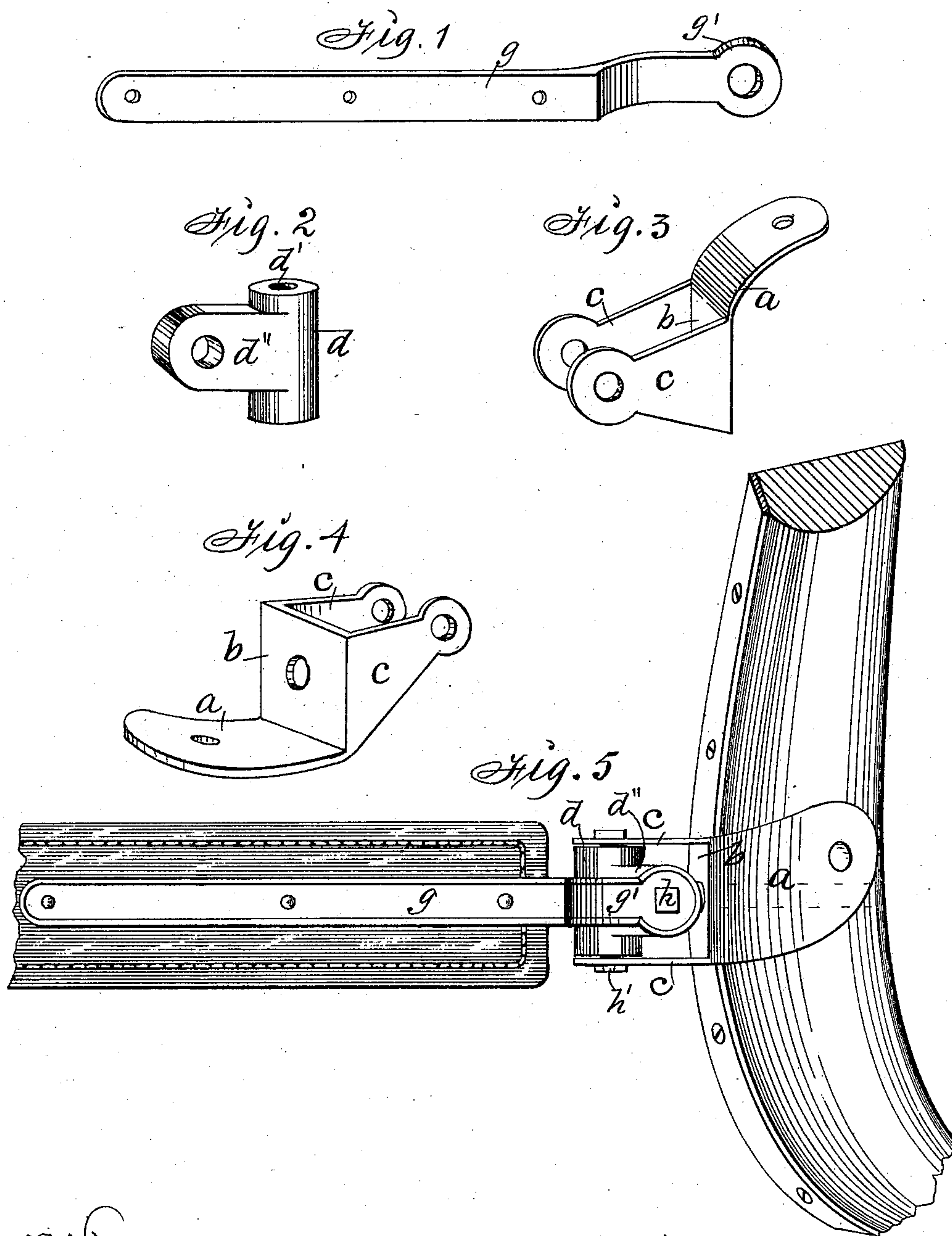


(No Model.)

D. HILL.
HAME TUG COUPLING.

No. 376,305.

Patented Jan. 10, 1888.



Witnesses:
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UNITED STATES PATENT OFFICE.

DONALD HILL, OF STORM LAKE, IOWA.

HAME-TUG COUPLING.

SPECIFICATION forming part of Letters Patent No. 376,305, dated January 10, 1888.

Application filed May 23, 1887. Serial No. 239,656. (No model.)

To all whom it may concern:

Be it known that I, DONALD HILL, a citizen of the United States of America, and a resident of Storm Lake, in the county of Buena Vista and State of Iowa, have invented an Improved Hame-Tug Coupling for Harness, of which the following is a specification.

My object is to furnish a neat, strong, and durable metal coupling device for connecting a hame-tug with a harness-hame in such a manner that the tug will have direct lateral and also direct vertical play, but no twisting or rotary motion such as is incident to the use of common clips and staples, swivels, or ball-and-socket joints.

My invention consists in the construction and combination of a clip adapted to be permanently fixed to a hame, a T-shaped knuckle, and two metal straps adapted to be hinged to the knuckle and clip, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of one of the metal straps adapted to be fixed to a hame-tug and detachably hinged to the knuckle. Fig. 2 is a perspective view of the knuckle adapted to be detachably hinged to the clip. Figs. 3 and 4 are perspective views of the clip adapted to be fixed to the hame. Fig. 5 is a perspective view showing all the parts combined with a piece of a hame and a piece of a hame-tug as required for practical use.

a is a curved and perforated clip adapted to overlap the outside and convex face of a hame, and *b* is a flat and perforated right-angled extension of the clip adapted to overlap the square and iron-bound edge of the hame.

c c are perforated and parallel ears projecting at right angles from the edges of the flat extension *b*. The complete device is preferably cast in a mold and made complete in one piece of malleable iron.

d is a T-shaped metal knuckle adapted in

size to be hinged between the parallel ears *c* of the clip by means of a screw-bolt passed through the perforations in the ears and a bore, *d'*, in the knuckle.

d'' is a right-angled and flat-sided extension from the central portion of the elongated knuckle.

g is a straight and perforated metal plate adapted to be riveted to the front end of a leather tug.

g' is an integral curved and perforated end adapted to overlap the T-shaped knuckle, as clearly shown in Fig. 5. A counterpart or mating plate, *g g'*, is placed on the opposite side, so they can be jointly hinged to the knuckle by means of a screw-bolt, *h*.

The clip is fixed to the hame by means of bolts or rivets, and the knuckle is hinged to the clip by means of a screw-bolt, *h'*, in such a manner that the tug and plates *g g'* will have vertical play while the knuckle is stationary, and the tug and plates and knuckle will have joint lateral play; but the tug will at all times be prevented from assuming a twisted position relative to the hame or a horse while in practical use, and by simply turning the knuckle half-way round the tug can be lengthened and shortened at pleasure.

I claim as my invention—

1. A hame tug coupling comprising a metal clip, *a*, having a flat part, *b*, and parallel extensions *c c*, a T-shaped knuckle, *d d''*, and plates *g g'*, substantially as shown and described, for the purposes stated.

2. The combination of the metal clip *a b*, having parallel ears *c*, the T-shaped knuckle *d d''*, and two mating plates, *g g'*, with a hame-tug and a hame, for the purposes stated.

DONALD HILL.

Witnesses:

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