

No. 609,159.

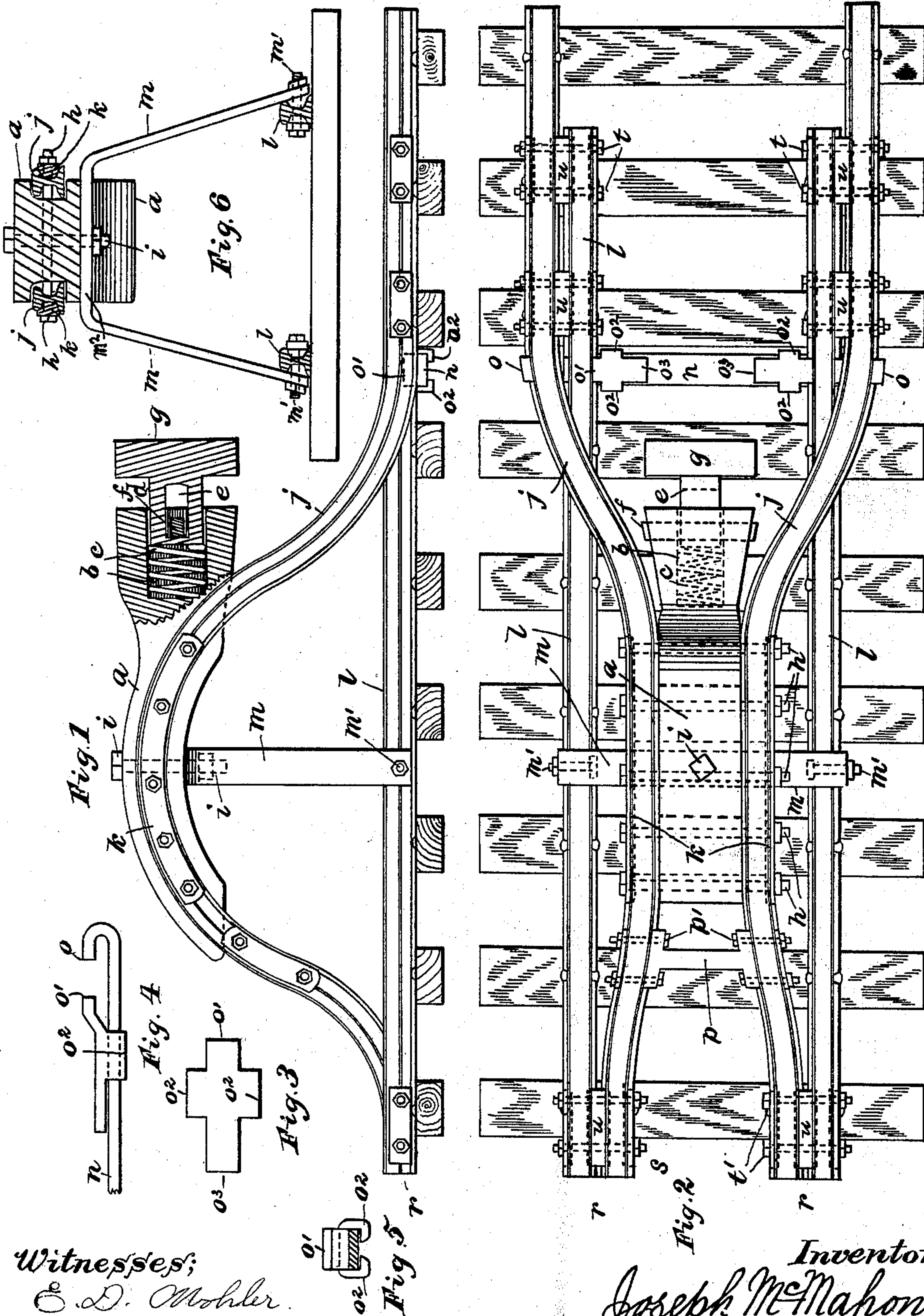
Patented Aug. 16, 1898.

J. McMAHON.

CAR BUMPER.

(Application filed Apr. 18, 1898.)

(No Model.)



Witnesses;

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UNITED STATES PATENT OFFICE.

JOSEPH McMAHON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
ELLEN E. McMAHON, OF SAME PLACE.

CAR-BUMPER.

SPECIFICATION forming part of Letters Patent No. 609,159, dated August 16, 1898.

Application filed April 18, 1898. Serial No. 677,992. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH McMAHON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Bumpers, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 shows my said car-bumper in side elevation with its head end in sectional view. Fig. 2 shows the said device in plan view. Fig. 3 shows a piece to form a clamp on the connecting-bar *n*. Fig. 4 shows Fig. 3 applied to bar *n*. Fig. 5 shows a transverse sectional view of Fig. 4, taken about midway between the points *o o'*. Fig. 6 shows a transverse section taken on a plane behind the transverse support and looking toward the bumper-head.

Like letters of reference denote like parts.

The object of my invention is to construct a car-bumper which shall be more reliable than those which contain wood in their construction and depend on the ground for their hold.

My object is, further, to make all of my construction above the ties, so as to make it possible to erect my structure at any season and on any track on a bridge, trestle, or wherever a track is or can be laid.

To attain said desirable ends, I construct my said new device in substantially the following manner, namely: I bend the two last end rails of a track upward and inward and so as to fit into the channeled sides of the bumper-body *a*. I make said bumper-body of cast-iron and curve said channels and rails to fit into each other. Through said rails and body are passed about five strong bolts *h*, which also pass through fillings *k*, placed between the head and flange of the curved rail. The arch of said rails descends both ways about equally; but the rear ends of said rails at *r* come within the sides of the straight rails *l* and are bolted to them. Said rails *l* are straight and lie on the inside of the rails *j*, to which they are bolted by two sets or pairs of bolts *t* and *t'* and blocks *u*, also held by said bolts. Said rails *l* tie the ends of the

vertical arch which holds the body *a* and make it rigid. To still further strengthen said arch, there is a transverse bar *m*², whose ends are bent downward to form the legs *m*, placed under the center of the arch and secured to the head by a bolt *i*, and the ends of said legs are bolted to the straight rails *l* by bolts *m'*. Below the rear end of the body *a* and near midway to the ties is a cross-bar *p*, with cross-heads at each end of it, fitted between the rails *j*, to which it is held by bolts *p'* to prevent the buckling of said rails. Just beyond the foot of the front ends of the arches is a transverse bar *n*, with incurved end hooks *o* to hold the rails *j* to gage, and within the inner sides of the rails *l* is a piece of iron with parts *o'* *o*² *o*³, of which the part *o'* is raised to fit on the flange of the rail. The wings *o*² are turned under the bar *n* to hold in place without weakening the bar, as would be the case when bolts are used, as well as for the purpose of cheapening the construction and at the same time making the said parts perfectly adjustable, which could not be the case when bolts were used. The said cross-shaped part is fitted on the bar *n* by heating and shrinking on after it is fitted while hot. There is a hole *b* in the body *a* containing coiled springs *c*, one within the other, and as many as can work, only one spring being shown here for the purpose of clearness of illustration, to obtain all the resistance possible. The cushion-head *g* has a stem *d*, which fits the hole *b*, in which there is a longitudinal slot *e*, through which passes a key-bar *f*. The rails *j* are ends of the track proper, to which they are connected and upon which the train stands when the bumper is in use. Said condition would involve the tearing of the track from under the wheels if any part of my structure was forced to give way, as that is here shown to be the weakest part of the entire mechanism.

What I claim is—

1. The combination with a spring-actuated cushion-head and a side-channeled bumper-body, of centrally-arched track end rails and straight rails within said track-rails bolted thereto at each end of the arch, substantially as specified.

2. The combination with a spring-actuated

cushion-head and a side-channeled bumper-body, of centrally-arched track end rails and straight rails within said track-rails bolted thereto at each end of the arch, antibuckling-
5 bars, and antitrack-spreading bars with inside track-holding mechanism, substantially as specified.

3. The combination with a spring-actuated cushion-head and a side-channeled bumper-
10 body with track-supported supporting-legs

under a transverse bar, under the center of said arch, of centrally-arched track ends and straight rails within said track-rails at the arch ends of said track-rails, substantially as specified.

JOSEPH McMAHON.

Witnesses:

WM. ZIMMERMAN,
ELLEN E. McMAHON.