

Rear-End Collision at Barnes, Southern Region

THE serious accident at Barnes on December 2, 1955, accompanied by 13 fatalities, was by far the worst on Southern lines since that at South Croydon on October 24, 1947, when 22 lives were lost, which itself was not approached for casualties on any consistent of the Southern since the derailment at Salisbury over forty years before. In the preceding twenty years, ordinary operating train accidents calling for formal inquiry had involved 62 fatalities of passengers, of which 48 were accounted for by three of them. The crowded state of the trains was the cause of the heavy death roll in the South Croydon collision, brought about, as were those at Battersea Park, Waddon and Esher, by irregular operation of the Sykes lock-and-block apparatus. It is now clear, from Lt.-Colonel G. R. S. Wilson's exhaustive report* that the Barnes collision also was due to action of this kind.

The accident occurred at approximately 11.28 p.m., when the 11.12 electric train, Waterloo to Windsor and Chertsey, consisting of two two-coach units (introduced in 1935-36 with new steel underframes, bogies and electrical equipment but with coaches constructed originally between 1875 and 1900 for steam stock), which had been irregularly admitted to the block section on the down local line, and was approaching the station at about 25 m.p.h., overtook the 10.55 freight train, Battersea to Brent, consisting of 15 loaded and 29 unloaded wagons, and a 20-ton van, drawn by an L.M.R. class "SF" 2-8-0 engine, which was moving

slowly forward, having been held 5-6 min. at the home signal.

Severe damage to the leading coach was confined to the motorman's and leading passenger compartments; the steel underframe overrode the goods van, destroying its body and a container on the next freight wagon, after which the coach turned over on the adjacent through line. Electric arcing started a fire in the wooden bodywork which rapidly developed and the vehicle was practically burnt out. Eleven of the 30-40 passengers in it lost their lives, as did the motorman and freight train guard; 20 passengers were detained in hospital with serious injuries and 21 sustained minor ones or shock.

Although current was cut off from the down local line by the circuit breakers in the Barnes and Clapham Junction sub-stations, while at Barnes the one controlling the down through also came out, this latter line continued to be fed from Clapham Junction, three miles away, and the arcing persisted for 4 or 5 min., when metal parts of the coach came in contact with the conductor rail. The current was, however, not sufficient to open the circuit breaker at Clapham Junction, but at 11.34 a motorman who was a passenger in the train applied a short-circuiting bar, after an unsuccessful attempt, which achieved that result and pressure was removed. The up lines remained alive for another 15 min. but this played no part in the fire, the rapid spread of which soon made it impossible to rescue persons from the burning vehicle, although courageous attempts were made,

* H.M. Stationery Office, Price 4s. 6d.

some persons injuring themselves in their endeavours to render assistance.

Colonel Wilson had to see a considerable number of witnesses and deal at length with various railway and public authorities on matters raised by the evidence tendered to him, much of which contained discrepancies and contradictions, especially regarding telephone conversations, either between signalboxes or between railwaymen and others and the telephone exchanges, fire services, and so on.

The Sykes lock-and-block, although old fashioned, mechanically and electrically, has a long record of reliable service in the operation of dense traffic, and if properly handled the signalling of more than one train into a section is prevented absolutely. Despite conflicting evidence, there can be no doubt that the releasing key must have been used to re-set a "plunger," or accepting, instrument at Barnes, without taking the precautions required by so serious an action. The train already in the section evidently had been forgotten momentarily, leading the signalman apparently to come under the misapprehension that he had not re-set his instrument after using it to allow a neighbouring signalbox (Putney) to close, a procedure involving a legitimate use of the key.

The signalman's mind was put into a condition to entertain the delusion it seemingly did by premature receipt of an "Is line clear?" signal from the man in rear (Point Pleasant Junction Signalbox), whose instrument gave him no positive indication that "Train out of section" had not yet been received. The inspecting officer remarks that few boxes can be more heavily pressed than Barnes and Point Pleasant Junctions, especially with trains running out of course, and the time has come when this route should be controlled by modern colour-light signalling and continuous track circuiting. Extensive further schemes are contemplated under the modernisation plan, and one has been revived for installing such equipment from Clapham Junction to Richmond. This should receive very high priority.

It will be some years before the Sykes apparatus disappears from all important lines of the Southern Region and although this accident might have been prevented by co-operative release for the instru-

ments the universal provision of this would involve many difficulties. A berth track circuit at the home signal would have done so and provision of such on both down lines at Barnes has been authorised. Colonel Wilson recommends doing this at all Sykes boxes controlling four lines of way where there is no good view of trains standing at home signals.

He had discussions on the difference of practice in working the Sykes electric semaphore, or block arm, on the Western and Central and Eastern Sections of the Region and observes that consideration is being given to standardising the latter method everywhere. With this the block indicator arm is normally lowered and raised immediately a train is accepted, being lowered again when "out of section" is given, providing a positive indication of the condition of the forward section.

Colonel Wilson had to deal with the questions of the fire set up by electric arcing, the summoning of help, and the cutting off of the current, as there was serious delay, arising from a misunderstanding, in calling the nearest fire appliances and it was some minutes before one of the sub-stations concerned was informed of the true situation. Evidence here was far from easy to sort out and although procedure in handling emergency telephone calls may need some revision no actual negligence on the part of anyone in the various outside services was involved. In any case it is next to impossible to foresee and provide positively against every conceivable kind of emergency condition, but new steel electric rolling stock and improved power equipment with high-speed circuit breakers eventually will practically eliminate the chance of such a fire occurring again.

The signalman at Putney, between Point Pleasant and Barnes Junctions, a relief man, closed his box considerably earlier than was permissible, but this was done in accordance with the signalling regulations, without technical irregularity. Of his conduct, although not directly contributing to the accident, it need only be said that to leave duty at an unauthorised time and influence other men to hide it by making false register entries are doubly reprehensible in one who, from his senior position, should have set an irreproachable example to others.