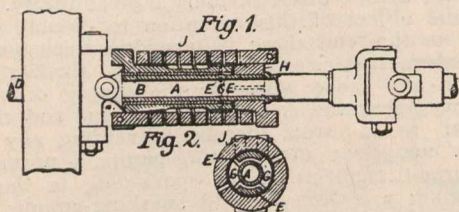


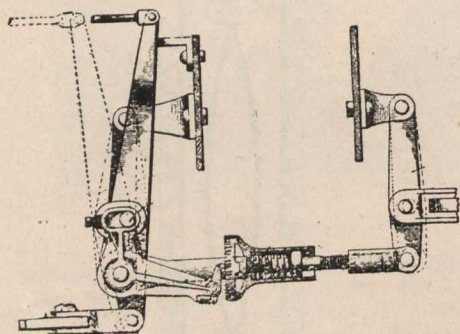
and rectangular section in the present example. It is of a diameter to encircle closely part of the loose sleeve B and part of the fixed sleeve H. The sleeves may, however, be so formed that the spring closely embraces more of the sleeve if it be found desirable. The effect of the close en-



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circling parts of the sleeves B, H by the spring J is that upon the spring J being subjected to torque, and becoming reduced in diameter, its ends engage the parts of the sleeves after the manner of a coil clutch, and thus take a proportion of the driving effort, so relieving the anchors of the spring.

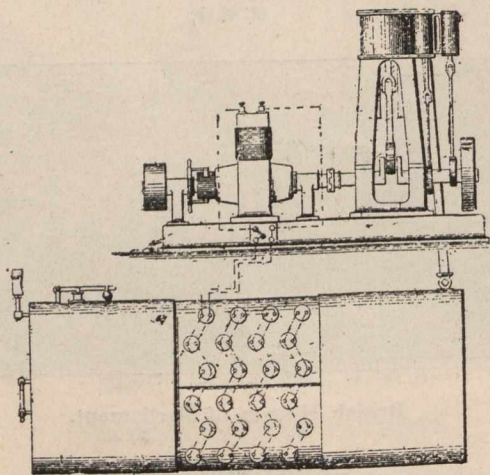
Slack Adjuster for Railway and Vehicle Brakes.—Anderson and Austin.—12,462.—The main brake lever is piv-



12,462.

oted to an adjusting device, which is pivoted at its other end to a lever connected with one of the brake beams, being a third brake lever connected to the main brake lever by a pivot pin.

Self-Driving Power Plant.—Dahl.—24,518.—A steam generator supplies a prime mover which drives a dynamo,

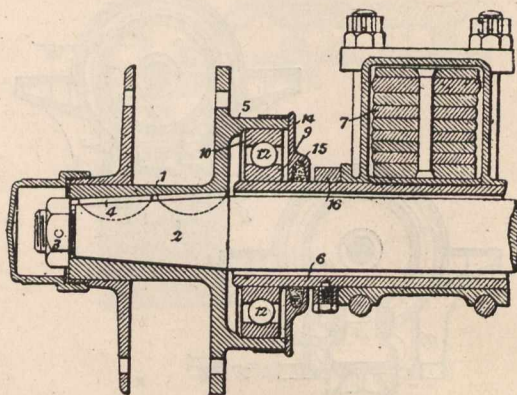


24,518

the current from the latter heating resistance coils, which heat the contents of the steam generator.

Axle Bearings.—T. Thornycroft and John I. Thornycroft and Co., Limited, Chiswick.—3,328.—1906.—This invention relates to bearings for the live axles of motor-cars and like vehicles, and has for its object to provide for the strain being taken partly by the revolving axle and partly on the tube carried by the vehicle body. For this purpose a projection from a part rigidly fixed to the revolving axle is provided internally with ball races and balls, through which the weight of the vehicle is transmitted to the wheels. In some cases provision may also be made for taking up the lateral thrust by means of ball bearings arranged in conjunction with the main ball bearings. The hub 1 of the wheel is rigidly secured to the tapered part of the live axle 2 by a nut 3 and keys 4, and is provided with a hollow cylindrical part 5 which projects from the hub and surrounds the axle 2 for a certain distance. The tube 6, through which the body of the car or other vehicle is supported as by springs 7, surrounds the live axle 2, but does not touch it, and projects into the cylindrical projection 5 on the hub. In the space between the tube 6 and

the projection 5 are fitted concentric ball races 9 and 10. The inner race 9, which comprises a ring with a groove in its external surface for the balls 12 to run in, is made to fit upon the tube 6, while the outer race 10, which comprises a ring, having in its inner surface a groove for the balls, fits inside the projection 5. The ball-races are protected from dust by an end cover 14 fitted on the projection 5, and extending into proximity to the tube 6, suitable



3,328.

packing 15 being provided in a recess in the surface adjacent to the said tube. Lateral movement along the tube 6 of the parts constituting the ball bearing may be limited by a removable ring or a collar 16 on the tube; the caps or covers 14 of the two bearings of an axle can be arranged to bear against rings or collars 16 on each end of the tube, and thus to limit lateral movement in either direction.



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Society of Chemical Industry.—Chairman, F. J. Smale; Secretary, Alf. Burton, 44 York Street, Toronto.



The Dominion Asbestos Company, a new syndicate of Americans with half a million capital, has purchased a large section of the asbestos mines at Black Lake and Thetford. These mines supply 85 per cent. of the world's asbestos. H. H. Robertson, of Boston, is president, and R. T. Hooper, of Montreal, managing director.