



The story of the
**ROYAL
SCOT**

SOUVENIR OF THE VISIT OF THE TRAIN
TO THE NORTH AMERICAN CONTINENT
AND THE CENTURY OF PROGRESS
EXPOSITION • CHICAGO • 1933



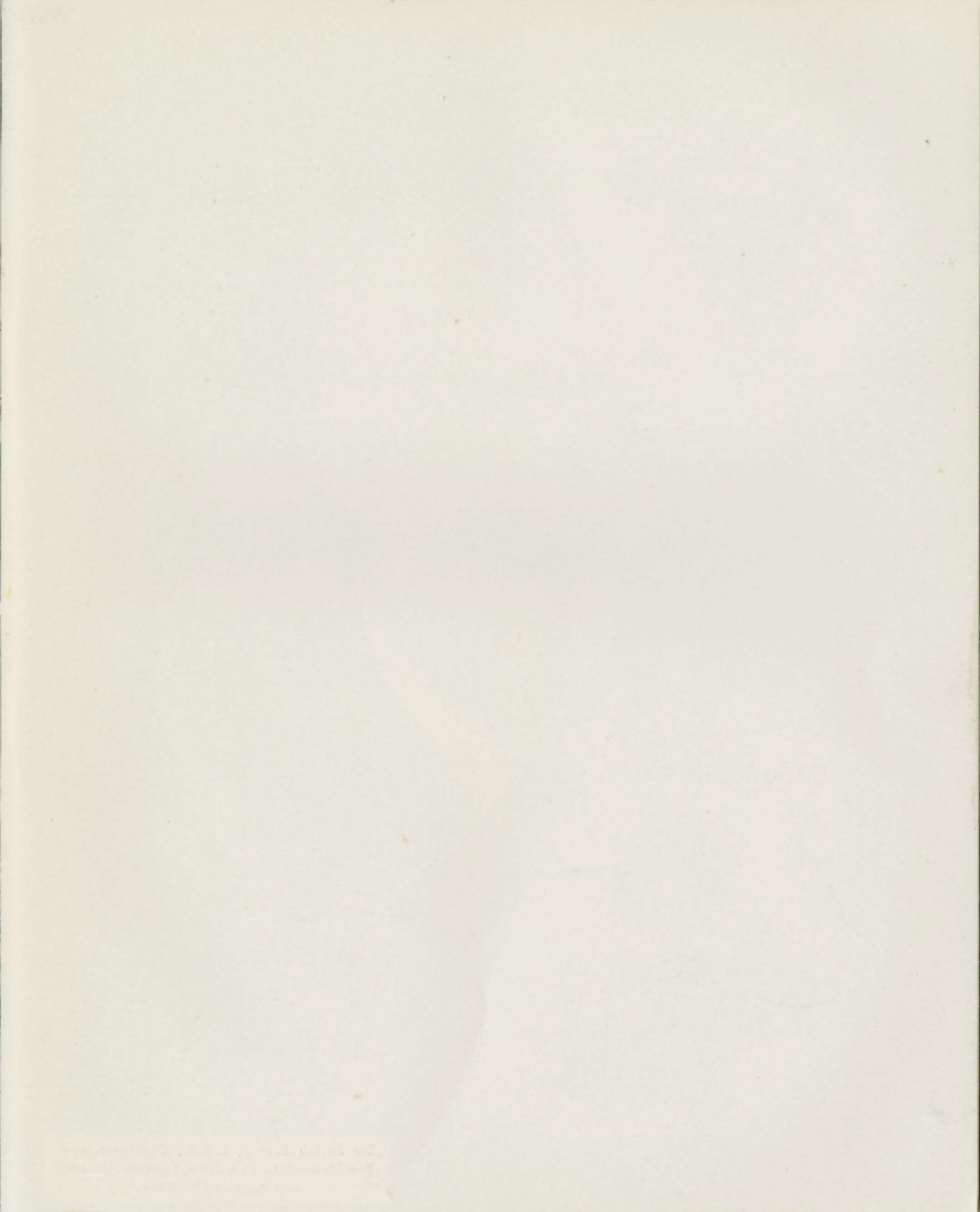
THE STORY
OF THE
ROYAL SCOT



LONDON MIDLAND AND SCOTTISH RAILWAY
COMPANY OF GREAT BRITAIN

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Sir Josiah Stamp, G.B.E., Chairman and
President of the Executive, London Midland
and Scottish Railway.

FOREWORD

by

SIR JOSIAH STAMP, G.B.E.

Chairman and President of the Executive

LONDON MIDLAND AND
SCOTTISH RAILWAY

THIS brief message introduces to you a booklet describing our "Ambassador Train," The Royal Scot, on the occasion of her tour of the United States and Canada and of her exhibition at the Chicago World's Fair of 1933.

The Royal Scot comes as a co-worker with the famous expresses of your land in the cause of humanity—as a trusted servant of the public—as a not unimportant unit in the world's transportation system.

We of the London Midland and Scottish Railway have sent this train 3,000 miles across the world because we are proud of it, having built it ourselves, and because it is characteristically British; and we regard it as a worthy "ambassador" of the transportation service rendered by our railway. It is our aim in submitting The Royal Scot to the interest of a wider, indeed a national American and Canadian public, to obtain the fullest endorsement of the numerous and courteous complimentary opinions of The Royal Scot which we have received from the many transatlantic visitors who have travelled by this train in our own country.

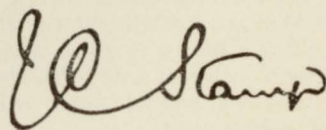
I feel, therefore, that it is singularly apposite that this year, 1933, is the fortieth anniversary of the World's Columbia Exposition held at Chicago in 1893, when the exhibit of our "ancestor" and now constituent Company, the London and North Western Railway of England, was honoured with the highest awards that could have been bestowed.

Whereas on that occasion we were represented only by the locomotive "Queen-Empress" and two types of Passenger Cars we now present an entire train—the first occasion on which a complete British railway train has ever visited the United States and Canada. We take pride in the progress and development typified by The Royal Scot as compared with the engine and cars which were exhibited with such success at Chicago in 1893—progress and development which are described more fully in the pages which follow and which tell something of the story of her heritage—a story that epitomises seven decades of British Rail History.

The London Midland and Scottish Railway welcomes the opportunity that has made her visit possible. Her exhibition at the Chicago World's Fair and her tour through many of your cities and towns will, it is hoped, forge fresh links in friendship's chain, in the making of which transport has always played a major part.

I feel, however, that I may claim a wider significance for this visit than that of simply showing the American and Canadian peoples what Britain is doing in the realm of modern passenger transportation by rail.

We on our side regard the tour of The Royal Scot as something more than a technical achievement—as a gesture, indeed, of salutation to those who share our tongue and our ideals; while the welcome which you on your side have already accorded in anticipation to The Royal Scot is, in our eyes, equally significant of that spontaneous spirit of Anglo-Canadian and Anglo-American amity which, even in times of acute world stress and difficulty, is nevertheless deeply graven in the hearts of English-speaking peoples throughout the world.

A handwritten signature in dark ink, appearing to read "E. Stamp". The signature is fluid and cursive, with a large initial "E" and a stylized "Stamp".



The Doric Arch at the Entrance to Euston Station, London.



The Royal Scot sets out from Euston Station, London.



Near Watford Tunnel.

THE ROYAL SCOT

Some Interesting Facts

Distances—

London (Euston) to Glasgow - 401½ miles.

London (Euston) to Edinburgh- 400 miles.

Journey time—Summer - - - 7 hours 40 minutes.

Winter - - - 7 hours 45 minutes.

Average overall speed—Summer - 52.4 m.p.h.

Winter - 51.8 m.p.h.

Weight of train (without engine) - 392-560 tons.

Weight of loco. and tender - - 156.5 tons in working order.

Coal consumed on journey - - 7 long tons per single trip.

Water consumed on journey - - 14,400 U.S. gals. per single trip.

Restaurant car meals served annually

(one train) - - - - 70,000.

Highest level reached on journey - 1,014 ft. above sea-level.

A WORLD'S RECORD

On April 27th, 1928, the Edinburgh and Glasgow Sections of The Royal Scot ran separately from Euston to Edinburgh and Glasgow without intermediate stop, 400 and 401½ miles respectively—world's records for the longest individual non-stop runs ever made.

At the present time both north-bound and south-bound Royal Scot trains run non-stop between Euston and Carlisle, 299 miles, during the summer, while the south-bound train runs non-stop over this section all the year round.

THE TRAIN WITH A TRADITION

"THE TRAIN WITH A TRADITION" is no empty slogan when applied to The Royal Scot, whose history to a large extent epitomises that of British railway express service over the last seventy years. The Royal Scot has not always been known by her present name, but for seventy years without a break an express has left Euston Station, London, for Scotland, at her present departure time of 10 a.m., and as the "Ten o'clock" she celebrated her seventieth birthday on June 1st, 1932. Since June 1st, 1862, when the departure time of 10 a.m. from Euston was standardised, the north-bound and south-bound Royal Scot expresses have covered between them 17,000,000 miles.

Railroads were very young when the first railway service between England and Scotland was started. The union of the two countries by rail was very early an objective of railway promoters and engineers, and as long ago as 1836 the great engineer, Joseph Locke, made a survey of the country north of Preston (Lancashire) with a view to taking the iron road through the Cumberland mountains to the Border at Carlisle, where it would join a line in course of promotion in Scotland. The Lancaster and Carlisle Railway was authorised in 1844, and opened for traffic two years later, thus carrying the railway almost to the Scottish Border; while on February 15th, 1848, the Caledonian Railway's line was opened throughout between Carlisle, Glasgow and Edinburgh, and the first railway train to make the through journey between London and Glasgow left Euston on this day at 10 a.m. The Lancaster and Carlisle Railway did not come under the control of the London and North Western Railway until 1859, but from that date until 1923 the Anglo-Scottish services were worked jointly by the London

and North Western and Caledonian Railways. With the constitution of the London Midland and Scottish Railway in 1923 the famous West Coast route became in its entirety a part of the great new LMS system ; thus the 400 miles of track which separate London from Glasgow and Edinburgh were placed under one management.

Throughout its long and distinguished history, the West Coast route to Scotland, over which The Royal Scot and her sister expresses travel, has been associated with steady and rapid progress in locomotive design and in the provision of increased travel comforts and amenities. Although the marked physical difficulties of the West Coast route have been met with a lavishness of engineering skill, modern demands for higher speeds and greater comfort exact from the locomotive designer the acme of performance in order that maximum efficiency of service may be obtained. The West Coast route includes two difficult sections, over Shap Summit (over 900 ft.) in England and Beattock Summit (1,014 ft.) in Scotland. These grades impose as severe a test as any route in Great Britain upon the capabilities of locomotives, equipment and train crews maintaining express services over long distances.

SCHEDULES OF BYGONE DAYS

It may be apposite here to make some comparisons between the regular scheduled times between London and Glasgow since the through service to Scotland from Euston was inaugurated :—

Year.	Time on Journey.	Overall Speed.
1848	12 hours 10 minutes	32.9 m.p.h.
1862	11 hours 30 minutes	34 m.p.h.
1922	8 hours 15 minutes.	48.7 m.p.h.
1932	7 hours 40 minutes	52.4 m.p.h.

It will be noted that, notwithstanding the enormous increase in the weight of passenger car equipment during these years, there has been a progressive acceleration of the services between these points.

It was in July, 1893—just forty years ago—that the first train of vestibuled corridor cars was put in service between Euston and Glasgow. It found immediate favour with the travelling public and became the standard of which The Royal Scot is the latest development.

Restaurant Cars were introduced two years previously, in 1891, and right from the start the success of this convenient and time-saving innovation was assured.

4,000,000 MEALS A YEAR

To-day, over 4,000,000 meals are served annually on the 264 restaurant car services operated by the LMS Railway. With the type of Kitchen Car employed on The Royal Scot, 224 passengers can be served at the same time. On occasions "Banquets on Wheels," comprising eight or nine courses with their full complement of wines, are served to more than 500 guests simultaneously.

The period from 1919 to the present time has been one of intensive research into passenger car construction, and the results thus gained by experience and experiment have been passed on to the traveller in the form of new ideas in train travel comfort. By 1930 The Royal Scot became symbolic of train comfort at its best. While uniformity of design in exterior decoration was aimed at, the opposite was the ideal set for the interior equipment. Diversity of design and colour was introduced to meet, as far as possible, the individual preferences of the travelling public. Thus, to-day, the passenger on The Royal Scot may travel in a compartment or in a Parlour Car, he may eat his meals in a Dining Car as in a public restaurant, or in a private compartment for four persons; he may take his coffee in a Club Car where deep armchairs invite him to restful ease.

Nor have the smaller items been neglected; items of which the passenger is hardly aware, but which mean so much in the

realisation of comfortable journeys. Problems of lighting, heating and ventilation, and the elimination of vibration, have been the subject of exhaustive investigation so that the perfect system might be devised. Wider and deeper windows, giving a wider field of view, are a feature of the modern LMS express.

SLEEPING CARS

Sleeping Cars are not the normal equipment of The Royal Scot train, which makes her journeys through the day time. The types which have been included in the exhibition train are those used on her sister expresses, The Night Scot and The Royal Highlander, and other principal night services of the LMS Railway. They have been designed to provide the traveller with a comfortable night's rest, journeys of longer duration not being required in Great Britain.

"The Train with a Tradition" exemplifies the service which British railways offer to their patrons—a service which, fitted to the needs of the public, has been built up through a hundred years of time.

In presenting The Royal Scot, the LMS Railway is offering something that is Britain's best.

THE ROUTE OF THE ROYAL SCOT

NO railway journey in Great Britain carries the traveller through such varied and such representative scenery as that of The Royal Scot.

To travel in The Royal Scot is to see a panorama of England and Scotland in less than eight hours.

From the London terminus of the London Midland and Scottish Railway at Euston, The Royal Scot runs first through the northern suburbs of London with their industrial and residential colonies, including Harrow, whose famous School ("Harrow-on-the-Hill"), founded by John Lyon, may be seen from the train, swiftly leaving the city behind to climb to the summit of the graceful Chiltern Hills at Tring. Here the train, as she swings down the long grade to Bletchley, passes through the great Tring Cutting carved by Stephenson through the hills—everlasting monument to the skill of a pioneer of world railways. On this section of line, too, she passes beneath the Icknield Way, a highway of the Ancient Britons, older than the Romans.

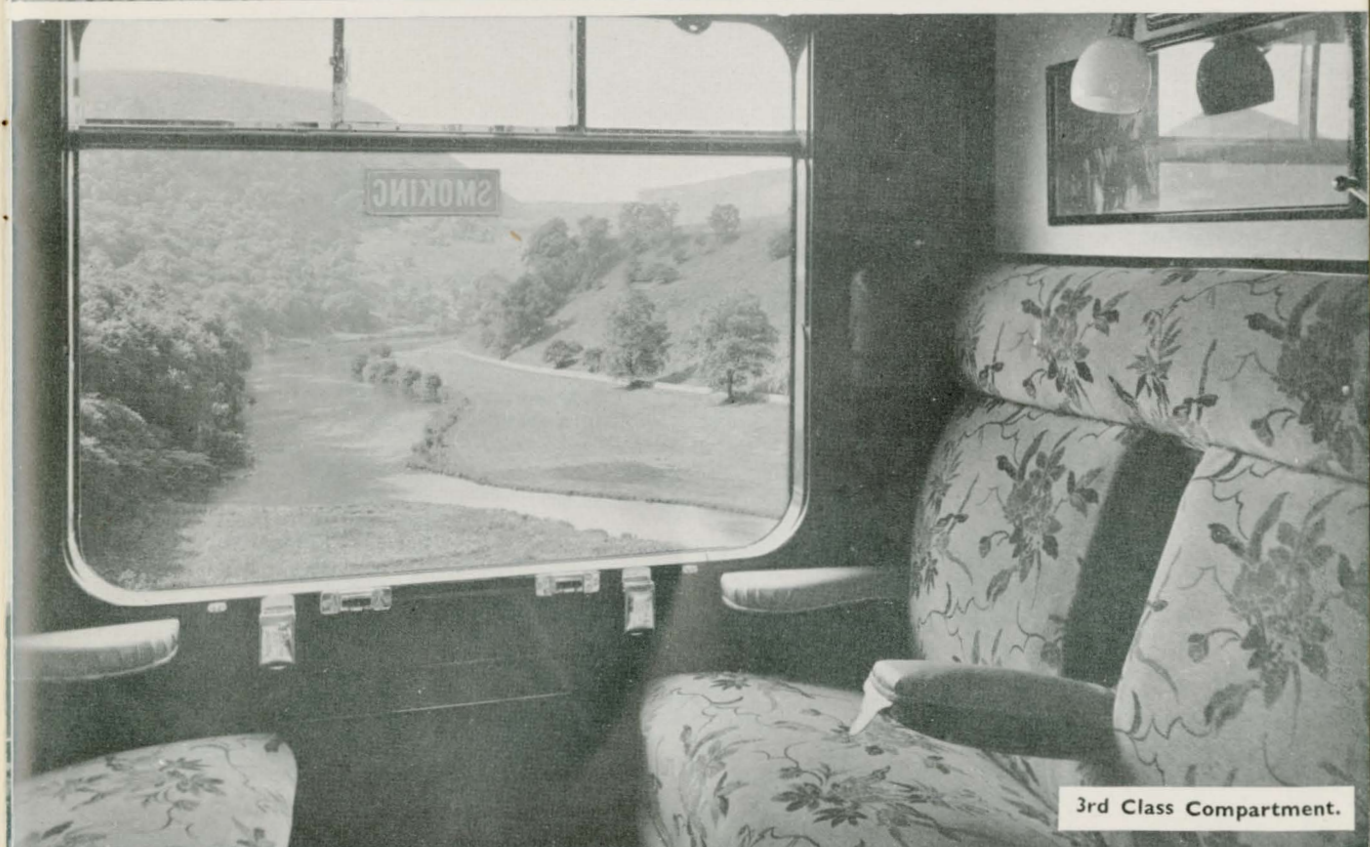
A swift run through the peaceful scenery of the agricultural Home Counties, with lovely old-world villages such as Aldbury, brings the traveller to Rugby, 82½ miles from London, one of the most important railway junctions in the country and a centre of the electrical industry.

THE BIRTH OF RUGBY FOOTBALL

Rugby's industrial fame is a recent development, however, compared with that of its famous school, which owes much of its great tradition to the famous Dr. Arnold. Rugby School claims a place in British history for other reasons beside its educational



1st Class Compartment.



3rd Class Compartment.



Club Car.



Parlour Car.

reputation; the classic *Tom Brown's Schooldays* is a story based on life at the school as it used to be, while it was on the playing fields of Rugby that William Webb Ellis, "with a fine disregard for the rules of football as played in his time" (1823), first picked up the ball and ran with it, thus originating the game of Rugby football which is such a serious rival to the Association (Soccer) code in Britain to-day, and which bears many resemblances to the modern American game.

At Rugby The Royal Scot leaves the original route of the old London and Birmingham Railway and bears away in a north-westerly direction to follow the undulating Trent Valley* to Stafford (133½ miles), skirting on either side the great industrial districts of the Midlands.

STAFFORD AND IZAAK WALTON

Stafford is notable for its industries, which include engineering and the evaporation for salt-making purposes of the extensive brine deposits of the district, but the tourist will find that one of its chief interests is provided by the town's literary associations, for not only was Stafford once represented in Parliament by Sheridan, but it was also the birthplace of Izaak Walton, author of that immortal work, *The Compleat Angler*. The ensuing 25 miles of the L M S main line from Stafford to Crewe are rich in interest for admirers of the worthy Izaak, for the cottage in which he lived stands close to the trackside hard by Great Bridgeford Station, while for several miles near Norton Bridge Station the line runs close to Meece Brook, from whose placid waters Piscator "drew both fish and inspiration."

* The Trent Valley line of the L M S was opened in 1847, and is of historic interest as being the first great railway "cut-off" in history, being built to provide a direct route from London to the North without having to pass through Wolverhampton and Birmingham. The original route through these towns rejoins the main line at Stafford.



The Route of The Royal Scot Express from Euston Station, London, to Glasgow and Edinburgh.

CREWE

Crewe (158 miles from Euston) is among the great wonders of industrial enterprise. One hundred years ago it consisted of a lonely farm or two set among sleepy meadows ; to-day it is a thriving town of 46,000 people which owes its existence solely to railways. Early railways formed junctions here, and it became the locomotive workshops centre for the London and North Western Railway, and it is now one of the two principal locomotive engineering centres of the LMS Railway, with magnificently equipped shops capable of turning out per week two new or completely reconstructed locomotives and 33 general repairs. Crewe is, incidentally, one of the largest railway works in the world.

From Crewe, railway routes radiate to all the points of the compass like the spokes of a wheel ; that of The Royal Scot is northwards to the great industrial towns of Warrington, Wigan and Preston. Near the first-named point the train thunders over bridges carrying the West Coast main line across two historic transport undertakings, the Manchester Ship Canal and the original Liverpool and Manchester Railway—"the oldest firm in the railway passenger business"—which was opened in 1830, and is now an important LMS route between Manchester and Liverpool, great centres of British trade and industry.

INDUSTRIAL LANCASHIRE

Now The Royal Scot, her speed attuned to the congested nature of the tracks of this busy area, runs for some thirty miles through the western outskirts of industrial Lancashire, heart of the world's cotton industry. Here the skyline is overhung with smoke from the tall mill chimneys ; iron and steel works and great chemical producing plants are by the lineside ; at night the leaping glow of a myriad furnaces suggests to the traveller the fantasy of a giant's forge.

Yet not twenty miles to the west are the beach resorts where Lancashire spends its playtime hours—Blackpool, Morecambe, Southport, etc.

Preston (209 miles), great railway junction and historic town, is the last outpost of this vast industrial belt. Here, amid the maze of tracks through which The Royal Scot threads her way, let us pause for a moment in fancy to consider one of those little incidents of history which impart the quality of romance to transport.

Preston is the trysting place of The Royal Scot expresses. Here, either in the station or just beyond, the north-bound and south-bound trains have crossed each other every day for seventy years.

“TWENTY MINUTES TO DINE”

In the old days before there were restaurant cars, the north-bound and south-bound trains each stopped side by side in the station while the passengers enjoyed their mid-day meal in the station restaurant, whither they were summoned by the ringing of a great bell and the stentorian cry of a top-hatted conductor—“Preston! Twenty minutes to dine.” To-day, just north of Preston, the trains pass each other at full speed while passengers eat lunch in the comfort of modern restaurant cars.

“Proud Preston,” as this ancient town on the banks of the River Ribble is traditionally called, has a long and distinguished history, including two invasions in 1648 and 1715 by the Scots. It was in the latter year that the “Old Pretender” was proclaimed James III. at Preston Market Cross, only for his forces to be vanquished shortly afterwards by Marlborough in the Battle of Preston.

At Lancaster (230 miles) comes the silver thread of the River Ribble, crossed by a giant bridge, and, now, to the west, one brief glimpse of the Irish Sea between Hest Bank and Carnforth (236½



Constructing Tring Cutting, 1837 (from an old print).

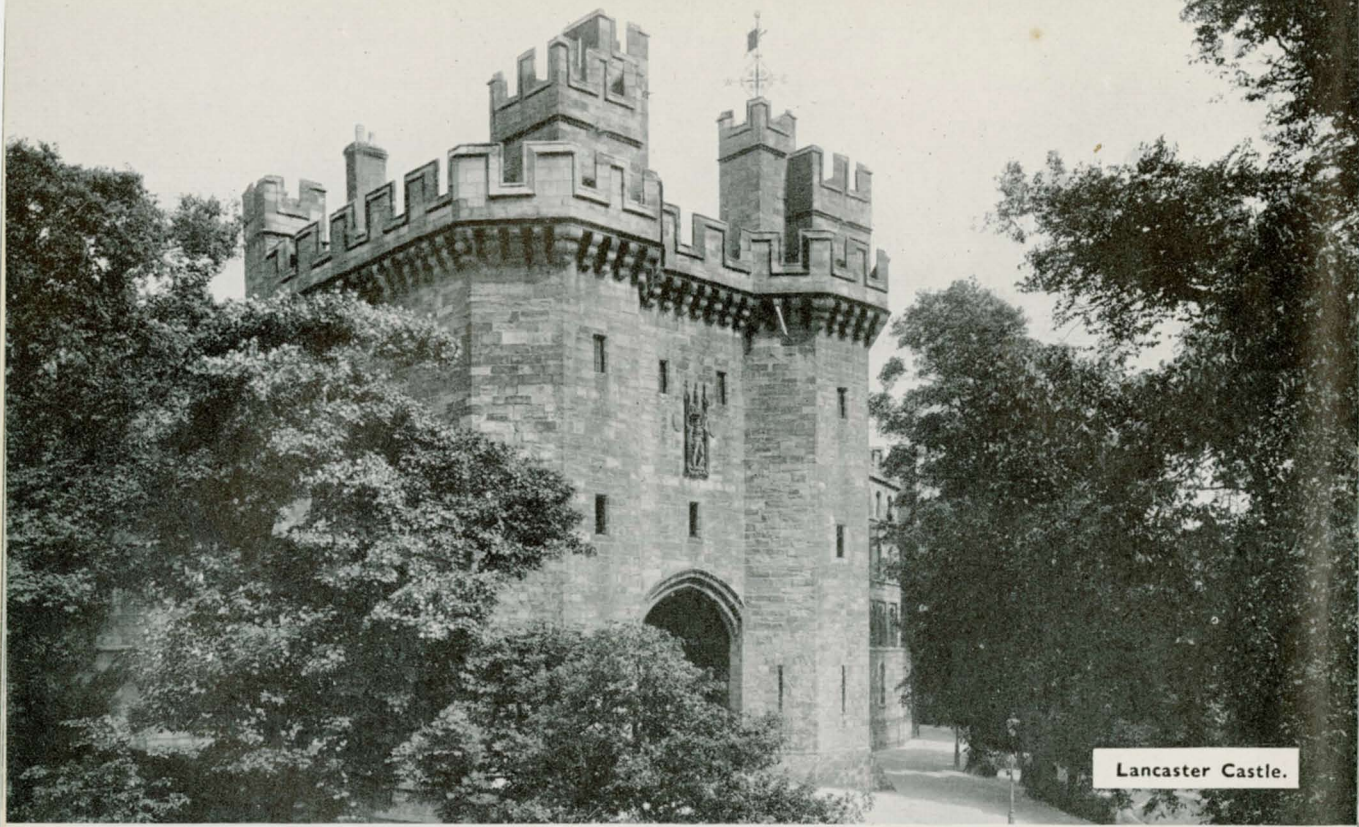


Aldbury Village (Tring Station).





The Royal Scot Express



Lancaster Castle.



The Royal Scot on her journey North.

miles). Here the flat lands are left behind, and, if the day is fine, the passenger may see on the left the beetling brows of the great Cumberland Hills, awesome in prospect of a climb to their very summit.

Although now architecturally a modern town, Lancaster is one of the oldest in Britain, its very name being derived from that bestowed by the Romans on their early settlement on the River Lune. The Dukedom of Lancaster is the second in the kingdom. One of the few survivals in modern Lancaster of the early age of English chivalry is Lancaster Castle, a notable landmark.

SHAP

Now, beyond Lancaster, the first of the heavy climbs lies before the locomotive, and the sharper beat of the exhaust heralds the steady ascent to Shap Summit. In the 36 miles between Carnforth and Shap Summit the train climbs up to 915 feet above sea-level, but such is the reserve of Royal Scot power that only in exceptional circumstances is an assisting engine taken over this section.

Few sections of line in Britain are so romantic as the long climb to Shap. The train swings at first through the foothills, striving to retain speed on the early stages, then racing down a short bank to gain momentum for the harder work beyond. Gradually the hills close in until the railway is so hemmed in that it seems there can be no way through to the north, but without a single tunnel the iron road finds its way through the narrow gap at Shap and so over the top, with a final climb of four miles at a grade of 1 in 70, until the train storms over the summit and goes racing down the long grades that lead to the Border. This ascent to Shap is an awe-inspiring journey after darkness falls, with the mountain walls echoing the roar of the exhaust and the glow from the firebox leaping in fitful reflection along the grey hillside. Even in summer, there are days when the train is actually in the clouds for several miles.

Almost equally fine is the descent from Shap into Carlisle, the train racing at full speed through the more peaceful glens that hug the northern slopes of the Cumberland hills. Here may be seen last mementoes of the old days of war, fortified farmhouses, " peel towers " and manors set in sheltered yet strategic positions ; while to the west may be seen (as earlier on the journey before reaching the summit at Shap) the lovely gems of Lakeland glimmering with the sheen of peaceful waters among the brooding silences of their sheltering Fells, on whose peaks snow lingers far into the Spring.

THE GATEWAY TO THE NORTH

Carlisle, 299 miles from Euston, is the gateway to the North. Here on the flat stretch of country that lies between the English and the Scottish hills was the last outpost of English strength in the days when Scot and Englishman were deadly enemies ; here was the great stronghold round whose walls border-rievs and cattle-thieves waged fierce guerilla warfare with the king's men. Nature made Carlisle a bulwark against aggression and a security for burgher and peasant ; here in the days of the Spanish Armada the blazing beacon on Skiddaw called citizens to arms. Modern progress has put this strategic value to account, and has made Carlisle one of the great railway junctions and transport centres of the country.

Carlisle is the division-point of the Western and Northern Divisions of the L M S Railway, and here in summer The Royal Scot makes her first halt, having run the 299 miles from Euston without a stop. The pause is only a momentary one, however, to enable a fresh engine to be taken on in place of that which has brought the train over the mountains from the south, and with

fresh energy the great express gathers speed to race the last hundred miles to the Scottish capital and to Glasgow.

GRETNA GREEN

A few miles out of Carlisle and the train crosses over the Border into Scotland, in which country the first station is Gretna—scene of many a romantic runaway marriage, for it is here that the ancient smithy stands, Mecca of eloping couples through more generations than the historian can record.

Beyond Gretna the climbing begins again, but now the mountains are not bleak and barren, but green and heather clad, their pleasant slopes dotted with lovely woods of Scottish fir. The peace of this countryside belies its warlike history, to which the frequent ruins of tower and keep, fortified manor and Border castle, bear tribute.

The final climb to Beattock Summit (1,014 feet above sea-level) is over ten miles of grades, whose steepest is 1 in 69. For the last stage of this ascent, river, road and railway run side by side through a lovely gorge; when the River Evan is in spate, the roar of its song almost drowns the staccato beat of the great locomotive as she thrusts her way to the summit.

THE SOURCE OF THE CLYDE

Beyond the summit the train races down through green hills amidst which is the source of the mighty River Clyde, here revealing itself as a timid Scottish burn, so small it seems incredible that this is the beginning of that vast stream we shall see later at Glasgow and Greenock, on which great liners and battleships have been launched for their first trip to blue water.

JOURNEY'S END

At Symington, 366 miles from Euston, The Royal Scot makes her last halt before reaching journey's end, the Edinburgh portion being detached to go eastward as a separate train, while the Glasgow portion turns westward at the nearby junction of Carstairs. The approaches to these two great cities are as dissimilar as their own characters. The train reaches Glasgow gradually, through the industrial districts of Rutherglen and Wishaw, while after a fast run through quiet country Edinburgh with her towering hills comes upon the traveller with bewildering suddenness, so that almost before its proximity is realised, The Royal Scot has come to rest within bow-shot of the mighty castle walls.

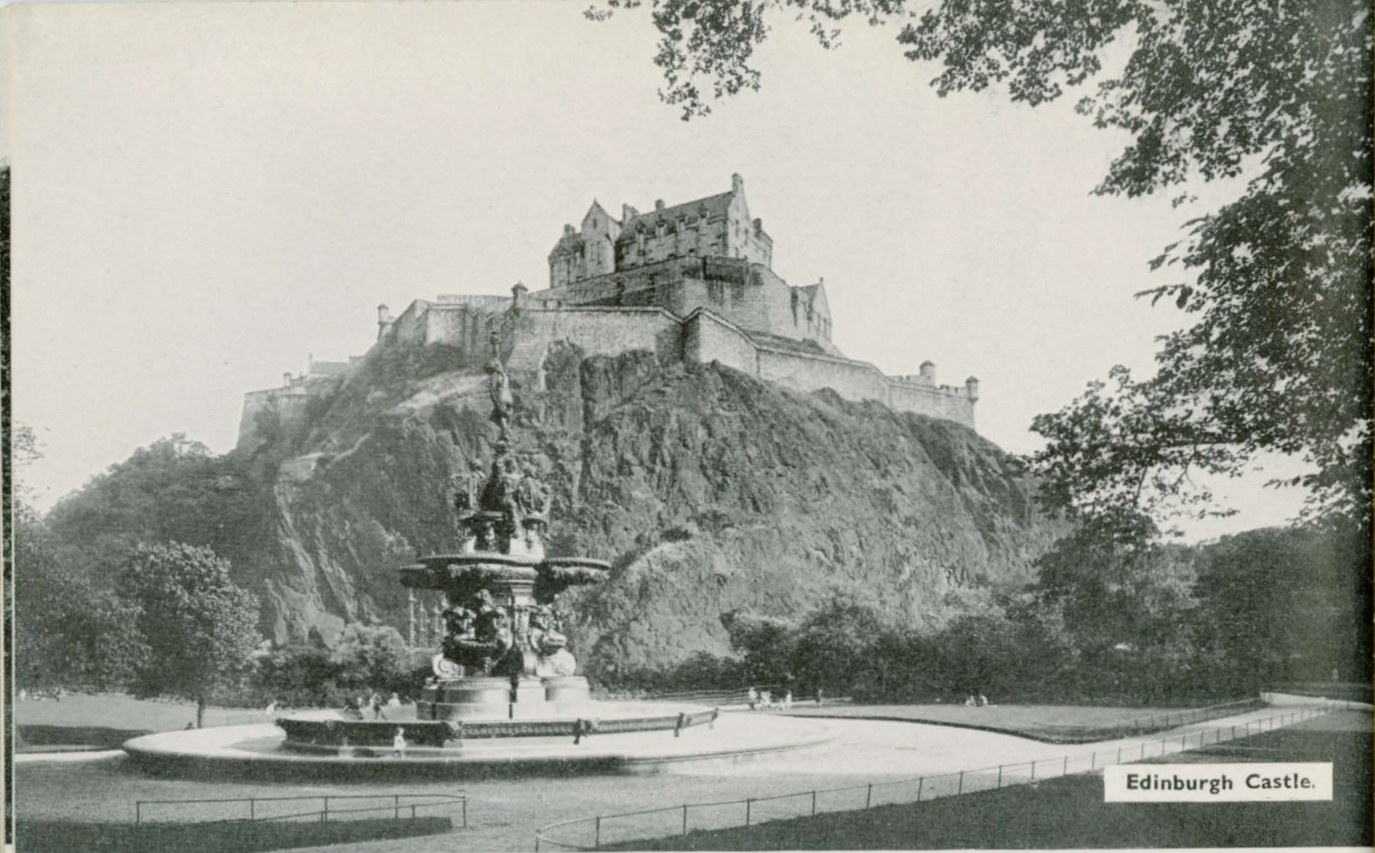




Carlisle Cathedral.



The Forge, Gretna Green.



Edinburgh Castle.



St. George's Square, Glasgow.

THE ROYAL SCOT LOCOMOTIVE

THE locomotive which is hauling The Royal Scot train on its American and Canadian tour, and which is exhibited as an integral part of the train-unit at the World's Fair, is London Midland and Scottish Railway No. 6100, and appropriately is named Royal Scot.

This locomotive is the first of a class of seventy similar locomotives, known as the Royal Scot class, which are the most powerful passenger-hauling engines on the LMS system.

The type was introduced in 1927, being designed by Sir Henry Fowler, K.B.E., at that time the Company's Chief Mechanical Engineer, for service on the fast and heavy expresses between London and Scotland, over the West Coast route, and for heavy express duties on the LMS Western Division main line generally. Fifty of these engines were constructed to the Company's requirements by the North British Locomotive Company, of Glasgow, and these proved so efficient and economical in service that a further series of twenty identical engines have subsequently been built in the LMS Railway workshops at Derby, England. The introduction of these locomotives has enabled a considerable amount of double-heading to be avoided.

The Royal Scots are of the 4-6-0 wheel arrangement, which is employed on a very large scale for express passenger haulage by all the British railway companies.

An illustration of this type of locomotive, together with the principal dimensions and technical particulars, appears opposite page 26.

WORLD'S RECORD NON-STOP RUN

It was an engine of this type which in April, 1928, made the longest individual non-stop journey ever performed on any railway throughout the world. On this occasion The Royal Scot express was run in two sections of which the first, hauled by No. 6113 Cameronian, ran without intermediate stop of any kind from Euston to Glasgow ($401\frac{1}{2}$ miles), while the second section ran non-stop from Euston to Edinburgh (400 miles), being hauled throughout by a compound 4-4-0 locomotive of L M S standard type.

The Royal Scot class have been designed principally for economical haulage of heavy trains over considerable distances, but they are also capable of exceptional speed performances. Among L M S expresses, other than those between Euston and Scotland, which are regularly worked by this type of engine are the Manchester-London Mancunian, which is timed to cover the 177 miles from Wilmslow to Euston in 172 minutes at an average speed of over 61 m.p.h. (the longest rail journey in Europe scheduled at over 60 m.p.h.); the 5.25 p.m. express from Liverpool to Euston, which is scheduled to run the $152\frac{1}{2}$ miles from Crewe to Willesden in 142 minutes, at an average speed of 64.4 m.p.h. (the fastest run in Europe of over 150 miles), and The Comet express which is scheduled to average over 63 m.p.h. from Stafford to Euston, $133\frac{1}{2}$ miles.

These remarkable schedules are maintained day after day, all the year round, with a high standard of punctuality which reflects great credit on the efficiency of the Royal Scot locomotives.

The latter, moreover, have on one or two special occasions proved themselves capable of speed performances which are almost phenomenal. On September 27th, 1932, two special trains were run in each direction from Euston to Coventry and back, a distance of 94 miles in each direction, for the conveyance of parties of guests

of motor manufacturing firms, and with trains weighing approximately 319 tons in each case, the locomotives Royal Scot and Royal Engineer made four extremely fast runs, of which the quickest was 82 minutes 42 seconds for the 94 miles, with two reductions of speed for service slacks, and the slowest only 86 minutes 47 seconds, the average speed throughout of the fastest run being 68.2 m.p.h. The highest speed attained at any one point was 88.3 m.p.h., but even then the engines were not being extended to their fullest capacity.

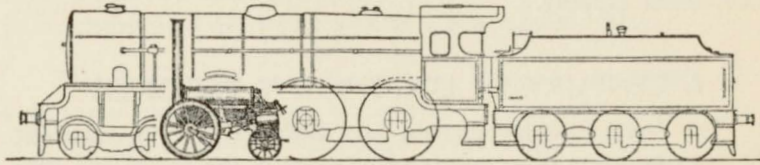
A CENTURY OF LOCOMOTIVE PROGRESS

The Royal Scot locomotives may fairly be said to represent the consummation of a century of progress in the design and construction of locomotives, within the physical limits imposed by the British height-loading-gauge, which is, of course, considerably smaller than that obtaining in the American Continent, and has restricted the expansion of locomotive dimensions accordingly.

It is therefore of interest to compare these locomotives with their tiny but heroic ancestors, which a hundred years ago struggled along the primitive tracks of early railways such as the Liverpool and Manchester (opened September, 1830), which now forms an integral part of the 7,000 mile L M S railway system. It is appropriate that a number of the modern Royal Scot class locomotives have been named after these pioneers of the Iron Road, and carry beneath their name-plates brass engravings depicting their namesakes.

As exemplifying the progress which has been made in the century which has elapsed since many of these early engines were designed, it is of interest to observe that three of these locomotives, Meteor, Comet and Phoenix, which were of the 0-2-2 type, built by R. Stephenson & Co., of Newcastle-on-Tyne, in 1830 for the Liverpool and Manchester Railway, weighed only five tons or so

apiece, and were capable of covering 30 miles in 1 hour 50 minutes, with a maximum loaded speed of about 25 m.p.h. ; whereas their counterparts on the LMS Railway to-day weigh 142 tons each and are capable of working trains of up to 560 tons on schedules of a mile-a-minute or more, start-to-stop.



Locomotive Royal Scot built 1927
with superimposed view of Locomotive Comet built 1830.

FAMOUS NAMES FOR FAMOUS FLIERS

BY naming their latest type of passenger express locomotives after famous British fighting units, the LMS Railway made what is probably the most popular decision in the history of railway engine nomenclature.

The system of bestowing names on railway engines has its origin over a hundred years ago, and is, in fact, as old as the railway engine itself. Actually, the early locomotives which puffed and panted over their primitive tracks carried names only, a system of numeration being brought into use only when railways had made such progress that it became absolutely essential for their efficient operation. Thus, on the Liverpool and Manchester Railway, opened in 1830, and now part of the LMS system, such names as Meteor, Comet, Goliath and Vulcan were found amongst its engines. It is of interest that these names, names that will for ever be linked with the history of British railways, have been revived and are among those borne by some of the locomotives of the Royal Scot class.

Locomotives have borne names of all kinds and classes. The earlier ones were symbolic of the speed and power they typified in the mind of a nation to whom locomotives were still a marvel. Then followed classical names such as Leander, Pegasus and Minerva, and, as more and more locomotives were built, the choice of names became wider and wider.

An amazing variety of nomenclature is to-day found in the list of named locomotives on the LMS Railway. There are Royalty,

mountains, birds, poets, authors, names famous in legend and history, and many others too numerous to classify.

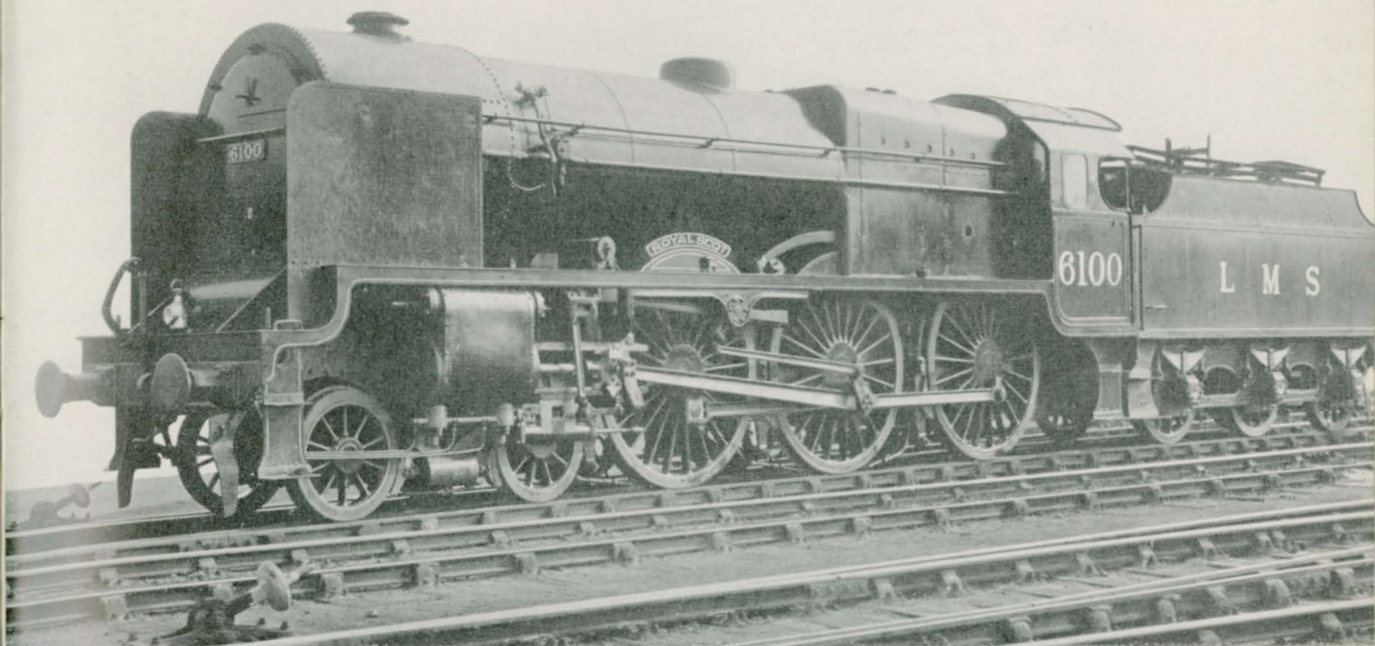
HISTORIC REGIMENTS

Of the seventy locomotives of the Royal Scot type, forty-three are named after famous British regiments. Taking her name from the 1st Foot, the oldest regiment in the British Army, Royal Scot inherits from that unit, now nearly 300 years old, the motto "Nemo me impune lacessit," which, translated into the vernacular of our time, advises those who would oppose her to look for trouble, a motto eminently suitable to both regiment and locomotive alike.

What more suitable sentence could, for instance, be devised for a 142-ton locomotive than that which is proudly displayed on the coat of arms of the Royal Inniskilling Fusiliers and the Royal Welch Fusiliers, the names of engines Nos. 6120 and 6118—"Nec aspera terrent"? Neither soldier nor engine will allow rough going to impede his progress. Could not locomotive No. 6114 proudly claim to share with the Coldstream the vaunt of "Nulli secundus"?

These locomotives may share, too, with perfect propriety, not only the regimental mottoes but the regimental nicknames as well. Thus Sherwood Forester becomes "Old Stubborn," and Grenadier Guardsman becomes "Coalheaver."

To write the history of each of the regiments whose names are borne by Royal Scot engines would be to write nearly the whole history of England for the last 300 years. We should have to tell of Waterloo, and Balaclava where The Royal Scots Greys set a standard of courage for all time; we should have to follow the red plumed and ostrich feathered bonnets of the Black Watch



STANDARD 4-6-0 EXPRESS LOCOMOTIVE (ROYAL SCOT CLASS)

The leading particulars of the engine and tender are as follows :—

Cylinders—Diameter	...	...	...	...	...	18 in. (3)
Stroke	...	...	...	...	...	26 in.
Coupled wheels, diam.	...	...	...	...	...	6 ft. 9 in.
Boiler pressure, lbs. sq. in.	...	...	...	...	...	250
Heating surface—Tubes	...	...	...	...	...	1,892
(sq. ft.)	Firebox	...	...	...	...	189
	Superheater	...	...	...	...	399
Grate area, sq. ft.	...	...	...	...	...	31.2
Tractive effort, 85 per cent. B.P.	...	...	...	...	...	33,150 lbs.
Wheel-base (engine and tender)	...	...	...	...	...	52 ft. 9½ in.
Length over buffers (engine and tender)	...	...	...	...	...	63 ft. 2½ in.
Weight, light—Engine	...	...	...	...	...	174,552 lbs.
	Tender	...	...	...	...	62,720 lbs.
	TOTAL	...	...	...	...	237,272 lbs.
Coal	...	...	...	...	...	20,160 lbs.
Water (U.S. gallons)	...	...	...	...	...	4,800



The Royal Scot near Carnforth,
236 miles from London.

through the Battle of Alexandria and with Sir John Moore at Corunna ; we should have to fight anew at Blenheim and the Boyne with the Royal Welch Fusiliers—"The 23rd," whose record is one of the most distinguished in the British Army ; we should have to be " everywhere " with the Royal Engineers—for " Ubique " is their motto.



We should have to write of deeds of daring and fortitude that make the wildest fiction dull reading. The Lancashire Fusiliers, The Highland Light Infantry, The Irish Guards and The Welsh Guards—these names are interwoven in the history of the British Isles.

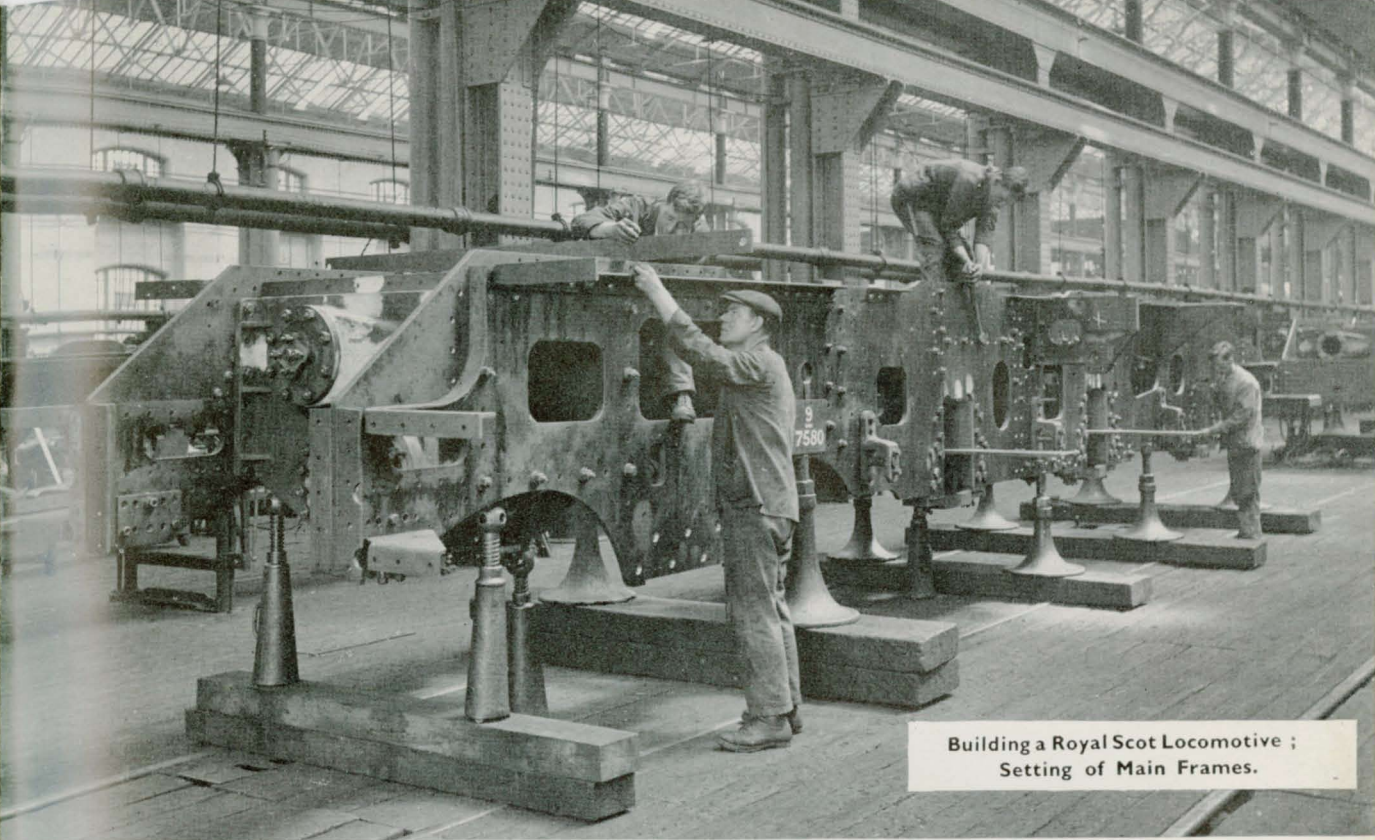
Latterly the names of several London Territorial Regiments have been bestowed on Royal Scot type locomotives, while the Royal Air Force—youngest of all the fighting forces—has been given a place in Royal Scot locomotive nomenclature.

A full list of the names of the Royal Scot locomotives is given overleaf.

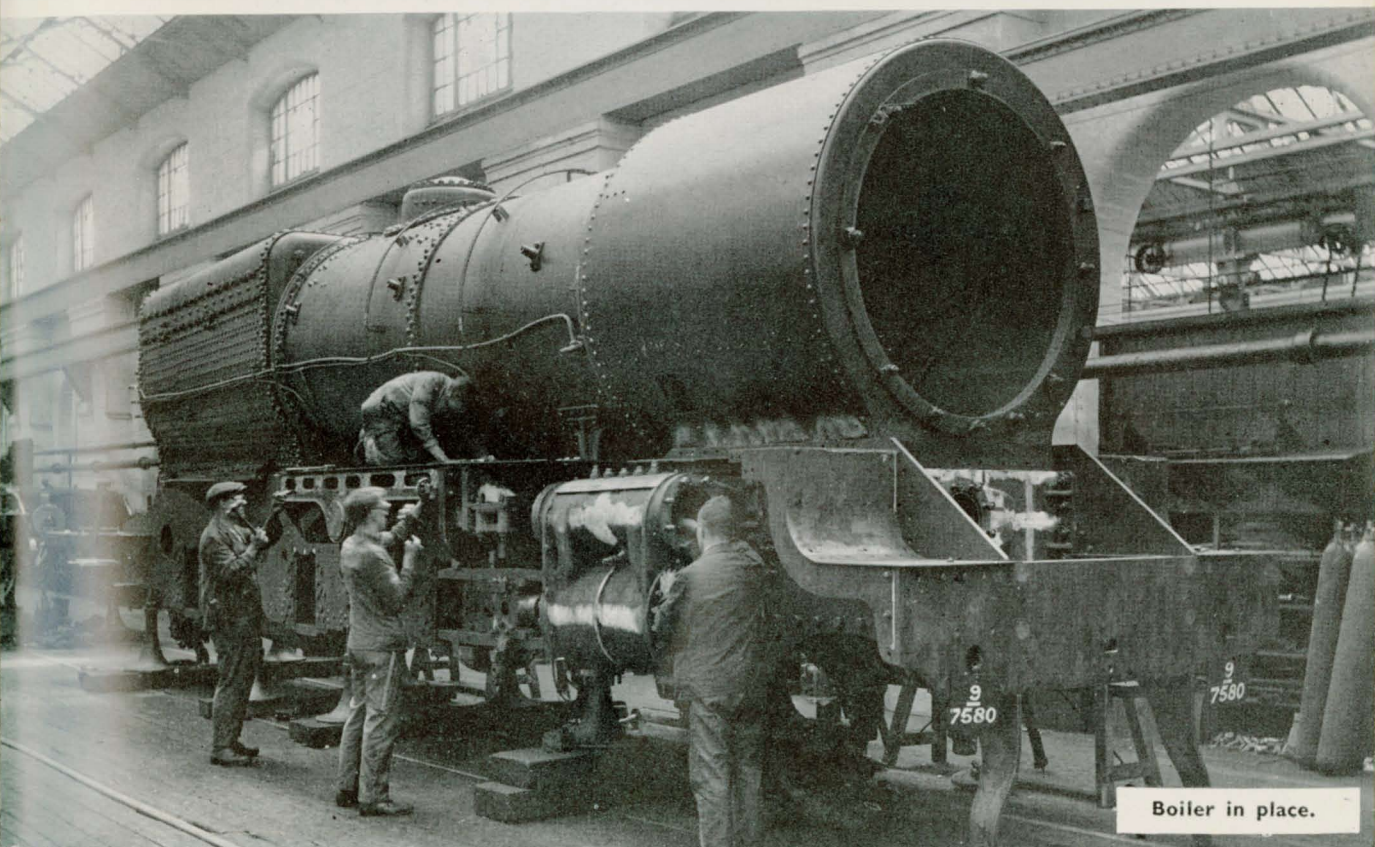
THE LOCOMOTIVES OF THE ROYAL SCOT CLASS

No.	Name.
6100 ...	Royal Scot.
6101 ...	Royal Scots Grey.
6102 ...	Black Watch.
6103 ...	Royal Scots Fusilier.
6104 ...	Scottish Borderer.
6105 ...	Cameron Highlander.
6106 ...	Gordon Highlander.
6107 ...	Argyll and Sutherland Highlander.
6108 ...	Seaforth Highlander.
6109 ...	Royal Engineer.
6110 ...	Grenadier Guardsman.
6111 ...	Royal Fusilier.
6112 ...	Sherwood Forester.
6113 ...	Cameronian.
6114 ...	Coldstream Guardsman.
6115 ...	Scots Guardsman.
6116 ...	Irish Guardsman.
6117 ...	Welsh Guardsman.
6118 ...	Royal Welch Fusilier.
6119 ...	Lancashire Fusilier.
6120 ...	Royal Inniskilling Fusilier.
6121 ...	H.L.I.
6122 ...	Royal Ulster Rifleman.
6123 ...	Royal Irish Fusilier.
6124 ...	London Scottish.
6125 ...	Lancashire Witch.
6126 ...	Sanspareil.
6127 ...	Novelty.
6128 ...	Meteor.
6129 ...	Comet.
6130 ...	Liverpool.

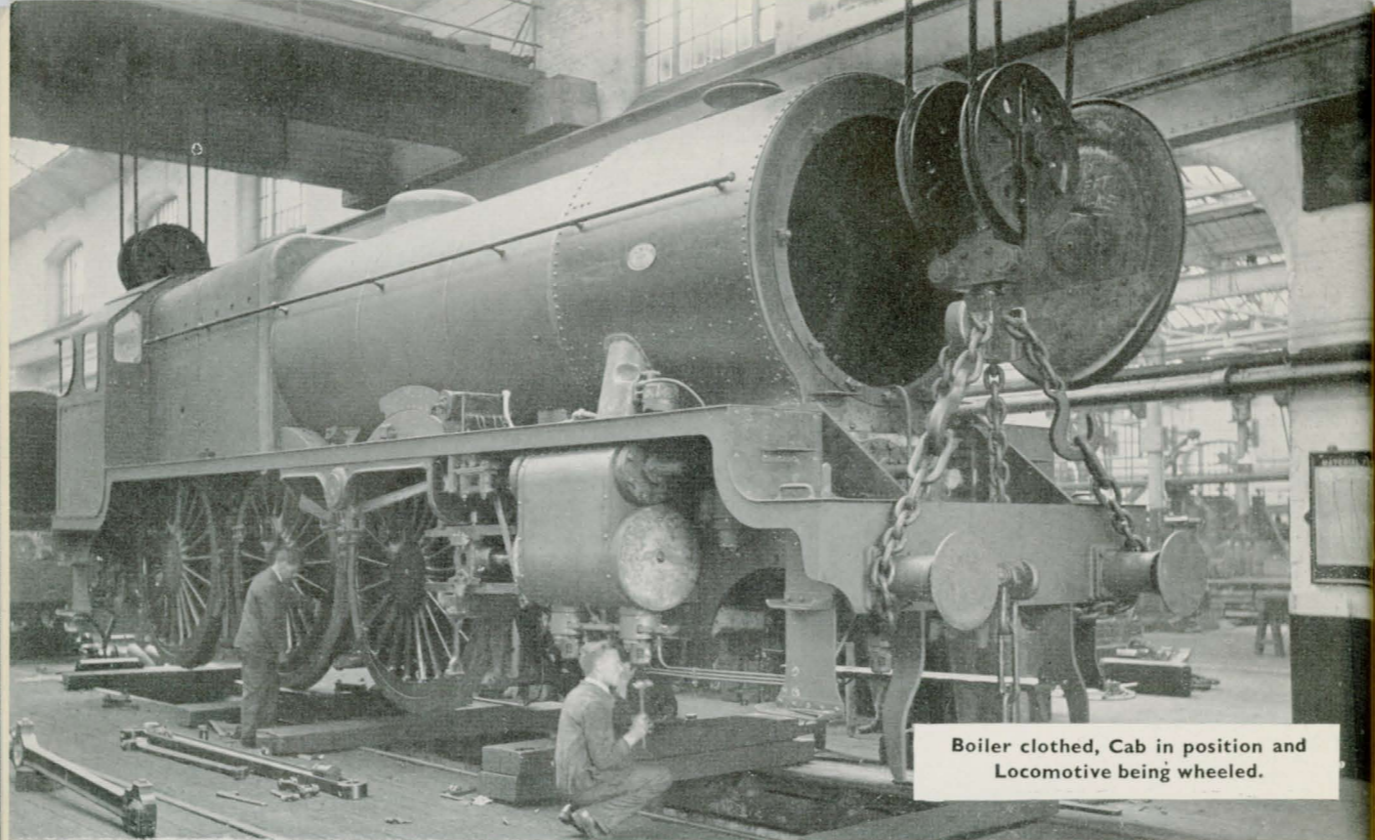
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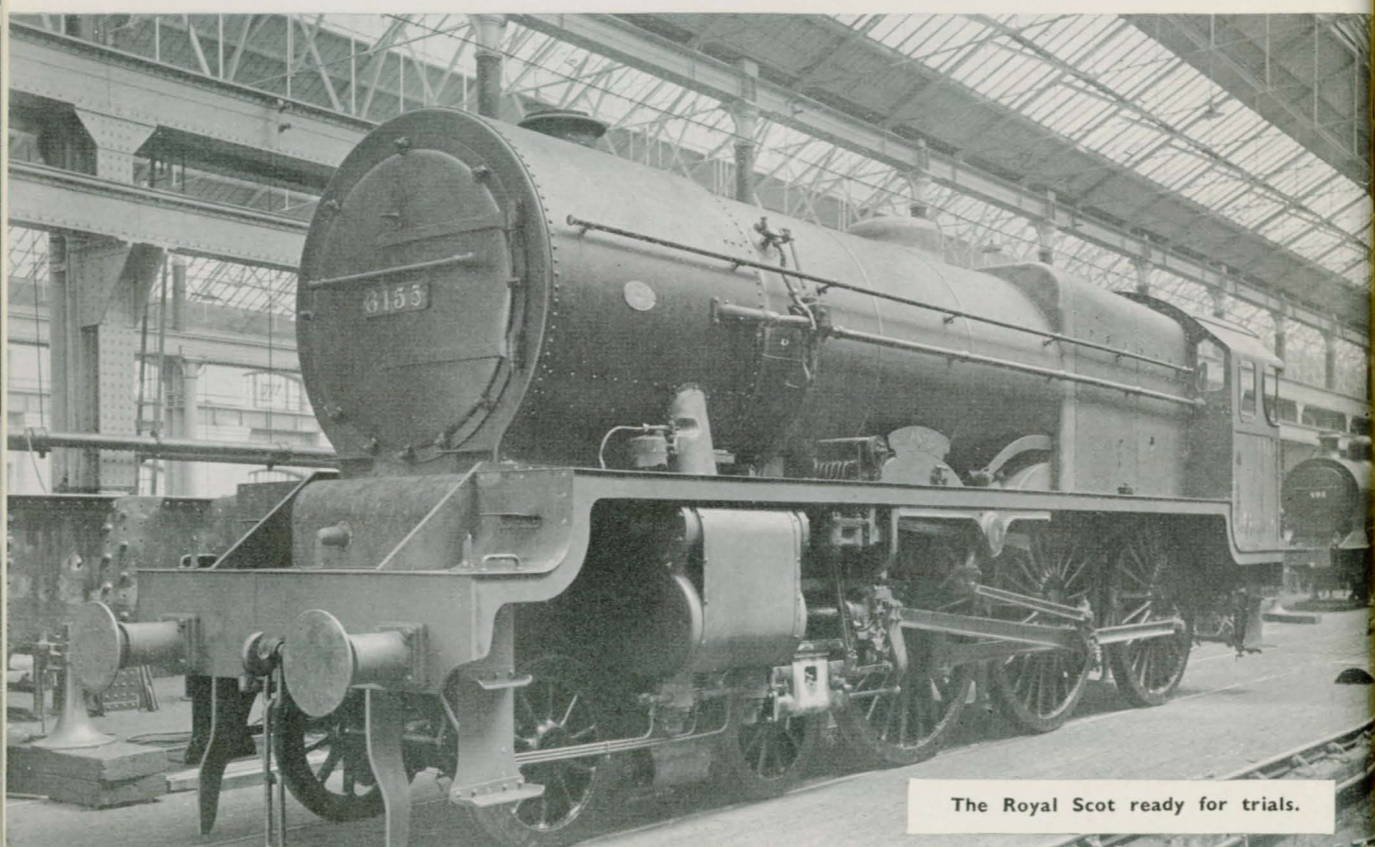
Building a Royal Scot Locomotive ;
Setting of Main Frames.



Boiler in place.



Boiler clothed, Cab in position and Locomotive being wheeled.



The Royal Scot ready for trials.

No.		Name.
6131	...	Planet.
6132	...	Phoenix.
6133	...	Vulcan.
6134	...	Atlas.
6135	...	Samson.
6136	...	Goliath.
6137	...	Vesta.
6138	...	The London Irish Rifleman.
6139	...	Ajax.
6140	...	Hector.
6141	...	Caledonian.
6142	...	Lion.
6143	...	Mail.
6144	...	Honourable Artillery Company.
6145	...	Condor.
6146	...	Jenny Lind.
6147	...	Courier.
6148	...	Velocipede.
6149	...	Lady of the Lake.
6150	...	The Life Guardsman.
6151	...	The Royal Horse Guardsman.
6152	...	The King's Dragoon Guardsman.
6153	...	The Royal Dragoon.
6154	...	The Hussar.
6155	...	The Lancer.
6156	...	The South Wales Borderer.
6157	...	The Royal Artilleryman.
6158	...	The Loyal Regiment.
6159	...	The Royal Air Force.
6160	...	Queen Victoria's Rifleman.
6161	...	King's Own.
6162	...	Queen's Westminster Rifleman.
6163	...	Civil Service Rifleman.
6164	...	The Artists' Rifleman.
6165	...	The Ranger (12th London Regiment).
6166	...	London Rifle Brigade.
6167	...	The Hertfordshire Regiment.
6168	...	The Girl Guide.
6169	...	The Boy Scout.

LONDON MIDLAND AND SCOTTISH RAILWAY COMPANY

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PRESTON	Park Hotel.
STRATFORD-ON-AVON	Welcombe Hotel.

SCOTLAND

AYR	Station Hotel.
DORNOCH	...	...	Dornoch Hotel.
DUMFRIES	...	...	Station Hotel.
EDINBURGH	...	...	Caledonian Hotel.
GLASGOW (Central Station)	...	...	Central Hotel.
GLASGOW (St. Enoch)	...	...	St. Enoch Hotel.
GLENEAGLES	...	...	Gleneagles Hotel.
INVERNESS	...	...	Station Hotel.
KYLE OF LOCHALSH	Station Hotel.
STRATHPEFFER	Highland Hotel.
TURNBERRY	Turnberry Hotel.

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PORTRUSH	Northern Counties Hotel.

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