(No Model.) 2 Sheets—Sheet 1.

E. BADIN.

LOAD RELEASER FOR LOGGING CARS.

No. 541,220. Patented June 18, 1895.

Fig. 1.

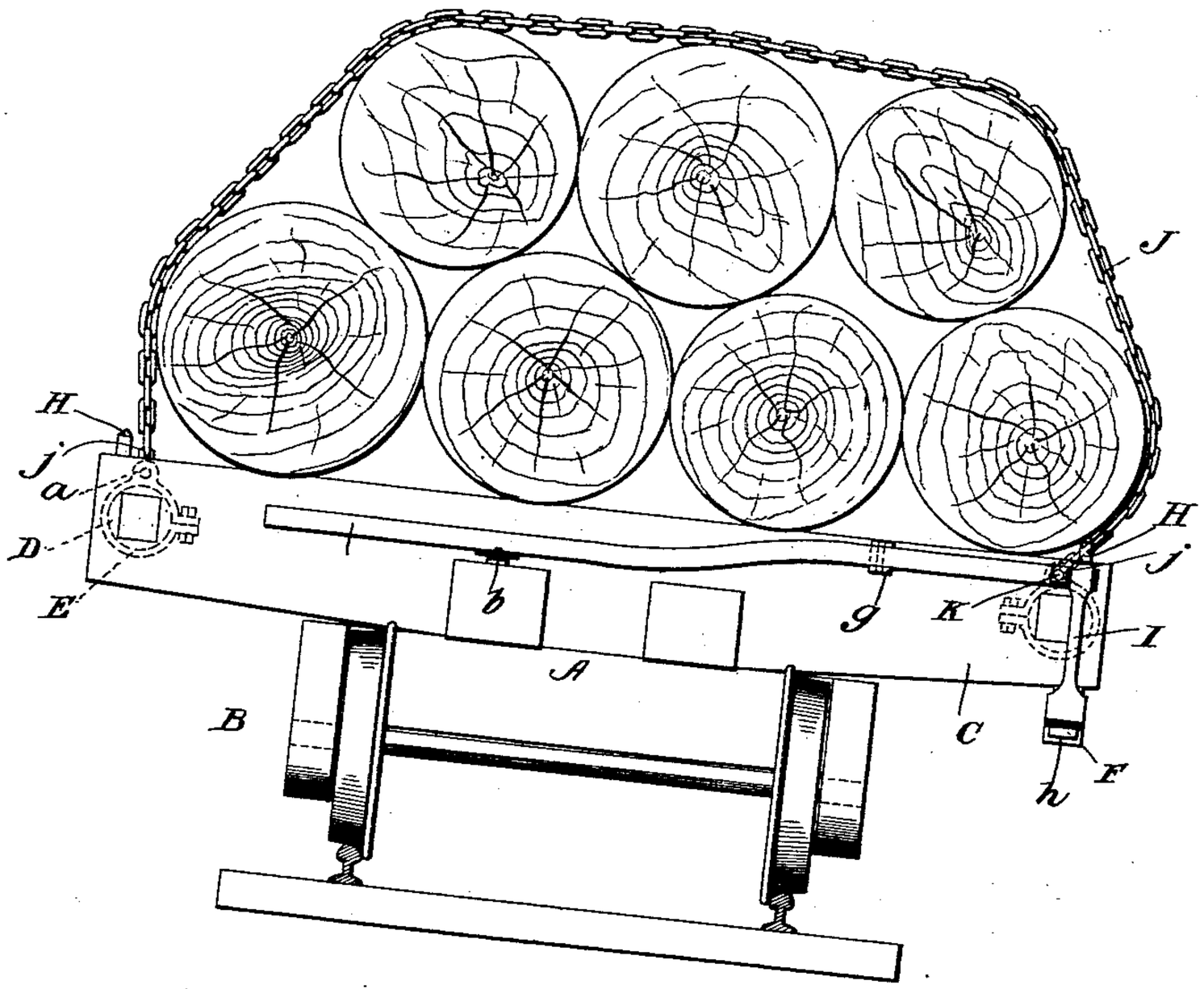


Fig. 2.

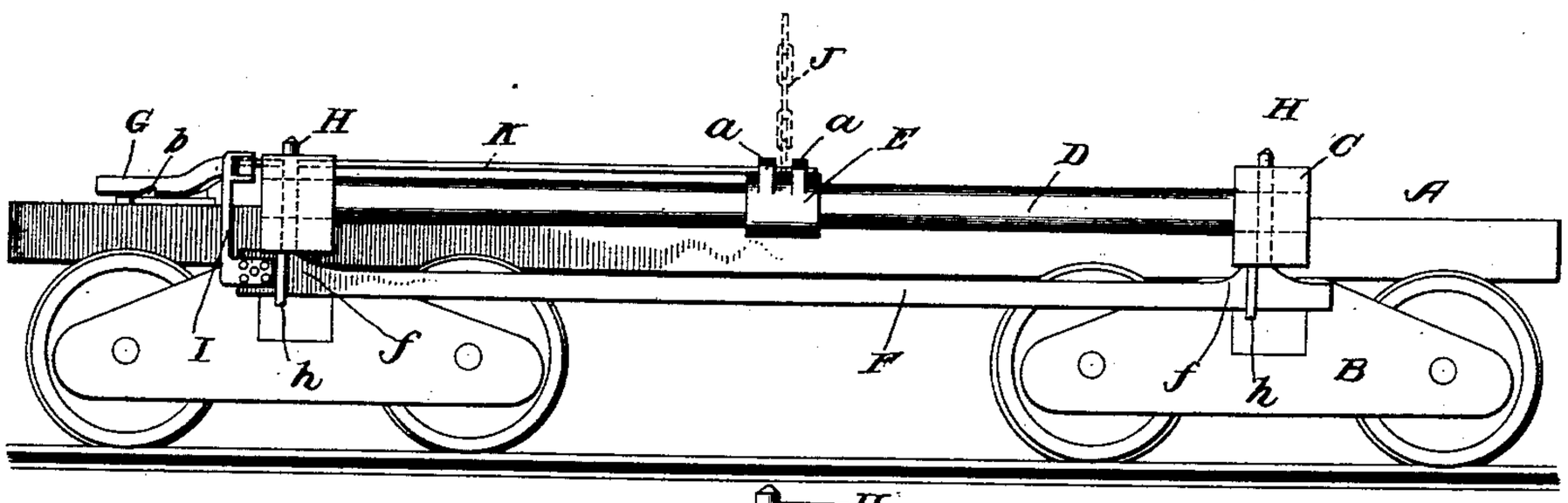
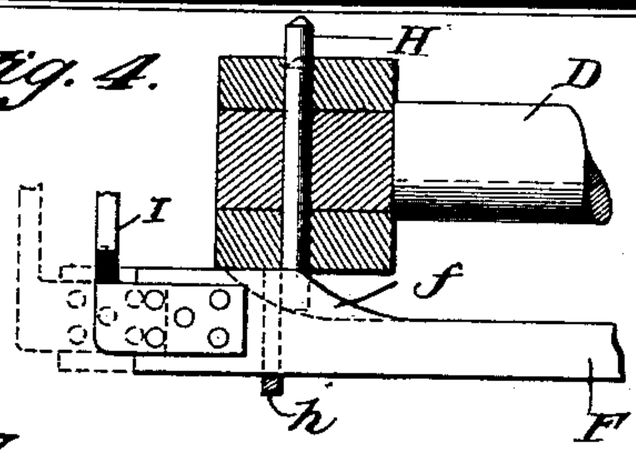


Fig. 4.



Attest.
Edw. C. Duvall. Jr.
B. L. Jeffery

Inventor:
Elia Badin
per Fred. P. Fisher
Atty.

(No Model.) 2 Sheets—Sheet 2.

E. BADIN.

LOAD RELEASER FOR LOGGING CARS.

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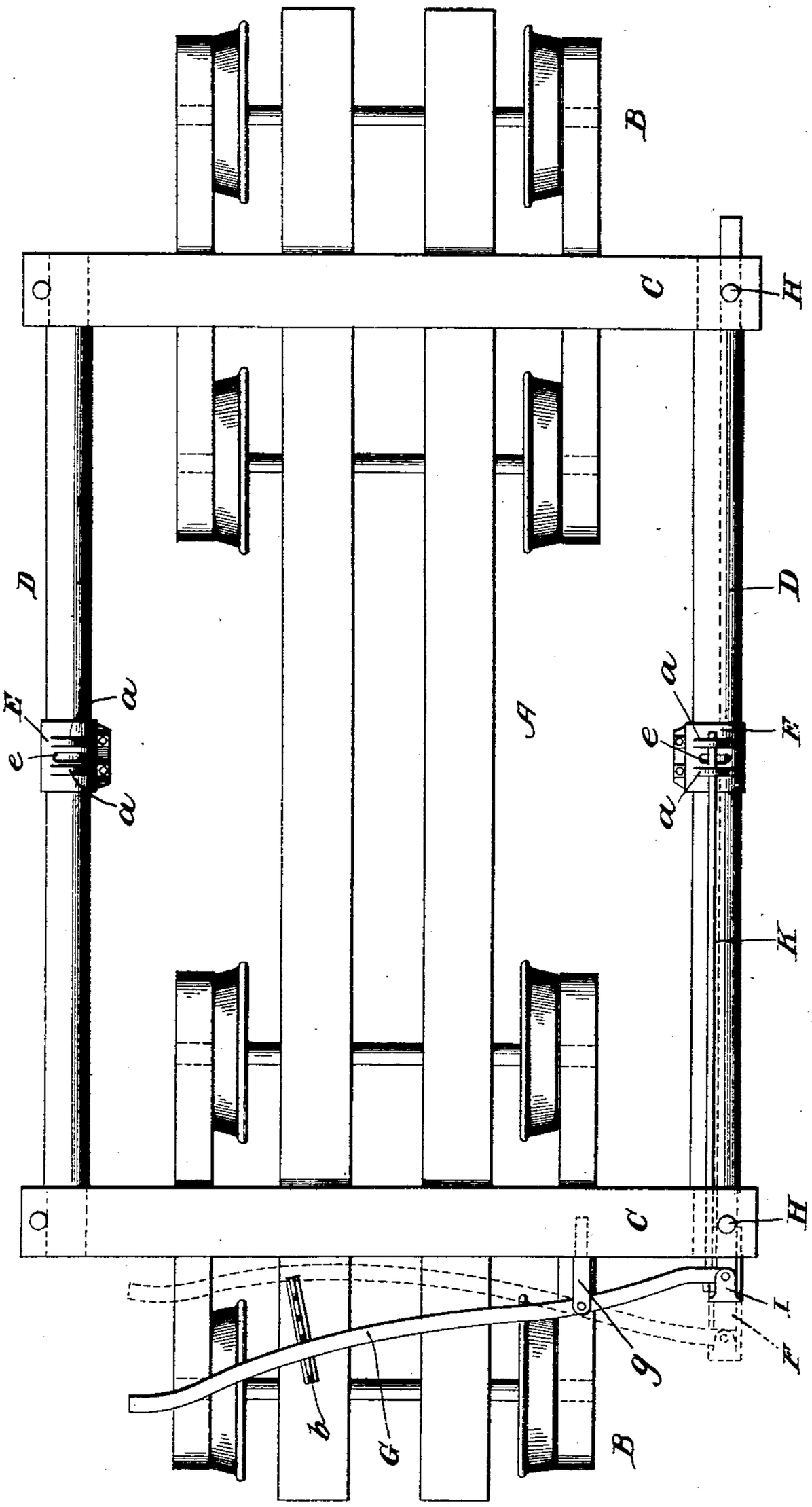

Fig. 3.

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Atty.

UNITED STATES PATENT OFFICE.

ELIA BADIN, OF RHINELANDER, WISCONSIN, ASSIGNOR OF ONE-HALF TO NICHOLAS DIDIER, OF SAME PLACE.

LOAD-RELEASER FOR LOGGING-CARS.

SPECIFICATION forming part of Letters Patent No. 541,220, dated June 18, 1895.

Application filed February 11, 1895. Serial No. 538,045. (No model.)

To all whom it may concern:

Be it known that I, ELIA BADIN, a citizen of the United States, residing at Rhinelander, in the county of Oneida and State of Wisconsin, have invented certain new and useful Improvements in Load-Releasers for Logging-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved means for binding and releasing a load of logs or similar articles carried by a logging car or similar conveyance, so that said load may be securely held upon the vehicle for the purpose of transportation, and may be easily and readily discharged therefrom, in many instances automatically, whenever desired by a simple manipulation of my present improvements, and the invention therefore consists essentially in the construction, arrangement, and combination of parts, substantially as will be hereinafter described and claimed.

In the annexed drawings, illustrating my invention, Figure 1 is an end elevation of a loaded log-carrying car provided with my improved binding and releasing mechanism. Fig. 2 is a side elevation of the car, showing my improvements. Fig. 3 is a top plan view. Fig. 4 is an enlarged detail sectional view showing the arrangement of one of the bunk spikes or pins and the cam-bar beneath it.

Like letters of reference designate like parts in all the different figures of the drawings.

A denotes the main horizontal frame of a flat car or other similar vehicle, adapted to carry logs, and B denotes the truck frames and trucks with which the horizontal frame is provided. The trucks will in general be ordinary car wheels adapted to run upon an ordinary railway track. I am, of course, restricted to no particular construction for the main frame, and what I have here presented, is given for an example merely.

Located transversely upon the main frame A are a number of bunks C. There are preferably two of these, one at each end of the car, and they project laterally beyond the sides of the car for some distance, as shown, so as to enlarge the capacity of the car as much as possible, and on these bunks the logs to be transported are laid in a longitudinal horizontal position, as shown in Fig. 1, said logs being piled upon each other in as large a pile as the car will accommodate.

The logs are kept upon the bunks, and hence upon the car, by means of bunk spikes or pins, which project from the upper faces of the bunks at the ends thereof and prevent the logs from rolling off the bunks, and also by means of chains, which cross over the logs, as shown in Fig. 1, and whose ends are fastened at the sides of the car. My improvements consist in means for quickly and easily fastening and unfastening these chains, and also for vertically adjusting the bunk pins so that their upper ends will project in an operative position above the face of the bunks, or will sink into an inoperative position, when their pointed ends will be flush with the faces of the bunks. Heretofore the bunk pins employed have been fixed in stationary positions in the bunks. A movable bunk pin is therefore a novelty, and I hereby lay a broad claim thereto.

H denotes the bunk pins or spikes. They are situated in vertical passages in the bunks, as shown in Fig. 4, said passages being large enough to allow the pins to move freely up and down therein. Running lengthwise of the car at a point beneath the outer ends of the bunks C are the endwise movable cam bars F, which are provided with cam-like projections *f* on their upper edges. On the upper edges of these bars F rest the lower ends of the pins H, as shown in Fig. 4. The bars are guided in their movement by the straps *h*, or other suitable means. When the projections *f f* are beneath pins H, as shown in Fig. 4, then the upper ends of the pins will project into operative positions above the upper faces of the bunks. When the bars F are shifted so as to displace the cam projections *f* from beneath pins H, than the latter will drop down through the action of gravity until their upper ends lie flush with or below the faces of bunks C. Thus by reciprocating the bars F the pins H may be elevated or depressed and be either thrown into an operative or into an inoperative position.

A suitable leverage is provided to accomplish this reciprocation of the bars F, which is necessary to regulate the position of the pins H.

G indicates a horizontally movable lever fulcrumed on a stud *g* projecting horizontally fromone of the bunks C. The end of this lever is pivoted to a casting or block I, which is bolted, or otherwise secured to the end of the bar F. Therefore by manipulating the lever G the cam bar F can be moved back and forth. As already stated these cam bars are at both sides of the car. Of course, if desired, there may be but one of them; also, there may be more than one lever G, if preferred; or if there is but one, it may be attached to the cam bar at one side, or at the other side, as may be desired.

On each side of the car, and above the cam bars F is a sway bar D, preferably round in form, and fastened at each end to the bunks C C. On these sway bars D are clamps E of any suitable kind, and arranged to be adjustable when desired, so that they may be fixed at any point in the length of the sway bars. These clamps have on the top side a pair of lugs *a a*, and between them is a slot *e*. The chain J has at each end an eye or link *j*, which is adapted to fit into the slot *e* between the lugs *a a*.

K denotes a rod which is connected to the lever G near the point where it is pivoted to the part I. This rod K passes through perforations in the lugs *a a*, and is adapted therefore to engage the eye *j* on the end of the chain J. The rod K, being attached to the lever G, reciprocates simultaneously with the reciprocation of the cam bar F. Hence the chain J will be disengaged from the clamp E at the same time that the bunk spikes H drop clear of the logs, and therefore by a single movement of the lever G, the log pile on the car will be unbound and released, so that if the car is on an inclining track as shown in Fig. 1 its load will then be automatically discharged. On the end of frame A is a toothed bar, with which the lever G engages, so that it may be held in the desired position.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a logging car, the combination with the vertically movable bunk pins, of the horizontally-movable cam bars having cam-like projections on their upper edges, on which upper edges rest the lower ends of the bunk pins, substantially as described.

2. In a logging car, the combination with movable bunk pins, of sliding cam bars engaging them, and a leverage for operating the cam bars.

3. The combination of the chain, the lug-provided part between whose lugs lies the end eye of the chain, the rod engaging the lugs and the eye, the movable bunk pins, the cam bars engaging them, and the lever operating the aforesaid rod and also the cam bars, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

his
ELIA × BADIN.
mark

Witnesses:
G. Q. CLARK,
SAM. J. WILER.