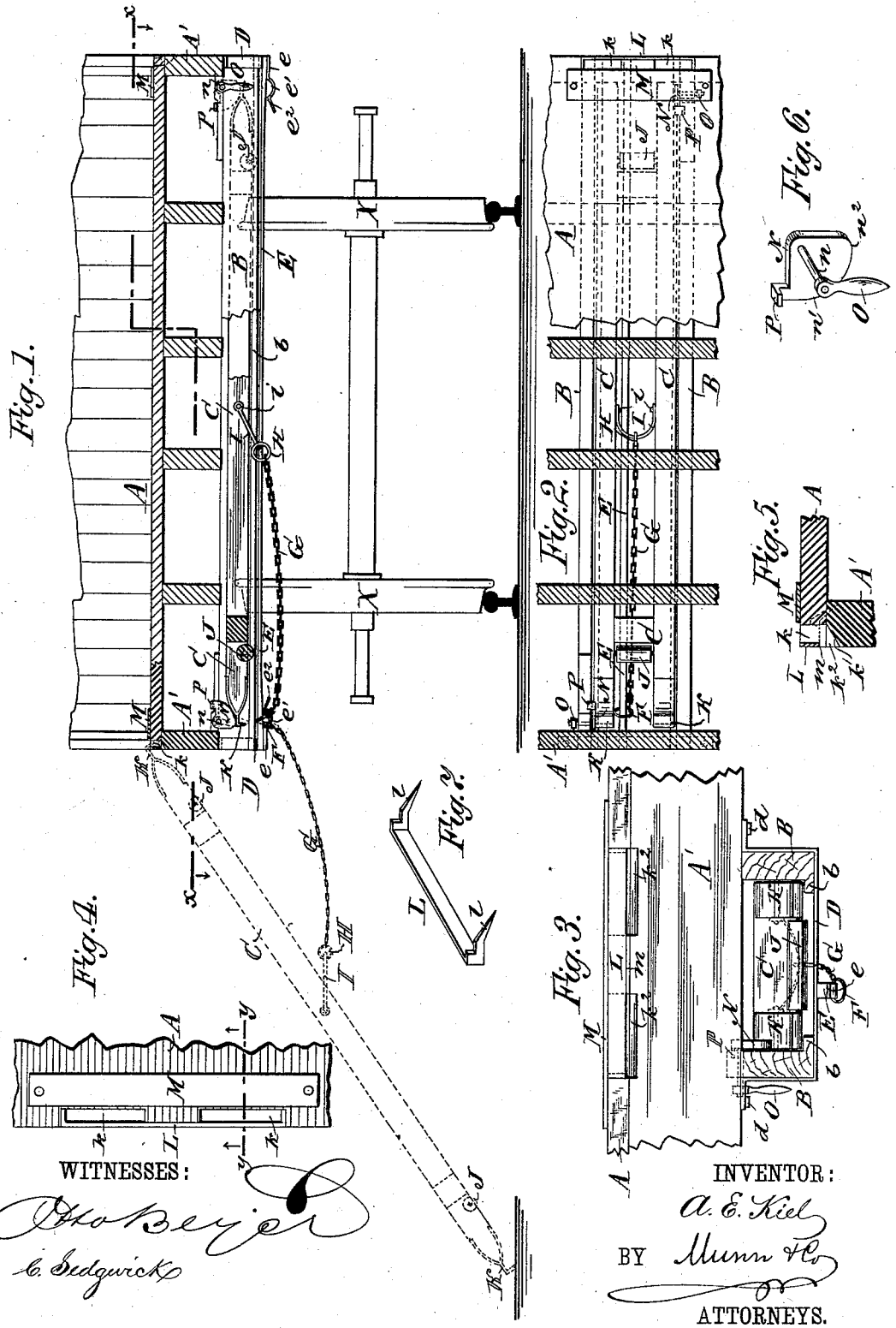
(No Model.)

A. E. KIEL.

TRUCK SKID FOR RAILROAD CARS.

No. 305,199. Patented Sept. 16, 1884.



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TRUCK-SKID FOR RAILROAD-CARS.

SPECIFICATION forming part of Letters Patent No. 305,199, dated September 16, 1884.

Application filed July 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, ADOLPHUS E. KIEL, of Montrose, in the county of Lee and State of Iowa, have invented a new and Improved Truck-Skid for Railroad-Cars, of which the following is a full, clear, and exact description.

The object of my invention is to provide a truck-skid intended more particularly for connection to railroad-cars, and arranged to be slid in ways to either side of the car, and so as always to be at hand for use when required in loading or unloading the car.

The invention consists in a truck-skid fitted to slide in ways beneath the car and tied to it by a chain which is connected at one end to the skid by a bail, and has a ring at the other end, which slips along a bar fixed to and running crosswise of the car, so that the skid may be run out for use at either side of the car, and may, while tied by the chain, be run into the car to receive the load, and out again to discharge it, and may be hooked into apertures at either side edge of the car to hold it in inclined position to deliver its load to the ground.

The invention consists also in devices for locking the skid in the ways when out of use, and also in the method of and devices for forming and protecting the skid-hook apertures in the car-floor, all as hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a cross-sectional elevation of a railroad-car in part with my improved truck-skid applied, and showing in dotted lines the skid set up at the side of the car. Fig. 2 is a broken plan view taken on the line *x x*, Fig. 1. Fig. 3 is a partial side elevation of a car-sill and an end view of the skid. Fig. 4 is a detail plan view of the car-floor. Fig. 5 is a cross-section on line *y y*, Fig. 4. Fig. 6 shows in perspective view the end lock-plate for the skid, and Fig. 7 is a perspective view of the cross-bar with which the skid-hooks engage.

The letter A indicates the floor of an ordinary box or platform car, and B B are timbers fastened crosswise of the car, below the side doors of the car. The timbers B B have lips *b b*, forming inside rabbets or ways, on which the truck-skid C may be stowed in between the timbers or ways B B, or be run out from the same for use at either side of the car.

D D are metal braces applied across the ways B B at both sides of the car, and serving to brace the ways to each other and to the sills A′ of the car-floor, to which the braces D are firmly secured by screw-bolts *d*, as shown. The end braces, D D, serve also to support the metal bar or strap E, which is rigidly connected at its ends to the braces, and has spring-catches *e e*, one at or near each end. The catches *e* inside of where they are fastened to the bar E have a depression or notch, *e′*, and beyond the notches they have downwardly-inclined ends or lips e^2, as shown.

On the bar E is placed a slip-ring, F, to which one end of a chain, G, is connected, and the other end of the chain connects by a ring, H, with a bail, I, which is pivoted at the ends of its opposite sides or arms, as at *i*, to the two parallel side bars of the skid C, whereby the skid will be tied loosely by the chain and rings to the bar E and the car-body, and so that the skid may be drawn out from the ways at either side of the car. The chain G is of sufficient length to permit the skid C, when drawn out to either side of the car, to be lifted up to and slid within the car-doorway and along the car-floor on the rollers J, journaled in the skid-bars, and be loaded with any heavy freight while in the car, whereupon the skid—now serving as a truck—may be rolled with its load out of the car, and as the skid inclines downward and passes outward the hook-irons K K, fixed at the inner ends of the skid-bars, will catch into the openings *k*, provided for the purpose, at and along the edge of the car-floor and hold the skid in inclined position, as in dotted lines in Fig. 1.

Referring to Fig. 1, we will suppose that the skid had last been drawn out for use at the right-hand side of the car, which would have drawn the ring F along the bar E until said ring entered the notch *e′* of the catch *e* at that side of the car, and when the skid had been stowed back again in the ways B B the ring

F would remain in the catch *e* at the right side. Now, in drawing out the skid for use at the left-hand side of the car, as in dotted lines in Fig. 1, the ring F will be drawn by the bail and chain out of the right-hand catch *e* and into the left-hand catch *e*, where it will be held fast; and when the skid is again stowed in the ways B B, the ring F will remain in the left-hand catch *e*, to hold the chain G up, so that it will not dangle along the roadbed of the track, and the chain will so be held up with the ring F in either side catch, *e*, as will readily be understood. I make the inclined lips or ends e^2 of the catches long enough to insure the catching of the ring in the notches of the catches at either side.

To form the openings *k*, and at the same time provide for a strong and certain hold of the skid-hooks K at the edge of the car-floor, I cut recesses vertically through the car-floor and slant the bottoms of the recesses, as at *k'*, so that when the metal cross-bar L is fastened along the face of the car-sill the lower parts of the openings *k* shall have clearance below the bar L—that is to say, there shall be lower face-openings k^2 to the openings *k*, (see Figs. 3 and 5,) through which any dirt entering the openings *k* may pass freely through them, and thus not lodge in them to fill them up and interfere with the instant engagement of the hook-irons K with the bar L when required. To hold the bar L in place I make it with end prongs, *l*, which incline backward and downward to enter correspondingly-inclined holes in the car-frame, as in Fig. 5, and as the bar L should finish flush with the side of the car-sill, and also to give the bar a firm edge support against the down-thrusts of the skid-hooks, I let the bar into a recess having a lower shoulder, *m*, Fig. 3, against which shoulder the lower edge of the bar may rest solidly.

I provide metal plates M along the inner edges of the slots *k*, to prevent undue wear of the car-floor by the skid and prevent tearing away of the wood of the car-floor at the backs of the slots by the action of the skid-hooks in entering the slots.

To lock the skid in place in the ways B B and hold it securely against jarring out by the travel of the car, I provide the lock-plates N, which I pivot on pins or shafts *n*, rigidly fixed to the plates and journaled in the ways B, or in blocks fixed to the ways, and so that when the plates N are swung down by the weight of their handles O, angle-stops P at the tops of the lock-plates will limit their downward movement, so as to hold the curved edges *n'* of the plates N at both sides of the car against the downwardly-curving opposite ends of the skid-bars, or of the hook-irons *k*, fixed at the ends of the bars, thereby preventing endwise movement either way of the skid C, as will be understood from Fig. 1. To draw the skid out to either side of the car, the handle O of the lock-plate N at that side will be swung inward, which will lift the plate to permit the skid to be drawn out, during which movement of the skid the rounded lower corner, n^2, of the lock-plate rides freely on the top of the skid-bar.

I prefer to arrange the lock-plates N on opposite way-bars B at opposite sides of the car, the better to prevent noisy jumping of the skid on the ways when the car is moving over inequalities of the track.

It will be understood that the chain G may connect at one end directly to one of the skid-bars; but I prefer to use the bail I, substantially as above described.

My improved truck-skid may be applied either to box or platform railway-cars or to other vehicles drawn by animal-power.

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

1. The combination, with a railroad-car or vehicle, of a truck-skid held in ways below the floor of the car or vehicle and connecting thereto by a bar, E, and a chain, G, having a ring, F, at one end sliding on the bar, and said chain being connected at its other end to the skid, substantially as shown and described.

2. The combination, with a railroad-car or vehicle, of ways B B, secured below the floor, and a truck-skid, C, fitted to slide in the ways and tied to the car or vehicle by a chain, G, said chain connecting by a sliding ring, F, with a strap, E, fixed to the ways, and by a bail, I, hinged to the skid, substantially as shown and described.

3. The combination, with the skid C, fitted to slide in ways B B and tied by a chain, G, as specified, of the catches *e e*, held to the bar E, and having notches *e' e'* and inclined ends e^2 e^2, substantially as shown and described.

4. The combination, with a railroad-car or vehicle, ways B B, and a skid, C, tied by a chain, G, as specified, of the rollers J, journaled in the skid, whereby the skid while tied by the chain may be rolled into and out of the car, substantially as shown and described.

5. The combination, with the truck-skid C, fitted to slide in ways B B, held by a chain, G, and having end hook-irons, K K, of the recesses *k k* for the hooks at the sides of the car-floor, substantially as shown and described.

6. The recesses *k k*, made with lower clearance-spaces, k^2, in combination with the skid-hook bar L, substantially as shown and described.

7. The bar L, made with end prongs, *l l*, in combination with the floor A', apertured to receive the prongs, substantially as shown and described.

8. The combination, with the floor A', apertured at *k k* and shouldered at *m*, of the skid-hook bar L, fixed to the floor by end prongs, *l l*, and resting by its lower edge on the shoulder *m*, substantially as shown and described.

9. The combination, with the floor A', apertured at *k*, and the skid C, of the wear-plates M, substantially as shown and described.

10. The combination, with the ways B B and the skid C, fitted in the ways, of the lock-plates N, pivoted to the ways, and provided with stops P, substantially as shown and described.

11. The lock-plates N, made with the stops P, rounded locking-edge n', and rounded corner n^2, in combination with the ways B B and skid C, substantially as shown and described.

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Witnesses:
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