May 12, 1936. F. W. LEWIS 2,040,773

RAILWAY CAR TRUCK

Filed Dec. 12, 1934

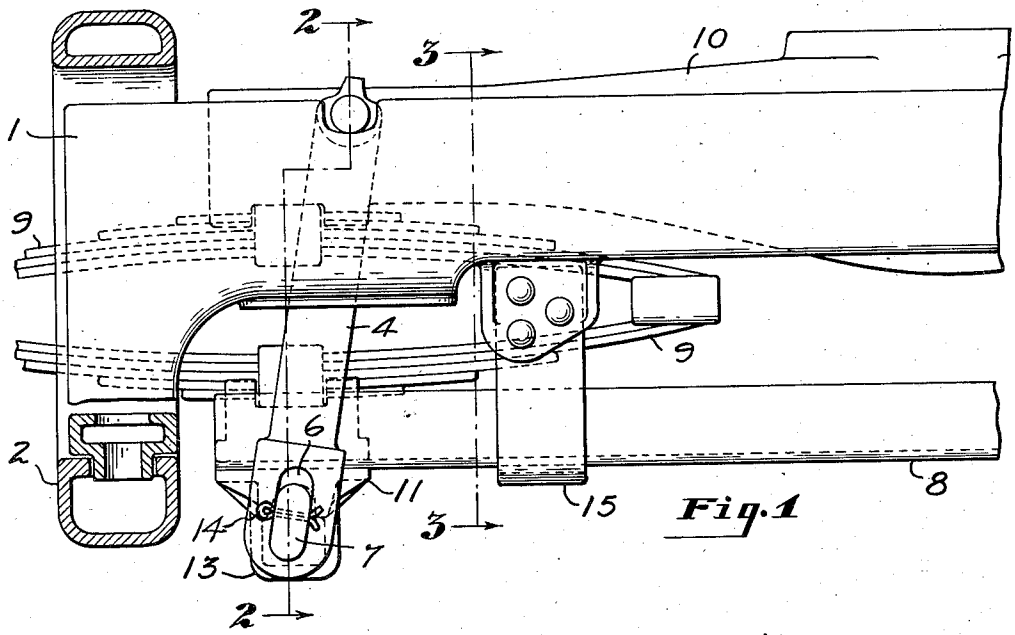


Fig. 1

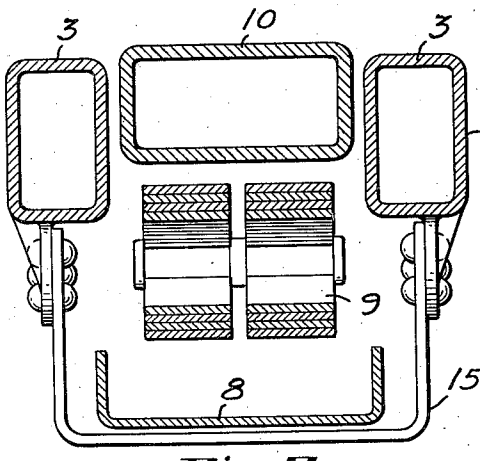


Fig 3

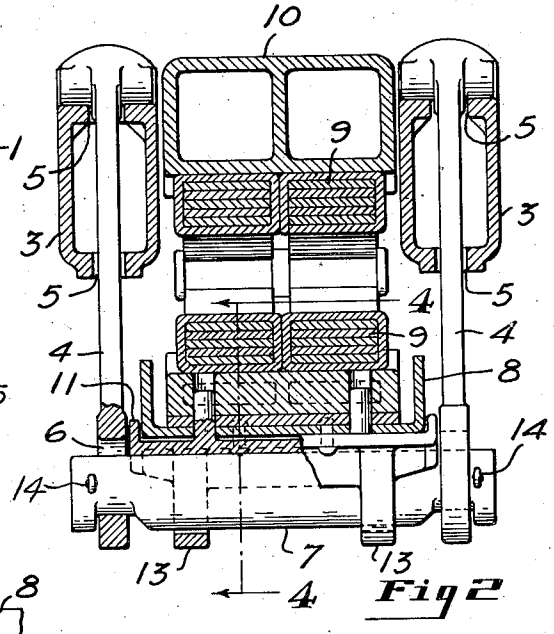


Fig 2

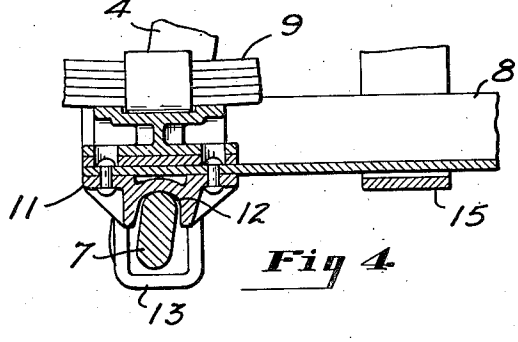


Fig 4

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Patented May 12, 1936 2,040,773

UNITED STATES PATENT OFFICE

2,040,773

RAILWAY CAR TRUCK

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Application December 12, 1934, Serial No. 757,111

11 Claims. (Cl. 105—190)

This invention relates to improvements in car trucks and more particularly to car trucks of the swing motion type.

One of the objects of the present invention is to provide a swing motion car truck with a safety means which functions in case of breakage of one or more of the swing hangers to prevent the dropping of any of the truck parts to the tracks where they might be the cause of an accident.

Another object is to provide a swing motion car truck with a supplementary supporting means which in case of breakage of one or more of the swing hangers will support the spring plank and bolster.

Another object is to provide a swing motion car truck with a means associated with the spring plank which in the case of breakage of one or more of the spring hangers will prevent the broken hangers and the hanger cross key from dropping to the tracks.

With the above and other objects in view, the present invention consists in certain features of construction and combinations of parts to be hereinafter described with reference to the accompanying drawing and then claimed.

In the drawing, which illustrates a suitable embodiment of the present invention,

Figure 1 is an elevational view of a portion of a car truck showing one of the truck side frames in section and the transom thereon, one end of the spring plank and the adjacent spring hangers being in elevation;

Fig. 2 is a transverse section taken approximately on the line 2—2 of Fig. 1;

Fig. 3 is a transverse section taken approximately on the line 3—3 of Fig. 1; and

Fig. 4 is a longitudinal section taken approximately on line 4—4 of Fig. 2.

Referring to the drawing, in which like numerals refer to like parts throughout the several views, and in which I have shown only those parts of a car truck necessary to properly illustrate my invention, the transom 1, which is of open rectangular shape, extends between and is supported in the windows of the truck side frames, one of which is shown and indicated by numeral 2. Hingedly suspended from the side portions 3 of the transom at each end thereof (only one end being illustrated) is a pair of swing hangers 4 which extend through slots 5 in the side portions 3 and which are provided at their free ends with openings 6.

The openings 6 of each pair of swing hangers 4 receive the opposite ends of a cross key 7 and the spring plank 8 is supported at its ends upon the cross key 7 upon the opposite pairs of hangers 4. The spring plank supports the bolster springs 9 at its ends which in turn support the truck bolster 10.

The construction described is conventional and it is to be noted that in the event one or both of the swing hangers at each end break during operation, there is nothing to prevent the broken portion of the hangers or the cross key from disengagement and falling to the tracks. Also, if the cross key should become disengaged or if both swing hangers should break, the end of the spring plank would drop to the track. In any of these cases serious accidents might result from derailment of the car truck.

The present invention primarily concerns a safety means which will prevent the falling of the swing hangers, springs, spring plank, or other associated parts, to the tracks, in the event of swing hanger breakage, and in this connection I provide each end of the spring plank 8 with a member 11 secured to the under side thereof, which forms a seat 12 for the cross key 7, and which is provided with spaced eyes or loops 13 that surround the cross key 7.

Also, the cross key 7 is of oblong shape and the swing hanger openings 6 in which the ends of the cross key 7 are received, are elongated and of a shape similar to the cross key to prevent relative rotation between the cross key and swing hanger. Cotter pins 14 or other suitable means extend through the key 7 outwardly of the swing hangers 4, as shown in Fig. 2, to prevent disengagement of the lower portion of the swing hanger from the cross key in the event of breakage of the swing hanger.

Rigidly secured to the transom side members 3 near each end are the legs of a U-shaped member 15, the base portion of which underlies the spring plank 8 in spaced relation, as shown in Figs. 1 and 3.

If, for example, one or both of the swing hangers 4 at one end of the transom, with which the present invention is associated, should break in operation, the spring plank 8 would drop only a short distance and would be supported on the U-shaped member 15, thus maintaining the spring 9 in its bolster supporting relation. Also, the cross key 7 is prevented from dropping to the tracks by the loops 13 which surround the same, the broken swing hangers 4 being prevented from rotating by the shape of the opening 6 and the shape of the ends of the cross key, and being prevented from disengagement from the cross key 7 by the cotter pins 14.

It is thus seen that I have provided a safety means that functions in the event of spring hanger breakage to maintain the spring plank and bolster springs in bolster-supporting relation, and to prevent any of the associated parts from falling to the car tracks where they might be the cause of a serious accident. The loops 13 and U-shaped members 15, however, do not interfere with the normal swinging action of the spring plank.

Although a single embodiment of the invention has been herein shown and described it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined in the following claims.

What I claim is:

1. In a car truck the combination with a transom of a swing motion bolster, a plank for supporting said bolster, a pair of depending swing hangers pivotally connected to said transom near each end thereof, each pair of swing hangers having a connecting member in bearing engagement with the under side of said plank, means associated with said plank to surround each of said connecting members, and means connected with said transom and underlying said plank to support said plank in the event of breakage of one or more of said swing hangers.

2. In a car truck the combination with a transome of a swing motion bolster, a plank for supporting said bolster, a pair of depending swing hangers pivotally connected to said transom near each end thereof, each pair of swing hangers having a connecting member in bearing engagement with the under side of said plank, means associated with said plank to surround each of said connecting members, and means connected with said transom and underlying said plank in spaced relation to support said plank in the event of breakage of one or more of said swing hangers.

3. In a car truck the combination with a transom of a swing motion bolster, a plank for supporting said bolster, a pair of depending swing hangers pivotally connected to said transom near each end thereof, each pair of swing hangers having a connecting member in bearing engagement with the under side of said plank, means associated with said plank to surround each of said connecting members in spaced relation, and means connected with said transom and underlying said plank to support said plank in the even of breakage of one or more of said swing hangers.

4. In a car truck the combination with a transom of a swing motion bolster, a plank for supporting said bolster, a pair of depending swing hangers pivotally connected to said transom near each end thereof, each pair of swing hangers having a connecting member in bearing engagement with the under side of said plank, means associated with said plank to surround each of said connecting members in spaced relation, and means connected with said transom and underlying said plank in spaced relation to support said plank in the event of breakage of one or more of said swing hangers.

5. In a car truck the combination with a transom of a swing motion bolster, a plank for supporting said bolster, a pair of depending swing hangers pivotally connected to said transom near each end thereof, each pair of swing hangers having a connecting member in bearing engagement with the under side of said plank, spaced means associated with said plank to surround each of said connecting members, and means connected with said transom and underlying said plank to support said plank in the event of breakage of one or more of said swing hangers.

6. In a car truck the combination with a transom of a swing motion bolster, a plank for supporting said bolster, a pair of depending swing hangers pivotally connected to said transom near each end thereof, each pair of swing hangers having a connecting member in bearing engagement with the under side of said plank, spaced means associated with said plank to surround each of said connecting members, and means connected with said transom and underlying said plank in spaced relation to support said plank in the event of breakage of one or more of said swing hangers.

7. In a car truck the combination with a transom of a swing motion bolster, a plank for supporting said bolster, a pair of depending swing hangers pivotally connected to said transom near each end thereof, each pair of swing hangers having a connecting member in bearing engagement with the under side of said plank, means associated with said plank to surround each of said connecting members, and a pair of U-shaped members each having its central portion underlying said plank and having its leg portions connected to said transom.

8. In a car truck the combination with a transom of a swing motion bolster, a plank for supporting said bolster, a pair of depending swing hangers pivotally connected to said transom near each end thereof, each pair of swing hangers having a connecting member in bearing engagement with the under side of said plank, means associated with said plank to surround each of said connecting members, a pair of U-shaped members each having its central portion underlying said plank in spaced relation and having its leg portions connected to said transom.

9. In a car truck the combination with a transom, a bolster supporting plank and swing hangers pivotally connected to said transom, said swing hangers having portions hingedly supporting said plank, of means carried by said transom to support said plank in the event of breakage of one or more of said hangers, and means carried by said plank to support said hangers and supporting portions in the event of breakage of one or more of said hangers.

10. In a car truck, the combination with a transom of a swing motion bolster, a plank for supporting said bolster, a pair of depending swing hangers pivotally connected to said transom near each end thereof, each hanger having an opening in its free end, a cross key for each pair of hangers having its ends disposed in the openings thereof and having bearing engagement with the under side of said plank, means carried by said transom and extending below said plank to support said plank in the event of breakage of one or more of said hangers, and means on said spring plank to support said cross keys in the event of breakage of one or more of said hangers.

11. In a car truck, the combination with a transom of a swing motion bolster, a plank for supporting said bolster, a pair of depending swing hangers pivotally connected to said transom near each end thereof, each hanger having an opening in its free end, a cross key for each pair of hangers having its ends disposed in the openings thereof and having bearing engagement with the under side of said plank, means carried by said transom and extending below said plank to support said plank in the event of breakage of one or more of said hangers, means on said spring plank to support said cross keys in the event of breakage of one or more of said hangers, and means extending through said cross keys to prevent inadvertent disengagement of said hangers and cross keys.

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