

954,071.

Patented Apr. 5, 1910.

2 SHEETS—SHEET 1.

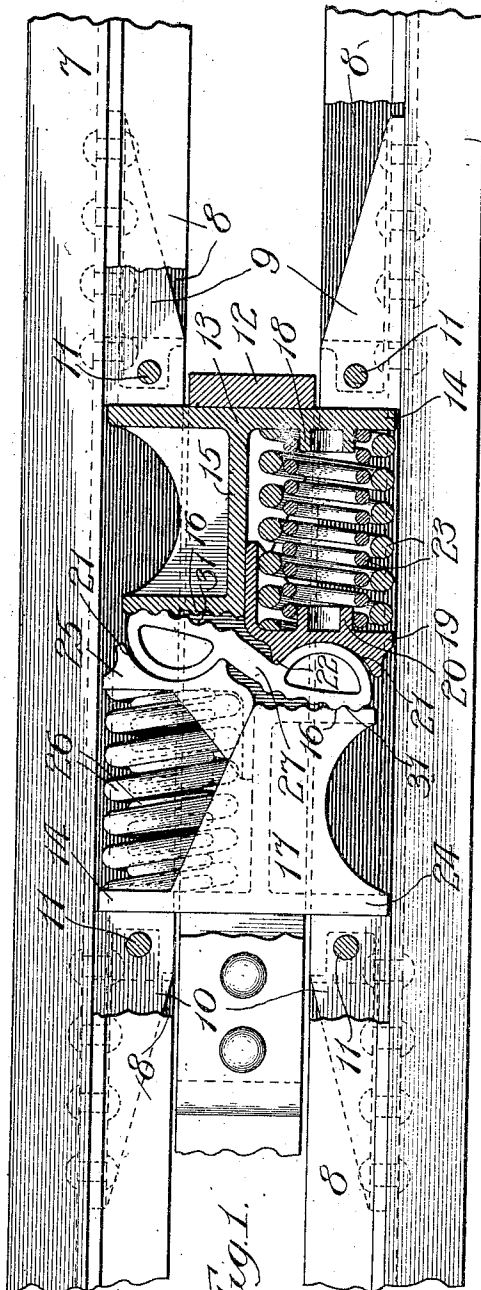


Fig. 1.

Witnesses:
John Enders
Chas. H. Buell.

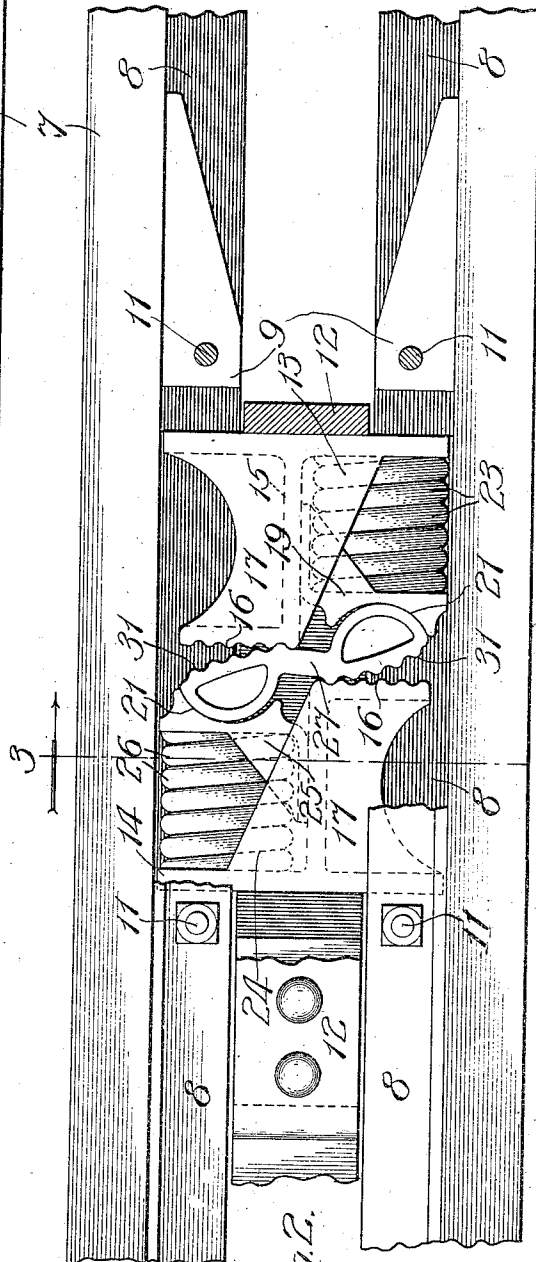


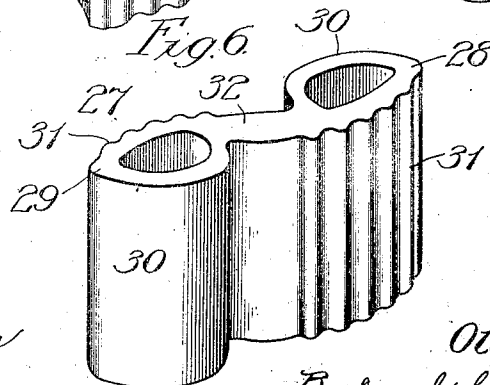
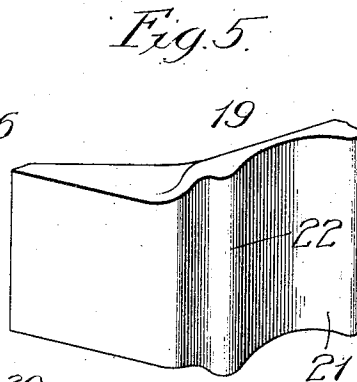
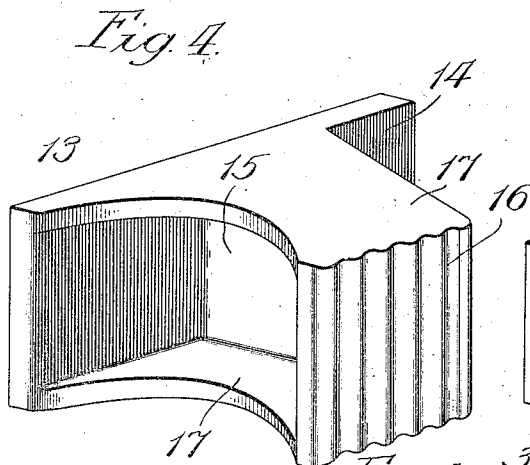
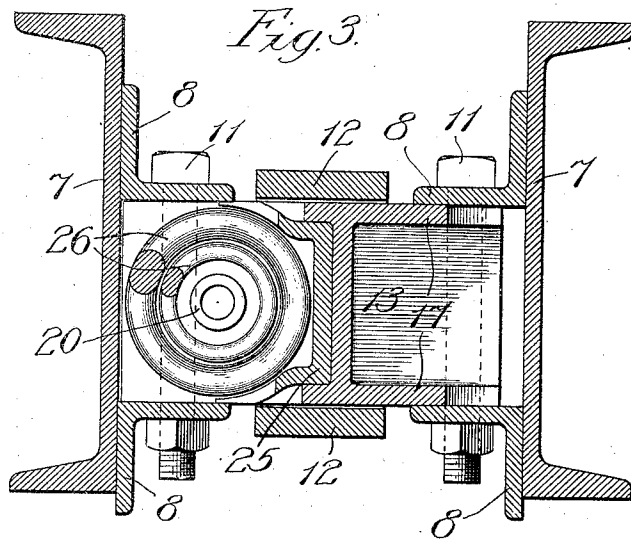
Fig. 2.

Inventor:
Olof Anderson.
By *Depue, Smith, Lee, Christensen & Wiles*
Attys.

954,071.

Patented Apr. 5, 1910.

2 SHEETS—SHEET 2.



Witnesses:
John Anders
Chas. H. Buell.

Inventor:
Olof Anderson/
By *Dydenworth, Lee, Chittom & Wiler*
Attys.

UNITED STATES PATENT OFFICE.

OLOF ANDERSON, OF CHICAGO, ILLINOIS.

DRAFT-GEAR.

954,071.

Specification of Letters Patent.

Patented Apr. 5, 1910.

Application filed September 11, 1909. Serial No. 517,192.

To all whom it may concern:

Be it known that I, OLOF ANDERSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Draft-Gears, of which the following is a specification.

My object is to provide certain improvements in the construction and arrangement of the spring-tensioning follower details of railway car-body draft-gears, with a view to interposing between the drawbar and draft-springs graduating mechanism which will effect rapidly-increasing spring-resistance, with attendant advantages, against movement of the drawbar in either direction.

It is further my object to provide a particularly strong, durable and efficient construction for the purpose defined, which may be readily applied to car-bodies hitherto in use without necessitating any material change in the under-structure details of such bodies.

In the accompanying drawings, which show my invention applied to one form of draft-rigging,—Figure 1 is a broken, partly plan and partly plan-sectional view of so much of a draft-gear as is thought necessary for a clear understanding of the construction and operation of my improvements, which are shown in normal position; Fig. 2, a view nearly similar in character to Fig. 1 and showing the position of moving parts when the draft-springs are compressed; Fig. 3, an enlarged section on line 3 in Fig. 2; Fig. 4, an enlarged perspective view of one of a pair of follower-blocks; Fig. 5, a similar view of one of a pair of spring-caps; and Fig. 6, a similar view of a rocker, or lever, interposed between the follower-blocks.

In the construction shown, 7, 7 represent the center-sills of a car and 8 stationary angle-iron guides. Fastened against the center-sills are the stops, or brackets, 9, 10. Bolts 11 pass through the angle-bars 8 and brackets 9 and 10, as indicated.

12 is the pocket-strap, or yoke, of the draft-gear secured to the shank of the draw-head, in a common manner. Seated normally against the stops 9 is a casting, or follower-block, 13 having, as shown most plainly in Fig. 4, a back-plate portion 14, web 15, serrated head-plate 16 and side-walls 17, 17. On the base-plate 14, in the position shown, is a spring-positioning boss 18. Sliding along the face of the web 15

is a spring-cap, 19 provided in its inner face with a spring-positioning boss 20 and in its outer face with a concave socket 21 terminating at one edge in the lip 22. Confined between the parts 13, 19 are the inner and outer companion-springs 23.

24 is a follower-block seated normally against the stops 10 and corresponding in its details of construction with the follower-block 13, described. Sliding against the block 24 is a spring-cap 25, corresponding in all its details with the cap 19 described. Between the parts 24, 25 are the inner and outer confined springs 26 corresponding in every way with the springs 23 described. The follower-blocks are slidingly mounted in the guides formed by the angle-bars 8 and the upper and lower sides of the yoke 12. The follower-blocks are reversed with relation to each other in the guides, whereby the socket 21 of the spring-cap 19 is directly opposite the serrated face 16 of the block 24 and the socket-portion 21 of the cap 25 is directly opposite the serrated face 16 of the block 13. Loosely mounted between the follower-blocks is a lever, or rocker, 27 shaped as indicated and formed with heads 28, 29, each presenting a convex surface 30 on one side and a slightly convex, serrated face 31 on its opposite side, the surfaces designated by the same numerals facing, respectively, in opposite directions. The heads 28, 29 are connected by a web 32. The faces 30 of the lever work in the concavities 21 of the spring-caps 19, 25 and their serrated faces bear against the serrated faces 16 of the follower-blocks 13, 24. When the follower-blocks are in relatively extended position against the stops 9, 10, the lever 27 occupies the position shown in Fig. 1, engaging the follower-blocks near the outer ends of the faces 16. The parts are held in this position by the tension of the springs 23, 26. A pull upon the drawbar 13 draws the rear end-portion of the yoke 12 against the follower-block 13, causing the lever 27 to move toward, or to, the position shown in Fig. 2. While thus moving it compresses the springs 23, 26 and is turned on its axis by the approach of the serrated surfaces 16. The rocker thus operates as a changing, or shortening, lever, gradually increasing the effect of the resistance of the springs against the approach of the follower-blocks. The resistance against movement of the draw-head and drawbar,

therefore, is gradually increased, thereby tending to prevent sudden tensioning, or yielding, of the springs with consequent jar in service.

5 In the movement of the drawbar in the direction to the right, in Figs. 1 and 2, the follower-block 13 is pressed against the stops 9 and the other follower-block is moved in the direction thereof, effecting a rocking of the lever 27, in the same manner as before described and with similar results. 10 The serrations in the meeting faces 16, 31 tend to steady the rocking lever in its movements, but they may be dispensed with if 15 desired. The rocking lever and follower-blocks are held securely against removal by the angle-iron guides 8 and upper and lower, or side, bars of the yoke 12.

The concavo-convex meeting faces 21, 30 20 offer material frictional resistance to the movements of the lever. This is an important advantage, for the reason, more especially, that it tends to retard the return of the parts to normal position and thus, in a large measure, neutralizes or absorbs shock 25 against the stops 9, 10.

My improvement may be variously modified in the matter of details of construction, to adapt it for example to different types of 30 draft-riggings, without departing from the spirit of my invention as defined by the claims.

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

35 1. In a draft-gear, the combination of a pair of opposed follower-blocks, each presenting a bearing-face and carrying a draft-spring and a draft-spring cap, and a rocking-lever interposed between the follower- 40 blocks in engagement with said draft-spring

caps and shiftably engaging said bearing-faces, the lever operating by shifting under the spring-tensioning movement of a follower-block to gradually increase the spring resistance against said movement, for the 45 purpose set forth.

2. In a draft-gear, the combination of a pair of opposed follower-blocks, each presenting a bearing-face and carrying a draft-spring and a draft-spring cap, and a rocking-lever interposed between the follower- 50 blocks in frictional turning engagement with said draft-spring caps and shiftably engaging said bearing-faces, the lever operating by shifting under the spring-tensioning movement of a follower-block to gradually increase the spring resistance against said movement, and the engagement of the lever and spring caps producing frictional resistance against movement of the follower- 60 block, for the purpose set forth.

3. In a draft-gear, the combination of a pair of opposed follower-blocks, each presenting a serrated bearing-face and carrying a draft-spring and a draft-spring cap, and a rocking-lever interposed between the follower blocks having convex portions engaging said spring caps and serrated face-portions engaging said serrated bearing-faces, 65 the lever operating by shifting under the spring-tensioning movement of a follower-block to gradually increase the spring resistance against said movement, and the serrated engaging-faces preventing undue slip 70 between the lever and follower-blocks, for the purpose set forth. 75

OLOF ANDERSON.

In presence of—

K. M. CORNWALL.

R. A. SCHAEFER.