

(No Model.)

A. LIPSCHUTZ.
DRAFT GEAR FOR FREIGHT CARS.

No. 578,109.

Patented Mar. 2, 1897.

Fig. 1.

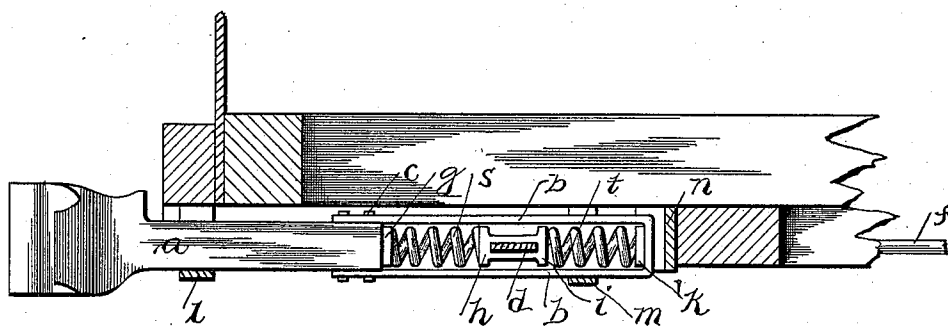
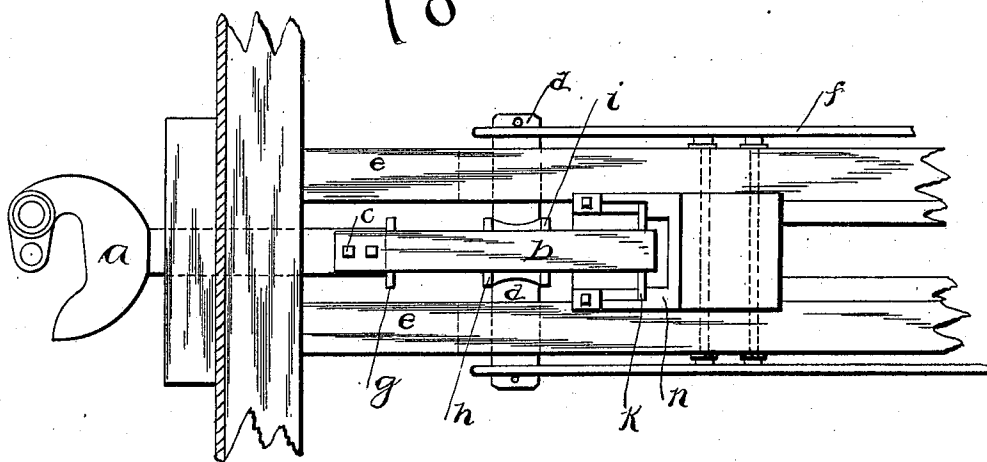


Fig. 2.



Witnesses:
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ARTHUR LIPSCHUTZ, OF CHICAGO, ILLINOIS.

DRAFT-GEAR FOR FREIGHT-CARS.

SPECIFICATION forming part of Letters Patent No. 578,109, dated March 2, 1897.

Application filed July 17, 1896. Serial No. 599,562. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR LIPSCHUTZ, a native of Germany, but having made oath of my intention to become a citizen of the United States, residing at No. 178 La Salle avenue, Chicago, in the county of Cook and State of Illinois, have invented a new and useful Draft-Gear for Freight-Cars, of which the following is a specification.

My invention relates to improvements in continuous-draft-gear rigging; and the objects of my improvement are, first, to afford means to avoid the elongation of the draft-rods by stretching; second, to secure a construction whereby the wear or breakage of the draw-bar through the strain at the draft-key is avoided, and, third, to get, when the car is pulled on one end, action also of the spring on the pulled end, and not only at the far end. I attain these objects by the construction of a draft-gear rigging illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the draft arrangement on one end of the car, and Fig. 2 a top view of the same.

Similar letters refer to similar parts throughout the views.

The draw-bar *a* is the regular Master Car-Builders' standard draw-head, and has bolted to it the spring-pocket *b* by bolts *c*. The draw-bar is supported by the carrier-iron *l*, fastened to the buffer-block, and also by strap *m*, which fastens to the bottom side of the draw-bar stop-casting *n*. Draft-key *d*, instead of passing, as usually in the continuous-draft arrangement, through an opening in the shank of the draw-bar, has here no direct connection with the draw-bar *a* at all, but is placed between the two springs *s* and *t*.

The draft-timbers *ee* are cut out for the draft-key, and connection with the draft-rods *ff* is made in the usual way.

g, *h*, *i*, and *k* are the spring-followers, *h* and *i* being made of a single piece and so as to allow the draft-key *d* to pass between them, Fig. 1.

If the draw-bar *a* is pulled, follower *k* is moved by the spring-yoke *b* to the left side and compresses spring *t*, which in turn forces, by pressing on follower *i*, the draft-key *d* to the left side and pulls the draft-rods *f f*, thereby forcing on the other end of the car,

which is not shown in the drawings, the draft-key to also move to the left side and to compress the spring corresponding to spring *t* on the end shown against the draw-bar stop, whereby, as in the continuous-draft arrangement, the pulling strain from the one end of the car is converted into a buffing strain at the other end of the car.

When draw-bar *a* is pushed, then follower *g* compresses spring *s*, thereby forcing draft-key *d* to the right by pressure on the twin follower *h i*, and thereby compressing also spring *t* and forcing follower *k* to its seat against the draw-bar stop-casting *n*.

In the continuous-draft gear as usually arranged the draw-bar at one end of the car is rigidly connected with the draw-bar at the other end by means of the draft-keys and draft-rods, and as there is therefore practically no slack in a whole train of cars having the old continuous-draft gear, and as there is no spring action till the last car in the train has commenced moving, it is readily to be seen that in my improved continuous-draft arrangement, where springs are interposed and act between draw-bar and draft-key, no more stretching of the rods will take place; furthermore, no special form of a draw-bar with shank expressly shaped to take the draft-key is necessary, and action is had in a pulling strain from springs at both ends of the car, and there being slack between cars an engine will be enabled to start a heavier train than possible with cars having the continuous-draft arrangement in use prior to my invention.

For cars having only one spring in the spring-pocket instead of the two shown in drawings it is only necessary to shorten the yoke *b* and omit spring *s*, while the same advantages result from this one-spring draft arrangement as before with the two-spring draft shown in drawings, that is, when the draw-bar is pulled the draw-bar spring *t* will be compressed against the draft-key, and pulling the draft-rods will compress the spring at the other end and force its follower against the draw-bar stop. Thereby, as before, at a pull on the draw-bar the spring at each end of the car comes in action. At a push at the draw-bar *a* follower *i* will compress the draw-

bar spring *t* and force its follower to the seat against the draw-bar stop-casting *n*.

I am aware that prior to my invention continuous-draft gear with draft-keys and draft-
5 rods and with one or two spring drafts have been in use. I therefore do not claim such a combination broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

10 1. A continuous-draft appliance consisting of a draw-bar, a spring strap or yoke secured to the draw-bar, a draft-key independent of the draw-bar and laterally extended through the spring strap or yoke, draft-rods respec-
15 tively secured to the ends of the draft-key and springs on each side of the draft-key.

2. A continuous-draft appliance consisting of a draw-bar, a spring strap or yoke secured to the draw-bar, a draft-key, a twin follower
20 through which the draft-key passes, springs disposed on either side of the draft-key and bearing against the twin follower and draft-rods secured to the ends of the draft-key.

3. In a continuous-draft appliance consist-
25 ing of a draw-bar, a spring strap or yoke secured to the draw-bar, a draft-key independent of the draw-bar and laterally extended through the spring strap or yoke, draft-rods respectively secured to the ends of the draft-

key and springs on each side of the draft-key 30 together with a follower and a stop or stops engaging the follower to limit the traverse of the draw-bar.

4. A continuous-draft appliance consisting of a draw-bar, a spring strap or yoke secured 35 to the draw-bar, a draft-key independent of the draw-bar, longitudinally extended sills having slots therein through which the draft-key passes and in which said key has its move-
40 ment independent of the draw-bar, draft-rods secured to the ends of the draft-key and a spring or springs acted upon by the draft-key and spring-yoke.

5. A continuous-draft appliance consisting of a draw-bar, a spring strap or yoke secured 45 to the draw-bar, a draft-key independent of the draw-bar and laterally extended centrally through the spring-yoke, a twin follower through which the draft-key passes, a pair of
50 springs, one on each side of the twin follower, the one ends of which springs bear against said twin followers and followers within the end portions of the spring-yoke against which the other ends of the springs bear.

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Witnesses:

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