

The NARROW GAUGE



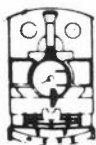
No. 66

WINTER 1973-74

35p



NARROW GAUGE RAILWAY SOCIETY



NARROW GAUGE RAILWAY SOCIETY

(FOUNDED 1951)



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EDITORIAL

We sincerely apologise for the non-appearance of an Autumn 1973 issue of the NGI — this was due to a series of unfortunate and unavoidable circumstances imposed upon us at the Editorial offices. We trust you will find this Winter edition to have been worth waiting for. Your Spring issue (number 67) is currently at the printers and will follow very shortly.



"THREE LITTLE ENGINES — on the three foot". Douglas Station, Isle of Man 12/8/65. Waiting to back onto their respective Port Erin, Peel and Ramsey trains are Beyer-Peacock 2-4-0Ts 12, HUTCHINSON (5126 of 1908), 8 FENELLA (3610 of 1894) and 5 MONA (1417 of 1874) — all in red livery.
(Alan Bowler)

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0-4+4-0 Mallet by Metallurgique of 1889 — <i>Fred Marris</i>	Enclosure

OUR FRONT COVER :

*WANKIE COLLIERY CO LTD, Rhodesia, 3ft 6ins gauge 4-8-2 No.2. (North British 27558 of 1955)
Nr. Thompson Junction station on 2nd August 1973.*
(C. M. Whitehouse.)

NARROW GAUGE PICTORIAL

Edited by MICHAEL JACOB

And featuring the results of the N.G.I. GRAND ANNUAL
PHOTOGRAPHIC COMPETITION. 1972/73
(see page 36 for further details)

*1st Prize — Category A (Narrow Gauge Steam). Awarded to Peter Shoesmith of Birmingham.
Photo : Kettering Iron & Coal Co. Ltd. 3ft gauge, 0-4-0ST. "KETTERING FURNACES NO.2"
(Black Hawthorn 501 of 1879) proceeding slow and steady with a train en route to the Ironworks.
17th September 1959.*





*1st Prize — Category D (Narrow Gauge Rolling Stock). Awarded to Alan Bowler of Eastwood.
Photo : C.F.T.A. Réseau de la Somme, France. Metre gauge vintage crane and match truck at
St. Valery Canal in May 1966.*



*2nd Place — Category C (Narrow Gauge Electric). By Peter Shoesmith of Birmingham.
Photo : Ferrovia Lugano — Cadro — Dino, Switzerland. Car No. 4 between Dino and Cadro,
running through the treetops towards Lugano on 24 June 1966. (Metre gauge).*



2nd Place – Category B (Narrow Gauge Internal Combustion). By Peter Shoesmith of Birmingham. Photo : Zillertalbahn, Tyrol, Austria. 760mm gauge "D8" 8-wheel diesel hydraulic (Orenstein & Koppel 26615 of 1967) at Uderns with a train for Mayrhofen, passing a Jenbach bound steam train. 7 September 1972.



2nd Place – Category E (Narrow Gauge Permanent Fixtures). By John Watkins of Wimbledon. Photo : Vale of Rheidol Railway (BR), Cardiganshire. 1' 11½" gauge. The four lever ground frame outside the loco shed at Aberystwyth July 1970.

1st Prize — Category E (Narrow Gauge Permanent Fixtures). Awarded to Alan Bowler of Eastwood. Photo : British Gypsum Ltd., Cuckoo Bush Plaster Works (now closed), Gotham, Nottinghamshire. 2' 1½" gauge single blade point with curved blade. March 1965.





1st Prize — Category B (Narrow Gauge Internal Combustion). Awarded to Peter Shoesmith of Birmingham.

Photo : Upper Tame Main Drainage Authority (UTMDA), Water Orton, (Lagoon Works.) 2ft gauge. Unidentified 4wD Motor Rail with a train of empty skips in December 1966.

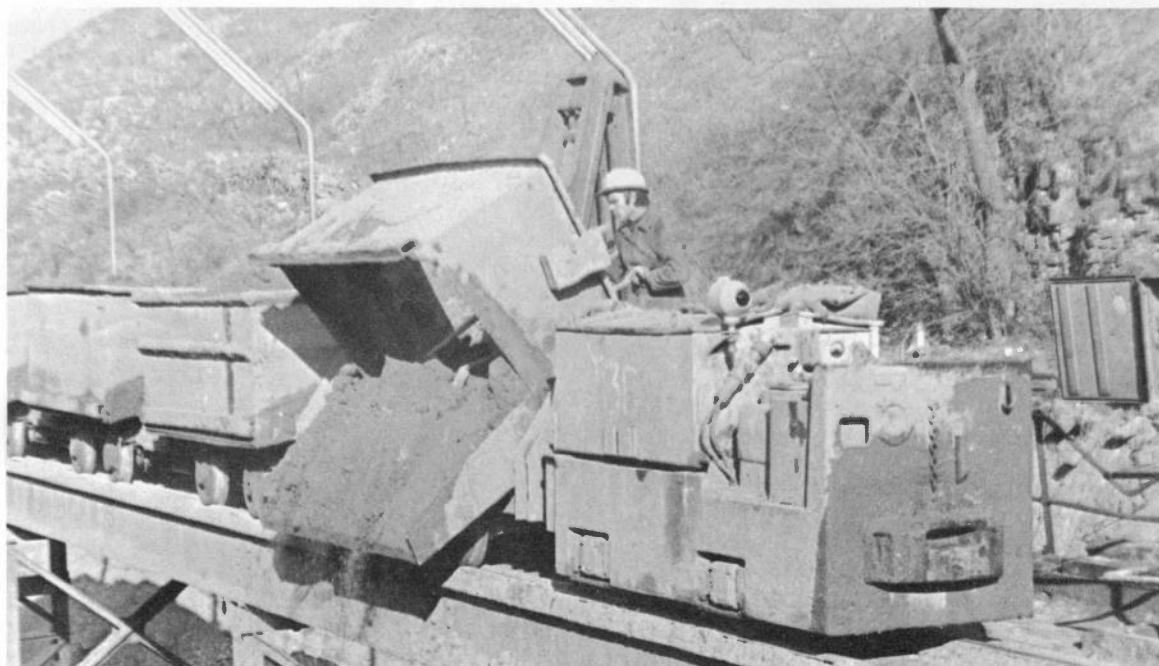
2nd Place — Category D (Narrow Gauge Rolling Stock).

by Brian Rumary of Bath. Photo : Heseper Torfwerk GmbH., Gross Hesepe, West Germany. Shunting 900mm gauge peat wagons by horse, at the Meppen cableway on 8th October 1969.





*2nd Place — Category A (Narrow Gauge Steam). By C. M. Whitehouse of Edgbaston.
Photo : Colorado Railroad Museum, U.S.A. 3ft gauge Rio Grande & Southern RR. 4-6-0 No. 20.
September 1969.*



*1st Prize — Category C (Narrow Gauge Electric). Awarded to Pete Briddon of Surbiton.
Photo : Laporte Industries Ltd., Sallet Hole Mine, Derbyshire. 2ft gauge "No. 3", 4w battery
electric (Clayton 5180 of 1966) making an unusual surface appearance.*

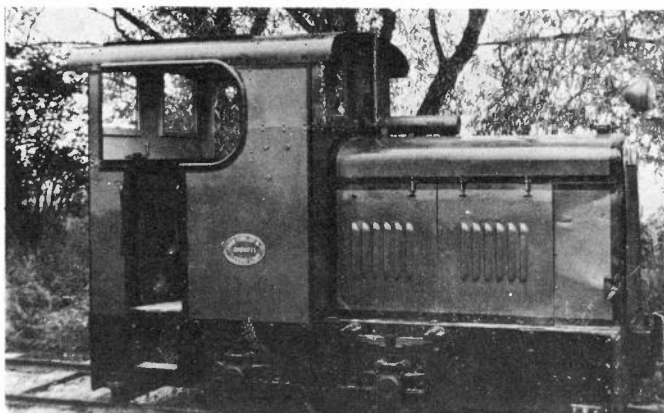
BRITISH NARROW GAUGE LOCOMOTIVE REGISTER

(COMPILED BY THE SOCIETY HON.
RECORDS OFFICER — Pete Nicholson)

PART 8 : JOHN FOWLER & CO. (LEEDS) LTD.

STEAM PLOUGH & LOCOMOTIVE WORKS, LEATHLEY ROAD, HUNSLET, LEEDS, YORKS.

No. 3900011 ('Resilient' class). Following re-gauging from 3ft to metre gauge and refurbishing by Alan Keef at Cote (Oxon) this 26 year old machine is now in regular service on the Cotswold Light Railways, South Cerney, Glos. where pictured in 1973. This loco previously saw service at Dinmor Quarries Ltd, Anglesey, North Wales. (Alan Keef)



John Fowler was born 11th July 1826 at Melksham, Wilts. When he started work he was initially employed by a corn merchant, but it was not long before he joined the Middlesbrough engineering firm of Gilkes, Wilson & Co. in 1847. Three years later he formed his own company, John Fowler & Co. to design agricultural machinery such as a mobile drainer and pipe layer. Later, activities were extended to include the development of steam ploughs which were built by Ransomes & Sims of Ipswich and Robert Stephenson & Co. of Newcastle upon Tyne.

Fowler's interests were moved to Leeds in 1859 when an arrangement was entered into with Kitson, Thompson & Hewitson of the Airedale Foundry, Hunslet, to construct railway locomotives. Fowler established his own works in Leathley Road about 1860 when he was joined by Wm. Hewitson to produce spares and accessories. The 'Steam Plough Works' was extended considerably and in 1862 was able to take over manufacture of all Fowler's equipment. John Fowler's health began to suffer under the intensive pressures of his rapidly expanding business however and in 1864 he had to take time off to rest. Whilst riding in a fox hunt he was thrown from his horse and died on 4th December. Hewitson also died before 1866 when the company built its first steam locomotive.

The first known locos built for industrial service appeared in 1871 these being standard gauge but it was not long before locos of lesser gauge were delivered to industry. Several experimental and patented locos were built in the latter part of the 19th century, — the first, in 1876, was a geared loco while a patent loco built in 1881 had a jack shaft drive from elevated cylinders. The same year was marked by the demonstration of a tunnel boring machine on the Channel Tunnel project which was abandoned purely on political grounds, the machine working satisfactorily. The closing years of the century were engaged in producing a large number of very attractive 2ft gauge tank and tank + tender locos of standardised designs for the Colonial Estates.

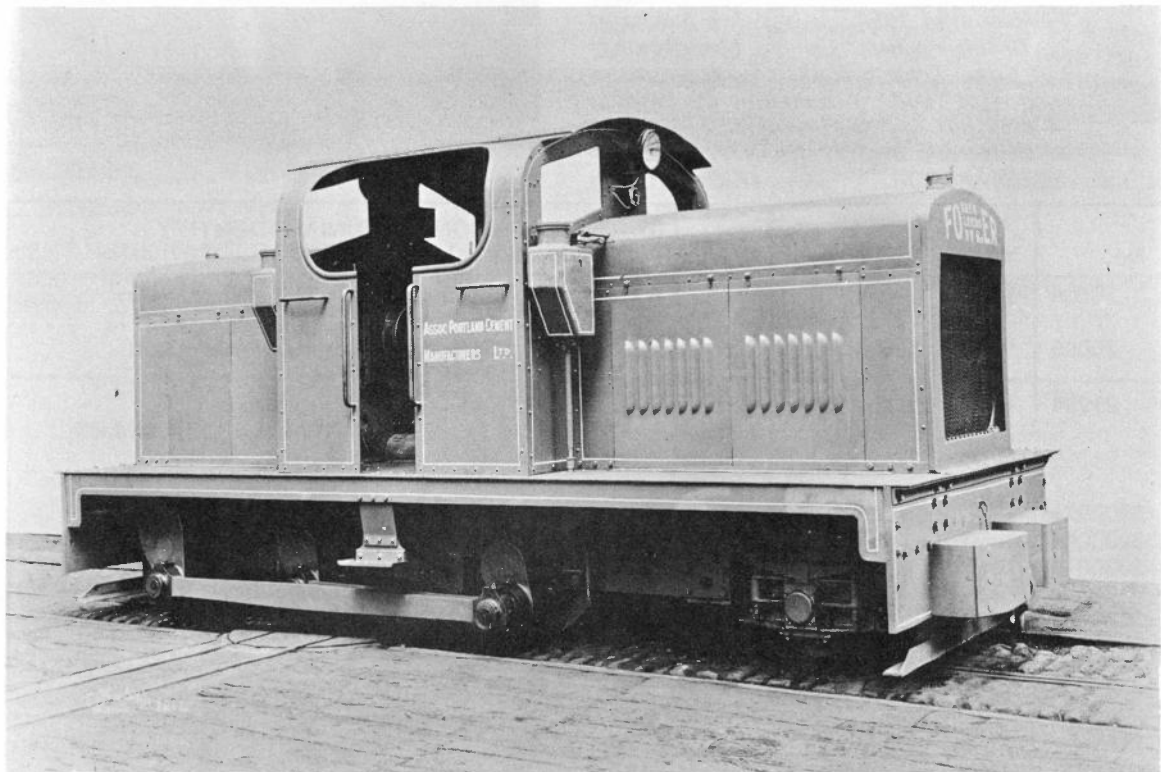
The Works were reorganised during 1914-18 when munitions were produced in quantity. Following that war a range of internal combustion locos was designed and the first to be built was a standard gauge 0-4-0 petrol in 1923. Soon after Fowlers designed and built their own petrol and diesel engines. Narrow gauge i/c locos were never produced in large numbers although a wide range of types were available for 18 to 85 horse power, either 4 or 6 coupled, — with or without pony wheels. Later designs were driven by internal chains.

Officially the last steam loco was No.22752 delivered in 1938, a 2ft gauge 0-4-2T but this was actually built by Hudswell Clarke ! Fowlers had ceased building steam locos themselves a couple of years previously. The 1939-45 War saw tanks of a different variety being constructed — 'Matildas' and 'Cromwells' ! Marshall & Sons Ltd, agricultural engineers of Gainsborough were taken into the Fowler organisation in early 1947. An interesting outcome of this merger was the Fowler 40HP loco designed for 2ft — 3ft6in gauges and fitted with a Marshall single cylinder 2-stroke horizontal diesel engine. The manufacture of Fowlers own engines ceased in 1949 and thereafter locos were powered by McLaren, Rolls-Royce, Leyland or Cummins engines.

Mechanical transmission gave way to hydraulic in 1957 and finally the last loco, a standard gauge 0-4-0 diesel, left the works on 24th January 1968. Loco manufacture was terminated because the flourishing side of the business was crawler tractors

and bulldozers and space and staff were required for these. The goodwill, designs and spares of the locomotives were sold to Andrew Barclay Sons & Co. Ltd, Kilmarnock in 1968 (NGI. 65/6). Today the firm continues to produce earth moving equipment and is now part of the Thomas W. Ward Group of Companies trading as Marshall-Fowler Ltd.

The nine surviving diesels consist of four very different types but the future of some of these is rather uncertain. Unfortunately no Fowler steam locos can be seen in Britain today although one almost certainly does exist in Westmoreland — buried ! This is a 2ft gauge 0-4-0 which in 1928 was dumped in a pool (and covered over) at the Thistle Plaster Works, Kirby Thore (now British Gypsum Ltd.) However with several examples in other parts of the World and with the present spate of importations for preservation it can only be hoped that a repatriation of one of these will soon take place.



106HP class. A Works photograph of one of the two 2-4-0 diesels (Nos 20684 and 20685) now at the Kilvington Gypsum Works, Notts of Associated Portland Cement Manufacturers Ltd, (NGN 69/17) a firm which has shown much favour for the N.G. products of Fowler. In view of their age this pair had a surprising reprieve in 1970 when they were transferred from Harbury Cement Works, Warks upon closure of the rail system there. This unusual wheel arrangement was adopted to keep within a specified maximum axle load. (Collection : Sydney A. Leleux)

CLASS	'RESILIENT'	40HP	100HP	106HP
Horse Power	40/44	40	100	106
Type	4wDiesel	4wDiesel	0-6-0Diesel	2-4-0Diesel
Length (overall)	13ft	11ft1in	19ft7½in	19ft6½in
Width	5ft	5ft3in	7ft	7ft8in
Height (top of cab)	8ft6¼in	8ft3in	10ft6in	8ft11in
Weight	6T	7¼T	17T	18T
Driving Wheels	2ft	2ft	2ft4in	2ft6in
Pony Wheels	—	—	—	1ft8in
Wheelbase	3ft8in	4ft	7ft	4ft9in (coupled)
				10ft (total)
No. of Speeds	3	3	4	3
Engine	4cyl. Fowler 4B	1cyl.2 stroke Marshall	4cyl. McLaren M4	6cyl. Ruston 6VQN

No. 4160005 (100HP class) depicted carrying the name WYNNSTAY during its short stay on the Welshpool & Llanfair Light Railway. This loco was built for the notorious 'Groundnuts Scheme' in 1951 but because of the failure of that project remained at Fowlers until 1954. It was then purchased by British Portland Cement Manufacturers Ltd, Lower Penarth Works, Glamorgan where used until 1968. Acquired by the W. & L. in 8/69 but sold to Pleasurerail Ltd for use at Whipsnade in 3/72 (NGN77/7) Now re-named VICTOR. (Rich Leithead)



No.	YEAR	CLASS	GAUGE	OWNER, LOCATION & RUNNING IDENTITY (SEPTEMBER 1973)
20684	1935	106HP	3ft	A.P.C.M. Ltd, Kilvington Works, Nr. Newark, Notts. [No. 1]
20685	1935	106HP	3ft	A.P.C.M. Ltd, Kilvington Works, Nr. Newark, Notts. [No.2]
21294	1936	'RESILIENT'	2ft	Brockham Museum Trust, Nr. Dorking, Surrey. [LAYER]
21295	1936	'RESILIENT'	2ft	Brockham Museum Trust, Nr. Dorking, Surrey. [PELDON]
3900011	1947	'RESILIENT'	1 Metre	Cotswold Light Railways Ltd, South Cerney, Glos.
3930044	1950	40HP	3ft	A.P.C.M. Ltd, Sundon Cement Works, Beds. [4]
3930048	1951	40HP	3ft	C. T. Shears c/o North Devon Clay Co. Ltd, Peters Marland, Devon. [EFFICIENCY]
4160004	1951	100HP	2ft6in	Welsh Highland Light Railway (1964) Ltd, Kinnerley Junc. Depot, Salop.
4160005	1951	100HP	2ft6in	Whipsnade & Umfolozi Railway, Whipsnade Zoo, Beds. [VICTOR]

NOTES :

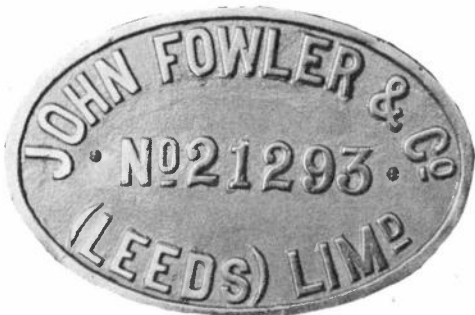
3900011 Regauged from 3ft in 1973.

REMINDER

Members are invited to submit material-photos (not necessarily recent but good quality black & white) and/or technical data of locos for inclusion in future parts. Additional and corrective information on published items is also welcomed. The records are being compiled for ALL builders simultaneously — (it is proposed to ultimately publish the cumulative parts in one book suitably brought up to date with information subsequently received and illustrated with further photos and drawings).



No.3930044 (40HP class) Another unusual design from Fowler and one of only three known locos of the type built which had a Marshall single cylinder 2 stroke horizontal diesel engine. This loco is still at A.P.C.M. Ltd, Sundon Cement Works, Beds. (NGN83/12) officially as standby to the Motor Rails but it has not seen use for a long time. Although a large loco of 'unfortunate' gauge, it is a very worthy candidate for preservation.
(Pete Nicholson)



FURTHER REFERENCES :

'N.G.' 57/27 — (40HP class)

'N.G.' 54/22,55/8, 56/25, 57/6 — (Official Photos — Steam Locos)

'N.G.N.' 37/7, 51/10, 80/13.

Fowler Catalogue 1926 (Reprint by I.R.S., 1972)

Industrial Railway Record No.29 — (General Survey)

Industrial Railway Record No.36 — (40HP class)

The Welshpool & Llanfair Light Railway (David & Charles) (100HP class)

Railway World Jan. 1960 — (40HP class)

ACKNOWLEDGMENTS TO :

G. R. Hatherill, A. M. Keef, S. A. Leleux, R. P. Morris and M. Swift

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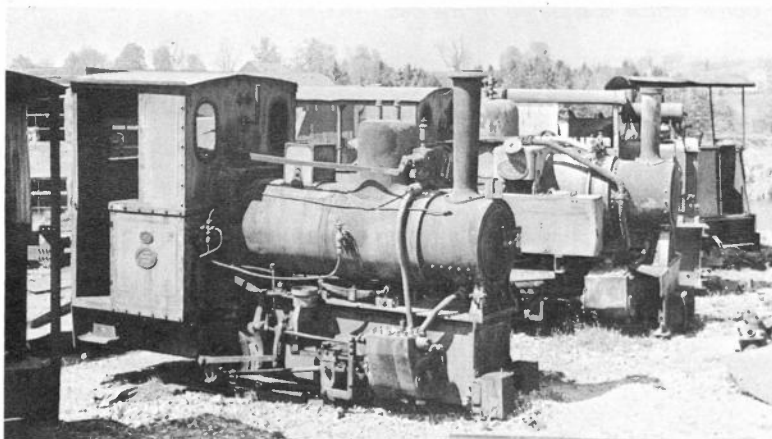
NEXT ISSUE (WINTER 1973-74). PART 9 : THE AVONSIDE ENGINE CO. LTD.

All contributions relating to this builder to the H.R.O. as soon as possible please, (remembering that the series is restricted to existing locos in the British Isles.)

RETROSPECT

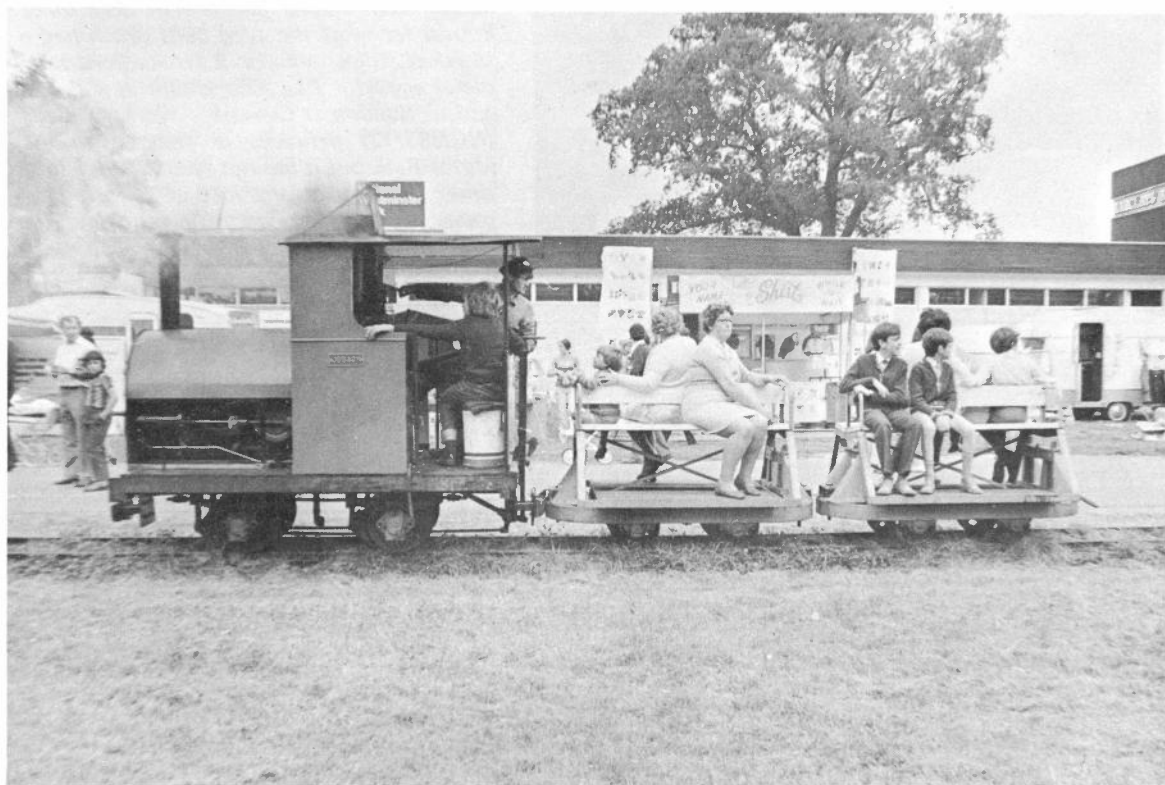
ROADS RECONSTRUCTION (1934) LTD.

CRANMORE DEPOT, SOMERSET. Gauge 2ft.

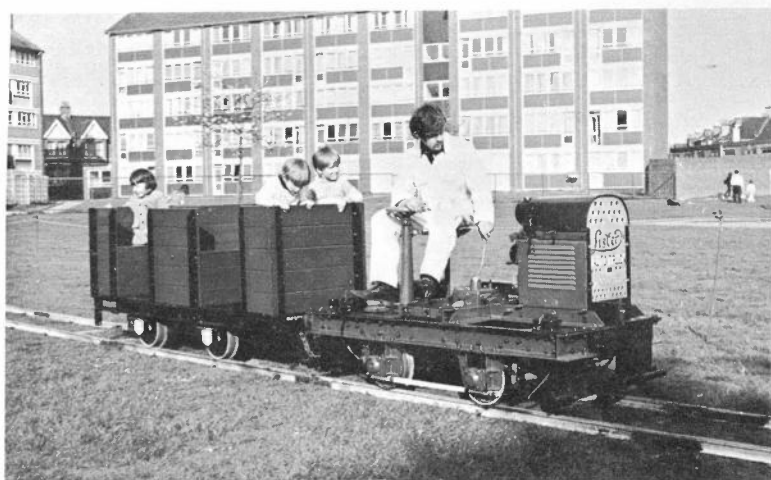


The Scene in the early fifties with a plethora of locos awaiting their fate. Nearest the camera is "No.3", Barclay 1855 of 1931, 0-4-0WT. Rarities that were scrapped here since 1950 have included 2 Kerr Stuart 0-4-2ST's, a Deutz 0-6-0D and a Jung 4wD etc They would surely have had a better future had this been 10 years later !

IN THE NEWS



Town and Country Festival — Stoneleigh, Nr. Kenilworth, Warwicks August 25th, 26th and 27th 1973. A 2ft railway was laid and operated by Hockley Heath Steam Rally Association for the Royal Show in July and was then left down for the T.&C.F. Loco is ODDSON 4wT (Umberslade No.1, 1970) owned by Jack Marshall of Hockley Heath, (NGI.61/6). Manriders owned by R. P. Morris. 'Chimney' on front of loco is an exhaust by-pass to control draught on the Merryweather boiler which is situated in the cab. (NGN.85/9) (Rodney Weaver)



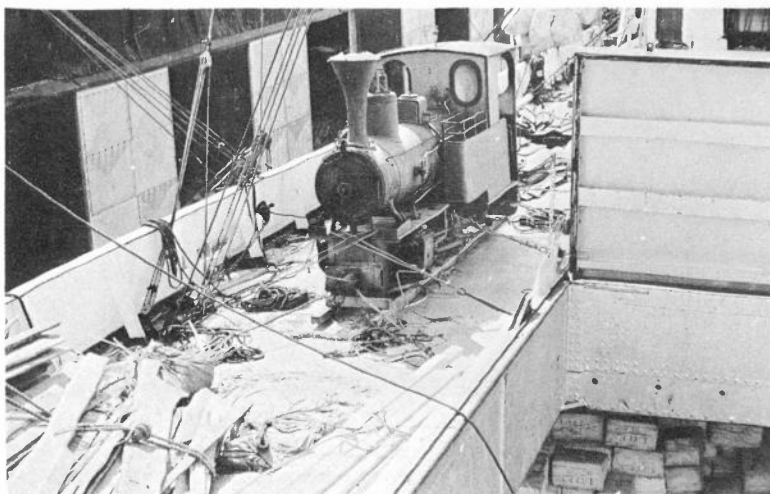
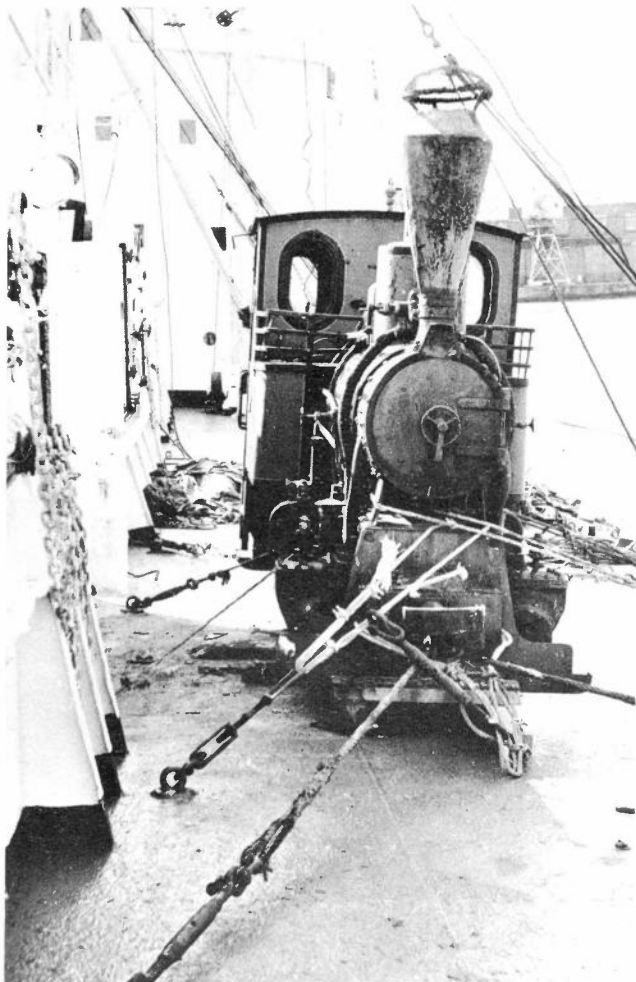
Member Pete Vallins at the controls of his preserved 4w Petrol Lister, No.9256 here drawing one of the first trains to run on the 100 yard line at Merton Traction Engine Rally 28-29/4/73.

Many feet below the field runs Edmund Nuttall's 2ft gauge line used in the construction of the Metropolitan Water Board's new large diameter main (NGN.80/16).

(Colin Bowles)

IN THE NEWS

Still the imports arrive ! Jung 3872 of 1931 an 0-6-0WT from the Camerouns is one of the latest – here seen securely tied aboard the "ORANYAN" (of Lagos) on 8/4/73 following arrival at Liverpool. Owned by one of our Members the present whereabouts is known but we are honouring a request not to publish details. (NGN.84/8). (J. A. Peden)



On board the same boat – which berthed in the Alexandra Dock, Liverpool is "No.932" of the Cameroun Development Corporation, Orenstein & Koppel 12740 of 1936, 0-6-0WT. Awaiting unloading before proceeding forward to the Leighton Buzzard N.G. Railway, Beds where it arrived in mid-April (NGN.83/9) (J. A. Peden)

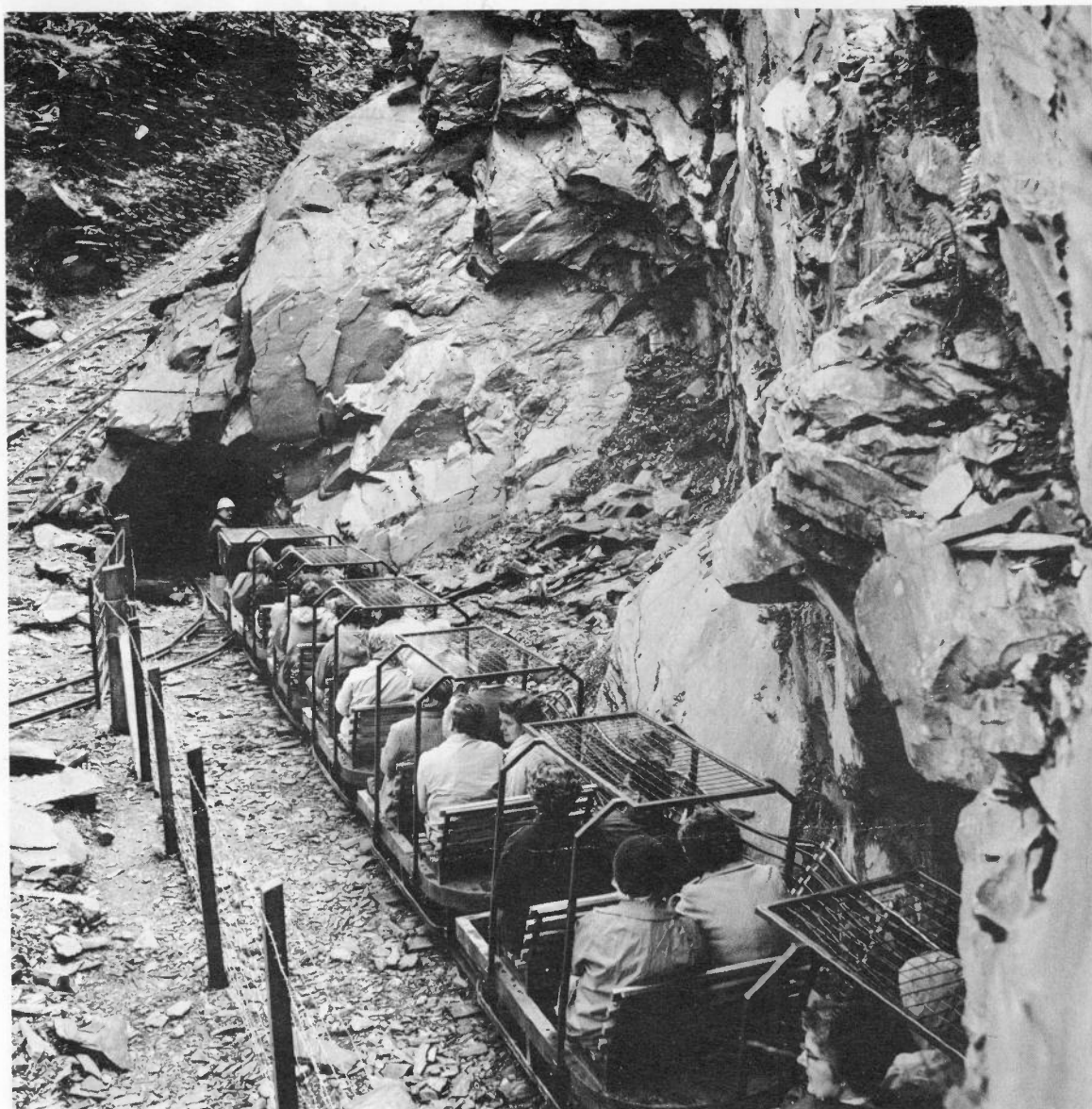
THE NARROW LINES OF INDUSTRY

EXPLORING THE GREAT SLATE CAVERNS OF NORTH WALES

by Jennie Lane

Courtesy of :
British Tourist Authority,
and Quarry Tours Ltd.

Gauge : 2ft



Hauled by Wingrove & Rogers 4wBattery electric locomotives, these specially-designed passenger cars take a full load of 24 visitors on the half-mile round trip into the mountain (B.T.A.)

One hundred years ago, people were walking into a Welsh mountain to work, extracting the slate it contained. Today, visitors can cover part of the same route by train, to see a reconstruction of 19th century working conditions.

The Llechwedd Slate Caverns are part of the Llechwedd Slate Mines at the Northern end of Blaenau Ffestiniog in the Snowdonia National Park. The veins of slate run deep underground and mining, rather than open-cast quarrying, has been the most economic method of extracting it. The underground workings extend to a depth of 900 feet, and consist of 25 miles of tunnels connecting the vast chambers from which the slate has been removed.

A horizontal tunnel or 'level' was driven into the rock until the vein of slate was reached. Then more levels, at right-angles to the first, were driven either side and the slate extracted at intervals along these secondary tunnels, leaving huge chambers in the rock. These might be 100ft or more in length, 40 ft. wide and, as they were often worked through from one floor to another, they could be as much as 200 ft. deep.

As each chamber was worked, pillars of rock 40ft. thick and the length of the chamber had to be left to support the roof. With modern earth-moving equipment it is possible to 'untop' the mine and remove the slate — as is happening in other sections at Llechwedd.

Llechwedd slate has been used to roof homes and public buildings all over the World — outside the British Isles current destinations are the Argentine, Australia, Denmark, France, Iceland and South Africa. The mines were begun in 1846 and, in the boom years between 1850 and 1876, ships were queuing for slate to export to France and Germany. When these countries imposed

tariffs in the 1880's, this trade suffered and was further reduced by the introduction of American slate to the European market.

Trade recovered in the 1890's but collapsed at the turn of the century when a three-year dispute at the Bethesda quarry (Caernarvonshire) affected the industry throughout North Wales. Inadequate supplies meant that customers either turned to the French slate industry or bought tiles, an industry then described as developing 'prodigiously'.

The decline of the slate industry in North Wales dates from that time. In 1900, 500 men were employed at Llechwedd, which ran its own hospital for the slate workers. Since those days, the employees have numbered as few as 35 : today there are just under 100.

Listed as 'non-essential' during both World Wars, the industry lost manpower which did not return. Its general decline has been attributed to bad labour relations and management; the popularity of cheaper, mass-produced tiles; loss of labour to better-paid jobs elsewhere; and small output which has remained small, partly through slowness to modernise. In mitigation, it has been found impossible to introduce electric wire-saws : the iron pyrites in the rock damage the blades so this method of extracting the slate, so successful in other countries, cannot be used.

But one manifestation of this slowness to modernise is seen by today's visitors. The reconstruction of the 19th century workface is illuminated by electric light, but at one stage this is switched off and the scene is lit by candle power, the only method of lighting until electricity was installed in 1946.

The reconstruction is at the half-way stage of the half mile tour inside the caverns. Visitors ride into the mountain in specially-designed passenger-cars

"No. 3" (Wingrove & Rogers 4wBE) returning tourists from out of the mountain on 12.8.72 (Note 'Q.T.' motif on loco) (Doug Clayton)



drawn by battery electric locomotives. The route is that of the miners' tramway to part of the original level opened in 1846.

Those miners had often already walked five miles over the mountains, and had the prospect of another five miles when their 12-hour working day was over. For this they earned less than £1 a week, out of which they were expected to supply their own candles, five of which were used up every working day. Working in teams of four, the men put their precious candles in lumps of clay on their helmets — homemade Davy lamps — or on to the wall. When necessary they would clamber up the walls, anchoring themselves to the rock surfaces by putting a chain around their thighs, leaving both hands free for working at the slate.

Arduous work it was too, seldom less than 10 tons of waste being extracted for every ton of

good slate. With the help of explosives, large blocks of slate are levered from the rock-face, split into smaller blocks and then sent by trolley to the surface where the slate is split and trimmed.

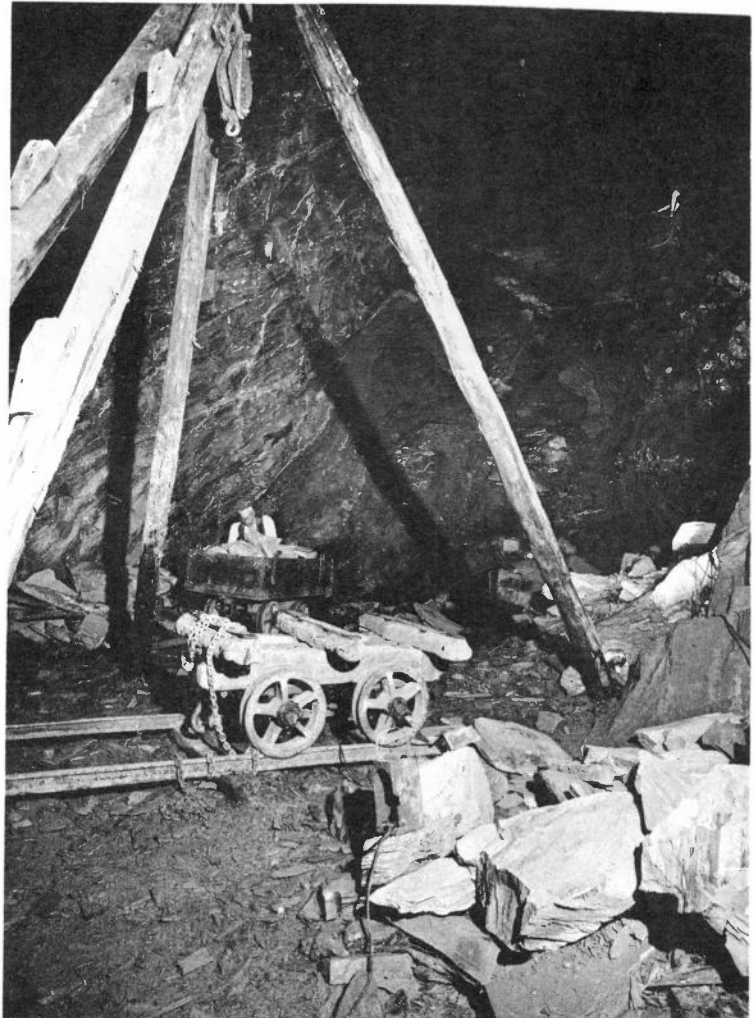
Visitors can see for themselves how slate is split in the reconstructed slate-mill at the starting-point of their journey. In the shop nearby they can buy various items made from slate; refreshments are also available.

The Llechwedd Caverns are open seven days a week. Special arrangements can be made for coach and school parties — details from Quarry Tours Ltd., Llechwedd Slate Caverns, Blaenau Ffestiniog, Merioneth.

* * * * *

Reconstruction of a workface in the Llechwedd slate caverns, as it would have been 100 years ago. The trolleyman was part of a four-man team which would have put in a 12-hour day, often with a five-mile walk over the mountains before and after duty (Note double flanged wheels on wagonry).

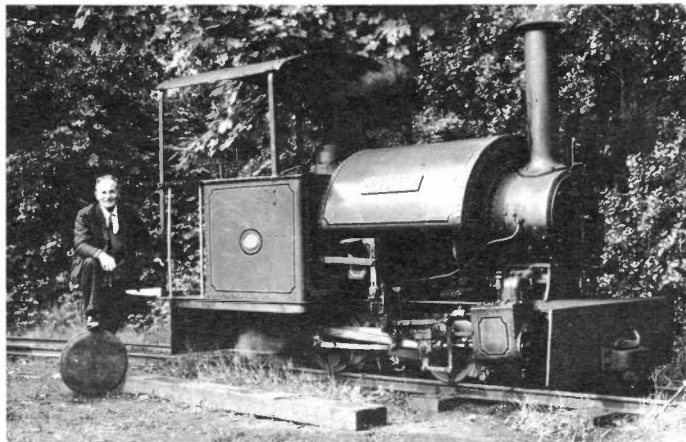
(B.T.A.)



LOCO - BIOGRAPHY

W. G. BAGNALL LTD No.2090

ALISTAIR PARSONS



- 1919 Built at the Castle Engine Works in Stafford as an 0-4-0 Saddle Tank locomotive to 2ft gauge. Despatched to Pilton Ironstone Co., Pilton, Rutland in April where named PIXIE. She was used there on removal of soil etc from a cutting, to form an embankment for the standard gauge line into the quarry. The narrow gauge line continued in use after the opening of the S.G. tramway and a gantry was laid across the cutting so that the N.G. wagons could be run onto it and their contents tipped into the S.G. wagons beneath.
- 1923 In June 2090 was sent to Pitsford Ironstone Quarry, Northants where she was used on ganistering work i.e. removing the overlying bed of silica, utilising v-tippers of conventional design.
- 1928 Returned to Pilton Quarry and later that year sent to Park Gate Iron and Steel Co. Ltd, Basic Ironstone Quarry, Eaton, Leics. At Eaton PIXIE was used on a line for tipping spoil excavated from a cutting to form the standard gauge connection into the quarry and to restore old workings to agriculture. After 5 years of this work PIXIE was returned again to Pitsford quarry.
- 1933 For the next 16 years PIXIE was laid up, immured in the shed at Pitsford Quarry.
- 1949 Put to use once again, this time at Cranford Ironstone Quarry where used on ganistering work.
- 1958 Superseded by modern earth scraper and caterpillar tractor units.
- 1962 In May aquired by the Rev. E. R. Boston B.A. for preservation and subsequently moved to and operated on the CADEBY LIGHT RAILWAY in the grounds of Cadeby Rectory, Leics. (where portrayed above)
- 1969-
- 1972 Several visits have been made to other lines and rallies running on a portable track. These include : Grand Transport Extravaganza, Crich, Derbys each year; Welford Steam Engine Rally, Husbands Bosworth, Leics, once; Market Bosworth Traction Engine Rally, Leics, twice; and Knebworth West Park and Wintergreen Railway, Herts in July 1972.
- 1973 Dismantled for complete overhaul after ten very active years at Cadeby.
(See also page 28)

SOME STATISTICS

Weight in working order : 5Tons
Tractive effort : 1,800lbs
Boiler pressure : 120lbs p.s.i.
Cylinders : 6in x 9in

Wheelbase : 3ft 6ins
Wheel Diameter : 1ft 3ins
Sharpest curve recommended : 40ft radius
Valve Gear : Walschaerts.



NARROW GAUGE International

South Africa

DIESELS ON THE AVONTUUR LINE

Neil Mardell



Three of the first four class 91 diesels (Nos 001, 003 & 005) to arrive in South Africa, (the fourth, No. 91.002 is in the shed behind, being put into running order), in the uncompleted Diesel Depot at Humewood, Port Elizabeth on the Avontuur line 30/8/73.

They arrived on the 27th August 1973 and will be later followed by 16 similar units, four being delivered each month. Built in America they are General Electric type UM6B (BoBo). The units are fitted with air regenerative braking, having an exhauster for the trains vacuum brake. They have a rated H.P. of 640 and measure 31ft 6in long, 8ft 4in wide and 11ft 10in high.

Steam will remain for another five years as the line beyond Assegaiboch must first be strengthened. There are at present 33 steam locomotives of the N.G. 11, 13, 15 & 16 classes working the line.
(Neil Mardell)

A scene which will very soon become commonplace. This has already spelt the end of N.G. Garrett operation in the Cape, one of the two N.G. 11 class engines has left for Natal. She will be followed by all the N.G. 13 & 16 class locos, leaving only the N.G. 15 2-8-2 tender locos to work the upper part of the line. This is of course the Avontuur 2ft gauge line, the longest remaining 2ft gauge branch in the Republic (177 miles !)

The arrival of No. 91.002 on its trial run to Humansdorp where she picked up a new load to work back to Port Elizabeth. The only problem encountered was with loading gauge clearance under some water cranes en route.

(Neil Mardell)



"CENTRE PAGE SPECTACULAR"

TASMANIA : MOUNT LYELL
MINING & RAILWAY CO. —
3ft 6in gauge

Dubbil Barel. A train of coal has arrived from Regatta Point on the right hand line behind 0-4-2T No.4 (Dubs 4085 of 1901) and will be hauled over the rack portion of the line in two parts. 0-4-2T No.5 (North British 24418 of 1938) is taking water on the left hand line and will haul the second section. (No.5 now preserved at Menzies Creek, Victoria). (C. S. Small)

**"THE MOST POWERFUL RIGID-FRAME LOCOMOTIVE ON THE 2ft GAUGE IN SOUTH AFRICA"
(EASTERN PROVINCE CEMENT CO LTD) SYDNEY MOIR**

The above title was the claim made for this 2-8-2 when Hunslet built it in 1949. Since the introduction of the S.A.R. Class NG 15, of 16,610 lbs T.E., the E.P.C.C. engine has had to take second place, for it only produces 15,200 lbs. T.E.

The design is a modification of that used when Hunslet constructed a series of 2-8-2 for the Gwalior Light Railway of India.



With a driver and fireman in the cab, and a pointsman riding the wagons, she works over a "railway" that is only a twelve-mile long private siding of the S.A.R., hauling Avontuur branch wagons down to the kilns.

Rotary tipplers, clamping the wagons fast by means of the wedge shaped lugs hanging from the underframes, empty them in a trice, ready for the return trip up-grade to the interchange station at Chelsea.

Tender-first with empties from the tipplers. Then, having changed trains, back again . . . easing four hundred tons of limestone down the 1 in 45 grades on the vacuum brakes. She makes a brave sight to eyes accustomed to plain black locomotives, for the dark green that is the main colour is relieved by a bright red stripe along the edge of the footboards.

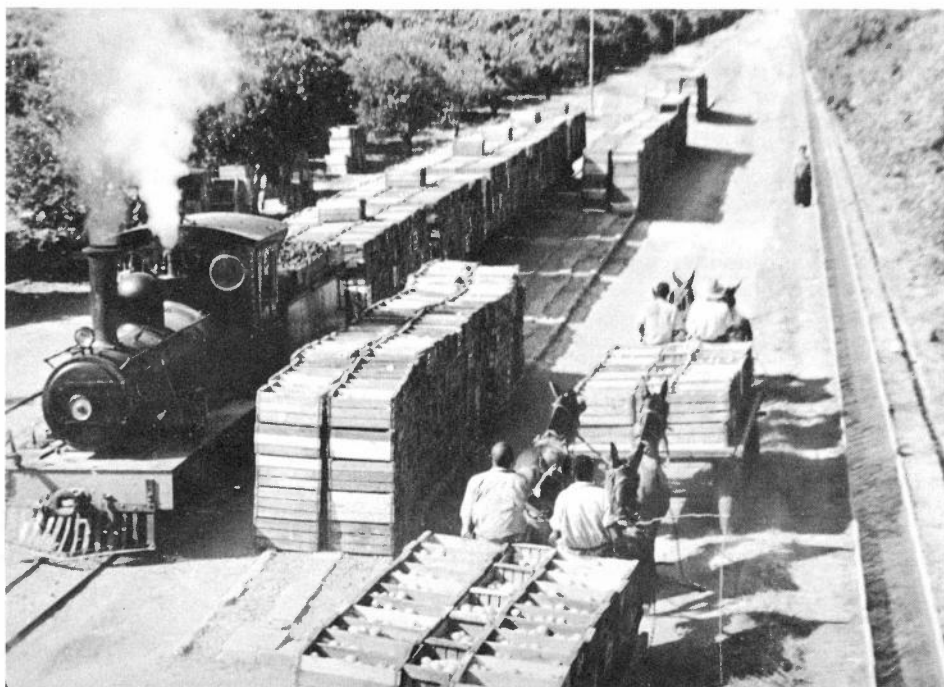


FROM ROAD TO RAIL AND BACK TO ROAD AND WHY

(ZEBEDELIA ESTATES)

SYDNEY MOIR

(Written from material supplied
by Robin Lake of Cape Town.)



Mule-trolleys, having been loaded with the boxes of oranges in the orchards, arrive at the road-and-rail interchange point.

Zebedelia . . the largest orange orchard in South Africa, the site of the longest agricultural railway, and the place where the roads gave way to the rails, which in turn gave way to roads again . . sprawls its acres in the Northern Transvaal.

In the twenties, mule-hauled trolleys carted the golden fruit along the dirt roads running through the orchards and connecting to the sorting and packing sheds. This was the type of transport that could make or mar the fruit before it ever got onto the 3' 6" gauge branch line of the S.A.R. that connected Zebedelia to the consumers of its product iron shod wheels and dirt roads combined to raise the wastage from bruising to a high figure.

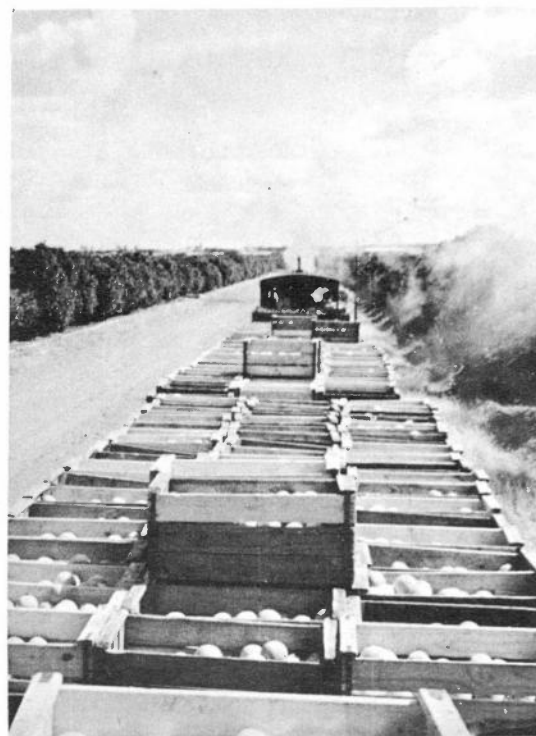
In due course, motor-trucks made their appearance on the estate, but did not succeed in speeding the work to any great extent, both trolley and truck being unable to carry more than

fifty of the wooden boxes into which the pickers emptied the contents of their canvas bags. In the season, a constant stream of trucks and trolleys converged on the sorting sheds, and delay at the off-loading banks became a factor, with both vehicles and drivers being kept waiting.

Around 1927 it was decided to replace road transport by a railway. Narrow-gauge tracks were laid, using 20lb. and 30lb. rails set to 2ft gauge on steel sleepers, until there were fourteen miles of main line. Three locomotives were obtained second-hand from the S.A.R. : these were the light 4-4-0 tender engines of Class NG.6, originally built by Falcon in 1897 for the Beira Railway. Later, a fourth locomotive was bought from the S.A.R. : this was an 0-4-2 saddle tank of Class NG.2, built by Dickson in the U.S.A.

The trains were worked as coupled sets, there being twelve sets, each made up of ten bogie flat wagons. Since one train could bring in more than

A thousand cases of oranges rattle down the steel rails that lead to the packing-sheds miles away.

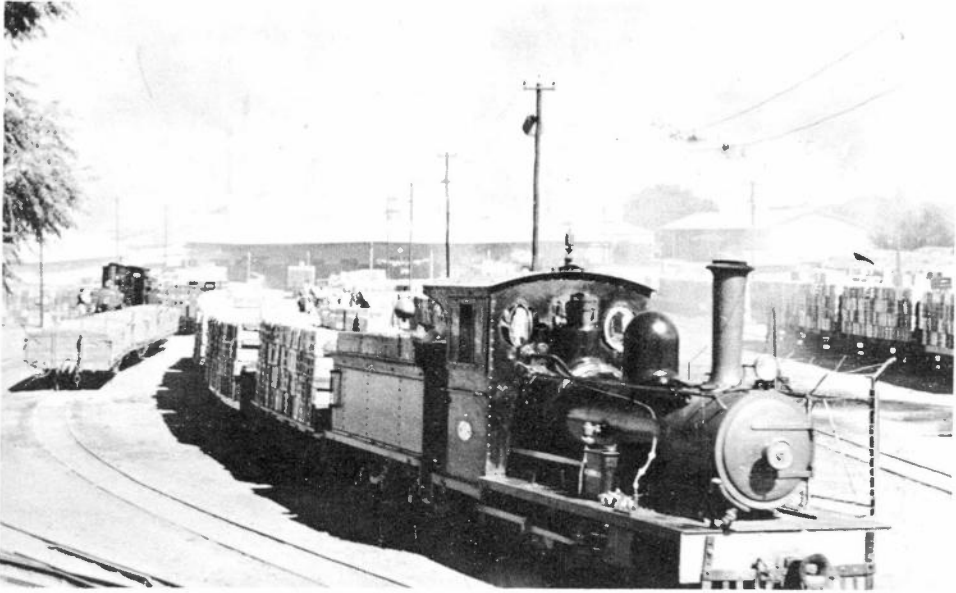


1,100 boxes of fruit, it replaced more than twenty trolleys. Under the old system, each pair of mules and their driver had to wait until the fifty cases of fruit on the trolley had been off-loaded : now it became possible for a locomotive to bring in a train, shunt it into the off-loading sidings, couple up to a rake of empty wagons and return to the orchards, there to exchange it for a loaded train. The mule-hauled wagons now worked between the orchards, where the fruit had been emptied from the canvas bags of the pickers into the wooden boxes, and the transfer points on the railway . . . the bumps of haulage might have been smoothed out, but the amount of handling remained roughly the same.

This system was adhered to for thirty years, becoming more and more inconvenient in its working. Finally, in 1957 came the idea of scrapping the railway and substituting dump-bottom trailers hauled by tractors. The railway was to give way to the road! 80,000 boxes, 320 mules and the forty trolleys they hauled, 100 railway flat wagons and four locomotives, plus the track materials, were rendered redundant . . . replaced by twelve tractors and a hundred and fifty dump trailers.

Whereas the steel wheel on a steel rail had been smoother-riding than had been steel-tired wooden wheels on a dirt road, the pneumatic tyres of the dump trailers gave an even softer ride. There was no bounce : the weight of fruit on fruit did not bruise as had the sharper pressure. (And, for those who want to know how the off-loading is now handled — the bottom doors are opened above a water-filled trough !) Each trailer can take the load of two trolleys — 100 standard boxes — though it takes ten trailers to equal the load of a train. Those who claim that there is nothing to equal a narrow gauge railway when it comes to this type of work can ponder one fact . . . Zebedelia now processes a ton and a half of oranges per minute during the season — the equivalent of 20,000 cases a day !

On the closing of the line, the little saddle-tank was scrapped, while the three tender engines came to Johannesburg. One was to be seen in the yard of an engineering firm, up for sale, one went to the James Hall Museum of Transport, operated by the Johannesburg City Council, and the third was donated to the Rand Society of Model and Experimental Engineers, and now stands outside their club-house.



A loaded train put onto the reception siding, the little 4-4-0 heads a train of empties back to the exchange point.

(Photos by African Film Productions)



(South African Railways photo)

STATISTICS OF A BRIDGE

Statistics can be pretty boring things, and you might think the Class NG.G16 Garratt and its train to be of more interest, but hear this : The bridge across the Van Staadens Gorge, on the Avontuur Branch of the S.A.R., is the highest in the World to carry narrow-gauge tracks, being 254 feet from water to rail-head : it was designed with a reserve of strength that would enable it to carry 3'6" gauge trains should a change of gauge come about (and it is quite likely that the weight of a narrow gauge train of 1973 is close to that of a broad-gauge one of 1906) : the total weight of the steel was 574 English tons, and 1,455 cubic yards of concrete went into the foundations and abutments : in those days it cost £20,177, — heaven alone knows what this figure would be were it built today !

Sydney Moir

THE NARROWER GAUGES

FEATURING THE 7¼in – 24in MINIATURES

Pete Nicholson

A COUPLE OF KRUPPS

The Waveney Valley Railway, Bressingham, Diss, Norfolk.



'MANNERTREU' Krupps 1663 hauls an empty stock train through the silver birches whilst on trials, 17/4/73.

(A. R. Taylor)

The latest of the network of railways at Bressingham Gardens is a 15in gauge line equipped with stock imported from Germany comprised of a pair of 4-6-2's and 19 open bogie coaches. The two 'Pacifics' were built by Friedrich Krupp A.G. of Essen and ran with a third loco at Gruga Park, Essen until October 1938. Subsequent history is rather obscure and conflicting reports have been received but a long period of storage appears to have ensued. They were seen in action in 1958 at the 'Bundesgartenschau', Koln but by 1965 this

line was completely overgrown. They did not see use again until their arrival at Bressingham which was on 15/12/72. Livery is now dark green with black smoke deflectors and red wheels, cowcatchers and nameplates. The coaches, of rather unusual pattern, are polished wood with red base-surrounds.

A complete circuit of track is under construction but for the first season a section of this was operated with one ten coach train hauled out by one loco, and hauled back by the other which had chased after it. (NGN.84/5,82/21,81/6).

'ROSENKAVALIER' Krupps 1662 sans builders plates and nameplates hauls another test train over the newly laid Waveney Valley Railway, 17/4/73

(A. R. Taylor)



COLLECTORS PIECE

ITEMS 28-32 : TICKETS OF THE RHEILFFORDD LLYN TEGID (BALA LAKE RAILWAY)

Pete Nicholson

1973 saw the second season of operations for trains running between Llanuwchllyn and Llangower and for these journeys a set of four punch tickets — of which two are illustrated — were issued. The stage numbers 1-6 refer to the proposed stations; only 1-3 are in use at present, there being an intermediate halt at Glan Llyn. These are printed by Williamson — colours and fares (for 1973) being :—

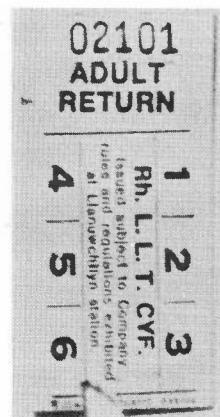
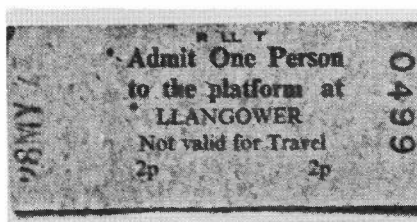
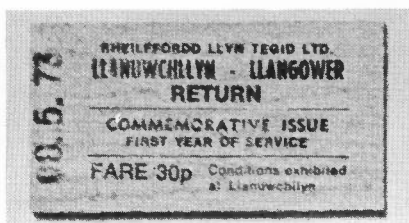
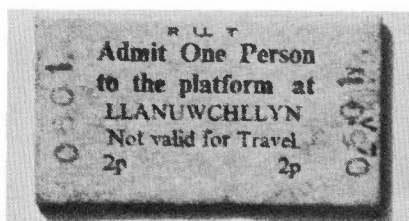
adult single	— green,	15p
child single	— pink,	10p
adult return	— white,	30p
child return	— yellow,	15p

(The reverse carries an advertisement for a local gift shop).

A ticket commemorating the 'first year of service' has also been available for adult return bookings; This is an Edmundson card and is bi-lingual, — one side in English (green), the other in Welsh (pink). This is also printed by Williamson and so far is the only ticket issued which carries the railway's title in full.

Two platform tickets have also been issued but surprisingly are of different styles and appear to be a 'local' printing. The Llanuwchllyn ticket is Edmundson size, but is thicker than usual. The front is buff, while the reverse (which states that it is issued subject to the conditions of the Company) is grey. The Llangower ticket is on thin grey card and is ½in longer than Edmundson size.

[Tickets supplied courtesy R.L.L.T]

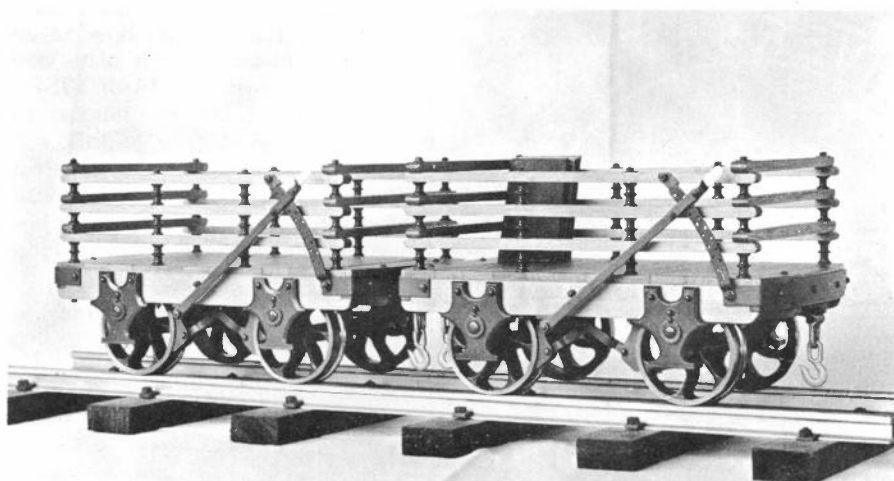


N. G. MODELLER

Some beautiful G.V.T. Wagonry built (& photographed) by our Member W. J. Milner



1) Model of Glyn Valley Tramway open granite wagon as constructed by the Midland Railway Carriage & Wagon Co. Ltd in c1888 for the Glyn Valley Tramway Company. Scale 1½in to 1ft.



2) Glyn Valley Tramway slate wagons built to a scale of 1½in to the foot for 3½in gauge.

CORRESPONDENCE JUNCTION



SYDNEY LELEUX recorded the A.G.M. visits of 19th May 1973 — one of his pictures catches the main party assembled outside the motive power depot at Trentham Gardens, Nr. Stoke-on-Trent. (Locos L to R, GOLSPIE-BRORA-DUNROBIN)



*FROM THE REVEREND "TEDDY" BOSTON
The 10th Anniversary of PIXIE's 1st Steaming at Cadeby took place on 7th April 1973 and was commemorated with this very large Headboard. Background is maroon, lettering yellow and the designs in appropriate colours. (See page 17).*

HUGH SYKES solves the mystery of the "Two No. 14's" !

The questions posed in NGI. 62/33 in captioning the photo of KATIE, the Guest built 2-4-2 on the Fairbourne Railway can now be answered after extensive research. The plate now carried by KATIE does read No. 14 of 1954; the building date is correct but the number should in fact be 13 . . . ! SYLVIA the BoBo with a 3.5 Litre Daimler petrol engine carries a plate No. 14 of 1961 and is in fact No. 14A although the suffix letter was not cast on the plate. Mr. Guest states that neither he nor the Railway liked the idea of a locomotive carrying the number 13.

The age of KATIE is confirmed as the boiler is officially 19 years old with its original copper tubes still in. It was bought by Mr. J. C. Wilkins, Chairman and Managing Director of Fairbourne Railway Ltd in 1965 from the Estate of the Late Capt. Hewitt in Anglesey. Prior to this the loco had been in store for 9 years and it is known that she worked on the Dudley Zoo Miniature Railway around 1954-55 for a few months, obviously when new.

PECKETT & SONS LTD — LOCO REGISTER
NGI. 61/4.

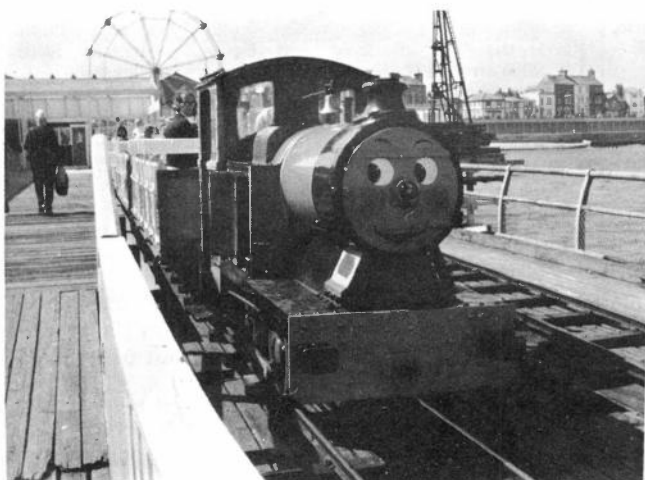
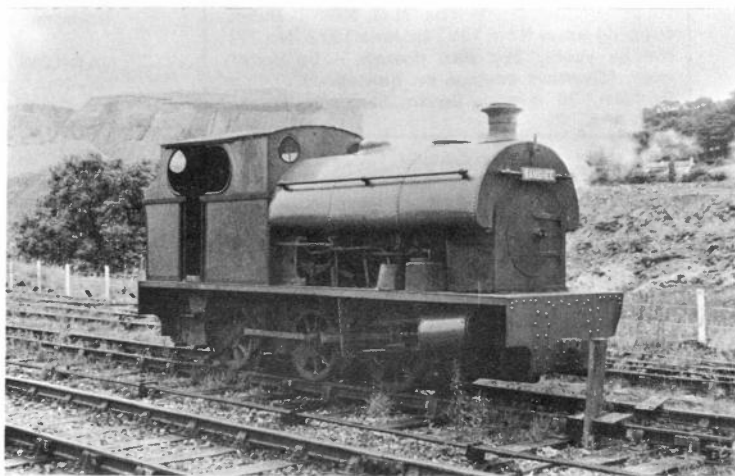
BILL PLUNKETT informs us via the 'News Desk Hotline' that

Peckett & Sons Ltd has not "folded up" or "gone out of business" (NGI. 63/34 & 64/31) but still exists today ! They continue to trade as 'Peckett & Sons Ltd' with their Registered Office on the Industrial Estate, Ongar, Essex. Premises are also shared with Ramsden Reside Engineering Ltd at Tower Works, Birdsroyd, Brighouse, Yorks from where certain spares for their locos (built prior to the closure of their works in Bristol) can still be supplied.

An interesting sideline is that Courage Breweries have recently been in touch with 'Pecketts' to obtain information relating to a sign for one of their public houses — "The Peckett Flyer".

W. K. Plunkett's own Peckett (No. 1870 of 1934) a metre gauge 'M7' class 0-6-0ST (NGI. 61/4) on the occasion of its first steaming at Embsay Station, Skipton, Yorks, 27/8/72. A track has been laid specially for this loco sharing sleepers with the standard gauge track of the Yorkshire Dales Railway Society. This loco is so large for N.G. that many casual visitors may not notice any difference between this and the other residents at Embsay! (NGN.74/12)

(Pete Nicholson)



'Eye, eye, that's yer lot!' 2ft gauge Baguley 3024 of 1939 looks out to sea on Walton-on-the-Naze Pier, Essex following a "face lift" last Winter. This included installation of a new 18HP Lister diesel engine and a tastefully applied Rev, Awdry style livery of red and black with a golden yellow 'smoke-box' door. (NGN 84/7, NGI 61/7) (Hugh Sykes)

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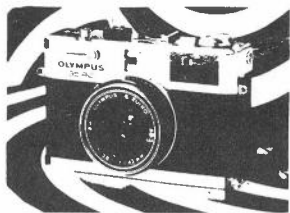
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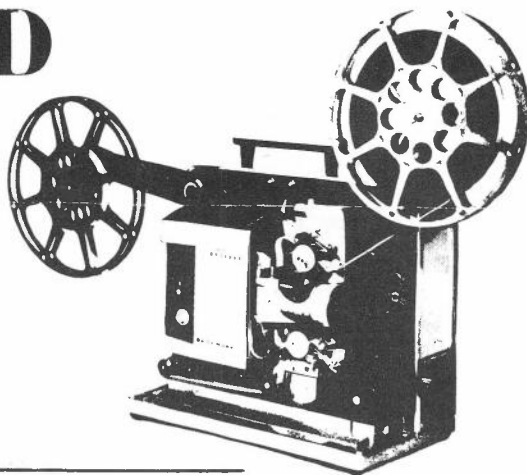
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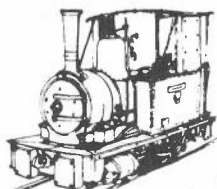


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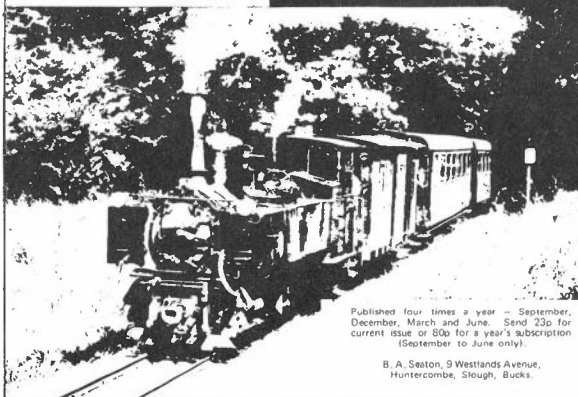
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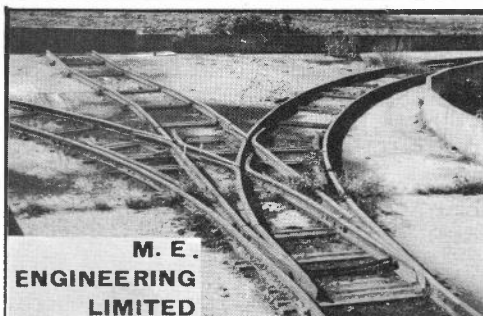
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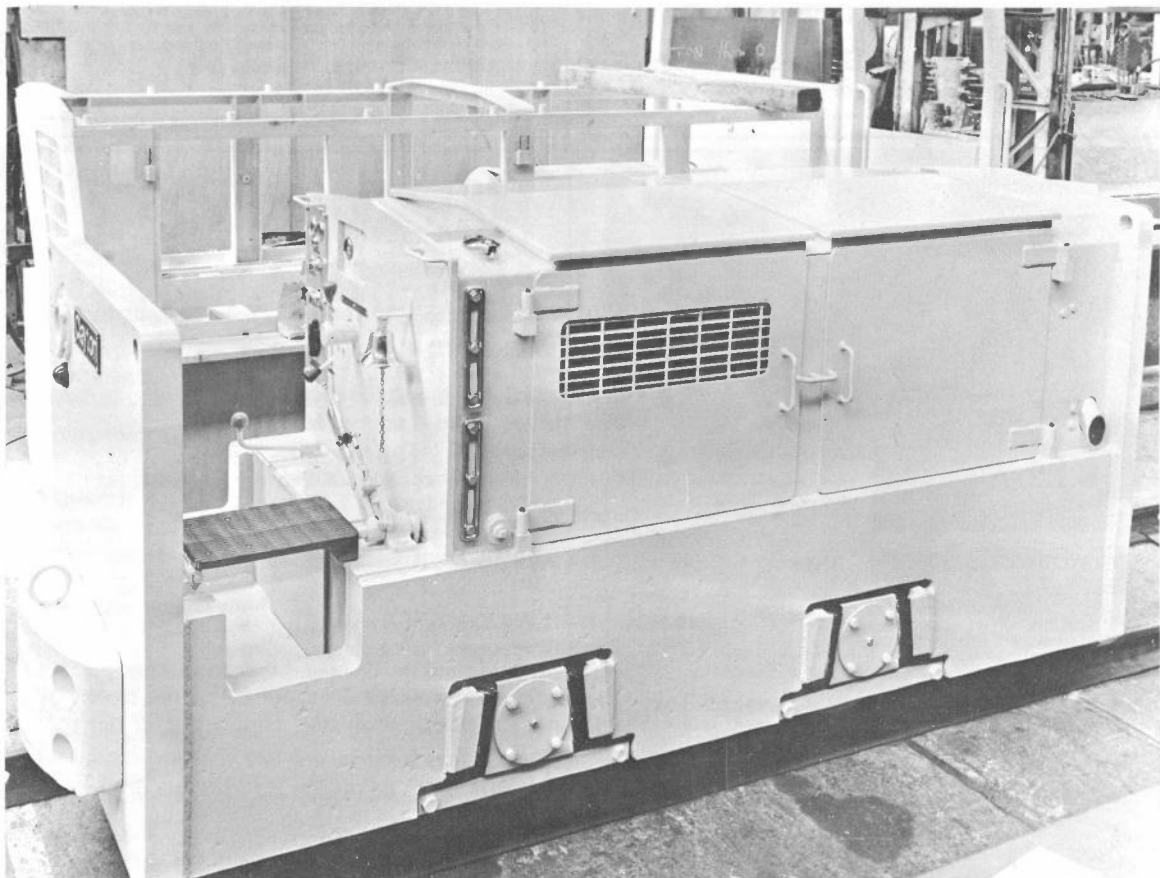
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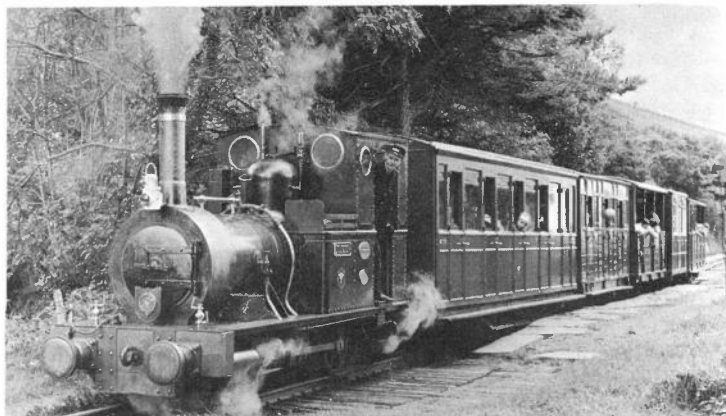


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Our **RECORDS DEPARTMENT** exists to supply Members with information and to accept news from Members for 'feeding' to both N.G.I. and N.G.N. editors. It is vital that these records (and thus Society publications) be kept right up to date. This is wholly dependent on Members incoming reports, so please do not leave it to 'the other chap' and never assume 'we know already' — we would rather hear six times than not at all !

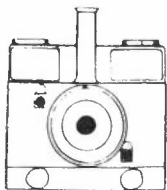
Free **NEWS REPORT FORMS** are always available from the H.R.O. on receipt of a foolscap S.A.E. These pro-formas are specially designed to assist both Members and Society officers — does away with the need for letter writing when you want to send us some news quickly . . . or . . . perhaps you simply do not like writing at all !? If so, the H.R.O. will be pleased to accept **ANY** news by telephone. You can now ring the '**NEWS-DESK HOTLINE**' 01-393 9520 any evening 19.00 — 22.00hrs (ask for Pete). Make a note of his number now !

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There are still gaps in the **N.G.R.S. LIBRARY** shelves — perhaps you can help to fill some of them? Hundreds upon hundreds of files, books, drawings, photos etc, have been maintained for the benefit of us all by our Librarian Peter Lee — since the earliest days of the Society. Peter is dependent on Members regularly sending in relevant published works-books, newspaper cuttings, Society magazines etc, etc, (photostat copies are just as acceptable if you wish to retain originals !). In order to keep this unique collection as complete and up to date as possible **ABSOLUTELY ANY REFERENCE WHATSOEVER** to N.G. should be included, so that future authors and researchers need look no further for published information on narrow gauge subjects.

A reminder that all items in the Library are available on loan — to Members only — for a period of one month. Outward payment, plus a small packing charge, to be paid when returning the parcel.

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N. G. R. S. Grand Annual Photographic Competition

CONGRATULATIONS to the winners of our 1972/73 Competition, and a very big THANK-YOU to all Members who took part. The 225 entries were judged by those Members present at the AGM (Stoke-on-Trent) on 19th May 1973 and the £5 prize vouchers presented by Rev. 'Teddy' Boston of Cadeby Light Railway fame. The 1st prize and 2nd place winning entries are featured in the N.G. PICTORIAL pages of this issue.

We gratefully acknowledge the donation of prizes received from :

Mr. RON COX of Stapleford, Notts &

Mr. PETER LEMMEY — on behalf of Society Members,
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1973-74 COMPETITION

BLACK & WHITE & *COLOUR SECTIONS

All entries submitted must be : **Black & White Glossy Prints** (ideally of at least postcard size and fully captioned on the reverse) or ***Colour Transparencies [slides]** (accompanied with full captions and S.A.E. for their return). All entries will be subject to inclusion in "N.G.I." at any time following declaration of the Competition results *Colour Transparencies will be promptly returned to the sender but Black & White prints will be retained for inclusion in the Society's Photographic Library unless their return is specifically requested.

Categories open to entries *

*A) Scene depicting N.G. Steam

*B) Scene depicting N.G. I/C (Diesel, petrol, etc . . .)

*C) Scene depicting N.G. Electric (inc N.G. Tramcars.)

D) Scene depicting an item of N.G. Rolling Stock.

E) Scene depicting a 'permanent fixture' of N.G. interest. (Building/Trackwork/Signalling, etc . . .)

(All pictures must have been taken personally by the Member submitting the entries)

— British or Overseas —

— Current or Historical —

— In use, out of use, or even derelict!

Black & White : — No limit on No. of entries

***Colour : — Limited to 2 entries per category**

We would particularly like to hear from any Member, Group, Society or Company willing to sponsor any prizes for the above categories.

Judging will be a highlight of the 23rd Society A.G.M. to be held in May 1974. Winning entries will be selected by those Members present, and the presentation of prizes will be by a well known N.G. personality — by invitation.

Competition Organiser :

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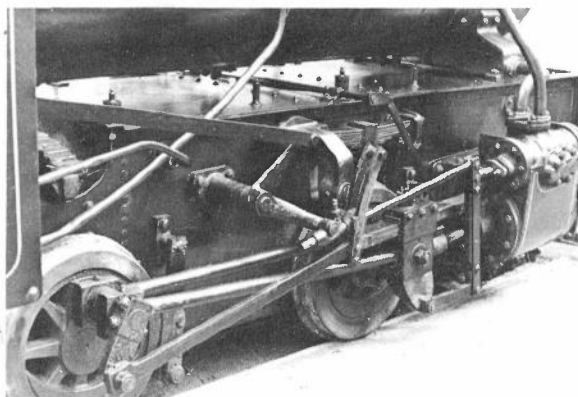
"K.Y.K.G." N.G.I. 65 —

The Answer : Burton & Ashby Light Railway,
3ft 6in gauge (Electric Trams)
1906-1927.

(Courtesy : T.M.S.)

"K.Y.K.G." N.G.I. 66 ➡

Identify this class of loco
(Answer next time)





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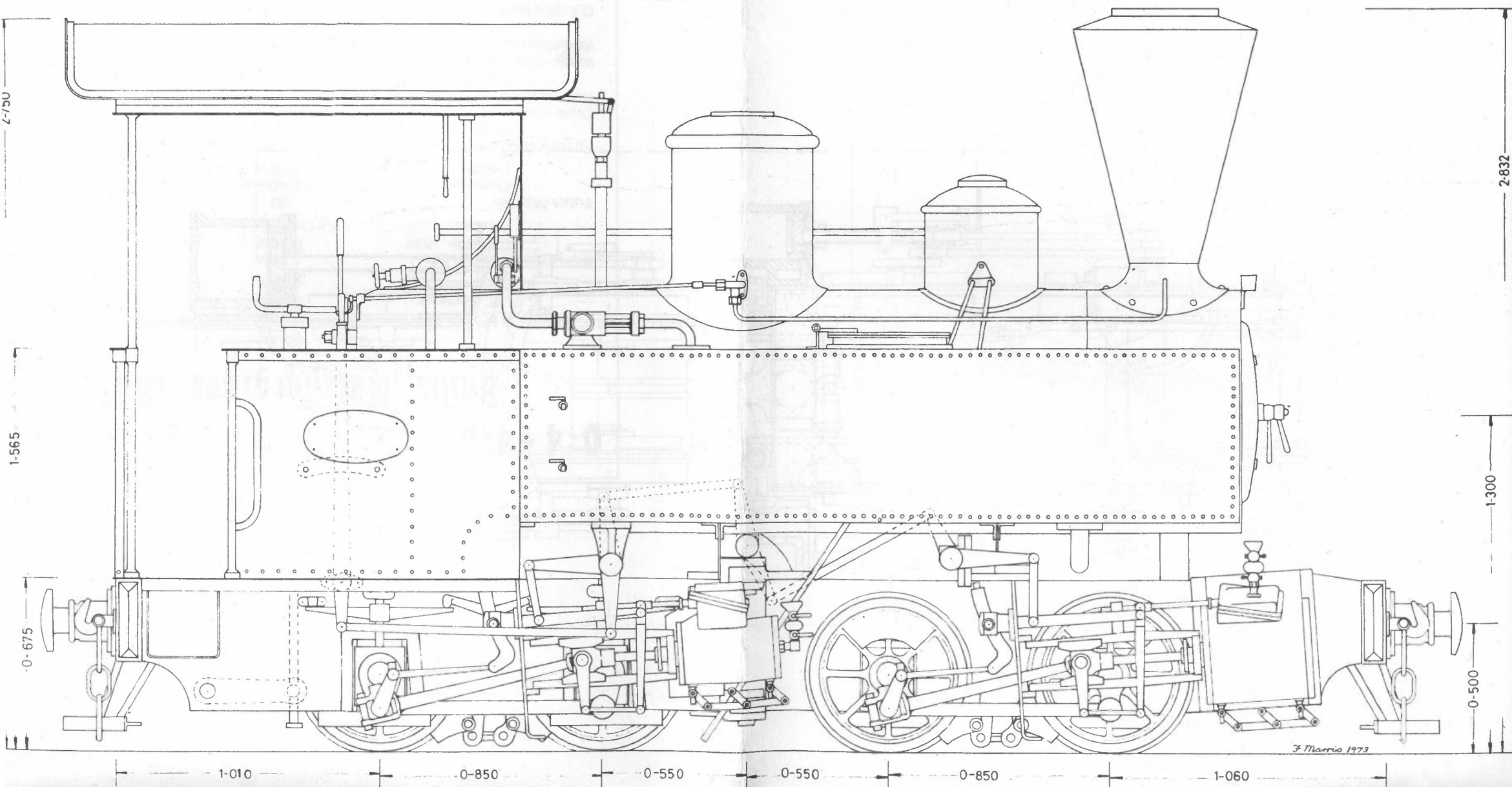
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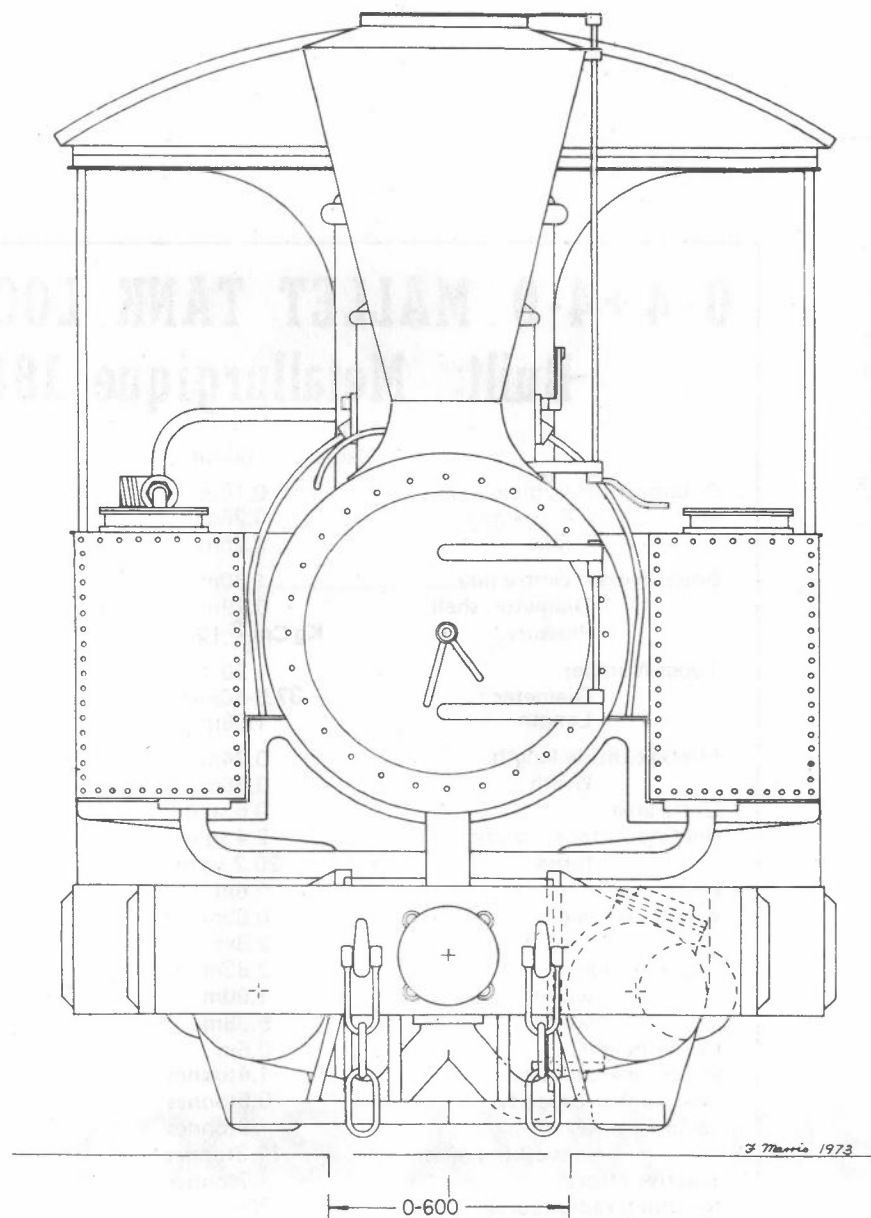
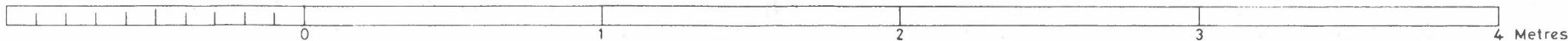
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The NARROW GAUGE RAILWAY SOCIETY





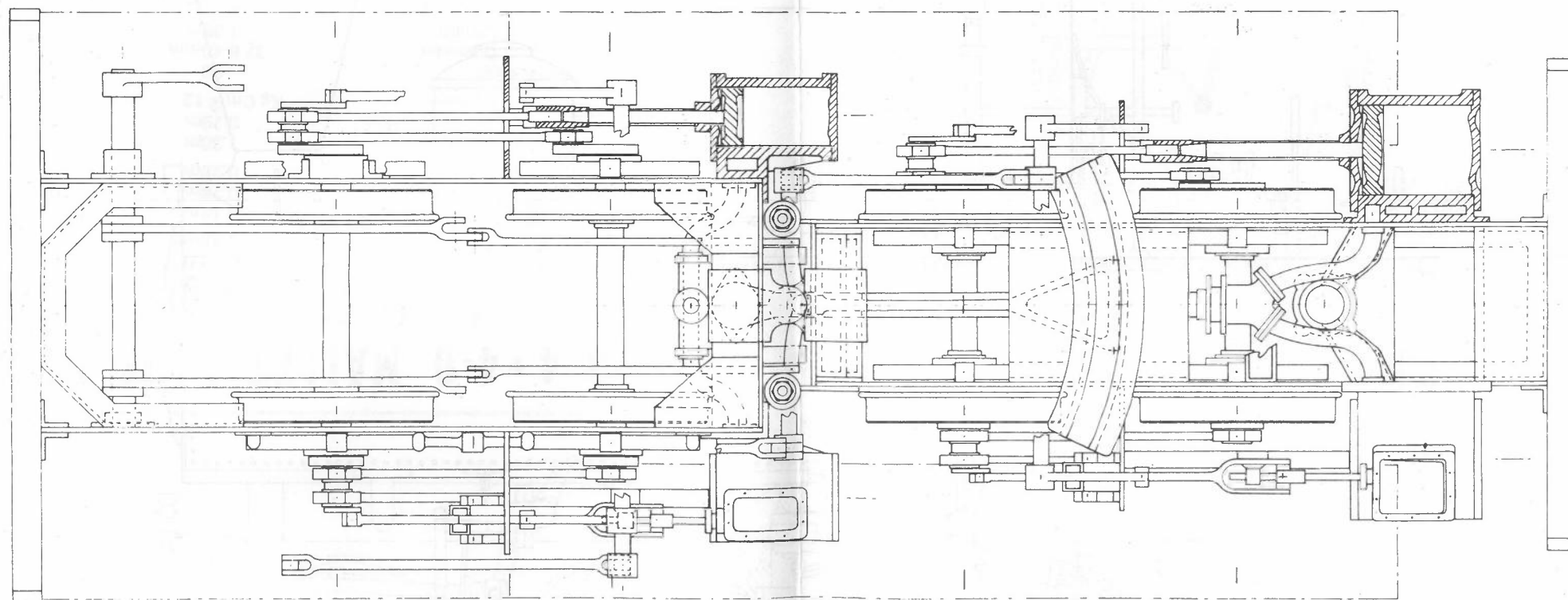
0-4+4-0 MALLET TANK LOCOMOTIVE

Built: Metallurgique 1889

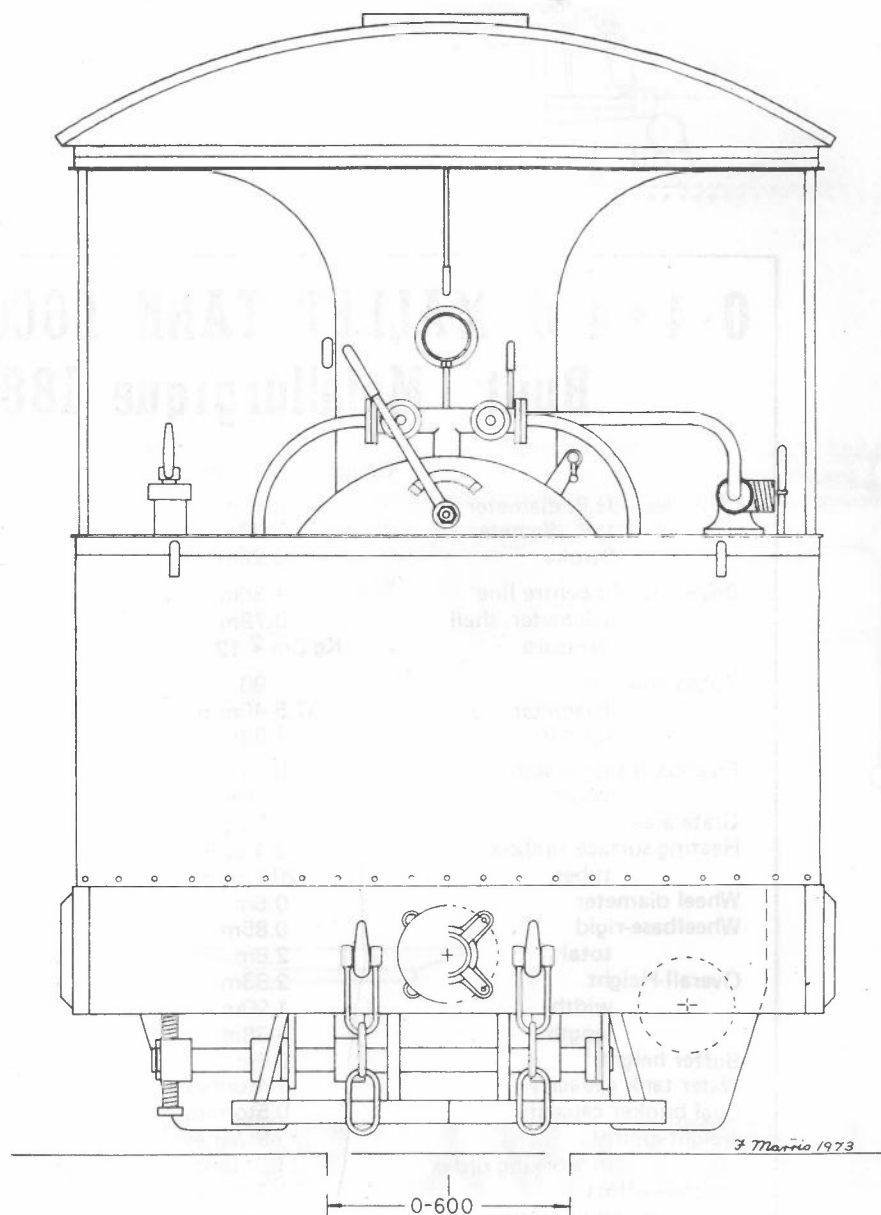
	Gauge :	600mm	1ft 11 ⁵ / ₈ in
Cylinder —	H.P. diameter	0.18m	7 ¹ / ₈ in
	L.P. diameter	0.28m	11in
	Stroke	0.26m	10 ¹ / ₄ in
Boiler-Height centre line		1.30m	4ft 3 ¹ / ₄ in
	Diameter, shell	0.79m	2ft 7 ¹ / ₄ in
	Pressure	Kg Cm 2 12	lbs in 2171
Tubes-Number		90	
	Diameter	37.5-40mm	1 ⁷ / ₁₆ -1 ⁹ / ₁₆ in
	Length	1.98m	6ft 6in
Firebox-Inside length		0.74m	2ft 5in
	Width	0.65m	2ft 1in
Grate area		0.5 sq m	5.4sq ft
Heating surface-firebox		2.4 sq m	25.8sq ft
	tubes	20.2 sq m	217.5sq ft
Wheel diameter		0.6m	1ft 11 ⁵ / ₈ in
Wheelbase-rigid		0.85m	2ft 9 ¹ / ₂ in
	total	2.8m	9ft 2 ¹ / ₄ in
Overall-Height		2.83m	9ft 9 ¹ / ₂ in
	width	1.90m	6ft 2 ³ / ₄ in
	length	5.38m	17ft 8in
Buffer height		0.5m	1ft 8 ³ / ₁₆ in
Water tank capacity		1.4tonnes	269gallons
Coal bunker capacity		0.5tonnes	10cwt
Weight-empty		9tonnes	8ton 17cwt
	in working order	11.3tonnes	11ton 2cwt
Traction effort		1.7tonnes	3,750lbs
Minimum radius curve		20m	60ft

(Ref : PARIS EXHIBITION, 1889 — N.G.I. 65/11)

The NARROW GAUGE RAILWAY SOCIETY



F. Morris 1973.



0-4+4-0 MALLET TANK LOCOMOTIVE

Built: Metallurgique 1889

	Gauge :	600mm	1ft11 ⁵ / ₈ in
Cylinder — H.P. diameter	0.18m	7 ¹ / ₈ in	
L.P. diameter	0.28m	11in	
Stroke	0.26m	10 ¹ / ₄ in	
Boiler-Height centre line	1.30m	4ft3 ¹ / ₄ in	
Diameter, shell	0.79m	2ft7 ¹ / ₄ in	
Pressure	Kg Cm ² 12	lbs in ² 171	
Tubes-Number	90		
Diameter	37.5-40mm	1 ⁷ / ₁₆ -1 ⁹ / ₁₆ in	
Length	1.98m	6ft 6in	
Firebox-Inside length	0.74m	2ft 5in	
Width	0.65m	2ft 1in	
Grate area	0.5 sq m	5.4sq ft	
Heating surface-firebox	2.4 sq m	25.8sq ft	
tubes	20.2 sq m	217.5sq ft	
Wheel diameter	0.6m	1ft11 ⁵ / ₈ in	
Wheelbase-rigid	0.85m	2ft 9 ¹ / ₂ in	
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