

range of the Pennsylvania Railroad locomotives as supplied by the Westinghouse company.

Fig. 17—Class 2-B-1 locomotive with a single motor and a single jackshaft vertically below the center of the motor. Three locomotives of this class have been supplied for the Dessau-Bitterfeld line of the Prussian-Hessian State Railways. The three locomotives are similar in many respects, the motor capacity of the different locomotives being as follows; Siemens, 1100 hp; A. E. G., 1200 hp; Bergmann, 1500 hp. The drawing shows the arrangement of the Siemens locomotive.

Fig. 18—Class 0-D-0 locomotive with single motor and single jackshaft. Five locomotives of this class have been supplied for freight service on the Dessau-Bitterfeld line. Three of these have single motors of 600-hp capacity, the remaining two having motors of 800 hp.

Fig. 19—Class 1-D-1 locomotives with two motors and a single jackshaft. Two locomotives of this class have been constructed for the Lauban-Königszell line, Prussian-Hessian State Railways, one by the Siemens-Schuckert Company and the other by the Allgemeine Elektrizitäts Gesellschaft. The two motors are mounted in the body of the locomotive symmetrically about the center line, and their shafts are coupled by cranks and connecting rods approximately at right angles to the single jackshaft, which occupies a central position midway between the two pairs of driving axles. The drawing shows the Siemens-Schuckert locomotive. The Allgemeine locomotive is similar but has two 900-hp motors and driving wheels of 1500 mm (59 in.) diameter.

Fig. 20—Class 1-C-0 locomotive with one motor and a single jackshaft. Nine locomotives of this class have been built by the Allgemeine Elektrizitäts Gesellschaft for the Mittenwaldbahn, Austria, and eight are under construction by the same firm for the Vienna-Pressburg line. The loco-

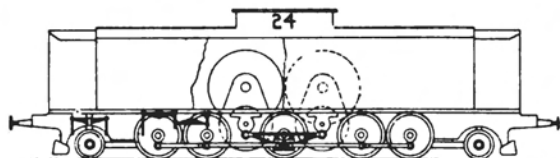


Fig. 24—Locomotive Drives—Lötschberg Railway Standard

motive has three driving axles with a single jackshaft about the center of the locomotive coupled to the motor, which is mounted in the body of the locomotive above the middle driving axle.

Fig. 21—Class 1-C-1 locomotive with two motors unsymmetrically placed in the body connected to a single jackshaft midway between them. Nine locomotives of this class are under construction by the Siemens-Schuckert Company for the Wiesental line, Baden State Railways, in Germany.

Fig. 22—Class 1-C-1 locomotive with a single motor and a single jackshaft. A number of these locomotives are under construction for the Prussian-Hessian State Railways. Three are equipped with a 1000-hp motor in each, one with a motor of 1250 hp and one with an 1800-hp motor. The last mentioned, which is a Siemens locomotive, is shown in the drawing.

Fig. 23—Class 1-C + C-1 articulated locomotive with one motor and one jackshaft in each half. Thirteen locomotives of this class intended for heavy freight service on the Kiruna-Riksgransen Railway are under construction by the Siemens-Schuckert company.

[Fig. 24—Class 1-E-1. This drawing was not a part of Mr. Lydall's paper, but is added to show the latest Oerlikon locomotive which has been made standard on the Lötschberg Railway. It is of the geared jackshaft type with a drive composed of a double helical gear, two jackshafts, a joint triangular yoke and crank connections to five pairs of driving wheels.—Eds.]

CHICAGO, MILWAUKEE & PUGET SOUND ELECTRIFICATION

The management of the Chicago, Milwaukee & Puget Sound Railroad has definitely decided to electrify the Deer Lodge-Three Forks section of its Rocky Mountain division, using 2400-volt d.c. propulsion current. This division contains 113 miles of main line, or the equivalent of 168 miles of single track including sidings and yard tracks. Overhead trolley, suspended from mast arms on wooden poles, will be used on tangent track and span-wire construction on wooden poles over curves. This type of construction will be changed to steel poles and overhead bridge trolley construction in yards containing four tracks or more. It also has been definitely decided that the transmission voltage will be 100,000 volts a.c., feeding five substations ranging in capacity from 3000 kw to 4500 kw, depending on their relative location to heavy grades. Essentially, the entire electrification, including the rolling stock, will conform to that installed by the Butte, Anaconda & Pacific Railroad. C. A. Goodnow, assistant to the president Chicago, Milwaukee & St. Paul Railway, authorizes the statement that no contract for the equipment has been let.

BROOKLYN RAPID TRANSIT INSURES ABROAD

The Brooklyn (N. Y.) Rapid Transit Company has transferred all its fire insurance—\$22,000,000—on which the premiums have been about \$100,000 a year, from the companies represented by the New York Fire Insurance Exchange to Lloyds, of London, thereby saving about \$27,000 a year. President Timothy S. Williams of the transit company says that this was done because the higher rates recently prescribed were discriminatory and unjust.

President Williams makes the following statement: "Our insurance was placed last year through the companies represented in the New York Insurance Exchange at an average rate of about 34.7. This insurance expired Nov. 15 last. Early in September we were suddenly notified that the Fire Insurance Exchange had increased the average rate from 34.7 to 62.3. This came as a great surprise to us, for in ten years we had paid the insurance companies over \$1,000,000 in premiums and had called upon them to pay in losses only about \$27,000.

"Feeling that, in view of our experience and the condition of our risks, the new rate promulgated by the New York Fire Insurance Exchange was discriminatory and unjust, we sought for several weeks to procure a reduction, and were able, if certain changes were made, to get the average rate reduced to about 43.8. This decision did not come until about nearly a month after the policies taken out last year had expired, and in the meanwhile our agents took the usual form of binder subject to the fixing of a satisfactory rate. The rate finally fixed at 43.8 was not satisfactory, and we therefore placed the entire schedule of \$22,000,000 in London Lloyds, saving \$27,000 in premiums. We regretted the necessity of going outside our own country for insurance, but there was no other proper course."

President Williams also disclosed the fact that the Brooklyn company for several years past had been gradually setting aside an insurance fund of its own and that it eventually hoped to carry its own insurance. The accumulations in the fund now amount to over \$600,000.

Willis O. Robb, manager of the Insurance Exchange, in defending the higher rates, says that there would have been no raise in rates if the Brooklyn Rapid Transit Company had not failed to make improvements which were promised. Although the transit company has not replied to this statement, it is believed that the basic charge is that the rate reduction received, even if the improvements referred to had been made, would have amounted to but a fraction of 1 per cent. The ease with which the low rate was obtained abroad speaks well for the character of the risk.