CLAIMS

1. An obstacle deflector of a railcar,

the obstacle deflector being capable of detecting derailment and an obstacle,

the obstacle deflector comprising:

a collision bar extending in front of a bogie so as to cross a permanent way;

a pair of operating members coupled to both respective end portions of the collision bar;

a pair of supporting members supporting the respective operating members through respective rotating shafts extending in a car width direction behind and above the collision bar;

elastic bodies configured to maintain the respective operating members at normal positions and allow upward and rearward rotation of the operating members around the rotating shafts by elastic deformation of the elastic bodies; and

a signal generator configured to generate a first signal when at least one of the operating members rotates upward by a predetermined angle or more and generate a second signal when the operating member rotates rearward by a predetermined angle or more, wherein:

each of the operating members is provided with a holding hole centering around the rotating shaft; and

each of the elastic bodies is a rubber bushing through which the rotating shaft is inserted and which is inserted into the holding hole.

2. An obstacle deflector of a railcar,

the obstacle deflector being capable of detecting derailment and an obstacle,

the obstacle deflector comprising:

a collision bar extending in front of a bogie so as to cross a permanent way;

a pair of operating members coupled to both respective end portions of the collision bar;

a pair of supporting members supporting the respective operating members through respective rotating shafts extending in a car width direction behind and above the collision bar;

elastic bodies configured to maintain the respective operating members at normal positions and allow at least rearward rotation of the operating members around the rotating shafts by elastic deformation of the elastic bodies; and

a signal generator configured to generate a first signal when at least one of the operating members rotates upward by a predetermined angle or more and generate a second signal when the operating member rotates rearward by a predetermined angle or more, wherein:

each of the elastic bodies presses the corresponding operating member against a locking member from behind to maintain the operating member at the normal position; and

if the railcar derails, the locking member is destroyed by upward rotational force of the operating member, and the operating member rotates upward.

3. The obstacle deflector according to claim 2, further comprising receiving members attached to the respective operating members, the receiving members including respective engagement bars located in front of the operating members, wherein

each of the elastic bodies is a plate spring configured to bias the corresponding engagement bar and the corresponding supporting member to separate the engagement bar and the supporting member from each other.

4. The obstacle deflector according to claim 2 or 3, wherein the locking member is a U bolt extending rearward from a front side of the corresponding operating member through both sides of the operating member and including both ends fixed to the corresponding supporting member.

5. The obstacle deflector according to any one of claims 1 to 4, wherein the signal generator is a limit switch including a detection lever configured to tilt in accordance with rearward and upward rotations of the operating member.

6. The obstacle deflector according to claim 5, wherein at least one of the operating members is provided with a pair of operating pieces sandwiching the detection lever.

7. The obstacle deflector according to any one of claims 1 to 6, further comprising a pair of frames hanging forward from a front end portion of the bogie, wherein

the supporting members are attached to the respective frames.