The object of the invention is to provide simplified means for automatically maintaining a draw-bar in central position which means are so arranged that they support the carrier for air, steam or electric automatic connectors.

The invention furthermore consists in the improvements in the parts and devices, and in the novel combinations of the parts and devices herein shown, described or claimed.

In the drawing forming a part of this specification, Figure 1 is an end elevation of a portion of a car showing my improvement in connection therewith, the coupler shank being shown in section. Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a detailed sectional view showing a modified form of attachment between the centering device proper and the carrier for the automatic air, steam or electric connector. Fig. 4 is a view similar to Fig. 1 showing a different embodiment of my invention, and Fig. 5 is a vertical sectional view taken on the line 5—5 of Fig. 4.

In said drawing and referring to Figs. 1 and 2, 10 denotes a horizontal strap or bar at the end of a car and rigid with the car under-frame. To said bar is secured a carrier iron 11 by bolts 12, or other suitable means, the carrier iron being adjustable in connection with the draw-bar shank 13. Secured to the underside of the carrier iron 11, near its ends thereof, are angles 14—14 in which is supported and mounted a bolt 15, kept in place by a head and nut 16 on the other end.

The angles 14—14 serve as stops for a pair of springs 17—17 mounted on said bolt 15. The carrier iron 11 is arranged to support a centering member 18 which, as shown, is provided with two sets of 55 spaced upwardly extending ears that are arranged to engage the sides of the draw-bar shank. Mounted between each pair of spaced ears 19 on a suitable pin or bolt 20 is an anti-friction roller 21, which rides on a top of the carrier iron 11 and which thus permits the member 18 to slide back and forth with a minimum amount of friction.

At its underside the member 18 is formed with two semi-cylindrical chambers 22 divided by a central vertical partition 23, the inner ends of the springs 17—17 being seated in said chambers as will be understood.

To the under cylindrical side 24 of the member 18 is adjustably secured a carrier 25 having a correspondingly curved top flange 26 arranged to be bolted to the member 18, the bolts 27 for this purpose being adjustable in elongated slots 28 in the member 18 whereby the carrier 25 can be adjusted to the proper angle. The carrier 25 supports the automatic air and steam and electric connector and may be of any desired form, that shown in the drawing illustrating one well-known type which I do not deem it necessary to here describe.

From the preceding description, it will be seen that the member 18 will be automatically retained in central position by means of the springs 17—17, and consequently the draw-bar 13 will also be kept in central position as will the carrier 25. This is of importance since in connecting or coupling two cars together the automatic coupler or connector for the air, steam and electric conductors will always be positioned in line with the coupler, and when the train of cars is passing over a curved track, the steam and air pipes will be also kept in vertical alignment with the couplers and be caused to automatically follow the movements thereof at all times.

In Fig. 3 I have shown a different method of connecting the carrier with the centering device proper and as shown, the centering member 118 is provided with a depending centrally located flange 31 having an elongated horizontal slot 32 therein. The carrier 125 is provided with a pair of upper-standing flanges 126 adapted to straddle the flange 31 and be secured thereto by bolts 127 which pass through the slot 32.

In the construction shown in Figs. 4 and
5, 211 denotes the carry iron, 213 the draw-bar and 218 the centering member for the air, steam and electric automatic connector. The member 218 is substantially of inverted U-shape in cross section as clearly shown in Fig. 5 and thereby adapted to straddle the carry iron 211. At its ends the member 218 is provided with upstanding shoulders 219—219 arranged to engage the sides of the draw-bar shank. In this construction, the carrier 225 is supported by means of a member 226 and pivotally mounted links 227—227, the latter being supported at their upper ends on pins or bolts 228—

15 mounted in the depending side flanges of the member 218 and pivotally connected at their lower ends by bolts 229 supported in the upstanding side walls of the member 226. The carrier 225 is connected to the member 226 by means of bolts 230—230.

In the construction shown in Figs. 4 and 5 and herein above described, it is apparent that the automatic connector for the air, steam and electric conductors will follow the movements of the draw-bar since the member 218 will always be moved in accordance with the movements of the draw-bar. In addition, the connector is flexibly connected with the member 218 and may thus accommodate itself to various conditions in service.

I claim:

1. In car construction, the combination with a draw bar, of a carry iron beneath the draw bar and arranged to directly support the latter, a member having anti-friction rollers, slidably mounted with respect to said carry iron and supported thereby, said member having upstanding projections on each side of the draw bar shank adapted to engage the latter, and spring means for normally maintaining said member in central position.

2. In car construction, the combination with a carry iron adapted to support the weight of a draw bar, of a member slideable with respect to said carry iron and having upstanding shoulders located at the sides of the draw bar shank, a carrier for air and steam automatic connector secured to said member, and means for adjustably securing said carrier to said member in any pre-determined position.

In witness that I claim the foregoing I have hereunto subscribed my name this 22nd day of April 1915.

JOHN R. MITCHELL.