoted bar G and the extension *b*, having a screw engagement with the latter, and, if desired, a check-nut *p* may be applied on the lower end of the bolt against the under side of said extension *b* to securely maintain the relation of the parts when in adjustment. The head of the bolt, as shown, may be perforated to enable said bolt to be turned by a bar as well as by a wrench. The upper side of the extension *b*, about the place of the bolt's penetration, may be provided with a boss *r*, formed integrally therewith, of truncated pyramidal or conical form, the under side of the pivoted bar G being correspondingly recessed, as at *t*. This feature of construction is not essential, but forms an interlocking between the adjacent parts, maintaining them and the bolt against lateral strain and displacement, and also insuring a greater length of screw engagement for the bolt, and imparts increased strength to the parts in advance of the thill-iron pin. The ear-piece for forming the pivotal support of the bar G may be formed on or attached to any suitable part of the clip—as, for instance, as seen in Fig. 5, on the tie-plate at the rear of the groove *h* thereof. The pin of the thill-iron is inserted in the transverse socket by removing the bolt and swinging up the bar G, when on replacing the bar and tightening the bolt the walls of the socket are brought to contact, and with suitable pressure on the said pin, it being understood that in construction the opposing faces of the extension *b* and bar G are to be normally separated, as shown in Fig. 1, to permit of the wear compensating adjustment.

What I claim as my invention is—

In a thill-coupling, the strap *d* of the axle-clip having the ear-piece *f*, the tie-plate *a*, having the forward extension *b*, formed with

the transverse groove *h*, and in advance thereof the tapered boss *r*, having the screw-threaded opening, the bifurcated bar *G*, pivoted to said ear-piece formed with the transverse groove *n*, and the tapered recess *t*, combined with the bifurcated thill-iron having the cross-pin *g*, and the screw-bolt *H*, having its shank engaging said screw-threaded boss-

opening and provided with a head to bear on the top of said bar *G*, substantially as described.

F. R. WILSHIRE.

Witnesses:

H. E. JOPLING,
W. QUINN.