No. 792,049. PATENTED JUNE 13, 1905.

J. KHEIL.

CAR SILL REMOVER.

APPLICATION FILED JUNE 3, 1904.

Fig. 2.

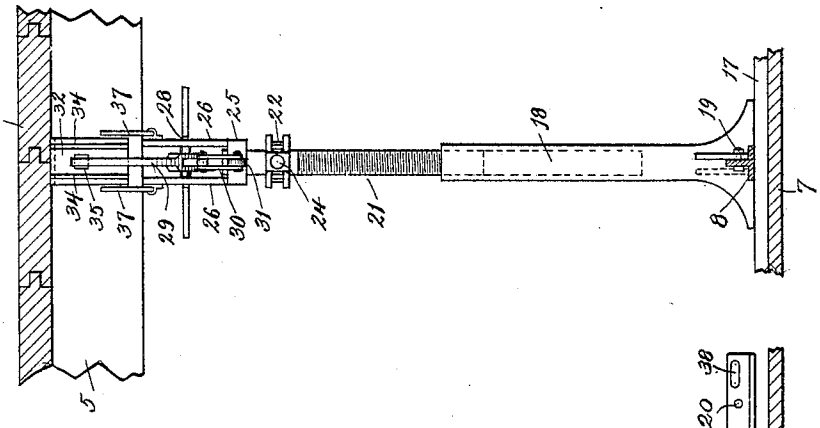


Fig. 1.

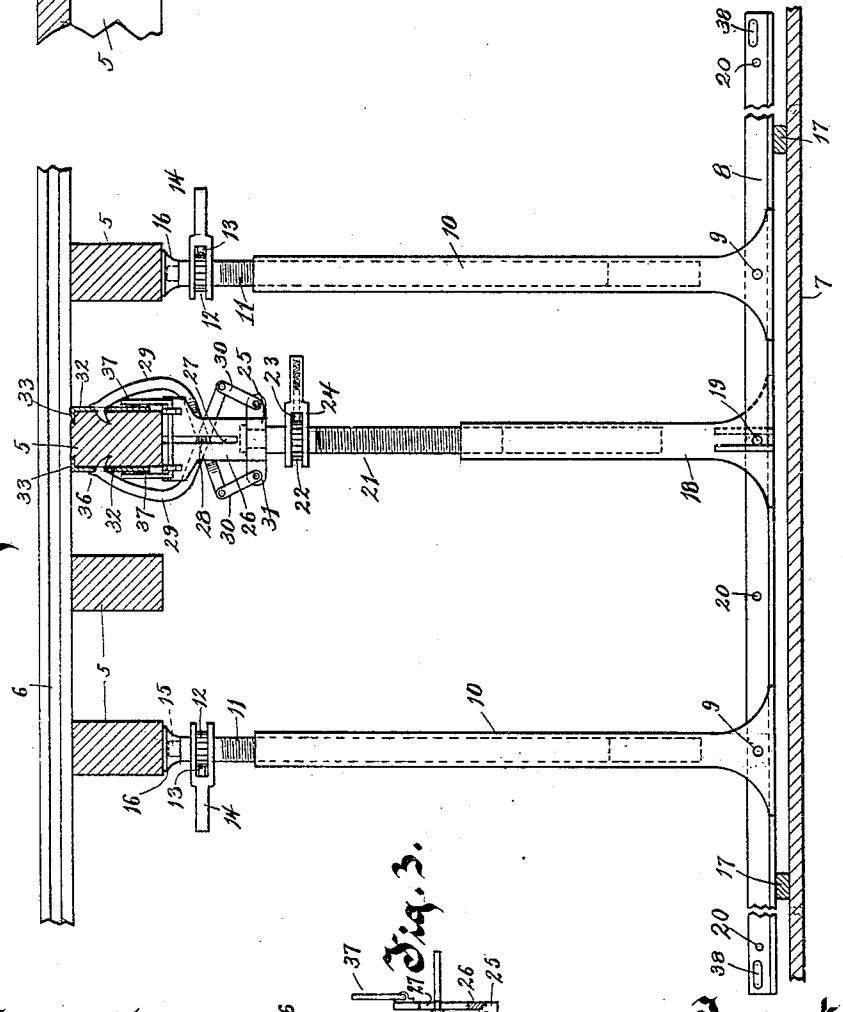
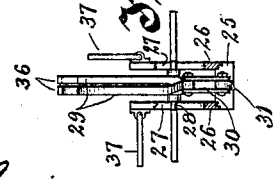


Fig. 3.



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No. 792,049. Patented June 13, 1905.

UNITED STATES PATENT OFFICE.

JOHN KHEIL, OF FOND DU LAC, WISCONSIN.

CAR-SILL REMOVER.

SPECIFICATION forming part of Letters Patent No. 792,049, dated June 13, 1905.

Application filed June 3, 1904. Serial No. 210,952.

To all whom it may concern:

Be it known that I, JOHN KHEIL, residing in Fond du Lac, in the county of Fond du Lac and State of Wisconsin, have invented new and useful Improvements in Car-Sill Removers, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to car-sill removers, and has for its object to provide a means for removing sills from cars in a safe and sure manner.

It frequently becomes necessary to remove car-sills which have been damaged or broken through rough treatment or accident so that they may be replaced by new ones, and this has usually been done by means of very crude implements, such as by a beam connected by a chain with the injured sill and operated as a lever; but accidents are liable to occur to the men operating such beam-levers by the sill giving way suddenly or the chain breaking.

It is therefore an object of this invention to accomplish the sill-removing operation by means of mechanism which will obviate the difficulties attending the former crude methods.

With the above and other objects in view the invention consists in the devices and parts and their equivalents, as hereinafter set forth.

Referring to the accompanying drawings, in which like characters of reference indicate the same parts in the several views, Figure 1 is a front elevation of a car-sill remover embodying one form of my invention and shown as applied to a car-bottom for the purpose of removing a defective sill. Fig. 2 is an elevation of the pulling member thereof, taken in a direction at right angles to the direction of the view of Fig. 1; and Fig. 3 is a sectional elevation of the upper end of a pulling member, showing a slight modification over the form illustrated in the other views.

In the figures, 5 represents the sills of a car-bottom, to which the decking or flooring 6 is secured as usual, and 7 represents the floor of the car-shops in which the sill-removing operation is conducted.

A supporting-rod 8, preferably a double-flanged rail or T-iron, has adjustably secured to its vertical flange by means of bolts or pins 9 a pair of standards 10, which are tubular and have threaded therein the stems of screws 11. The screws 11 carry at their upper ends ratchet-wheels 12 to be engaged by pawls 13 in yoked operating-handles 14, which are pivotally mounted on the screws 11 and by which said screws may be turned in the standards 10. At their upper ends these screws 11 have reduced bosses 15, pivotally fitting in socket-heads 16, which form bearings for the screws 11 and which are adapted to be forced upwardly against the sills 5 by means of the operation of the ratchet-handles 14. The supporting member 8 may be placed upon the floor 7 or may be supported by blocks 17 at each end, as shown, and when the socket-heads 16 are forced tightly up against the sills of the car-bottom the mechanism is firmly held in place. A sill-removing member is also adjustably secured to the supporting member and comprises an internally-threaded post or standard 18, which is adapted to be attached to the supporting member by bolts or pins 19, which pass through perforations in the flanged base of the standard 18 and also through perforations 20 in the vertical flange of the supporting member 8. A screw 21 is threaded in the standard 18 and carries near its upper end a ratchet-wheel 22, engaged by the spring-pressed pawl 23 of a yoked operating-handle 24, which is pivotally mounted on the screw 21, all corresponding in construction and operation to the operating parts for screws 11. The extreme upper end of screw 21 is swiveled to a head 25, which has a pair of parallel upwardly-extending plates 26 with central vertical slots 27, in which slides a pin 28. The pin 28 forms a pivot for a pair of bent hooks 29, one passing through an opening of the other where the pivot-pin 28 passes through, and the lower arms of these bent hooks 29 are connected by links 30 with oppositely-extending ears 31 on the head 25. The pivotal pin 28, which slides in the vertical slots 27 of the plates 26, extends beyond the said plates to form handles by which the hooks 29 may be operated, the raising of these handles serving to bring the hook members

together and the lowering of them in the slots 27 serving to separate the hook ends of the bent hooks 29.

A pair of plates 32 are provided with hooked upper edges 33 and are adapted to be placed on opposite sides of the defective sill which is to be removed with their hooked upper edges forced in between the upper edge of said sill and the under surface of the car-decking to which it is attached. Said plates are provided in their outer faces along their side edges with strengthening-ribs 34 and at their middle portion with openings 35, through which the claw ends of the hook members 29 are adapted to pass and enter the sill. The claw ends of the hook members are provided with upwardly-extending spurs 36 for engaging the plates above the openings 35, and thus limit the extent of penetration of the claw ends of hook members 29 into the defective sill.

Each plate 26 has pivoted to it near its upper edge a U-shaped member 37, which is adapted to be swung upwardly to embrace with its two arms the opposite sides of the sill being operated upon, and thus prevent any tendency of the head 25 to turn with the screw 21.

In operation the supporting member 8 is secured in position by the tightening of the screws 11 under the side sills of the car-bottom, as before mentioned, and the screw 21 is raised until the plates 26 preferably bear against the under side of the sill to be operated upon, and then the pivot-handles 28 are raised, causing the hook members 29 to enter their claw ends through the openings 35 of the plates 32, which have had their hooks 33 driven in between the upper edge of said sill and the car-decking above, and said claw ends of the hook members embed themselves in the sill until their spurs 36 bear upon the plates 32. The arms 37 are raised to embrace the sill and prevent the head 25 from turning, and then the ratchet-operating handle 24 is operated to lower the screw 21 in its standard 18. As the support 8 is prevented from approaching the car-bottom by the screws 11, the tightening of the screw 21 draws the defective sill from the car-decking in a positive and safe manner, the force of the screw having the tendency to increase the hold of the hook members 19 with the sill and the plates 32 preventing such tendency from forcing the claws of said hook members too far into the sill and also by their hook edges 33 preventing the splitting of the sill.

It is obvious that by means of the adjustment of the standards 10 and 18 on the supporting member 8 the removing operation may be performed on any of the sills of the car-bottom, and by means of suitable hand-holes 38 in the ends of the supporting member 8 the entire device may be readily carried from one car to another.

In Fig. 3 is shown the construction of the hook members 29 when they are arranged to overlap each other at the pivotal point instead of one passing through an opening in the other, and this and other changes in the details of construction and arrangement of parts may be resorted to without departing from the spirit and scope of this invention.

What I claim as my invention is—

1. In a car-sill remover, a support adapted to be braced by the car-bottom, and a sill-pulling member having connection with the support and provided with means for engaging a car-sill.

2. In a car-sill remover, a support, screw-standards carried by the support for bracing the support from the car-bottom, and a sill-pulling member connected to the support and having means for engaging a car-sill.

3. In a car-sill remover, a support, ratchet-operated screw-standards connected with the support and adapted to brace it by engaging the car-sills, and a sill-pulling member connected to the support and having means for engaging a car-sill.

4. In a car-sill remover, a support, and a sill-pulling member connected with the support and comprising a screw having means for engaging the car-sill.

5. In a car-sill remover, a support, and a sill-pulling member connected thereto comprising a standard, a screw threaded therein, a ratchet for turning the screw, and means carried by the screw for engaging a car-sill.

6. In a car-sill remover, a support, and a sill-pulling member connected thereto comprising a standard, a screw threaded therein, means for turning the screw, and a head swiveled to the screw and provided with means for engaging a car-sill.

7. In a car-sill remover, a support, and a sill-pulling member connected thereto comprising a suitably-mounted screw, means for turning the screw, a head swiveled to the screw, and hooks carried by the head and adapted to engage a car-sill.

8. In a car-sill remover, a support, and a sill-pulling member connected thereto and having a sill-engaging means adapted to clamp the sill with increasing force as draft is applied thereto, and means for applying draft to the sill-engaging means.

9. In a car-sill remover, a support, a sill-pulling member connected thereto comprising a suitably-mounted screw, means for turning the screw, a head swiveled to the screw, and a sill-engaging hook carried by the head adapted to clamp the sill with increasing force as draft is applied to the head by the screw.

10. In a car-sill remover, a support, a sill-pulling member connected thereto comprising a pair of hooks adapted to clamp a sill with increasing force as draft is applied thereto, means for applying draft to the hooks, and plates adapted to be arranged on opposite sides of the sill and provided with openings

through which the hooks engage the sill, said plates serving to limit the extent of penetration of the hooks into the sill.

11. In a car-sill remover, a support, a pulling member connected thereto comprising a pair of hooks adapted to clamp a sill with increasing force as draft is applied thereto, means for applying draft to the hooks, and a pair of plates to be placed on opposite sides of the sill being removed and having hooks to be forced between said sill and the decking to which it is attached, said plates being adapted to be engaged by the hooks.

12. In a car-sill remover, a support, a sill-pulling member connected thereto and comprising a pair of hooks adapted to clamp a car-sill with increasing force when draft is applied thereto, and means for applying draft to the hooks, a pair of plates adapted to be placed on opposite sides of the sill to be removed and having hooks to be driven between the upper edge of the sill and the decking to which it is attached, the hooks of the sill-pulling member being adapted to enter openings in the plates, and spurs on said hooks to engage the plates and limit the extent of penetration of said hooks into the sill.

13. In a car-sill remover, a support, a sill-pulling member connected thereto and comprising a suitably-mounted screw, means for turning the screw, a head swiveled to the screw and having a pair of opposite plates, a pin slidable in slots of said plates, and a pair of sill-engaging hooks pivoted to said pin and having connection to the head.

14. In a car-sill remover, a support, a sill-pulling member connected thereto and comprising a suitably-mounted screw, means for turning the screw, a head swiveled to the screw and having a pair of opposite plates, a pin slidable in slots of said plates and projecting beyond to form handles, and sill-engaging hooks pivoted to said pin.

15. In a car-sill remover, a support, a sill-pulling member connected thereto and comprising a suitably-mounted screw, means for turning the screw, a head swiveled to the screw and having a pair of opposite plates, a pin slidable in slots of said plates, a pair of sill-engaging hooks pivoted to the pin, one passing through an opening in the other, and links connecting the hooks to the head.

16. In a car-sill remover, a support, a sill-pulling member connected thereto and comprising a suitably-mounted screw, means for turning the screw, a head swiveled to the screw, a pair of sill-engaging hooks carried by the head, and a U-shaped member pivoted to the head and adapted to embrace the sill and prevent the head turning with the screw.

17. In a car-sill remover, a supporting-bar, a pair of screw-standards connected thereto, a sill-pulling member also connected to the supporting-bar and comprising a suitably-mounted screw, means for turning the screw, and a sill-engaging means carried by the screw.

18. In a car-sill remover, a supporting-bar, a pair of screw-standards connected thereto and adapted to bear against the car-sills, a sill-pulling member also connected to the supporting-bar and comprising a suitably-mounted screw, and sill-engaging means connected to the screw.

19. In a car-sill remover, a supporting-bar, a pair of screw-standards adjustably connected thereto adapted to bear against the car-sills, a sill-pulling member also adjustably connected to the supporting-bar and comprising a standard, a screw threaded therein, means for turning the screw, a head swiveled to the screw, a pair of sill-engaging hooks connected to the head adapted to clamp the sill with increasing force when draft is applied thereto, a pair of plates adapted to be placed on opposite sides of the sill to be removed and having hooks for engaging the sill, said sill-engaging hooks being adapted to enter openings in the plates, and a U-shaped member pivoted to the head and adapted to embrace the sill.

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

JOHN KHEIL.

Witnesses:
A. G. DANA,
LEO. F. DANA.