

(No Model.)

R. M. GALBRAITH.  
DRAFT GEARING FOR ENGINE TENDERS.

No. 587,523.

Patented Aug. 3, 1897.

*Fig. 1.*

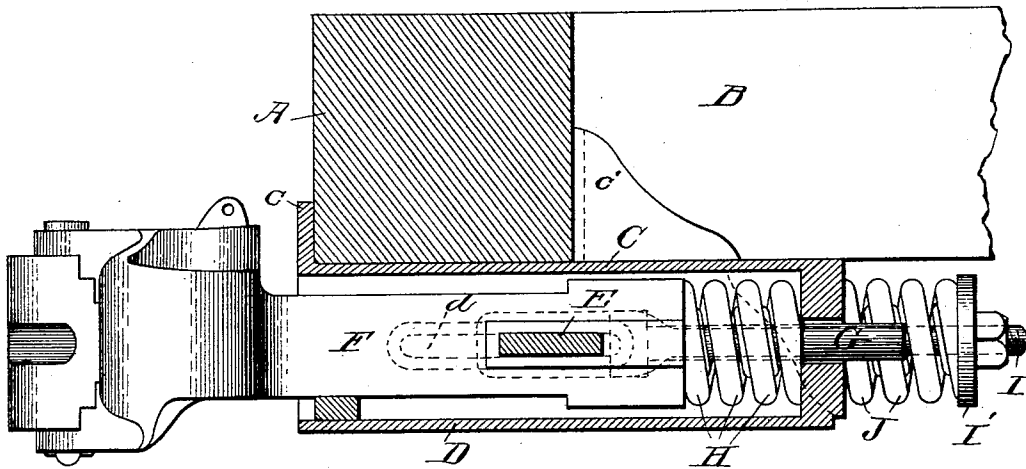
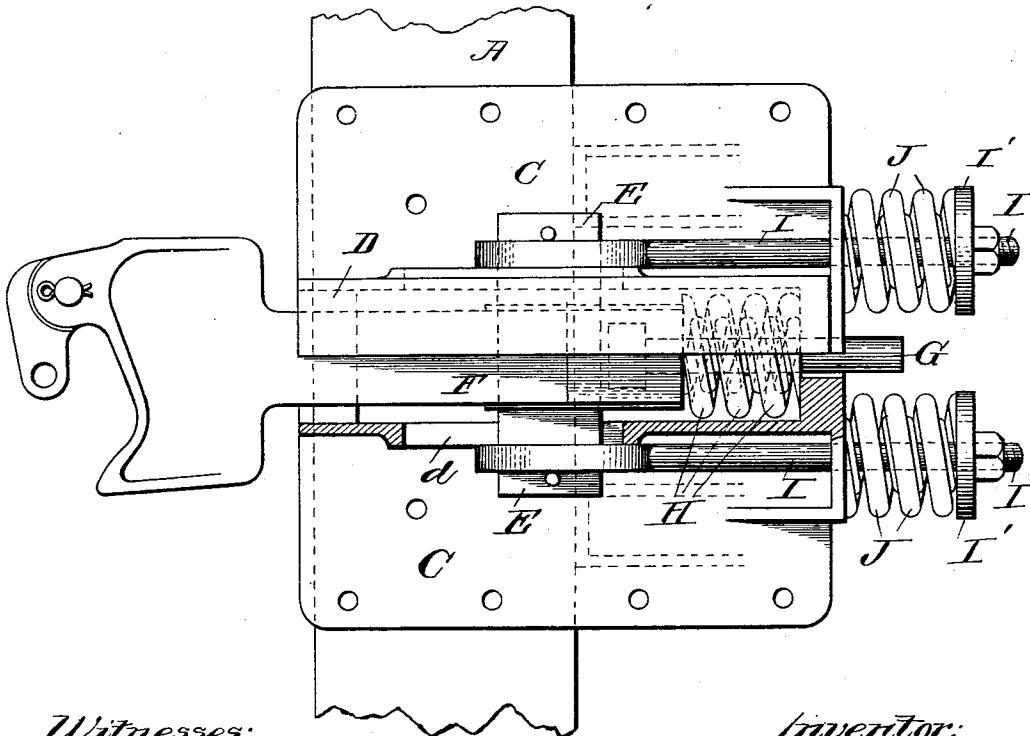


*Fig. 2.*



*Witnesses:*

*G. A. Pennington*  
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*Inventor:*

*R. M. Galbraith*  
*by Paul Baker*  
*his atty.*

# UNITED STATES PATENT OFFICE.

ROBERT M. GALBRAITH, OF PINE BLUFF, ARKANSAS.

## DRAFT-GEARING FOR ENGINE-TENDERS.

SPECIFICATION forming part of Letters Patent No. 587,523, dated August 3, 1897.

Application filed April 29, 1897. Serial No. 634,371. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT M. GALBRAITH, a citizen of the United States, residing at Pine Bluff, in the county of Jefferson, State of Arkansas, have invented a certain new and useful Improvement in Draft-Gearing for Engine-Tenders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a longitudinal sectional view showing my improved draft-gearing in position; and Fig. 2 is a bottom plan view of the same, part of the housing being shown in section.

This invention relates to a new and useful improvement in draft-gearings for engine-tenders, the object being to construct a gearing which is not only easily applied, but which will strengthen the timbers in the frame of the tender. The gearing is also very light compared with the appliances now in use and is easily assembled and applied.

Special features of my present invention reside in the combination, with the shank of the draw-bar, of a suitable pocket or housing for receiving said shank, springs arranged behind the shank for taking up end thrust upon the shank, and a U-shaped arrangement in the form of a continuous draw-bar attachment for taking tensional strain off the shank.

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 end sill, and B the intermediate sill, such sills being of usual construction.

C indicates a plate having a projection *c* at its front end to engage the end sill, and having suitable braced projections *c'* for engaging the rear side wall of the end sill. This plate is secured to the end sill and intermediate sill by suitable bolts or screws, which pass through openings located in any desirable position.

D indicates a pocket or housing arranged on the lower side of plate C, said pocket being open at its front end and closed at its rear end, as shown. The side walls of this pocket

are slotted, as at *d*, for the passage of cross-bar E.

F indicates the shank of a draw-bar, which is provided with an opening near its rear end to receive the bar E, which it carries.

G indicates the tail-bolt mounted in the rear end of the shank and passing through an opening in the rear wall of pocket D. The head of this tail-bolt is held in position by the cross-bar E.

H indicates springs arranged around the tail-bolt and between the rear end of the shank and the rear wall of the pocket D.

I indicates two rods formed with loops at their forward ends to receive the cross-bar E. These rods pass through webs extending laterally from the housing D and have mounted upon their rear ends follower-plates I', between which and the webs are springs J.

The parts being assembled as shown in the drawings, the tension is placed upon springs H and J by turning up the nuts on the rear ends of rod I. In this way the draw-bar has no lost motion, and any end thrust which it receives will be taken up by the springs H, which act practically as buffer-springs. The end pull on the draw-bar will be distributed between the springs J, which will be compressed. In rounding curves the shank is permitted some lateral motion, but the tendency of the two springs J, being compressed on each side of the shank and the draw-bar, is to equalize the pull, and by so doing the axis of movement of the draw-bar is practically at the cross-bar E.

The gearing is practically self-contained and can be applied to most any form of tender-frames now in use. All the parts can be assembled before the plate C is secured to the several sills. Should any of the springs become broken, they can be quickly and easily replaced without necessitating disassembling the parts. By engaging the end sill on both sides and securing the plate C to the end sill and intermediate sill the plate forms a very effective brace for the framing of the tender.

I am aware that many minor changes in the construction, arrangement, and combination of the several parts of my device can be made and substituted for those herein shown and described 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, is—

1. The combination with suitable sills, of a pocket secured thereto, a draw-bar arranged in said pocket, a buffer-spring behind the draw-bar, and springs arranged on each side of the draw-bar and outside of the pocket for taking the end pull on the draw-bar; substantially as described.

2. The combination with the end and intermediate sills, of a plate having a pocket formed thereon, a draw-bar shank carried in said pocket, a buffer-spring behind said shank, a cross-bar passing through the shank, rods mounted on the ends of said cross-bar, and springs surrounding said rods and seated against a fixed abutment and a follower-plate carried on the ends of the rods; substantially as described.

3. The combination with an open-ended pocket having slots in its side walls, of a draw-bar shank carrying a cross-bar which projects through said slots, a tail-bolt, a buffer-spring, rods mounted on the ends of the cross-bar, follower-plates on the ends of said rods and springs which bear against said follower-plates; substantially as described.

4. The combination with the shank of a draw-bar, of a buffer-spring behind the same,

a cross-bar carried by said shank, rods carried by said cross-bar, follower-plates on the ends of said rods, springs which are seated against said follower-plates, and nuts on the ends of the rods which impinge against the follower-plates to place the springs under compression; substantially as described.

5. The combination with an open-ended pocket having slots in its side walls, of a draw-bar shank arranged therein, a tail-bolt in the rear end of the shank and the closed end of the pocket, a cross-bar carried on said shank in advance of the end of the tail-bolt, rods on the ends of said cross-bar, said rods passing through openings in webs which are extended laterally from the rear end of said pocket, springs surrounding said rods, follower-plates on the ends of the rods, and nuts threaded on the ends of the rods and impinging against the outer faces of the follower-plates; substantially as described.

In testimony whereof I hereunto affix my signature, in presence of two witnesses, this 30th day of March, 1897.

ROBERT M. GALBRAITH.

Witnesses:

E. C. LAINE,  
P. SOUTHER.