

PLATFORM ELEVEN



THE JOURNAL
OF THE
**Lancashire & Yorkshire
Railway Society**

PLATFORM ELEVEN is the eleventh journal of the Lancashire & Yorkshire Railway Society, this being the Spring 1983 edition. The society produces three journals per year with the occasional booklet on other L. & Y.R. subjects. Members also receive regular duplicated newsletters and meet in assorted venues monthly. For further details of the society, please contact the Membership Secretary, Mr T. Wray, 30 Mossway, Middleton, Manchester M24 1NS.

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COVER PHOTOGRAPH:

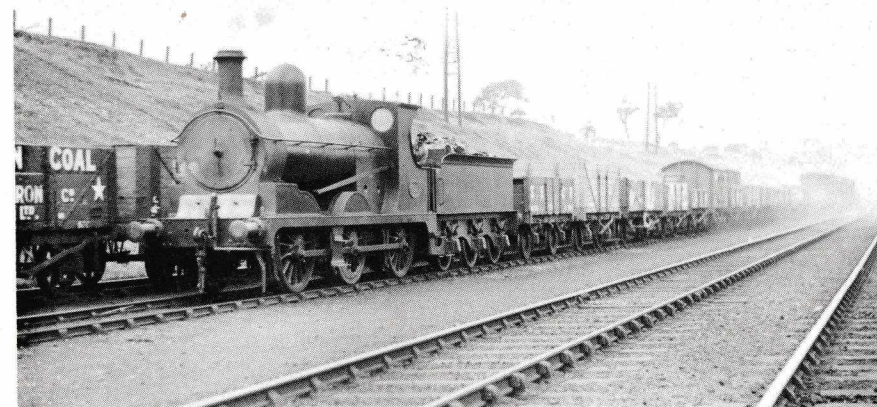
Many years ago, I was putting a display of models on show at the Christmas exhibition of the Manchester M.R.S. and my main exhibit was a rake of five L. & Y.R. six-wheeled carriages. Gordon Heywood caught sight of the 'old' carriages and exclaimed that we must get a 'High-flyer' to head them! I was sceptical as I could not visualise such a grand loco on such a lowly train. That was before I saw the series of photographs taken by J. M. Tomlinson of 4-4-2s in the Poulton-le-Fylde district. Most of the views include a train of six-wheeled stock and the passengers must have had a spirited ride behind the big engine on an express turn.... as the headlamp code shows. This particular view shows 1398 after the fitting of outside bearings to the rear carrying axle. Both Eric Mason and J. M. Tomlinson appear to have had arrangements with the local drivers as spectacular smoke effects are a common feature of most of their photographs taken at this period.

Photo courtesy—A. G. ELLIS

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GOODS TRAINS

by J. B. Hodgson

It must not be assumed that a goods train is just a random collection of wagons. In pre-group days the railways dealt with the majority of goods movement in the country, both long distance and station-to-station traffic, and to deal with this there were various classes of goods train.

Primarily the local goods train would collect wagons from a branch or a certain number of stations in an area. The "Traffic offering" to use the jargon, could be from full wagon loads to the humble parcel. Wagon loads are fairly easily dealt with—the local train depositing them at the consolidation station, where the train engine or the yard 'Pilot' would sort them into batches for collection by the longer distance trains as laid down in the Working Timetables.

"Less than Wagon loads" traffic would be put into what the L & Y called 'Tranship' vans. These were part of every 'station-to-station' train and were generally marshalled next the engine. On arrival at a station—the first duty of the engine was to position or 'spot' the tranship van at either the Goods Shed or at the tranship stage. Whilst the engine was dealing with the rest of the train the goods staff would be loading the tranship van with the 'smalls.' After dealing with the other traffic—attaching or detaching P.O. wagons, empties etc.—the engine would finally collect the tranship van and move on.

When the local goods arrived at its terminal point the tranship van again would be taken to be consolidated with others, possibly travelling in different directions, e.g. A Tranship van would cover each of the following branches: Meltham, Holmfirth and Clayton West, the latter two also covering the main line stations such as Brockholes, all terminating at Lockwood where the traffic would be transhipped into a further tranship van going East or West and so on.

Livestock traffic, cattle vans etc. were a considerable percentage of traffic and if there were over ten wagons of such traffic for any destination the traffic Inspector could detail a special train. Odd wagons of cattle etc. when worked by ordinary goods trains had to be marshalled next to the engine at all times, and if shunting had to be done, the livestock would be detached before starting such shunting.

The Goods Inspectors at larger Goods Depots had to inspect all livestock on trains passing through, and if any animals had fallen or if anything untoward had happened, the van had to be detached and the beasts off-loaded there, prior to being re-loaded and sent forward, if possible. Similarly, if animals were 'on the road' for more than 12 hours they too had to be off-loaded, watered, fed and re-loaded after 6 hours rest—by the Railway, hence the alacrity with which livestock traffic was dealt with at most stations.

Various other types of traffic also demanded special treatment. Gun powder vans, for instance, had always to be marshalled 'inside' the train towards the rear, i.e. with at least three other vehicles between it and the brake van whilst not more than two vans were to be marshalled together. This often meant that special 'Runner' vans or wagons would be marshalled with these vans, particularly for large shipments.

Tank Wagons loaded with acids or inflammable liquids had to be similarly dealt with and these, too, had not to be shunted but placed with care. The position of these tanks in the train was not specified except to say that they must not be marshalled next to livestock.

The main line goods trains—picking up and transferring traffic to and from certain stations were shown on the Working Timetables and had to try to keep time. On arrival at a station these trains would expect to find their 'pickup' traffic already marshalled in a given order by the station 'Pilot' so that their traffic could be quickly detached and attached, often the only 'loose' wagon would be the long distance 'tranship' van to detach or pick-up.

At certain places along the train's route a certain amount of time would probably be allowed for 'sorting' of the wagons—every fourth or fifth call probably.

In these long distance trains it was possible to find odd brake vans being returned to their 'home' station as wagons and as such they would be marshalled at the appropriate point in the train.

Again in pre-group days—foreign wagons would be returned home as quickly as possible—resulting in much empty wagon mileage.

Coal trains—comprising mainly private owner wagons did not appear in the working timetable and were worked "as the traffic will allow," often spending long periods in loops and sidings waiting for the openings in the W.T.T. Plan. The exception to this were of course the Dock Specials which were often called up by the Inspectors at the Docks for coaling liners (at Liverpool) when these trains would be worked as 'right-away' trains in paths reserved in the W.T.T. for such Specials.

Again 'returning empties' caused a lot of empty wagon mileage and the consequent wagon inspection stops at various points—where also wagon numbers were taken for the Railway Clearing House to charge the owners with the mileage run.

These are but a few of the different types of Goods Trains which ran—so if you are a Modeller—don't just bung a line of Wagons behind a Goods Engine and call it a 'Goods Train'—set it out properly and know how and why!



Darwen station over a century ago. The locomotive is one of Jenkins' 0-6-0s with 4'-10" wheels first built in 1861 and carried on until 1870 when there was a total of 149 in service . . . quite the largest of Jenkins' classes. They could be found on both goods and passenger trains all over the L.Y.R. and E.L.R. systems. Ahrons wrote how repairs might be effected with string and millband and how the large copper domes would reflect all the colours of the rainbow as they discoloured in the atmosphere.

Over the fence is the station with its single platform 79ft long. The station buildings were built in the 'Tudor' style and delayed by a strike of the masons who, it was considered, were overpaid and their wages were duly reduced to 27/- per week . . . still a good figure for those days.

In front of the fence is the yard where wagons are being unloaded and shunted by the loco. Notice the shunter standing on the buffers of the four-wheeled tender. The wagon belongs to 'J. & W. Tomlinson' of Darwen and bears the number 35. On the far right is a wagon marked 'Scot Lane' with an oval motif showing on the lower right side.

On the line in the foreground are three wagons belonging to Jacob Cooper, Coal & Lime Merchant, Over Darwen. They are numbered 5, 4 and 8 and the next wagon on the right may well be another of the same. The old print varies in tone over this portion so much that the colours of the wagons appear to vary but they are most probably all alike. Note the differing arrangement of the lettering 'Over Darwen' on the newest wagon. Behind the horse cart is a wagon lettered 'Clifton ——— Coal'.

Not an L. & Y.R. wagon in sight!

B.C.L.

Lancashire and Yorkshire Railway.	
EXCESS LUGGAGE TICKET.	
No. 4914	Train 1/50 June 15 1869
From	to Heywood
Weight	lbs.
Allowed	lbs.
Excess	Perambulation d.
Received	Booking Clerk.

PRIVATE OWNER WAGON LIVERIES

Conclusion of the 3-box coal wagon series by A. J. Watts

While the details in the article refer in particular to the 3-box wagon stock dealt with in the two previous articles, the colour schemes applied to normal coal wagons of each company in almost every case.

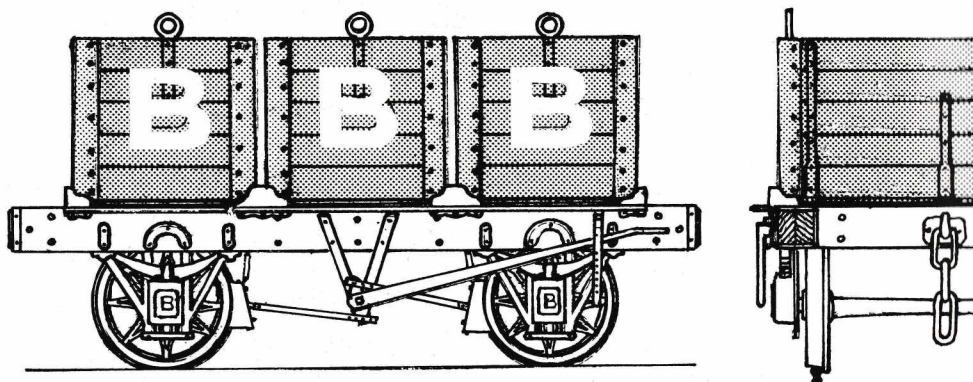
BLUNDELLS

The overall colour was Black with a large flattish 'B' on the side of each box, thus displaying three on each side.

28" High 24" Wide
Strokes 6" thick



Although no photographs exist of Blundells 3-Box wagons of sufficient quality to illustrate clearly this type of wagon (other than the ones on p.28 of Platform Nine and p.10 of Platform Ten) the drawing reproduced here contains sufficient details for the reader. In particular, the wooden brake blocks should be noted on this dead-buffered example, many of which remained in use on such wagons for a good number of years. Note should also be made of the 'B' on the face of the axle-box, a common feature of most Blundells wagons.



*Type of Box Wagon in use at Pemberton Collieries 1880-1890 for coal shipments to Liverpool.
(From a 1967 booklet on Blundells by D. Anderson)*

No evidence has come to light as to where individual wagons were numbered although there is a strong inference that the numbers were either on the solebar or alternatively on the bottom of the left hand box when the wagon was viewed from either side. There is no conclusive photographic evidence.

WHITE MOSS COAL CO. — SKELMERSDALE

The basic colour of these wagons was Red Oxide, the lettering layout following in many respects that of the 10 and 12 ton wagons owned by the company. When viewed from either side the left hand box carried a large 'W', the right hand box carrying the appropriate letter 'M'. Both these were in unshaded white. The centre box is more problematical, having what appears to be the company's name and location laid out in a deep ellipse pattern with some word or wording across the centre of the ellipse. Photographs showing this are extremely hazy and of poor quality. One is obliged to try to decipher the lettering, using as a basis the wording on the White Moss 10 & 12-ton wagons built by Ince Waggon & Ironworks Co.

The following conjectural reconstruction, which in the writer's view substantially reconciles those words with the pattern and length of the words on available photographs is thus:—



ELLERBECK COLLIERY — ADLINGTON

Somewhat greater problems arise with this company's wagons. While the painting and lettering details of their ordinary wagons is known to the writer, the same cannot be said of their box wagons. No photographic evidence of them appears to exist, although the writer understands that this colliery photographed its own wagon stock so as to deter their mis-appropriation by other concerns. None of this record seems to have survived.

The overall wagon colour was Red Oxide again with White unshaded letters. All box wagons were broken up in 1932 when the colliery was closed for a period.

RICHARD EVANS & CO. LTD — HAYDOCK COLLIERIES

This company had a change of its wagon colours around 1918 which is now little known. Originally, the colour was a bright red oxide with medium sized letters white lettering across the wagon side in a shallow arc. The post 1918 colour was plain black with larger white letters depicting the word 'HAYDOCK' in a straight line on the wagon side. A diamond shape motif was depicted in a white outline underneath the side door.

The '6-box' wagons had a similar legend in much smaller letters along the second plank of each box with the legend 'LANDSALES' underneath on the fourth plank. To the best of the writer's knowledge, photographs depicting this livery date from the mid-twenties or early thirties. No diamond motif was used on the boxes.

BLAINSCOUGH COLLIERY – COPPUL

Similar comments and details apply as to Ellerbeck Colliery wagons. There is no knowledge of how long this colliery's box wagons remained in use. Painting details were red oxide with unshaded white letters and two black diamonds edged in white on each side of the ordinary wagons. This motif was discontinued in later years.

MONKS FERRY STEAM COAL Co.

The painting and lettering of this company's box wagons is clearly exemplified in the photograph on page 8 of the last issue, which shows the version lasting up to Nationalisation and beyond.

In earlier days the colour employed was Red Oxide with White unshaded lettering as indicated in the photograph. In later years the colour used overall was black although exactly when the change took place is not known.

GARSWOOD HALL COLLIERY

Nothing is known of the painting or lettering of this colliery's box wagons although it is presumed that they must have had some of the colour characteristics of its ordinary wagon stock, namely red oxide overall with white letters shaded black along the side.

CLIFTON & KEARSLEY COLLIERY Co.

As mentioned previously, very little is known of this colliery's boxes, if indeed they were part of box wagons. It has recently come to light that similar boxes were in use on canal barges in this area though their ownership has not been verified.

The normal overall colour of this concern's wagons was a bright red with an unusual triangular motif in white shaded black, but whether this would have been employed on any box wagon is not known.

J. GRIFFITHS & Co. (Liverpool)

Nothing is known of these box wagons other than what is mentioned in the L. & Y.R. registers. The company wagons were normally grey with white lettering shaded red.

PRESTON LIVERPOOL DISTILLERY Co.

Nothing is known of this company's box wagons apart from the L. & Y.R. register entry.

From the Rule Book 1889

35. The 'Danger Signal' is shown in the day time, by the arm on the left hand side of the post being raised to the horizontal position and by the exhibition of a red light by night.

NOTE—A Purple light is used on some lines as a 'Danger' signal for Ground Discs controlling Shunting and for Sidings and Bay Lines.

BARTON WRIGHT TANK ENGINES USED FOR CARRIAGE WARMING DUTIES

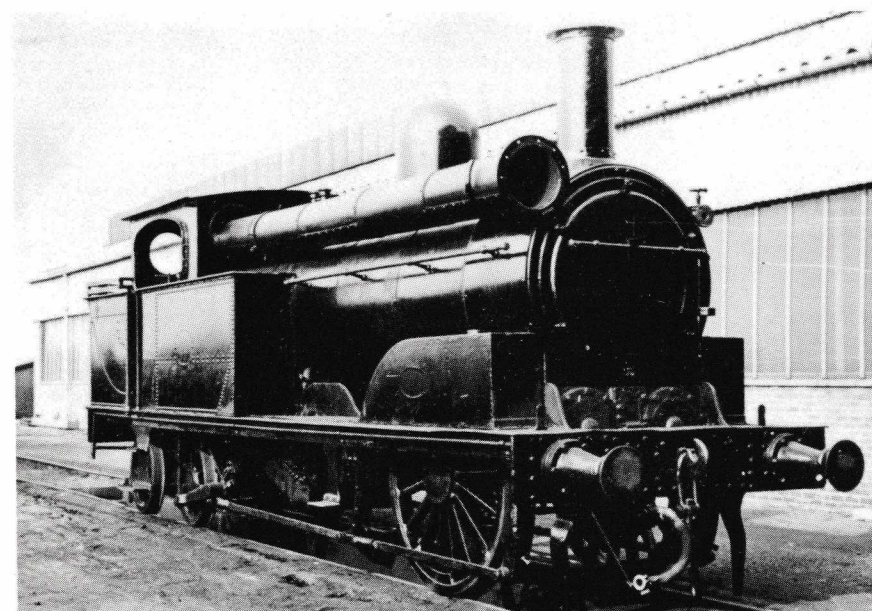
— A Progress Report —

Bernard Fielding LL.B.

Since my article in Platform one, much new information and several photos have come to hand, enabling me to issue this 'progress report', coupled with an appeal for further information and photos to enable me to finish the task. How much simpler the task would have been if the maker's plates had not been removed!

The bulk of the 0-4-4T were of Sharp Stewart origin and these can be identified by a quarter circle of rivets running upwards just above the footplate level behind the cab to almost the top of the coal bunker. Other makes did not have these rivets.

There is evidence that some engines were moved to other sites—e.g. the engine at Accrington in 1945 does not appear to be the same one as the 1954 engine at Accrington. I have received a letter saying that, (on one occasion), one of the two engines at Blackpool Central was not a Sharp Stewart. This may well have been so at that time.



A Sharp Stewart loco with the driving axle removed leaving just carrying wheels for its trip from Horwich to its place of work. This engine has just been painted and serviced but the impression of the numberplate and works plate still show in the layers of old paint. The long funnel was carried on two brackets and erected on site. The steam pipe was connected to the union on the opposite side of the smokebox. As a small child in the Great War period, I asked what the long thing was on one of these engines being towed past our station. I was told that it was a gun to shoot the Kaiser with, a story I believed for many years!

I am at a loss to understand the numbers given to some of these engines in B.R. days, some of which refer to 4-4-0s (if they were in fact L.Y.R. numbers). These engines could have assumed the identity of the engines from which they received replacement boilers; or the list could be purely a B.R. list of static boilers without any reference to L. & Y. numbering. At present I am keeping an open mind on this matter.

In the B.R. days, the two Blackpool Central engines were numbered 1 & 2 so it seems logical that the Blackpool North engine would be 3 and that the Accrington one would be 4. If this was so then there would appear to be two separate B.R. lists, one for the Blackpool and Accrington engines and one for the Manchester area ones.

The Edge Hill engine is worthy of note as being (possibly) the last survivor, being in situ in 1969 (after the end of steam on British Rail). It also had the luxury of electric lighting in the cab.

The engine numbered 926 (on the rear of the bunker) was in Horwich Works in B.R. days with "Sold to Len Fairclough" chalked on the bunker. I wonder if he had his eye on it before finally choosing to buy the Aspinall 0-6-0 No.1300?

TABLE A Engines Identified

0-4-4T

Site	LYR No.	Maker	LMS No.	B.R. No.	Details	Remarks
Blackpool Central	480	SS		1 or 2	H	scrapped 11/1964
	910	SS		1 or 2	H	scrapped 11/1964
Queens Road, Manchester	920	SS			H	in use 10/1965
Cheetham Hill, Manchester	925	SS	4687	925	H	cut at Newton Heath shed 8/1967
Accrington	713	SS		4		in use 4/1954
Queens Road, Manchester	112	K (long tanks)		498		in use 1955
Cheetham Hill, Manchester	636	K			R	in use 9/1964

0-6-2T 4'-6"

Garston Docks Banana Van Heating	239	K	4608			in use 4/1957
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0-6-2T 5'-1"

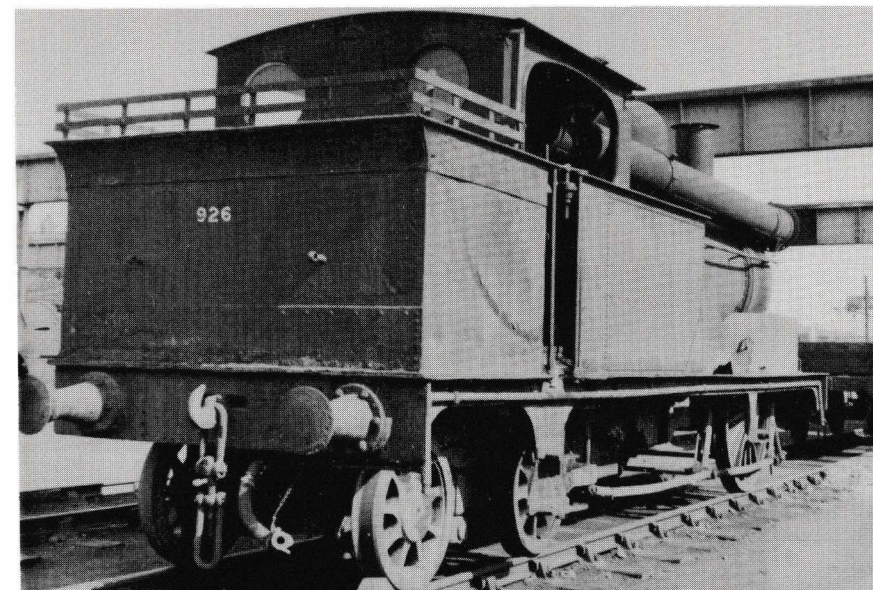
Cheetham Hill, Manchester	247	K				in use mid 1960s
Cheetham Hill, Manchester	688	D	11612 until 1932	511		in use 10/1962

Abbreviations:

D = Dübs
H = Fitted with Hughes smokebox door (6 'dogs')

K = Kitson

SS = Sharp Stewart
R = rear splashers removed



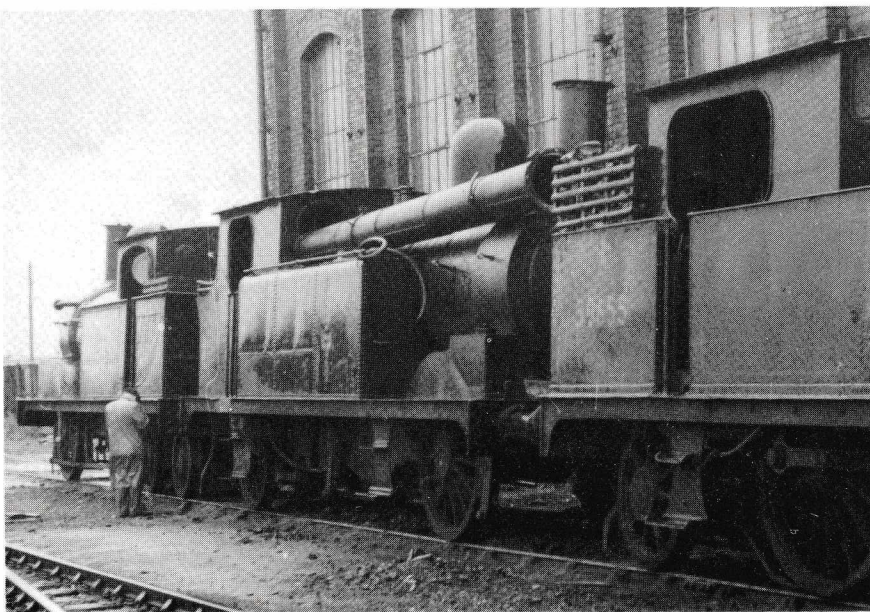
The Garston Docks 0-6-2T was an 'odd man out' in that it retained its makers plates (Kitson 2320) and also is the only example I know of to carry L.M.S. and its number 4608 in full size letters and numbers.

I hope shortly to compile an article listing the motley collection of old L. & Y. engines which ended their days on other stationary boiler duties but which fall outside the scope of this article.

TABLE B Unidentified engines or sites

Site	LYR No.	Maker	LMS No.	B.R. No.	Details	Remarks
Cheetham Hill	?	SS	4783	903	H	Cut up at Newton Heath Shed 8/1967
Cheetham Hill	?	?		898		in use 1955
Blackpool N.	?	SS		3 (?)	H R	in use 1959
Edge Hill	?	SS			H R	in situ 1969
Accrington	not 713	?			R	in use 1945
Unknown Sites	625	SS				These might be the engines from Blackpool North and/or Edge Hill see above
"	912	SS				
"	61	D				
"	?	SS		926		

I have been unable to trace the engines at Irlams-o-the-Heights, Southport, and Colne any suggestions?



A Dubs 0-6-2T (688) and a Sharp Stewart 0-4-4T at Horwich ... possibly for the last time as the radial tank was withdrawn in August 1955 and the 0-6-2T (now only 0-2-2) remained in use into the early 1960s.

Additional note from the Railway Magazine, 1925.

BARTON WRIGHT loco No. 61 (0-4-4T) built by Dubs, October 1878.

This engine was fitted for burning liquid fuel 13/6/1890 but nothing appears to be recorded about its success. The loco was withdrawn in May 1909 and converted to a carriage warming unit where it was later recorded in July 1925 at Longsight.

100 YEARS AGO

On Friday, as the Lancashire & Yorkshire passenger train which leaves Goole at 2.45 p.m. was running down an incline on its way to Leeds, one of the rods connecting the two front wheels of the engine suddenly snapped in two and was cast with great violence high in the air, alighting some distance from the train. The driver, Joseph Robinson of Albert Street in Goole, who was leaning over the side at the very moment, saw the breakage and at once shut off steam and brought the engine as quickly as possible to a standstill.

We are sorry to say that Mr Robinson received some severe internal injuries whilst assisting in lifting the rods onto the engine, and on his return to Goole was conveyed to his home in a cab and is now progressing favourably under the care of Doctor Bramwell."

Submitted by Ralph Fisher

Reprinted by permission of the Goole Times.

Rail-built buffer stops

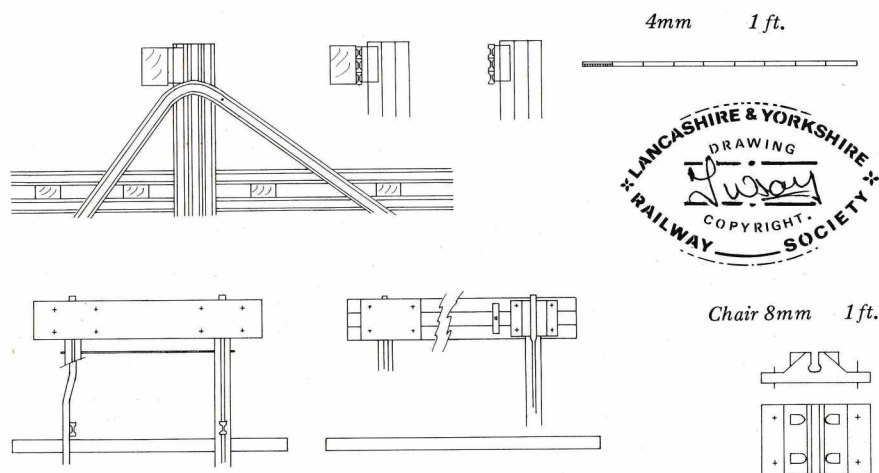
TOM WRAY

Rail-built buffer stops were introduced, I believe, during Barton Wright's period with the L & Y Railway, gradually replacing the timber type. There were two basic designs, those with a timber buffer beam and those with three rails attached one above another, both types were mixed indiscriminately. A third variation was confined to the electrified line between Manchester and Bury where, because the new vehicles were without conventional buffers and the couplings projected beyond the substituted pads, the standard buffer stop was impracticable. In this case two timber blocks were attached to the three-rail type.

Construction was quite simple, four rails were bent to form the supports and recesses were cut in the appropriate places to allow for the horizontal and vertical rails. The vertical rails were joggled inwards from the outside of the running rails so as to be vertically above it at the top. The cross members were attached to the front of the vertical by means of an elongated chair. One other thing to mention was an iron rod to the rear of the uprights between the supports, the reason for this is not readily obvious. In certain instances there was provision made for a stop lamp, either in an elaborate form on the buffer beam or more simply a post in the ground with a bracket attached. (Both types are illustrated).

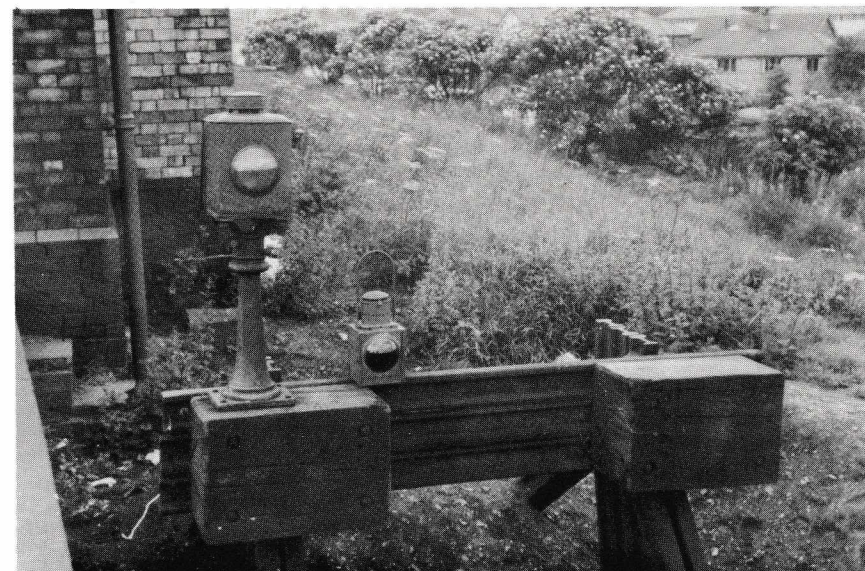


*Rail-built buffers at Middleton Junction 1957
Photographs & drawings by Tom Wray.*



VERSION 'A'—The buffer beams were painted white with two black squares where the buffers struck, the rest would have been painted black.

VERSION 'B'—The buffer beams were painted white with two black squares where the buffers struck, whether the rest was painted (all ironwork black, Platform 4) or left unpainted has not yet been established. In the late nineteen-fifties there were several buffer stops at Bury Gas Works siding painted red, these sidings had been disused and were covered with a large mound of coal, the buffer stops poking out at one end.



Buffer stop with blocks, up bay platform, Prestwich.

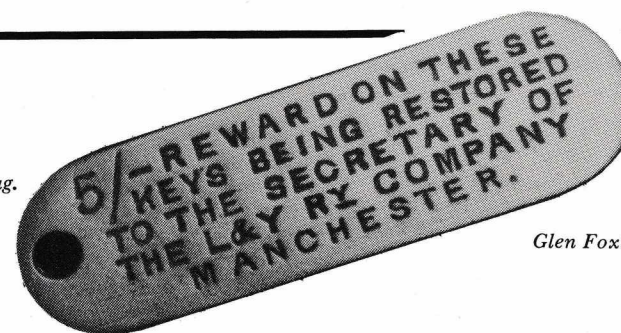
From the Minute Book:

With reference to minutes of 11.10.1892 from Mr Prentis that Russian Petroleum has been in use for lighting signals at about 80 stations since October 1892 without a single complaint having been received and recommending that its use be gradually extended over the whole system, also reporting that with Mr Naylor's concurrence he had bought 2,000 gallons of Russian Petroleum from Messrs Meade, King, Robinson & Co. at 3½d per gallon net delivered at Liverpool with an allowance of 3/- each for returned casks delivered in Manchester, thus bringing the cost to 2¼d net per gallon.

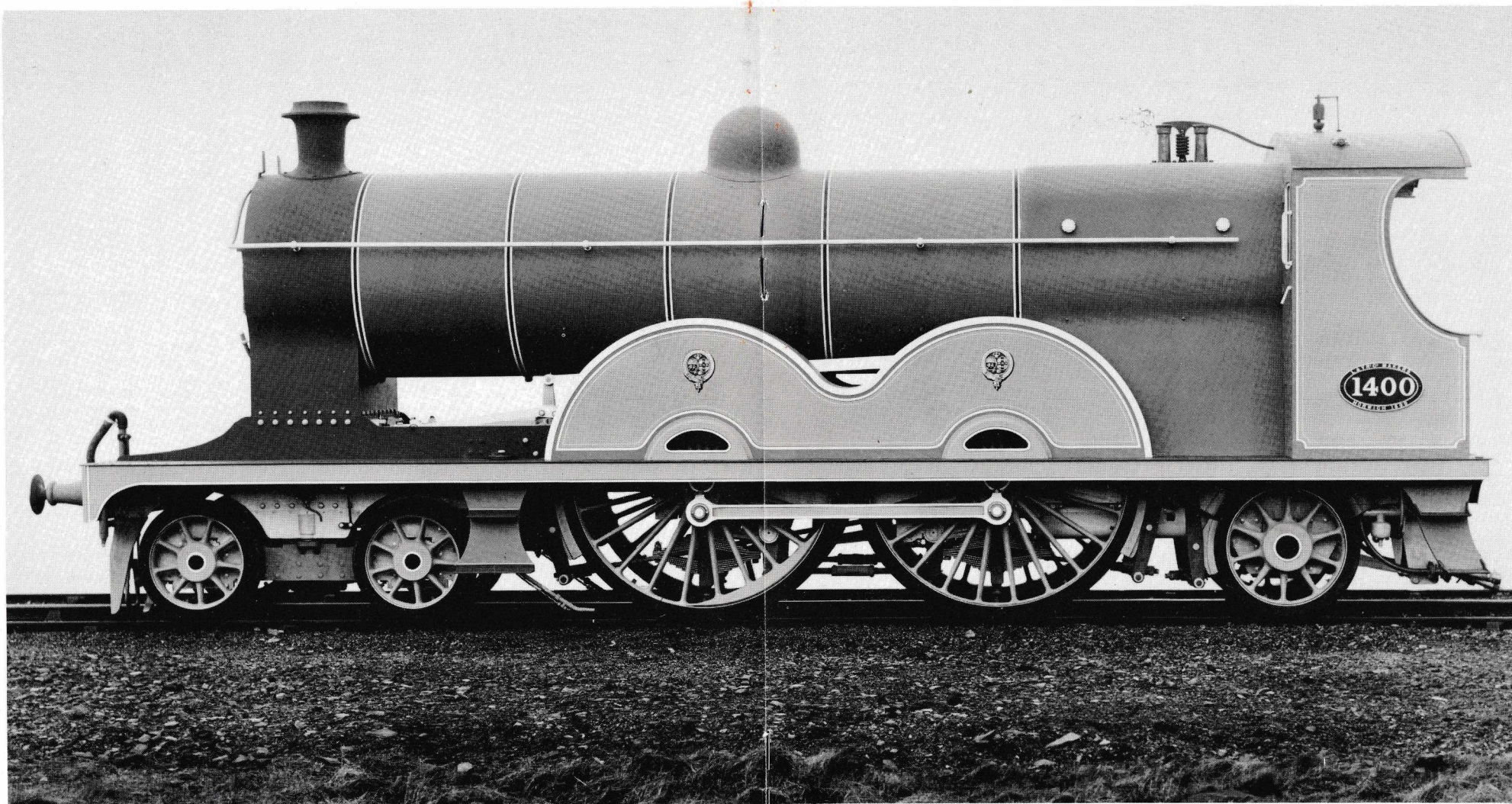
It was ordered that Mr Prentis endeavour to purchase a further 1,000 barrels at the same terms and to report.

23rd January 1894

Brass Key Tag.



Glen Foxley collection.



John Aspinall developed his big express engines from the earlier 7'3" 4-4-0s and the likeness is very obvious. Because the boiler was much larger (bigger than any other in Britain at that time) it had to be set much higher to clear the wheels. The Belpaire firebox was still a new entity on the railways and the steam sanding was the first application on the L. & Y. From the first, they were a success although the alterations and developments were legion. As the 4-4-0s of the 1093 class were called the 'Flyers', the big new engines were soon dubbed the 'High Flyers' and stories of exceptionally high speeds were soon to spread.

Our photograph shows the first of the class as built in February 1899 with the low cut cabsides and compensated suspension to the driving wheel axle boxes. The livery is the

'photographic' grey that shows all the detail so clearly. Many shades of grey were used to bring up the details that would not show otherwise on an all black engine photographed in a Lancashire February!

It is interesting to note that the class were intended to start with the No. 700 but a change was made at the last moment and the first engine carried the 1400 number. They have become the favourites of many, not least of Eric Mason, whose manuscript and notes form the bulk of our main feature of the next pages. Much of it has not been published before and is therefore offered as a complement to the extensive chapter in his book 'The Lancashire & Yorkshire Railway in the 20th Century' first published in 1954.

Photograph courtesy N.R.M.

THE ATLANTICS

by the late ERIC MASON

Sir John Aspinall was the Chief Mechanical Engineer of the Lancashire & Yorkshire Railway from 1886 to 1899 and it was in his last year of the post that his finest locomotive appeared. Had it been completed just a few months earlier, then he would have been the first to introduce the type to these shores. In spite of his friend H. A. Ivatt beating him to the post as it were, it was the L. & Y.R. locomotive that so completely surprised the contemporary engineers and travelling public by its massive appearance.

Engine No.1400 appeared outside the erecting shop at Horwich works on February 18, 1899, fitted with a rather ridiculously small tender, much narrower across the footplate than the engine. New and larger tenders soon made their appearance and, in some cases, were fitted to the engines before they entered regular service. The principal dimensions of No.1400 are given herewith, and to these the whole class of 40 engines generally conformed with the exception of certain boiler details on the six which were fitted with low degree superheaters. The boiler, which was later designated Class "J," had a Belpaire firebox, and the smokebox was extended 2 ft. 6 in. into the barrel, the length of which was 17 ft. 2½ in., whilst the distance between the tubeplates was 15 ft. 0 in. The heating surface of 1,721 sq.ft. was made up of 196 2-in. diameter tubes giving 1,539 sq.ft. and a firebox giving 182 sq.ft; the grate area was 26.05 sq.ft., and the working pressure 180 lb. per square inch. Tractive effort at 85 per cent. boiler pressure was given as 16,506 lb.

The first 20 engines appeared in 1899 in this order:

Feb. 1400	May 1396/7/8	Aug. 702
March 1392/3	June 1399, 1401/2	Sept. 708/11
April 1394/5	July 1403/4, 700	Oct. 718/35/37

Horwich works or progressive numbers were 631 to 650.

All these engines had lower cut cab panels than shown in the photographs, but there is an excellent woodcut to be found in the *Engineer* for June 2, 1899, showing No.1400 in its original condition. The low cut cab panels were altered to a much higher and more symmetrical arrangement in the early days of the engines' existence and the later series of engines conformed to the altered design. A narrow door was fitted in the front plate of the cab on both sides of the firebox to give access to the foot framing, so that the enginemen need not scramble round the side of the cab if it became necessary to go to the front of the engine. An interesting effort was made to compensate the springing of the coupled wheels by a system of levers and bell cranks connecting the spring links. This arrangement disappeared not long after the engines were built and was not fitted to the 1902 series, so it is safe to assume that little had been gained by this attempt to equalise the weights on the coupled wheels. Steam reversing gear was used on a few of the first engines, but this also disappeared, No.1394 being the first engine to lose it in 1901; a vertical screw with horizontal wheel was fitted just in front of the driver so that it was easy for him to operate without rising from his stool. Coincident with this improvement, the original regulator handles, mounted one on each side of the firebox and operated in what

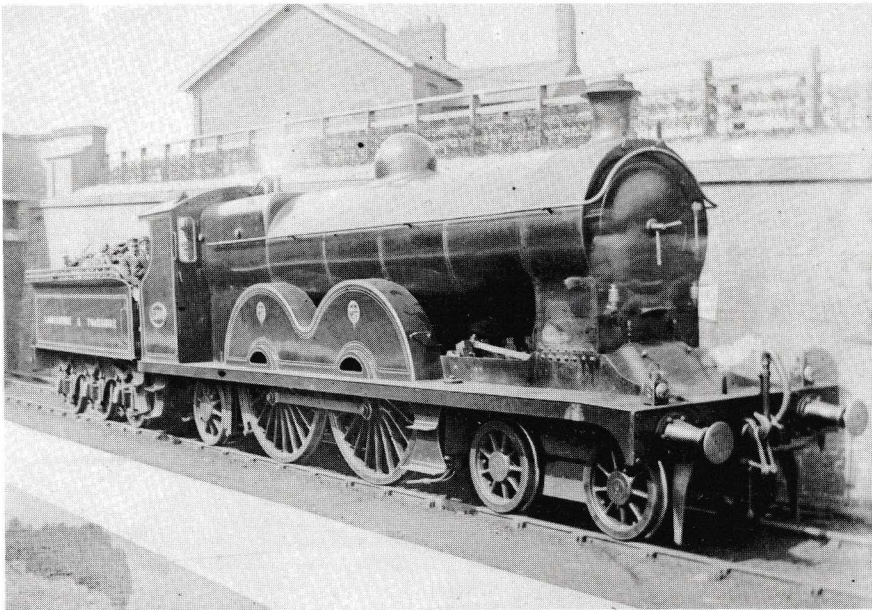


No.1403 soon after building and showing the original narrow tender that was provided for the new locomotives. The tender is the standard Aspinall type as built for the 'A' class 0-6-0s, short wheelbase and flush-sided. Tenders with wider tanksides, as built for the new 0-8-0s in 1900 were soon supplied to the 4-4-2s while the narrow tenders found their future to be in place of Barton Wright tenders paired to 4-4-0s. The earliest alteration to the 'High-flyers' was the cutting back of the bufferbeam ends from 1903. Clearances must have been a little tight somewhere.

Photo — S. Sutcliffe collection.

might be described as a fore to aft manner, were replaced by a single handle fitted in the more usual position in the upper central part of the firebox front plate; the handle projected downward and was operated by a sliding two-handled horizontal bar, working across the firebox between two brackets.

The engines were at first fitted with balanced slide valves, exhausting through the back of the valve directly into the blast pipe, but just before the appearance of the second series in 1902 experiments were conducted with outside admission piston valves, and as a result a number of the first series, and all the second lot of the Atlantics, were fitted with them. Piston valves with saturated steam were not unusual features of locomotive design at this period, but they brought their own troubles, one of which was the difficulty of obtaining a reliable steamtight valve ring. Coupled with general valve lubrication trouble, this led to the return of the balanced slide valve, which this time, however, exhausted the steam in the more orthodox fashion through the cylinder exhaust ports. Steam jacketed cylinders were fitted to a number of engines, the idea being to draw the steam for working the injectors from the boiler by way of the cylinder jackets, thus warming-up the cylinders. The first bogies fitted to the engines were of the swing-link or cradle type and the trailing wheels had inside bearings and spiral springs. Following reports of rough riding the bogies were changed for the Adams sliding-type with strong check springs. Trailing outside bearings with laminated springs were fitted later.

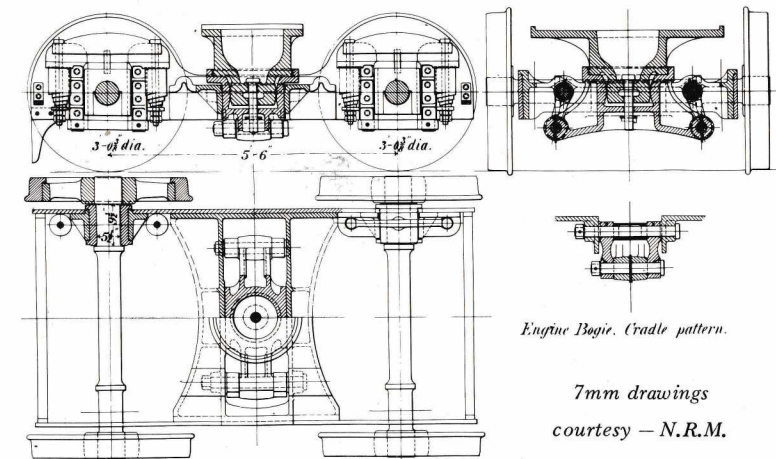


No.1399 was one of the nine known engines to be fitted with piston valves in 1900/1 and the bulging covers in front of the smokebox are evidence of this modification. The engine now carries the fully lettered livery to the tender (post 1902) but otherwise is in original Aspinall condition. She is standing at Poulton awaiting the Blackpool portion of the Fleetwood to Manchester express.

Photograph — J. M. Tomlinson

The last engine of the first series, No.737, was notable as the first engine in Great Britain to be fitted with a device for superheating steam, and although the temperature to which the steam was raised was not very high—about 95 deg. F. after the engine had been pulling hard for a quarter of an hour—it was pioneer work of a very important character. A small saving of $3\frac{1}{2}$ lb. of coal per mile was reported after a four-month test with No.737, which was temporarily allocated to Southport shed during its experimental period, and Driver Tom Pendlebury made many special trips with it between Burscough Junction and Preston with varying loads for research purposes. The boiler steam was superheated, or “dried,” by passing it through a drum fitted in the smoke box, which was recessed further backwards in the superheater engines. The drum was provided with exactly the same number of tubes as the boiler, only slightly larger in diameter, and it was fitted internally with vertical baffle plates about three-quarters the height of the drum, alternate ones being secured from the top and the bottom so that the steam, after being admitted from the boiler, had to make so many journeys up and down the inside of the drum before being collected in the main steam pipes in the smokebox and delivered to the steam chests.

As it was necessary periodically to remove the small ashes from the space between the drum and the boiler tube-plate, a collecting hopper was fitted at the bottom of the barrel and two down pipes descended therefrom with lids on the lower ends. When the lids were opened at the close of a day's work the fine ashes



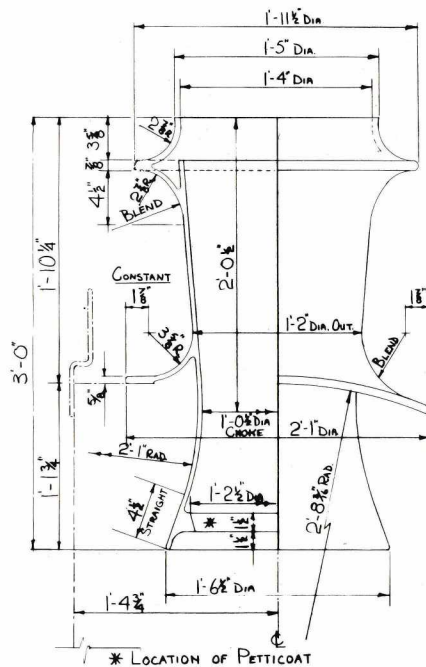
The swing link pattern of bogie as first fitted to the class (and the 1093 4-4-0s) carried a separate set of guard irons in front of the leading wheels and is easily spotted in front views because of the absence of cross frame plate in front of the axle that is so apparent in views where the Adams sliding bogie has been adopted. All the second batch (Lot 45) were built with the Adams bogie.

were supposed to fall into the engine pit. These down pipes and hoppers were removable, and the uncovered manhole was used as an entrance into the middle chamber when leaking tubes and blowing steam pipe joints required attention. As each tube in the drum was slightly larger in diameter, and exactly opposite its partner in the boiler, the removal of boiler tubes was more or less straightforward. The superheater engines, Nos.737 and 1420-4, were not too popular with the drivers, as there was a lot of steam left to get rid of after the regulator was closed; nor were they liked by the shed gangs, who on occasion had to crawl up into the gap between the boiler and superheater, a form of entertainment which ranked extremely low in their estimation. All the engines concerned had their superheaters removed after varying periods of work; the last to be so dealt with was No.1424 in 1917. Quite a lot of advantage was said to accrue from the use of steam jackets and superheaters, but over a long term the cost of upkeep and renewal of fittings reduced the financial gain in fuel efficiency.

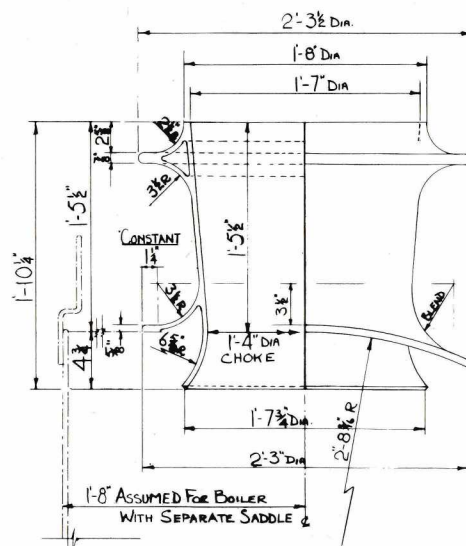
The second series of 20 engines, Nos.1405-24, appeared in 1902, as follows:—

January 1405	March 1409-12	May 1417-20
February 1406-8	April 1413-16	June 1421-24
Horwich works numbers: 791-810.		

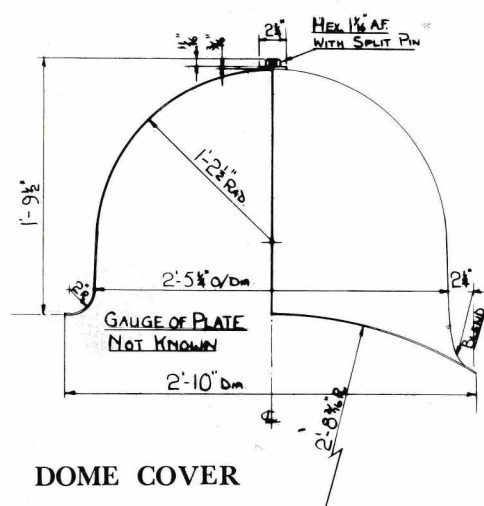
They differed very slightly in appearance from their predecessors by having a narrow valance or outside angle frame, and their main frames were continued in a straight line backwards from the smokebox instead of dipping slightly. On the first series of engines the handrails had been fitted fairly high up on the boiler side, and formed a continuous rail around the front of the smokebox; on the second series the side rails were lowered, the smokebox rail forming a separate fitting. All the earlier engines were brought into line with the new arrangement about the same time.



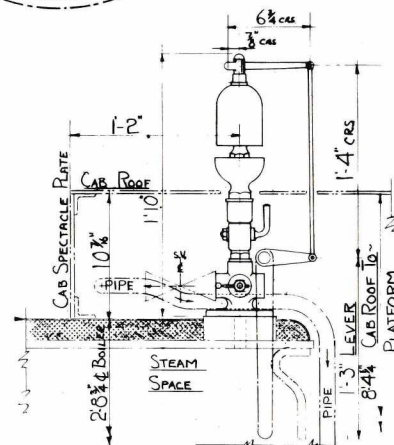
ASPINALL CHIMNEY



HUGHES CHIMNEY



DOME COVER

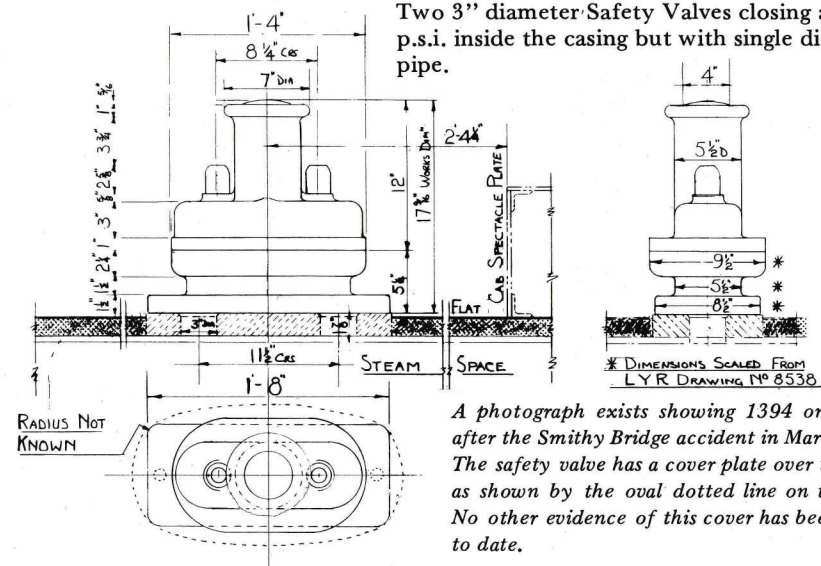


WHISTLE & FOUNTAIN

Experiments with chimneys and blastpipes had been a feature of L.& Y. practice for some years, and about 1910 the Atlantics came in for similar attention when No.1403 made its appearance, closely followed by No.1401, with a chimney 4 1/4 in. shorter and 3 1/2 in. wider, together with a new blastpipe having an orifice 1/4 in. wider than those with the narrow chimneys. The long internal cowl or chimney extension inside the smokebox was abolished at the same time. These engines had the reputation of being much freer runners after the front end alterations. The question of compression control had been thoroughly explored at Horwich, first with the 0-8-0 four-cylinder compound engines. In 1911 No.1417 of the 4-4-2s had its slide-valves fitted with Hughes' special ball release valves, and was made the subject of some very exhaustive comparative trials with No.1424, which retained the ordinary Richardson balanced valves. The results of the tests were very much in favour of No.1417 and showed a coal saving of 19 per cent. and considerable reduction in the wear of the slide valves; exceptional freedom in running, with its attendant economies, was also a feature of No.1417's performance, the engine being timed at some very high speeds while working the 11.35 a.m. 40-minute express from Manchester to Liverpool, which usually loaded to six or seven corridor vehicles. On one occasion, for instance, the engine ran from Rainford Junction for 5 miles in 3 1/2 min., averaging 85.7 m.p.h. In feats such as this in tests spread over many weeks, legendary figures of terrific speed bursts were born. While there is no official confirmation of maxima of over 100 m.p.h., there is no doubt that Newton Heath driver Chapman with No.1417 really did some extraordinary running, and it was quite a regular thing on the eastward journey to have the regulator closed at Swinton goods cabin and to coast the remaining 5 1/4 miles to Manchester in 6 1/2 min. down the 1 in 500 and 1 in 98 banks. Normal practice with unaltered engines was to shut off steam at least 2 miles nearer to Manchester.

HOY-TYPE SAFETY VALVE

Two 3" diameter Safety Valves closing at 180 p.s.i. inside the casing but with single discharge pipe.



A photograph exists showing 1394 on its side after the Smithy Bridge accident in March 1915. The safety valve has a cover plate over the base, as shown by the oval dotted line on the plan. No other evidence of this cover has been found to date.

Following the success of No.1417, others were fitted with ball release valves, including Nos.1395, 1401/3/7 and, I believe, No.708, although there is not a detailed list available of the total number of engines altered. The 1914-18 wartime economies prevented the further extension of the fitting, and after the war the C.M.E. and his staff focused their attention on the fitting of ball release valves to piston valves, and the special slide valves were allowed to wear themselves out with the development of the 4-6-0 superheater rebuilds. From about 1919, the complete set of 40 Atlantics were fitted with circular smokeboxes resting on cast steel saddles.

The 1400s were prone to breakage of the connecting rod at the motion link pinhole about a third of the distance from the small end and the 78 days motion overhaul reduced the trouble but did not eradicate it entirely. I recall several really serious mishaps involving bent and broken connecting rods and in some cases, broken reversing shafts. These would often take place along the line between Swinton and Hindley on engines working westbound trains and when this happened at high speeds, the experiences of the enginemen were most alarming as nothing could be done but close the regulator and apply the brake. The same trouble was much rarer on the smaller engines, but 19 in. cylinders of the 1400s would find a flaw in the rod if one could be found. On express engines, the discovery of such flaws meant the rods being sent away for renewal immediately but with flaws on the smaller engines, the inspection would be made more frequently until it was deemed undesirable to allow the flaw to extend further. A breakage at speed on a 1400 could derail the engine as the loose end beat against the track until the train could be brought to a halt.

The sheds to which the "1400" Class were allocated at first were Newton Heath, Southport, Sandhills, and Low Moor, but with the appearance of the 1902 series Leeds, Blackpool and Fleetwood had their share. No.1400 went as a new engine to Newton Heath, and the second engine, No.1392, went to Southport along with Nos.1397/9. No.1400 spent the whole of its career until 1921 in the Manchester area, being one of the quota transferred to Agcroft in 1908. In its early days it made some trips over the L.& N.W. line between Preston and Carlisle, but apart from these and the regular summer through train from Manchester Victoria to Windermere, which commenced running in 1904, the class did little work on foreign lines until the amalgamation of the L. & Y.R. with the L. & N.W.R. in 1922, when the Atlantics were often seen at Crewe working in from Blackpool or on an occasional pigeon special from the East Lancashire district worked by Agcroft men. It was Low Moor shed that always seemed to have the largest allocation, there being no fewer than 13 of the class there at one period. Blackpool had about 10 stationed there up to their acquisition of 4-6-0s in 1909, and Fleetwood had an allocation of three for working the Belfast boat trains to Manchester and to Leeds via East Lancashire. One of the Fleetwood engines, No.1419, went there new and remained there exclusively for over 12 years; Nos.1397/9 and 1403 were Southport engines for the best part of 20 years, and No.1411 was never stabled at any other shed than Blackpool Central during the whole of its career. Similarly No.1392, after a brief introduction at Southport, during which it ran trials on the Southport-Liverpool line, was removed to Sandhills and there remained till its doom.

A word can be said here of the "one engine, one train" job which was worked from Blackpool Talbot Road (North). There is no geographical railway connection between the two Blackpool stations of Central and Talbot Road without



1424 receives attention at Newton Heath after 1920. The smokebox has distorted badly due to overheating which will be cured only by the rebuilding with a cast steel saddle for the smokebox. Other alterations to the original condition are legion. Hughes buffers were substituted for the originals from 1909 and the smokebox door was altered before this date. The cover has been removed from the front of the valve chests and the Hughes class disc has been affixed to the upper cab sides.

Photo — G. W. Smith

going round by Kirkham, a matter of 20 miles, and so it was necessary that one express engine should be located at the little three-road engine shed just outside Talbot Road station to work the daily corridor express from that side of Blackpool to Manchester, calling only at Poulton-le-Fylde to pick up the residents of that town and the neighbouring village of Thornton. The engine performing this work for many years was No.1396, regularly driven by Richard Hornby, his day's work consisting of the run to Manchester, an intermediate trip from Rochdale to Liverpool and back, returning home with the 4.55 p.m. corridor express to Blackpool Talbot Road. This was normally a set train of six vestibuled corridor coaches with elaborate brass handrails at the end doors of each coach, and made a very handsome looking set-piece.

When the new 4-6-0 engines appeared in 1908/9 four Atlantics were transferred to Agcroft shed to work certain trains between Manchester and York. Three of these actually lodged at York in a cosmopolitan shed along with representatives of the Great Central and Great Eastern Railways. Two of the three Atlantics worked out to Manchester on mid-morning and noon trains, returning to York in the evening; the third engine only worked to Rochdale, where it had to do a quick turn-round in order to catch the 7.30 p.m. York express from Victoria. A spare engine was held at Agcroft to change over for washing out and examinations, and also to cover the working of the daily Hull-Liverpool express, the engine of which was changed at Manchester, re-fuelled and serviced at Agcroft.

If the Hull train was running late due to a delayed arrival of the steamer from Zeebrugge, the spare engine had to work back to Hull, and the Hull engine would then stand by till all the Yorks had been accounted for, after which it might make a trip to Liverpool or Southport on an evening semi-fast. At one time the Hull engine had been under the supervision of the Low Moor district officer, and was usually No.1420, but soon after the transfer of engines of this class to Agcroft, No.711 became the Hull engine, and remained on that work till the train was withdrawn in 1915. In 1921, consequent upon the eight-hour day agreement for railwaymen, the locomotive diagrams were considerably rearranged and a few of the "1400" Class, Nos.737, 1394, 1400/5, were sent to Wakefield as a good centre from which to work to York, Hull and Liverpool. It might be of interest here to tabulate the engines, showing the various sheds to which they were attached, according to the writer's notes kept over a period of many years. This list does not pretend to include all the changes in detail but serves to show generally from whence these engines could be seen working between about 1904 and 1922.

In conclusion, a few notes about individual engines. No.702 was fitted with a Davies & Metcalfe exhaust steam injector in 1903 but did not retain it for many years. In November, 1910, the same engine was involved in a serious collision at Ormskirk, and after being repaired appeared with the main frame in front of the smokebox tapered straight down to the buffer beam, instead of forming a graceful curve as on the rest of its class. No.1394 was involved in the Fleetwood boat train collision at Smithy Bridge, near Rochdale; during a very severe blizzard in March, 1915. It had to be extensively

THE L. & Y. ATLANTICS—ALLOCATIONS

Eng. No.	Sheds stationed at	Eng. No.	Sheds stationed at
700	18, 2, 13	1405	18, 32, 1, 2
702	18, 32	1406	18, 2, 4, 2
708	2	1407	4, 2
711	2, 17, 13	1408	4, 2
718	2, 18, 6	1409	32, 30, 1
735	2, 32, 2	1410	32, 18
737	2, 6	1411	32
1392	17, 18	1412	32, 1
1393	1, 4, 2	1413	32, 1, 13
1394	1, 18, 30, 1, 6	1414	18, 32
1395	1, 32, 1	1415	2
1396	1, 31, 32, 2	1416	2
1397	17	1417	2, 1, 32
1398	1, 30, 32	1418	2, 18, 13
1399	17	1419	30, 32, 1
1400	1, 13, 6	1420	2, 13, 32, 1
1401	17, 32, 2	1421	30, 32
1402	1, 13, 6	1422	2, 1
1403	18, 17	1423	2, 30, 2
1404	18, 30, 32, 2	1424	2, 4, 18

KEY

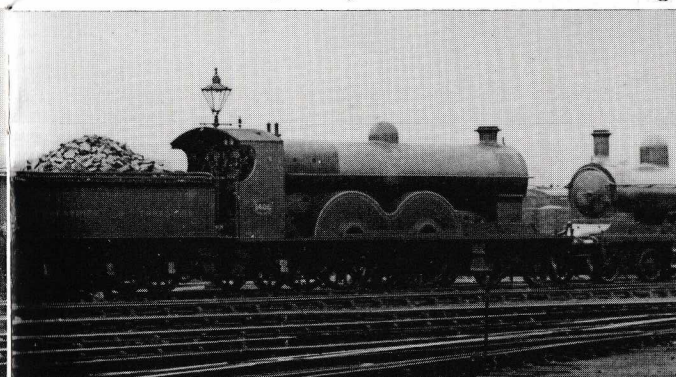
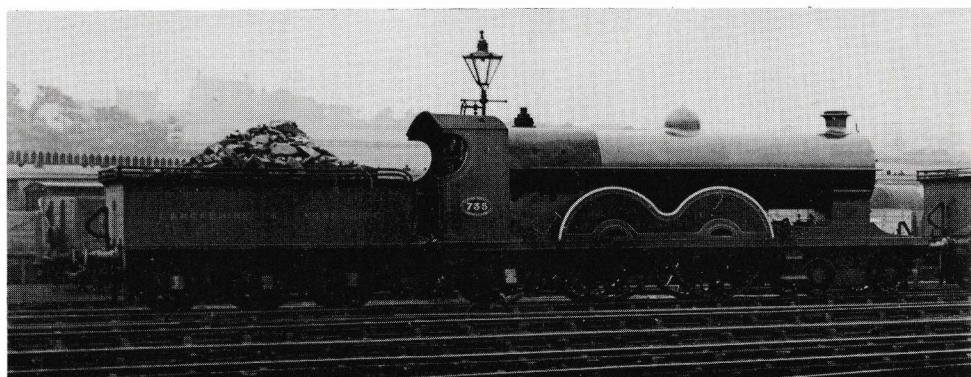
Shed No.		Shed No.	
1	= Newton Heath	18	= Sandhills (Bank Hall)
2	= Low Moor Heath	30	= Fleetwood
4	= Leeds	31	= Blackpool (T.R.)
6	= Wakefield	32	= Blackpool (C.)
13	= Agcroft		
17	= Southport		

repaired at Horwich and reappeared with a narrow valance strip similar to those on the 1405-1424 series. The same engine was the first of the class to be painted L.M.S. lake and carry an L.M.S. number (10303). In 1923 No.1408 was fitted with a Caledonian type whistle, to the great amusement of contemporary railway staff—and others. No.1411 had brake blocks fitted to the bogie wheels as an experiment, but no other engines were similarly dealt with until the arrival of the "1506" Class 4-6-0s in 1908. No.1418 was given a specially strengthened pair of connecting rods and valve gear about 1914, the object being to combat cases of connecting rods breaking through the jack-link pinhole, a weakness of this class and, in fact, of any express type of engine fitted with Joy's valve gear. Special care had to be taken with the "1400" Class as a whole and the valve motion and rods were taken down after every 78 days' work. The brass bushes in the connecting rod jack-link pinhole were removed and the rods closely examined for flaws. No.1418's special gear overcame the flawed rod trouble, but it also made the engine highly unpopular; when it fell due for valve gear examination the sultry comments of the fitters and their mates struggling to manhandle the heavy rods and crossheads turned the shop air blue.

Aspinall said once that he considered the life of an engine to be about 30 years, and his "1400" Class therefore almost lived up to his expectation, the dates of their withdrawals being as follows:—

1926: 702, 1395; 1927: 700, 735, 1392, 10302 (1393), 10303 (1394), 1397, 1399, 10326 (1411), 10332 (1417), 1418, 10334 (1419), 10338 (1423); 1928: 10305 (1396), 1414, 10330 (1415); 1929: 10323 (1408), 10327 (1412), 10328 (1413), 10336 (1421); 1930: 10315 (708), 10319 (737), 10312 (1404), 10325 (1410), 10331 (1416), 10337 (1422); 1931: 10317 (718), 10321 (1406); 1932: 10311 (1403), 10324 (1409), 10339 (1424); 1933: 10307 (1398), 10300 (1400), 10309 (1401), 10310 (1402), 10320 (1405), 10322 (1407), 10335 (1420); 1934: 10316 (711).

The engines were allocated Nos.10300-39 in the L.M.S. list, but only those shown above as cut up with L.M.S. numbers (ex-L. & Y. numbers in brackets) are known to have carried them. The Atlantics were on the whole very reliable machines, especially in the hands of first-class enginemen, of which there was an abundance on the L. & Y. Railway. Sheds like Blackpool and Low Moor, whose footplate staff had spent practically their whole career firing and driving this class, knew how to start a train without slipping, even if the engine did have 7 ft. 3 in. driving wheels, and many had had previous experience of this sized wheel when operating the "1093" Class. The Engines were good steamers and



The final L. & Y.R. condition of the 'Atlantics' with cast steel smokebox saddle. Low Moor shed has Nos.735 and 1406 well coaled ready for the day's work. The latter loco has received a set of Ross 'Pop' safety valves possibly the only loco so treated.

Real Photos.



The author of this article is a well-known name to most L. & Y. enthusiasts but pictures of him are quite rare as he was usually behind the camera! Eric Mason is posed here in front of 1418 at Atherton Central station in the early 1920s. The dome of the engine has a few scars to prove its twenty years of age.



easy to handle, and they have a historical value which, in the opinion of many who knew them should rank high in the locomotive story.

In 1932, there were some strong feelings amongst the 'older school' that certain types of locomotive from the railway companies should be saved from extinction. To this end, letters appeared in the railway press toward the preservation of the L. & N.W.R. 'Hardwicke' 2-4-0 and the Caledonian Railway single No. 123. It was also proposed that one of the fast disappearing L. & Y. 4-4-2s might be repainted in her former livery and kept at Manchester where it would be appreciated most. 'Hardwicke' was saved, at Derby, of all places, and the C.R. single was eventually to be preserved, but the 'High-Flyers' were allowed to pass into extinction.

Extracts from the Locomotive Committee Meeting minutes regarding the class.

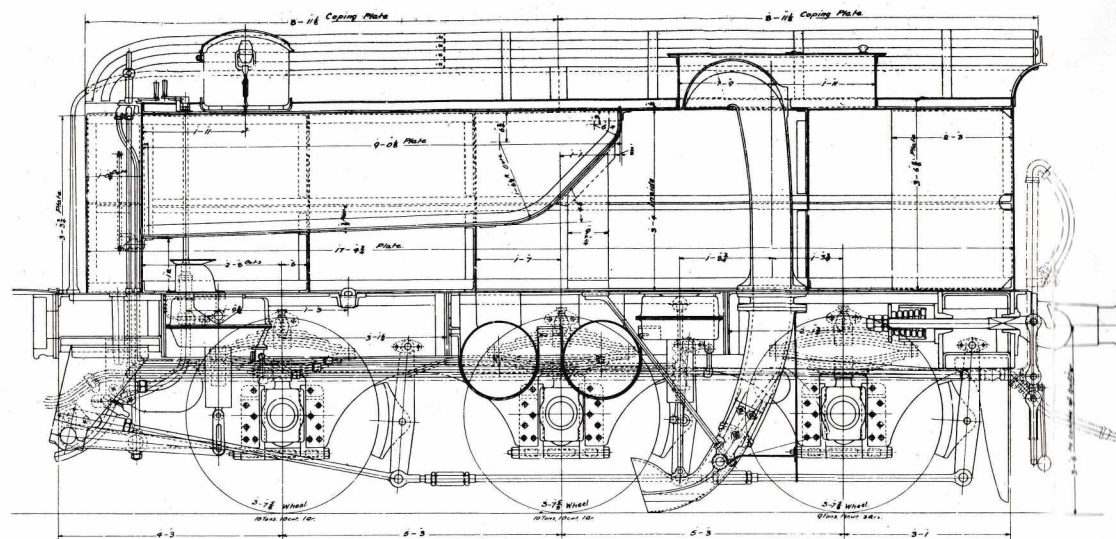
- 2.99 No. 1400 enters service — first of 20 to Lot 37.
- 27.12.99 Two engines fitted with cast iron valves.
- 22.6.00 Order to fit 14 engines with piston valves as a result of 'screaming' from the engines exhausting through the backs of the valves. (only 702, 708, 1392, 1393, 1394, 1396, 1398, 1399 and 1404 completed).
- 1.10.00 Last engine now fitted with higher cabside panels.
- 28.11.00 Order to alter all side regulator handles to normal position on the firebox faceplate.
- 28.2.01 Order that the steam reversing gear to be removed and ordinary hand-operated vertical screw substituted. Engine No. 1394 was the first to have the new regulator and hand-reversing gear .1901.
- Three engines have automatic water release valves. .1901.
- .1901 Compensating beams between coupled axles to be removed from all Lot 37 engines.
- 1.02 No. 1405 of Lot 45 enters service (20 engines ordered 29.10.1900).
- 3.03 No. 702 fitted with Davies & Metcalfe exhaust steam injector.
- 23.5.03 No. 708 fitted with indicator shelter for general test work.
- 22.6.03 Order for all engines to be fitted with outside bearings to the trailing wheels. (not completed until about 1912).
- 13.7.03 Order for engine No. 1418 to have stronger valve gear, 8" big end journals and bearings. Coupling rod width increased by ½" and 8½" wheel bearings
- 15.10.03 Order for all buffer beam ends to be 'slotted' to clear platforms when using crossover roads.
- 26.11.03 No. 1411 fitted with high speed bogie brakes.
- 26.2.04 Order for all engines to have 'D' valves. (not completed)
- 5.04 Thicker smokebox fitted to No. 1405
- 29.9.04 Order for all engines to have bogie brakes but this was not carried out except on No. 1411 and possibly one or two others.
- 26.4.06 Order for all engines to have 'Richardson' valves.
- .06 All handrails now altered to Lot 45 pattern.
- 18.6.09 Ordered that all the class to have strengthened motionwork (like 1418) Never carried out.
- 26.7.10 No. 1403 fitted with wide chimney—ordered that more engines be so fitted.
- 17.9.10 No. 1417 ordered to be fitted with ball release valves . . . work completed February 1911 (19% economy in coal later claimed).
- 0.12 No. 1395 fitted with indicator shelter for tests.
- .14 Superheater removed from Nos. 1420 and 1422
- .14 Superheater removed from Nos. 1421 and 1423
- .17 Superheater removed from the last engine, No. 1424
- .18 Order for cast steel saddles to be fitted to all engines as they come through the works.
- 0.20 Class discs 7 fitted to cab upper panels.

N.B.— There appears to be no record of the Hoy safety valve being fitted to the 1400 class. Both Lot 37 and Lot 45 were built with Ramsbottom valves but the change appears to have taken place between 1903 and 1905.

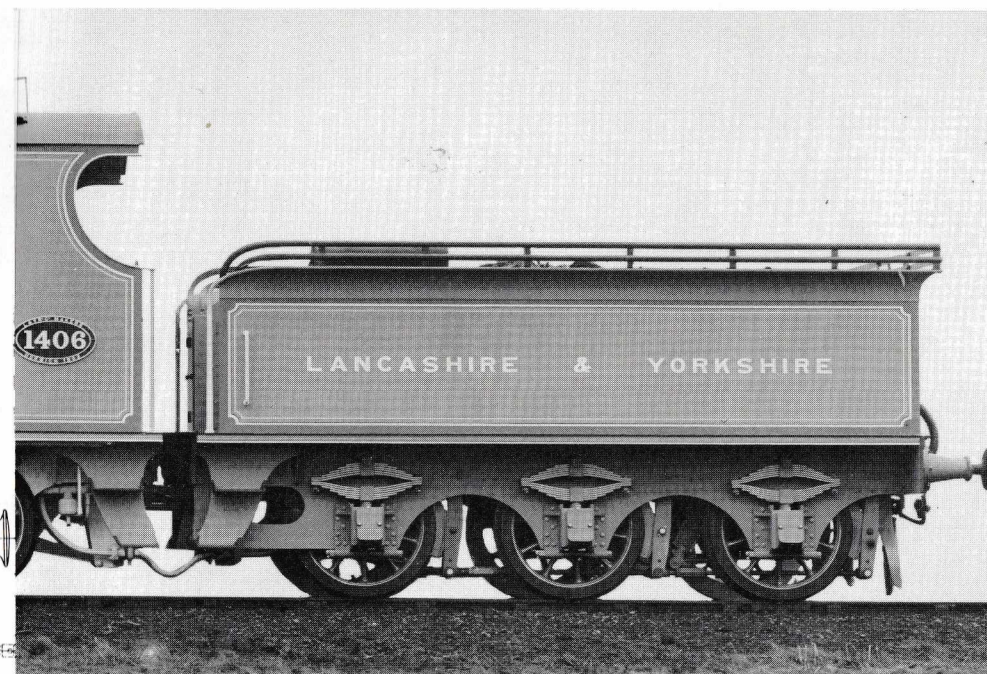
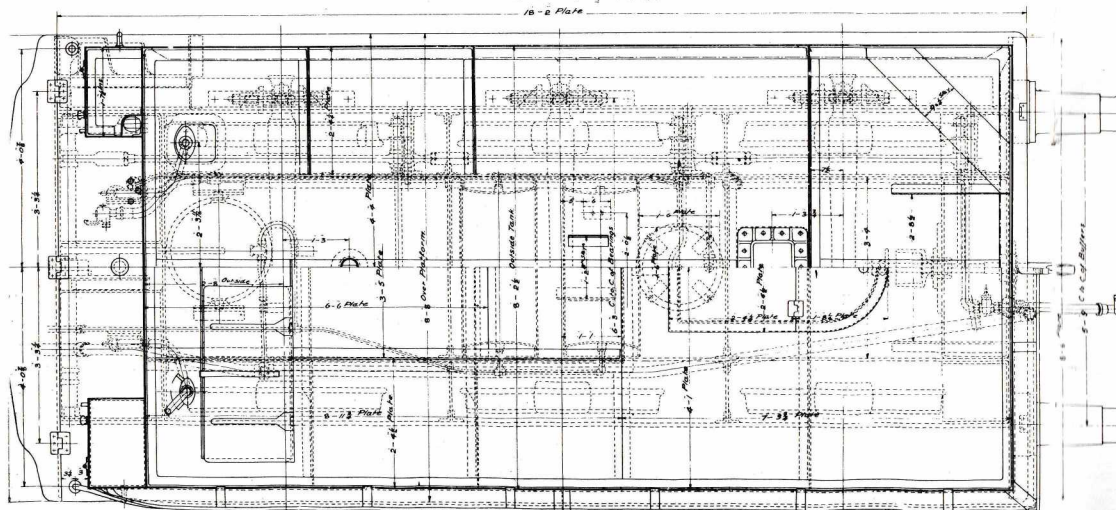
The second lot of 4-4-2s to be built had tenders with Hoy's double spring arrangement employed. The 'Aspinall/Wright' pattern of buffer was fitted, only to be exchanged for the Hughes type from 1909. It is noticeable that when first built, these tenders did not have a coal division wall as fitted to even the temporary tenders of the very first batch and to other Aspinall tenders.

Photograph courtesy N.R.M.

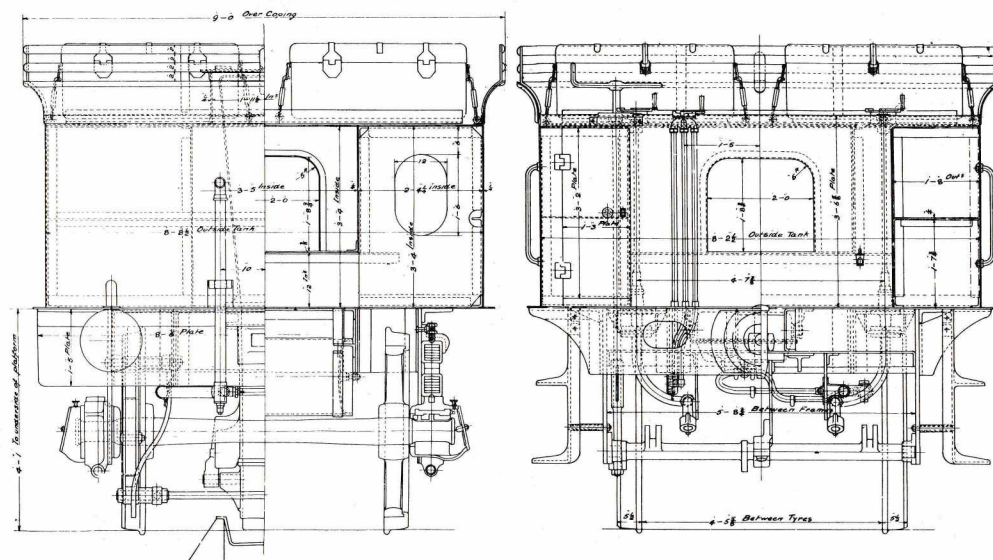
Drawings show the tender after modification of buffers in 1909.

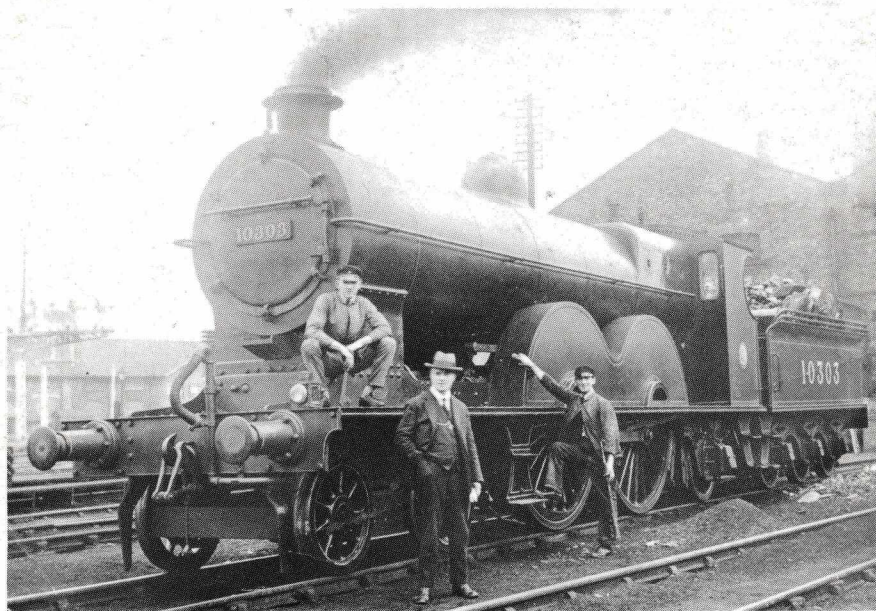


ARRANGEMENT OF TENDER
FOR
10 WHEELED BOGIE PASSENGER ENGINE
4 WHEELS COUPLED 7-3 DIA



Drawing 7mm. scale for 'O' gauge





The final condition of the class is shown in this L.M.S. period view of 10303 (ex-1394) at York. The engine is painted red and fully lined out, even to the buffers which were always black in L. & Y.R. days. Although this engine was the first to be repainted by the L.M.S. and received the new number, it was withdrawn in 1927 when several were still running with their old pre-grouping livery and number.

L. & Y. ATLANTIC No. 1400—DIMENSIONS

Cylinders	19" x 26"	Height from rail level to top of	
Coupled wheels	7' 3"	chimney	13' 0 3/4"
Bogie	3' 0 1/2"	Weight (in working order) on :	
Trailing "	3' 7 1/2"	Bogie	12 tons 5 cwt.
Tender "	3' 7 1/2"	Each pair of coupled wheels	17 tons 10 cwt.
Overall length of engine and tender...	57' 6 1/2"	Trailing wheels	11 tons 10 cwt.
Total wheelbase " " " ...	48' 1"	Engine weight (in w.o.)...	58 tons 15 cwt.
Engine wheelbase " " " ...	27' 9"	Tender weight (in w.o.) ...	30 tons 13 cwt.
Centre to centre of coupled wheels...	7' 6"	Coal capacity of tender ...	5 tons
Bogie wheelbase	5' 6"	Water " " "	2,290 galls.
Centre line of boiler above rail level	8' 11"		

Further photographs and a cab drawing appeared in Platform Three and more contemporary information was published in Platform Eight.

The Editor wishes to thank Roy Chapman, John Edgington, Tom Derbyshire, Peter Priestley, Ron Priestley, Sam Sutcliffe and Tony Watts who all contributed to this feature.

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