

UNITED STATES PATENT OFFICE

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DRAW-HEAD FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 640,147, dated December 26, 1899.

Application filed August 5, 1899. Serial No. 726,308. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. McKEEN, a citizen of the United States, residing at Easton, in the county of Northampton and State of Pennsylvania, have invented certain new and useful Improvements in Draw-Heads for Railroad-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in the construction of draw-heads for railroad-car couplers.

In the manufacture of draw-heads it has been found exceedingly difficult to secure the adequate degree of strength and at the same time preserve the required lightness and proportions of the draw-head, and this is more particularly the case in draw-heads designed for use with the large-capacity cars now required by traffic, because to secure the required strength it will be necessary to increase the size, and this in turn would necessitate a change in the draft-timbers, carry-irons, &c.

My invention has for its object to produce a draw-head of standard size which shall have the necessary strength to resist all strain to which it may be subjected and which may be employed with the required large-capacity cars without in any manner altering the construction or arrangement of the draft-timbers and carry-irons.

In draw-heads as at present constructed the hollow shank is strengthened by internal independent longitudinal ribs projecting from each wall; but it has been found from experience that while such ribs render the structure stronger than it would be in the absence thereof, still under excessive strain said ribs are liable to transverse fracture, and their power of resistance is in proportion to the size of their cross-section or thickness.

My invention contemplates providing longitudinal vertical and horizontal interior braces which will successfully resist any natural amount of strain to which a draw-head may be subjected; and with this end in view my invention consists of a draw-head formed with vertical and horizontal braces integral with the walls of the draw-head and merging

and joining centrally, as will be hereinafter and in detail explained.

In order that those skilled in the art may know how to make my improved draw-head and fully understand its advantages, I will proceed to describe the same, referring by letters to the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of a draw-head embodying my invention. Fig. 2 is a longitudinal horizontal section of the same, and Fig. 3 is a cross-section at the line *x x* of Fig. 1.

Similar letters of reference indicate like parts in the several figures of the drawings.

A is the head, and B the shank, composed of four walls constituting an integral hollow body.

C D are respectively horizontal and vertical partitions or centrally-intersecting brace-walls cast integral with each other and the surrounding rectangular walls or body of the draw-head. Each of the central partition-walls C D is preferably formed with openings or spaces E F to secure as much lightness of the structure as possible commensurate with its required strength, and as the greatest strain upon a draw-head in actual use is in a horizontal plane the openings or spaces E in the horizontal brace wall or partition C are made somewhat smaller than the openings or spaces F in the vertical brace wall or partition D, and the openings or spaces in each of said walls or partitions are preferably so located or arranged as not to unnecessarily impair the integrity or strength of the structure as a whole.

From the construction shown and described it will be seen that the transverse intersecting partitions C D, extending from opposite walls and united centrally, constitute continuous longitudinal braces and that without adding materially, if any, to the weight and without increasing the proportions of a draw-head they will add very materially to its strength.

As already indicated, I am fully aware that it is not new to strengthen a draw-head by providing ribs on the interior face of the side walls, and I do not wish to be understood as laying any claim to extending the said ribs

to a greater or less degree toward the center;
but

What I claim as new, and desire to secure
by Letters Patent, is—

- 5 A draw-head formed with centrally-intersecting brace walls or partitions cast integral with the side walls, substantially as shown and described.

In testimony whereof I affix my signature
in presence of two witnesses.

THOMAS L. McKEEN.

Witnesses:

W. H. SIEGFRIED,
E. L. BIXLER.