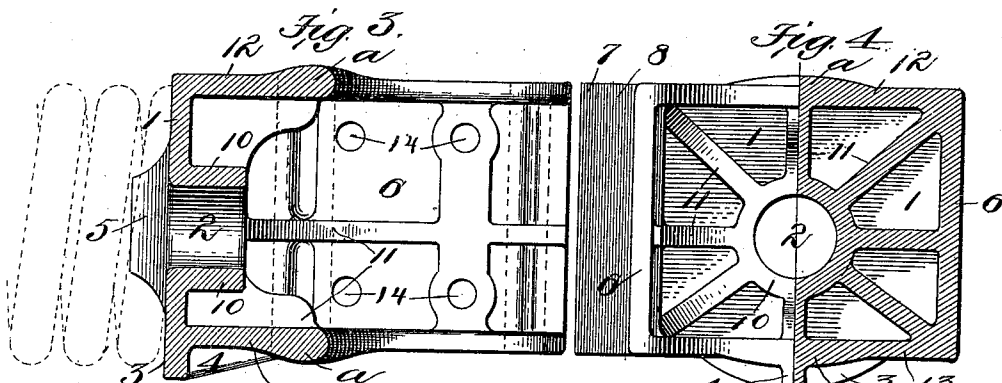
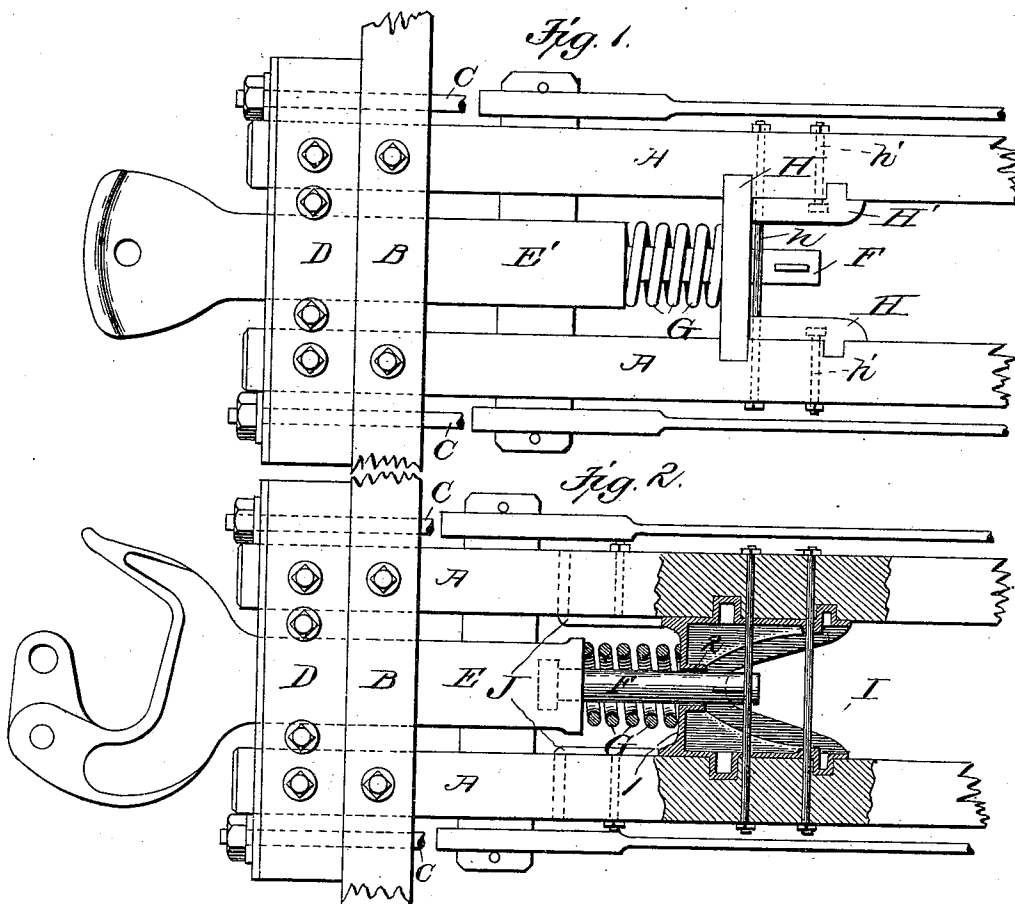


(No Model.)

A. G. STEINBRENNER.
DRAFT LUG.

No. 583,554.

Patented June 1, 1897.



Witnesses: 13.
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UNITED STATES PATENT OFFICE.

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DRAFT-LUG.

SPECIFICATION forming part of Letters Patent No. 583,554, dated June 1, 1897.

Application filed December 21, 1896. Serial No. 616,518. (No model.)

To all whom it may concern:

Be it known that I, ANDREW G. STEINBRENNER, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Draft-Lugs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a top plan view of a style of draft-rigging most generally employed in freight-car construction. Fig. 2 is a plan view of a draft-rigging embodying my invention. Fig. 3 is a vertical sectional view through my improved lug. Fig. 4 is a rear end and partial cross-sectional view.

This invention relates to a new and useful improvement in draft-rigging for freight-cars.

The most common form of draft-rigging for freight-cars is shown in Fig. 1, where it will be seen that a follower-plate is let into the draft-timbers, said follower-plate being reinforced by braces or lugs arranged behind the same.

When automatic couplers were authorized to be adopted, the Master Car-Builders' Association determined upon a certain standard whose shank was somewhat shorter by several inches than the shank of the old forms of coupler. This change necessitated the abandonment of old forms of rigging when new standard couplers were applied, and this change was so costly, especially on old cars, that railroad companies were loath to adopt them, but preferred to run the cars the time allowed in which to make the change. The presence of the old-style link-and-pin coupler not only endangers lives of operators who are compelled to go between the cars to effect the coupling and uncoupling, but such couplers are not as strong nor as safe as the standard automatic.

My invention relates particularly to a draft-lug especially designed to take the place of old-style follower-plates and lugs, the object being to provide a combined follower-plate and lug which can be used in old-style draft-rigging for standard automatic couplers. By the use of my invention automatic couplers can be mounted in cars having old-style draft-

rigging, the draft-rigging being saved and not thrown away and new rigging erected, as has heretofore been done.

With this object in view my invention consists in a casting in which the follower-plate and lugs are made integral, said casting cooperating with old-style rigging and with automatic couplers.

The invention further consists in the construction of the casting in which the front wall is provided with a bossed opening to receive the tail-bolt of the coupler, said front wall having a downward extension to complete the continuity of the spring-seat, and being also braced by interior webs properly disposed to resist the end thrust of the coupler against the front wall. In addition to the above the top and bottom walls are increased in thickness at about their centers and behind the front wall to strengthen said front wall.

Other features of invention reside in the construction, arrangement, and combination of the several parts, all as will hereinafter be described, and afterward pointed out in the claims.

In the drawings, A indicates the draft-timbers; B, the end sill; C, the end-sill tie-rods; D, the dead-wood; E, the shank of a standard automatic coupler, and E' the shank of an old-style link-and-pin coupler.

F indicates the tail-bolt, whose head is seated in the rear end of the coupler draw-bar shank, and G the draft-spring.

In the drawings I have also shown a continuous draw-bar arrangement; but as this forms no part of my invention I will not describe it here.

In old-style rigging a follower-plate H was let into recesses in the draft-timbers, through which the tail-bolt passed, and between which and the shank the draft-spring was interposed. This follower-plate was braced by lugs H', also let into recesses in the draft-timbers, said lugs being held in position by bolts *h* and *h'*, the former of which was preferably a through-bolt.

I indicates my improved lug and follower-plate combined, which I will now describe in detail.

1 is the front wall, which is preferably in

advance of the recesses for the old-style follower-plate, in order to compensate for the shortness of the shank of the automatic coupler. This front wall is formed with an opening 2 for the passage of the tail-bolt, and its face is extended downwardly by a projection 3, braced by web 4, to afford a continuous bearing for the draft-spring. From the sides of the front wall extend lugs or projections 5, which, bearing against the strap-iron wear-strips J, secured on the inner sides of the draft-timbers, hold the casting firmly in place.

6 indicates the side walls of the casting, which are provided with ribs 7 near their front ends, fitting the recesses of the old-style follower-plate.

8 indicates ribs near the rear ends of the side walls, which fit into the recesses of the old-style lugs.

Opening 2 in the front wall is preferably strengthened by a bossing 10, and the front wall is further strengthened by webs 11, which may be vertically and horizontally disposed, or diagonally disposed, or both, as shown.

12 and 13 indicate the top and bottom walls, respectively, which are preferably cut away at their rear ends to give easy access to the tail-bolt key. These top and bottom walls are thickened at *a* for the purposes of strength, to prevent them splitting, due to the bifurcation for purposes of lightening.

14 indicates bolt-openings in the side walls, through which pass the bolts which secure the casting to the draft-timbers.

By the use of a casting as described above fewer pieces have to be handled in assembling the draft-rigging and fewer bolts have to be used. Therefore the parts are less liable to become disarranged in use. The rigging is stronger and the casting can be used on old-style rigging, thus saving said rigging from abandonment when automatic couplers are applied to supplant the link-and-pin couplers.

I am aware that many minor changes in the dimensions of my casting, the position of the ribs, bolts, holes, and webs can be made for different rigging without in the least departing from the nature and principle of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination with draft-timbers which are formed with recesses for a follower-plate and lugs, a shank, tail-bolt and draft-spring, of a casting formed with an opening for the tail-bolt, the front wall of said casting affording a seat for the draft-spring, the rear

end of the casting being open to give access to the rear end of the tail-bolt which terminates just behind the front wall, webs for strengthening said front wall, and ribs near the front and back ends of the side walls, said ribs fitting in the follower-plate and lug recesses in the draft-timbers, substantially as described.

2. The herein-described casting for use in freight-car draft-rigging, the same consisting of a front wall formed with an opening for the passage of the tail-bolt, webs for strengthening said front wall, side walls formed with ribs for engagement with the draft-timbers, the rear end of said casting being open and the top and bottom walls being cut away to give ready access to the rear end of the tail-bolt, substantially as described.

3. The herein-described casting for use in freight-car draft-rigging, the same consisting of a front wall formed with an opening for the passage of the tail-bolt, webs for strengthening said front wall, side walls formed with ribs for engagement with the draft-timbers, the rear end of said casting being open and the top and bottom walls being cut away to give ready access to the rear end of the tail-bolt, said top and bottom walls being thickened at the front edges of the cut-away portions to give them strength, substantially as described.

4. The herein-described casting for use in freight-car draft-rigging, the same consisting of a front wall formed with an opening for the passage of the tail-bolt, webs for strengthening said front wall, a downward extension of the front wall which offers a continuous bearing for the draft-spring, side walls formed with ribs for engagement with the draft-timbers, the rear end of said casting being open and the top and bottom walls being cut away to give ready access to the rear end of the tail-bolt, substantially as described.

5. A casting for use in freight-car draft-rigging the same consisting of parallel side walls having interior stiffening-webs and exterior locking-ribs, an apertured front wall, the front face of which forms a seat for the draft-spring, the inner face of said front wall having a boss or flange around its aperture, and strengthening-webs, all of said parts being integral, substantially as described.

In testimony whereof I hereunto affix my signature, in presence of two witnesses, this 14th day of December, 1896.

ANDREW G. STEINBRENNER.

Witnesses:

F. R. CORNWALL,
HUGH K. WAGNER.