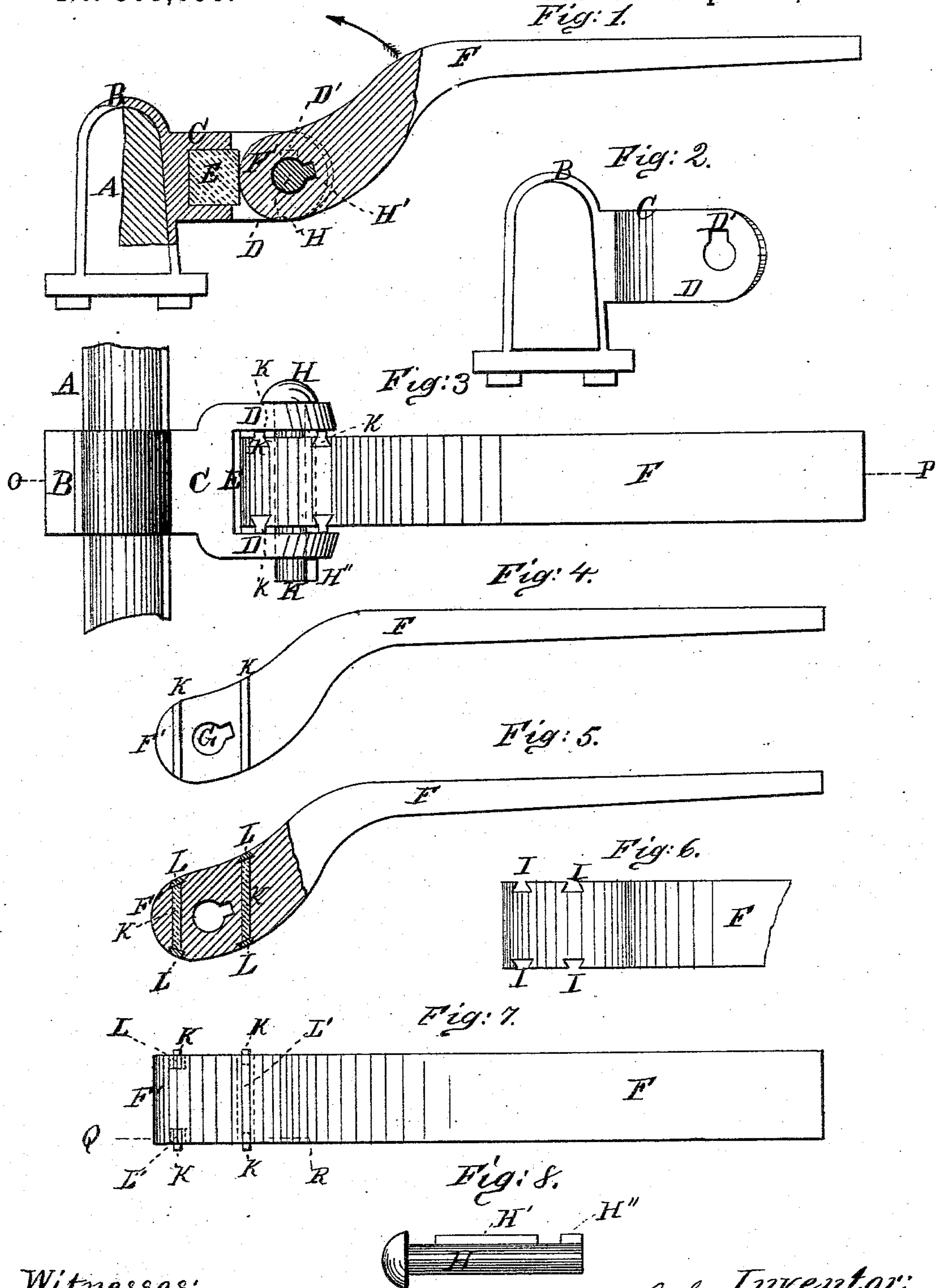


(No Model.)

J. A. BRAGAW.
THILL COUPLING.

No. 305,890.

Patented Sept. 30, 1884.



Witnesses:
John C. Turnbridge.
John M. Speer

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UNITED STATES PATENT OFFICE.

JOHN A. BRAGAW, OF ALBANY, NEW YORK, ASSIGNOR OF ONE-HALF TO
SEBASTIAN FROELICH, OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 305,890, dated September 30, 1884.

Application filed July 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BRAGAW, a resident of Albany, in the county of Albany and State of New York, have invented an Improvement in Thill-Couplings, of which the following is a full, clear, and exact description, reference being made to the accompanying drawings, in which—

Figure 1 is a longitudinal view, partly in section, of the thill-coupling provided with my improvements, the section being made on the line O P, Fig. 3. Fig. 2 is a side view of the clip, box, and jaws. Fig. 3 is a top view of the thill-coupling. Fig. 4 is a side view of the thill-iron. Fig. 5 is a longitudinal view, partly in section, of the thill-iron, the section being made on the line Q R, Fig. 7. Figs. 6 and 7 are top views of the thill-iron. Fig. 8 is a side view of the bolt.

This invention relates to improvements in couplings for connecting the thills, shafts, or poles of vehicles with the axle; and it consists in the peculiar construction and combination of the various parts of the thill-coupling, as more fully hereinafter set forth, and indicated in the claims.

In the drawings, the letter A represents the axle. B is a clip of the common form, having cast with it in one piece the box C and the jaws D, D, the latter being provided with holes D'. E is a rubber cushion placed in the box C, as now commonly used. F is the thill-iron having in its head the hole G, which corresponds in size and shape to the holes D' D' in the jaws, and also the eccentric portion F'. H is a bolt or pintle having the feathers H' and H''. I I are the slots in the sides of the thill-iron; K K, the strips of rubber inserted into the slots, and L L' the caps which close the ends of the slots. The head of the bolt is integral with it. The length of the feather H' is equal to the width of the thill-iron, and the spaces between the feathers and the head of the bolt are to be of proper width to allow the bolt to turn easily in the jaws.

In order to insert the bolt H, the thill-iron is raised vertically above the jaws D D, in the manner indicated by the arrow in Fig. 1, until the opening G in its head, which corresponds exactly in size and shape to the stem and feathers of the bolt, is in line with the

holes D' in the jaws. The feather H'', after the bolt has been inserted, will securely hold the bolt and the thill-iron in place after the latter has been turned down into a position where it is fit for use.

It is apparent that feathers similar to H' and H'' may also be placed on the opposite side of the bolt with like effect, corresponding grooves being made therefor in the lower part of the holes D' and G. When the thill-iron is turned down toward and into a horizontal position, the eccentric part F' of the thill-iron presses against the plug of rubber, and the latter in turn presses the thill-iron forward against the bolt, and the bolt against the front part of the jaws D, and thus to some degree prevents rattling.

In order to prevent the rattling of the sides of the head of the thill-iron with the jaws D D, I provide the former with two slots, I I, cut vertically, or nearly so, into either side thereof, in front and in rear of the hole G, as shown in Fig. 4. The slots must be of sufficient depth and width to allow the insertion of a strip of rubber or other elastic material, and may be advantageously of the dovetail form, in order to prevent the rubber from falling out, as shown in Figs. 3 and 6. The strips of rubber are made to project slightly from the slots, as shown in Figs. 3 and 7, and thereby prevent the sides of the head of the thill-iron from grinding against the jaws or rattling. The slots may be of any convenient form, and must be at proper distance from the hole G, as indicated in Figs. 4 and 5. Their ends may, if desired, be covered by metallic caps L L', of dovetail form and flush with the surface of the thill-iron, as indicated in Fig. 5, the caps preventing the strips from falling out. For this purpose a corresponding incision in dovetail form has to be made into the surface of the head of the thill-iron. The caps may either be made to cover the end of each slot separately or the ends of two slots at a time, as indicated in Fig. 7. The slots I I may with like effect be cut into the jaws D and the rubber inserted therein, the thill-iron being left solid, and instead of rubber other elastic material may, though with less advantage, be used.

While the action of the eccentric part F',

together with the rubber plug E, serves to prevent the rattling of the thill-iron with the bolt and that of the bolt with the jaws, the strips of rubber K serve to prevent side rattling on all points of contact.

I claim as my invention—

1. The thill-iron F, combined with the clip-jaws D D and with the intervening cushions, K K, substantially as described.
2. The thill-iron F, combined with the clip-jaws D D, intervening cushions, K K, and caps L, substantially as described.

3. The combination of the thill-iron F, having the hole G and eccentric portion F', and having the slots I I and strips of elastic material K K, with the clip B, having jaws D D, and with the cushion E, substantially as described.

JOHN A. BRAGAW.

Witnesses:

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