H. J. LOMBAERT.

DRAFT BAR FOR RAILROAD CARS.

No. 31,670. Patented Mar. 12, 1861.

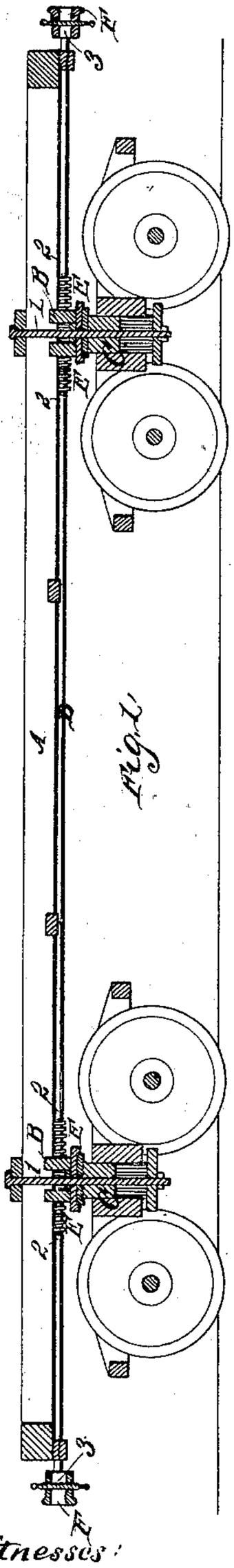

Fig. 1.

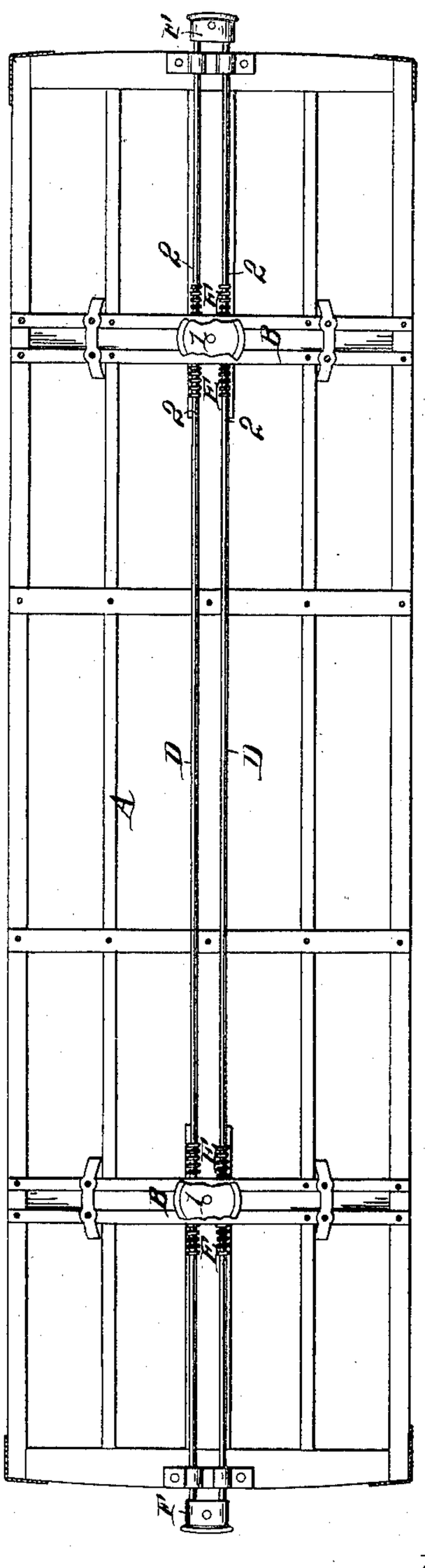

Fig. 2.

Witnesses:

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HERMAN J. LOMBAERT, OF PHILADELPHIA, PENNSYLVANIA.

DRAFT-BAR FOR RAILROAD-CARS.

Specification of Letters Patent No. 31,670, dated March 12, 1861.

To all whom it may concern:

Be it known that I, HERMAN J. LOMBAERT, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Draft-Bars for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical, longitudinal section through the middle of the platform and trucks of an eight-wheel car having my improvement applied thereto; and Fig. 2, a plan view of the under side of the same—like characters, when on both figures, indicating the same objects.

The nature of my invention consists in the construction, and arrangement together, of a continuous, rigid, draw-bar, buffer-heads, and springs, in combination with the bolsters of a car, as hereinafter described, whereby a more simple, effective, and durable pulling and buffing device is afforded, and, at the same time, the usual and very objectionable elongations and contractions in a train of cars in starting and stopping, are entirely avoided.

In the drawings, A is the platform or bottom of the car; B, B, its bolsters; and C, C, its trucks.

D, represents the continuous draft-bar; E, E, E, E, the springs; and F, F, the usual buffers or coupling-heads.

The draft-bar (D), in this instance, consists of two cylindrical rods of iron which extend, parallel with each other, along the middle of the underside of the platform (A), loosely through the bolsters (B, B) and free of the respective king-bolts 1, 1, between them, and also connecting the two buffer-heads (F, F) together, rigidly—leaving a sufficient space between the ends of the platform (A) and the heads (F, F), respectively, for the required longitudinal motions of the draft-bar.

The springs (E, E,) surround the respective rods of the draft-bar (D) and are secured thereon so as to bear against the front and rear sides, respectively, of the two bolsters (B, B), by means of the keys 2, 2, or otherwise. The said draft-bar (D) is, in this instance, made of two distinct cylindrical rods—as seen in the drawings—for the purpose of avoiding the "king-bolts" (1, 1) and the central opening or mouth 3, of each of the buffer-heads; but, it is obvious that a single, flat bar may be adapted to serve the purpose as well, by slotting it so as to avoid these parts. The springs (E E) are also here represented as of steel, and helical in form, but vulcanized gum-blocks may be substituted for the same purpose, if preferred.

In the operation of a train having each car fitted with this improvement, it will be perceived that, in either starting or stopping, the whole train will not be varied in length by the motion of the draft-bars more than the variation incident to any one of the said cars upon its respective bar (D), or—in more specific words—supposing the longitudinal spring-motion of the draft-bar of each, or any one of the cars, to be three inches—the variation in the length of the train, however long it may be, will not exceed three inches, from the motions of the springs, and consequently, in starting, and stopping, this very slight variation in the length of the train, renders the application and operation of such brakes as are intended to be worked by steam or other power, from a single point in the train, and independently of the draft-bars, a matter of simple and easy accomplishment; besides obviating the destructive jerking and jamming incident to the use of the divided draft-bars in general use at the ends of the cars; or, of those having a motion of sufficient extent to operate the brakes. Another feature of importance in the application of this draft-bar arises from the fact that its bearings are directly against the bolsters, and therefore the car frame is relieved from all strain in starting and stopping a train.

I am aware that a continuous draft-bar has before been applied so as to operate the brakes, by abutting against each other from the momentum of the cars in the train; and I am also aware that, in England, a continuous draft-bar has been used having buffer-heads applied, and also a spiral spring attached near each end and bearing upon the ends of bars resting on the axles of the car and supporting the said continuous draft-bar so as to pull by the axles and also allow the car-body to sink and rise on its springs without varying the height of the buffer-heads from the rails of the track; but, this device is not applicable to the eight-wheeled cars used in the United States.

Therefore I do not claim, broadly, the application of a continuous draft-bar to a car; but,

Having described the peculiar construction, application, and operation, of my improved draft-bar, and pointed out its superior utility, what I claim as new therein of my invention, and desire to secure by Letters Patent is,

A draft-bar, for rail road cars, consisting of the rigid bar, or bars, D, buffer-heads F F, and springs E, E; the same being constructed and arranged together in combination with the bolsters B, B, so as to operate in the manner described.

HERMAN J. LOMBAERT.

Witnesses:
JOHN ULRICH,
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