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D. W. COPELAND.

THILL COUPLING.

APPLICATION FILED JULY 17, 1907.

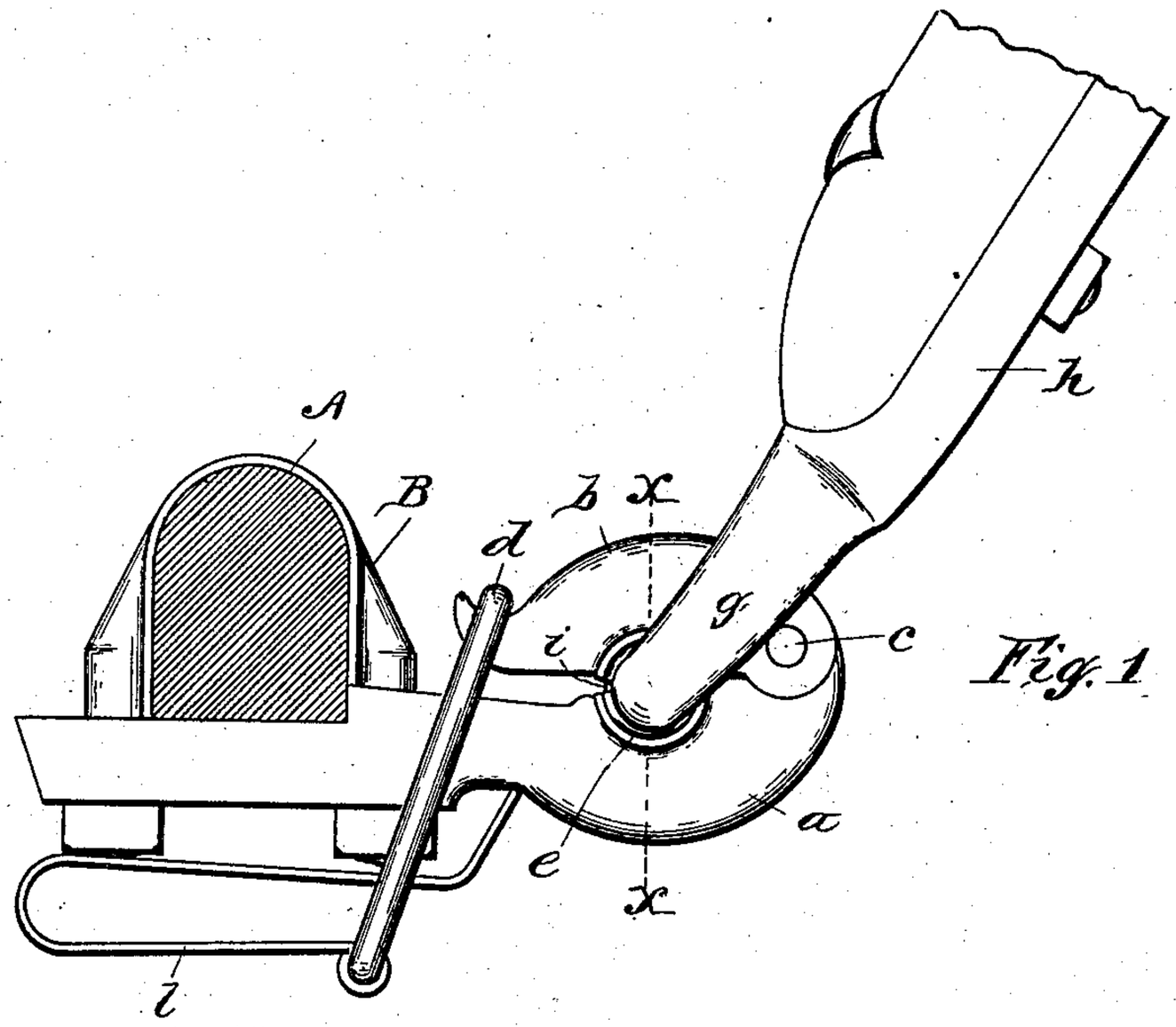

Fig. 1

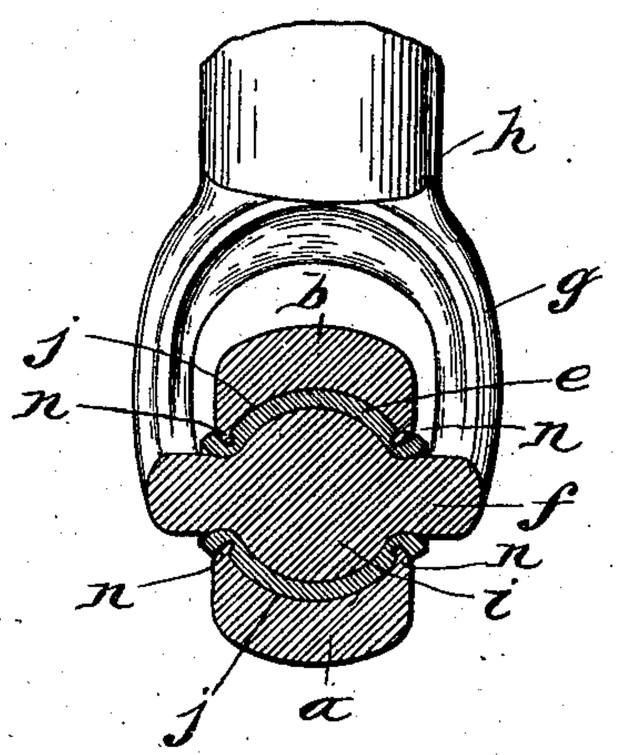

Fig 2

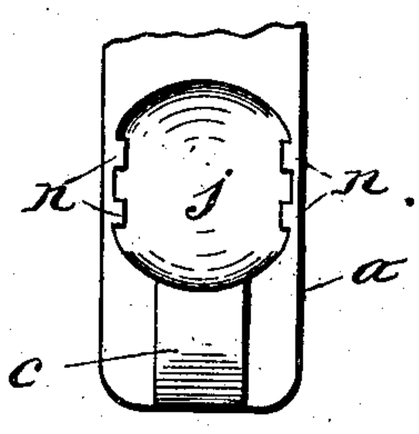

Fig. 3

Witnesses:
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UNITED STATES PATENT OFFICE.

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THILL-COUPLING.

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To all whom it may concern:

Be it known that I, DAVID W. COPELAND, a citizen of the United States, and resident of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Thill-Couplings, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of thill-couplings in which the draft-eye is divided diametrically into two parts, and a packing is interposed between the draft-eye and pin which is secured to the thill iron and passes through the draft-eye.

The object of this invention is to securely retain the packing in the draft-eye while the thill is disconnected from the vehicle, and thus obviate the liability of losing said packing.

A further object is to cushion the sides of the draft eye so as to prevent the rattling thereof on the adjacent parts of the thill iron. And to that end the invention consists essentially of a thill-coupling having the draft-eye provided with inwardly projecting teeth or clenches, and a packing retained in the draft-eye by said teeth or clenches biting into the external surface of the packing, as hereinafter more fully explained.

In the accompanying drawings Figure 1 is a side view of a thill-coupling embodying my invention; Fig. 2 is a transverse section on the line —X—X— in Fig. 1; and Fig. 3 is a detached plan view of one of the members or jaws of the coupling.

—A— denotes the front axle of a vehicle, to which the thill-coupling is attached by means of a clip —B— in the usual manner.

The draft-eye of the thill-coupling consists of two jaws or members —*a*—*b*—. The member —*a*— is formed on a forward extension of the clip-bar, and is thus rigidly sustained on the vehicle. The other member —*b*— is hinged or pivotally connected to the front end of the member —*a*— as shown at —*c*— in Fig. 1, and extends rearwardly therefrom to receive across the top thereof a link —*d*— which is caused to press the member to its closed position by means of a spring *l* connected at one end to the lower end of the link and bearing at its opposite end on the underside of the aforesaid clip-bar extension.

I do not however limit my present invention to the specific form of said spring nor the means for transmitting the force of the spring to the link —*d*—.

My present invention pertains especially to the means for securely retaining the packing —*e*— in the draft-eye, which receives through it the coupling-pin —*f*— preferably formed integral with the bifurcated end —*g*— of the thill-iron —*h*—. Said coupling-pin is formed with a spherical enlargement —*i*— between the arms of the bifurcated end of the thill-iron, and the members —*a*—*b*— of the draft-eye are formed with uniform spherical recesses —*j*—*j*— concentric with the enlargement —*i*—. The packing —*e*— is usually formed from leather of uniform thickness and thus has uniform external and internal spherical surfaces to fit closely to the recesses —*j*—*j*— and to the enlargement —*i*— of the coupling-pin, between which the packing is interposed. To retain the said packing in the draft-eye when the thill is disconnected from the vehicle I form one or both members —*a*—*b*—, especially the lower member —*a*— with suitably shaped teeth —*n*—*n*— which project inward from the sides of the draft-eye so as to bite into the external surface of the packing and thus obtain a secure hold thereon to confine the packing in the draft-eye. To prevent rattling of the coupling, the packing is made of sufficient length to project at the sides of the draft-eye and form thereat cushions which prevent the draft-eye from coming in contact with the arms of the bifurcation of the thill iron as shown in Fig. 2.

What I claim as my invention is:—

1. The combination, with the coupling-pin formed with a spherical enlargement, the packing formed with uniform internal and external spherical surfaces, and the draft-eye formed with uniform spherical recesses for reception of said packing, of teeth projecting inwardly from the sides of the draft-eye and disposed to bite into the external surface of the packing to positively retain said packing in the draft-eye.

2. In combination with the coupling-pin, the draft-eye provided with teeth projecting inwardly from the sides thereof, and the packing extending across the teeth and terminating in anti-rattling cushions at the sides of the draft-eye.

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Witnesses:

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