

On the Brighton Line Fifty Years Ago

By F. S. BOND



Photo]

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Some of the locomotives in the 1905 exhibition at Brighton, finished in olive green, yellow, and umber liveries. The two last named are "B4" and "B2" class 4-4-0s

THE early years of the present century were a most interesting period at Brighton Works because they saw the beginning of the sweeping changes which followed the death of R. J. Billinton, in 1904, and the appointment of Douglas Earle Marsh, in 1905. Not only were the works much smaller than than later, but no electric power had been installed. Machines were driven by steam engines through shafts and belts, and the boiler plant included as auxiliaries two old locomotive boilers. The overhead gantry cranes were driven by cables and pulleys, and other equipment was generally in keeping with this out-of-date plant. All this was swept away by Marsh before he had been long at Brighton, and the works were electrified and modernised in every way.

During the last years of his term of office, R. J. Billinton was handicapped by ill-health—a misfortune that also overtook his successor—but locomotive building to his designs continued until after Marsh's succession; these engines were of the "big radial" 0-6-2 tank types. In those pre-Lancing days, the carriage

shops were on the opposite side of the main line from the locomotive shops.

The locomotive shop foremen were all old hands of strong character and various idiosyncrasies, including, in some cases, a wonderful flow of picturesque language. The chargeman of the new-engine gang in the erecting shop was Mr. Jenman, who later had charge of the District Running Department at Brighton. Another personality of those days, who will be long remembered, was Charlie Peters. Though really holding an inspector's job, he was designated trial driver, and was responsible for preparing all new and heavily-repaired engines for the road. He also had to take these engines out on trial runs, usually to West Worthing or Littlehampton, as they came out of the shops.

A memorable event in 1905 was an exhibition of engines and carriage stock outside the carriage shops, staged to enable the directors to select future standard liveries. There were locomotives in Stroudley "green" (yellow), in green, and in the umber livery subsequently adopted. Specimen coaches were in a variety of colours, notably

mahogany, green, and an attractive combination of green lower and cream upper panelling.

The locomotive stud at Brighton shed was much larger in those all-steam days. The "B4" class 4-4-0s (known as the "Scotchmen" because most of them were built by Sharp Stewart & Company of Glasgow) were the crack passenger engines, but the "Gladstone" 0-4-2s were still taking their share of the work, and were even booked to take the principal expresses. A few of the Stroudley singles were still running, and secondary work was done by Billinton's earlier 4-4-0s, the "Grasshoppers."

The most difficult train that the "B4s" had to work was the 8.45 a.m. from Brighton to London Bridge, especially on Monday mornings, when it frequently loaded to what then was computed as "equal 28," or up to 375 tons tare. It was made up of non-corridor stock, and with passengers weighed over 400 tons as far as East Croydon. Its most unusual feature was that at that station it slipped a portion consisting of two six-wheel brakevans, two eight-wheel bogies, and a twelve-wheel Pullman car, weighing 112 tons tare. As the result of signal and other delays, net start to stop speeds of 46 to

TABLE I
L.B.S.C.R. : BRIGHTON-GROSVENOR ROAD

Dist. Miles	Run No. Engine, 0-4-2 No. Load, tons tare " " gross	1 174, Fratton 222 235		2 193, Freemantle 190 200	
		min. sec.	speed	min. sec.	speed
0.0	BRIGHTON	0 00		0 00	
1.3	Preston Park	4 00		3 50	
4.7	Clayton Summit	9 20	42	9 10	45
9.2	Burgess Hill	14 10	61	13 45	
12.9	HAYWARDS HEATH	17 50		17 25	
18.7	Balcombe Tunnel (North End)	25 00	45	24 20	48*
21.4	THREE BRIDGES	28 10		27 25	eased
24.9	Horley	31 30	66	31 10	
29.0	Earlswood	35 40	53	35 50	
33.4	Quarry Summit	41 40	41*	43 15‡	sigs, virt. stop
35.9	Stoats Nest	44 40	sigs.	47 10	
39.5	South Croydon	49 05	sigs.	—	sigs.
40.4	EAST CROYDON	50 30		51 40	15
43.4	Norbury	55 25		—	
46.0	Balham	58 00		—	
48.2	Clapham Jn.	60 30	sigs.	62 10	sig. stop
50.4	GROSVENOR ROAD (Ticket platform)	63 40‡		—	

* Average through tunnel. † 61½ min. net. ‡ Minimum on 1 in 200, 43 m.p.h.

Among the Brighton top-link drivers of that time were such men as Tompsett, Young, Ellis, and Stevens. They later drove the Marsh Atlantics, and Young became an inspector. All drivers in those days had their own engines, in which they took a great pride, and their names were painted in the cabs.

The great event of 1903 was the remarkable run on Sunday, July 26, when class "B4" No. 70, *Holyrood*, superbly driven by Tompsett, took the "Pullman Limited" to Brighton in 48 min. 41 sec. from Victoria, and brought it back in 50 min. 21 sec. A maximum speed of 90 m.p.h. was achieved on the down journey.

48 m.p.h. were not uncommon, nor were sustained speeds of 40 to 42 m.p.h. unusual up the long gradients of 1 in 264, despite the 58 to 62 axle load.

Turning now to performance by the "Gladstones," it must be remembered that they weighed only 39 tons in working order, so that in handling loads of 220 to 225 tons, they were hauling nearly seven times their own weight, if the tenders and the passengers are included. To give some idea of their normal everyday work, records of six runs with different engines are shown in the accompanying tables.

The first run was with the 5.45 p.m. train from Brighton, which was non-stop



One of Stroudley's 0-4-2s, No. 172, "Littlehampton," in the locomotive yard at Brighton about 1904. The lifting gantry is in the background



Photos]

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Interior of a "balloon" type coach with reversible plaited-cane seats, used on pull-and-push trains in 1905

to the ticket platform on Grosvenor Road Bridge, outside Victoria. As in all other runs, except the second up journey, the driver did not know that he was being timed. Speed rose steadily from the start, to reach 42 m.p.h. at Clayton Summit (where it was still rising) passed in the excellent time of 9 min. 20 sec., considering the load. A minimum of 45 m.p.h. at Balcombe Summit was also creditable, as was the time of 41 min. 40 sec. to Quarry Summit. Adverse signals delayed the subsequent descent, but the net time to Grosvenor Road was not more than 61½ min. The equivalent non-stop time into Victoria would have been 63 min. or less, a figure that has not been greatly reduced 50 years later.

Run No. 2 was timed from the footplate. Driver Taylor was in charge of *Freemantle*, and thanks to a slightly lighter load, he was able to improve on the first run, with the excellent minimum of 45 m.p.h. at Clayton Summit. The working pressure of these engines was 150 lb. per sq. in., and after showing 142 lb. at the start, pressure fell to 120 lb. at Clayton Summit; this was approximately the pressure range throughout. Cut-off was kept constant at 27 per cent. and was only increased to 35 per cent. in recovering from signal checks. It will be noted that although the engine was markedly eased after Balcombe Summit,

Three Bridges was passed in under 27½ min., or only 2½ min. longer than the 60-min. electric non-stop trains are allowed today. There was further easing after Earlswood, and the train was brought almost to a dead stand just before it entered Quarry Tunnel. The net time to the signal stop at Clapham Junction probably was under 60 min. The train was the 1.20 p.m. from Brighton.

All the four down runs tabulated were from London Bridge, Nos. 1 and 2 with the 2 p.m., No. 3 with the 5 p.m., and No. 4 with the 6 p.m., which was joined at Redhill. In the first run, *Carew D. Gilbert*, subsequently renamed *Gladstone*, ably driven by Parker, covered the initial 10.3 miles to East Croydon in 17 min. 15 sec. start to stop. From the restart at Croydon, Three Bridges, 19.0 miles, was passed in 24 min. 10 sec., or only 1 to 2½ min. longer than the Hove-Worthing-Littlehampton electric trains are allowed today. Parker took things more easily after Three Bridges, and yet reached Preston Park 2½ min. early.

The comparable run, the second, suffered two engineer's and one signal check, but Sharman passed Quarry Summit slightly faster than in run No. 1, attaining 42 m.p.h. on the 1 in 264 before Stoats Nest, and falling only to 40 m.p.h. on the 1 in 165 to Quarry Tunnel. The engine was then eased, and a severe

TABLE II
L.B.S.C.R. : LONDON BRIDGE-BRIGHTON

Dist.	Run No. Engine, 0-4-2 No.	1 184, <i>Carew D. Gilbert</i>			2 183, <i>Eastbourne</i>			3 190, <i>Arthur Otway</i>			4 198, <i>Sheffield</i>		
		Load, tons tare	179	190	179	190	176	190	225	240			
			min. sec	speed	min. sec.	speed	min. sec.	speed					
0.0	LONDON BRIDGE ...		0 00		0 00		0 00						
2.8	New Cross ...		5 45		5 50		6 00						
8.6	Forest Hill ...		10 15		11 30	32	10 40	24					
10.3	E. CROYDON (arr.) ...		17 15		18 30		17 30 (pass)						
	" " (dep.) ...		0 00		0 00								
14.8	Stoats Nest ...		8 05		8 05	42	23 20	47½					
17.2	Quarry Summit ...		11 55		11 40	40	26 50	42					
								steady					
20.7	REDHILL ...		—		—		—		0 00				
21.6	Earlswood ...		16 45		17 0		31 40		2 00				
25.7	Horley ...		20 15		21 10	p.w.s.	35 35		6 40				
				sigs.				p.w.s.					
29.3	THREE BRIDGES ...		24 10		26 00		40 25		11 15				
32.0	Balcombe Tunnel (North End) ...		28 35		31 45		43 55	47					
37.7	HAYWARDS HEATH ...		34 30		38 10		49 40		21 00				
41.5	Burgess Hill ...		39 20		41 50		53 10		24 30				
45.9	Clayton Summit ...		45 15	39*	47 30	sigs. 42*	58 15	47½*	29 35				
49.3	Preston Park ...		51 35		52 15		62 05		34 10				
50.6	BRIGHTON ...						64 30						
			50½ min. net		49½ min. net		63½ min. net						

* Average through tunnel

28.6 miles in 34 min
10 sec = 50.2 m.p.h.

relaying slack made the time to passing Haywards Heath 3 min. 40 sec. longer than in run No. 1, and proved an incentive to subsequent reduction of this margin to only 40 sec., despite a signal check at Hassocks. The net start-to-stop speed was nearly 48 m.p.h.

Run No. 3 was with the Saturday 5 p.m., and therefore not with quite such a heavy train as on other weekdays. Driver Wright was in charge of *Arthur Otway*, and took matters leisurely to East Croydon, passed in 17½ min., but some excellent climbing followed, with speeds of 47½ m.p.h. at the top of the 1 in 264 at Stoats Nest, and a steady

times were identical with those on run No. 3, despite a 28 per cent. heavier load.

The "Gladstones" ran remarkably smoothly, thanks to their uncoupled trailing wheels, and their cabs were models of simplicity and economy in fittings. The "finger-tip" control of the Westinghouse brake invented by Stroudley could hardly be bettered for its precision and effectiveness.

This was also the heyday of the early pull-and-push trains, then fitted with mechanical control over the regulator when driven from the end remote from the engine. There was a square-section



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A coach painted green with cream upper panels for the 1905 exhibition, outside the paint shop at Brighton

42 m.p.h. up the final 1 in 165 to Quarry Summit. The climb of all but seven miles from East Croydon thus took only 9 min. 20 sec., a creditable performance with steam traction even today. A relaying slack was encountered just beyond Horley, but so good was the acceleration that Balcombe Summit was breasted at 47 m.p.h. The succeeding 13.9 miles to Clayton Summit were covered in 25 sec. over even time, and the run was completed with 30 sec. in hand on the 65-min. schedule. The net time was 63 or 63½ min.

The final run gave the present writer the only 50 m.p.h. start-to-stop speed he recorded with a "Gladstone," incidentally with the heaviest load. As it was dark, speeds were not noted, but between Haywards Heath and Burgess Hill, and Burgess Hill and Clayton Summit, the

rod sliding in a socket between universal joints to provide the necessary rotary motion, and also end and side play between the engine and the coach. The "Terrier" tank engines (or "Rooters" as they were always known to their crews) were then used with "balloon" open-type coaches. It was with one of these combinations that 60 m.p.h. was timed between halts on the Worthing-Brighton service in 1905, the only mile-a-minute speed by a "Terrier" known to the present writer achieved in so short a distance.

From these notes, it will be clear that things did move in and around Brighton 50 years ago, and there was a wonderful "family" camaraderie between all grades and departments. Every man had a pride in "his" line, the L.B.S.C.R.