

FAMOUS TRAINS: XIII.

The "*Southern Belle*" and the
"*Folkestone Flyer*," Southern Railway

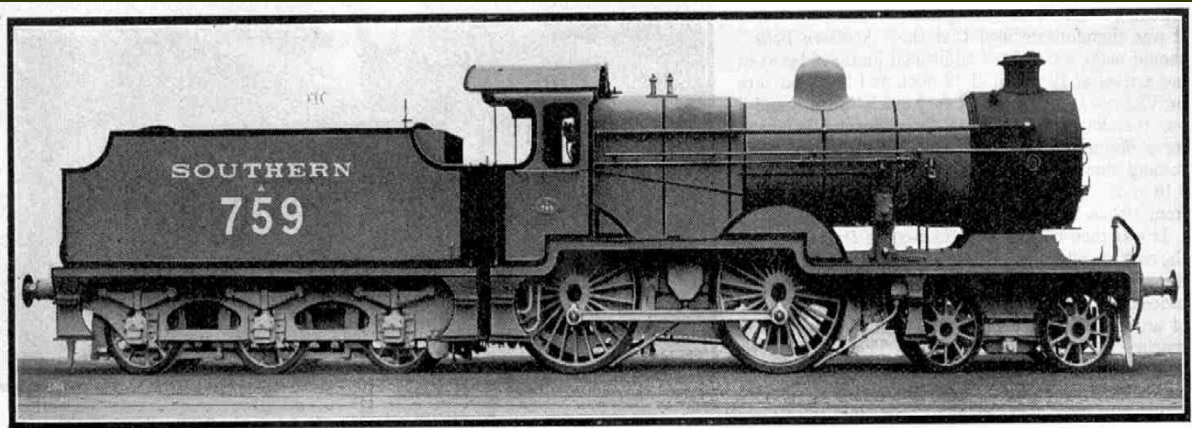
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No. 13 The "Southern Belle" and the "Folkestone Flyer,"

Southern Railway

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SIXTY years ago, (now 145) a Chicago resident named George Pullman conceived the idea that travel in the United States of America might be made much more comfortable if some private individual with sufficient enterprise were to build a more luxurious type of car than ever previously employed, and then either lease the cars to the railways, or pay a rental to the railways for running them and recoup himself by the amounts paid by the passengers in supplementary fares. The idea caught on. Pullman sleeping cars and Pullman drawing-room cars rapidly came into use all over the United States and to-day no express train there or in Canada runs without this type of equipment.



Courtesy]

Latest Type "L" class 4-4-0 Express Engine, Southern Railway

[Southern Railway

The progress of the Pullman in Europe has been less rapid. It was in 1875 that the first Pullman car came to England. The Midland Railway, having seven years previously extended its tentacles southwards into its London terminus at St. Pancras, and being anxious to wrest passenger traffic from its old-established rivals on both sides, introduced Pullman sleeping cars as a special form of luxury equipment between London and Glasgow, and also Pullman drawing-room cars between St. Pancras and Manchester. But on the Midland the Pullman idea did not find much favour, for some reason or other, and to-day – there is almost tragedy in the comparison – the bodies of the old cars may be discovered doing the duty of lineside shelters for shunters and others near the Central Station at Manchester, outside Nottingham, and elsewhere!

Leading Dimensions of Southern Railway Locomotive Types mentioned in this Article			
Type	4-6-4 Express	4-4-2 Express	4-4-0 Express
Tender or Tank	Tank	Tender	Tender
Class	" Stephenson "	" Superheated "	Latest " L "
Cylinders, diameter	22 in.	21 in.	19½ in.
" stroke	28 in.	26 in.	26 in.
Driving Wheels, diameter	6 ft. 9 in.	6 ft. 7½ in.	6 ft. 8 in.
Heating Surface, tubes	1,535 sq. ft.	1,913 sq. ft.	1,252 sq. ft.
" " firebox	152 "	137 "	155 "
" " superheater	383 "	461 "	235 "
" " total	2,070 "	2,561 "	1,642 "
Firegrate Area	26.7 "	31.0 "	22.5 "
Working Pressure, per sq. in.	170 lb.	170 lb.	180 lb.
Tractive Effort, at 85 per cent.	24,175 lb.	20,840 lb.	18,885 lb.
Adhesion Weight	56½ tons	37½ tons	38 tons
Weight of Engine	98 "	68½ "	58½ "
Water Capacity	2,700 gals.	3,500 gals.	3,500 gals.
Coal	3½ tons	4 tons	5 tons
Weight of Engine and Tender (in working order)	—	109 tons	99 tons
Length of Engine and Tender, overall	50 ft. 5 in.	57 ft. 10 in.	56 ft. 8 in.

The next introduction of Pullman cars was in 1879 on the old London, Brighton and South Coast Railway, where, on the short journeys between London and the South Coast resorts, the open type of drawing-room car immediately found favour. All three sections of the present Southern Railway – the South Eastern and Chatham, the Brighton and the London and South Western, which worked them for some years between Waterloo and Bournemouth, abandoned them eventually in favour of restaurant

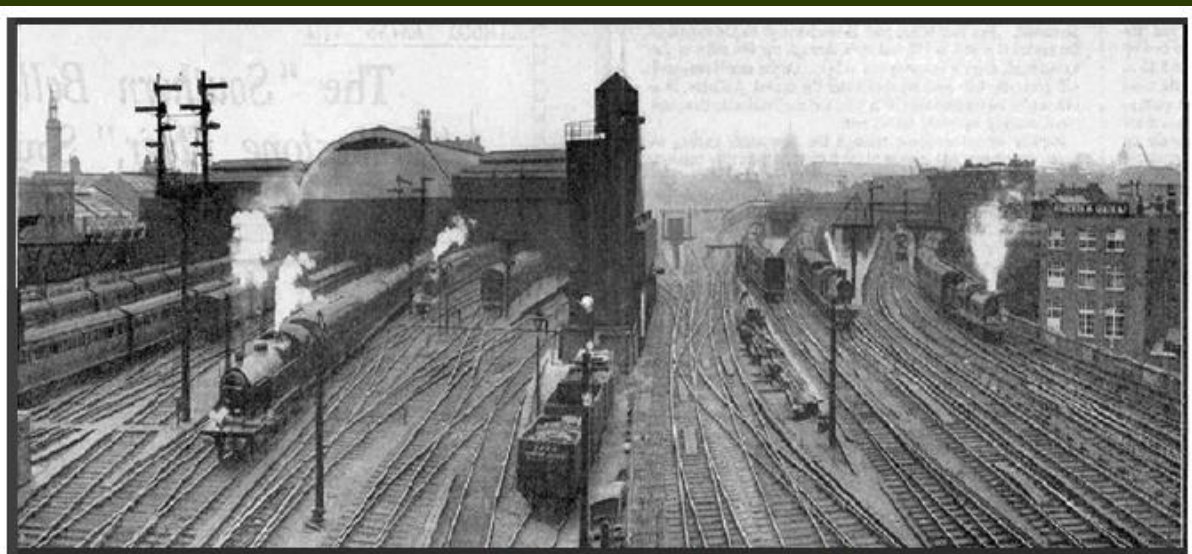
cars, on the other two sections the Pullman business has gone up by leaps and bounds. Suffice to say that in the summer of 1927 no less than 114 trains were running daily on the Brighton and South Eastern sections of the Southern with Pullman cars attached – first class only in the latter case, but first and third-class on 44 of the Brighton trains and third-class only on six more.

It was in the year 1908 that the first daily all-Pullman express appeared in the British Isles, and to the London, Brighton and South Coast Company belongs the honour of its introduction. For ten years previously a first-class "Pullman Limited" express has been running from Victoria to Brighton and

back on Sundays, covering the 51 miles in the even hour, but there had been no such time operating on week-days. The new train was therefore arranged to leave Victoria at 11 a.m. daily and to reach Brighton at 12 noon. To mark the occasion suitably, a distinctive name was chosen – that of “*Southern Belle*” for the new service, and in view of the adoption 15 years later, of the title “Southern Railway” by this group of lines, the name could scarcely have been improved upon

An entirely new set of twelve-wheeled Pullman cars, seven in number, was built to make up the “*Southern Belle*,” and the boast on their introduction that this was the most luxurious train in the world was at that time very likely not without foundation. The whole set of seven cars was required for Sunday use, but on weekdays this formation was generally cut down to four, as for some years first-class passengers only were carried and four coaches provided sufficient accommodation. It was next thought that this significant coaching stock was not being put to sufficient use, and it was therefore decided that the “*Southern Belle*” should make a couple of additional journeys between her arrival at Brighton at 12 noon and her departure for Victoria at 5.45 p.m. A very quick “turn-round” was therefore arranged, the “*Belle*” leaving Brighton for a 60-minute run to London at 12.20 p.m., and coming down again from Victoria to Brighton at 3.10 p.m. This increased the mileage of the stock from 102 to 204 miles daily.

It was therefore realised that four-coach trains, even if the cars are all Pullmans, are a wasteful proposition in these days of powerful modern locomotives, and a concession to democracy was decided upon in the form of an addition on weekdays of ordinary third-class coaches to the train formation. This proved so immensely popular that, after the Brighton Company had set up an entirely new standard in third-class travel by providing Pullman cars for third-class passengers, in 1915, it was finally decided to substitute third-class Pullman cars for the ordinary third-class coaches. This last substitution has taken place since the war, and once again, therefore, the “*Southern Belle*” is an all-Pullman express. Only in the summer is an additional brake-van attached for the conveyance of luggage; at other times Pullman cars alone are included in the formation.



**Parallel Tracks, South of London Bridge, Southern Railway.
The Folkstone 80-minute expresses use the lines on the right-hand side**

During the height of the summer the "*Southern Belle*" shares with the 10.45 a.m. Pullman boat express to Dover the distinction of being the heaviest Pullman train in the country, and the task before the locomotives of completing the 51 miles between Victoria and Brighton in the hour is by no means an easy one.

In the earlier days of the "*Belle*" a variety of locomotives undertook its working. Often the four coach train, and at times the seven-coach Sunday express, was entrusted to one of the fine Earle Marsh superheated 4-4-2 tanks of Class "I.3," which kept time without difficulty. On other occasions these would be supplanted by the large "Atlantics" – either the non-superheated engines of the 37 – 41 series, or the later superheated developments, Nos. 421 – 426. Then came the turn of the 4-6-2 tanks "Abergavenny" and "Bessborough," and, later still, of the magnificent Billinton 4-6-4 express tanks of the "Charles C. Macrae" series, the last-named being powerful express engines in every respect other than that of carrying a separate tender for fuel and water supply. They were provided, indeed, with the largest cylinders ever fitted to a British two-cylinder single locomotive (other than the similarly-dimensioned Urie 4-6-0 engines of the London and South Western), 22 in. in diameter by 28 in. stroke, with the result that their tractive effort reached the high figure on 24,175 lb.

Now, however, in the march of progress, the ubiquitous 4-6-0 "King Arthur" tender engines are chiefly concerned in the working of the "*Southern Belle*" and the other Brighton 60-minute expresses. A special series of these engines has been built, provided with six-wheeled tenders instead of the eight-wheeled tenders in use on other sections of the Southern line, as being more suited in coal and water capacity to the short runs of the Brighton section. The 4-6-4 tanks still take a hand in running the "*Belle*" at times, and sometimes also the 2-6-4 Maunsell tanks of the "River" class; but in general it is a "King Arthur" that will be found at the head of the train. The times of the service have been altered, by the way, since "systematic" departure times were adopted on the Central Division, in common with the other divisions of the Southern Railway. So the down "*Southern Belle*" leaves Victoria at 11.5 a.m. and 3.5 p.m., and the return times are 1.35 p.m. and 5.35 p.m. from Brighton to Victoria.

We shall find the train probably, in the last platform but one at the extreme right-hand side of Victoria station, with the third-class Pullmans in front and the first-class behind, to a total on weekdays, of eight or nine cars in the winter and probably ten in the summer. The hardest effort required of the engine, going south, is the rise out of Victoria to the Grosvenor Bridge over the Thames. This is slightly easier in grading than from the South Eastern side of the terminus, being 1 in 64 as against 1 in 61; but even so the half-mile of climbing, starting right off the platform end, is a tough proposition, more especially as rear-end assistance is seldom employed.

Once across the river we accelerate rapidly, swinging over the South Western main line to run parallel with it as far as Clapham Junction which we pass at about 45 miles an hour, some six minutes after starting. Between here and Brighton the main line has three well-defined summits, each crowned with a tunnel; these are near Merstham, some 18 miles after starting, Balcombe, 32 ½ miles, and Clayton, 46 ¼ miles, the line dropping between each two summits to its lowest points at Horley, 26 miles out, and Wivelsfield, just beyond Haywards Heath and 40 ½ miles from the start.

Between Croydon and Brighton the gradients are mostly in long even stretches at 1 in 264, up to the tunnels and down to the hollows, the only steeper lengths being 2 ¾ miles at 1 in 165 from Coulsdon up to Quarry Tunnel, and four miles mostly at 1 in 200 through the tunnel and down to Earlswood.



This photograph, taken by F.E. Mackay, shows the "Southern Belle" passing Star Lane

On the rising gradients from Clapham to Balham at 1 in 166 and 94, we fall to about 40 m.p.h. or a shade under, but then probably work up to 55 m.p.h. or thereabouts through Streatham Common. On the farther rise, to Selhurst, speed falls again somewhat and is then moderated through the maze of junctions that brings us on to the original London and Brighton main line at Windmill Bridge, just south of Croydon. East Croydon, 10 ½ miles from the start, is passed in about 16 min. only for the remaining 40 ½ miles to Brighton.

It is a long stretch "against the collar" from Croydon up past Purley and Coulsdon to "Quarry" summit. At Coulsdon we leave behind us the electrified lines and cross over the old joint Brighton and South Eastern tracks to the right of them, on to the avoiding line that the Brighton Company opened in 1900 to give them an independent route from here to Earlswood, on the other side of Redhill, where the original main line is rejoined. Up the 1 in 264 to Coulsdon we maintain 50 an hour, or slightly under, falling to 45 or less on the 1 in 165 ere we enter Quarry Tunnel, which is just over a mile in length.

Then follows a swift dash down past Earlswood to Horley, where we may touch anything from 65 up to 75 m.p.h., according to driver and engine. The impetus of this probably will carry us up the 1 in 264 past Three Bridges to Balcombe Summit, which is just before the entry to Balcombe Tunnel, at between 50 and 55 m.p.h. Then another downward dash past Haywards Heath and Wivelsfield to Keymer Junction, where the Eastbourne line diverges on the left, will produce a second maximum probably over 70 m.p.h. Rising to and through Clayton Tunnel, which also exceeds a mile in length, we probably drop slightly below 50 m.p.h. and then, with very gentle running down the final incline to Preston Park, we draw slowly round the sharp curves and up the long platform at Brighton Central, to a dead stand probably just on the stroke of 12.5 noon. Timekeeping is none too easy with

all the congestion of this busy route, but it is seldom that the "*Belle*" is more than a minute or two out at either end of her journey.

It is of interest to note, by the way, that the fastest time ever achieved between London and Brighton was made by the 4-4-0 engine "*Holyrood*," with the down Sunday "Pullman Limited" on 26th July, 1903, when the journey of 50.9 miles was completed in the remarkable time of 48 minutes, 41 seconds. It is claimed that on that occasion a maximum speed of 90 miles an hour was attained at Haywards Heath.

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What an extraordinary revolution has taken place in railway travel in the south-east of England in the last twenty years! At the beginning of the present century the South Eastern and London, Chatham and Dover lines were the butt of every humorist who wanted to make capital out of our railways. For slow, late and uncomfortable running the South Eastern was held on all hands to have few rivals, and not, it must be admitted, without some reason; but to-day all that is totally changed. On such trains as the 80-minute Folkestone expresses, which form the subject of our study this month, you may witness some of the fastest railway travel in England. Up-to-date Pullman cars and comfortable corridor coaches make up the trains and you can have meals and light refreshments brought to you wherever you sit.

Since the war (WW1), while the great trunk lines to the North of England have been content, in the main, gradually to restore their pre-war speeds, the Southern has established, especially in its Eastern territory, scheduled train-speeds considerably faster than any previously attempted. So the time between London and Folkestone has been brought down successively to 90, to 85 and now to 80 minutes by the best expresses.

The distance from Charing Cross to Folkestone Central is almost exactly 70 miles, giving an average booked speed of 52 ½ m.p.h. from start to stop. But when allowance is made for the slow exit round all the sharp curves from Charing Cross to London Bridge, for the congestion of the suburban area, for the tremendous climb from New Cross to Knockholt and, last of all, for the severe slack round the curve through Tonbridge Junction just when the speed ruling is high, it will be seen that there is no time to spare. In fact the average rate over rate over the dead straight and well-graded 40 ½ miles between Tonbridge and Folkestone must be round about a mile-a-minute throughout, if time is to be kept, and the maximum speeds must be considerably higher than this.

While the speed of these trains has been going up, so the weight of them has been constantly on the increase also. The latest 32-ton corridor coaches have now been introduced, seven of which, in addition to the Pullman car, of between 33 and 40 tons, make up at least 255 tons behind the tender. If an additional coach be added, the total is over 300 tons. This is a truly formidable task of haulage for the 4-4-0 locomotives invariably employed. Until 1927 these were generally of the large-boilered "L" class, introduced just before the war and numbered between 760 and 781; they were of special note in that 10 of them were built by the German firm of Borsig, at their Tegel works in Berlin. But last summer saw the advent of the new and more powerful super-heater "L" locomotives, of Mr. Maunsell's design, which are now doing first-class work on these trains.

There are actually four trains timed to make the 80 – minute run between Charing Cross and Folkestone. The 4.15 p.m. and the 7.15 p.m. are the two down expresses so booked, and the two up trains leave Folkestone Central at 11 in the morning and 5.10 in the evening. The 9 o'clock up makes London Bridge in the same time, but in this case, of course, the distance covered is not quite so great. As most of our journeys in these articles have been made from London, it will be somewhat of a novelty to take the up journey for once, and we will therefore imagine ourselves at the Central Station at Folkestone somewhere about 5 o'clock in the evening ready to make the dash for town at 5.10 p.m.



Photo **"Kent Coast Express,"** Eastern Division Southern Railway. The engine seen is similar in type, but rather smaller than the latest superheated "L" class locomotives [F. E. Mackay

Part of the train we shall find already waiting in the bay platform, consisting probably of two corridor third-class brake coaches and a first and third corridor "composite." Immediately afterwards at 5.2 p.m. the Deal and Dover portion arrives. It has actually started its journey at Ramsgate at 3.38 p.m. and has come slowly round the coast over a curved and steep section of line with many stops, through Sandwich, Deal and Walmer to Dover, and thence right alongside the sea, threading a number of long tunnels and up through the Warren to Folkestone. The Pullman car is next the engine, with four corridor coaches behind it; but after the engine has been into the bay to fetch the Folkestone portion, the car is in the centre, with the coaches on either side vestibuled to it. Prompt to time at 5.10 p.m. we are away.

Some tremendously fast running lies immediately ahead of us. From Folkestone to Tonbridge the distance is 40 ½ miles, but according to the timetable we must pass Tonbridge Junction at 5.51 p.m. – that is, 40 ½ miles in 41 minutes from the start. To make matters more difficult, we have ahead of us, for five miles out of Folkestone to just beyond Sandling Junction, a continuous rise at 1 in 264. But all the way up this we shall find our engine steadily accelerating, and we shall probably get through Sandling, 4 ½ miles, at a speed of between 40 and 45 miles an hour, in some eight minutes from the start.

Now the galloping begins. There is a gentle down gradient from Westenhangar to Ashford, not steeper than 1 in 266 at any point, but the speed will rise until, probably we are well above the "70" line, and our headlong dash past the locomotive works and through Ashford Junction will be thrilling indeed. Then follows a faint rise to a siding called Chart, after which are further faintly falling grades to Pluckley, and gentle ups-and-downs over the perfectly straight course onwards to Paddock Wood. Along here we shall reel off mile after mile at round about 70 miles an hour. On one fairly recent occasion, in fact, I timed one of the new "L" class engines, with a 340-ton train, to cover the 29.3 miles from Westenhangar to Paddock Wood in 24 min. 55 sec., which represents an average rate of 70.6 m.p.h. over the whole of this distance. On the run in question our speed rose twice to 76 ½ m.p.h., and we actually passed Tonbridge, 40 ½ miles in 39 mins. 40 secs., from the start.

From Paddock Wood there is a rise towards Tonbridge, and immediately we have breasted it there comes the shutting off steam and the slowing for Tonbridge Junction, to 35 m.p.h. It could not come at a worse place, as we want all the impetus we can get here for the tremendous climb that follows immediately, up to Sevenoaks. For four miles, past Hildenborough to the mouth of the tunnel, it is at 1 in 122, and then, through the two miles of the tunnel itself, there is an easing of 1 in 144. On the ascent the speed will gradually fall, until we shall enter the tunnel, probably, at a little under rather than over 30 m.p.h., and shall maintain this same speed, roughly, up to the tunnel exit.

Rapidly we gather speed through the deep chalk cutting to Sevenoaks Station and onward to the bottom of the valley between there and Dunton Green, where climbing recommences. This final stretch of the ascent to Knockholt (two miles at 1 in 143), is not quite so steep as that from Tonbridge. After having touched about a mile-a-minute between Sevenoaks and Dunton Green, we shall clear the 1 ½ miles of Polhill Tunnel and breast the summit, in the chalk cutting just before Knockholt Station, at about 40 m.p.h. or slightly over. Although we have covered the 36 miles from Sandbridge to Tonbridge in 33 minutes or so, we shall find that the 7 ½ miles from Tonbridge up to Sevenoaks have taken 12 minutes, and the 5 ½ miles from there on to Knockholt 6 ½ or seven minutes. For the remaining 16 ½ miles on to Charing Cross, therefore, we have at most some 20 minutes left.

But the engine's hard work is pretty well over. All the way to New Cross we have now falling, and for the most part steeply falling grades ahead, though the driver dare not make full use of his opportunities, owing to the shortness of the signal sections and the possibility of signal checks in the congested suburban area we have now entered. We shall "ease" over the junctions at Orpington, but on the steepest part of the descent, from Elmstead Tunnel down to Hither Green, it is possible we may again exceed 70 an hour before the enforced slowing over the curve through St. John's.

If we are lucky, we may get through to Charing Cross without a signal check, but so crowded with trains is this maze of lines that it is hardly surprising if we fail to get an absolutely clear road. Still, our driver will probably contrive to keep his train on the move, without any stop or very severe slowing, though the curves between London Bridge and Charing Cross are so sharp that they must be negotiated with caution. So we roll over Charing Cross Bridge, and we may expect duly to come to rest at our platform at 6.30 p.m.

Although we have probably done enough travelling for the day, our train has not, and three-quarters-of-an-hour later another "L" class engine will be starting the same set of coaches on a

return 80-minute dash to Folkestone. All credit to the Southern for such enterprising timings in difficult running conditions.

The problems that confronted the Southern Railway at the inception of the grouping scheme were enormous. All through the war years, and for a considerable period afterwards, its tracks and rolling stock had borne the strain of carrying men, munitions and war equipment of all kinds to and from the embarkation ports, and complete reconstruction was essential. For a time all appeared to be confusion, but gradually the bold policy adopted proved successful. Considerations such as these make the running times of the "Folkestone Flyer" all the more meritorious.



Based on a photograph by Mr. Roy James.
Featuring the ACE Trains 4-4-0 Southern Railway Schools Class locomotive 919 Harrow.

Supplied freely with the 6th edition - October 2013 of 'Just the Ticket,' an independently produced e-newsletter, serving all with an interest in modern coarse scale O gauge model trains. Copies are available on request from d.upton355@btinternet.com