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CAR FENDER.
APPLICATION FILED JULY 24, 1911.

1,061,019.

Patented May 6, 1913.

FIG. I.

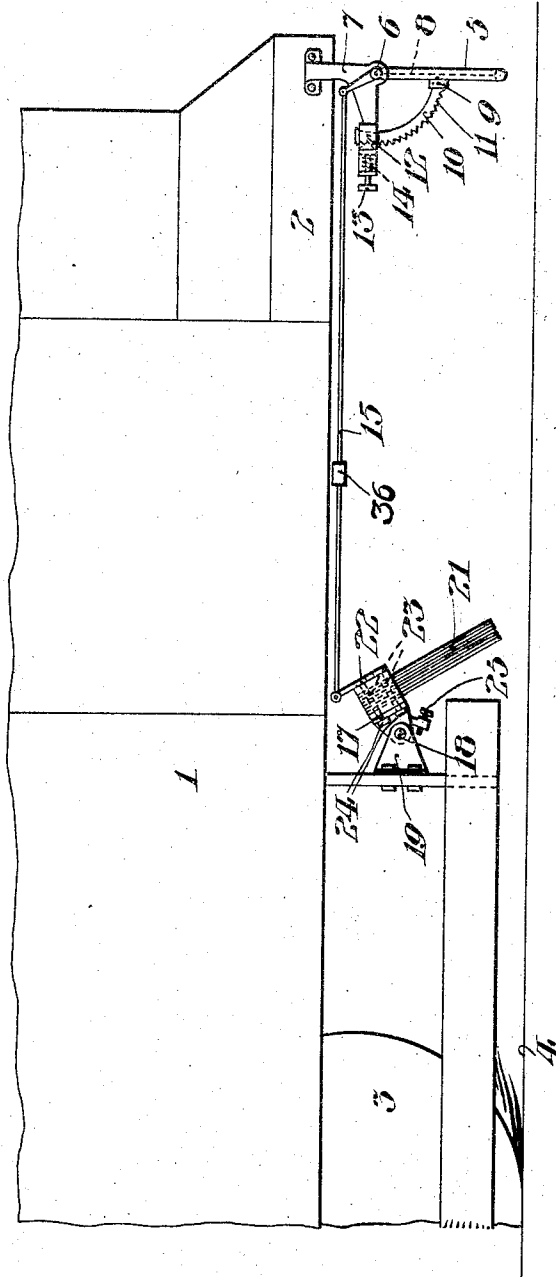
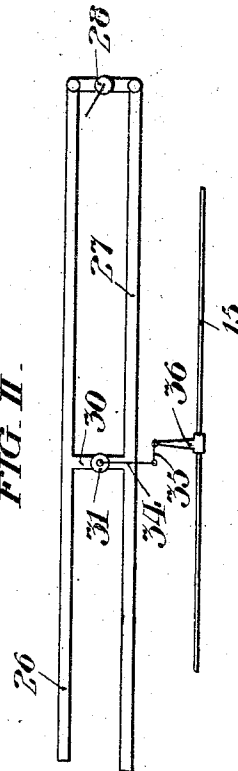


FIG. II.



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CAR-FENDER.

1,061,019.

Specification of Letters Patent.

Patented May 6, 1913.

Application filed July 24, 1911. Serial No. 640,228.

To all whom it may concern:

Be it known that I, JACOB SCHNEIDER, a citizen of Switzerland, residing at Philadelphia, in the State of Pennsylvania, have invented a certain new and useful Improvement in Car-Fenders, whereof the following is a specification, reference being had to the accompanying drawing.

My invention relates to fenders wherein a wheel guard is upheld in normally inoperative position beneath the car, in front of the front wheels of the latter, by connection with a swing frame at the front of the car platform; so that when said frame is struck and swung inwardly by an object on the road bed, said wheel guard is lowered to its operative position to fend said object from said wheels, and is held in operative position by the detention of the swing frame in abnormal position, such detention being effected by an automatically operative detent engaging said swing frame.

As hereinafter described my invention includes an oscillatory wheel guard the bottom edge of which is a brush formed of bamboo, ratan or similar flexible material, said guard being pivoted at its upper edge so as to hang vertically in front of the wheels when in operative position, but capable of being swung forwardly and upheld when not in operation, by a link pivotally connecting it with a swing frame at the front of the car, including a panel of flexible reticulated fabric. Said frame is also pivoted at its upper edge so as to be vertically pendent in operative position, but is capable of being swung inwardly to set said wheel guard in operative position. Said swing frame is provided with a detent sector pivotally connected therewith, having a serrated edge, and adapted to slide circumferentially in a bearing provided with a detent including a spring pressed bolt arranged to engage the successive serrations in said sector, so as to hold the latter in any position to which said frame may be swung. Moreover, said link connecting said wheel guard and swing frame is operatively connected with the valve of an air brake mechanism, so that, upon movement of said swing frame to set said wheel guard in operative position, said brake is applied to arrest the movement of the car; said valve being held in operative position by the detention of said swing frame, when swung backward, as above contemplated.

In the drawings:—Figure I is a frag-

mentary side view of a car, having a convenient embodiment of my invention applied thereto. Fig. II is a diagrammatic plan view showing the relation of the car brake valve to the fender link by which it is operated.

In said figures the car body 1 is provided with the platform 2 and supported by wheels 3 on the track 4. The swing frame 5 is mounted to oscillate upon the pivot 6 in the bracket 7 extending below said platform 2 in rigid connection with the car. As indicated in Fig. I, said frame 5 has a foraminous panel 8, preferably of flexible reticulated fabric, conveniently cord or wire netting, and said frame is pivotally connected at 9 with the sector 10 having the serrated edge 11. Said sector 10 is adapted to slide circumferentially in the bracket 12 having the detent slide bolt 13 which is pressed into engagement with the serrations in said sector by the spring 14; so that said frame 5 is temporarily detained in any position in which it may be set. Said frame 5 is pivotally connected by the link 15 with the wheel guard, which includes the rigid bar 17 pivotally connected at 18 with the bracket 19; the latter being rigidly connected with the car. The bottom edge of said wheel guard is a flexible brush preferably formed of bamboo, ratan or similar flexible elements 21 stiff enough to fend a body away from the car wheels, but flexible enough to avoid injuring said body; said brush elements being conveniently clamped between said bar 17 and the bar 22, by the bolts 23 and nuts 24. It may be observed that in the normal position of the fender shown in Fig. I, said swing frame 5 hangs vertically from its pivotal connection with the car, but said wheel guard is upheld in inoperative position so as not to interfere with the progress of the car by contact with projecting paving stones or similar objects upon the road bed; such construction and arrangement being advantageous in that it permits said brush 21 to be made of such extent as to barely clear the surface of the road bed when said guard is set in operative position with its adjustable stop 25 against said bracket 19, and thus prevent the passage of hands or feet beneath said guard. As indicated diagrammatically in Fig. II, said car is provided with pipes 26 and 27 leading to and from the main valve 28 of the air brake mechanism which is located at the front of the car platform 2 to be operated by the mo-

torman, and said pipes are connected by the branch 30 having the auxiliary valve 31 beneath the car, arranged to be operated by the lever 34. Said lever 34 is pivotally connected by the link 35 with the arm 36 on said link 15, so that, when said swing frame is in the normal vertical position as shown in Fig. 1, said valve 31 remains closed and the brakes are controllable solely by the valve 28, but when said swing frame 5 is swung inwardly to the position to release the wheel guard so that it may assume its operative position as above contemplated, the consequent movement of said link 15 operates said auxiliary valve 31 to automatically apply the brake. However, it is to be understood that said brake valve 31 and wheel guard may be contemporaneously returned to their normal position by manual return of the swing frame 5 to its normal vertical position shown.

I do not desire to limit myself to the precise details of construction and arrangement herein set forth, as it is obvious that various modifications may be made therein without departing from the essential features of my invention as defined in the appended claims.

I claim:—

1. In a railway car, the combination with a swing frame pivotally supported at the front of the car so as to depend vertically therefrom; of a sector having a serrated edge, pivotally connected with said swing frame and arranged to slide circumferentially in a bracket rigidly connected with said car; a detent slide bolt in said bracket arranged to engage the serrations in said sector; a spring normally pressing said slide bolt into engagement with said sector; a wheel guard comprising a frame pivotally supported beneath said car in front of the wheels thereof so as to depend vertically when set in operative position; said wheel guard having at the lower edge thereof a series of flexible brush like members adapted to resiliently engage a body impinging thereon; a link pivotally connecting said swing frame with said wheel guard, whereby said wheel guard is raised to inoperative position when said swing frame is lowered to its operative position and vice versa; brake mechanism adapted to arrest the progress of said car, including pipes leading to and from the front of said car, a valve at the front of said car, adapted to be manually operated to control said brake; a cross connection between said pipes including an auxiliary valve adapted to control said brake; an operating lever on said auxiliary valve; an arm on said link; and a pivotal connection between said arm and the lever of said auxiliary valve; whereby movement of said swing frame to set said wheel guard in operative position automati-

cally operates said auxiliary brake valve to arrest the movement of the car.

2. In a railway car, the combination with a swing frame pivotally supported at the front of the car so as to depend vertically therefrom; of a sector connected with said swing frame and arranged to slide circumferentially in a bracket connected with said car; a detent in said bracket arranged to engage said sector; a spring normally pressing said detent into engagement with said sector; a wheel guard comprising a frame pivotally supported beneath said car in front of the wheels thereof so as to depend vertically when set in operative position; said wheel guard having at the lower edge thereof a series of flexible brush like members adapted to resiliently engage a body impinging thereon; a link pivotally connecting said swing frame with said wheel guard, whereby said wheel guard is raised to inoperative position when said swing frame is lowered to its operative position and vice versa; brake mechanism adapted to arrest the progress of said car, including a valve adapted to control said brake; an operating lever on said valve; and means operatively connecting said frame and said valve lever; whereby movement of said swing frame to set said wheel guard in operative position automatically operates said brake valve to arrest the movement of the car.

3. In a railway car, the combination with a swing frame pivotally supported at the front of the car so as to depend vertically therefrom; of a sector having a serrated edge, pivotally connected with said swing frame and arranged to slide circumferentially in a bracket rigidly connected with said car; a detent slide bolt in said bracket arranged to engage the serrations in said sector; a spring normally pressing said slide bolt into engagement with said sector; a wheel guard comprising a frame pivotally supported beneath said car in front of the wheels thereof so as to depend vertically when set in operative position; said wheel guard having at the lower edge thereof a series of flexible brush like members adapted to resiliently engage a body impinging thereon; and a link pivotally connecting said swing frame with said wheel guard whereby said wheel guard is raised to inoperative position when said swing frame is lowered to its operative position and vice versa.

4. In a railway car, the combination with a swing frame pivotally supported at the front of the car so as to depend vertically therefrom; of a sector connected with said swing frame and arranged to slide circumferentially in a bracket connected with said car; a detent in said bracket arranged to engage said sector; a spring normally pressing said detent into engagement with said sector; a wheel guard comprising a frame

pivotally supported beneath said car in front of the wheels thereof so as to depend vertically when set in operative position; said wheel guard having at the lower edge thereof a series of flexible brush like members adapted to resiliently engage a body impinging thereon; and a link pivotally connecting said swing frame with said wheel guard whereby said wheel guard is raised to inoperative position when said swing frame is lowered to its operative position and vice versa.

5. In a railway car, the combination with a swing frame pivotally supported at the front of the car; of a sector connected with said swing frame and arranged to slide circumferentially in a bracket connected with said car; a detent in said bracket arranged to engage said sector; a spring normally pressing said detent into engagement with said sector; a wheel guard comprising a frame pivotally supported beneath said car in front of the wheels thereof so as to depend vertically when set in operative position; said wheel guard having at the lower edge thereof a series of flexible brush like members adapted to resiliently engage a body impinging thereon; and means connecting said swing frame with said wheel guard whereby said wheel guard is set in operative position when said swing frame is raised.

6. In a railway car, the combination with a swing frame pivotally supported at the front of the car; of a wheel guard comprising a frame pivotally supported beneath said car in front of the wheels thereof so as to depend vertically when set in operative position; said wheel guard having at the lower edge thereof a series of flexible brush like members adapted to resiliently engage a body impinging thereon; means, including a link, connecting said swing frame with said wheel guard, whereby said wheel guard is raised to inoperative position when said swing frame is lowered to its operative position and vice versa; brake mechanism adapted to arrest the progress of said car, including pipes leading to and from the front of said car, a valve at the front of said car adapted to be manually operated to control said brake, a cross connection between said pipes including an auxiliary valve adapted to control said brake; an operating lever on said auxiliary valve; an arm on said link; and a pivotal connection between said arm and the lever of said auxiliary valve; whereby movement of said swing frame to set said wheel guard in operative position automatically operates said auxiliary brake valve to arrest the movement of the car.

7. In a railway car, the combination with a swing frame pivotally supported at the front of the car; of a wheel guard comprising a frame pivotally supported beneath said car in front of the wheels thereof so as to depend vertically when set in operative position; said wheel guard having at the lower edge thereof a series of flexible brush like members adapted to resiliently engage a body impinging thereon; means positively connecting said swing frame with said wheel guard, whereby said wheel guard is raised to inoperative position when said swing frame is lowered to its operative position and vice versa; brake mechanism adapted to arrest the progress of said car, including a valve adapted to control said brake; an operating lever on said valve; and means operatively connecting said frame and said valve lever; whereby movement of said swing frame to set said wheel guard in operative position automatically operates said brake lever to arrest the movement of the car.

8. In a railway car, the combination with a swing frame pivotally supported at the front of the car; of a wheel guard comprising a frame pivotally supported beneath said car in front of the wheels thereof so as to depend vertically when set in operative position; said wheel guard having at the lower edge thereof a series of flexible brush like members adapted to resiliently engage a body impinging thereon; a detent, including a spring pressed bolt, arranged to detain said swing frame; and means connecting said swing frame with said wheel guard, whereby said wheel guard is raised to inoperative position when said swing frame is lowered to its operative position and vice versa.

9. In a railway car, the combination with a swing frame pivotally supported at the front of the car; of a wheel guard having at the lower edge thereof a series of flexible brush like members adapted to resiliently engage a body impinging thereon; a detent for said swing frame, arranged to automatically release and permit said frame to turn in either direction, under sufficient pressure, and means connecting said swing frame with said wheel guard, whereby said wheel guard is raised to inoperative position when said swing frame is lowered to its operative position and vice versa.

In testimony whereof, I have hereunto signed my name at Philadelphia, Pennsylvania, this fifteenth day of July, 1911.

JACOB SCHNEIDER.

Witnesses:

FRANZ HODER,

RAYMOND G. SLOAN.