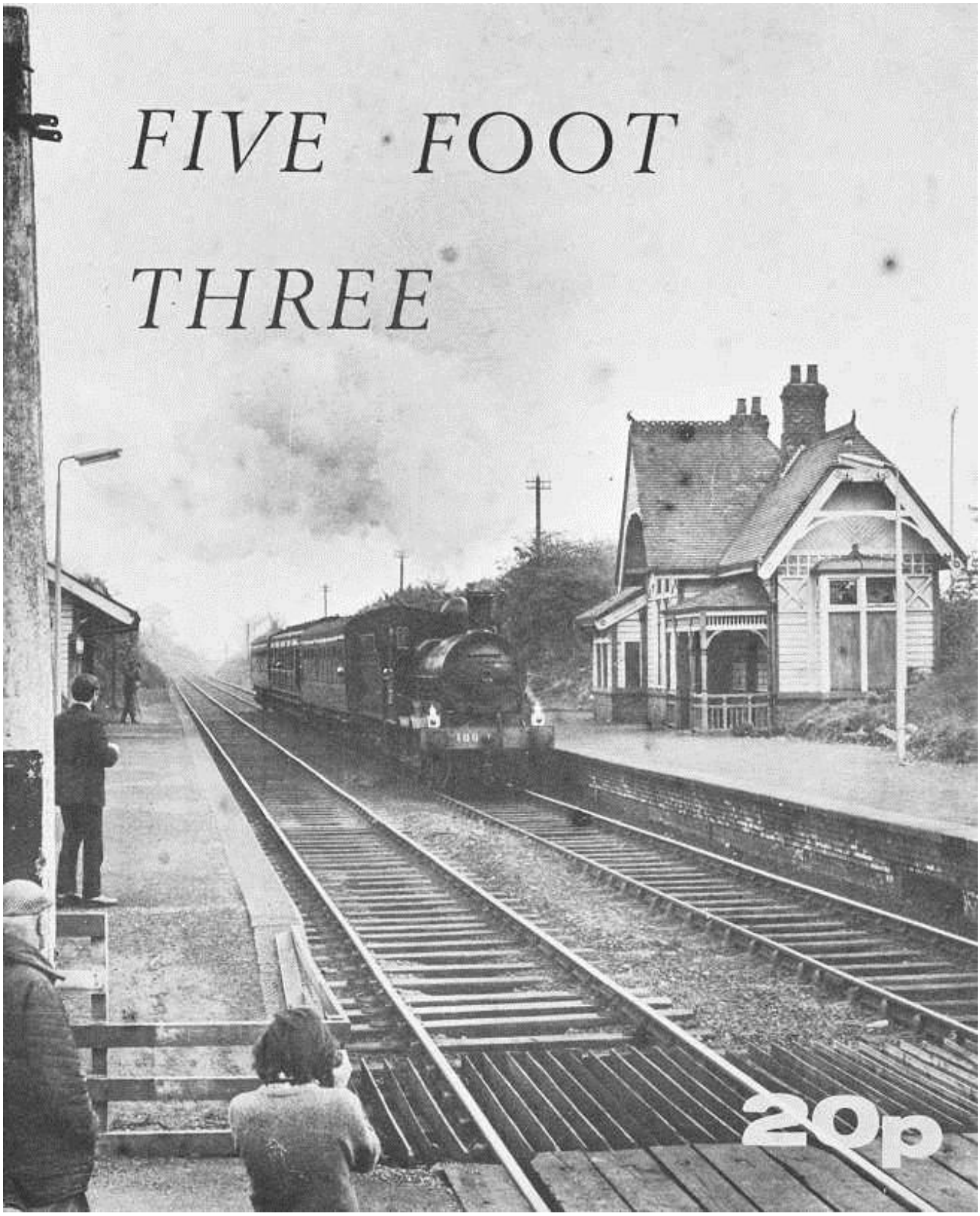
FIVE FOOT
THREE
20p

FIVE FOOT THREE
No.16
Winter 1974

Editor: Charles Friel

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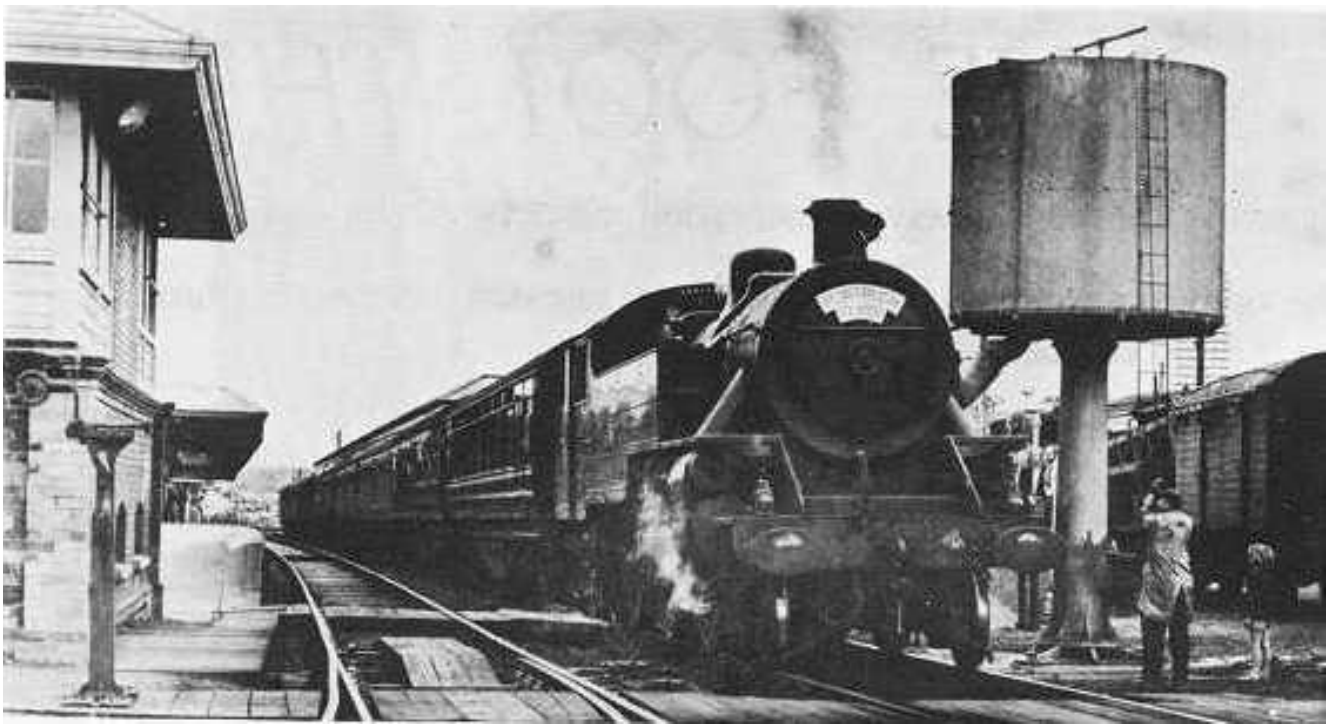
Front Cover: No.186 storms past Trooperslane on 20th April 1974 with the King Fergus II train. (C.P. Friel)

SUMMER PROGRAMME 1974



No.4 takes water at Ballymena on the second Portrush Flyer, 4th August 1973. The first two coaches are NIR's, including North Atlantic brake 472. (C.P. Friel)

Steam Train Rides - **Every Sunday In July And August**

Whitehead Excursion Station, 2pm to 6pm.

Portrush Flyer - **20th July, 3rd, 17th & 31st August**

Recreate the vintage days of the steam excursion on the only public steam train on any main line in the British Isles. Party rates available - full bar service both ways - seats reserved - full day at the seaside for all the family. Plenty of seats on last two trains, but first two booked out at time of going to press. The 17th August Flyer is booked to be worked by No.171 and will be extended to Londonderry and back to Portrush in the afternoon. Details available separately.

Silvermines Railtour - **28th & 29th September**

Locos 4 and 186 in two big days of steam.

Dublin - Limerick Junction - Clonmel - Limerick (overnight).

Limerick - Silvermines - Nenagh - Ballybrophy - Dublin - Belfast.

Runpasts, lineside buses, photo stops, train splitting and leap-frogging, full catering service throughout, hotels and connections arranged. Separate details available.

Anniversary Run - **19th October**

Proposed, not yet finalised, 10th anniversary run, Belfast to Dublin and back with No.171. Probably taking in a visit to beam engine and other attractions. More details available later.

. . . NON-MEMBERS ARE WELCOME TO ALL RPSI EVENTS . . .

. . . ALL TRAINS WORKED BY RPSI ENGINES AND COACHES . . .

. . . EVERYTHING FOR THE ENTHUSIAST . . .

EDITORIAL

In recent years the Irish railway enthusiast has seen his library grow from a battered second-hand copy of the 1949 ABC and Murray's 1944 Great Northern to a wide range of company histories, facsimile timetables, loco lists and recollections of steam days as well as picture 'histories' and an increase in Irish coverage in the periodicals - both prototype and model.

This plethora of the printed word has been a very welcome change when one considers the miserable range of material available in the early sixties. There is no doubt that every Irish enthusiast owes a great debt of gratitude to the various publishers and authors who, between them, have unearthed a wide range of information and photographs.

The various publishers have invested huge sums of money in Irish subjects and that their investment is paying off is evidenced by the still-expanding list of titles. However, one wonders if money considerations do not take a dominant part in the production of books on our local lines. Time and again we have heard of authors having to trim their work to suit a seemingly arbitrary number of pages with the unavoidable consequence of damaged material being published, not as the author wrote it but as it had been trimmed to suit an obscure accountant.

The selection of material by the publishers in the first place leaves many with misgivings, for the yardstick seems to be first written first published regardless of how ill-informed or otherwise the author or how poorly treated the subject. In this regard a more responsible attitude seems to be called for as once a book is published on any one aspect of our railways the market is automatically killed for several years. There have been several examples of this in recent years where authors who seem to enjoy the confidence of their publishers bluff their way with padding, undefined conclusions, hazy or hopelessly wrong ideas and a type of 'pig in the parlour, are ye right there Michael' attitude to Ireland and all things Irish.

Many of the books offered to the previously-starved Irish enthusiast in recent years have suffered from two basic faults - little original information other than that obtained from company records (annual profits, etc., not really the stuff of railway enthusiasm) and an over-emphasis of the oddities of Irish railways (just how often have the Battle of the Gauges, the Fintona tram, the Listowel and Ballybunion and the Armagh disaster been rehashed?). The much more interesting and better recorded everyday life of Irish railways in the past is almost completely ignored. The point is emphasised by the fact that, until recently, most narrow gauge lines had been well covered while all the broad gauge companies, with the exception of the Northern, had only been 'done' (all too briefly) in the photographic albums.

Thus it has been disappointing when several authors recently tried to publish books based on their own experiences (containing a wealth of valuable, original material) and were fobbed off with the excuse that the subjects had already been 'adequately dealt with'. A more enlightened attitude by publishers would do the recording of our railway history a great service as well as being more financially rewarding through better sales.

Perhaps if the readership made their views known to the publishers, then some progress might be made.

NEWS FROM THE COMMITTEE — J.A. Friel

Committee meetings are held on the first Thursday of each month, the venue being one of seven houses made available by Committee members living in Belfast.

The Society's equipment for sending out circulars - consisting of duplicator, addressograph machine and plates together with paper and envelope stocks - have been looked after for several years by J. Glendinning. All of this has now been taken over by the present Secretary and moved to his digs in Belfast. The Committee would like to express its thanks to Johnny for all the hard, routine work he has put into updating the plates and producing circulars and distributing these and our magazines. Anyone interested in helping out in this field in future is asked to contact the Secretary.

Society members distributed 6,000 leaflets in towns along the Antrim-Lisburn line during the week before the line's reopening in January. In return NIR have contributed towards the publicising of the Portrush Flyer.

Much Committee time has been given over to discussing programmes of work on engines, coaches and track at Whitehead. However, a lot of coach and track work remains undone due to the pitifully small number of members turning up each weekend. Between engine re-tubing and rebuilding the interior of the Diner, several members have worked many long weekends and weeknights during the winter. BUT our appeals for more workers have had a generally poor response - the circular about this at the start of the winter produced three new workers while the "What are you doing over Easter?" circular produced one! There is lots and lots to be done if only more members would make the effort to come down. Some members travel a hundred miles each Saturday to and from Whitehead; how this contrasts with the many who live only a tenth of that distance away for whom the effort would be so much less, if only they would turn up.

Michael Henderson tackled the job of co-ordinating the Steam Gala with great enthusiasm. This job has been shared by several Committee members in the past and they are glad to see our PSRs take on a share of the responsibility. Michael was also in charge of our first Schools' Day on 12th June. Rescheduling of school timetables following the recent province-wide strike kept some parties away, but the venture was a big success and useful experience in a new field.

The enormous amount of time which went into re-tubing No.4 and No.171 left nothing for bringing No.27 into the old shed over a pit for attention to her boiler. Accordingly, her boiler insurance had to lapse temporarily, but the necessary work will proceed when circumstances permit.

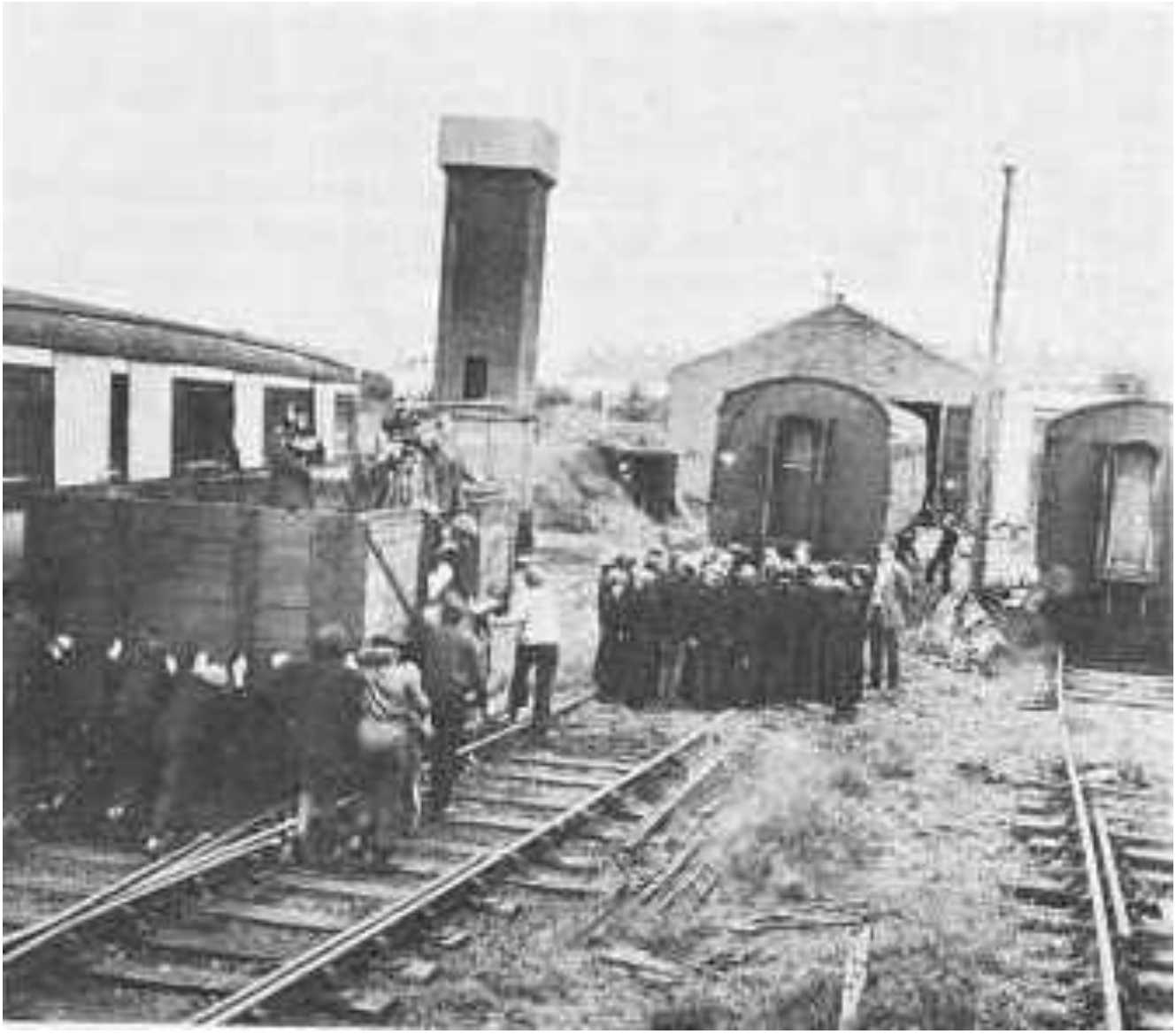
The Committee was pleased to agree to the publishing of the book "A Decade Of Steam" written by members Drew Donaldson, Jack O'Neill and Bill McDonnell.

Because of the unusual nature of the Society's activities, our insurance position needs to be constantly under review. If we were to take precautions against every possible source of danger our activities would halt instantly. We are grateful, therefore, to Derek Young in advising on the correct and cheapest types of insurance cover. At present our public liability policy is for £250,000 and we are covered for any claim provided we can show that all reasonable precautions were taken to prevent accidents.

A particular success during the winter was the return of the indoor meetings in Belfast. These were made possible by the efforts of member Rev J. McKegney in obtaining the use of St.Jude's Hall in Sunnyside Street - an excellent venue far enough from the city centre to make car parking easy and safe. A film show provided by Sullivan Boomer at the first meeting brought us back to the early days of the Society, and he also showed some German steam. The second meeting, also a film show, was provided by John Laird. Almost a hundred people, including several ex-railwaymen, turned up to see an entire evening of steam in the early sixties. At the third and final meeting of our short season, Graham Stanley presented slides and cine with stereo sound of steam in his native Australia. The professional quality of the material and of the presentation really caught the imagination of those present (some even resolved to throw their own cameras away). There were many requests for Stanley to do another show next winter, and at present another series of meetings is being planned.

It was with great regret that the Committee accepted the resignation of Irwin Pryce from the Committee

following disagreement over rostering arrangements. Peter Scott has taken over the responsibilities of the Locomotive Operations post. An Operating Sub-committee, with the main function of rostering, has been set up composed of A. Ragg (co-ordinator), P. Scott (drivers, firemen and steam-raisers), P. Newell (shunting and coaling), K. Pullin (coaching staff) and J. Friel (cleaners, etc.). J. Friel was appointed Safety Officer.



Filming the Schools' Open Day. Ulster Television in action as a party from Bangor Grammar School are introduced to the Society and the Site. (C.P. Friel)

The Carrickfergus Advertiser has agreed to sponsor the Steam Gala by producing posters and giving free advertisements in its paper. Coleraine District Council (whose area includes Portrush) has donated £50 and the Causeway Coast Tourism Development Association has donated £15 towards publicising the Portrush Flyer.

In mid-May, for the first time in several years, the Committee met to decide whether to run a railtour because of the fact that so few people had booked. The tour was, of course, the Saint Lawrence and eventually it was decided that we could afford to lose some money in running the tour. It was ironic that, having reached this heart-searching decision, the tour was eventually prevented from running

anyway by the strike which paralysed the province at the end of May. However, the original poor support for the tour has not been forgotten by Committee members and it makes the planning of future tour programmes all the more imponderable.

The Treasurer has introduced a stricter system of recording and banking income from our various events. Our money transactions are now very complex and there is a greater need to keep control of transactions.

Shunting School practical session when some of the new trainees tried their hand at shunting for the first time, to the amusement of No.23's crew. (C.P. Friel)

A recurring problem is with us again - that of break-ins at Whitehead. It is difficult to take effective action against offenders, even when they are known. All we really can do is to strengthen the security of the fence. The slow progress in doing so inevitably comes back to the need for more volunteers from our large membership, especially in the Belfast area, to come down and help out where it is needed.

Appointments:

Liaison Officer: John McGuigan

Posts Of Special Responsibility:

Plant Maintenance:	J. Glendinning
Assistant Operations:	M. Henderson
Counter Sales:	Nevin Hamilton
Catering:	Ena McKnight
Trainee Shunter/Guards:	B. Blair M. Henderson N. Poots K. Pullin D. Trotter L. Whyte-Drake D. Webb

LOCOMOTIVE REPORT — P.A. Scott

Most of the immense amount of work mentioned in Five Foot Three No.15 has been successfully completed after one of the most hectic winter's work yet managed at Whitehead. Following the Three Rivers Tour engine steaming practically ceased as No.4, No.171 and No.186 were quickly in various stages of dismantling and repair - for a while the storage bench looked like a loco jumble sale with miscellaneous pipes, fittings, bearings, springs and rivets.

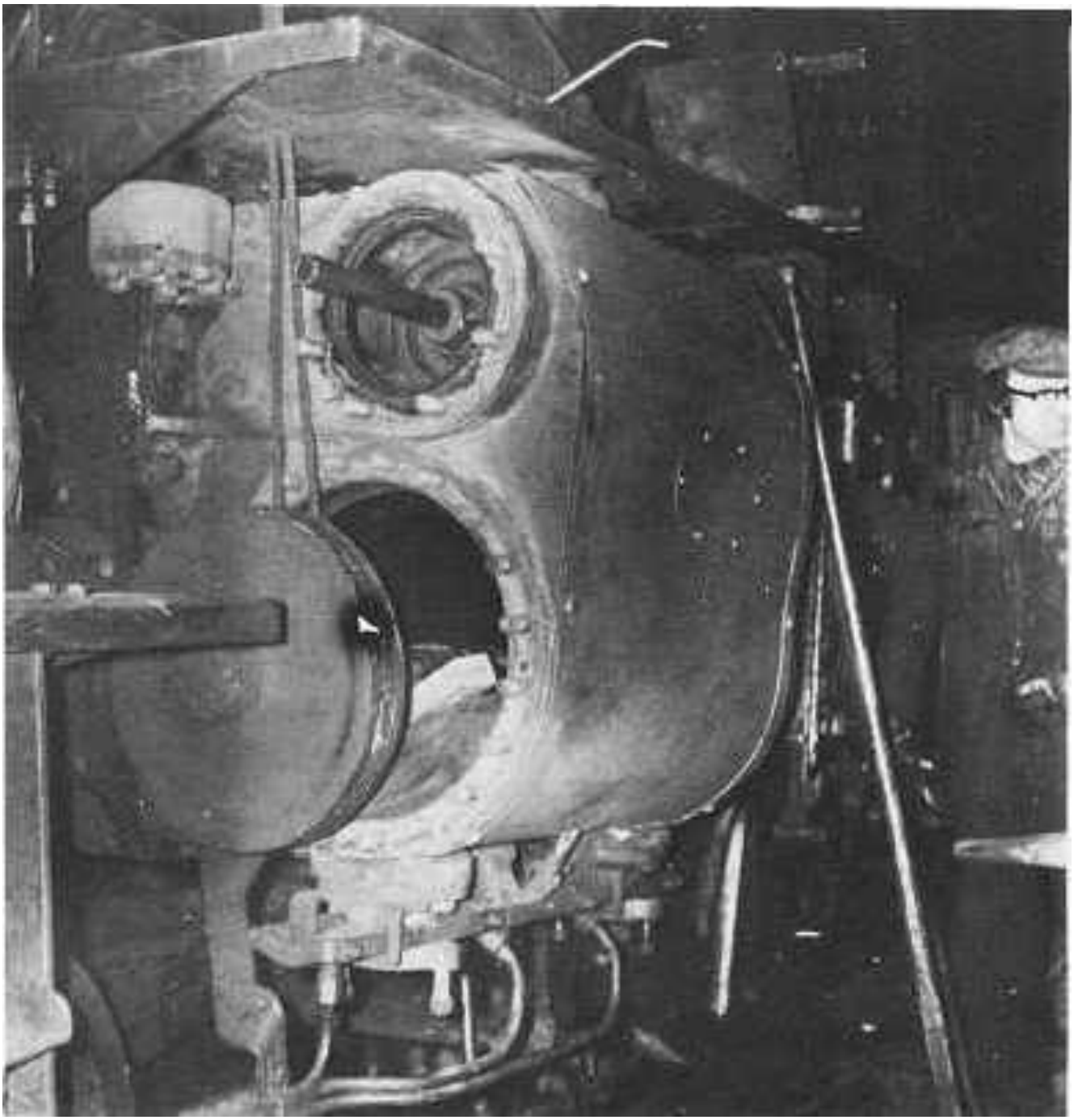
Although No.4 had all her small tubes removed first, it was No.171's tubes which arrived first and with the experience gained on No.186 the previous winter, the retubing job went ahead with all due speed. At the same time the routine taking down and cleaning of cab fittings, minor boiler repairs and attention to the chimney were undertaken and completed. The balance of the overall work on No.171 fell into three main areas, the valves, the weighing, and ever-persistent brake problem.

The unevenness of No.171's beat was particularly noticeable in recent outings with, as one expert put it, "one beat now, and then after a bit, three beats on top of other". Apart from sounding erratic, her frequent stalling while shunting at Whitehead was very troublesome. Following attention to the valves, she now sounds much more even though she is still slightly out in reverse gear. The method employed was to equalise the lead, using the exhaust side of the valve heads and the exhaust ports for reference. It would have been too much trouble to remove the steam pipes to gain access to the admission side, which would have given a more accurate result. The worst gear, incidentally was found to be three eighths of an inch out.

For the job of weighing the engine a wheel-weighing jack was constructed using a ten ton hydraulic jack fitted with a pressure gauge, and a bracket to bolt on the outside of the wheel to be weighed. The wheel was lifted just enough to allow a steel rule to pass underneath, between tread and rail. The pressure gauge was calibrated to read the load directly, allowing for the difference due to lever effect between wheel and bracket. The method is not accurate as the track is not exactly level and because the rail tends to spring up after the wheel as it is lifted. This tends to give a high weight reading, but even so it should be accurate to within 3 cwts of the correct value. The engine was found to be badly out - the driving axle was carrying only ten tons instead of eighteen while the other axles were carrying more than their fair share in consequence. While the adjustment of the weight gives the engine better grip etc., it should also help her riding and help reduce strain in coupling rod bushes, etc.

Our old enemy, the brake, was cured by fitting a replacement engine brake cylinder. The problem was a leakage past the rolling ring during partial brake applications and this has now disappeared. Scale from the internal steam pipe, which is partly steel, still comes over with the steam, but the filter removes

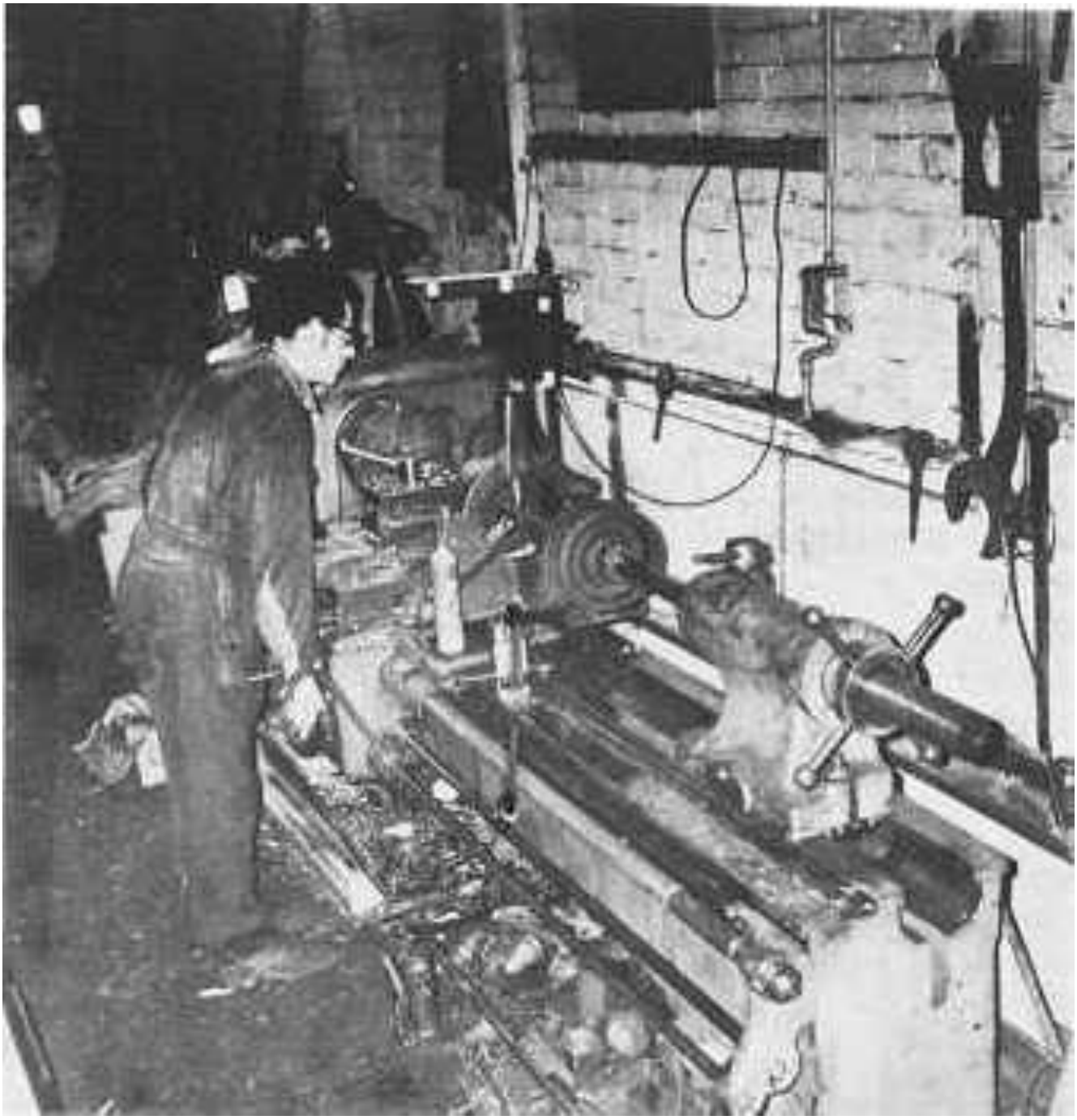
most of it before it can reach the ejector cones.



Dismantling the cylinder and piston valve on No.4 - cylinder piston removed and supported by rope. (C.P. Friel)

The tank engine, No.4, was the subject of the same retubing as No.171 but had a lot of work carried out on her motion as well, not to mention an extensive repair job on the ashpan and a repaint in UTA lined black. The trouble with removing the valves was mentioned in the last magazine and after a lot of heavy slogging, the valve heads were extracted on each side. Fortunately the valve heads were still large enough to be reused, but after reboring the valve chests it was necessary to fit new rings. A set of rings suitable for the rear head were obtained from York Road. For the front head, which is ⅛" larger in

diameter, it was necessary to obtain rings of approximately the correct dimensions, but larger, and machine them to size. We were fortunate to obtain rings of the correct inside and outside diameter but nearly twice the thickness required; these were turned to size in a specially constructed jig for the lathe. Although it meant more work for the constantly-employed lathe, it did have the advantage that the rings would be finished to provide a good fit in the grooves.



Skimming and polishing one of No.4's valve spindles in the lathe. (C.P. Friel)

While we had the valve spindles out, we took the opportunity to true them up, skim and polish them on the lathe while the valve liners were rebored to a new diameter to make them parallel. In order to insert the valve spindle into the valve chest, it was necessary to compress the rings in the grooves and to hold them until both heads were located in their respective liners. This was done by jamming them with thin

cardboard. The greatest difficulty was to locate the rear head without the rings springing out, since access to it is not possible during the operation. The first spindle went in very easily but the second gave trouble when one ring sprang out and prevented the rear head from entering properly at the first attempt. Before refitting the gland bushes it was necessary to have them remetalled and machined and this was done by York Road. The left spindle had been running bent where it passed through the rear gland bush and was badly worn to one side in consequence.

Peter Scott works at fitting No.186's left-hand big end bearings while John Friel (right) waits to help with the next lift. (C.P. Friel)

When first steam tested, No.4's exhaust sounded rather woolly on one beat, presumably before the

cardboard from one of the heads had disintegrated and allowed the rings to expand. to their proper diameter. By the end of the shunting upon which the engine was engaged, the exhaust was sounding sharp once more.

Fears that No.4's tubes would be held up by the industrial problems earlier in the year did not materialise and delivery took place on time. The tubes were entered and expanded inside several days, with the use of an air-driven tube expander which took most of the arm-breaking effort out of this otherwise lengthy job. The hydraulic test was carried out using an air-driven hydraulic pump which is not unlike a locomotive feed pump, and consists of a large diameter air cylinder and a narrow-bore water cylinder in tandem. It took a great deal of the muscle power out of the hydraulic testing. We should perhaps mention that the blanks used to replace the boiler fittings during the hydraulic testing consisted of metal plates with a gasket of thick rubber cut from the scrapped BUT railcar ends of 552.

A number of minor boiler jobs were also done, for example the overhaul of clacks and certain boiler fittings, retapping of washout plug holes and riveting over of firebox stay heads. The ashpan was patched and strengthened and the smokebox repaired where the door was no longer fitting properly. Some replacement and repairs were carried out to the self-cleaning screens.

When the engine was steamed after retubing, a bad knock was noticed when working hard, and looseness was subsequently found in the coupling rod knuckle pins. In order to renew these it was found necessary to dismantle the return cranks, connecting rods and coupling rods. The knuckle joint consists of a case-hardened steel pin working in case-hardened bushes, and because of wear it was necessary to make new bushes and skim and reharden the pins. A number of the coupling rod and connecting rod bushes have become slack in the rods and will require attention. The worst one (the right hand coupling rod bush) was remetalled and fitted.

No.186 was not being neglected while all this was going on. Her chimney was repaired by welding and patching and we will have to make do with this until a new chimney can be fitted. The right trailing tender box ran hot on the "King Fergus" railtour and this has been attended to.

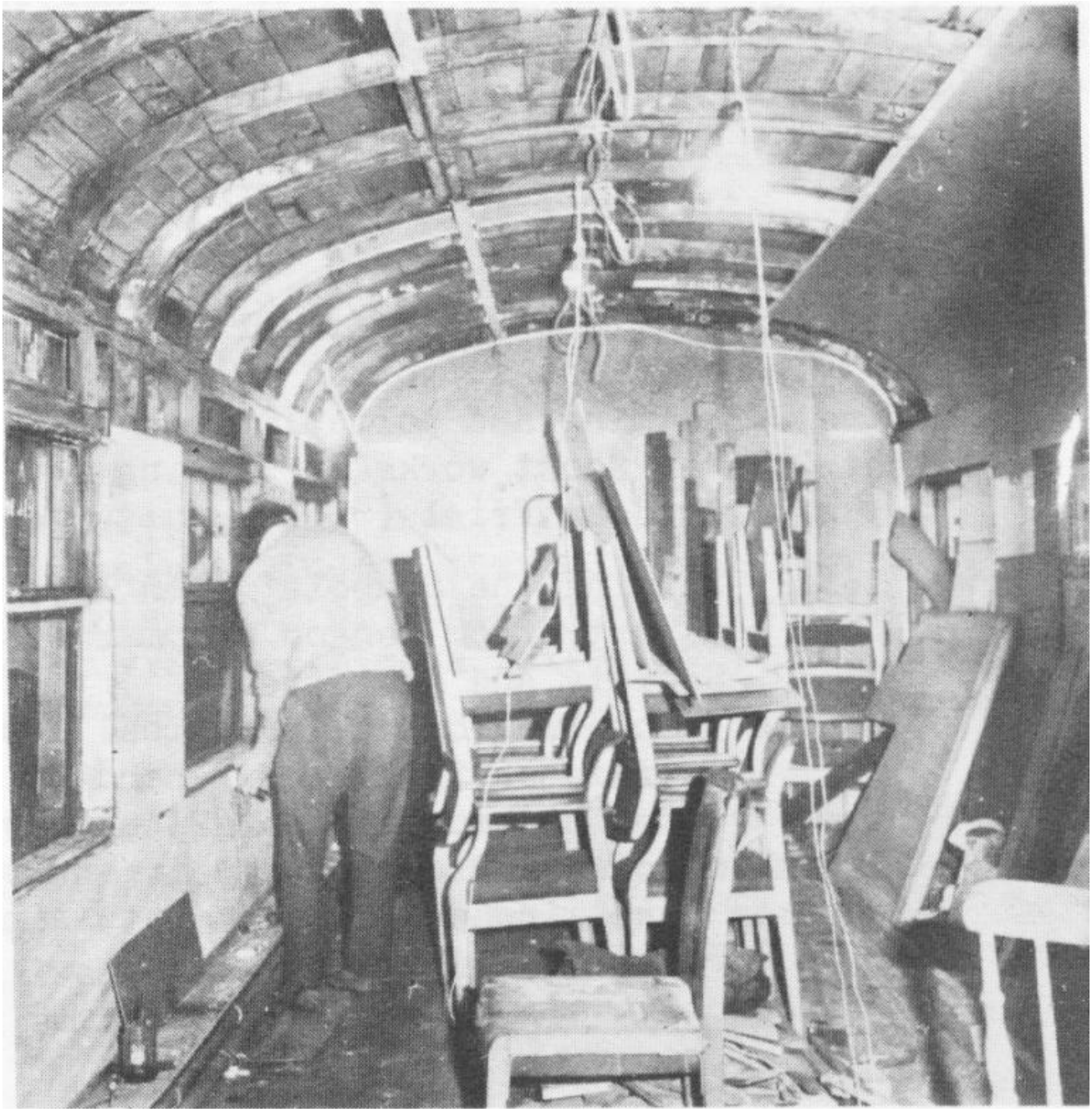
CARRIAGE NOTES — K. Pullin

The main job in the newly-formed Carriage and Wagon Department during the past winter and spring has been on Diner 552. On the outside, work has been done to the roof to cure the numerous leaks while inside the saloon section the ceiling and one wall have been re-panelled. The saloon end of the kitchen has been rebuilt to replace the narrow, awkward, serving hatch with a bar and serving counter.

The principal reason for the work outside was the severely leaking roof; travellers last year may have noticed the rather lumpy appearance of the plastic ceiling. When we investigated we found these lumps full of water and further investigation unearthed much mouldering hardboard, plywood and much of the 'false work' in one wall was found to be very rotten, though basically the structure was sound. The 'false work' consisted of pieces of rough timber behind the hardboard to give a feeling of solidity. The intended repair job on the roof was to strip off the old canvas covering and replace this with roofing felt. When one canvas layer was removed another appeared and under that a third. The lowest layer was in fairly good condition and we have attempted to retain this by scraping off the old paint and repainting, patching with fabric the many small, and some large, holes. A section over the kitchen was one huge patch and this was replaced with roofing felt. All of this took far too long to do and delayed other work in consequence.

When work on the roof was thought to be reasonably well in hand, the interior was attacked. Some sections of the roof beam had to be replaced and we found a supply of suitable, well-seasoned, timber in the open wagon earmarked for scrapping. With the roof structure strengthened, the re-panelling of the ceiling in hardboard, and the walls in mahogany ply, was plain sailing.

As part of the reconstruction work in the new bar area a partition was constructed which reduces the eating area by one pair of tables, i.e. six seats, thus leaving a reasonable circulating and queuing area. A fairly realistic bar counter forms one end of this space where customers will buy not only liquid refreshments but also such kitchen commodities as sandwiches, tea and hot dogs. The drawing shows the new arrangement and how the kitchen has been rearranged to gain at one end the space lost at the other. The rebuilding job meant the removal of the non-functioning refrigerator.

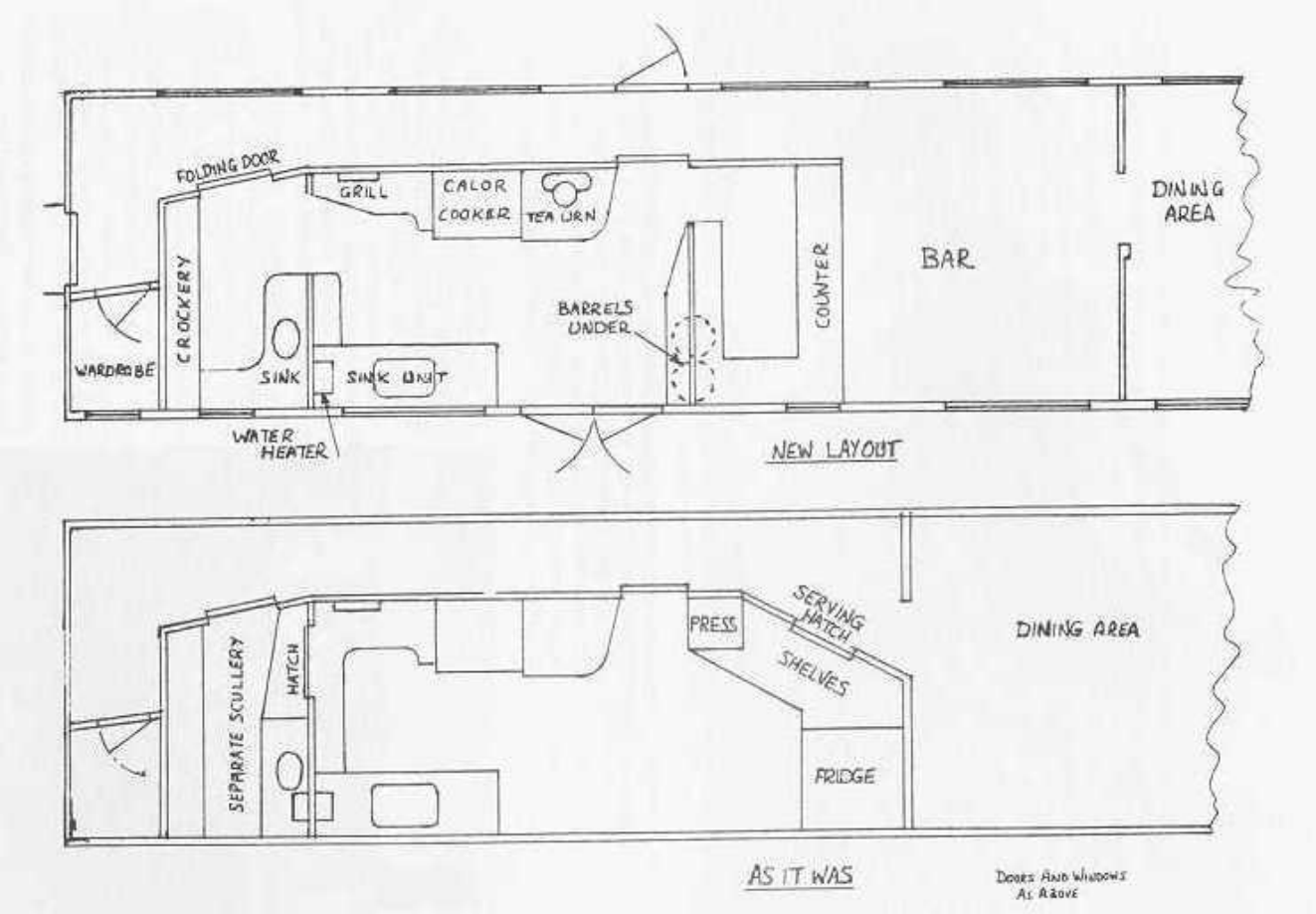


Inside 552 during repair and restoration work showing new panelling on walls and new timber in the roof. (C.P. Friel)

The Bredins, of course, were in quite good condition but much important work was done to the panelling of 1328, the upholstery in 1333 and re-hanging the doors in the three corridor Bredins. Work

in 861 has been confined to the provision of a shutter in the shop, which enables it to be closed down with some security.

When time allows, we have pelmets and curtains for the diner and older type electric lighting to replace the fluorescents. The roof on the Directors' Saloon (another canvas job) must be fixed and the outside panelled and inside wiring attended to. After that 4012, while her roof is good, has many broken windows and damaged seats.



Diner 552: Alterations to Kitchen Area

One Guinness van has been derailed near the Carriage Siding to act as a workshop while a start has been made to repaint the Bredins in crimson of a shade similar to 861's but without the white panelling. Black and straw lining will eventually complete the livery.

SITE REPORT **P. Newell**

Since the last report, the new carriage siding, to be known as 'No.2 Carriage Siding', has been completed. It now holds all the rolling stock not required for the operating season. Unfortunately it can only take four and six wheeled stock at the moment but it will be realigned to take up to five bogies. The point-work went in reasonably smoothly and to schedule, the most difficult job being the excavation of the point from under fifty tons of rubble at Magheramorne. This was accomplished with the aid of a huge bulldozer kindly made available by the Cement Works. At first only the diesel engine entered the new siding, but later No.4 successfully did a bulldozing job on the first few lengths. By getting the old 'rubbish' rake, consisting of three open wagons, a flat, two Guinness vans, the brake van, No.171's big tender, the NCC railcar we're storing for the Transport Museum, oil car and coach

4012, the shunts necessary for making up trains and so on should be much easier.

The gates across the platform and running lines have been completed. The fence was added to with the addition of barbed wire on the gate pillars, gates and the top of the fence while much of the bottom of the fence is being put in a run of concrete.

Carriage siding turnout being put in. (C.P. Friel)

At the moment, plans are in preparation for the laying of No.5 shed road and the subsequent diversion of the roadway at present on this site. In order to relieve the congestion inside the fence, it is proposed to lay a road for the rubbish parallel to our own 'main line' between the water column and the bridge. The roofing of the new shed is still in the forefront of our minds and with a bit of luck, and lots of money, we hope to get something done there this winter.

In conclusion, I would like to record my thanks to those Committee members who enabled me to get the new siding and point completed. At the same time, I must say I was disgusted at the total lack of interest shown by the rest of the membership in this work; the response to the request for workers at

Easter, as far as site work was concerned, was zero! With few exceptions, the same people have been working continuously on engine and site for the past ten years, so for the sake of the Society and yourself, why not participate in the Society and its work and ensure another and even more successful second decade?

THE 321 CLASS — A. Donaldson

As the nearest GSR rival, after the demise of 341 in 1928, to the GNR "S" class, a study of the 321 class may be of interest. In fact, the Ss were G.T. Glover's alternative to an enlarged QL which was designed by C. Clifford after the 322/113 exchange of 1911, which could possibly have been influenced by the GS&WR engine.

The 321s were Coey's fourth and, as it turned out, final answer to the problems of increasing train weights and the difficult starts out of Kingsbridge and Cork. The first batch, Nos. 321-8, came in 1904/5.

To meet the need for greater steaming capacity he had designed the first coned boiler in Ireland for No.308, one of his earlier classes. This type of boiler was decided on in order to increase the water and steam space round the firebox, as well as the tube heating surface. Actually, the front ring of the boiler was parallel, 5'0½" inside diameter; the rear ring increased from this diameter at the front end to 5'6½" at the firebox. The barrel was 10'3¾" long, and the tubes were carefully arranged so as to give the freest possible water and steam circulation - as well they might, for there were no less than 301 of them, only 1⅝" diameter giving a tube heating surface of 1366 square feet. In the later batch of 321s the tubes were reduced in number to 283 giving 1283.9 square feet.

The increased weight of the new boiler for No.308 caused concern to the Civil Engineer's Department so every effort was made to cut out unnecessary weight, and this also affected the 321 class. Even so, the latter came out at 52.05 tons, with a maximum axle load of 16.8 tons - low figures however for such a large-boilered engine.

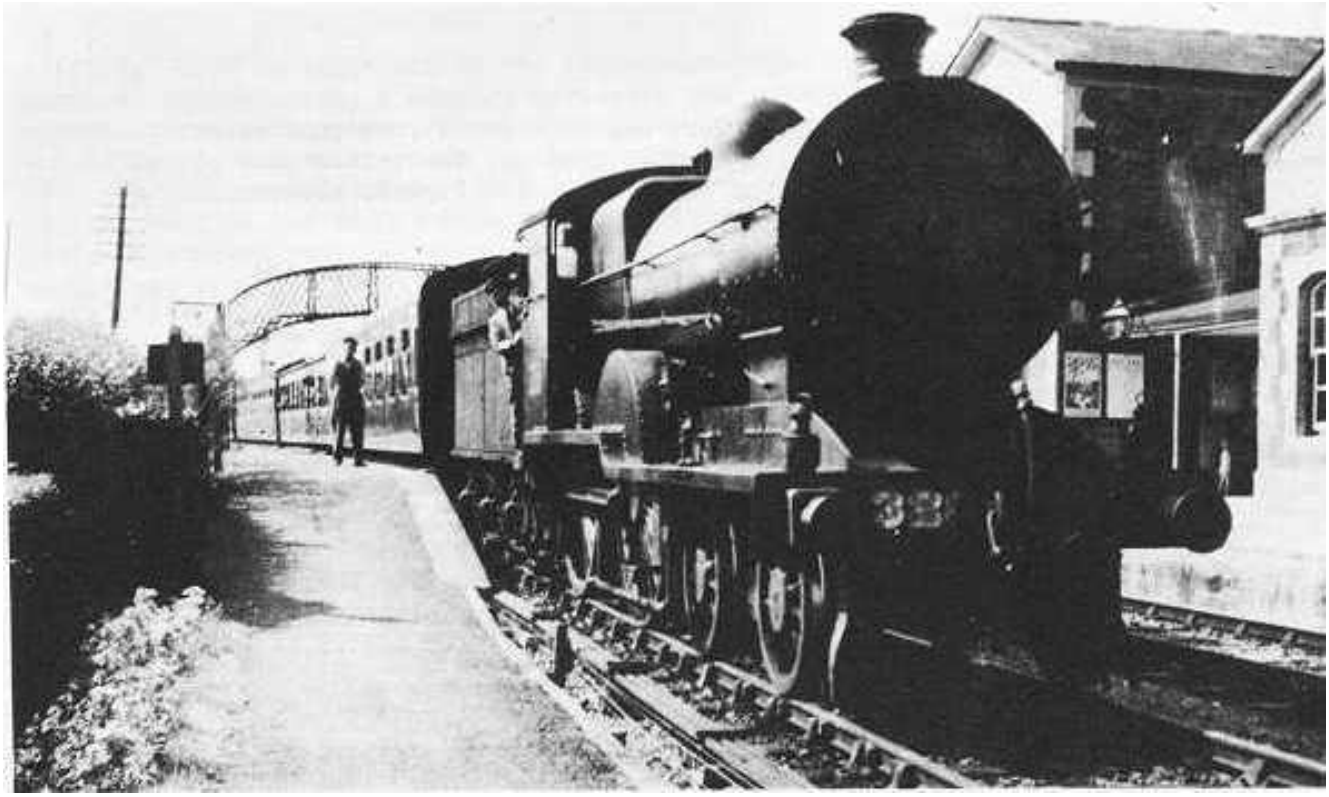
The taper boilers provided an ample supply of steam, so after the appearance of the second batch of 321s, in 1906, Nos.305-7 got coned boilers, and in 1913, R.E.L. Maunsell, Coey's successor, put one in No.309 of class 310 (intermediate between classes 305 and 321) and later into Nos.311-2 of the same class. The fireboxes of this class, and of the 321s were 6" longer than those of class 305. The casing was 6'6½" x 4'6½", firebox and heating surface was 145 square feet and grate area 23 square feet. Nos. 309, 311 and 312 were considered as 321 class engines for loading purposes.

Here are the principal dimensions of class 321 as built:

Cylinders	18½" x 26"
Wheels	6'7" and 3'6"
Pressure	160 lbs
Tractive Effort (85% working pressure)	15,310 lbs
Boiler Plates	$^{9}/_{16}$" thick
301 (later 283) tubes	1⅝" outer diameter 1,366 (later 1,283.9) sq ft
Firebox	145 sq ft
Total	1,511 (later 1,428.9) sq ft
Grate	23 sq ft
Frame Thickness	1"
Wheelbase (total engine and tender)	41'3"
Wheelbase (coupled)	9'0"
Bogie	18.55 tons
Driving Axle	16.70 tons

Trailing Axle	16.80 tons
Total	52.05 tons

The tenders, of a type introduced in 1900, but with coal rails added, carried 3,345 gallons and 7 tons and weighed 38.2 tons.



321 class 4-4-0 No.328 at Banteer on the 13:15 Tralee-Dublin on 23rd August 1954. (A. Donaldson)

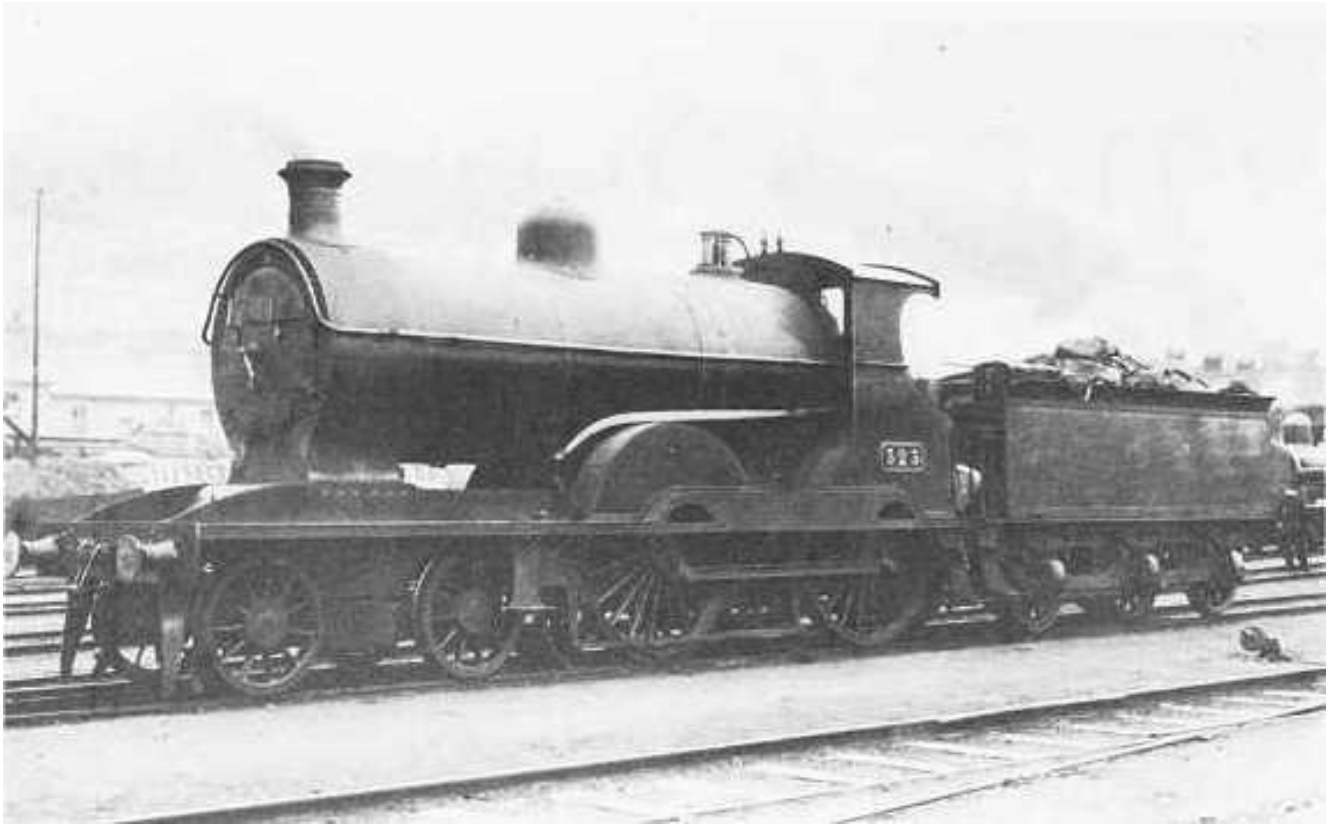
No.332 had Marshall valve gear. No performance figures are available, but No.307, which had the same gear, is recorded as having attained 68½ mph at MP10 and 75 mph at MP 12¼; Kildare was passed in 29 minutes from the start at Inchicore. The load was 153 tons.

One gathers that the 321s were not at first entirely satisfactory. Crank axle breakages led to replacement of the solid forged crank axles by built-up ones. They also suffered in being too lightly built, because of the permanent way shortcomings. When the track relaying and bridge strengthening programme was completed the engines were able to be stiffened, especially at the rear. This was the sum total of modification which 328 had undergone when she worked the Irish Convention Special in 1917. She covered the 164.7 miles from Cork to Island Bridge in 148 minutes running time. The load was given as '8½' (this could be about 120 tons). So the performance stood comparison with Mark Foley's immortal exploit twenty years later. 328 did not achieve this performance without effort; her smokebox was anachronistically compared afterwards, by one who saw her from a Down train, to a Flanders poppy!

Already by 1911 Mr Coey had planned to superheat No.326, though the project was carried out by Maunsell. It was obviously in preparation for new (larger) superheated engines, which appeared as Maunsell's 341 of 1913.

No.326 had a Wakefield mechanical lubricator for the cylinders (that fitted to the later 321s lubricated the loco axles), 8" piston valves above the cylinders, actuated by rocker arms (as in the GNR 'S' and rebuilt 'Q' classes), and a snifting valve to admit air to the steamchests when coasting. As usual in

early cases of superheating, a mercury pyrometer was provided to register the degree of superheat, while a damper, operated by a cylinder on the side of the smokebox, automatically closed the ends of the superheater smoke tubes when steam was shut off. No.326 had 177 tubes of 1⅝" diameter and 24 of 5¾" diameter. The total tube heating surface was 1,153.3 square feet to which the superheater added 345.5 square feet. Cylinders were increased to 20" diameter and tractive effort to 17,900 lbs, weight was now 53.1 tons. No.326 is reported to have been entirely successful. She was however reconverted to a saturated engine in 1916, owing to the accident of a fractured cylinder block, having served her purpose as a 'guinea pig'.



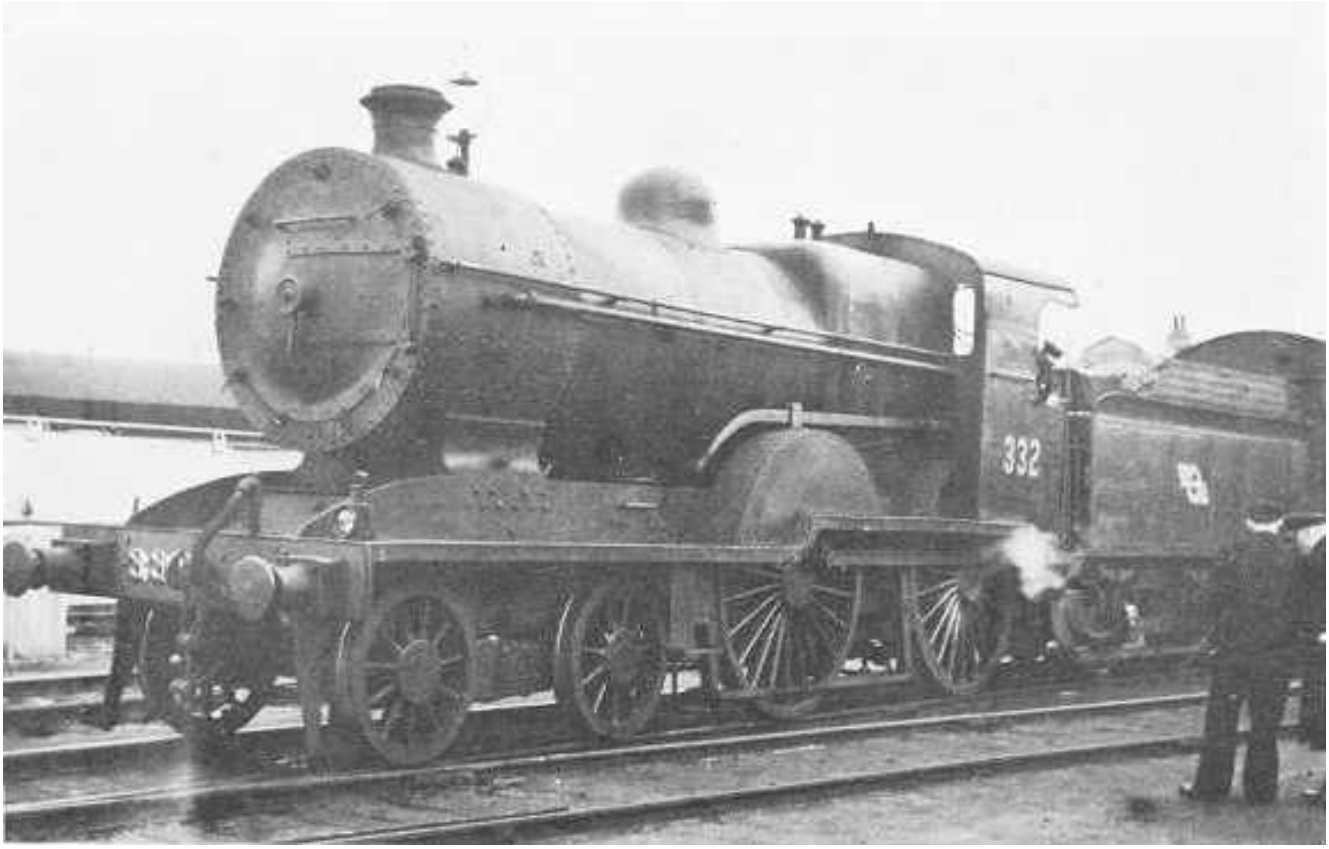
321 class 4-4-0 No.323 in original condition, seen here at Cork in 1907 or thereabouts. (Locomotive Publishing Co., 87030)

Watson continued to build saturated taper boilers for the 321 class and the next development did not involve superheating. In 1917-8 Watson rebuilt Nos. 327-332 with new 1⅛" frames, fitted extended smokeboxes, raised the platform over the coupled wheels to facilitate access to the driving boxes (this had been awkward with the Stirling type of coupling rod splasher previously fitted), raised the pressure to 170 lbs, and made other detail modifications. The weights now were: bogie, 19.2 tons; driving axle, 17.65 tons; trailing axle, 17.4 tons (total 54.25 tons).

Next, in 1924, T.R. Bazin renewed Nos. 321-3 to look like a 'pocket edition' of his own 4-6-0 No.500. They had new frames like those of Nos. 327-332 and a parallel boiler (called W class) with a barrel 10'3¾" long by 5'2¾" (the same diameter as that of No.500); Bazin was notoriously cagey about superheating, so this boiler was saturated, having a tube heating surface of 1,358 square feet, firebox 145 square feet (total 1,503). The firebox casing measured 6'6½" x 4'5⅝"; grate area was still 23 square feet. Pressure was now 180 lbs, cylinders 18" x 26" and tractive effort 16,315 lbs.

In 1926, Bazin, greatly daring, superheated No.332, using piston valves 8" diameter, and raising the boiler centre line from 8'5" to 8'7¾". Following early superheating practice he lowered her pressure to

160 lbs, though W.H. Morton later restored it to 180 lbs. In the early days of superheating, it was regarded as an alternative to high pressure. Thus the Ss, the GNR's first venture into superheating, worked at only 165 lbs pressure at first. They also had pyrometers and cylinder operated dampers like No.326.



321 class 4-4-0 No.332 in final condition at Kingsbridge about 1949. (A. Donaldson).

No.332 was less popular than the others. Jack O'Neill characterises her as rough and sluggish when shut off. Martin Bolster, on the Kerry Road, once pointed out to me where her trailing wheels had worn through the internal splashers in places. Her higher-pitched boiler may have contributed to this, and her snifting valve must have been faulty.

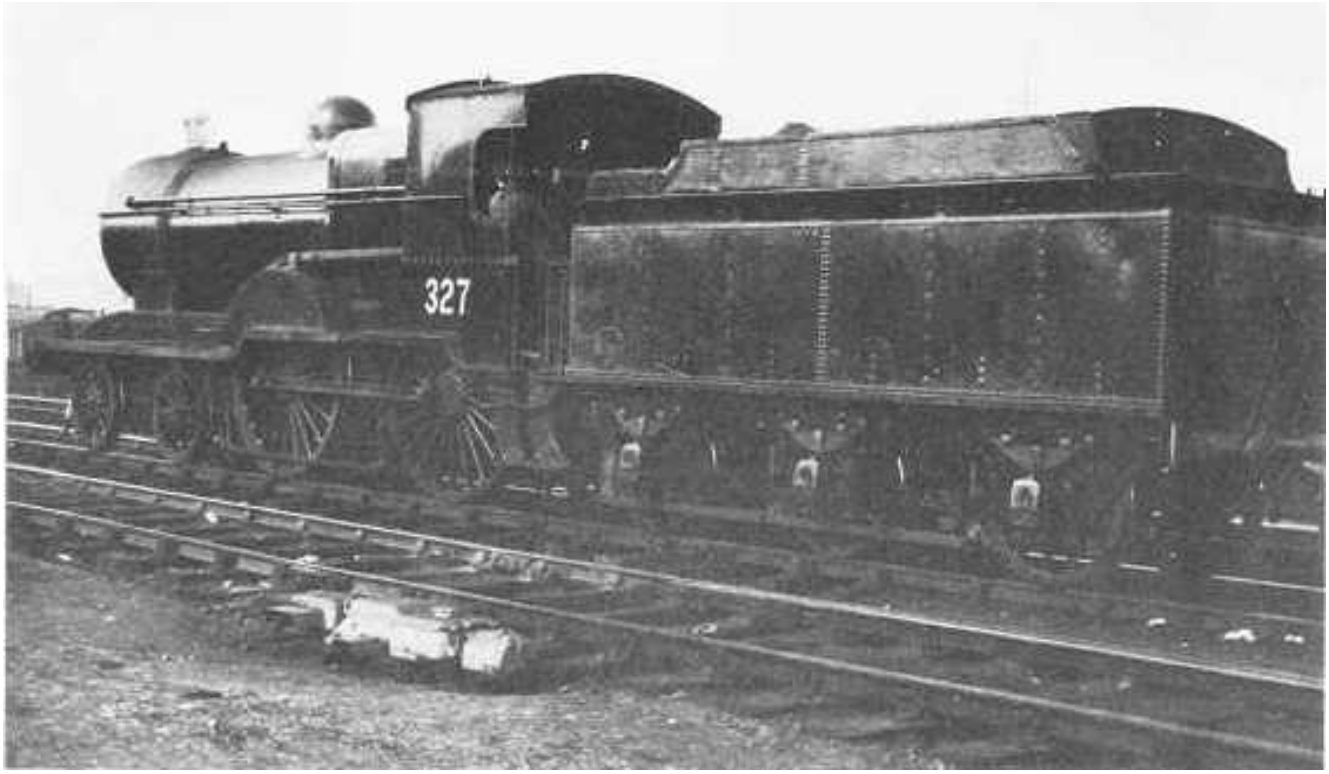
W.H. Morton had made a success of superheating on the MGWR, first with 2-4-0s and 'Achill Bogie' 4-4-0s carrying only 150 lbs pressure, but just before the 1925 Amalgamation he had managed it with some of the 'C' class 4-4-0s (GSR class D7) which had 175 lbs, thus succeeding where G.T. Glover of the GNR had failed (with class QL) in 1919. Having been appointed CME of the GSR in 1929, he instituted a big programme of superheating, retaining slide valves.

Progress had no doubt been made in cylinder lubricants - the GNR had superheated the PG and QG 0-6-0s with slide valves, saving money by utilising the original cylinder block. So Morton rebuilt Nos. 327-331, scrapped Nos. 324-326, and superheated Nos. 321 and 323. No.322 was superheated later. The weights now were: bogie, 20.35; driving, 17.6; trailing, 17.35; total 55.3 tons.

I have always suspected that Maunsell had intended to build ten 341s, Nos. 341-350 (Coey's goods engines started at No.351) and that the steel for Nos. 342-350 was used to provide new frames for nine of the twelve 321s.

Coey's cab with its two-radiused cut-out may have looked pleasing; certainly it is convenient to model; but it was anathema to the enginemen - it had neither beading, corner pillars nor a place to rest the arm

when leaning out. Bazin's cabs possessed all these amenities, and had an adequate roof; that of No.321, his first rebuild, extended well past the corner pillars. As with his No.500, Bazin also widened the platform at the rear, from the Coey standard of 8'2½" to 8'9¾", providing a roomy cab and a better spec - though unfortunately the engine footplate was consequently wider than the tender. No.327 was presumably the last rebuild. The GSR was chronically short of capital and apparently insufficient was allocated to finish 327 off properly. She retained her 8'2½" platform and Coey cab. However, in the 1940s, the latter was altered to have a rectangular cut-out, beading and corner pillars, though the Belpaire firebox of the W boiler only left room for a very narrow spec.



321 class 4-4-0 No.327 with the cab described in the article at Dublin in 1957. (A. Donaldson)

Thus were finally evolved the handsome and lively machines which many of us knew and admired.

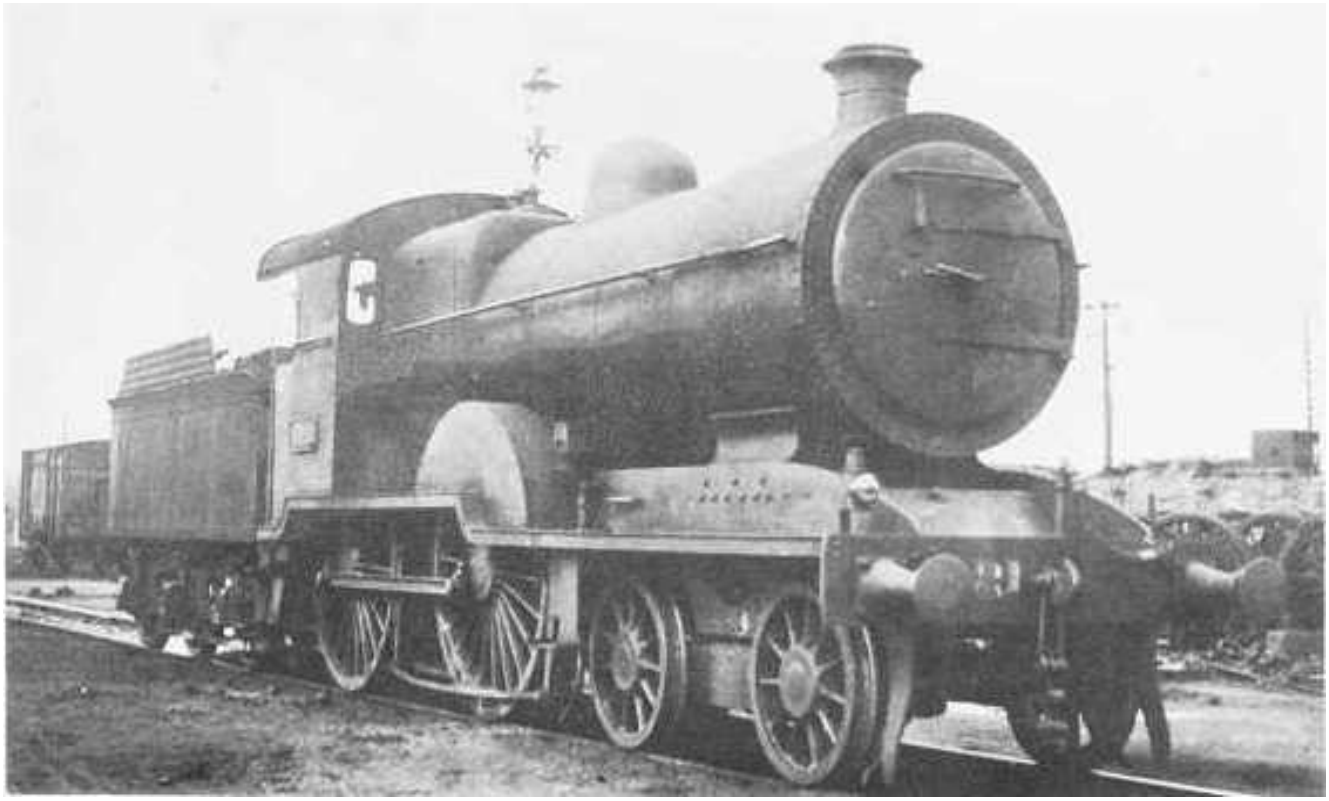
Jack O'Neill tells how "they responded to each touch of the regulator like spirited horses" and that his introduction to them was an even-time run by 327 in from Kildare on a GAA special in 1948. 327 also enjoyed the distinction of being (as far as is known) the only 321 to work the Enterprise (from Limerick Junction to Amiens Street, after a loco failure; Mossie Teahan kept time easily).

Finding 329 on the Down Cork Mail in 1951 and mistakenly imagining she would return on the Up, I asked the driver, Omagh man Frank Forde, if 329 was likely to keep as good time as a 400. Frank had been long enough in CIÉ's employ to have the classic answer ready. "Why wouldn't she?" he asked. "She has just as high a wheel." He proceeded to demonstrate by cutting time on every section. His times from Kildare forward would in some cases have been within 1939 schedules. They were: 22:55 to Port Laoghise, max 68; 20:07 on to Ballybrophy, max 67 and min 42¾; thence to Thurles 23:05 with a max of 72½ (including a permanent way slack); and finally 24:04 to Limerick Junction, after a 72 down Jack Loughlin's bank. The load was 195 tons.

In post-war years, I had the impression that Nos. 321-3 were less lively than 327-331, but before the War 321 used to bring up a heavy Limerick train - often eleven bogies, including a Pullman car - on the dot, night after night. It had to be, as the train was followed in rapid succession by a relief to the Mail,

and the Mail itself, with sometimes a Waterford portion squeezed in as well - all using the same arrival platform. So far as I know, it was this engine which worked two double trips to Thurles in the 24 hours - a daily mileage of 347.

In 1954, the Tralee portion of the 10:45 Down was altered to run as a separate train at 11:25. The return working was at 13:15 out of Tralee, the Up and Down trains crossing at Banteer. 321s were rostered for these turns, each engine working through between Dublin and Tralee (207 miles, involving 5½ hours' continuous steaming - the trains stopped at all stations on the Kerry Road).



321 herself in the period between 1924 and 1930 when she carried a saturated boiler. (Real Photographs, X592)

Of the engines I timed that summer (327-330 and 332), 328 was the star performer. Ned Duggan, of Tralee, had shown how good the 333s were on the Kerry Road, but he made them look ordinary when, with 328 and 165 tons, he ran the 7.1 miles from Tralee to Gortatlea in 10 minutes 52, start to stop. The only significant falling grade is a half mile at 1 in 100 around MP 58. This produced a maximum of 60½ mph, which was held for almost two miles. Schedule time was 14 minutes for steam or diesel. Driver Callaghan, on another occasion, with the same engine and load, ran the 6.4 miles (downhill) from Rathmore to Millstreet in 8 minutes 34, max 64, attained in about 3 minutes from the start. The Kerry Road, be it noted, was subject to an overall limit of 60 mph at the time.

On the main line, again with 328, and 190 tons, Peter McGibney brought the 13:15 ex Tralee from Kildare to Kingsbridge, 30 miles, in 32 minutes 36 start to stop, i.e. at the end of a 207 mile run. Peter contented himself with a maximum of 70 mph, at MP 12. Strictly, even the main line was subject to an overall 70 mph ceiling.

Another train on which the 321s excelled was the 10:00 Kingsbridge to Limerick and Thurles, splitting at Ballybrophy. On this train on one occasion in 1951, Driver Harvey on No.330, after topping the 2½ miles at 1 in 128 of Ballybrophy bank at 36½ mph with 270 tons (starting from Mountrath), went ahead

from Ballybrophy with only a single twelve-wheel brake-compo in an attempt to reach Thurles, stopping at all stations on the way, without blocking the 10:30 ex Kingsbridge, booked non-stop to Thurles, and now in hot pursuit. Harvey ran the 6.5 miles from Lisduff to Templemore in 7 minutes 12, start to stop, max 76 mph; then restarting had 330 up to 41 at MP 79¼ (i.e. in half a mile) and 69 at MP 81 (2¼ miles cleared in 2 minutes 56). Speed then rose to a max of 78 and he stopped in Thurles, 7¾ miles, in 8 minutes 43 start to stop. Diesel No.1 running allowance would have been 9 minutes.

The excellence of the 321s probably derives from their combination of superheating, high pressure and slide valves; indeed they may well represent the optimum, or at least the largest possible, size of engine for using slide valves. On the one hand, Coey had unsuccessfully fitted piston valves to two of his 47 ton saturated 301s, while no engineer would dream of a slide valve Woolwich, 400, 500 or 800!

I hope others will come up with more and better exploits by these well-loved engines; there must be plenty of members whose railway interest goes back sufficiently far. Indeed the history of the 4-4-0 tender engine across the whole spectrum of Irish railways (six railways used them; there were over 70 varieties) would make a fascinating study and perhaps provide a challenge to RPSI Publications.

NIGHT SHIFT — Eoin Roe

Slowly at first, and then more frequently as the early evening wore on, the well-dressed night shift began to assemble at the shed, fresh from city offices, schools and factory floor with well-polished shoes and neatly-combed hair. A few minutes in the back of the shed, a quick donning of old clothes, a boiler suit and a pair of tough boots, a beret, cap or ragged scarf and the transformation is complete. No more chat of office drudgery or changing jobs, endless politics or league football, now it's all coal and oil, carriages and shunting.

Thus the scene is set for the opening of the night's work in Ireland's last main line steam shed, now one of the select few in the British Isles which turn out engines for main line working and certainly one of the most active. The location is, of course, our own depot at Whitehead and the scene is being set for turning out the Portrush Flyer, that unique train in Western Europe, now in its second successful season.

Let us turn the clock back, however to that pioneering summer of 1973 and join the growing band of workers as the shift assembles. The duty roster is pinned up on the shed notice board and many crowd around to see what their duties are - of course we all know fairly well beforehand but it's a convenient meeting place before getting down to work. There is some preliminary work to be done on No.4 before she can be pulled out of the shed and a small group of the regulars busy themselves checking the engine over while others move outside the shed to the many areas of activity out there.

One or two prepare the tractor for the coaling to be done a little later and soon the ageing and unlovely, though invaluable, machine coughs into life and begins to move towards the coal pile below the water tower. Other groups busy themselves on coaches and in the roads outside the shed doors the carriages are swept out, the windows cleaned and tanks filled while the boxes are oiled and the running gear is checked over. In the Diner, over on road four next the roadway, the many crates of minerals and beer and stocks of crisps, biscuits and sweets together with plastic cups and spoons, supplies of tea and sugar are all carefully loaded and stored ready for the morrow's business. The draught beer is hooked up - and tested! - while the spirit stocks are checked and locked away. The shop in 861 is similarly stocked up with all the diverse things our public like to buy, including the commemorative postcards which they can post on the train.

Three or four people get together to take down the temporary bit of fencing wire that completes our fence across the running roads while up at the shed the doors on number one road are swung open. Then our 'secret weapon' is brought out. A long wire rope is attached to the back of the Jeep and the

other end of it, a rail length and a half away, is attached to the 'Roto-lift', a ratchet chain hoist which is secured to a convenient chair and sleeper. By working the ratchet, the wire rope tightens and trembles like a plucked string as the hoist takes the full weight of No.4. Bit by bit, she is wound out of the shed, two men working the hoist handle with all their strength. With about six feet of the engine clear of the doors, the hill down from the shed begins to take over and the engine begins to free-wheel. The handbrake checks her progress, however, and No.4 is brought to a halt with her bunk opposite the coaling ramp.

The coaling ramp consists of the big earth bank below the tower and the ex-Inglis bread container. With a bucket of coal, the tractor races the earth bank and breasting the rise, swings sharp right onto the sleepers laid on top of the bread container. Now at right angles to the engine, the tractor brings her bucket of coal high over the bunk and tips the first load into the empty bunk. The first couple of loads are allowed to spill through the doors onto the cab floor to provide a supply for lighting up. With about five tons put aboard in something like twenty-five journeys, the tractor retires and one or two concentrate on building up a crib of lumps round the edge of the bunk while the tractor adds a bucket or two more to top the thing off. Then the engine is moved clear of the shed altogether, with her chimney in the open, so that lighting up tomorrow will be all the cleaner. With No.4 safely parked for the night, the morning's Steam Raiser spends a few minutes gathering sticks, rags, newspaper and old motor car engine oil for the morning's lighting up.

Sleeping arrangements at Whitehead consist of a sleeping bag on a seat in one of the corridor Bredins, probably 1335 for she has slightly longer seats and padding against the outside walls to keep the feet warm. With the time wearing round to half-eleven the Steam Raiser is already in bed while the others listen to "Week Ending" on a radio in the Diner before turning in themselves. The weather forecast is for a fine day tomorrow and almost before the anthem can have died away 1335 is a hive of activity as the six or seven who did most of the evening's work get bedded down for the night.

Suddenly there's an alarm clock jangling, the compartment is heavy with the stale air of sleep and as the Steam Raiser struggles out of his sleeping bag, his companion on the other seat rolls over and hides his ears with his pullover-cum-pillow. The clock shows the time to be three o'clock and soon the Steam Raiser gets himself dressed in his working clothes and as quietly as possible makes his way out of the compartment into the corridor and heads for the nearest door, his creaking boots echoing. With what sounds like a clap of thunder, he gets the door open and climbs down onto the ballast, drawing his scarf close about him for it's very cold at this hour and the cold dawn pierces the greasy overalls and touches his feet as he trudges off to the shed.

Even at this hour, with the sunrise still only a yellow-red glow on the horizon, there is plenty of bird-song and No.4 sits outside the shed, cold as death, waiting to be lit. Soon the first mug of tea of the day is brewed and, regaled with a thick cheese sandwich, the Steam Raiser gets to work building up a heap of sticks, oil-soaked rags, newspaper and the old car oil just under the brick arch. The water level in the gauge glasses is checked and then the waiting heap in the firebox is set alight. The black smoke begins to curl and find its way back into the cab as the sticks crackle to life and a couple of shovels of lumps the size of your fist are carefully added to the fire - no slack at this stage or there could be bother. Prudently adding lumps to the spreading flames, the Steam Raiser hurriedly slams the firebox doors shut against the acrid fumes. Occasionally though he catches a lung-full of smoke and his eyes seem to turn to large pools of warm water as he heads for the cab window to drag in a lung-full of fresh air.

Sitting by the window, waiting, he notices the lonely mournful wail of the local fog-horn over on Black Head lighthouse, four blasts and a pause then four more steadily, unendingly moaning into the light sea fog that has obliterated the half-hearted glow of dawn. The cutting on the Larne line is alive with birds; down at the point someone's pet cat picks its way across the tracks while overhead two seagulls fight for the perch on the level indicator on the top of the tower while two rooks squabble loudly over a crust

of bread. Sitting alone, the Steam Raiser idly wonders if any of today's passengers are up yet before starting to oil the engine. Carefully working his way round the engine, he removes the cork at each oiling point, tops up the cup and makes sure the trimming is introduced in the drip pipe. Someone once reckoned there were nearly a hundred oiling points on the engine but eventually the round is complete and, taking a well-oiled rag, the Steam Raiser climbs up on No.4's tank and smears the safety valves and whistle with oil to keep them clean during the lighting up.

While busying himself cleaning the cab and its fittings with oil, the Steam Raiser is joined by the first of the morning's later risers. With a cheery voice, far too bright for this time of morning, the newcomer asks how things are going and climbs up into the cab, takes a quick look in the firebox and, somewhat hopefully, taps the pressure gauge. It's a bit early for that yet.

In the ensuing half-hour or so the rest of the overnight lodgers in 1335 stumble past No.4 into the shed, from where the smell of frying soon emanates. On the engine the boiler is beginning to make noises and the Steam Raiser begins to paint the warm boiler backplate with oil.

After a while the Steam Raiser is joined on the footplate by most of his fellow workers who hang about in the warmth for a while before starting the morning's tasks. Someone begins to reminisce "Do you remember the time Rab Graham took No.54 ..." and we're off in a round of Mogul tank stories and folktales, exploits recounted in detail to an eager audience, inducing a warm feeling of nostalgia and all the more realistic for being told on the footplate of one of the engines involved.

Then after what seems to be only a few moments, there's a call to "Come down out of there and get this engine cleaned. She's filthy!" A departing helper slyly taps the pressure gauge again and the needle flicks to ten pounds - we're in business. Again the fire is raked through and levelled, being gradually added to all the time, so that now little remains of the heap on the cab floor. Then the Steam Raiser tries the blower, eager to move on, and there is a heartening hollow rushing noise from the chimney. Opening the firebox doors again, with no fear of fumes blowing back this time, the Steam Raiser works at the fire, the shovel digging into the bunk as he builds up the fire, taking less care about slack now. The can of cylinder oil is placed on the trip tray on the boiler backplate so that it will be warm and thin enough to do its job from the very start. Soon the pressure gauge lifts past the forty pound mark and the Steam Raiser is joined by the morning's fireman and driver, again Society volunteers.

The Steam Raiser books off and heads for the shed to wash and eat as the band of cleaners set to with rags and oil to clean the engine down. The fireman examines the fire, the water level and so on while the duty driver inspects the oiling done earlier and looks for leaks and blows. Some boiler fittings begin to drip water and the fireman nips up whatever nuts he can to staunch the drips, consoling himself that the others will close up when the gaskets and packings have expanded with the heat. With about eighty pounds on the clock, the fireman turns to the lubricator on his side of the cab, removes the top filling plug and opens the drain plug, holding his shovel under it to catch the condensate left from the last steaming. Then he fills the lubricator using the oil which has been warming for some time on the drip tray. Making sure the handbrake is screwed hard on and the engine in mid-gear with the drain cocks open, the driver opens the regulator and admits steam to the cylinders and blows out any water left there. With the cylinders clear of water, the engine is edged carefully into the shed and over a pit so that the boxes can be oiled, the fireman knocking off the blower and closing the damper to avoid making too much mess in the shed.

With the oiling completed, and cylinder oil in the piston rod cups, we are ready to start making up the train. With our cramped layout, we have to keep our train of coaches split up and this morning we have two coaches on each of the shed roads two, three and four, and another coach at the platform just inside the fence. The shunting is complicated by the presence of the so-called 'rubbish' rake, a miscellaneous collection of variously useful vehicles that occupy the platform road outside the fence. In 1974, however, this rake will no longer present a problem for it is now safely out of the way in the new

carriage siding. So No.4's first move is to collect the two coaches on number two road, 1335 and 1333. As well as Steam Raisers, Drivers and Firemen, our operating grades include Shunter/Guards who control all movements within the site. With No.4 coupled to the two coaches, the Shunter checks for scotches and obstructions before waving the engine away.

No.4 makes her way slowly down to the road overbridge, her drain cocks still open and the Driver carefully watching his engine for defects. Coming back along the platform road, No.4 collects the first half of the 'rubbish' rake and moves it onto our own main line, parking it near the water column before returning to the platform, still with 1335 and 1333 next her, to collect and similarly move the rest of the rake. Unfortunately, now, No.4 will have no access to the shed should anything go wrong, but we keep our fingers crossed and nothing does.

Having disposed of the 'rubbish', we can set about making up the train proper. First we couple to 861 and then into number four road to collect the Diner. Carefully the coaches are brought together for at the far end of the coaches are the doors of the new shed and we don't want to damage them, though the doors bear very distinct buffer marks bearing witness to the fact that this caution is not always enough. Once safely coupled to the Diner, the Shunter makes sure that the other coach in this road, the Directors' Saloon is safely secured before waving No.4 back down the platform. Clear of the point, the train is stopped and the point thrown and held by a clip before No.4 moves slowly back into number three road to collect 1328 and 1327. Once again caution, and by dint of careful driving and clear signalling the Bredins are safely taken and the six coach train is moved to the platform where the Shunter begins to connect vacuum bags, close corridor connections and take up the screw couplings as far as possible.

Emerging from the steam drifting down from the drain cocks, the Shunter signals to the Driver to create a vacuum. With renewed rushing of steam from the chimney and a gentle squeal here and there down the train, the engine begins to blow up a brake. In the van of 861 the Shunter watches the dial come slowly round to twelve and stop - there must be a leak somewhere. Getting on the ground, to look and listen for the offending connection, he is joined by the Carriage & Wagon Officer. Quietly making their way along the length of the train they hear a hissing noise high up on 1328 and the Shunter swings up on the end footboard and then onto the buffer to turn the disc back to the horizontal position - someone must have caught a communication cord while cleaning. Looking back to the engine, the pair get the thumbs up from the Driver. Continuing their circuit of the stock, the Shunter and his companion check the action of the brake blocks as the driver successively makes and destroys the vacuum.

Meantime, the first of our early callers arrive on the platform, cameras at the ready, to watch the proceedings, and with the time coming up to eight o'clock the coaches are carefully labelled for the day's parties - a Bredin and three compartments for the ICI Social Club, two bogies for the Carrickfergus Youth Club, the rest of that other Bredin for Women Together, part of 861 for a group from a Government office, and we mustn't forget to put Father Starkey's group in the two NIR bogies we'll be picking up at York Road.

And so it goes on, lots of little jobs getting done by degrees to ensure a really professional turnout.

For some time now, the NIR crew of two drivers (one of whom will fire) and our friend and mentor Inspector Frank Dunlop, have been on the engine giving her a thorough vetting while the guard familiarises himself with the layout of 861's van and its back-to-front handbrake wheel. By now, most of the operating staff have slipped off to the shed to clean and prepare themselves for the run to Portrush while more passengers arrive by car and admire the gleaming engine in the early morning light, take their first photographs of the day and find their seats in the train. But no matter how much enjoyment the turnout gives members of the Society and the general public, those workers who have been responsible for the train feel an extra inner glow of pride at a job well done.

Soon the departure time is upon us and the shed and fence are made secure for the day. The last of the workers scramble aboard as No.4 whistles and the brakes groan as they lift off and, with a final wave from the guard, No.4 edges along the platform, under the bridge and stops at the signal controlling our exit from the site onto the main line. An MPD railcar trundles in from Larne, its driver waving enthusiastically as No.4 whistles derisively and our driver calls out that he doesn't want to be blocked. The passengers in the railcar either miss the engine and train altogether or simply look on as if this was still something to be seen every day.

With the railcar out of the way, the bells for the wicket gate ring again, the wickets swing closed and our signal tumbles off. Off go the brakes, the drain cocks roar steam and water and the safety valves lift just for a moment as the regulator is heaved open. With a lurch No.4 takes up the strain and with a great bark, starts the day's work in earnest, and another Portrush Flyer is on the road.

Speeding towards Belfast, the Society workers in the shop and bar and those helping out in other ways have the train almost to themselves. We wonder how many casual day-trippers we'll get and think too of all those excited children (and their parents) even now making their expectant way to York Road for a journey into the past.

Perhaps you, reader, can now understand some of the inner pride and sense of achievement the Whitehead regulars feel when they arrive in York Road on a shining August morning, a glittering engine heading a rake of spotless coaches and be met by a mass of excited children who marvel at all they see, each one appreciating it in their own way. Somehow it makes the long winter's work on engine tubes and coach roofs, laying track and all the rest seem very worthwhile indeed.

Come on, let's go on a Flyer!

BOOK REVIEWS

An Outline Of Irish Railway History, H.C. Casserley, David & Charles, £6.50

To review a book which describes itself as an 'outline' begs the inevitable question of what an outline is; should the work be of a brief and general nature or should the subject be allowed to expand where the author feels appropriate. Most purchasers will, no doubt, be looking for an overall historical reference book which can readily supply, from one place on the bookshelf, the correct (and authoritative) answers to the most obvious questions which are likely to arise.

While one gets the impression that this is the author's intention, to say that he succeeds in every instance would be incorrect. The book is certainly authoritative, and covers what is an immense subject in an extremely concise and business-like manner, but one doubts whether all the errors which appear are altogether typographical. There are, however, no mistakes that are liable to slip past the discerning eye of a reader who already has a working knowledge of the Irish railway system.

But at this point another doubt about the book should be raised - for what type of reader is the book intended? Is it written as an introduction for one who has no background knowledge of the country or its railways; or is it intended as a collected reference source for the dyed-in-the-wool enthusiast? In both directions the book fails and disappoints, coming from so distinguished an author. To appreciate much of the text fully, the reader should equip himself with a map or at least a copy of the timetable covering the system concerned in the chapter, for the author talks with the familiarity of one who knew the line and expects his readers to be equally at home, even though the lines passed into oblivion some forty years ago. On the other hand, if the reader is familiar with the subject he will find many long and detailed passages which are unnecessary.

These criticisms may seem unfair, or picking holes, but I feel the author has fallen between two stools of saying too much or too little. Otherwise the book is well laid out and I commend the author for a

very orderly layout. The format is basically one chapter per company with separate chapters for subsequent groupings in chronological order, while each chapter carries a summary in italics at the heading. Thus we know whether we are about to find the information required - and if not, can move on to check the post-grouping chapter in the same way, ideal for a reference work.

I have two reservations about the book which might be taken to heart by intending authors. While the selection of photographs is adequate, it is hardly good and I find it hard to believe that Mr Casserley's well-known collection could produce only these rather poor quality pictures. Indeed from work which I have seen I feel we are being insulted in being asked to pay so much. I realise that the overall standard of reproduction is poor, but one cannot help feeling that some third rate material is being foisted upon us.

I also feel the author should have spared us the 'funnies'. While it is pleasant to read amusing anecdotes, they invariably need a subtlety of style which has not come over in this case. It is less deplorable than the political axe-grinding which appeared recently in another fairly recent book on Irish railway history written by a rather badly-informed Englishman. Where this author has, perforce, to deal with politics, he does so in an emphatic, but at no time offensive way. He has only fallen down in telling 'stage Irish' jokes which would have been better omitted. One would not expect an encyclopaedia to be humorous, so why should a reference be so?

Although the current pricing of books from David & Charles is considered by some to be excessive, this book is basically good value for money. It accomplishes what it set out to do and in an extremely readable way provides a valuable addition to every enthusiast's bookshelf, particularly in the locomotive details of the companies which are thoroughly documented. **WSB**

A Railway Atlas Of Ireland, S. Maxwell Hajducki, David & Charles, £4.25

This long-awaited work represents a lot of honest toil in bringing together main lines and branches, mineral lines, street tramways and bog railways in one set of maps, and the author/compiler deserves every credit for his work.

The book falls into four main parts, an Introduction, the maps themselves, a Key to Initials and a Gazetteer.

The Introduction is almost sneeringly short and fails to comment on the evolution of our system from a geographer's point of view - an angle which one might have reasonably expected in a geographical type of book. Just what themes are being discussed is not clear and leave us without any sort of direction as we take on the pages of maps.

The first thing that strikes one about the maps is the curious choice of red to represent rivers, lakes and sea, while the complete absence of mountains and high ground leave one with lines squirming round inexplicably. Several of the junctions are wrong (e.g. Clara) while others, like Bundoran Junction, are incomplete. Several of the dates of opening are wrong too, while information about singling, etc., appears only here and there, while several branches fail to appear altogether. The maps are set out in several passes across the island, working from north-west to south-east. Each page is divided in squares but the overlap and repeats from page to page are very unsatisfactory and in some cases information is lost in the overlap.

The Key to Initials shows many minor slips while the Gazetteer represents the first recent alphabetical list of Irish stations though we can only regret that the opportunity wasn't taken to include well-known landmarks such as Kellystown or 46th Mile Box. In the Acknowledgements, there is cartographic advice acknowledged from two sources but the work belies little of this help. Most of the fault here, however, lies with the slapdash work of the printer who has made such nonsense of some of the pages

as to leave them almost useless.

We have already mentioned the garish choice of water representation and it appears that it is in the overprinting that the main trouble arises. For instance, Burtonport appears halfway out in the sound towards Tory, Millar's Bridge on Page 7 is well out in the Lough while almost the entire Midland main line appears to have been laid on the bed of the then-operating Royal Canal! All in all, the printer's poor effort makes one despair. The compiler hopes that his work will "provide the essential background upon which further work ... may be based". With the printer's help and his own lapses, the work could only be taken with the greatest degree of caution.

Without too much bother, the work could have included signal boxes and important sidings, a gradient profile, viaducts and tunnels, and this sort of information would have added enormously to the sparsely and not very well printed information alongside each line.

Bearing in mind that Ireland does have mountains and that not every line was laid through lakes, along canal beds or somewhere out to sea, this book cannot really be given the green light, but no doubt those intent on keeping their libraries up to date will probably manage to buy it. **RCE**

LETTERS TO THE EDITOR

Dear Sir,

Editors get more kicks than kudos, and their most industrious correspondents are those who seek to find fault. If I say that this letter started out as honest seeking after knowledge, you, Sir, will no doubt take that with a large pinch of salt.

Everything connected with the Irish North fascinates me, so I duly admired the fine picture of PP No.50 at Enniskillen in the current magazine. Just what was it that suggested the 5:15pm to Omagh? I could detect no more than the usual clean or cleanish 4-4-0s in typical Enniskillen sunshine - what was the clue? Then, the thought struck; it is coming on for twenty years since I last stood on Enniskillen station, but the shadows were never like that in the late afternoon. This made me think of a typing error, 5:15 for 2:15? Reference to my meagre collection of timetables suggested that in the last decade of the Irish North, not only was there no 5:15 but that 2:10 was always 2:10. May I, a mere foreigner, suggest that No.50 is 'pilot to the Junction' as footnoted in the WTT for the nine months of the year when the 11:10am to Pettigo did not run? This pilot working is noted for the 2:10pm.

But let me compliment you on the production of Five Foot Three number fifteen and in particular your own photographs. Yours are the only ones I see of preserved steam in these islands which manage to inject an air of freshness and originality into what are sometimes under-patronised, but always over-exposed, subjects. First No.186 on Barnagh, then No.171 on the King Fergus, and now the magnificent high-level shot of No.171 on the TV train with Belfast Lough as a backdrop - verily "Steam Over Belfast Lough"!

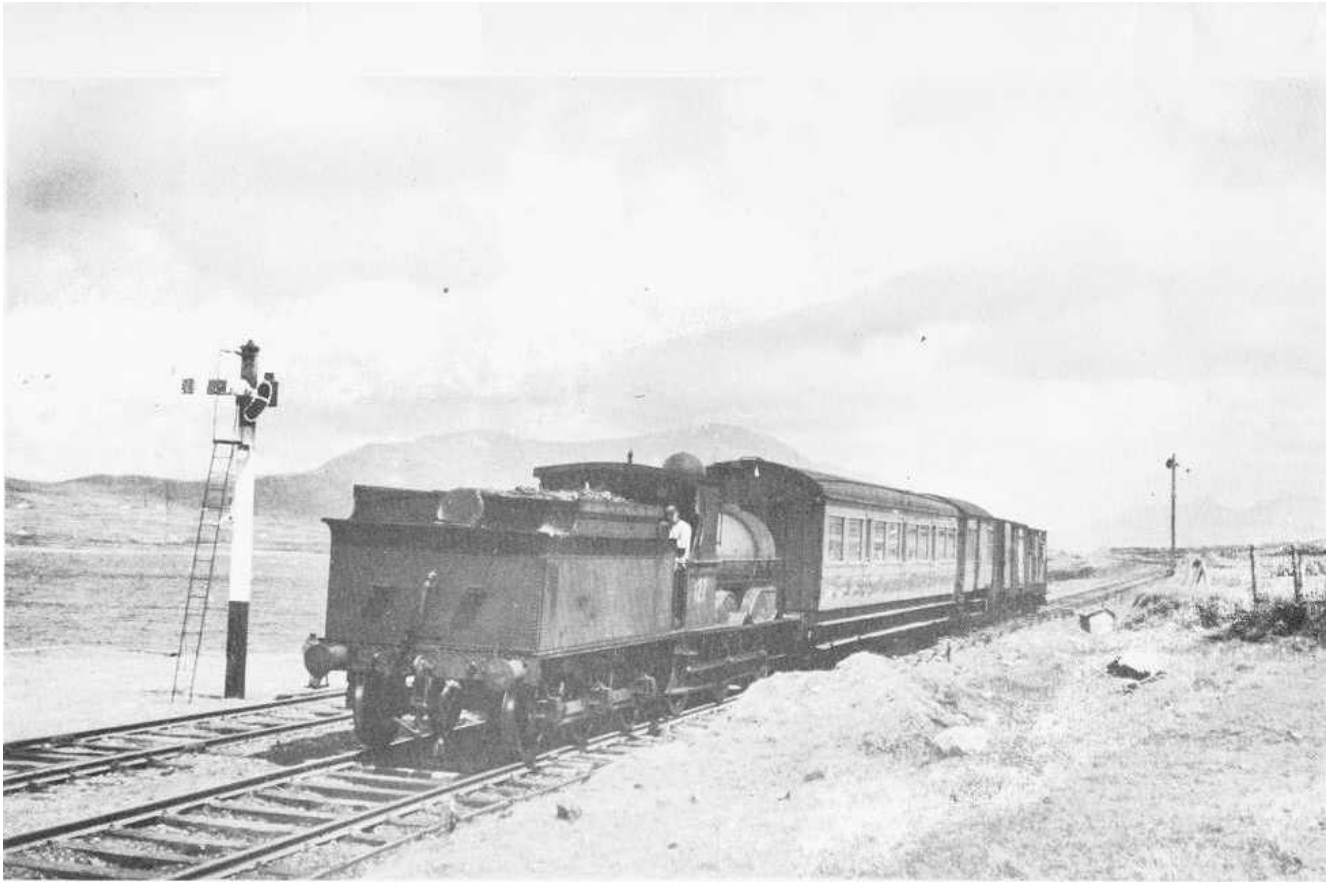
My own personal preference is for a magazine with articles such as "Steam On The Donegal" by S. Carse or "Dundalk Swansong" by C. Natzio in issue eleven or "High Summer On The Bundoran Line" by one C.P. Friel in issue seven. However, with a steam programme such as we had in 1973 or is yet to come in 1974, it is obvious that the workers are too busy for writing. If the current type of magazine gets No.171 out on the main line - then good luck.

Robert H. Barr

Sedgwick, Kendal

[Mr Barr is, of course, correct about the train being the 2:10 and not the 5:15 as suggested in the caption. The 5:15 was a train of the thirties and the pilot engine was the one on the second turn in the

Enniskillen top link. The crew and engine had previously been to Derry and back when they handed the engine over to the crew in link six who piloted the train to Omagh and came back light engine. The position in the fifties, however, was different, as Mr Barr points out. - Ed.]



J15 class 0-6-0 No.127 drifts into Valentia with a mixed from Farrenfore on 25th May 1954. (S.C. Nash)

Dear Sir,

In view of my criticism some years ago of both the contents and the standard of Five Foot Three, I think it now only fair to congratulate the present Editor on the vast improvement he has been able to effect. The change in content has been noticeable for several issues, and in my opinion the present balance between Society matters and general Irish railway items is about correct. The new type of production adopted with No.14 represents an immense improvement on earlier issues and whilst No.15 does not quite come up to the same standard (presumably due to the production difficulties mentioned in the Winter News-Letter) no doubt this will be rectified with No.16.

On an entirely different matter, it is gratifying to note that the Society has now acquired several coaches, as quite apart from the need to possess these vehicles for future use, the preservation of coaching stock in Ireland (with the exception of a handful of early examples) has been sadly neglected. However, whilst the need to protect these vehicles from vandals has been recognised, thus resulting in the fencing of the Whitehead site, the necessity to protect them also from the weather does not (judging from the lack of any mention thereof in Five Foot Three and accompanying circulars) appear to have even been considered. Perhaps the mere thought of the capital and labour involved in providing covered accommodation has deterred members from raising the issue, and the Committee from considering it. However, sooner or later (and preferably sooner) the problem must be faced. Coaches

left in the open and largely unused will suffer steady deterioration, as several British preservation societies have already found to their cost. It would be interesting to know whether the Committee has, in fact, thought about the provision of covered coaching stock accommodation; if not, I would strongly recommend that it does so.

Lance King

Kenton, Harrow

Dear Sir,

I note below a couple of points regarding two of the vehicles recently acquired by the Society and listed on Page 35 of Five Foot Three No.15.

1. No.1333. The seating capacity of this coach is 72, not 76 as shown. The latter figure would have been correct when the vehicle was built, but the introduction of corridor connections (which were not originally provided) meant that the full width seats across each end were replaced by pairs of double seats resembling those already in the main body of the coach.

   This carriage was one of a set of twelve comprising brake thirds, thirds and compos, built for the Bray suburban services in the later thirties. They were, and still are, very comfortable (I think the seats were Dunlopillo) but their capacity was too limited, and they had too few doors to be altogether successful for their original purpose. As main line vehicles they were used around the system, but a number have been converted to ambulance coaches, radio studios and mail vans. At the time of writing one Bredin brake third is still working in Dublin suburban trains.

2. No.552, ex GNR 88. This car was not originally an all-first but had thirty fixed seats (2 and 1) in two saloons, a first seating twelve, at the outer end, and a second holding eighteen, next the kitchen. It went into service in the 8:15am ex Belfast and 6:40pm ex Dublin expresses, which at that time had the heaviest catering requirements on the line. The latter train gave a connection out of the day mail boat ex Holyhead, and thus played its part in providing the through day service between London and Belfast.

   During the war years 88's capacity was too limited for the very heavy morning Up and evening Down traffic between Belfast and Dublin and it was used for most of this time on the 9am ex Dublin and the return evening train, which latter varied somewhat in timings.

   The car was converted to BUT working early in the history of those ill-starred but lively railcars, and went into service in the Belfast-based Enterprise in April 1958. Some time later it had its fixed seats and traditional decoration replaced by the present tables and chairs and what I regard as cheap, slazzy-looking decoration.

I was most interested to read Barney McGirr's recent article. Can he be persuaded to write any more for us? I chiefly remember him after the BUTs came to the Derry Road, when it was a nice question as to whether he or Jimmy Kelly put up the more spirited performance between Omagh and Dungannon. I have several notes of 36½ minutes between these two stations, hand staff exchanges included.

One final point on 1333. In I think 1944 I saw one of this type of coach in the pick-up train on the Bundoran line - several Great Southern vehicles were hired by the GN at that time.

L.H. Liddle

Glenageary

LONDON NEWS — L. McAllister

In the small space available to me, may I appeal for help in the fundraising and publicity roles fulfilled by the London Area of the Society. So far this year we have spent four days selling, two on railtours and two at Quainton Road with excellent results. So far, central funds have benefited by £80. CAN YOU HELP?

Unwanted railway periodicals are always of great use to us, if you care to let us have your surplus material, we will turn it into cash and then into coaches or whatever. And we do a good line in second-hand books, both buying and selling and most are in excellent condition.