



# NARROW GAUGE NEWS

PUBLISHED BY

The Narrow Gauge Railway Society

EDITOR: M. MALLETT, 21 HEATH MOUNT, LEEDS, 11.

Number 29.

September 1964.

## North West Area.

Area Secretary: P. J. Burkill, 1, Stroud Close, Alkrington, MIDDLETON, Lancs.

The Area has held a number of meetings this summer but owing to unforeseen difficulties with the Area programme notice, advice of some of the meetings has been unfortunately neglected. Because of this and other summer activities attendance at meetings has fallen off.

Further meetings will be held on the following date:-

September 26th at 1, Stroud Close, Alkrington, MIDDLETON, Lancs. at 7.30 p.m. for 8.00 p.m. start. Refreshments will be served.

On October 30th-31st the Area will be putting on a stand at the Macclesfield Model Railway Society Exhibition, at the Stanley Hall, Macclesfield.

## London & Southern Area.

Area Secretary: S. Holliday, 7, Wordsworth Parade, Green Lane, LONDON. N.8.

Meetings will be held at CAXTON HALL, LONDON. S.W.1. (Nearest Underground station - St. James's Park) at 7.00 p.m. for 7.30 p.m. start.

Wednesday: 16th September 1964.

Wednesday: 21st October.

Wednesday: 18th November.

oooooooooooooooooooooooo

## Baldwin Narrow Gauge Locomotives: Part IV.

I. Stephenson.

### New Zealand's first "Pacific".

The first 'Pacific' type locomotives to run in New Zealand were also the first built by the Baldwin Locomotive Works. The specifications put out by Mr. A.L. Beattie, the railways Chief Mechanical Engineer, called for locomotives with a large firebox capable of burning Otago lignite coal. The Baldwin works at first proposed a 4-6-0 'camelback' locomotive with a wide "Wooten" forebox over the trailing coupled wheels. This was not what Mr. Beattie had in mind and he proceeded to design a 4-6-2 type locomotive with a "Wooten" firebox supported by a two wheeled Rushton trailing truck.

The 13 locomotives were completed in 1901, and became the 'Q' class. Three were put into service on the Auckland section for use of the Rotorua Express, and the rest worked between Oamaru, Dunedin, and Invercargill. At first the Q class were limited to about 60 lb/yd. track, but as relaying progressed they were able to extend their field of operations. These handsome machines had two outside cylinders, and piston valves actuated by outside Walschaerts Valve Gear. The parallel boiler, of steel, was fitted with 188 2" dia. iron tubes. The boiler was 16'0" long between tubeplates, and worked at 200 lb/sq.in. The firebox was also of steel, 8'0" long by 5'0" wide, giving a grate area of 40 sq.ft. The total heating surface of the boiler was 1673 sq.ft.

The smokebox carried a handsome cast iron 'cap stack' chimney and an oil-burning headlight. The long, sleek, unencumbered boiler carried a sand dome, which had the engine number painted on the side, a steam dome, and a small flat topped dome which housed the safety valves and a chime whistle. The side window cab was a low slung affair, built of steel, and made the engine look long, low, and fast. The 24 ton tender was carried on two 4 wheel bogies and carried 2000 galls. of water in addition to 5 tons of lignite coal.

These engines had, of course, their own particular shortcomings, the main one being the Rushton trailing truck. This had inside journals, which were rather small, being only 5½" dia. by 9½" long. The combination of heat from the firebox and dust from the road bed caused them to run hot, and the engines were frequently out of service due to 'hot boxes'. At first there was a tendency for the leading bogie to lift off the track, but this was cured by fitting a large cast iron block to the pilot beam. The Walschaerts Valve Gear also proved troublesome, but in fairness it should be stated that this was one of its first applications by an American loco builder.

The Q class gave good service for many years, but as trains became heavier it was necessary to replace them by bigger locomotives, some of which, the Aa class were built by Baldwin in 1914. Between 1926, and 1934 the engines were reboilered with superheated Ab boilers.

cont.....



In 1940, four of the class were scrapped in order that their comparatively new boilers could be fitted to the 1914 Aa class locos. The engines were then steadily withdrawn for cutting up, the last three being 339, 343, and 346, which remained in service until 1957, when they were 56 years old.

Dimensions of the class as follows:

Cylinders	:	16"x 22".	Weight - engine	:	48 tons.
Driving wheels	:	4'1" dia.	- tender	:	24.1 tons.
Boiler Pressure	:	200 lb/sq.in.			
Total engine wheelbase	:	26'3".			

Total in class: 13. Running numbers : 338 - 350. BLW works numbers : 19242 - 19254.

00000000000000000000000000000000

## Notes & News.

Isle of Man - 1964.

M. Swift.

(1) Isle of Man Railway.

The 'gossip column' of the Daily Herald contained the following note on August 19th. "A GREAT TRAIN". 'While Dr. Beeching is axing helpful railway lines all over the country, he ought to have a look at the Isle of Man, where they are making money out of the most antiquated railway in Britain. A friend on the island reports:- "The sleepers crunch under the wheels ( what is left of them), and the track is as bent as a kinky boot. Evne on the big straight it looks like the big dipper. The latest locomotive came into service in 1926, and the coaches were built in 1905. Fourteen miles from Douglas to Port Erin takes just under an hour, and the top speed is 15 miles an hour." There is one thing. I don't think you can have accidents.'

(We bear no responsibility for the errors in the above statement!)

The service being operated this year is more or less identical to the 1963 service, with trains from Douglas to Port Erin at 10.00; 10.30; 11.45; 2.15; 3.40; and 5.25\*, and from Port Erin to Douglas at 10.35; 11.50; 2.15; 3.45; 4.10; and 5.30\*.

(\* These run from 20th July to 22nd August only.) On the Peel and Ramsey lines the service is not so good, with trains from Douglas at 10.25 to Ramsey; 10.40 to Peel; 12.00 to Peel and Ramsey, and 2.10 to Peel and Kirkmichael. Trains to Douglas are at 1.45 from Ramsey and 2.25 from Peel, 4.00 from Kirkmichael; 4.25 from Peel and 4.00 from Ramsey. In addition there is a train from Peel at 12.10 to St.Johns only. Six locomotives and the railcar are required to work the service, and as there are only seven locomotives serviceable ( excluding the O-6-OT CALEDONIA ) a failure would cause difficulties during the peak periods. The loco workings during the peak traffic period of early August may be of interest and are detailed below.

No. 5	Douglas	10.40	No. 8	Douglas	10.25	No. 10	Port Erin	10.35
MONA	Peel	<u>11.15</u>	FENELLA	Ramsey	<u>11.40</u>	G.H.WOOD	Douglas	<u>11.25</u>
	"	12.10		"	1.45		"	11.45
	St. Johns	<u>12.19</u>		St. Johns	<u>2.32</u>		Port Erin	<u>12.35</u>
	" "	12.28		" "	2.36		" "	3.45
	Ramsey	<u>1.15</u>		Peel	<u>2.45</u>		Douglas	<u>4.33</u>
	"	4.00		"	4.25		"	5.25
	Douglas	5.15		Douglas	5.00		Port Erin	6.15

No.11	Douglas	10.00	No.12	Douglas	10.30	No.16	Banks	10.00 and 10.30
MAITLAND	Port Erin	<u>10.51</u>	HUTCHINSON	Port Erin	<u>11.20</u>	MANNIN	trains to Port Erin	
" "	" "	11.50	" "	" "	2.15		out of Douglas,	the latter often as far as Port Soderick.
	Douglas	<u>12.40</u>		Douglas	<u>3.10</u>			
" "	" "	2.15	" "	" "	3.40		Doulag	12.00
	Port Erin	<u>3.05</u>		Port Erin	<u>4.30</u>		Peel	<u>12.35</u>
" "	" "	4.10	" "	" "	5.30		"	2.25
	Douglas	5.05		Douglas	6.20		Douglas	3.00

The two ex. C.D.R.J.C. Railcars work the 2.10 from Douglas to Kirkmichael, returning from there to Douglas at 4.00. No.1 SUTHERLAND banks the 10.25 to Ramsey out of Douglas, and spends most the day either on station pilot work or on shed as spare. In Douglas shed are 15 CALEDONIA, still fitted with its plough for winter work, and 14 THORNHILL, which was used for a few days last year, but has not worked at all this season. All the other locos are out of use and stored in a shed at Douglas.

The cleanest locos on the line are 10 and 12, which are really spotless. Most of the rest tend to be in need of a good clean, especially MANNIN, which is in poor condition externally. The stock generally is very smart, being clean and well painted, though it is a pity that the saloon coaches are not used more often. The only time they seem to work is on the Sunday morning trains to Kirk Braddan. The track in places tends to be rather rough riding, though the Port Erin line is generally better than the Peel

cont.....

and Ramsey lines. Some of the stations, and certain sections of the track are now spread with spent oxide from local gas works, presumably to keep weeds down, but this imparts a gas works odour totally out of keeping with a rural narrow gauge station!

The locomotives are gradually becoming less efficient than they were, partly because of their age, and also because of the 'best steam coal' that is now available. By the time this arrives at the loco shed, after repeated loadings and unloadings, it is often largely composed of dust and small coal, which hardly makes for economy of working. Spares too are hard to come by with the present situation in the loco industry, and the company are obliged to be self sufficient to some extent. The ex.C.D.R.J.C. railcars are now giving good service, following the extensive overhaul which they received before entering traffic, and it seems likely that if the problems of transporting the former West Clare diesel locos; which have still not been sold by C.I.E.; can be overcome, they will be obtained to help out on the motive power side.

The trains are very well patronised during the peak summer period, and there is no doubt that no bus service could replace the trains. On the other hand the number of visitors to the island is dropping steadily, and with present holiday patterns it seems likely that this trend will continue. The Sunday trains to Kirk Braddan are still busy, particularly on the return journey, and the following timetable of a typical days workings is of interest:

Loco No.11	Douglas	10.10 (8 coaches)	Union Mills	11.00 (16 coaches empty)
MAITLAND	Kirk Braddan	10.15	Kirk Braddan	11.05
	Union Mills	<u>10.19</u>	" "	11.55 (8 coaches)
	" "	10.22 (Lt.engine)	Douglas	<u>12.00</u>
	Douglas	<u>10.30</u>	" "	12.02 (Lt. engine)
	" "	10.40 (8 coaches)	Kirk Braddan	<u>12.06</u>
	Kirk Braddan	10.45	" "	12.10 (8 coaches)
	Union Mills	<u>10.49.</u>	DOUGLAS	<u>12.15.</u>

The ex. C.D.R.J.C. railcars also work on this service, leaving Douglas 10.50, arriving at Kirk Braddan 10.55. It then departs at 11.40, arriving at Douglas 11.45.

The Foxdale branch, disused for so long, is still complete with track all the way from St. Johns to Foxdale. Much of this is overgrown with gorse in the cuttings and through woods, but on the sections cut into the hillside on high banks the track is clear and one can imagine CALEDONIA pounding up the winding track to the mines.

## (2) Manx Electric Railway.

The M.E.R., now Government owned, has had the benefit of thousands of pounds of Government money for reconstruction, and almost the whole of the track has now been relaid with new rails and sleepers. Some stretches still remain to be attended to on the Ramsey line, but rails are ready for this work and it will probably be completed during the coming winter. The cars themselves are now all in the attractive red, teak, and white livery, and present a superb example of coachpainting at its best. The depot yard at Derby Castle has been given a tarmac surface, and Laxey station has also been tarmaced. A new waiting shelter of varnished timber with a transparent roof has been erected in the trees alongside the Snaefell departure track, and loudspeakers in the trees now relay light music in the evenings! Ramsey now has a very fine station alongside the Plaza Cinema, where a large single storey building of stone and fancy concrete blocks with a slate roof has been built. This incorporates booking and parcels offices, and spacious and well lit waiting roof, and toilets.

Trains consist of a motor car and trailer, and often a van to cater for the fairly heavy parcels and smalls traffic. There is an hourly service to Ramsey, about a 30 min. service to Laxey, and additional trains as far as Groudle. The open motor cars are normally confined to the Laxey and Groudle services.

The Snaefell cars have recently been fitted with a public address system, giving a commentary of the route, interspersed with light music.

## (3) Douglas Horse Trams.

The Douglas horse trams, another link with the past, continue to ply regularly between Victoria Pier and Derby Castle. Each horse works a total of four trips each way a day - three hours work - and they are certainly very well looked after. Whether they will continue depends on many factors. The Douglas Town Council and the Police are reported as wanting to take them off, using the excuse that they cause traffic congestion, although this is actually caused by the lines of parked cars and coaches on each side of the promenade. During the day the cars are a definite asset to traffic control as they segregate up and down lanes, and keep road speeds within reasonable limits. However, their future may be in the balance.

(4) GROUDLE GLEN RAILWAY.

The 'Glen Industry' of the Isle of Man has been hardest hit by the decline in visitors. When the line was opened, some 65 years ago, over 100,000 visited the glen every year. Last year there were only about 13,000 visitors. Due to this decline, and the fact that the glen has changed hands several times during the last few years has meant that little money has been available for heavy expenditure.

The station, set on a ledge above the floor of the Glen a few hundred yards from the entrance, is a large corrugated iron roofed shelter with no sides, and covering two tracks. These become single alongside the loco shed, a long single road corrugated iron shed, which holds four coaches and one loco. The track then runs along a ledge through the woods until it emerges, and rounds the cliff to terminate above a Cafe and the beach in a very exposed position. Here is the passing loop, and a small water tank. The track, now overgrown and covered with debris from the cutting side, continues to wind along its precipitous ledge above the sea for a further couple of hundred yards to the terminus, where there is another loop. A small cove here had its entrance barred to form a sea lion pool, and a pen on the opposite side of the cove held polar bears. The rusted remains of these works still remain as a memorial to better days.

The track generally is still in fair condition, as are most of the remaining coaches. Of these four are in the shed, and two on the track a little way down the line. They appear to be used quite frequently to give unofficial rides to children, and have both suffered damage because of this. One coach frame has been run off the track and lies lodged against a tree below the line. Of the locos, the rusted remains of SEA LION 2-4-OT WB 1484/96 remain derelict behind the shed, and POLAR BEAR 2-4-OT WB 1781/96 inside with the coaches. She was repainted in a lurid 'fairground type' livery some years ago, which rather detracts from her otherwise smart appearance. POLAR BEAR was lit up last year with a view to working a service, but the tubes had deteriorated badly, and she is no longer fit to run without repairs. It seems unlikely that these will be done, as the cost of operating the line in recent years was only just covered by the income.

(5) Ramsey Pier Railway.

Ramsey Pier, owned by the Isle of Man Harbour Board, has one of the handful of pier railways in the country. The pier is about  $\frac{1}{2}$  mile long, and has a single track laid down the centre with grooved tram rails. For such a short line it has a considerable rolling stock, consisting of six 4 wheel luggage flats, a very small 4w flat, and a 4w covered maintenance wagon, all designed for manual haulage. Passenger traffic is normally worked by a 12 seat 4WP railcar (Wickham 5763), but when traffic is heavy a 15 seat bogie coach is used, hauled by the line's locomotive, a 4WP F. Hibberd 2027. The fare is 4d. single, with children 2d. Last year, it will be recalled, the Queen Mother travelled on the line, and the staff are very proud of this distinction.

Welshpool & Llanfair Lt. Railway.

Up to early August the W. & L. had carried over 10,000 passengers, some 4,000 more than at the same time last season. It is hoped that the final figure this year will be 50% up on last years. The company is maintaining its cordial relations with the Zillertalbahn, and is to present the Z.B. with nameplates for four of its locos.

County Donegal Railways.

M. Swift.

A fleeting visit to Strabane revealed that the two locos destined for the U.S. were still in the yard. These are the 2-6-4T's MEENGLAS and DRUMBOE, the latter minus its nameplates, and a total of eight coaches. The painting of the locos and stock was obviously done in a hurry, and in many places is wearing through. Moss is growing on the locos, but surprisingly they are still complete with all their brass fittings. Several of the coaches have broken windows, but otherwise have suffered little. It is presumed that the 4-6-4T ERNE is still at Letterkenny. The signal cabin at Strabane is still complete with all its levers, although there is no longer any track or signals for it to control, and it appears to be used by the bus crews working the services connecting with the trains. The well known station naemboard exhorting the passenger to change for Donegal, Letterkenny, Stranorlar, etc. etc. is still in full view on the former G.N. line platforms, and the thirsty traveller can find his wants satisfied in the Station Bar, now the only room occupied in the former C.D.R. station isolated on its island platform amid a wasteland of abandoned trackbed.

W. P. McCormick, Kings Road, KNOCK, Belfast.

M. Swift.

Mr. McCormick has about 80 yds. of heavy 3'0" gauge track in his back garden, and the former British Aluminium Co., Larne loco, which is operated in steam occasionally. It is 1 0-4-OT Peckett 1026/04, and resides in a large shed with a former B. & N.C.R. 4w open wagon, and a 4w flat from the Aluminium works. This loco has been retubed and restored, and looks very smart indeed. A C.D.R. signal completes the 'railway' scene.



Exmouth Minature Railway.

Eric Langhorne.

At Exmouth is a 220 yd. long circular line operated by a Mr. & Mrs. Beckett, operating in gardens. The motive power is No.1, an American outline 4-4-2 tender loco named MINX and built by Curwen of Marlborough; and No.2 and 0-4-2 CALEDONIAN, which has recently been overhauled. The station has a water tank, and neat seats. Four trips round the circle are provided at a fare of 9d. There are four coaches on the line, normally three in use and one spare.

Cornish Industrial notes.

M. J. Hodgson.

The Old Deabole Slate Quarries are still operating, and have two locos on the system. One, 4wD MR 4534 - No.2, was partly dismantled, and No.3 4wD MR 5738, in working order. Quarrymen are carried on the incline in a small carriage rather similar to a primitive cliff lift type car.

Of the former system at the De Lank Granite Quarries there is now little trace, except for an odd pair of wheels and a tub.

The Devon County Council Quarry at Parracombe is now derelict and overgrown, though some track remains. The Kerr Stuart 'Wren', was of course taken away as long ago as July 1958, but the RH diesel still resides in its shed.

The line of the Pentewan Dock & Concrete Co. ( 2'6" gauge of course) has been out of use for some time, but the two RH diesel locos are still here.

Roads Reconstruction Ltd. Somerset.

M. J. Hodgson.

At Vobster Quarries there is little trace of the former narrow gauge system, but the unusual tunnel connecting two quarries remains in use as a path and cattle track.

There were at one time a number of RH locos ( these left about 1953), a Deutz, which was disposed of about 1956, and an unusual French loco by Locofax Comessa.

At the Cranmore Depot and Quarry there were five petrol locos and one 0-4-0T AB 1885/31, but all these have now gone. The quarry, now abandoned and waterlogged, was first worked by narrow gauge, then by standard gauge using electric trucks controlled from the centre of the quarry, then finally narrow gauge again. The quarry has now been leased to a firm of engineers and scrap dealers.

The final visit was to the Hapsford Plant H.Q. of the New Frome Quarry Co., terminus of what must have been a wonderfully scenic narrow gauge line up Vallis Vale to Whatley. The AB steam locos went to India about 1947, and the whole route is now standard gauge.

Narrow Gauge at Gravesend Canal Basin.

R. L. Eastleigh.

At the Gravesend Canal Basin of the former Thames & Medway Canal is a fair amount of about 2'0" gauge track. This commenced at the far edge of the basin, on the landward side, and consisted of a short stub leading into pointwork opening out into a parallel double track. Almost immediately the track swings right and is lost under a cinder track, but later reappears and seems to head for the gas works. The track at this point appears to be laid with grooved rail. There is no track nearer the gas works, but it does suggest that the line might have been used in connection with this. More track also appears on waste land on the side of the canal heading towards Strood. It seems possible that the land may have been used as a stacking ground for coal.

The very short stub at the basin suggests that locos may not have been used, as it will only hold four or five wagons.

Has any member any further knowledge of this line?

Further notes of the Provence system. ( from Loco Revue No.241)

P. J. Burkill.

The regular passenger service is entirely worked by the Renault railcars and Billard trailers. These work four daily trips between Nice and Digne, and two between Nice and La Vesubie, plus occasional special trips during the winter sports season between Nice and Thorans. The total run of 156 km. takes 3 hrs. 30 mins., and if the first railcar is full, a second one follows after an interval of 10 mins. Special trains are sometimes worked for tourist groups and to holiday camps. Freight is carried on the thrice weekly goods.

The Company is making a great effort to improve its services. The track is in good order, and curves, gradients, and points have been improved. However, the line is a difficult one on the mountain sections, along narrow passes where landslides occur following heavy storms in summer and snow in winter, while most of the line traverses poor country with little industry. Nevertheless, the line is a good connection between the north and south avoiding Marseilles, and tourist can travel from Geneva to Nice in a day passing through a marvellous mountain landscape.

The station at Nice is shortly to be rebuilt and a special suburban service started. New railcars are to be obtained. In all, this is one of the finest metre gauge lines in France.

Austria ( from 'Eisenbahn' )

E. K. Stretch.

Schafbergbahn (OBB metre gauge rack line from St. Wolfgang to Schafbergspitze)

The first diesel loco has been delivered to the line, and another is expected. If these are successful further units will be ordered and steam traction will cease. From the description the new unit appears to be a railcar. They have a maximum speed of 20 km/hr, and this will enable the journey time to be cut by half. However, for the present the timetable will be unchanged as mixed steam and diesel operation has to be allowed for.

India: Southern Railway. ( from 'Eisenbahn' )

E. K. Stretch.

The metre gauge section Tambaran - Villupuram, part of the Madras - Tiruchirappalli main line, and 135 km. long is being electrified at 25 Kv. 50 cycles. When this is completed the existing 500V. DC line from Madras Beach to Tambaram (30 km.) will be converted to 25 Kv.

Brazilian Narrow Gauge lines.

Juergen Otto Berner.

Companhia Mogiana de Estradas de Ferro, Sao Paulo.

The main line of this system is metre gauge, but some branches were built to 60 cm. gauge. Abandonment of these lines began very early, and the last, to Sorra Negra, ceased in 1956. Competing paved roads caused the closure of most of the CMEF. No recent statistics of 60 cm. gauge loco and car rosters are available, but in 1925, when the 60 cm. gauge operations were at their peak of efficiency CMEF had 8 tender locos, 7 tank locos, 5 1st class passenger cars, 8 2nd class passenger cars, 5 compos, 1 baggage, 4 livestock cars, 61 box cars, and 32 gondolas and flats.

Cia. Paulista de Estradas de Ferro, Sao Paulo.

This system has metre, 5'3" and 60 cm. gauge lines, the 60 cm. gauge running to Santa Rita do Passa Quatro and Aurora. By 1961 they were reduced to freight only services, and it is not known if they are still in operation or what works them.

Estrada de Ferro Braganca, Para.

This systems main line and branches are mainly metre gauge, but two branches are 60 cm. gauge. These used mostly Decauville equipment. The Prata branch was closed some time ago, and the Benjamin Constant branch has been relaid to metre gauge.

Estrada de Ferro San Mateus, Espirito Santo.

This line served a rich lumber region in the state of Espirito Santo. It was built in the middle 1920's, and was abandoned after the last war. The line was 68 km long and ran from S. Mateus to Nova Venecia.

Tramway da Cantareira, Sao Paulo.

This was formerly a suburban railway in Sao Paulo city, but has now been enlarged to metre gauge, and forms part of the Cia. Sorocabana de E.F. It had many passenger and freight cars.

Estrada de Ferro Morro Velho.

This was a 66 cm. electric line serving the Morro Velho gold mines in the state of Minas Gerais. The line was 8 km. long and ran from Raposos on the E.F. Central do Brasil main line to Morro Velho.

Ramal Ferreo Campineiro.

This firm had a 60 cm. gauge line from Joaquim Egidio to Dr. Lacerda in the state of Sao Paulo. It was enlarged to metre gauge a long time ago.

E.F.Perus - Pirapora.

This 60 cm. gauge line still operates in the suburbs of Sao Paulo. It serves a cement plant at Perus, but carries general freight traffic and passengers over its 16 km. line. The roster is unknown.

Cia. Agricola Fazenda Dumont.

This was a coffee plantation line close to Ribierao Preto in the state of Sao Paulo. In 1925 the stock consisted of 3 tender locos, 1 tank loco, 3 special and 5 1st class passenger cars, 2 baggage cars, 20 box cars, and 4 flat cars. It may now have been abandoned.

Estrada de Ferro Palmeres do Sul a Osorio.

A 60 km. long railway in the North Eastern state of Rio Grande do Sul was built during 1917 - 18 to link navigation between a series of lakes and the Patos lagoon by the above company. The line continued operating until December 1960, and its locos and stock were sold in June 1961. There were four locos, all built by Hunslet and adapted to burn wood. Each carried fuel in a special covered 'tender'. The line had only 2 passenger cars, and a combine, but for freight traffic it had 13 box cars, 13 gondolas, and 11 flats for heavy loads. There were also two railcars and one trailer. At abandonment only locos 201 and 203 were operating, 204 being in the repair shops, and 202 partly cannibalised.

Port of Rio Grande Administration.

This organisation operates a 60 cm. gauge line on the northern part of the Patos lagoon for carrying building materials. It is worked by steam and diesel locos.

Sugar cane and coffee plantation railroads.

In the states of Pernambuco, Alagoas, Rio de Janeiro several lines operating in the sugar plantations and mills, while in the state of Sao Paulo there are others in coffee plantations. Several of these are 60 cm. gauge. Other minor lines are at work at mines and industrial concerns, most of these having Decauville equipment with animal haulage.

E. F. Porto Guaira - Porto Mendes.

The Cia. Mate Laranjeira exploited matte tea and lumber on the banks of the Parana river and built a 60 cm. gauge around a series of waterfalls in the river at Siete Quedas ( Seven Falls ). The line has now possibly been abandoned.

New Zealand Railways.

Correction to the loco list in the June News : No.27.

Oil fired 4-8-4 Kg should be Ka.

Coal fired 4-8-4 Kg should be Kb.

The following notes have been adapted from "Cavalcade of New Zealand Locomotives" by A. N. Palmer and W.W.Stewart. M. Mallett.

Ka class 4-8-4.

Weight: Engine	92 tons.	Cylinders	20" x 26"
Tender	53.4 tons.	Driving wheels	4'6" dia.
		Boiler pressure	200 lb/sq.in.

The Ka was a logical development of the earlier K class which had proved itself on the North Island main trunk railway. Designed by R.J.Gard to the requirements of P. R. Angus, and built at the Hutt workshops between 1939 and 1950, the Ka incorporated several new features adopted as a result of experience with the K.

The most outstanding feature of the first 30 members of the class was the streamlined cowl which concealed the A.C.F.I. feed water heating apparatus. This was removed after the war together with the feed water heaters. The last five locos were built without streamlining, and the final two; outshopped in 1950; were equipped with Baker valve gear instead of the more usual Walschearts gear. Roller bearings were fitted to all axles on engine and tender, and the frames were of high tensile steel. All the original members of the class were fitted with exhaust steam injectors.

Of the 35 Ka's built, only 34 survive as No.949 was scrapped in 1955 as a result of damage sustained in the disastrous accident at Tangiwai.

Most of the class are now fitted with Westinghouse cross compound air compressors, and all were converted to burn fuel oil between 1947 - 53.

Kb class 4-8-4.

Weight: Engine	93.3 tons.	Cylinders: Engine	20"x 26"
Tender	52.9 tons.	Booster	7"x 10"
Boiler pressure	200 lbs/sq.in.	Driving Wheels	4'6" dia.

When the K class loco was introduced in 1932 its trailing engine bogie was designed to allow the addition of a booster if necessary. The booster is a two cylinder auxiliary engine which can be cut in at low speeds if required to give extra power. This was found unnecessary on the North Island, but its need became urgent on the Midland line in South Island. It was decided to build six booster equipped 4-8-4's for this service.



Classified Kb, these locos were built at the Hillside workshops in 1939, and were practically the same as the North Island Ka's. The booster increased the tractive effort from 30,815 lb. to 36,815 lb.

The Kb's also lost their streamlining and A.C.F.I. feed water heaters in 1948-9, and more recently have been fitted with Westinghouse cross compound air pumps. Unlike the Ka's, the six Kb's are still coal burners.

#### K class 4-8-4.

Weight: Engine 86.7 tons.  
Tender 53.4 tons.

Cylinders 20" x 26"  
Driving wheels 4'6" dia.  
Boiler Pressure 200 lb/sq.in.

Designed by R.J.Gard to the requirements of the C.M.E., P.R.Angus, this loco was a masterpiece, for within the restricted confines of the N.Z.G.R. loading gauge (11'6" high by 8'6" wide) had been built a loco developing a tractive effort of 30,815 lb., yet with an axle load of only 14 tons. Features of the K class were roller bearing axlebox boxes on the leading engine bogie, and tender bogies, Commonwealth cast steel firebox cradle and rear truck, power reverse gear, grease lubricated floating bronze bushes on the side rods, twin Westinghouse air compressors, a mechanical lubricator, air operated firedoor, and many other modern fittings. The grate area of 47.7 sq.ft. was almost the largest practicable for hand firing, and the high capacity tender carried 5,000 galls of water and almost 8 tons of coal.

Thirty of the locos were built at the Hutt workshops between 1932-6, and they were placed in service on the North Island main trunk railway. They were completely successful from the outset, and their teething troubles were of a minor nature. Today the locos are oil fired and work freight services on several North Island main lines.

#### J and Jb class 4-8-2.

Weight: Engine 68.6 tons.  
Tender 40.3 tons.

Cylinders 18" x 26"  
Driving wheels 4'6" dia.  
Boiler pressure 200 lb/sq.in.

Although the Ka had proved very satisfactory on main lines laid with 75 lb/yd rail, there was an urgent need for a loco to operate over secondary lines with 53-56 lb/yd rail. Mr. Gard designed the J class to fill this need.

The J was partially streamlined after the style of the New Haven R.R. 1400 class 4-8-4. They had a power rating between the Ab and K classes and the axle load was restricted to 11½ tons. The J incorporated all the modern features of the Ka, including roller bearings on all axles, and a noteworthy addition was the use of Baker valve gear and a American style Vanderbilt tender. Forty of the class were built by N.B.L. of Glasgow, and all had arrived safely in New Zealand by early 1940. Thirty of the class were delivered to North Island, and ten to South Island for service between Oamaru and Invercargill. Later these were transferred to North Island. Twelve were converted to oil burning and reclassified Jb.

#### Ja class 4-8-2.

Weight: Engine 69.1 tons.  
Tender 40.3 tons.

Cylinders 18"x 26"  
Driving wheels 4'6"  
Boiler pressure 200 lb/sq.in.

These were the last steam loco built for the N.Z.G.R, 35 being turned out of Hillside shops from 1946 as oil burners for South Island, and 16 were built by N.B.L. as oil burners for North Island. Unlike the J's the Ja's were built unstreamlined. At the outset they were fitted with cross compound air pumps, and most have roller bearing on all crank pins but one. The use of these has enabled the locos to run high mileages between overhauls.

ooooooooooooOoooooooooooooooooooooooooooooooooooo

#### Information Wanted.

Maps, drawings and stock details of French metre gauge lines: P.J.Burkill, 1, Stroud Close, Alkington, MIDDLETON, Lancs.

#### For Sale.

"Switzerland's Amazing Railways" by C.J.Allen (1st edition), and "Gateway to the Continent" by E.W.P.Veale. Best offer secures: E.G.Cope, 3, Milton Gardens, Norristhorpe, Liversedge, Yorks.

#### We have pleasure in welcoming the following NEW MEMBERS.(Junior)

- A. SKILTON, "Rydal", Claremont Rd., REDHILL Surrey.
- B.C.TISDALE, 3, Godstone House, Kingsnyp-ton Park, Kingston Hill, Surrey.
- B.W.CRITCHLEY, 66, Pulteney Rd., South Woodford, LONDON E.18.
- P.J.WELLS, 27, Glendower Road, LONDON. S.W.14.

#### Changes of address.

- T. A. STEVENSON, Beech Farm, 552, Bradgate Rd., NEWTON LINFORD, Leics.
- P.J.BURKILL, 1, Stroud Close, Alkington, Middleton, Manchester, Lancs.