To all whom it may concern:

Be it known that I, EDMUND P. KINNE, a citizen of the United States, and resident of Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Coupling-Centering Devices, of which the following is a specification.

My invention relates to railway cars and has particular reference to a novel centering device for use in connection with car couplers. In the use of couplers particularly on passenger cars, a centering device has been considered essential or desirable many such devices having been proposed. However, an objection to many of such devices is that the coupler is designed for considerable side motion thus requiring an extreme expansion and contraction of the centering springs. On the extreme sidewise movement of the coupler a spring in order to give the required centering effect at the intermediate positions will have extreme rigidity or resistance.

I have designed a centering device for use in connection with car couplers so arranged that the centering force is applied to a point nearer the center of oscillation of the coupler than has been heretofore proposed. Thus the sidewise movement required of the springs is much less than if the centering springs are applied near the head of the coupler. In other words, the radius under which the centering device operates is considerably reduced.

My novel centering device is so arranged as to not interfere in any manner with the removal of the coupler or the long shank to which the pivoted head is attached. The device may be said to consist in a pivoted arm removably engaging the coupler shank, said arm being acted upon by the centering springs, said springs having a bearing on the adjacent draft sills.

The invention will be more readily understood by reference to the accompanying drawings, wherein,

Figure 1 is a plan view of a car coupler with which my novel centering device has been associated; and Fig. 2 is a sectional elevation through the construction shown in Fig. 1.

Referring more particularly to the drawings it will be seen that my device is applied to a passenger car, a cast steel platform 10, of which is shown in Fig. 2. This platform has a downwardly extending annular shelf 11, to which the centering lever 12, is secured by means of a pivot bolt 13. Centering springs 14, secured by a bolt 15, in the draft sills 16 bear against the inner faces of semi-circular heads 14a carried by sleeves 14b sidely mounted on the bolt thereby providing a rock-bearing on each side of the lever 12, and maintain the same in centered position. The lever 12 is provided with angular legs 17, forming a yoke which yoke embraces the long shank 18, to which a car coupler 19, is pivoted by means of the pin or bolt 20. The coupler head and the shank 18 have abutting shoulders 21, 22, by means of which the oscillation of the head in the shank 18 is limited. The shank and head are maintained in elevated position by means of the carry iron 23. The shank 18 is adapted to swing on a pivot, indicated by the aperture 24, in Fig. 1.

It will be seen that the oscillation of the shank from the point 24 will affect the centering springs 14, only from a radius equal to the distance between the pivot 24, and the yoke 17, and that this radius is still further reduced by half by reason of the location of the springs 14, midway in the length of the lever 12. By this arrangement short and powerful springs 14 may be employed the same effect being secured as if longer springs were mounted at a point closer to the head 10. It will further be noted that the shank 18 may readily be taken down or withdrawn without affecting in any way the centering mechanism, the yoke 17 being open at the bottom. A very simple and adaptable centering device is thus secured.

Modifications may be made in the construction and such modifications as are within the scope of my claims I consider within the spirit of my invention.

I claim:

1. In a device of the class described, the combination of a coupler, longitudinal car sills, a shank, a car platform, and a centering lever for said coupler, said lever being pivoted to said platform and extending rearwardly, terminating in a yoke engaging said shank, and springs carried by said
sills and engaging both sides of said lever intermediate its ends, substantially as described.

2. In a device of the class described, the combination of a coupler having a rearwardly extending portion, the terminal portion of which is adapted to act as a pivot, a car platform, longitudinal car sills, a centering lever pivoted to the platform and extending rearwardly above said rearwardly extending portion, centering springs carried by said sills and acting on said lever, the free end of said lever being bifurcated and straddling said rearwardly extending portion, substantially as described.

3. In a device of the class described, the combination of a coupler having a shank, the inner end of which is adapted to be pivoted to a fixed portion of the car, a centering lever pivoted to a fixed portion of the car and extending rearwardly from its pivot point, said lever being provided with a yoke engaging said shank, sills, a bolt passing through said sills and said lever, and springs carried by said bolt and engaging said lever on both sides thereof, substantially as described.

EDMUND P. KINNE.

Witnesses:

LAURA CARLISLE,
HANS SCHLICHTING.