The NARROW GAUGE

THE NARROW GAUGE RAILWAY SOCIETY

No. 44 MAY 1967

THE NARROW GAUGE RAILWAY SOCIETY

Hon. Secretary: Mike Swift, 47 Birchington Avenue, Birchencliff, Huddersfield.

Hon. Editor: Henry Holdsworth, 76 Tower Lane, Leeds 12.

Subscription £1.1.0d. Juniors (under 18 yrs) 10/- Please send to Mike Swift as a temporary measure.

EDITORIAL

The Editor has heard some comments about the foreign contents of the magazine. Some people seem to think our interest in Narrow Gauge Railways should end at Dover. A study of the last seven magazines shows:-

29 articles dealt with ALL BRITISH railways or locos
10 articles described foreign railways which were built by BRITAIN or had BRITISH Rolling Stock,
only 12 articles described FOREIGN railways with no British connections (America 5, S.Africa 3 and one each Spain, Yugoslavia, Austria).

The Editor pleads guilty ONLY to the charge of bias towards the Steam loco but has been known to model 1/C and certainly drawings and articles on 1/C have had their share of magazine space.

Our congratulations to Jane and John Townsend, married on Easter Tuesday. We wish them all the very best of luck in the future.

Another year has passed and we hope you will accept a friendly reminder to renew your subscription NOW, if you haven't already done so, the next magazine can only go out to paid up members of course.

Best wishes, Henry Holdsworth.

COVER PHOTO and that on page 32 by courtesy of British Railways - taken in May 1956.

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"PINTA" By J. L. Townsend

The 1'10" gauge railway system of Arthur Guinness Son & Co. (Dublin) Ltd. has been in existance for almost a century and considering that 24 steam locomotives have been employed on this unique system it is surprising that it has not featured more often in railway periodicals, particularly as the Company have been noted for their friendliness. It has not, however, been ignored by Railway Engineers who have recognised its many advanced and outstanding features and the genius of Samuel Geoghegan its creator.

The Brewery was built on the sloping south bank of the River Liffey and production of stout increased so greatly during the latter half on the last century that the premises were continually extending, covering eventually about 60 acres. Initially internal transport was by horse and cart and horse tram, but it was found that these were not sufficient to meet the growing transport demands and that this could only be met by a completely new internal railway system.

Geoghegan had been born in 1845 and joined the Engineering Staff in 1872. Construction of the railway commenced in 1872 and continued for four years, by which time Geoghegan had been appointed Head Engineer (1875). Design and construction presented a number of problems which were largely solved by his inventiveness. Firstly the Brewery was in three main levels on a considerable slope and secondly the lines had to be laid within the narrow confines of existing structures which imposed curves of very small radius and thus made severe limitations on the design of rolling stock.

The first problem was initially tackled by providing an hydraulic lift between the two main levels but this was later dispensed with and replaced by a spiral tunnel which, in two and a half turns, lifted the line 25 feet. The tunnel has a radius of 60 feet and a gradient of 1 in 39 and is still an outstanding feature of the system. Within it the rails are laid in concrete, tramway fashion, and, as the track is only single, a simple signalling device was used to ensure that only one train was in the tunnel at a time. This was worked by the driver on entering the tunnel and cleared by him on exit. In recent years an electric light system has been employed.

The solution to the problems of narrow spaces and tight curves were found eventually in the adoption of the unique design of Geoghegan locomotive. In 1875 the first locomotive was supplied by Sharp, Stewart & Co. and was a small 0-4-0 engine with a weight of only 2 tons with a saddle tank carrying some 28 gallons. At the time this carried out all the necessary work and survived until 1913 carrying visitors around the Brewery. In the following year, how-

ever, two locomotives were obtained from Lewin of Poole in Dorset. These were named MALT and HOPS appropriately and were of five tons weight with large fly-wheels something like Aveling & Porter engines. These were followed in 1878 by a further two six-ton Sharp Stewart locomotives and the gradual increase in weight, necessary for the increasing loads, culminated in the first of the Geoghegan designed engines in 1882.

No. 6 was built by the Avonside Engine Co. Ltd., Bristol, and was a prototype for a further 18 to be built by the Dublin firm of William Spence, Cork Street. These were remarkable locomotives, not only for small technically advanced points of design and for their ability to meet very successfully the arduous demands put upon them, but also for their dual role as a motive power unit on the broad gauge.

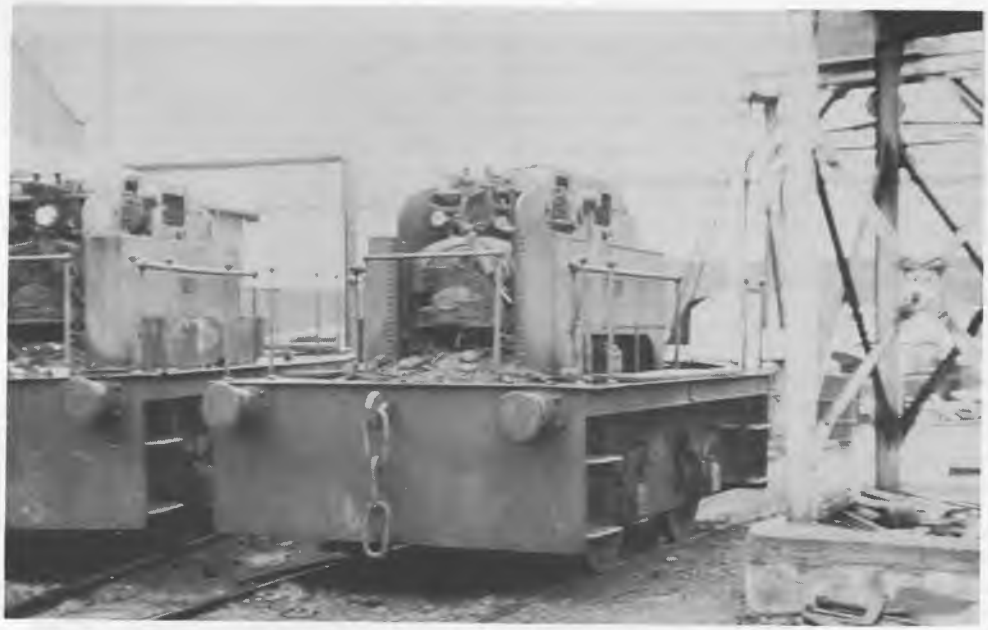
The design remained substantially the same with only minor alterations and improvements over the years. The following are the principle dimensions:-

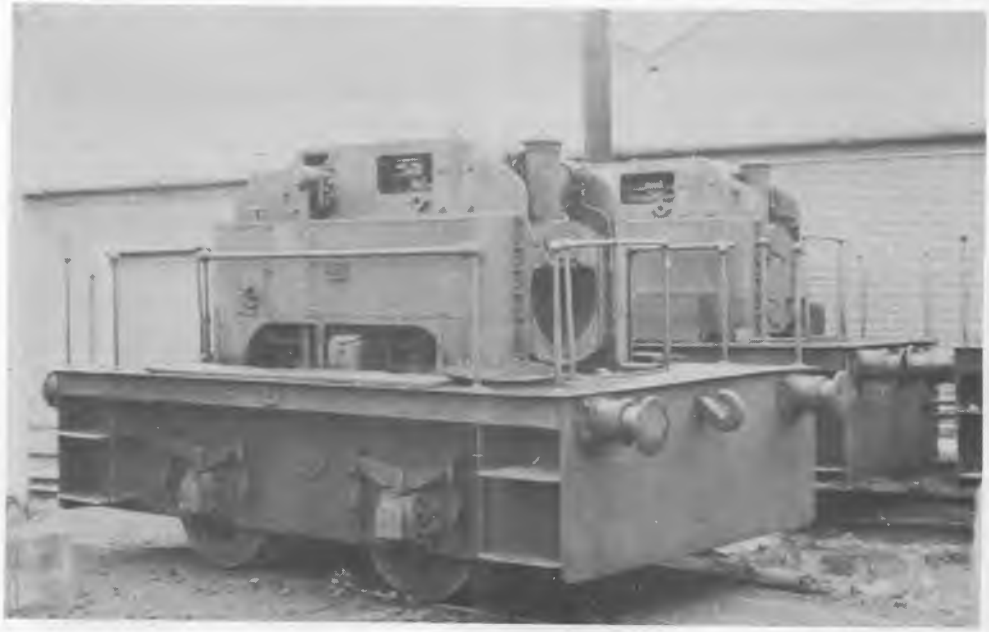
Cylinders (two) : 7 in.diameter by 8½ in.stroke.
Wheels : 1'10" diameter on a 3'0" wheelbase.
Boiler : Diameter of barrel inside 2'5".
No. of tubes 64
Diameter of tubes outside 1½ inches.
Length of tubes between tubeplates 2'10⅜"
Heating Surface: Firebox 13.75 sq.ft.
Tubes 72.61 sq.ft.
Total 86.36 sq.ft.
Steam pressure : 180 lbs./sq.in.
Capacity of water tanks : 80 gallons.
Capacity of bunker : 3½ cwt.
Total weight: 7 tons 15 cwt.

No.	Built	Maker	Makers No.	Withdrawn
1	1875	Sharp, Stewart	2477	1913
2	1876	Lewin		1914
3	1876	Lewin		1927
4	1878	Sharp, Stewart	2764	1925
5	1878	Sharp, Stewart	2765	1925
6.	1882	Avonside	1337	

The following are all Wm. Spence locomotives:-

7 8 9	Built in 1887
10 11 12	1891
13 14 15	1895
16 17 18 19	1902
20 21	1905
22	1912
23 24	1921





In order to allow for the negotiation of tight curves by keeping the wheelbase short, to keep the width as narrow as possible, and to make for easy placing onto the haulage bogeys, the engine is placed above the marine boiler and the drive is transmitted to the wheels by a vertical connecting rod. In photographs these appear to pass through the side tanks but in fact there is a gap between the rear of the tanks and the front of the bunkers for these. The motion of the Stephensons valve gear is easily accessible for maintenance through inspection covers above it.

The wheels are mounted in a completely separate unit similar to a bogie. The main frames of the locomotive may be considered as the two vertical sheets between the tanks and boiler. At the top these support the motion and on the bottom is attached the leaf springs. These in turn are attached to the upper edge of a flexible rectangular frame forming the sides of the bogie which can flex in a vertical plane in the middle. Within the rectangular frames the ends of the axles are mounted in sleeve bearings, in turn mounted in spherical bearings, to allow for any rolling motion of the locomotive.

Allied to this frame arrangement is the method of drive between the cylinders and the wheels. The cylinders are mounted horizontally between the frames above the boiler. Vertically above the driving axle, the crankshaft is held in vertical conventional hornguides. There is a vertical link connecting the respective driving axlebox with the crankshaft bearing above it. This link holds the axle and crankshaft centres at the same distant apart, this link also supports the crankshaft. To allow for angularity between the frames and the crankshaft, (as with the axle, the crankshaft is subject to the same rolling movement, due to the connecting links just mentioned) the bearing guides are 'opened OUT' top and bottom to allow the bearing to rock in its guide, this being similar to the usual locomotive axlebox.

The problem of twisting the connecting and eccentric rods when the crankshaft moves out of 90 degrees to the main frames is solved in the following manner. The connecting rod journals on the crankshaft are concave to a radius of $4\frac{1}{2}$" when viewed in section, with the external diameter of the big end brasses being made spherical, the big end of the connecting rod is made to match. The small end bearing is arranged in a similar way, namely the usual parallel bearing within a spherical one. The eccentric sheaves' bearing surfaces are machined convex, thus allowing the eccentric strap to twist relative to the sheave. Thus full flexibility is achieved between cylinders and crankshaft.

The drive between the crankshaft and the driving axle is achieved by vertical 'L' shaped coupling rods. The crankshaft bearing being at the top and the crankpin bearing at the angle of the 'L', the foot forming part of the coupling between the wheels. Originally the problem of overcoming the bending which occurs when the locomotive rolled, was solved in the following way. When the driving axle goes out of 90 degrees to the main frames the crankshaft follows suite due to the connecting links between the bearings. However, the vertical centre line between centre of axle and crankshaft remains parallel to the vertical line of the main frames. The result is that the vertical coupling rod has to bend to a flattened 'S' shape:⟶


BCK
7960

Firstly the vertical coupling rod was made of 2" wide by $1\frac{1}{4}$" thick iron with a short section of steel insert 2" long by $4\frac{3}{4}$" wide and 3/16" thick inserted between the end of the rod and the bearing both at the crankshaft and crankpin ends. This was later modified by making the rod entirely of steel of the same section except the $1\frac{1}{4}$" was reduced to $\frac{1}{4}$" thickness for a length of 2" adjacent to the bearings, the width remaining 2" throughout. This gave the rod a much neater appearance. This was not the final form that these rods took as they were later altered to a uniform section throughout of 2" wide by $\frac{3}{4}$" thick.

Although this arrangement is described as a flexible frame, in its final form it is less flexible than the conventional springing arrangements with hornguides. The conventional arrangement allows each box to move independent of its neighbour. With Geoghegan's design the movement between the leading and trailing axles is virtually non existent. With this in mind, the added complications of bearings within bearings, maintenance costs must have been high compared with a conventional locomotive of equivalent power. However, this must surely be the most powerful locomotive built based on a ratio of horse power to cubic size.

The wheels are thus inside the bearings and frames, and are braked by two opposed cylinders operated by steam and acting on two brake shoes on each wheel. No handbrake is fitted, but a sandbox is situated on each side between the wheels.

In its heyday there was a total of some eight miles of 22" gauge serving the Brewery. On the upper level malt was transported from the bins in Robert Street and hops from the Hop Store to the Brewhouse and even today long trains pass regularly through the cobbled streets on this level, hauled by the 37 hp 'Planet' type diesels. From the upper to the middle levels spent grain and hops were removed to disposal points whilst from the latter level malt was conveyed from the Cooke's Lane maltings to Robert Street Malt Store. On the lower level empty casks were transferred from the railway banks and yards to the cask washing and cleansing sheds, carrying as many as 8,000 casks in one day. When the Victoria Quay wharves were used for the cross-channel trade, the full and empty casks were handled by the railway between here and the racking sheds.

But it must surely be the principle of the 'two-in-one' locomotives that is the most interesting feature. Prior to the ownership of broad gauge (5'3") locomotives the Company carried out all movement of wagons between the Brewery and the Kingsbridge Goods Station of the Great Southern Railways by 'haulage wagons' or 'converter bogeys' into which the narrow gauge locomotives were lowered. These were all built by William Spence and were able to haul up to 13 broad gauge wagons.

LOCO DRAWING - see fold-out page at the rear of the magazine please.

The narrow gauge locomotive was raised and lowered into position by an hydraulic hoist, later converted to electricity, a bridging shackle being quickly secured to the engine by four pins. When lowered between the frames of the broad gauge vehicle the driving wheels rested upon narrow rollers which in turn were geared to the wheels of the converter bogey which could thus be propelled along as a broad gauge locomotive. Whilst examples of rolling stock having been worked over two gauges are comparatively common I would be interested to learn of any other railway using a system similar to this for locomotives.

The peak total of narrow gauge wagons has now been halved to nearly 300. An unusual type of coupling bar is in use which permits both pushing and pulling round the sharp curves. The entire system is now being gradually contracted and it is anticipated that it will become defunct within 3 or 4 years. Since the war the steam locomotives have been gradually replaced by the diesels, the design of which imposed the same difficulties as had been originally experienced with the steam, except that they were not required to fulfill the 'two-in-one' principle. In latter years the number of steam locomotives had been reduced to five and by May 1965 the last of these had steamed at the Brewery.

No. 20 was already on display at the Belfast Transport Museum whilst No. 13 had been donated to the Talyllyn Railway Museum. In addition No. 15 had been repainted and was still at the Brewery awaiting collection from a group in Dublin that wished to preserve it. It was therefore with considerable surprise that I received a letter from Messrs. Guinness, in reply to one simply asking what was the present state of the railway system, dated 23rd September 1965 and stating that the company were prepared to present the Society not only with one of the narrow gauge locomotives but also with one of the broad gauge bogeys. - "This is a rather unique application and I am sure you will be interested." Members will be aware from articles in the Newsletter during the past year of the considerable deliberation which took place and of the arguments for and against the preservation of a further Geoghegan locomotive.

Inspection of both units (Nos. 23 and 3) and of boiler reports by Tony Deller and myself on a visit to Dublin early in December and the additional offer of the transhipment gantry by the Company which would make possible the demonstration of both items in working order at the Museum, confirmed our wish to raise the transport costs if possible. Originally the Company had wanted the vehicles moved within four months but eventually they agreed to extend this in view of our intention to exhibit them in a more realistic and useful way.

Considerable enquiries were made among haulage and shipping firms to ascertain how the items could be transported and it was eventually agreed that Coras Iompair Eireann would carry out the entire movement from the Brewery to the Museum and for only £180.

CONTINUED ON BACK COVER.

PHOTO COMPETITION 1966

Over fifty entries were judged by a panel of Leeds Area members, we have pleasure in awarding prizes as follows.

1st	£1. 1. 0	"Kettering Furnaces No. 2". August 59 by P.J. Shoesmith.
2nd	10. 6	Styrian Government Railway, Austria, Murtalbahn. 2'6" gauge, U40 0.6.2 tank leaving Murau 25.7.65, by P.J. Smith, Birmingham 8.
3rd	10. 6	You know where. July 1961. "Prince of Wales" by Ivan Stephenson, Morley.
4th	-	Preserved loco at Capolago, June 1966, by P.J. Shoesmith.
5th	-	A pint sized decapod. 60 cm gauge 0-10-0 No. 105 by O & K No. 105 Madrid Sugar Refinery 10. 9. 65 by Maurice Billington.

3rd

1st

2nd

4 th

5th

THE FIRST OF THE MANY

By Sydney Moir

More than forty years ago, the class NG.G.11 proved the abilities of the Garratt Design on the Narrow Gauge Lines of South Africa. Today, these branches of the S.A.R. are powered almost entirely by Garratt Engines.

When the South African Railway was formed in 1910 by the amalgamation of the systems of the Cape Colony, the Colony of Natal, the Free State and the Transvaal, a varied assortment of narrow gauge locomotives was brought under one ownership. The only two-foot line in the Transvaal worked with a brace of 0-4-0 side-tanks: the Natal Government Railways had gone in solidly for 4-6-2 side-tanks on its two lines: the Cape Government worked the Hopefield Railway with 2-6-0 tender engines and the Avontuur Railway with 2-6-4 side-tanks and 4-6-0 tender engines, throwing in a couple of dissimilar 0-4-0 tanks for good measure.

After the Act of Union had created a single country from the four elements, the construction of two-foot gauge railways was continued. Those in Natal repeated the existing pattern, being powered by 4-6-2 side tanks: a duplicate 2-6-0 was obtained for the Hopefield and more 4-6-0's were put onto the Avontuur line. These were followed in 1916 by the most powerful of them all, the Pacifics built by Baldwin, while nine ex-Beira Railway 4-4-0 tender engines were scattered around the various branches.

Though each and all were capable of handling the traffic for which they had been designed, loads were becoming greater year by year - by 1919 it was obvious that more powerful locomotives were required. The very factors that had called the narrow gauge into being - hilly country abounding in sharp curves - militated against the use of heavier rigid-frame engines: the 4-6-2 of the Avontuur Branch represented the longest wheelbase that could safely be worked around the tight curves. Trials with one of the ex-German 2-8-2 tender engines obtained from South West Africa proved this conclusively.

There followed a short period of experimenting with the chassis of two of the older 4-6-0 engines and a broad gauge boiler. These chassis were still in the sheds at Humewood Road in 1935, but by that time changes of staff on the Avontuur line had wiped out all memory of what had been done. Whatever it was, the results proved the possibilities of an articulated locomotive.

Baldwin Locomotive Works then supplied tentative designs for Simplex Articulated locomotives of both tank and tender types. These have been referred to as Malletts, but did not have the compounding system of the true Mallett. However, they featured the widely-swinging boiler front of the Mallett design, and most likely this put paid to the idea, for the widening of cuttings on the curves would have been both inconvenient and costly.

The Garratt design, however, was capable of doing all that could be asked of it with no alterations required to track, cuttings or bridges. Messrs. Beyer-Peacock worked out a design for a 2-6-0 x 0-6-2 and three engines were ordered. On delivery in 1920, they were classified as NG.G.11: No. 51 went to work on the Avontuur Branch, while Nos. 52 and 53 were sent down to Natal, to operate the Stuartstown Branch. These engines had a maximum cylinder horse-power of 660, a T.E. of 15,876 lbs. at 75% of the 180 lbs. boiler pressure, and an all-up weight of 44 tons 15 cwt. By comparison, the 4-6-2 tender engines could only develop a cylinder hp of 546 and a T.E. of 12,302 - the new engines produced an extra 3,574. When compared to the little 4-4-0 the Garratts made the older engines look ridiculous, for they could overpower four of the Class NG 6. The use of a bigger boiler (4'2" internal diameter as against 3'6" on the 4-6-2 and and 2'8" on the 4-4-0) combined with the width and depth of firebox restricted only be the loading gauge meant easier and more economical steaming.

The 4-6-2 tank engines of the Natal lines exerted less than half the tractive effort of the Garratts. On the Stuartstown line the use of the NG.G.11 meant a saving in mileage and time for the same quantity of goods equal to one engine and crew - the line was then handling 6,000 tons of general goods per annum. However, the engines had their teething troubles, the fracturing of the main steam pipes being the greatest. After a series of tests, it was decided the real cause lay in the main-frames and strengthening was ordered. No. 52 was the first to be dealt with, entering the Durban shops during the early part of 1923. No further trouble was experienced in service and in due course the other two were modified.

Nos. 52 and 53 set up such a good record of service in Natal that the purchase of further Garratts was urged. As a temporary measure, No. 51 was sent round from the Avontuur Branch to join her sisters. Two further engines were ordered, incorporating certain changes dictated by experience with the original trio. The wheel arrangement of 2-6-0 x 0-6-2 was retained, but the Walschaerts gear now drove piston valves instead of the D-valves of the original design, while the slightly longer boiler carried a superheater. As a result, the number of tubes was reduced from 211 of $1\frac{3}{4}$" diameter to 115 of $1\frac{3}{4}$" and 13 of $5\frac{1}{2}$".

The new engines went to work in Natal, under the numbers 54 and 55. As a class they were obviously NG.G.11, while the differences equally obviously called for a sub-division: Nos. 51, 52 and 53 now became NG.G.11 (First Order), while Nos. 54 and 55 were known as NG.G.11 (Second Order).

The 'First Order' engines lasted more than thirty years in active service. No. 52 was the first to go, being sold during 1956 to the Rustenburg Platinum Mines. Her sisters were both put to light work: No. 51 was sent back to the Avontuur Branch, while No. 53 went to Port Shepstone - she was scrapped in February 1962. At Humewood Road, No. 51 stood idle on a spur, in running order but out of use.

1

2

At the beginning of 1964, certain members of the Ffestiniog Railway Society put out feelers regarding the purchase of a Barratt with which to bolster the engine-power of their line. While they would have preferred No. 56 or No. 57 of Class NG.G.12 at 36 tons, or No. 84 of Class NG.G.14 at 37 tons, their luck was out, for Nos. 56 and 57 had been sold out of service in 1952, while No. 84 had been scrapped during 1954. Thus the choice had to be a NG.G.11, and the General Manager of the SAR was contacted directly.

His reply was disappointing: Nos. 54 and 55, the 'Second Order' engines, were working the Weenen Branch, being the only locomotives permitted to run over the light rail of this line. The only other engine available was No. 51, which was due for scrapping, and until she had been inspected it was not possible to say if she was in sufficiently good condition to be worth purchasing. In due course, a further letter from the SAR put paid to all hopes of working a NG.G.11 over Ffestiniog metals - No. 51 was in such poor shape that re-conditioning would be too expensive and accordingly authorisation had been given for her scrapping.

At the present moment, Nos. 54 and 55 are stationed at Humewood Road, doing light work: their places on the Weenen have been taken by two of the Class NG.G.13 engines of the 2-6-2 x 2-6-2 wheel arrangement, a fact that seems to indicate a general relaying programme has been carried out on the Weenen Branch. Since relegation to light work is usually the forerunner of condemnation, it seems as if the 1926 engines have reached the end of their road - forty years of active life is not such a bad age for a locomotive!

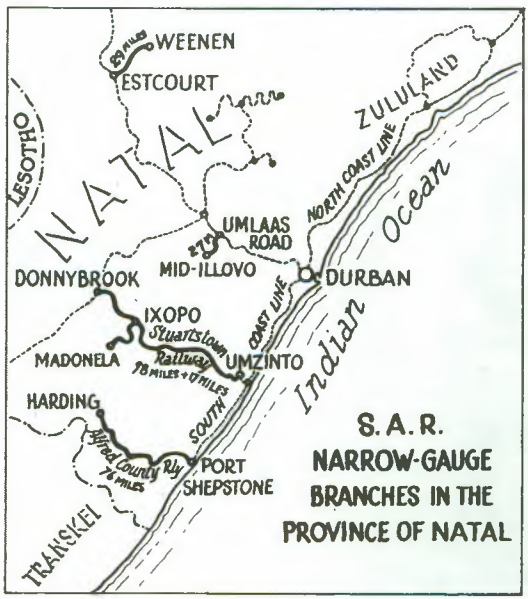


Photo 1:-

No. 51, the first of the many, standing cold and idle at Port Elizabeth. This was at the end of forty-two years of service, so she could be said to have worked well. From here she went to Humewood Road shops for an examination, the intention being to determine whether she should be sold or scrapped - she was marked for cutting up as a result. The simple lines of the tanks, both front and rear, was a feature not found on the NG.G.13 or NG.G.16 engines that took over their duties.

Photo 2:-

Giving a good idea of the width of a Garratt on 24" gauge tracks. The gentleman with the morning's milk seems quite unconcerned by the presence of two sets of hissing and clanking motion work behind him. Practically all narrow gauge yards in South Africa are spacious affairs, having been laid out in open and undeveloped country.

Photo 3:-

The use of electric headlights adds yet another pipeline to the Garratt's main frame, for the cable from dynamo to switch-board and on to front and rear headlights is passed through standard conduit with standard junction boxes.

Photo 4:-

No. 55, Class NG.G.11 (Second Order), shunting at Weenen. Since these engines are 'assigned', the trimmings added to them are largely determined by the ideas of the engine-men. For example, an aluminium-painted smokebox and stack is NOT a feature of South African Railways locomotives.

Photos : Yvonne Adendorff

South African Railways

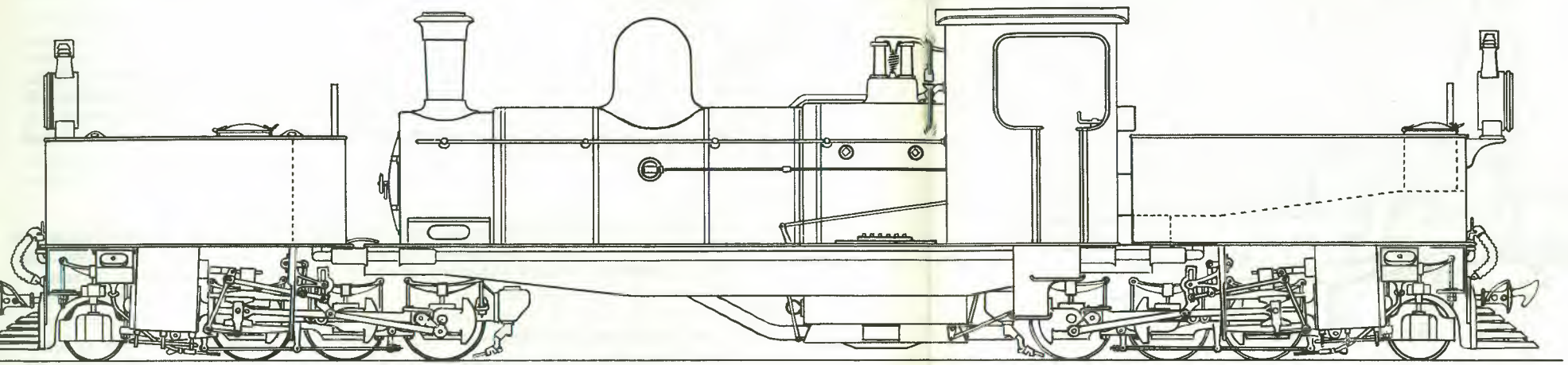
CLASS NG.G.11 (First Order)

Locomotives 51, 52 & 53

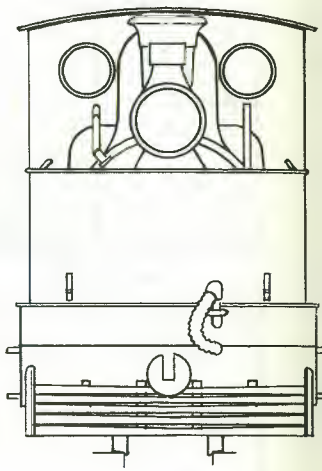
(NARROW-GAUGE)

12" 0 1 2 3 4 5 6 FEET

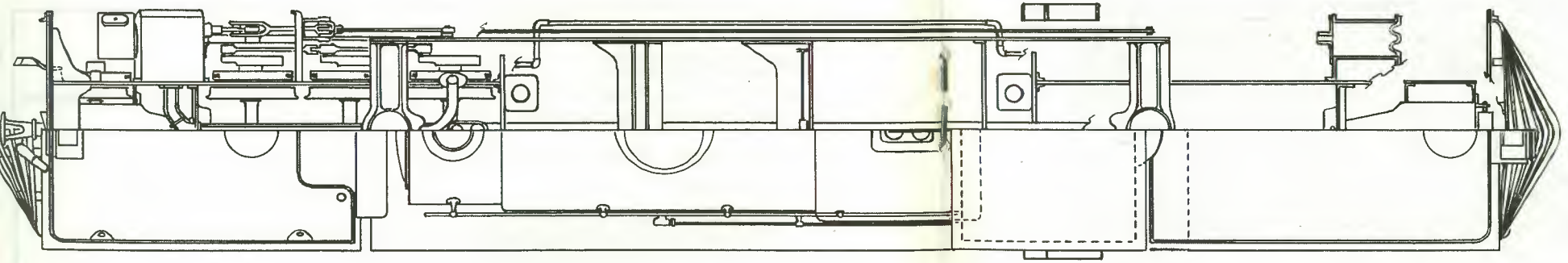
From Beyer-Peacock Drwg. 87406
Mar. 20, 1919



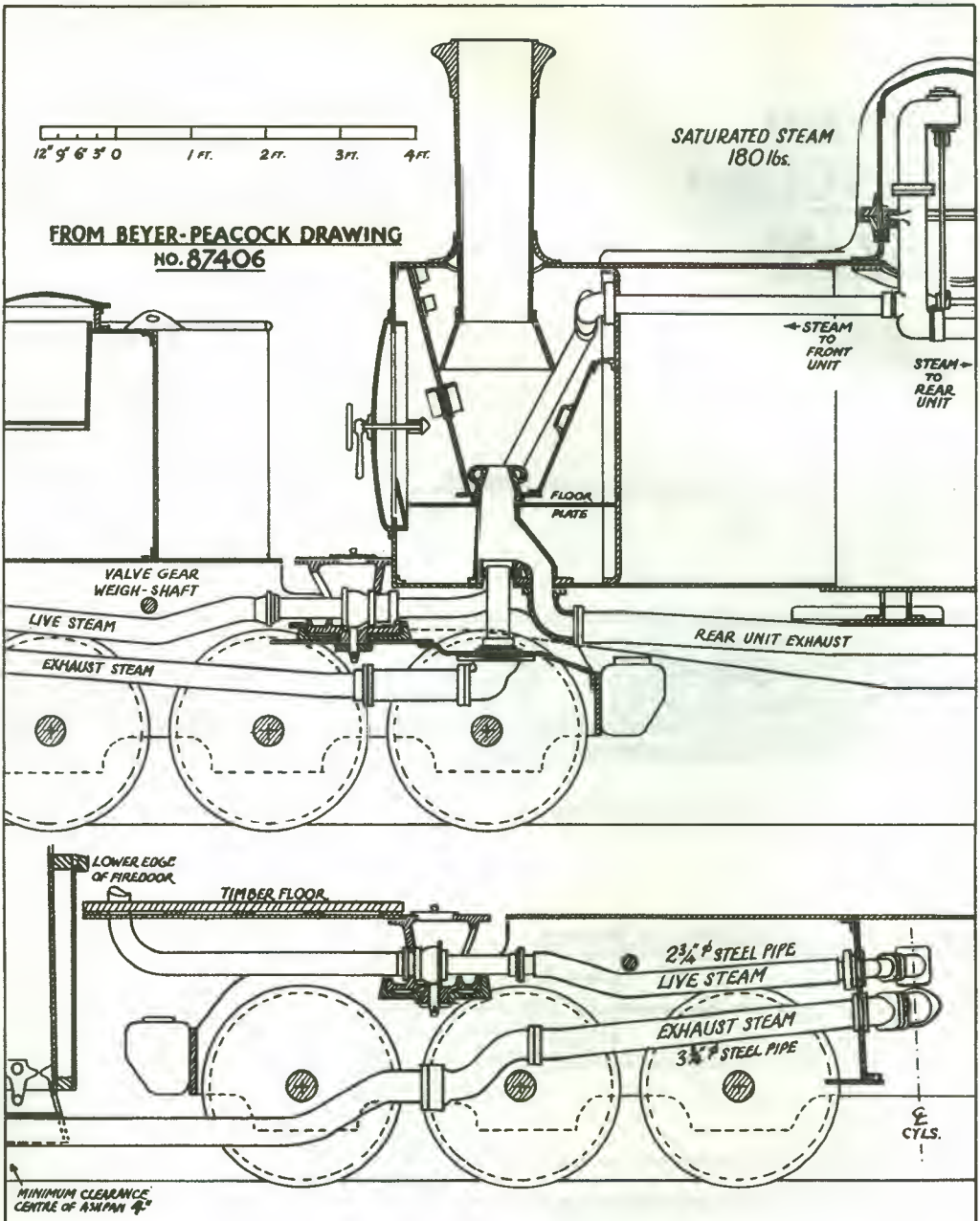
ELEVATION OF LEFT-HAND (FIREMAN'S) SIDE



FRONT ELEVATION

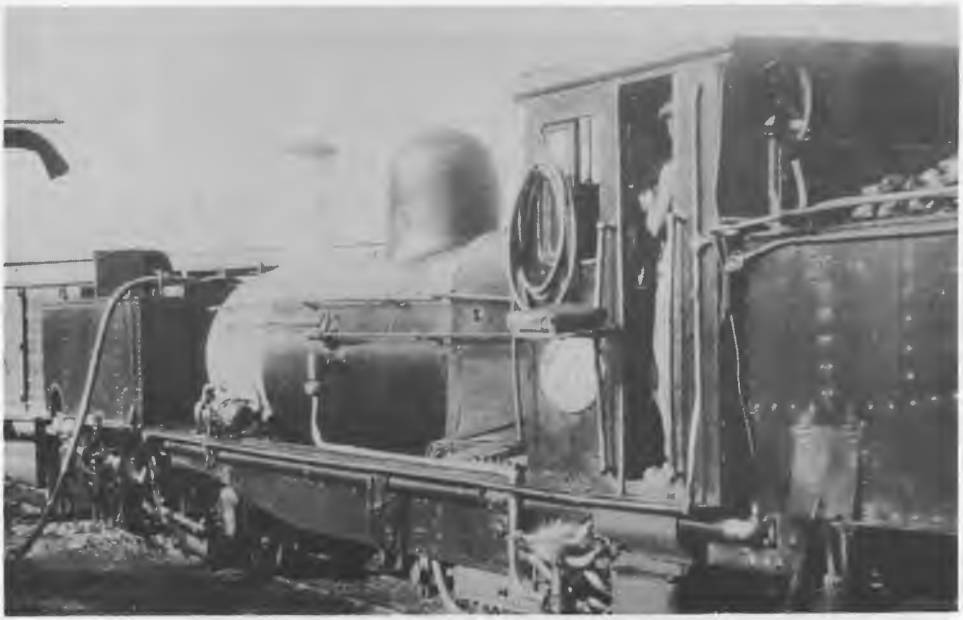


PART-PLANS, SHOWING FRAMES



Live and Exhaust Steam connections, front & rear units.
Beyer-Peacock Loco No 01060. S.A.R. Class NGG 11, 1st Order.

S. MOIR 1964



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"PICK-A-BACK TO THE WORKSHOPS"

By Sydney Moir

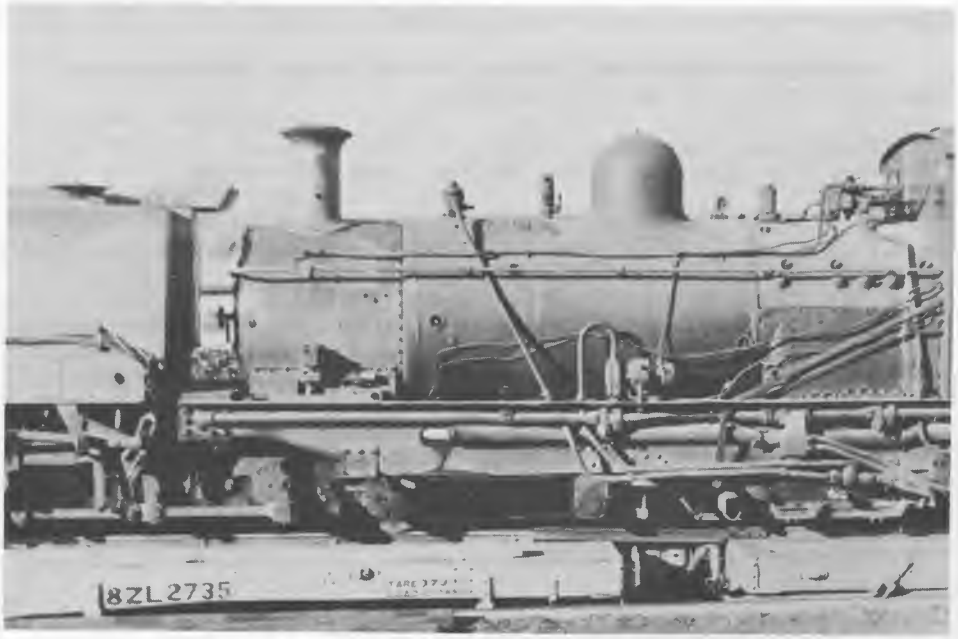
In South Africa the narrow gauge railways share the repair facilities of the broader gauge, for both are part of the Government-owned system. This means ailing stock has to be railed from running shed to workshop and has led to the introduction of special vehicles for the job.

Photo 1 shows HUMEWOOD ROAD the loco depot of 177 mile branch between Port Elizabeth and Avontuur. A Class NG.G.16 Garratt stands in the special end loading pit on a broad gauge 3'6" wagon. These were originally steel drop side wagons but sides and ends have now been removed. Difference in couplers will be noted.

Photo 2 The gap between wagons is bridged by a short length of rail. Garratt engines are run into position with the weight distributed equally between the two wagons, Tender engines 2-8-2 NG.15 are separated, loco on one, tender on the second.

Photo 3 HUMERAIL is the code for Humewood Road. UITENHAGE is the central workshops of the Cape Midland system of S.A.R.


FOR CONVEYANCE OF
NG LOCOMOTIVES
BETWEEN HUMERAIL
AND UITENHAGE
8ZL2735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IRELAND '66

PART TWO — INDUSTRIAL LINES

By Rich Morris

BALLINGARRY COLLIERIES (PRODUCTION) LTD.

Gurteen Nr. Coalbrook, Co. Tipperary, 2 ft. gauge.

Situated in the Slieveardaga Hills Coalfields this location is an Anthracite Mine & Brickworks. Premises are quite extensive with N.G. railways on the surface and underground. Surface line was at one time worked by I/C locos, but is now rope and hand worked.

Four disused locos on a bank along with other old machinery.

	MR (Plateless)	Green.	Cabless.	Dorman engine.	
"CC1" 11801	MR 7964	"	"	"	"
"CC2" 11802	MR 7966	"	"	"	"
-	RH (Plateless)	"	"	"	-

First 3 are 4 W Diesel, the Ruston 4 W Petrol.

The RH was stated to be from St. Patricks Copper Mine Avoca, has peculiar buffing gear and is flameproofed.

Underground lines are operated by 4 W Battery locos, 13 built by Logan and 4 by Wingrove & Rogers (British Electric Vehicles).

Logan works numbers 1020/27/28/30/31/48/55/95/96/97/98 and 1100 all ex M.E. Engineering Cricklewood or Waddingtons the Contractors, one remains unidentified along with the W.R.'s.

Rolling stock comprised large steel bogie cars for conveying coal from underground, and half a dozen wooden 6 seater personnel cars.

Traffic is rope hauled up a steep incline from underground.

Clashduff Colliery.

Traces of 2' track and loco shed were found, the foreman at Gurteen confirmed locos were transferred there on closure.

BOARD SOLATHAR AN LEICTREACMAIS (ELECTRICITY SUPPLY BOARD)

Allenwood Sod Peat Burning Electricity Station, Co. Kildare. 3 ft. gauge

Situated in the 'Bog of Allen' the line is worked by four RH 4 WD.

	RH	314223	of 1951	48 DL
"2"	RH	326051	1952	"
"3"	RH	314222	1951	"
"4"	RH	300518	1950	"

All fitted with cabs, in blue and cream livery. No. 4 was undergoing repairs at the time of our visit.

LANESBOROUGH POWER STATION. CO. LONGFORD.

Near Loughree on Longford Roscommon Border.

Two lined green Ruston 4 WD's fitted cabs.

3' gauge	RH	422566	LBT
	RH	422567	LBT

Frame of the second loco was stamped 422561

PORTARLINGTON POWER STATION. CO. OFFALY.

3' gauge. Near Offaly - Laoighis border. Four Rustons work here.

"1"	RH	249526	of 1947	48 DL
"2"	RH	249525	1947	"
"3"	RH	279604	?	"
"4"	RH	326052	1952	"

All fitted cabs, 1 and 2 green livery, 3 and 4 cream/green.

These 3 are Eire's only Power Stations worked by E.S.B. locos, the others are worked by Bord Na Mona throughout.

Operation is much the same at all three, the B.NaM. bring the trains of peat into reception sidings and return to the Bogs with empties.

The trains of fuel are then pushed one wagon at a time into a tipper device which upturns the wagon into the furnace feeding hopper.

The ESB locos shunt only in Power Station precincts and so their mileage is small.

BRODERICK & RYAN CARROWNANALT MINE.

Near Derreenavoggy. Co. Roscommon. 2' gauge.

Sitting in a shed was found disused.

No. 1 RH 264244 - 13 DL

Grey livery, out of use for the last 3 years. A nearby addit had just re-opened and was being hand worked (rail).

COURTOWN BRICK & TILE CO.

Courtown. Co. Wexford. 1'8" gauge.

This gauge is unique in Ireland, and there are other unique features too!

Line was previously horse worked but now owns

RH 264237 4 WD 13 DL

in green livery with a red wooden cab fitted with a single slope top to allow it to enter the sloping roofed shed.

Unique features of the loco is the outside coupling chains, due possibly to its very narrow gauge, or it may be a 2' gauge loco converted locally. Front wheels driven by right hand chain, back ones by the left.

The galvanised Iron Loco shed has a steam heater fitted in the inspection pit, presumably to keep 264237 warm in winter.

The line is quite interesting, a stiff incline limits the load to one skip per trip - only two skips were in evidence.

A three way point was found at the bottom of the incline, one branch not used, the other turning off into a small pit where clay was being dug and loaded by a Ruston Bucyrus digger.

DONEGAL PEAT DEVELOPMENT CO.

Bellanamore - Fintown. Co. Donegal. 2' gauge.

Up on the moors, not far from the nearby CDR line, this delightful peat line runs in from the bog to the loading dock on a ballast which includes lorry frames!! Tyres act as buffer stops.

Ten slatted all steel peat wagons have an unusual feature, one pair of wheels are able to swivel - a semi bogie idea.

The loco here is possibly unique, having been converted from Diesel to Petrol. It now sports a transverse Ferguson tractor engine with a side overhang of 2'6".

MR 7944 Grey, cabless, 4 wheel.

JOHN EASTWOOD & SONS LTD., ANDERSTOWN, BELFAST. 1'3" gauge.

No. 4 "The Bug" ex Romney Hythe & Dymchurch railway reported here.

In 1933 this loco went to Belfast Corporation Miniature Railway in Belle Vue Park, Belfast.

Built by Krauss 8378 of 1926 it was 0.4.0 PTT.

Sent to Anderstown in 1960 for scrap, it was eventually covered over with an ever increasing mountain of scrap metal and is stated to lie by the large crane. When the opportunity arises she (?) will be dug out and preserved on site.

IRISH S.E.C.A. LTD., ALLENWOOD, CO. KILDARE.

A French owned firm, interpretation of initials not known.

A Carbon manufacturing plant, processing peat brought in by Bord Na Mona.

It is interconnected with Allenwood Power Station.

Loco was seen in Thos. Mitchell's yard, Bolton, as late as 1965 under repair.

HE 2280 of 1941 a 4 WD conversion from 2' gauge to 3' shunts peat wagons from reception sidings.

The loco carries Mitchell's repair plate 50161, has a Perkins Diesel engine, unglazed cab and is in green livery.

IRISH PEAT DEVELOPMENT CO. LTD., MAGHERY. Co. Armagh. 3' gauge.

3¼ miles off the Irish M.1, the location is well known to enthusiasts. There is no trace of the former electrification, the line now being run by two diesels.

FH 3719 of 1954 with cab, green livery. A real gem parked about a mile up the track, identified as

"Shoema" Schöttler 1727 of 1955 (Bremen) 4 WD fitted with cab, black and green.

No less than three nameplates "Shoema" are carried on the cab, the builders' plate inside reads Christoph Schöttler
Maschinenfabrik
Diepholz Bez. Bremen

and a fifth plate (presumably the dealers)
Dolberg Glaser & Pflaum - Essen.

A peculiarity (beside the nameplates) is the wide spacing of the wheels on this machine.

Rolling stock consists of all wood slatted bogie wagons.

Track is very picturesque, there was all of a foot of grass on the trackbed and trains sweep back the foliage on each side as they journey on.

McTIERNAN BROS. GLEN BALLINSHEE COLLIERY.

Geevagh, Co. Sligo. 2' gauge.

A small location high up in the Bralieve Mountains where McTiernan's are extracting coal from a small addit.

A secondhand 0.4.0 BE is working, probably ex St. Patrick's Copper Mines Avoca.

Identification impossible, belived W.R. product. Cabless, blue livery, wheels have been built up ½" with welding.

Wagons are drawn out of the addit by the loco which retires to the loco shed spur, the wagons are then hand pushed to the tipplers.

A number of steel and wooden wagons lie about in various states of disrepair.

MOGUL OF IRELAND LTD., SHALLEE NENAGH. Co. Tipperary. 2'6" gauge.

A new silver mine being sunk by a Canadian firm. CIE are laying in a new broad gauge branch to the works.

For underground use a number of mines locos have been brought from South Africa, four have arrived, to be followed by 4 or 6 more. Built by E.C. Lenning Pty. Ltd., Germiston, South Africa, 4 WD Type 6, flameproof, cabless, orange/red/black livery.

Works Numbers L706/002
L706/006 the fourth one being without plates.
L706/007

Surprisingly Dorman (of Stafford, England) engines are fitted to the locos, so English engines have been fitted to South African locos for delivery to Eire via Canada.

Locos were stored awaiting the mine opening, also evident were 31 heavy duty Hudson side tippers and 3 Pneumatic Diggers (rail mounted).

POPE BROS. LTD., NR. URLINGFORD. Co. Tipperary. 2' gauge.

On the Urlingford - Littleton road, this is one of Eire's two peat lines not run by Bord Na Mona.

"5" HE 2659 of 1942 Withdrawn
"4" MR 8749 "
- MR Plateless "
"3" *MR " (E1B 39) Working
"No.*4" MR Plateless
- Krohnke 312 of 1961

* fitted transverse Fordson Major engines giving 2'6" side overhang.

All are 4 WD, the HE and the un-numbered MR are the only ones fitted with cabs.

The Krohnke is unique to the British Isles, so a few plate details for the record:- Knecht Krohnke Maschinenfabrik,
Hamburg-Harburg 1.
Type MAH 711

fitted with Petters engine which may not be original, nicknamed "The Cronk" by the staff who state it was converted from a B.Na.M. Railcar (denied!)

Line about 2 miles long, the MR's bring the loaded peat wagons to a junction about ½ mile from the works, where the other MR or the Krohnke take the train into the works.

One oddity amongst the Rolling Stock, 2 skip bodies mounted on one frame (transverse) used to take away waste, dumped on the trackside as additional ballast.

UNITED KINGDOM PEAT MOSS LITTER CO.

New Ferry Works Nr. Bellaghy. 2'8" gauge.

A Lister (possibly R28074 of 1945) 4 WD has been converted to Diesel from Petrol. According to the manager the only loco to have ever worked here. Cabless, green livery. At this Companies Creagh Works, Toome (1'8" gauge) there lies a wagon, the line now lifted. No couplings are fitted indicating hand worked perhaps. (previously believed loco).

THE FOLLOWING LINES WERE FOUND TO BE CLOSED:-

Ministry of Agriculture. Black Braes Embankment.

Lough Foyle Near Londonderry. 2' gauge. No trace of MR 9202 and 9205 or other rolling stock could be found.

David Patten Ltd., Monaghan. 2' gauge.

MR 2397 a 4 WP previously recorded here could not be found, attempts to trace were in vain.

Harbour & General Works Ltd., Coleraine.

Co. Londonderry. 2' gauge.
Only a contract, no permanent works. MR 5604 4 WD presumably went to other work on completion of the contract at Coleraine.

Dungannon Brick Co. Ltd.

Dungannon Co. Tyrone.
2' gauge. Location checked, walking about in 9" of mud.
Line closed many years ago.
HE 1964 of 1945 4 WD was reported to have been despatched to the Cowcroft Brick Co. Ltd., London, 3 or 4 years ago.

Continued on page 30

Correction to Magazine No. 43 and an excuse to produce two superb photos by Douglas Ferreira.

Top - No. 11 Erne at Letterkenny.
Nasmyth Wilson No. 699 of 1904. (Note also it is a Signal only that survives here not the box!)

Lower - No. 4 Meenglas and No. 5 Drumboe (nearest) at Strabane.
Nasmyth Wilson Nos. 828 and 829 of 1907.

St. Patrick's Copper Mines, Avoca, Co. Wicklow.

2' gauge.
Works on the Eastern side of the Vale of Avoca are abandoned, but 3' track still in situ rusting away. The Western side mines are still being worked, one loco 040 BE completely derelict and unidentifiable (but believed a WR product), the survivor of three which worked here. No locos work underground so we understand.

Western Industries (Boyle) Ltd.

Keelogues Quarry, Boyle, Roscommon.
The line was in use until 1961, now road dumpers move the limestone. In 3' high foliage at the rear of the works is an FH Planet (Plateless) 4 WD in green livery almost entirely covered by corrugated iron panelling. The loco has a cracked cylinder block, no other rolling stock and no trackwork.

For Information only (not visited in 1966)

James Boyd & Sons Ltd., Roughfort Quarry, Carnmoney, Co. Antrim.

2' gauge, possibly one MR 4 WP here.

Lagan Vale Estate Brick & Terra Cotta Co. Ltd.

Belfast. Co. Antrim.
Extensive enquiries failed to locate, perhaps another member can help.

Reed Mallick Ltd., Altnahinch Dam.

Lough Fiel Nr. Ballymena (?) Co. Antrim.
Advertised for sale in 1965 two 30 DL RHS and one 40 DL RH. Not checked due to oversight.

Wm. Clark & Sons Ltd., Upperlands, Co. Derry.

Horse worked line, gauge not known, another horse worked line believed to be at Ballinascarthy, Co. Cork.
Any information on the above items would be appreciated by the author.

(To be continued)

Letters to the Editor

From Geoff Welsh, Kettering:-

Re. the letter in Magazine No. 43 and the photographs of the Penrhyn "Tar Boilers".

Two square sided, round topped vehicles with firebox doors on each side, a large rectangular opening on the top with a lid and a short chimney at one end. Wooden solebars, four 15" wheels at 2'10" centres. As to their use I have two versions which are not incompatible, one that they were for drying slate dust and the other (and far more likely) that slate dust and pitch were mixed hot in them and used for making tiles, bricks and road mending materials.

If this is the case the problem is why so small, why only two and why put the things on wheels when a larger stationary plant would have been far more logical. However, that is what I have gleaned for what it is worth. If anyone has any better ideas or knowledge I would be as pleased to hear it as friend Fairhurst.

The third and most interesting reason follows -

Shortly after the first world war (the one to end all wars) the staff of the quarry was raised to some 2,000 men. Labour relations were improving as far as these 2,000 were concerned, unions having been invented, and shorter hours and rest periods were introduced. Now quarrying being thirsty work a quantity of liquids was consumed during these rest periods and as it is not a good thing to quaff alcoholic beverages before lowering oneself down the face of a slate quarry to knock holes in the walls,thereof, a rule was put forward that tea only should be drunk.

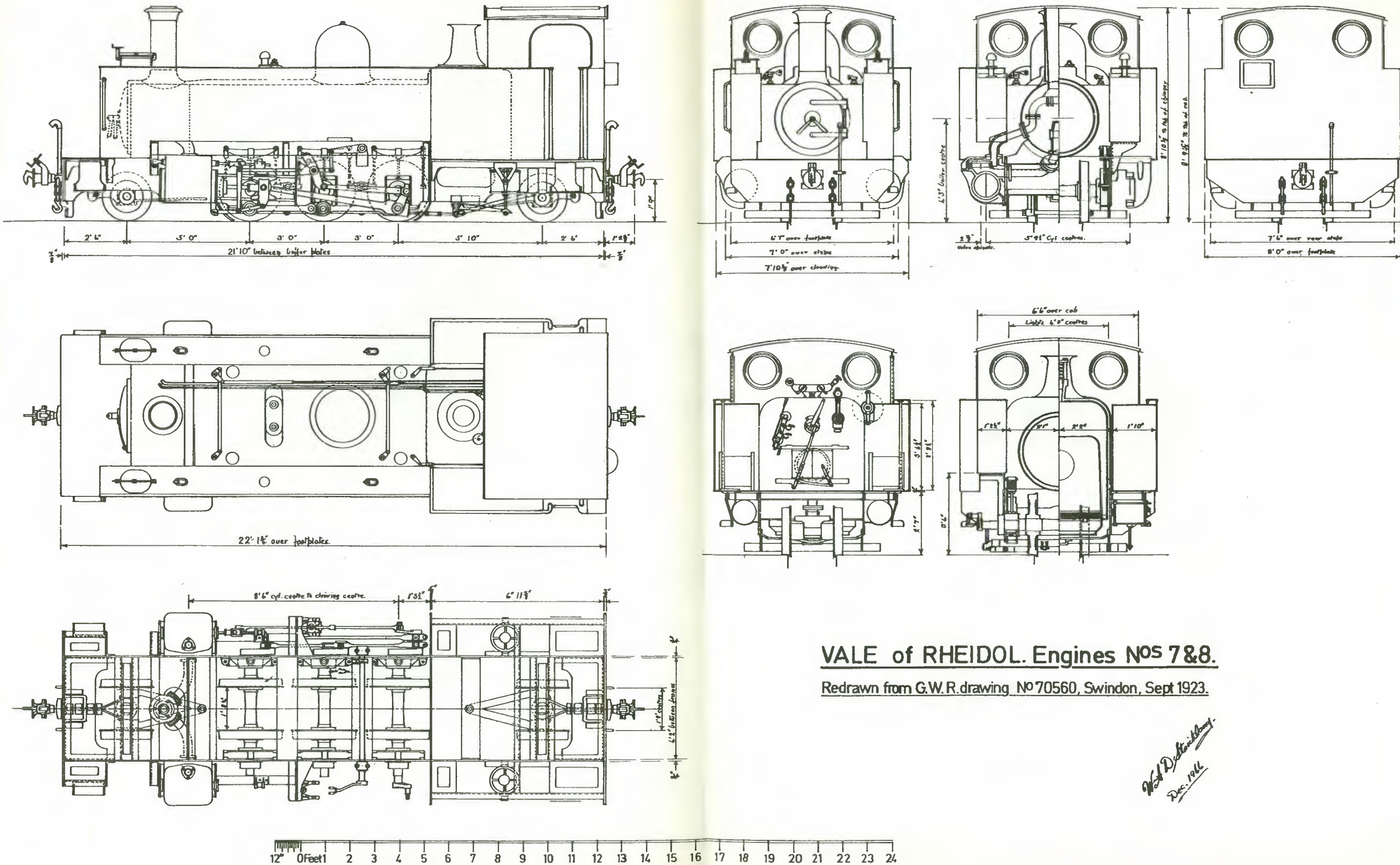
Now the Welsh are an independent race and word was passed back to the management that tea would be drunk if required but it would have to be provided and it would have to be hot. No hot tea twice a day, no slate.

2,000 thirsty men at a pint a time means something in the order of 250 gallons of tea twice a day and something like fifty miles of railway with men scattered all round it. The engineering staff were consulted (here, sort this one out Charlie!!) and the pictured vehicles were constructed. Two long wooden wagon frames were produced in the workshops and boilers fitted. Fireboxes were installed but due to the narrowness of some of the ledges in the quarry, doors had to be provided at both sides to enable the fire to be kept bright at all times.

A large opening was made in the top for cleaning purposes fitted with a lid to keep the heat in and under this was arranged a shallow tray of perforated metal into which tea was placed.

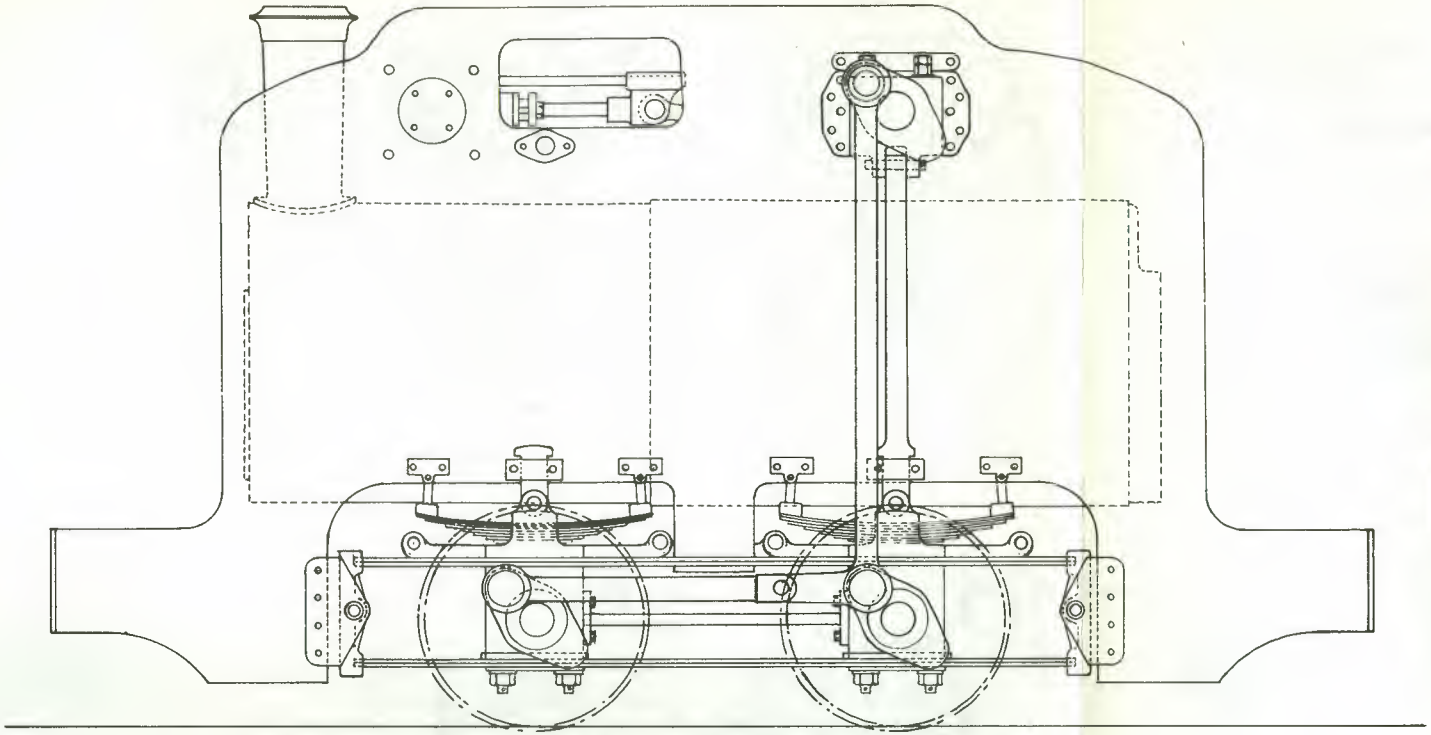
Continued on Outside Back Cover

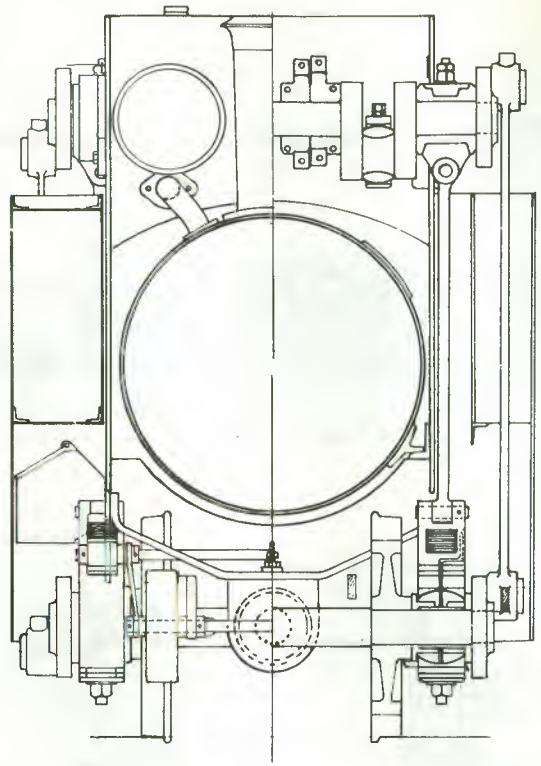

OWAIN GLYNDŴR
7

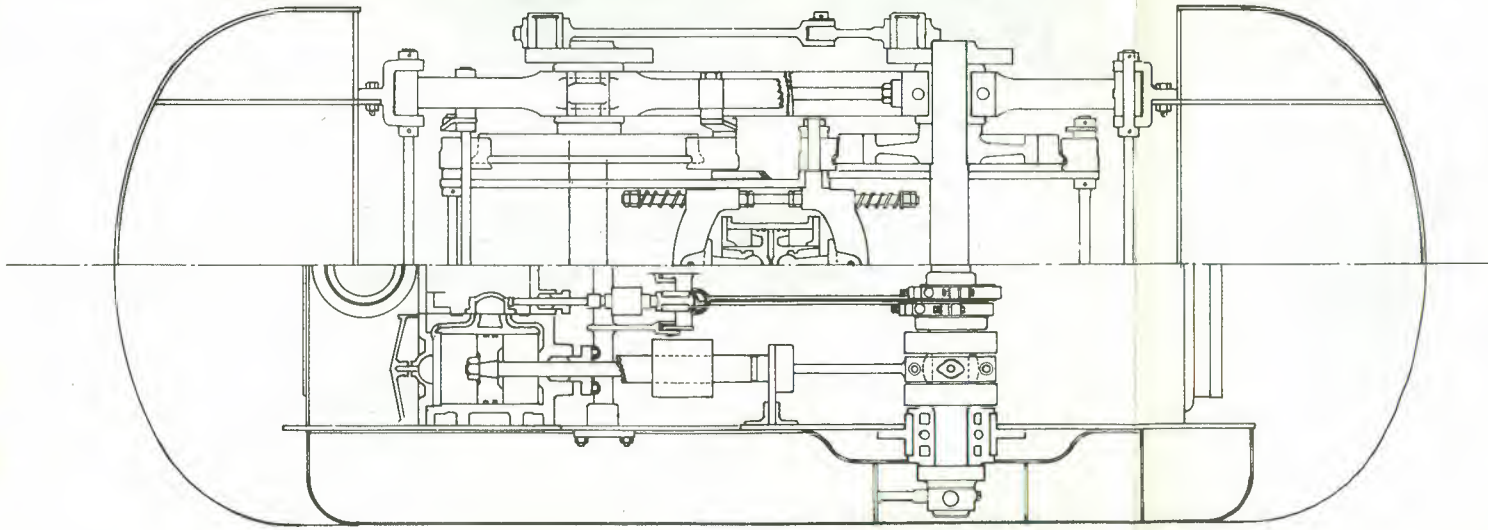


VALE of RHEIDOL. Engines Nos 7&8.

Redrawn from G.W.R. drawing No 70560, Swindon, Sept 1923.







THE GUINNESS LOCOMOTIVE.

Sections showing flexible frame & drive, information taken from print of W. Spence drawing № 4655.

Wm D. Strickland
3.6.'27

Exhaustive correspondence was also carried out with H.M. Customs & Excise, the Board of Trade and H.M. Treasury in order to find out what the import regulations were and then to obtained relief from them. Some 30 letters, numerous meetings and telephone calls later relief was granted on both Import Duty and the Temporary Charge on Imports.

Throughout this time the transport cost was gradually being raised, although it must be said that this was very largely through the sales and other direct work of the Museum rather than by response to appeals in magazines and at meetings. No doubt a different interest will be shown when the units are working.

On 7th September the vehicles were collected from the Brewery and taken to the Ocean Pier Dock and were followed by the gantry on the 21st. The whole consignment was shipped by the m.v. "Derwent Fisher" on the 6th October to Preston where it remained until 12th November when Pickfords collected it and set off for Brockham. There cannot have been much optimism among members of the Museum when they knew that the 22 ton load was due to be delivered on the 13th but in the event unloading proved relatively easy when compared to the difficulties with other rolling stock.

For the future, progress to working demonstration will obviously be very largely dependent on financial resources. The entire unit, with the gantry roped in pieces around it, will remain as such until the foundations for the gantry can be concreted so that it can be lowered straight into position. This may well involve a bulk load of pre-mix concrete. It is very tentatively hoped that this can be completed by the spring 1967. Further inspection of No. 23 shows that it should be possible to put this in steam after very minor attention and Guinness' have indicated that they would be interested in having a formal handing-over ceremony at a Whitsun Open Day if the locomotive is working by then.

A full description of the transporting of the items, of the near loss of them beneath the waters of Preston Dock and of the unloading appears in the Brockham News for January. Copies of this can be obtained from P. Cooper, 51 Waddon Road, Croydon, Surrey, at 1/6d. post free.

Throughout the time it has taken to get 'PINTA' (editors nickname - wishful thinking I imagine) I have been astounded by the help extended both by the various officials of Messrs. Guinness who have been more than generous in their patience and generosity (they are now sending all the surviving locomotive spares and patterns for our use) and by the officials of the various government departments that I have approached. It is easy to condemn officialdom but a personal approach can elicit much help and advice together with a courteous interest bordering on enthusiasm. In addition the Society is indebted to Coras Iompair Eireann for carrying out a most difficult job and at a price which made it possible to consider this preservation.

Continued on Back Cover

By the way, now the vehicles are at Brockham, we have discovered that the converter bogie is No. 4 and not No. 3 as promised and advertised. Any member who donated and feels he has been cheated is welcome to make the necessary arrangements for a swap!

* * * * * * * *

My thanks to Tony Deller - loco information; Frank Jones - photos; and Bill Strikland for the drawing which appears at the end of the magazine.

VALE OF RHEIDOL DRAWINGS

20" x 13" copies of this drawing to full 1/36th scale for 16.5 mm track can be supplied at 5/6d. post free (folded). Allow 3 to 4 weeks. Enquiries to the Editor.

Continued from page 31 - "Letters to the Editor"

Water was run into the boiler, the fire lit and the two wagons sent up from the port at at 10.30 a.m. and three p.m. each day. By the time they arrived at the quarry the water was boiling and the perforated trays were lowered into the water for long enough for the tea to infuse. The two boilers (or 'pots' as they were called) were then separated and taken by the main level locos to all parts of the workings where the men filled their mugs and had the usual ten minutes for expectoration and inhalation. Plus, in those enlightened days, a mug of char.

At about the time they appeared the thermos flask arrived in the Bethesda shops so the use of the 'pots' was discontinued after a very short time and they were stored in the back of the loco shed at the port. Thus they are still in reasonably good condition. Why they were never broken up would be a mystery but for an old letter found in the files. This was from one of the managers to the works engineers giving instructions that they should be kept, continuing: '... in future years some people are bound to get interested in either quarrying or railways as a hobby, and if we leave those things about just think what gloriously stupid reasons some of them will think up for why we would build a couple of mobile boilers...'