

T. EUBANK.  
DRAFT RIGGING.

No. 570,987.

Patented Nov. 10, 1896.

Fig. 1.

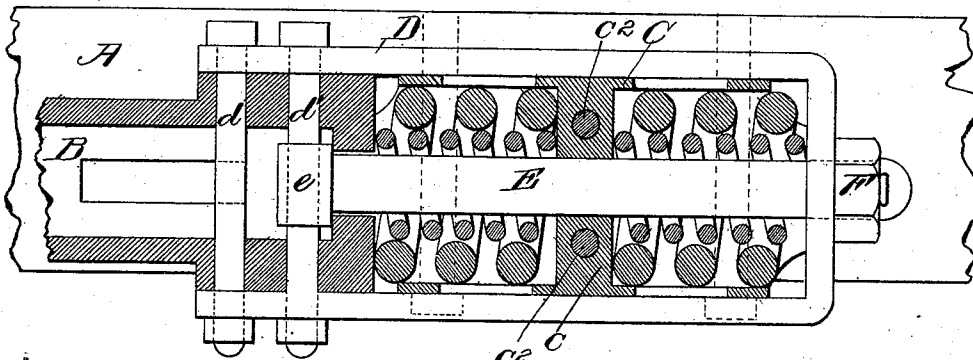


Fig. 2.

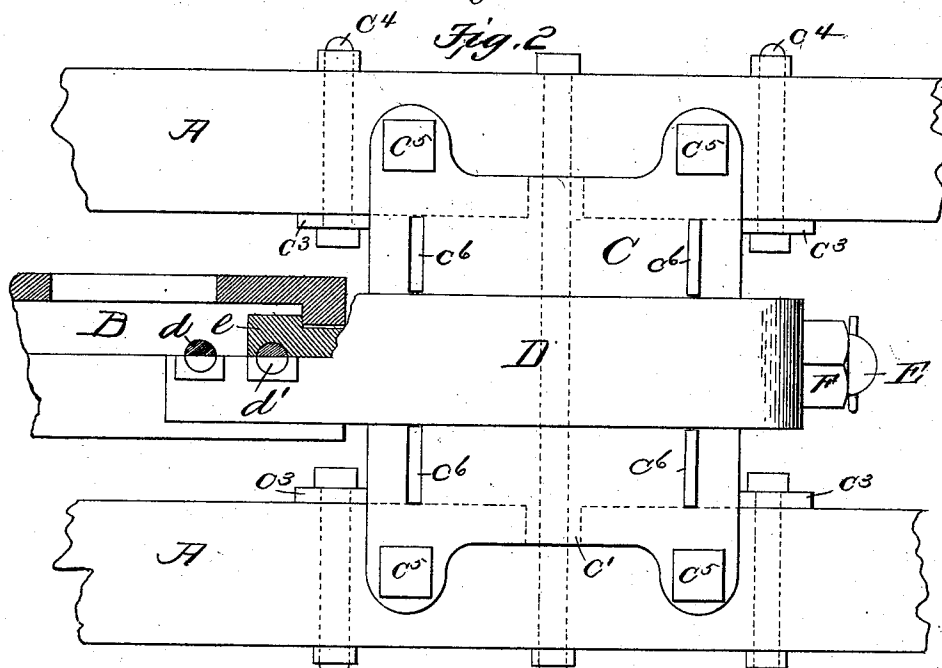
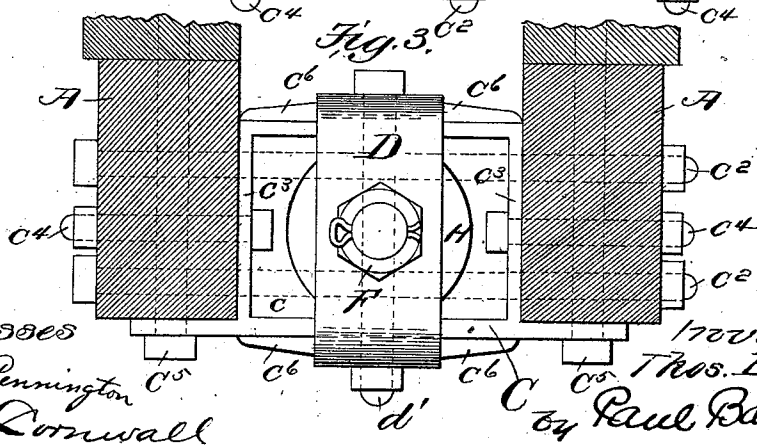


Fig. 3.



Witnesses

G. A. Pennington

F. R. Cornwall

Inventor

Thos. Eubank

by Paul Bakewell  
His atty.

T. EUBANK.  
DRAFT RIGGING.

No. 570,987.

Patented Nov. 10, 1896.

Fig. 4.

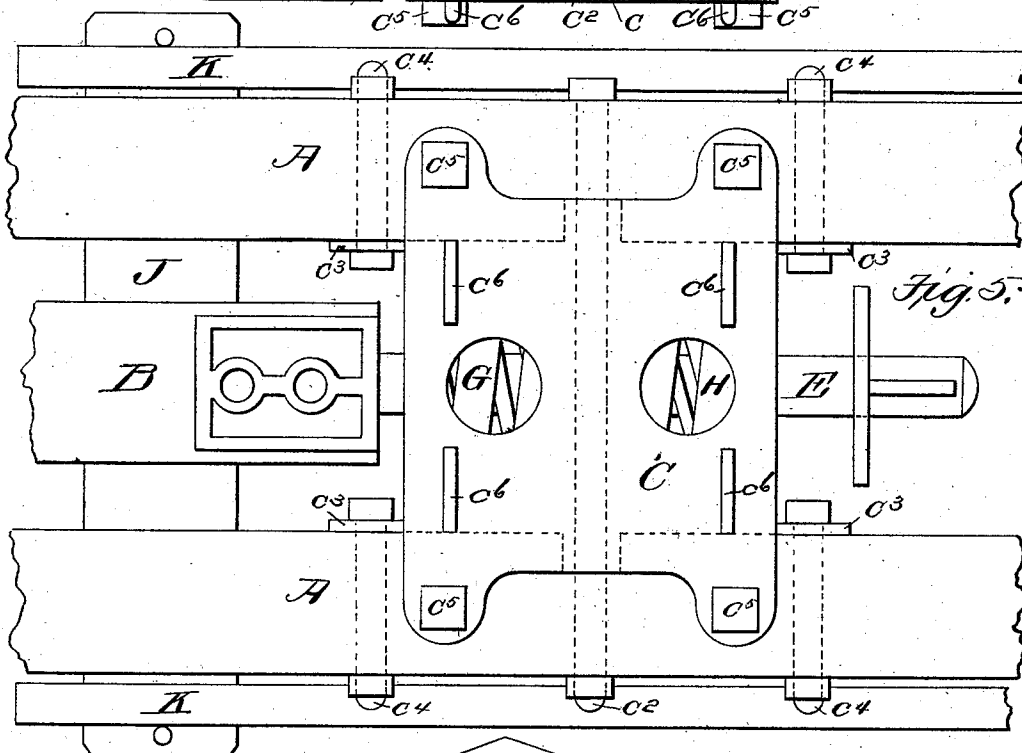
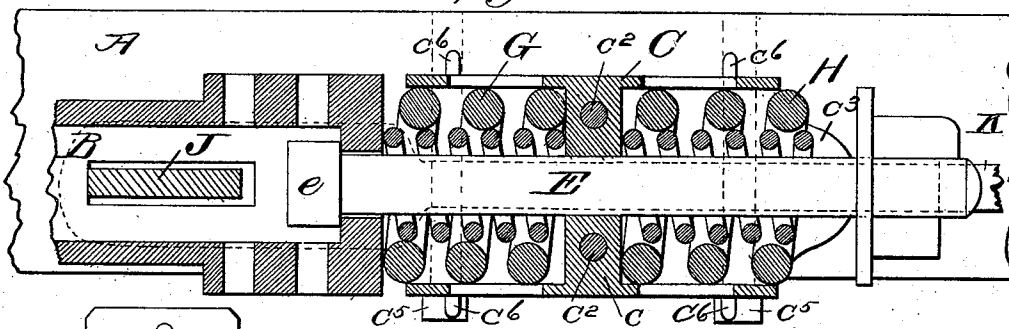


Fig. 5.

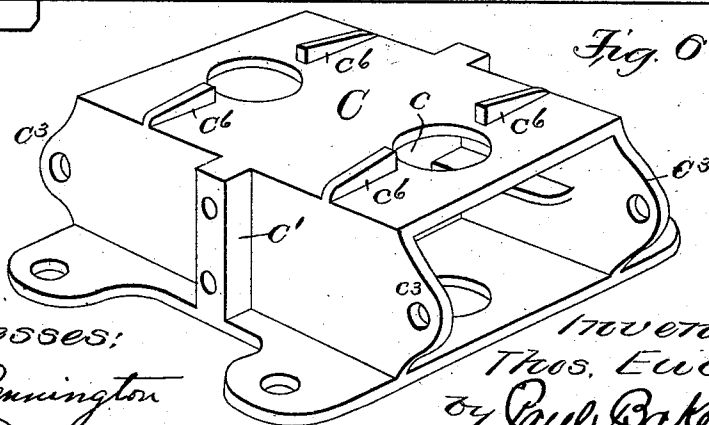


Fig. 6.

Witnesses:  
G. A. Pennington  
F. R. Cornwall

Inventor  
Thos. Eubank  
by Paul Bakewell  
his atty.

# UNITED STATES PATENT OFFICE.

THOMAS EUBANK, OF LITTLE ROCK, ARKANSAS, ASSIGNOR TO THE  
AMERICAN RAILWAY EQUIPMENT COMPANY, OF EAST ST. LOUIS,  
ILLINOIS.

## DRAFT-RIGGING.

SPECIFICATION forming part of Letters Patent No. 570,987, dated November 10, 1896.

Application filed August 20, 1896. Serial No. 603,327. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS EUBANK, a citizen of the United States, residing at the city of Little Rock, county of Pulaski, State of Arkansas, have invented a certain new and useful Improvement in Draft-Rigging, 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 longitudinal sectional view through my improved draft-rigging. Fig. 2 is a bottom plan view of the same, said view being partly in section. Fig. 3 is a rear end elevational view. Fig. 4 is a vertical sectional view through my improved draft-rigging when used in connection with a continuous draw-bar attachment. Fig. 5 is a bottom plan view of the same. Fig. 6 is a perspective view of the double-pocketed housing for the draft-springs.

This invention relates to a new and useful improvement in draft-rigging for railway-cars; and it consists, generally stated, in the novel construction of the double-pocketed housing for the draft-springs.

It further consists in the novel arrangement and combination of the tail-bolt and yoke, whereby the follower-plates usually present where a tail-bolt is used are dispensed with; and, finally, the invention consists 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, and B the shank of a coupler, such parts being of usual construction.

C indicates what I have termed a "double-pocketed housing," which is arranged between and bolted to the draft-timbers. This housing has a partition-wall *c*, which extends laterally, forming lugs *c'*, which are adapted to fit in grooves formed in the inner faces of the draft-timbers. Through this partition are formed openings for the reception of bolts *c<sup>2</sup>*, which extend through the draft-timbers and tie the parts together. The side walls of this housing are formed with ears *c<sup>3</sup>*, by which

the housing is secured to the draft-timbers 50 by bolts *c<sup>4</sup>*. The bottom of the housing extends laterally, forming wings through which pass bolts *c<sup>5</sup>*, said bolts extending vertically through the draft-timbers. *c<sup>6</sup>* indicates guide lugs or projections formed on the top and 55 bottom, respectively, between which the yoke is seated, the movement of said yoke being thus limited to a longitudinal one.

D indicates the yoke, which is substantially U shape in form, the forward members of 60 which are secured to the shank by means of suitable bolts *d* and *d'*.

E indicates the tail-bolt, formed with a head *e*, located within the shank, said tail-bolt passing rearwardly through the center of the 65 partition of the housing and through the rear end of the yoke, outside of which yoke said tail-bolt receives a nut F, which is preferably locked in place by a cotter-pin, as usual.

In assembling the parts of my device above 70 described the tail-bolt is first arranged in the shank, the forward draft-springs G strung thereon, the housing arranged in position on the tail-bolt, the rear draft-springs H strung 75 thereon, and the yoke slipped in position, so that when the springs are compressed bolts *d* and *d'* can be inserted. The compression of the draft-springs is accomplished by turning up the nut F on the rear end of the tail-bolt until the openings for the bolts *d* and *d'* 80 aline with each other when said bolts are inserted to bind the front end of the yoke in place. The bolt *d'* passes through an opening in the head of the tail-bolt, so as to prevent said tail-bolt from turning after the parts 85 have been assembled.

From the above construction it will be seen that the yoke and tail-bolt coöperate with each other, so as to distribute the strain of the draft equally between them. In other words, 90 instead of depending upon the resistance of the bolts *d* and *d'* to a shearing strain to hold the springs under compression and afford necessary strength, as has heretofore been done in some forms of rigging, the tail-bolt is 95 used to coöperate with the yoke and relieve the bolts *d* and *d'*. By the presence of the tail-bolt when combined with the yoke great

saving of time results when the draft-springs are compressed, for the reason that the turning up of the nut F is positive and any degree of compression may be had and maintained by the tail-bolt, together with the yoke and the yoke-bolts  $d$  and  $d'$ . Of course the length of the horizontal members of the yoke and the position of the bolt-openings for the bolts  $d$  and  $d'$  largely control the maintained compression of the springs.

From the above it will be seen that follower-plates are dispensed with and the great labor and time incident to the introduction of such follower-plates in compressing the draft-springs are saved.

Another advantage of my device is that it can be assembled on the ground and then slipped in position ready for use without requiring the services of three or four men and bending of certain parts to accommodate them to varying conditions found on different cars.

The parts of my device are of such dimensions that they may be used to replace the ordinary draft-gear now in use.

In Figs. 4 and 5 I have shown my invention applied to a continuous draw-bar attachment, in which event the yoke is dispensed with and a follower-plate I arranged at the rear end of the tail-bolt. In these figures, J indicates the draft-bar, and K the continuous rods. In other respects the invention is the same.

I am aware that yokes have been used in draft-gear as well as tail-bolts, but I do not know that the two have ever been combined in the manner here illustrated and described, nor am I aware that the tail-bolt has ever been used in combination with the yoke to compress the draft-springs, thus dispensing with the follower-plates.

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 of the United States, is—

1. The combination with the draft-timbers and shank, of a double-pocketed housing arranged between the timbers, draft-springs in said pockets, a yoke secured to the shank, and a tail-bolt; substantially as described.

2. The combination with the draft-timbers and shank, of a double-pocketed housing arranged between the timbers, draft-springs in said pockets, a yoke secured to the shank by means of through-bolts, and a tail-bolt having its head arranged in the shank, through

which head passes the yoke-securing bolt; substantially as described.

3. The combination with the draft-timbers and shank, of a housing arranged between the timbers, draft-springs in said housing, a yoke, and a tail-bolt having a nut on its rear end which is adapted to impinge the yoke and compress the draft-springs; substantially as described.

4. The combination with the draft-timbers and shank, of a housing arranged between the timbers, draft-springs in said housing, a tail-bolt having a head which engages the shank, said tail-bolt passing through the springs, housing, and yoke, a nut on the rear end of the tail-bolt which is adapted to be turned up to impinge against the yoke and compress the draft-springs, and bolts for securing the yoke in place on the shank; substantially as described.

5. The combination with the draft-timbers and shank, of a housing arranged between the timbers, draft-springs in said housing, a tail-bolt having a head which engages the shank, said tail-bolt passing through the springs, housing, and yoke, a nut on the rear end of the tail-bolt which is adapted to be turned up to impinge against the yoke and compress the draft-springs, and bolts for securing the yoke to the shank when said draft-springs are compressed, one of said yoke-securing bolts passing through the head of the tail-bolt; substantially as described.

6. The combination with the draft-timbers and shank, of a housing arranged between the timbers, draft-springs in said housing, a yoke secured to the shank and passing around the housing, said housing being provided with lugs or projections which afford seats for the yoke to guide the same in its longitudinal movement, and a tail-bolt; substantially as described.

7. The herein-described housing for draft-gearing, the same consisting of top, bottom, and side walls, a vertically-disposed central partition within the walls, ears at the ends of the side walls, lateral wings extending from the bottom wall, and lateral projections forming vertical ribs on the side walls, which ribs are substantially continuations of the central partition, all of said parts being integral; substantially as described.

In testimony whereof I hereunto affix my signature, in presence of two witnesses, this 15th day of August, 1896.

THOS. EUBANK.

Witnesses:

JOS. F. WILLS,

THOS. S. BUZBEE.