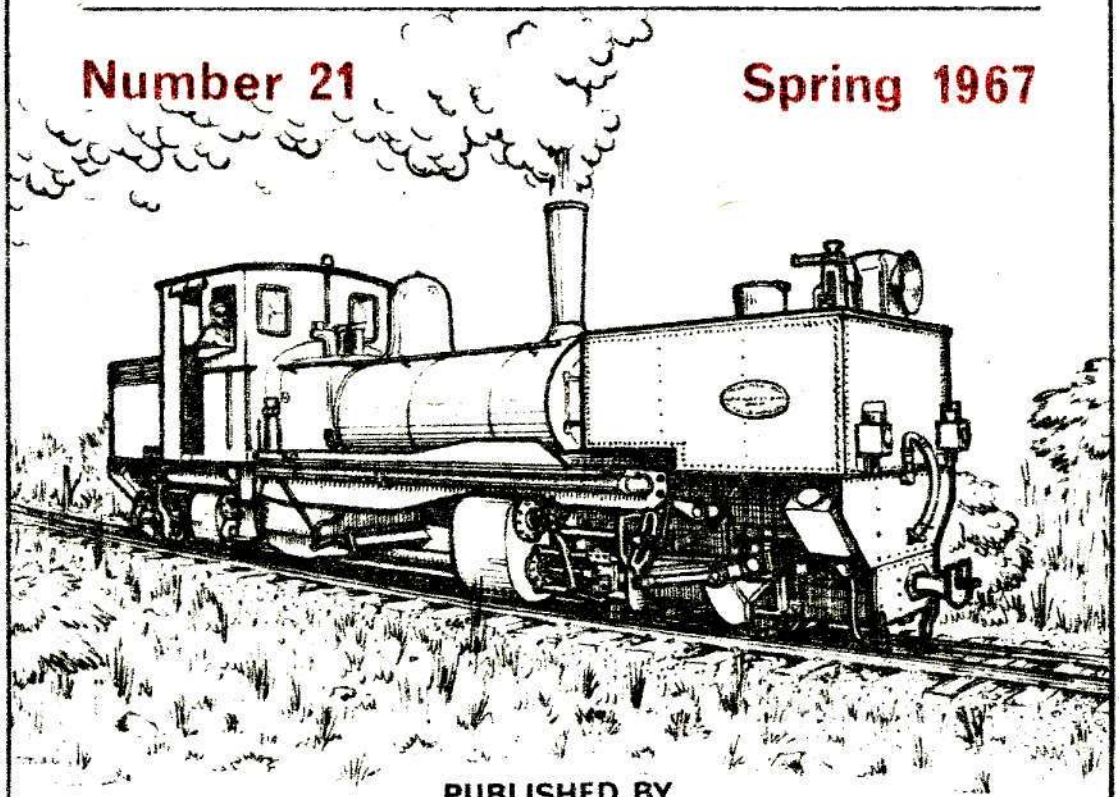
LIGHT RAILWAYS

Number 21 Spring 1967



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LIGHT RAILWAYS

NO.21 SPRING 1967 VOL.VI.
PRICE - 25¢.

John Thompson's cover drawing shows the Tasmanian Government Railways "K" class Beyer-Garratt locomotive, - the first Garratt in the world. One of the two locomotives in this class is now owned by the Festiniog Railway, Wales; the other was scrapped.
Members will have noticed that the quality of duplication of the front covers is of a consistently high standard. The Puffing Billy Preservation Society has been good enough to duplicate our front covers, for which we thank them. They certainly improve the magazine.

We originally intended to have an article on the Thomson Valley Tramway (Erica - Bell's Camp) but have held it over for a while, in the hope of obtaining some further information. I would be very interested to hear from any reader who has any information on this tramway.

THE VICTORIAN LIGHT RAILWAY SOCIETY

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Annual subscription- $1-00 from June 1st. 1967.

The Darnum-Elinbank Tramway

by - M. Plummer.

Mr. Benjamin James Cropley was an early Gippsland pioneer who took up a selection of over 800 acres in 1876, at Elinbank, near Warragul - about seventy miles from Melbourne. With a brother and three nephews he cleared part of his land for grazing, and, realizing the value of the timber, decided to build a sawmill and a 7-mile tramway to get it out. (See map Page 9)

He was not the first in the area to exploit this wealth, as about this time several sawmills were sending timber to the Warragul-Sale railway, and a siding had been put in to deal with it at Bloomfield (now Nilma). Cropley was quite an enterprising man, and rather than use a wooden-railed horse worked line, he decided to build a more permanent line using iron rails with a steam locomotive to haul the timber.

Accordingly he wrote to Fowler's Sydney office to enquire about a locomotive. They wrote back on the 13th. Sept. 1888 outlining the type of locomotive they thought would be suitable for his line. Within a month he forwarded £150 ($300) as a deposit. I was fortunate enough to locate the original letter of specifications and the receipt he obtained for the deposit.

THE LOCOMOTIVE

This was of the 0-4-2ST wheel arrangement, and was fitted with a trailing truck of Major English's patent; outside Joy's valve gear; a steel boiler with brass tubes and copper firebox; double spring balance safety valve; an awning over the driver's footplate; a screw brake acting on all coupled wheels; two injectors; and a spark arresting chimney. All for £850 ($1,700) !

Dimensions of the locomotive were as follows:-

Coupled wheel diam.	30-ins.
Rigid wheelbase	4-ft.
Total wheelbase	8-ft. 9-ins.
Cylinder diam.	9-ins.
Cylinder stroke	14-ins.
Heating surface,firebox	22 sq.ft.
Heating surface,tubes	218 sq.ft.
Grate area	5 sq.ft.
Boiler pressure	140 lbs.p.s.i.
Tank capacity	250 gallons.
Coal bunker capacity	18 cu.ft.
Weight, empty	9¼ tons.
Gauge	2'6" or 3'.

Mr. Cropley must have stated what gauge he wanted his locomotive when he ordered it, but I have not been able to find details.

THE TRAMWAY

While the locomotive was being built in England, Mr. Cropley's partner, Mr. W. Smith laid the tramline. He got no assistance from the V.R. It had been reported in a Warragul newspaper that several hundred tons of 50 lb. rails had been sold to go to China at £2/5/- a ton, but the V.R. refused to sell any 50 lb. rails and charged him £4/10/- for 60 lb. rails. This was a big undertaking in those days,for the seven miles from Darnum station to Mr. Cropley's property was mostly virgin forest. He was also harrassed by the landowners through whose land the tramway ran. In one case he paid more in rent than twice the amount the owner gave for the whole block of land. It was poor land, unfenced and unimproved.

The whole plant cost about £6,000 ($12,000). The sawmill was in full operation by the end of January 1889, but the locomotive had not arrived, so horse traction had to fill the gap.

When the locomotive arrived it was found the curves were too tight. After some alterations the

curves were corrected, and by the 3rd. May 1889 the "Jarragul Gazette" was able to report that " Messrs. Cropley's engine is now in full working order and with its train is now doing about three trips a day. The locomotive, which was manufactured by Messrs. Fowler & Sons of Leeds, England, is allowed by 'those in the know" to be an effective piece of machinery. It is fitted with all the latest improvements and it is hoped its enterprising owners will be fully repaid by their venture. There are now three mills in operation sending timber to the station, and I hear about another to be erected a couple of miles further out. It certainly looks as if platform and other accommodation [at Darnum] will have to be materially increased to meet growing requirements."

The qualified driver was Bill Edwards, whose son followed in his father's footsteps, and drove the Climax locomotive on the Tyers Valley line. The mill reached a peak output of about 4,000 super feet of timber per day fairly quickly, and the loco was kept busy hauling this, and the output of the three other mills to Darnum railway station. Mr. Cropley closed the line in 1903, I assume because the timber was worked out, and sold the rails back to the V.R. for £2/5/- a ton, and deducted the cost of freight charges to Melbourne. Mr. Cropley is on record as saying that he came out of the venture poorer than when he began, but nevertheless the line was a source of income to him during the worst years of the depression.

Mr. Cropley's line was, to the best of my knowledge, the only private line around Jarragul to have a steam loco, the rest were horse worked, with the exception of one line, which had an internal combustion tractor rebuilt from a road vehicle about 1932.

DISPOSAL OF THE LOCOMOTIVE.

Although a connection between the two cannot be definitely proven, the Cropley Fowler is almost identical to a 3-ft. gauge engine owned by the Warburton Timber Company between 1910 and 1916. The Warburton

engine, [see page 7], was built in 1885, the same year as Cropley's, and carries the Fowler Builder's No.5851. It is known to have been one of the original engines of the Warburton Timber Co., which was formed in 1910, and worked there for six years; until sold to the Walsh Island Dockyard, Newcastle, N.S.W. Nothing is known by the writer of its life there, or of its eventual fate, perhaps one of our N.S.W. members can help.

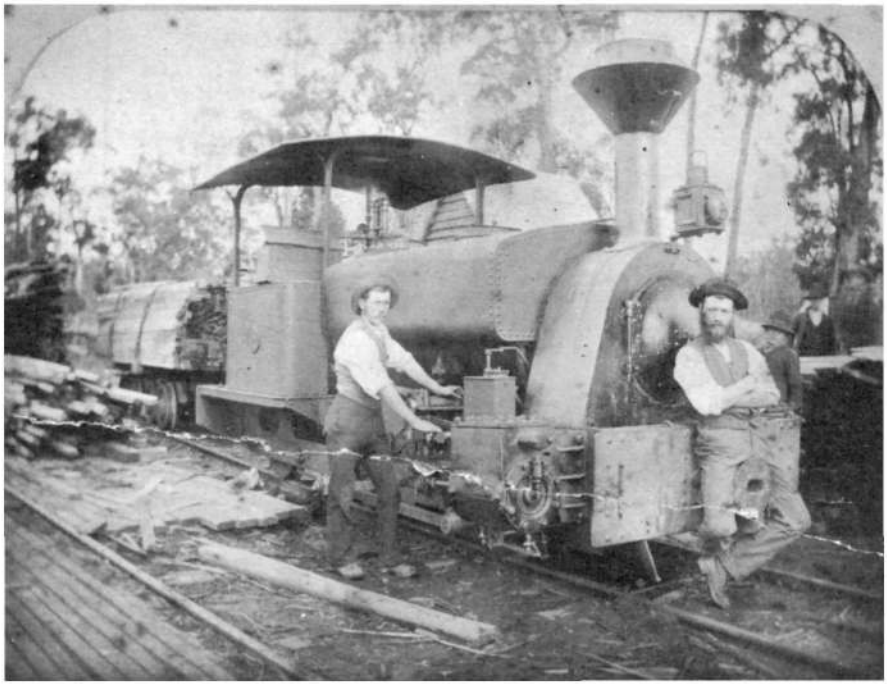
The four main differences between the two which can be noted in the photos are- there is no spectacle plate or cab step on Cropley's engine; and there is no sand box behind the cylinders, or blow-off cock on the front of the cylinders on the Warburton engine. These differences could be modifications which may have been done by a local mill fitter or an agent, who may have carried out improvements to get a better price.

If they are the same engine, there is seven years (1903-10) to explain between when Cropley's closed and the W.T.Co. was formed. It could have been at Darnum for all or part of this time, or been stored in a dealer's yard, or perhaps it worked on another tramway. Thus there are still quite a few mysteries to be cleared up about this engine.

References used -
"Warragul Guardian" and "Warragul Gazette" 1889-1903.
"The Path of Progress" (A history of Warragul), by Hugh Copeland.

Original letter from Fowler & Co. to Mr. Cropley.
Receipt for payment of £150 deposit.
Warragul Gazette, 1926.
The author wishes to thank Mrs. R. C. Mills, and other descendants of Mr. Cropley, and Miss O. Marrabel of the Warragul & District Historical Society, for their help.

CONTRIBUTE TO
"NEWS NOTES & COMMENTS."



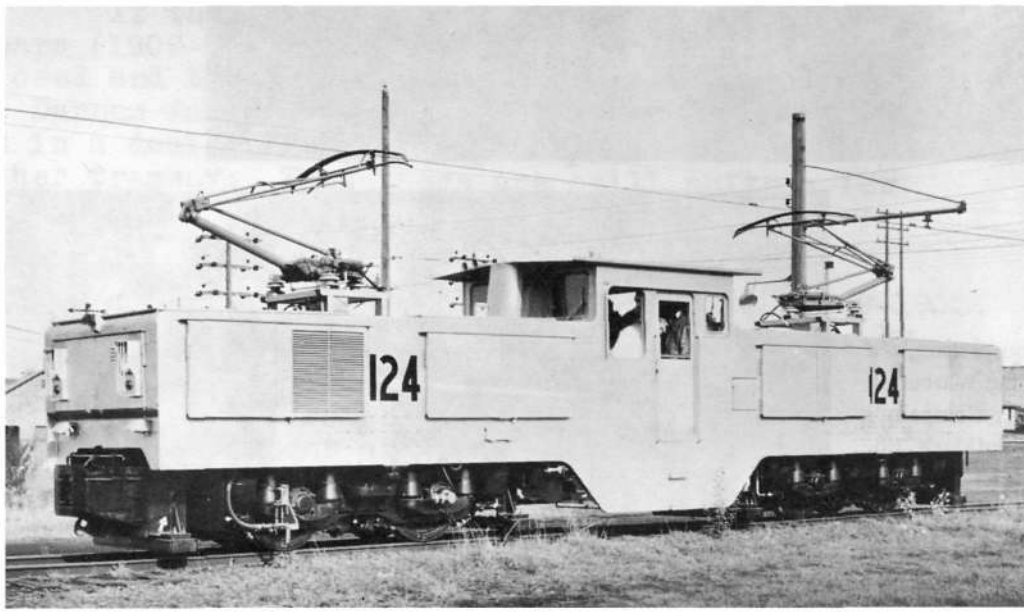
Fowler 0-4-2ST on Cropley's Darnum-Elinbank tramway. Photo probably taken sometime in the 1890's.

(Photo - V.L.R.R.S. Archives, Photographer - Louis Bertram).

For comparison, we show the Warburton Timber Company's Fowler, Builder's No. 5851 of 1888. The similarity between the two engines will be noted.

Another view of Cropley's locomotive, presumably at the Elinbank saw-mill, sometime in the 1890's.

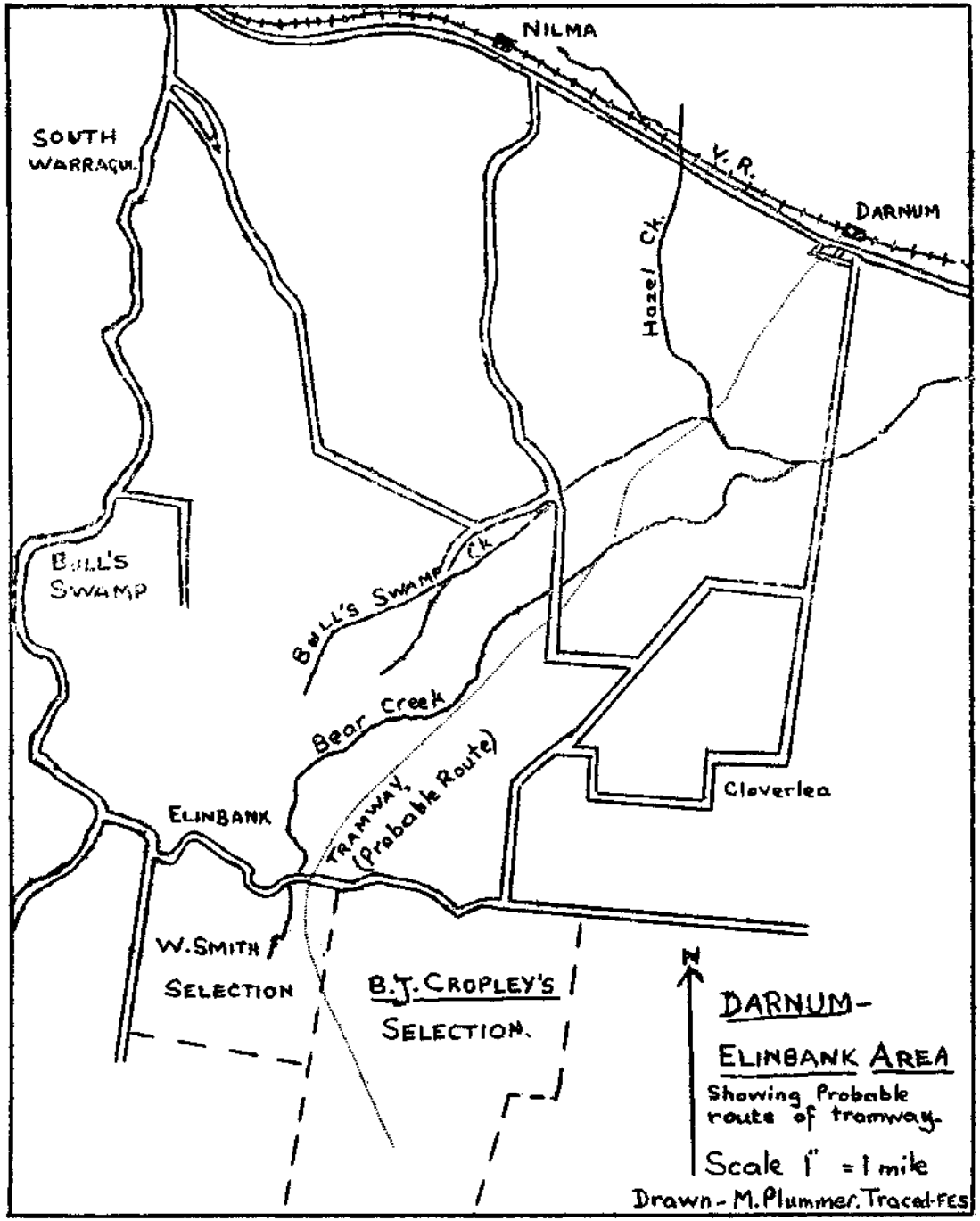
(Photo - V. L. R. R. S. Archives)



One of the two new 62 ton Hitachi locomotives supplied recently to the S. E. C. (See page 33 last issue). The locomotives have a tractive effort of 34, 720 lbs., and a total wheelbase of 30-ft. 9¼-in.

Note the Stone-Faively type pantographs.

(Photo - State Electricity Commission of Victoria).



Australia's First Diesel Locomotives.

RUBICON TIMBER TRAMWAY.

By - F. Stamford.

In 1935 the 2-ft. gauge Alexandra - Rubicon timber tramway reverted to the ownership of the Alexandra Shire Council, and the Council was prepared to lease the line to Clarke & Pearce - local sawmillers - providing steam locomotives were not used in summer, because of the alleged fire risk. Up to this time three Krauss 0-4-0WT locos had been in use. If Clarke & Pearce had followed contemporary timber tramway practice they would have purchased, or made, tractors to work the line. However they apparently felt that it was below the dignity of their line to operate it with something so primitive as a tractor. After all, their track was well laid - the last thing one would expect on a timber tramway - and their timber wagons had steel frames, and even had springs.

Consideration was given to the construction of a weird articulated internal-combustion tractor, with some "Trail" tractor characteristics; but it was finally decided that nothing less than a genuine diesel-mechanical locomotive would do.

Geo. W. Kelly & Lewis Pty. Ltd. of Melbourne, built the first of these engines in 1935, and it proved so successful that a second one was ordered in 1936. The first one was painted green, the second was red. Almost certainly these were the first diesel locomotives (as opposed to converted tractors) to be built in Australia, and it is something of a paradox that they should have been ordered for a timber tramway. Timber tramways are generally associated with the most primitive and roughly built motive power and rolling stock, while these locos were very sophisticated pieces of machinery indeed.

DESCRIPTION.

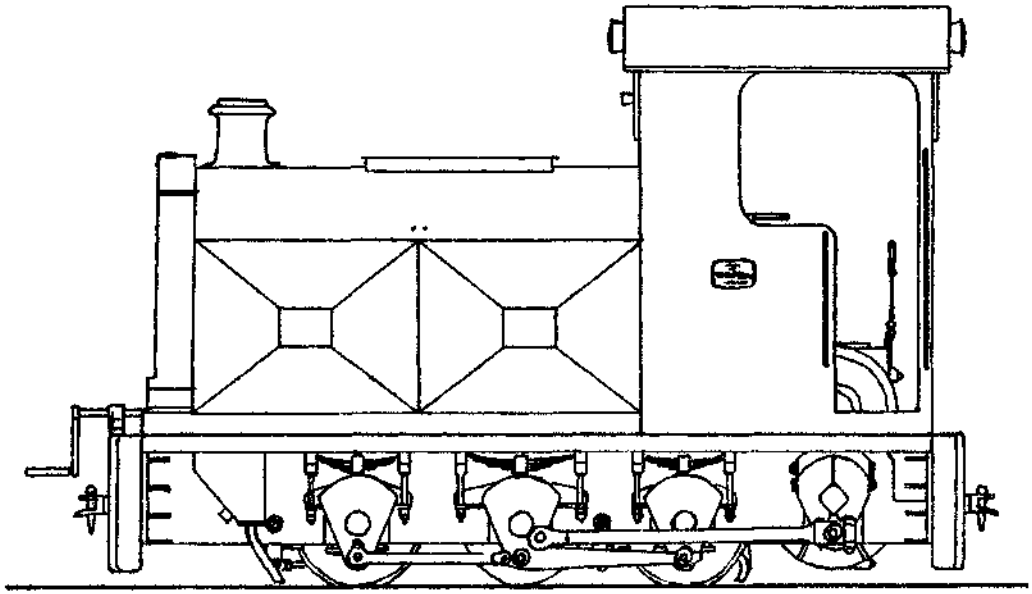
These locomotives were extremely neat looking little six-coupled units, with jack-shaft drive. The centre drivers were flangeless, and the wheels were of railway profile - no six inch treads here! Of note was the fitting of a flanged funnel, a practice common on English industrial diesels of this time, contrasting with modern diesels with their stove-pipe exhausts.

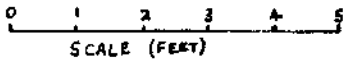
The locomotives were fitted with a four cylinder Dorman-Ricardo diesel engine, with hydraulic coupling, and four speed epicyclic gearbox, and used light diesel oil as a fuel. Two decompression levers were fitted to the cylinder heads to assist in hand starting from cold, but C.A.V. Bosch 24-volt electric starting equipment was also fitted. A combined heater and starter switch for heating of the plugs was placed on the dash-board panel in the cab.

The circulating water was pumped by the engine and cooled by means of a honeycomb type radiator of six sections. The vertical sections were arranged with top and bottom rubber joints, so that any section could be removed without disturbing the others.

TRANSMISSION

The engine carries a Vulcan-Sinclair fluid flywheel coupling, this being coupled to the pre-selective wilson gearbox by means of a rubber bush and pin type steel coupling. The gear box is coupled again by a larger rubber bush pin type coupling to the final drive gearbox, in which a reduction of 3:1 takes place between a bevel pinion and crown wheels. The crown wheels are mounted on ball bearings and revolved in opposite directions. Reversing was achieved by moving a sliding sleeve on the splined shaft. The dogs on the outside of this sleeve engaged with recesses in one of the crown wheels and received the drive. All these gears were cut by Richardson gears Pty Ltd. of Melbourne.

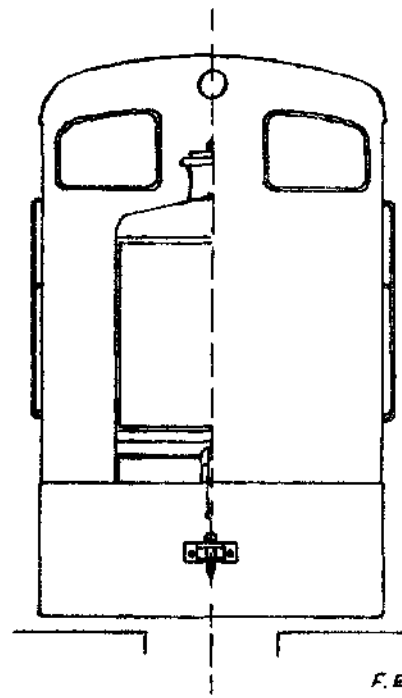




RUBICON TRAMWAY

DIESEL-MECHANICAL LOCOMOTIVES;
BUILT BY KELLY & LEWIS PTY. LTD. MELBOURNE,
IN 1935 & 1936.

GAUGE -	2-ft.
Wheel arrangement -	C
Wheel base (rigid)	5-ft.
Wheel diameter	1-ft. 10-in.
Length over Couplings	14-ft. 1½-in.
Height overall	8-ft. 8-in.
Width over buffer beams	5-ft. 2¼ in.
Width over hand rails	5-ft. 6⅜ in.
Engine power output:-	
1,350 r.p.m.	53 b.h.p.
1550 r.p.m.	62 b.h.p.
2000 r.p.m.	72 b.h.p.
Weight, Roadworthy,	10 tons.
Number built :-	2.



F.E.S.

The splined shaft, which is carried on roller bearings, transmitted its power to the jack-shaft by means of hardened nickel chrome pinions and cast steel spur wheels, the reduction being 2.52:1. The jack shaft is carried by large roller bearings, grease lubricated. From this shaft the drive was transmitted through cast steel detachable balanced crank disks to the main coupling rods, which were coupled to a point on the trailing coupling rods, which in turn operated the wheels through balanced cranks.

The main plate frames are $\frac{3}{4}$-in. thick and carry heavy machined cast iron buffer beams. Front and rear sandboxes were provided, operated by a lever from the cab. A compensated hand screw brake operating on four wheels was fitted.

The large cab was provided with two Dunlopillo seats, under which were the batteries and tool box. The controls consisted of hand brake, reversing lever on final drive gearbox, throttle control on dashboard plate, pre-selection lever, dis-engager pedals for Wilson gearbox, and a push button to stop the engine. A panel on the dashboard plate carries the starting switch, fuse boxes, ammeter and lighting switches, and the engine oil pressure gauge.

Large headlights, and corresponding tail lights showing red, are fitted to both ends of the cab; and an electric horn is also fitted. The 25-gal. fuel tank was fitted with a sight glass.

OPERATION

The engine was governed to give a maximum speed of 13.4 m.p.h. in top (fourth) gear at 1,550 r.p.m. The maximum engine speed was 2,000 r.p.m. at which the locomotive would have been capable of 17.2 m.p.h. in top gear. In operation, no speed higher than 12½ m.p.h. was called for. The maximum governed speeds were 2.8 m.p.h. in first gear, 5.0 m.p.h. in second, 8.2 m.p.h. in third, and 13.4 in top gear.

After tests at the works the locomotives were railed to Alexandra. The intended loads were hauled with ease, and the loco hauled 12 wagons of timber, about 48 tons, up the 1 in 30 grade near Alexandra without any sign of the engine being up to full load. The loco was also capable of slipping its wheels on dry rails. The fuel consumption on a return trip of about 28 miles was four gallons, compared to half a ton of coal used by the Krauss steam locos doing similar work.

CONCLUSION

The Alexandra - Rubicon tramway ceased operations about 1949, when road transport took over. This closure was probably due to the timber getting areas along the tramway having been worked out. And so, just as the main line railways were placing their first big orders for diesel locomotives, Australia's two pioneer locomotives of this type were retired. The first one remains intact at Alexandra, while the second one has been partially dismantled. It is to be hoped that some day Australia's first diesel will become an exhibit at Menzies Creek narrow gauge museum. (See photos, pages 25 and 26).

(Ref.- " Commonwealth Engineer," January 1, 1936, p. 185-186).

KERANG-KOONDROOK TRAMWAY

On Saturday December 9th. the Association of Railway Enthusiasts are running a special steam hauled train to Koondrook. This tour is highly recommended to our members, as there is a great deal to be seen on this interesting ex Shire owned tramway. Koondrook is of particular interest, with its unusual track layout, and station built in the main road. If you are interested write to A.R.E., Box 4810, Mail Exchange, Melbourne, 3001.

LETTERS

Mr. G. Watsford writes:-

SOUTH MELBOURNE GASWORKS TRAMWAY.

I was browsing through a Melbourne Harbour Trust Exhibition of photos in the Kodak Gallery last week, when an old photo caught my eye. It was titled

"First Australian Expeditionary Force Troopships at Port Melbourne, 19-10-1914."

Of most interest, however, among the troopships at Town Pier, was a collier discharging into skips on the gasworks tramway. Presumably from a glass plate negative, the photo was extremely clear, and was taken from an elevated position which I estimate to be either the smokestack or the highest building of the Robert Harper (Silver Star Starch) building on Beach Street, between Dow Street and Esplanade West. The adjacent Oriental Mills building on the Dow Street corner is clearly visible.

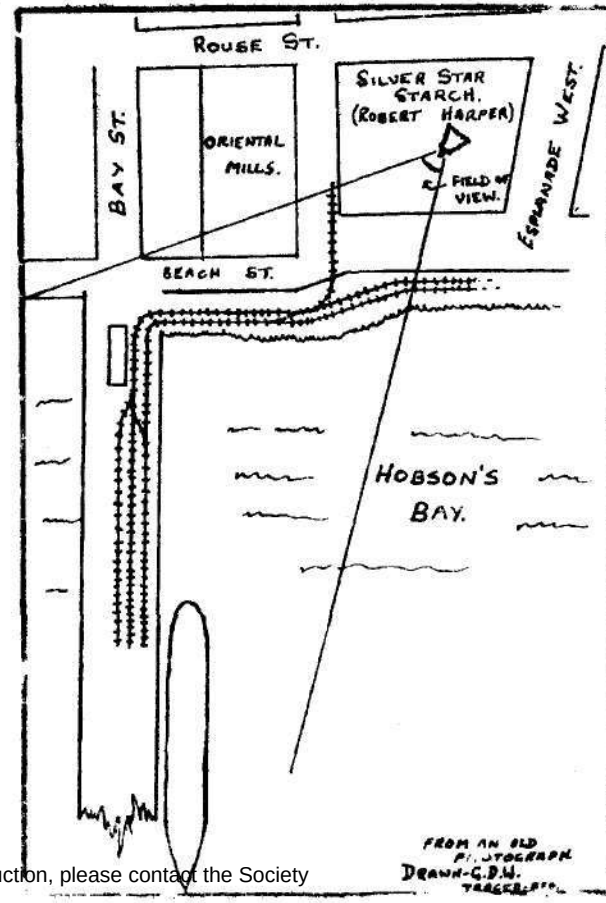
Several trains are visible, the ruling load for each horse being three skips, both on the Up and the Down, normal left hand running being followed on the double track. Unfortunately, the detail of the skips could not be discerned without the aid of a magnifying glass, but they appeared to be a deep box, with rounded corners, mounted on four wheels.

Immediately in the foreground of the photograph , there was a trailing crossover opposite the

end of Dow Street, between the Up and Down roads, and a single track facing connection off the up road, which crossed Beach Street and disappeared from the field of view along the east side of Dow Street. It may have connected to the boiler house in the Harper factory, but it looked disused in the photo. On the Pier, the double track appeared to branch into three, with crossovers, after passing a cargo shed at the shore end. The end of track, some 250 - 300 yards from shore, was obscured behind the collier. The pier continued for a further 300 - 400 yards, but no tracks were visible on the decking on this section.

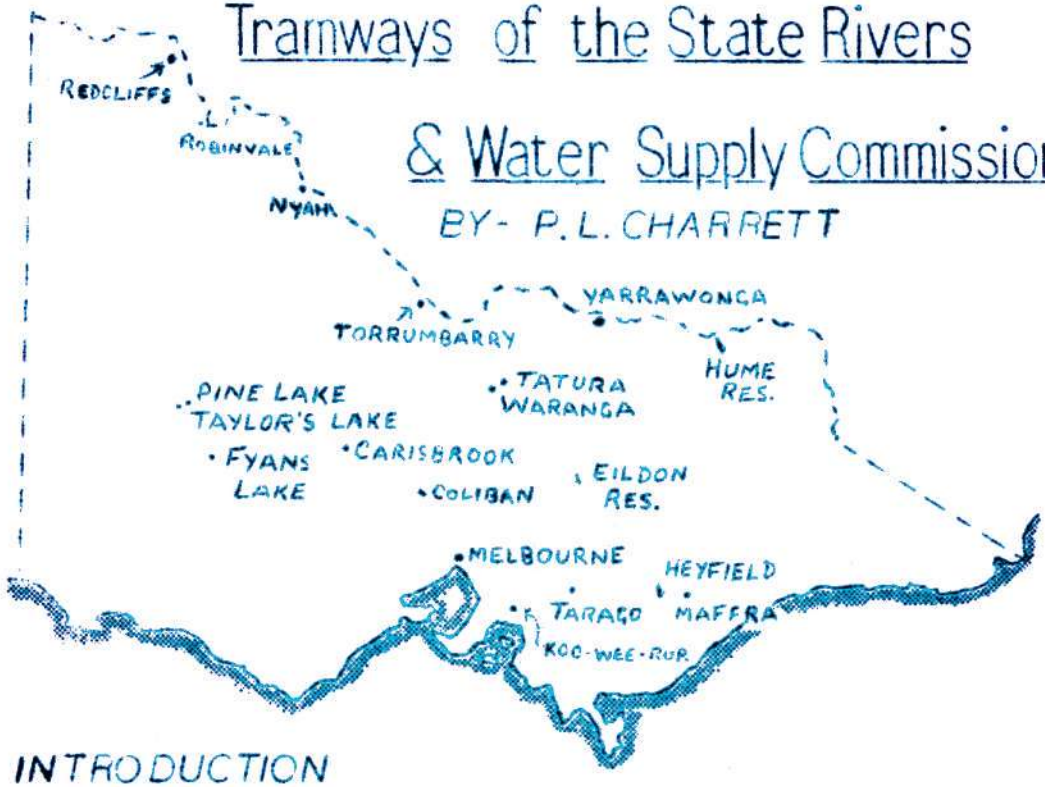
The sketch illustrates the arrangements visible. Some differences are apparent between this and the published map. The old Esplanade West route did not cross Beach Street at Dow Street, but continued on the seaward side.

SOUTH MELBOURNE GASWORKS TRAMWAY.



Tramways of the State Rivers & Water Supply Commission

BY- P.L. CHARRETT



INTRODUCTION

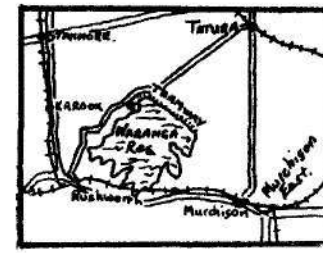
The State Rivers & Water Supply Commission has had quite a number of tramways of various gauges throughout Victoria. This article attempts to give details of some of these lines. Some of the information has been taken from known details previously published in other magazines, while other information has come from official files. Information is sometimes sketchy, and may not be correct. I hope to publish another article when further information comes to hand.

The S.R.&.W.S.C. was formed in 1907 by the amalgamation of all Irrigation Trusts (except Mildura) and other rural water supply bodies. The S.R.&.W.S.C. controls all water resources outside of Melbourne.

The River Murray Commission was formed on 31-1-1917, and controls all waters of the Murray River. It

comprises representatives from the Commonwealth, South Australia , New South Wales and Victoria .

WARANGA RESERVOIR

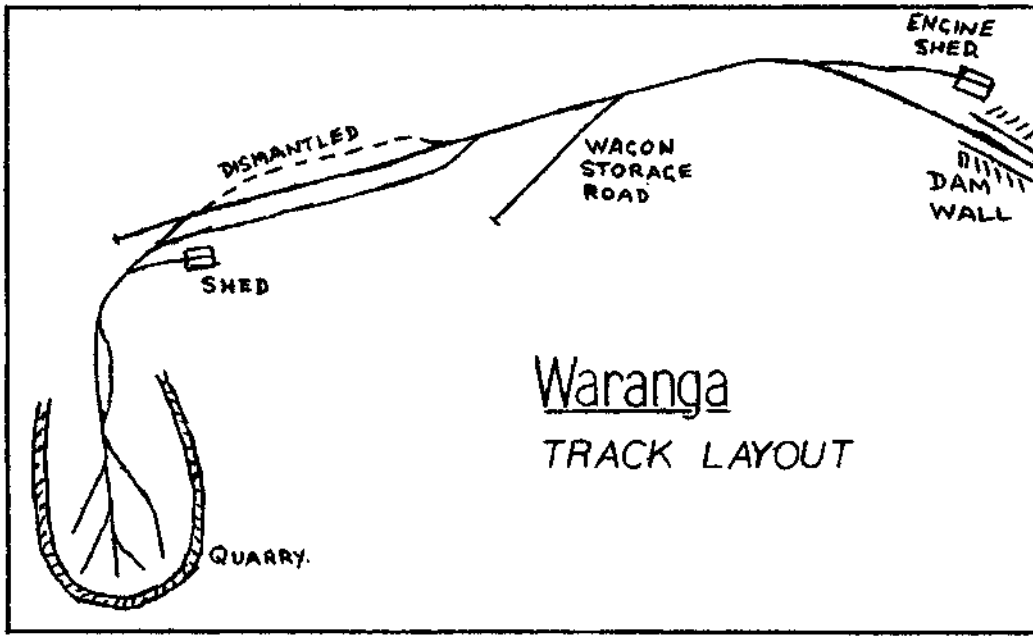


The Waranga Reservoir, about 15 miles south-west of Tatura, was built from 1902 to 1908; and enlarged from 1915 to 1926. As far as is known steam tramways were not used in the original construction, but this has not been proved. Tramways were used in the enlargement, but it is doubtful if steam locos were used. (S.R.&.W.S.C. correspondence of 1919 suggests that steam locos were not used on any works until Torrumbarry weir in 1919. The correspondence consists of letters to Government railways asking about the use of locomotives on tramways.)

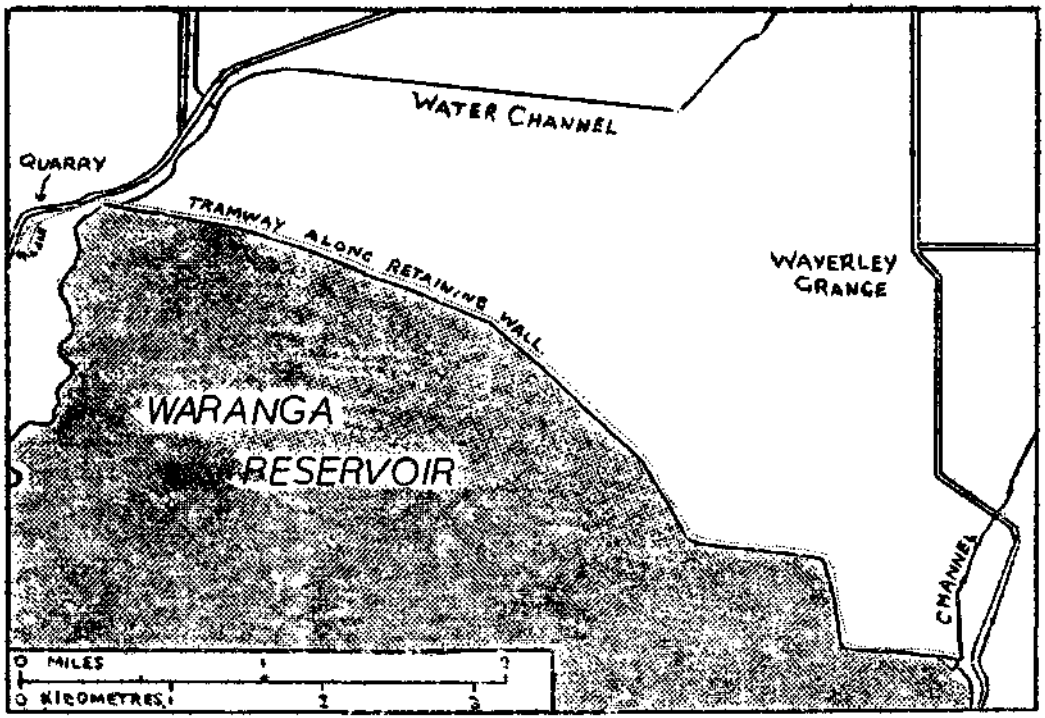
Photographs of enlargement construction show only horses. Annual Reports, which up until 1928-9 were very detailed, did not mention motive power. According to Annual reports the tramway is not mentioned until 1919-20, and I think this was the first use of the tramway. The wall was completed at this stage, and a tramline was laid along the top of it - about three miles - to convey stone beaching from quarries at both ends. By 1921 the stone facing had been completed and apparently the tramway was not being used.

Storms in December 1935 damaged the stone face on the wall, and stone for pitching was quarried and hauled on to the crest, presumably by tram, as the tramway was relaid with heavier rails in 1936-38.

This 2-ft. gauge tramway is still used for maintenance of the wall. Rolling stock at present consists of a four wheel petrol loco of Bo wheel arrangement, built on a wagon chassis. It has a



Waranga
TRACK LAYOUT



two cylinder, two stroke engine of German make, and was constructed be Sewell of Footscray, in 1959. No cab is fitted, but it has a canopy in the style of early T.A.C.L. tractors. The rigid wheel base is 2-ft. 4-ins., wheel diam. 1-ft..

Other rolling stock includes a four wheel passenger wagon, consisting of a galvanized roof over a platform. This vehicle has eliptical car springs. Also noted in January this year were three tippler wagons, four flat cars, one water tank car, and four tippler wagon frames.

The tramway is now used mainly for inspection purposes, and for carting stone from the quarry when repairs are necessary.

EILDON RESERVOIR.

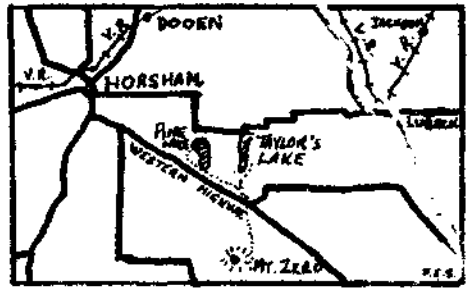
Eildon Reservoir was constructed from 1914 to 1927, and enlarged in the early 1950's. Annual Reports make no mention of a tramway, but temporary 2-ft. gauge trackage is known to have existed, almost certainly horse worked. Tramways were only used in the original construction.

FYANS LAKE STORAGE.

About five miles of 2-ft. gauge tramway was laid from Grampians Range to Fyans Lake (about six miles west of Stawell) to transport beaching stone. Wagons of German make were used, hauled by horses.

Are YOU a Sidrodromarcheologist ?
Then send a report of your latest discovery to the Editor.

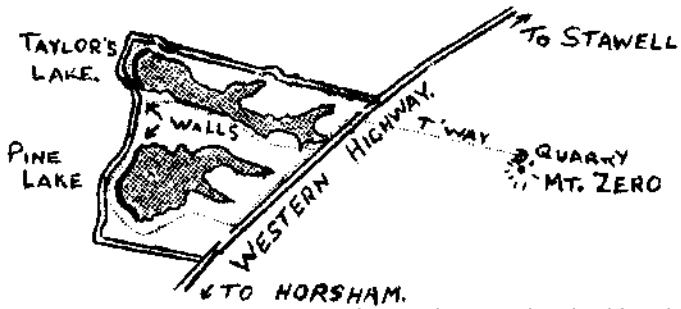
TAYLOR'S LAKE, PINE LAKE - MOUNT ZERO TRAMWAY



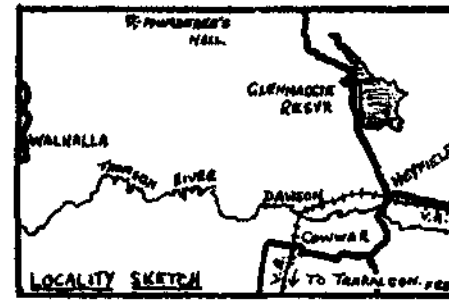
Taylor's Lake storage - about 11 miles from Horsham, was constructed from 1915 to 1919. A 2-ft. gauge horse worked tramway was used from a quarry at Mt. Zero to Taylor's Lake - about 9 miles - to convey stone for the embankment. The rails were taken from the Fyans Lake works. Upon completion of the embankment, the tramway was removed between Taylor's Lake Dam and the highway, and relaid along the northern side of that road for 2½ miles, to serve Pine Lake, crossing a wide channel by means of a trestle bridge about half way. The end of the new line was about 10⅛ miles from the quarry.

The Pine Lake embankment was commenced in 1919 and finished in 1928. About every two miles crossing loops were built, where the horse teams changed over - two horses pulling a rake of nine wagons. In all 40,000 tons of stone were transported to Taylor's Lake, and 60,000 to Pine Lake.

After the dams were completed the rails remained, although some were stolen during the war. The line was dismantled after the war, and now only the earthworks remain. Bridges alongside the Western Highway, crossing channels, were dismantled in 1960, although high earthen embankments follow the highway for a mile or so.

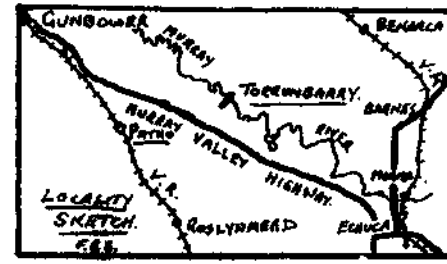


GLENMAGGIE RESERVOIR.



Glenmaggie Reservoir, which is about five miles from Heyfield, was constructed from 1919 to 1927. A 2-ft gauge tramway was built from Heyfield railway station to the weir site in 1919. The next reference to a tramway was in 1922, when sand, gravel and shingle for making concrete was crushed at a site upstream from the works, and transported by tram to the works. No further mention is made of the tramway but it is presumed that the line continued to transport materials for concrete until the dam was finished. No mention is made of motive power, but it is presumed horses were used.

TORRUMBARRY WEIR.



Torrumbarry Weir was constructed by the S.R.&.W.S.C. for the R.M.C. from February 1919 to December 1923.

A 2-ft. gauge steam tramway was built from a siding on the Elmore-Cohuna railway, later known as Torrumbarry Weir Siding (north of Patho), to the Weir site in 1919. This tramway, 6½ miles long, was constructed of 16-lb. rails, and was used to convey materials from the railway to the works. The siding near Patho was ready on 31st. October 1919. A 6 ton crane was installed here.

The two steam locos used on the line appear to have arrived early in 1921. In the financial year 1920-21 only about 3,000 cubic yards of gravel and other material were transported over the tramway. In 1921-22, 25,000 tons were carried, falling to 18,900 tons in 1922-23.

Included in the 1922-23 figures were 2,000 cubic yards of sand from sandpits two miles from the works, 7,000 cubic yards of gravel from Carisbrook, and 5,700 cubic yards of stone spalls from Axedale (on the defunct Heathcote-Bendigo line) and Edgecombe (on the defunct Redesdale line). Rolling stock consisted of side tipping wagons of 1-cu.yd. capacity.

Locomotives:- The two locomotives used on the line were an 0-4-0T built by Krauss in 1893, and an 0-4-2ST built by Black, Hawthorn & Co, England. The Krauss weighed about four tons, and was bought from the Queensland Railways in May 1921 for £610 ($1,220), being shipped from Brisbane on the 20th. May 1921. This engine is thought to have been transferred to Maffra in January 1923.

The Black, Hawthorn had previously been used by the Melbourne Harbour Trust on Williamstown Wharf, and was bought from the M.H.T. in April 1920, for £475 ($950). This loco arrived at Torrumbarry late in 1920 after having been overhauled by Thompson and Co. at Williamstown. Details and dimensions are as follows:-

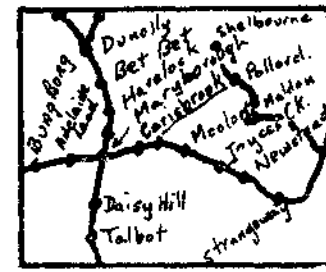
Builder's No.:- Not known.
Cylinders:- 6½" diam.,12" stroke.
Driving wheels:- 22½" diam.
Trailing wheels:- 18" diam.
Rigid wheelbase;- 3-ft.2-ins.
Total wheelbase:- 7-ft.3-ins.
Boiler dimensions:- 6-ft. long,2-ft.9-ins. diam., copper firebox 27-ins. by 27-ins., 50 1¾-in. diam. brass tubes, two injectors.
Boiler pressure:- 130 lbs. p.s.i.
Water capacity:- 150 gallons; Coal capacity:- 3-cwts.
Weight:- about 6½ tons empty.
Fitted with outside frames. It is thought this loco went to No.11 lock, near Mildura, early in 1924; and probably ended up at Yarrawonga Weir,- as a loco of this description was auctioned in 1939, after having worked on the construction of the Yarrawonga weir.

MAFFRA

Maffra is the centre of a large irrigation district. The 4 ton Krauss locomotive at Torrumbarry was sent to Maffra in 1923. It is thought the loco was used on channel construction work. No further reference is made to locos or tramways in the Maffra area.

CARISBROOK

GRAVEL SIDING

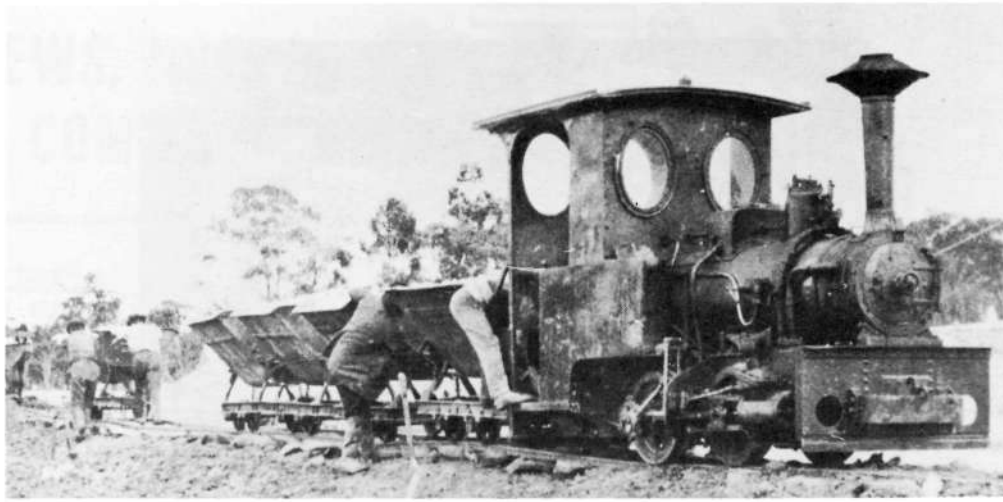


Gravel was transported by the Victorian Railways, from an S.R.&.W.S.C. siding at Carisbrook to the Torrumbarry Weir site on the Murray River, from 1920 to 1923. Apparently during this time the gravel was obtained close to the siding, as no mention is made of any transport at Carisbrook. However, in early 1923, a 2-ft. gauge tramline was constructed from the siding to a gravel heap known as "Stewarts", about a mile, for a cost of £50 ! It appears that this tramway was horse drawn, particularly in view of the low construction cost. No further mention is made of the tramway, and I think it would have lasted only a year or so, because Torrumbarry was finished in late 1923.

(To be continued).

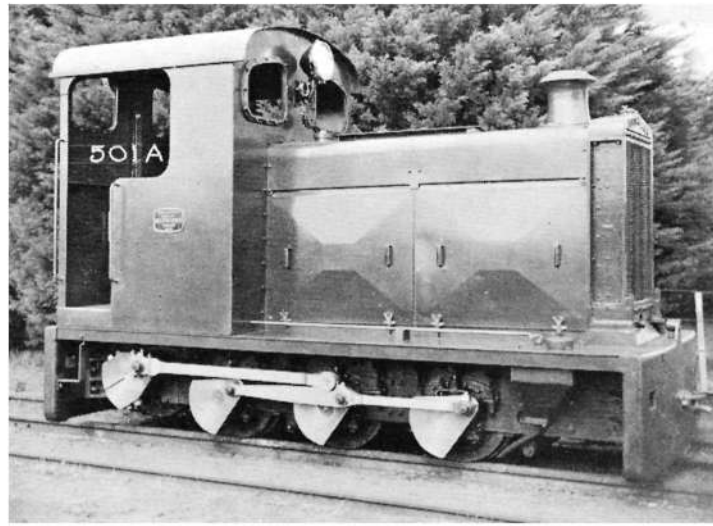
Member Mr. R. K. Aubrey , of 7 Gavan Court, Werribee, 3030; is in the process of compiling information on Garratt locomotives in Australia, for a book he hopes to have published. He would be interested to hear from any reader who would be willing to help with information or photographs.

Tasmanian Rail News gives latest news of one of Australia's most interesting railways systems.
Send to - Mr.A.T.Ryan,91 Parker St.,Devenport,Tas.

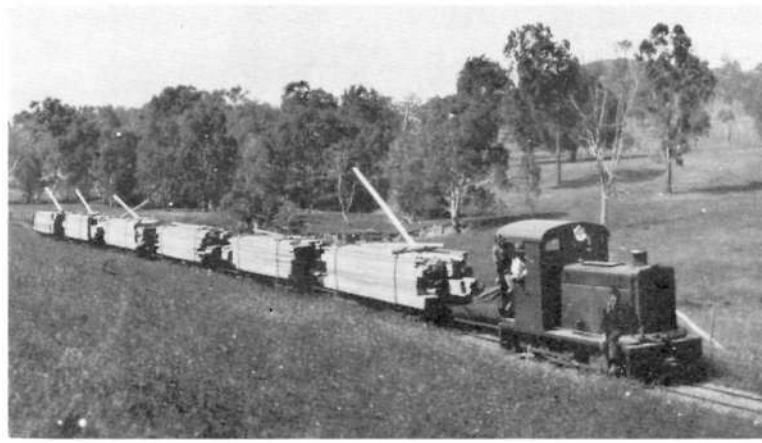


Krauss 0-4-0T loco, B/N. 2437 of 1890, ex Queensland Railways, at work on the Torrumbarry Weir construction tramway in the early 1920's.
(Photo - J. L. Buckland Collection).

Australia's first diesel locomotive at work on the Alexandra - Rubicon tramway.
(Photo - The late R. P. Cleary, courtesy R. J. Cleary).

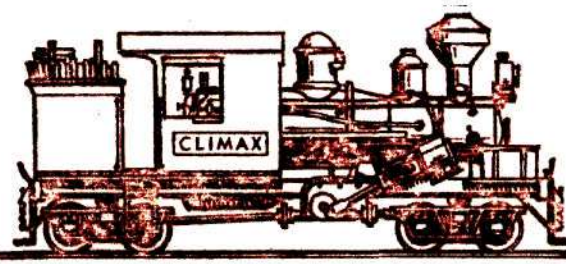


The official builder's photo of the Rubicon tramway's first diesel locomotive, built by Kelly & Lewis in 1935.
(Photo - H. Beeching).

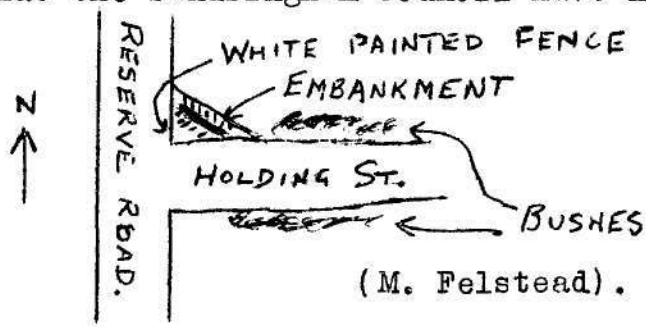


The same locomotive at work near Alexandra.
(Photo - the late R. P. Cleary, courtesy R. J. Cleary)

NEWS, NOTES & COMMENTS



Victorian Railways, BLACK ROCK - BEAUMARIS LINE:- The only remaining earthworks of this tramway are at the corner of Reserve Road and Holding Street, Beaumaris. All that remains is a small embankment about six inches high. (See sketch). There is also evidence of sleepers having been in Holding Street. Holding Street is the only street along the route of the line that the Sandringham Council have not yet sealed.



(M. Felstead).

SAN REMO - PHILLIP ISLAND BRIDGE CONSTRUCTION:- Two identical Ruston-Hornsby diesel locomotives are being used in the construction of the new bridge connecting Phillip Island and the mainland, (between Newhaven and San Remo). The method of construction is to build a temporary jetty out from each shore, and build the bridge alongside. The locomotives, of B wheel arrangement, are 18-inch gauge, and are used to carry materials out along the jetties, being independant of each other, with about a thousand feet of trackage on each side. The bridge is not due for completion until 1968. It is not known whether John Holland & Co. (the bridge builders) bought the locos new or second hand.

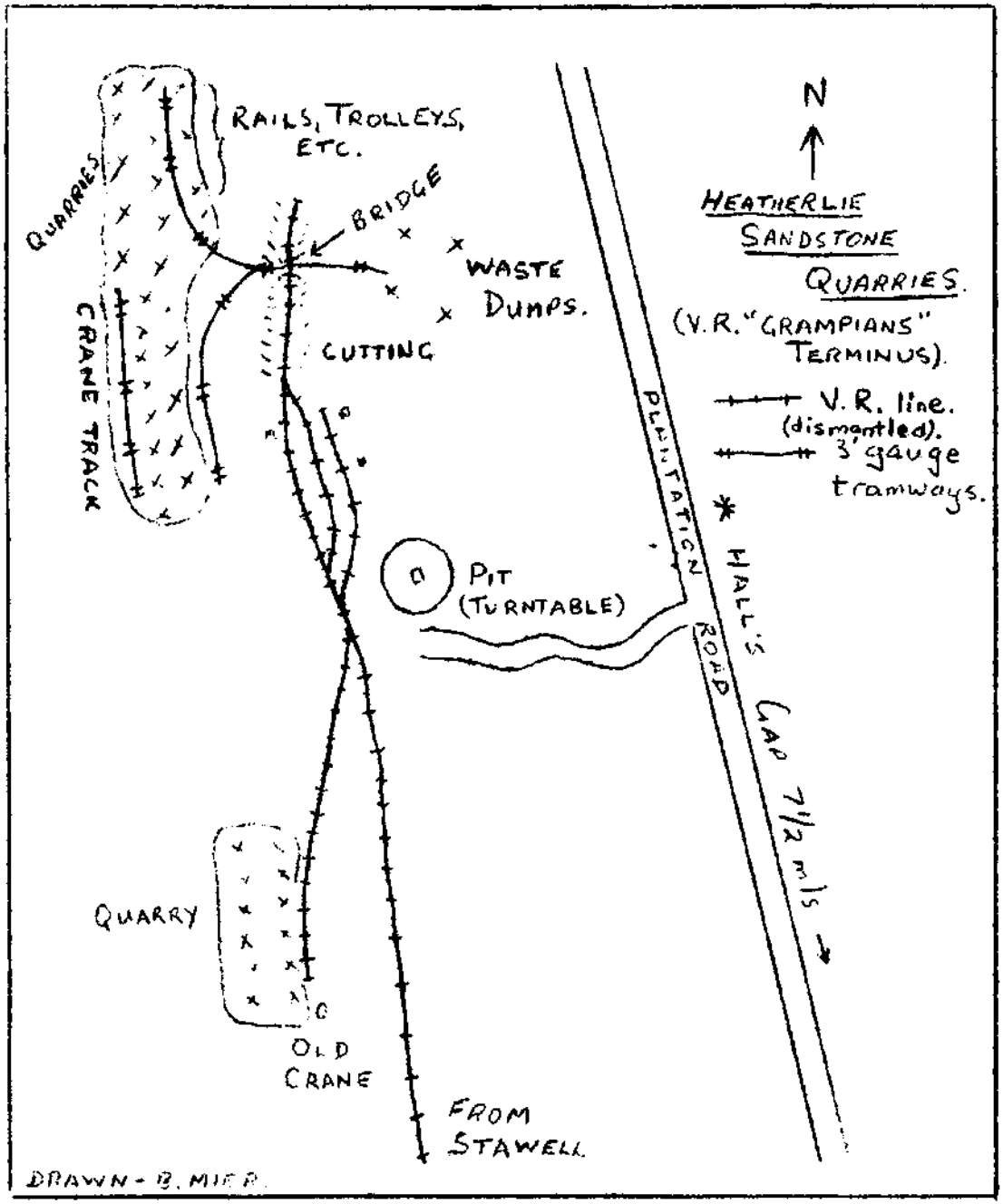
(M. Plummer).

THE HEATHERLIE QUARRY TRAMWAY.

Just sixteen miles east of the popular tourist resort - the Grampians - lies the old gold-mining township of Stawell. Not so well known to the rail fan is that Stawell was once the junction of the main Adelaide line and a branch line that ran for about sixteen miles right to the foot of the Grampians. Much can be seen of this old line at certain places along its route, but of special concern to this Society is the small tramway system that operated at the terminus of the 5'3" line. For, although the V.R. line was occasionally used to take picnickers into the mountains (a southerly branch was planned to Halls Gap, but never built), its primary purpose was to convey sandstone from the quarries at Heatherlie to Melbourne and other centres for buildings. If you go there you won't find a township - the site has been surveyed, but the town failed to come into existence - yet there is much to see.

Just on the Halls Gap side of the curved wooden bridge on the main road, Plantation Road is followed for about 7½ miles to the short, sandy track which leads to the quarry centre. Just where the road reaches the place, the junction of the main V.R. line and a switch-back spur is located. The spur climbs in a southerly direction on a grade of about 1 in 50, through a low cutting, and arrives after a third of a mile at the southern-most quarry. Apart from the remains of an old timber crane, there is little to see and the spur appears to have lead simply to a dead end. Sleepers mark the route.

The northern side of the junction, however has many features of interest. Several 5'3" sidings seem to have emanated from this point to where some sandstone huts are now standing. To the east of this level ground is a circular pit, now featuring a small wooden building for your convenience, but which just may have held a turntable? The main V.R. line extends beyond the sidings, beside a hut, and into a cutting



about ten feet in depth and a hundred yards long. It ends just beyond the cutting. To the west of this line, evidence will be found of part of the quarry line, which from memory forms a curved junction with that part of the line which goes into the northern quarry (see map). This northern quarry contains many yards of single track tramway still in a usable condition. The gauge is 3-ft. Some wheels are still on the track, and old tippler wagons can be seen beside the line. Following the line back out of the quarry, one goes through a cutting and then comes to the V.R. cutting below. The rails end at the end of this cutting, but an embankment on the other side which continues for a short distance suggests that there was in fact a bridge here from which sandstone blocks were conveyed to V.R. wagons.

East of the huts is the area where waste was deposited, and the surface of the land indicates that a series of temporary tramlines were laid to take the waste to the waste-heaps, then relaid elsewhere to keep the waste close to other heaps.

Also worthy of inspection are the three boilers at the central quarry. Manufactured by Hughes Engineers, South Melbourne, they are solid in construction and standing up well to the test of time. Nearby, a petrol-driven motor performs the task of power supply on the rare occasions when it is needed (the quarry is still used occasionally).

It should be noted that our visit here was a brief one, and an experienced observer with a keen eye is invited to make a more exhaustive study of the place in order to clarify the layout and perhaps discover in the bushes other relics of this little tramway.

(Brian Mier).

BEAUMARIS HORSE TRAMWAY - During recent reconstruction of Tramway Parade, Beaumaris, some sleepers of this tramway were found buried in the roadway. This tramway has been closed for more than fifty years.

(F. Stamford).

TASMANIAN NEWS

Neika Tramway - This 2-ft.gauge tramway ran for some three miles along the Hobart City Council's water supply pipe-line from Neika (8 miles from Hobart on the Huon Highway) towards the head of the pipe-line at Wellington Falls. It was built for use in construction of the pipeline early this century, but in later years its main users were Council employees cutting firewood. Rolling stock latterly consisted of three 4-wheel wagons, motive power being human or horse in the up direction and momentum down. The line ran through beautiful forest and mountain scenery, and crossed two gullies on trestle bridges. The two sets of points were prefabricated, with steel sleepers. The line was abandoned and dismantled in 1957, but the shed at the Neika terminus, and one trolley remained until the disastrous bush fires of February last; now all that remains is the ruins of the shed, two pairs of wheels and some rails and points.

Another 2-ft. gauge tramway operated on the slopes of Mount Wellington, running for approx. $\frac{1}{8}$ mile along the Lenah Valley Track from a point near the Springs. Virtually nothing is known about it.

(Tasmanian Rail News; Sept.-Oct.1967).

OBITUARY

Paul Dodd.

We sincerely regret to record the tragic death of member Paul Dodd, aged 23, in a car accident on September 4th. Paul joined the Society during the early stages of its reconstruction, and much of the success of our December film night was due to his skill and willing assistance. He was well known for his film making skill, being co-founder of the Film Group of the Australian Railway Historical Society. On several occasions he used this skill to assist our Society. He will be sadly missed by his many friends in the Society.

RESEARCH PROJECTS

Some of our members may like to have a go at a little research into non-V.R. railways and tramways, but may not be sure how to go about it. Geoff Maynard and myself have been doing quite a bit of work at the Latrobe Library lately, and we have collected some useful basic information on a number of lines, which should be a great help to anyone willing to spend the time to delve deeply into a particular line. We should also be able to give you some clues on where to find additional information. If you are interested in doing some research of this kind, which generally involves reading at the Latrobe Library and examination of the site of the tramway, please contact me (the Editor), and I will see if we have some information on a line which interests you.

EDITOR'S POSTSCRIPT

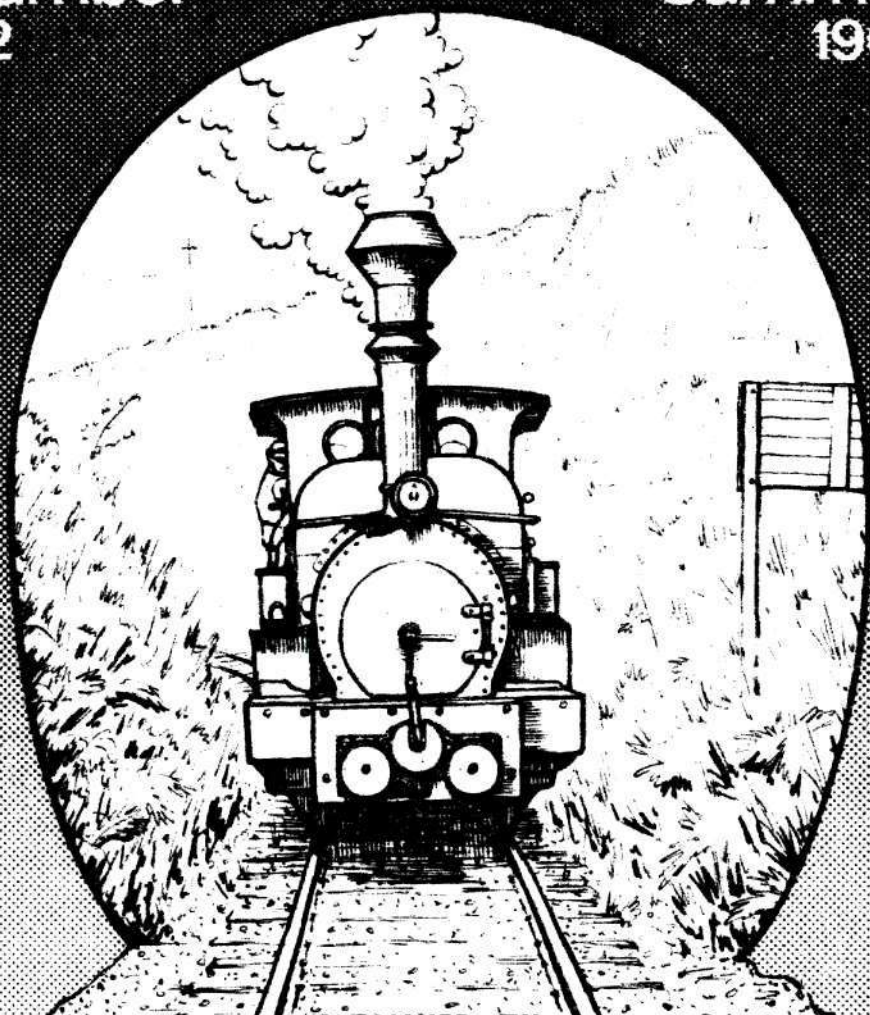
We have come to the end of another magazine, which I hope has been of interest to you. Once again we have included four pages of photographs, which I hope are of a higher standard than those in the previous issue. It is proving quite expensive to include photos in every issue, particularly as old faded photos with which we have to contend, require special attention to give the best effect. If the next two issues are to include photos we will have to increase our funds, by gaining more members, and by running some profitable tours. We are doing our utmost to give members the best value for their money, but we don't think it is worthwhile publishing photos unless the quality of reproduction is top-class, and this is not cheap. You can help by spreading knowledge of the Society to your friends, and thus getting us more members. Leaflets about the Society are available for any prospective members you may know.

Oppinions expressed in articles or letters are not necessarily those of the Society or Editor.

LIGHT RAILWAYS

Number 22

Summer 1967



PUBLISHED BY

The Victorian Light Railway Research Society

The cover drawing by John Thompson shows a Hudswell Clarke 0-4-2 ST owned by the Australian Portland Cement Company entering the tunnel on their 3'6" gauge railway at Fyansford, Victoria.

THE VICTORIAN LIGHT RAILWAY RESEARCH SOCIETY

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Back Numbers. -- Copies of issues No.16, 17, 18, 19 are available at 20 cents each; No.20 and 21 at 25 cents each, plus postage, from Frank Stamford.

The next issue will contain another major article by Peter Charrett, this time dealing with the Hume Weir construction; a shorter article on the construction of Warrnambool Harbour, together with the usual round-up of letters, comments, news items and anything else that turns up.

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Opinions or ideas expressed in articles are not necessarily those of the Society or the Editor.

TRAMWAY PROPOSALS IN THE PORTLAND DISTRICT

Keith W.Turton

The first settlement in the State of Victoria was the coastal township of Portland. Portland was founded on November 19th, 1834 by Edward Henty,who arrived to establish the pioneer settlement of the State,located on the shore of a sheltered bay which was part of the Port Phillip District of the Colony of New South Wales.

Portland was destined for a seemingly never-ending struggle for existence in competition with the larger,established seaports of Melbourne and Geelong,both located on the sheltered waters of Port Phillip Bay. But in the early days of the settlement of Victoria,before the networks of roads and railways were built to connect the present principal Western District provincial cities and the State capital,Portland was a busy seaport. Sealing and whaling provided most of the tonnage handled in the early days,but as the pioneer settlement began to grow and the immediate hinterland became populated by the early settlers and farmers, products of the land began to displace those of the sea as the principal items which were exported.

The roads in the district at that time were roads in name only,and after any appreciable rainfall became impassable bogs or quagmires. Thus it was in the very early stages of the habitation of the Portland district that the townspeople began the advocation of the construction of a tramway to connect the wharves with the hinterland.

FIRST TRAMWAY PROPOSALS

In the early days of the settlement of Victoria, there were several companies promoted with the intention of constructing railways and tramways in various parts of the Colony as well as around Melbourne after the Melbourne and Hobsons Bay Company had successfully built the first railway in Victoria, that between Melbourne and Sandridge (Port Melbourne) in 1854. Some of these companies were successful, but the vast majority were promoters of over-ambitious schemes that failed mainly through lack of working capital.

Such a company was the Geelong, Ballarat and Portland Railway Company, registered in 1856 to build a line between those three settlements. The company was regarded in Portland as a blessing but interest quickly waned when it was found that the pioneer seaport was not represented on the Company's Board and the Company took little interest in the town and never laid a rail. Earlier, there had been a proposal to link Melbourne with Portland via Geelong by means of a horse tramway.

As early as 1852 local interest in the construction of a tramway between Portland and the hinterland was kindled and in September of that year the local newspaper reported that "steps are being taken for the obtaining for this district of a tramroad". The citizens were not particularly interested in a railway or tramway which lead towards either Melbourne or Geelong; these two ports were regarded as arch rivals and treated with suspicion and mistrust. All they wanted was a railway of some sort leading into the immediate hinterland to carry wool, hides, tallow, tan bark, timber etc. to the wharves for shipment overseas.

A series of deputations from Portland wore a track to the Colonial Government in Melbourne, press- for the construction of a railway, and in 1856 the Government decided that a tramway with wooden rails

and horse power would be more fitting to the needs of Portland than a railway. The tramway was to be of 3ft IOin gauge, I8 miles long and was to run from Portland to Mount Eckersley. The latter township appears to have been located a short distance north of the present site of Heywood,or it could be an early name for that town, and immediately after the announcement that the line was to be built there was a further scheme,promoted from the Dartmoor district, for a tramway to run from Dartmoor to connect with the Portland tramway.

The scheme is notable in that it was sponsored by the Government and not by private individuals. This is the first known attempt of the Victorian Government entering the railway or tramway scene. An initial expenditure of £20,000 was provided and land was reserved. The site of the Portland terminus was fixed at a point near the present Portland North station. Tenders for the construction of the line were called in October,I857, and the first sod was turned at a ceremony at Portland on December 3rd. of that year.

The initial contract was for the construction of nine miles of tramway from Portland to near where Heathmere station stands today,and this was to cost £I9,000. The tramway,however,was never completed and experienced a turbulent career during the construction period.

The original contractor complained several times that the levels supplied by the Government were unworkable,and work was frequently suspended while these troubles were sorted out. Even so,by February of the following year the "Portland Guardian" reported that "the whole line of contract was formed" (meaning the track formation was complete?) and sleepers were being cut and ballast quarried. Rails were to be of ironbark and the line was to be fenced throughout. More trouble then eventuated between the contractor and the Government,but despite this, it was recorded that in October,I858, eight miles of

the tramway were completed. The grant for the tramway's construction was withdrawn in I859,and no work was carried out in that year.

Unfortunately,there are no records which would prove that the part of the tramway which was completed was actually used,and whether or not this part of the tramway ever carried any passengers or freight remains a mystery.

Fears were expressed in the township that the tramway grant would not be restored in I860,but these were dispelled when a further grant was made during that year for the completion of the line. Collier and Evans were the successful contractors for the construction of a further five miles of line northward from the temporary railhead,and C.S.Baillie wan a contract to complete the line into Heywood. The respective contract prices were £5,893 and £2,II5. Both of these contractors got into various difficulties and after much arguing, petitioning and wrangling the whole scheme was abandoned and the tramway material sold at auction at Portland in I865.

Some of the difficulties facing the contractors and the eventual operation of the tramway can be appreciated when it is revealed that the specifications called for one creek to be crossed on a bridge which consisted of timber spans resting on the stumps of growing trees on either side of the watercourse,the trees having been felled to a suitable size to serve as the piers. One of the contractors'works foremen added to the chaos by embezzling funds destined for the tramway.

Thus ends the first chapter in the 25-year period which elapsed between the first advocation of a tramway to serve Portland and the completion of the Government line from Arrarat which was opened in I877. It was a bitterly disappointed Portland which played host to those who attended the auction sale of the equipment and material which comprised the tramway,but the fighting spirit

carried on,and it was only a little over a year later that a company was floated to take over the earthworks of the Government line as part of a proposed tramway between Portland and Hamilton.

THE PORTLAND AND NORTHERN TRAMWAY

In I866 a locally sponsored firm,the Portland and Northern Tramway Company,was registered. Capital was £I00,000 in five pound shares,and Edward Henty was on the board of directors. The prospectus was issued in July of that year and shows that the promoters were to apply to the Government for authorisation to assume possession of the earthworks of the original tramway for the sum of £30,000. It was also proposed that the line would be extended to Branxholme. The gauge selected was 3ft.I0ins.with light iron rails and horse traction. If the prospectus is to be believed,an annual profit from the operation of such a line of £9,9I0 was to be expected. This included £300 per year for the replacement and depreciation of horses. Total outlay was expected to be £80,000. Further plans were to extend the line to Hamilton,and long range plans were made to build branches from Green Hills(Condah) to the valley of the Wannon River and eventually to Coleraine.

The engineers report,dated 30th.June,I868, states that the extension from Heywood to Branxholme, laid with iron rails weighing 30 lbs.to the yard, would cost £46,000. Referring to the I6½ miles of roadbed recovered from the ruins of the Government system,the engineer reported that this section was ready to receive ballast,but it was considered that the original route should be deviated from to avoid excessively sharp curves. Ruling gradient was to be I in 50. A substantial amount of capital was promised locally to finance the line,but collecting the money proved to be a different matter and the scheme was eventually abandoned through want of working capital and lack of Government support.

One influencingfactor here was the agitation from the town of Hamilton for direct railway communication with Melbourne,which commenced about this time. The promoters of the Portland and Northern Tramway tried to enlist the aid of Hamilton in influencing the Government to support their proposals,but the Hamilton people were only interested in a direct line to the capital.

THE PORTLAND AND NORTHERN RAILWAY COMPANY

After the Portland and Northern Tramway Company had failed to win any kind of support from outside Portland and had eventually been wound up,no time was lost in forming another organisation to build a tramway into the interior. Only this time the promoters went one better than a tramway.

The Portland and Northern Railway Company was formed in 1872 with a capital of £500,000. The company proposed to build a 3ft.6in. gauge railway between Portland and Hamilton via Merino,with branch lines serving Coleraine and Casterton. The Colonial Government in office at the time promised the company a land grant to assist with the building of the line. Accordingly,plans were prepared, surveys carried out,and a private railway Bill was presented to Parliament by the Company.

Unfortunately,an election defeated the Government which favoured the proposal and the incoming body body was not interested in the Portland and Northern Railway Company's proposals,but did vote the sum of £2,500 compensation to the company to cover the costs of plans and surveys. Not long afterwards a Bill was passed authorising the construction of the Arrarat-Portland railway,which was completed in 1877. Between Portland North and Heywood the existing railway follows almost exactly the right of way of the original tramway.

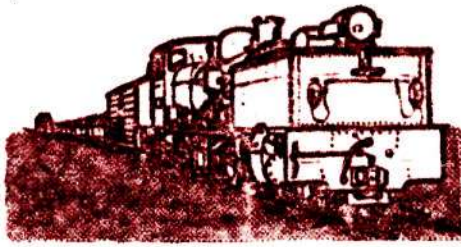
Thus ends a little-known chapter in the history of the railway development of our State, unfortunately with a few questions left unanswered. For example,there were Public Works Dept.tramways

on the piers at Portland,yet no reference can be found to any attempt to connect the Portland and Northern line to them. And no explanation can be found as to why the tramway terminus was not at the Portland wharves,but some distance away. Perhaps some other method of transit had been planned between the tramway terminus and the two wharves in use at the time.

Of the original tramway,it has already been related that the right of way is now used by the railway between Heywood and Portland North,but in two places on the outskirts of Portland itself,where deviations were made from the original route due to curviture,it is just possible to discern embankments of the ill-fated project.

The influence of the Portland people to have a tramway or railway funnelling traffic into their port from the very beginning can be seen in the geography of the present railway system in the area,for today a train can run from Portland to Casrerton,Mount Gambier or Horsham via Balmoral without having to reverse direction.

A complete and comprehensive history of the railways of the district has been written by the present author and will be published in book form by the Australian Railway Historical Society in the near future.



LETTERS

Mr.J.L.Buckland writes :-

First of all,congratulations on the increasingly interesting content of "LIGHT RAILWAYS" which I have read with enjoyment. Congratulations,too,to those members who have unearthed so much new material by sheer persistence and hard work.

CROPLEY'S LINE. (L.R. No.2I)

I have absolutely no doubt that the Fowler on this line and the Warburton original Fowler were one and the same;the changes enumerated being but minor variations,probably carried out in the course of re-conditioning the loco for re-sale. The alleged"blow-off cock"on the front cylinder cover in the page 7 picture of Cropley's engine is in reality a lubricator,which has been relocated above the steam chest,as has the sandbox been removed therefrom,in the Warburton photo on the same page.

S.R.& W.S.C. (L.R. No.2I)

The Krauss used on the Torrumbarry Weir was B/N 2437 of I890,with 0-4-2 WT notation,which came originally from the Oceana-Argenton tramway near Zeehan,Tas.,thence worked for the Zeehan Tramway Co. from I893 until it later came into the possession of the Chief Engineer,Queensland Railways,who used it on construction works at Croydon Junction (nowBaddow) outside Maryborough,Queensland.

In regard to the Black Hawthorn engine,there were actually two similar,but not identical,but I am uncertain which one,or whether both worked at Torrumbarry. Certainly both came into the possession

of the SR&WSC. Both were 0-4-2 WT type.

Assuming Mr.Charrett is correct that one came from the Melbourne Harbour Trust at Williamstown, I do NOT agree that it worked on the"Williamstown wharf" (pier ?), though it is possible that they may have used such a loco in their Dockyard at Williamstown, but this is pure conjecture and subject to further research. Despite rumours to the contrary,there is no evidence that the M.H.T. ever employed locos at its Williamstown Dockyard.

Details of the two Black Hawthorns are as follows:

B/N 1134 of 1897 came originally from the Zeehan and Western Silver Mining Co.,Zeehan,Tas.,where it was known as "WESTERN". It had 6½ x 10in. cylinders and 20½in. driving wheels and was sold for scrap about 1940 following disposal of the plant ex the Yarrawonga Weir construction.

(Mr.L.Poole recalls having seen this loco in a scrap yard in Ratcliffe St.,West Melb. in Feb.1941 Ed)

B/N 1173 of 1898 was slightly larger and presumably had the dimensions quoted by Mr.Charrett. As to which one came ex M.H.T. is a matter of opinion;my own being that whichever one it was (probably 1134) was sold by the M.H.T. ex bond store for non-payment of wharfage dues,but this is subject to further investigation.

Despite Mr.Charrett's contention,I believe one of the Black Hawthorns to have worked at Heyfield and/or Maffra; there was certainly a loco employed at some stage of the Glenmaggie Dam construction.

Finally,I must deny any claims to proprietorship of the top picture on page 25,which I obtained privately and which I believe came originally from the SR&WSC.

J.L.B.

CONTRIBUTE TO-

"NEWS, NOTES & COMMENTS."

An important letter from Mr.P.L.Charrett :-

Dear Sir,

With regard to my article on the S.R.&.W.SC. tramways published in issue No.2I,I must explain that the article as published was not the article that I wrote.

WARANGA RESERVOIR:-- After the last paragraph on p.I8,it is not my article. I believe a petrol loco was obtained for haulage about the period I936-'38,when heavier rails were laid.

FYANS LAKE STORAGE:-- I did not write this item.

TAYLORS LAKE,PINE LAKE-MT.ZERO TRAMWAY:-- I only wrote half the first paragraph.

TORRUMBARRY WEIR:-- I did not supply any details about the locomotives. (Since the time of writing,I have found out more information:

The Krauss loco. was transferred from Torrumbarry Weir to Maffra in Jan.I923 and I believe was transferred to the Hume Reservoir construction probably in the late I920's or early I930's and then later to the Yarrawonga Weir construction.(Commenced I936)

I did not say in my original article that the Black Hawthorn was used on Williamstown Wharf,but I said the Black Hawthorn was bought from the Melbourne Harbour Trust. This loco went to No.II lock near Mildura early in I924 and then probably to Yarrawonga Weir,although there is a gap from I927 when Mildura was completed and I936 when Yarrawonga started. With the depression it is possible that the plant was idle for those years.

According to SR&WSC Annual Reports,River Murray Commission Annual Reports and official files,there were two locos at Torrumbarry,one bought from the QGR and the other from the MHT. According to the files one was transferred to Maffra while the other does not rate a mention except under the general heading "plant". The RMC report says one steam loco arrived at Mildura early in I924,the SR&WSC report

says two oil locos,and the files mention Malcom Moore locos --- which is correct ?

As to the second Black Hawthorn,I can only guess at this stage as to where it was before Yarrawonga.

In I924 when the Krauss was transferred to Maffra work at Glenmaggie was at an advanced stage and it is doubtful that the loco would have been needed at this stage. As for the long 5-mile haulage,horses were known to have been used for 8 miles at Taylors and Pine Lakes.

Mr.H.M.Sherrard,a civil engineer,worked with the SR&WSC in the early I920's and he states that materials and plant were transferred along a wooden railed narrow gauge tram by horse teams from Heyfield to the works.(The other Black Hawthorn might have been used at the works only).

I believe the top photo on p.25 is of channel construction at Maffra,not at Torrumbarry Weir.

P.L.C.

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Mr.L.G.Poole writes:--

RUBICON TIMBER TRAMWAY (L.R. No.2I).

In connection with the excellent account of the first Diesel Locomotive in Australia,I would be pleased if you would allow me to add a few points.

On p.II it is stated that "the flanged chimney was a practice common on English industrial diesels of this period".

As far as I can acertain,this feature was only used by the firm of Hudswell Clarke of Leeds,and I have not seen this type of chimney on any other diesels designed and built in the early I930's. The Hudswell Clarke advertisments in "The Locomotive" and the "Railway Gazette" showed this type of chimney as applied to a number of their D/E engines of various types and powers.

While it has been common practice to give credit to various Chief Mechanical Engineers for locomotives, it eas seldom that any new design was produced by

them alone,nor by the actual construction firm. The work was carried out in the works drawing offices by the design and drawing office staff,so full credit must be given for these Diesel locomotives for the Rubicon Co. to the late R.P.Cleary,who was Chief Designer and draughtsman in the firm of Kelly and Lewis. He took the basic design of Hudswell Clarke as his pattern,but reversed the position of the gear box assembly from under the front of the engine, as on the Hudswell Clarke products,and placed it under the cab floor to improve weight distribution and ease of access.

SOUTH MELBOURNE GASWORKS LINE (L.R.Nos.2I,20)

I must compliment Mr.Watsford for his excellent sight,for giving a detailed account of the 4-wheel tram waggons,which he saw without the aid of a magnifying glass. During the years I922-I926,I often observed this tramway in operation and the waggons,of hopper design,are just as Mr.Watsford describes them. The centre track on the pier had a large elevated hopper for the unloading of the coal from the collier,the incoming empty waggons being drawn past this,on the track next to the Eastern edge of the pier,andtaken back,one by one by hand to pass under the loading hopper,or bin.

All the "trains" consisted of three waggons hauled in each direction by one horse. The siding between the two factories had been removed I922.

L.G.P.

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Mr.L.I.Goff writes:--

A RAILWAY IN PAPUA (L.R. No. 20)

I was pleased to read Ray Pearson's "Railway in Papua" --- it at least cleared up the mystery of the fate of the Hampden,Cloncurry,Mining Co's A-class Shay.

Re the Barklay "Polygon",ex B.H.A.S. Port Pirie. In the immediate post World War I modernization of the Broken Hill Associated Smelters at Port Pirie, horse haulage of waste slag to the dump was replaced

by loco haulage. Four locomotives were purchased new from Andrew Barclay and each was patriotically named after a famous World War I battle.

These locomotives were :--

"POZIERES"	B/N I543	---I9I8.
"POLYGON"	B/N I544	---I9I8 or I9I9.
"PERONNE"	B/N I545	---I9I9.
"PASCHENDAELE"	B/N I546	---I9I9.

(? Passchendaele - Ed.)

At a later date,"PORT PIRIE",B/NI955 --I928, was added to the fleet,presumably to replace "Polygon" which had been sent to Bootless Bay.

All locos have been out of service for many years,having been replaced by a diesel,which in turn is being forced into retirement by a conveyor bolt system in the next few years.

The fate of the steam locos is as follows:--
"Polygon" ---derelict at Bootless bay and later cut up for scrap.
"Paschendaele" --- 'preserved' in outlandish colours in kindergarten,Risdon Park,Port Pirie.
"Peronne" --- Preserved in A.R.H.S.Museum at Mile End, S.A.(March I967 Bulletin Supplement).
"Pozieres" and "PortPirie" --- Unknown,but possibly still in the B.H.A.S. Loco shed.

L.I.G.

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Mr.H.Wright writes :--

SHAY LOCOMOTIVES IN AUSTRALIA (L.R. Nos.I8, 20).

The Shay article in issue No.I8 was very interesting,and I beg your indulgence on this subject for a few words; recently I obtained some notes on the British Australian Timber Coy's line and loco at Coffs Harbour -- Shay 2I35 -- this was called "Fanny" and is believed to have worked at Nondaville Sawmill at Boambee after about I9I6,where it later lay derelict until "canablised", and eventually was cut up by E.W.Smith & Sons,Engineers of Coffs Harbour.

Shay No.704 of Bunning Bros.,W.A. was known as "Dirty Mary of Argyle".

Mr.E.W.Woodland confirms two Shays in W.A. -- these would have been 704 and I968.

If one of the Huon Shays went to the Philippines Islands,this would have been 698.

I would like to confirm Mr.Bruce MacDonald's remark regarding Shay 2029 being sent by Millars from Geeveston to Vanikoro in the Solomons; I have received confirmation of this from New Zealand contacts.

Also I would like to add that early ARHS bullitins record (but do not confirm) two Shays at the Mittagong Coal Mining Coy.,Mittagong,and possibly another at the Mittagong Iron Works; That is,two,or possibly three,Shays in this area.

I would like to add three Shays unlisted to date: B/Ns. I328 of I9I3 : 2742 of I9I4 : 3278 of I925.

These served the British Phosphate Commission on Christmas Island in the Indian Ocean -- I have a photo of one carrying road No. 7.

Congratulations to those responsible for "Light Railways",and all who work towards its contents.

H.W.

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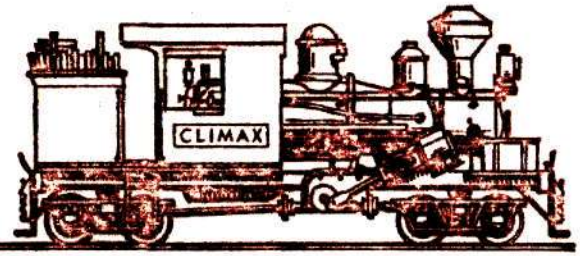
ONLY ONE SURVIVES !

The sole survivor of the once numerous steam narrow-gauge railways which operated in Victoria is the Belgrave-Emerald "Puffing Billy" line which was only saved by the work of volunteers.

You can help ensure that "Puffing Billy" continues running by spreading the word of its existence amongst your friends, neighbours, or workmates. A timetable is enclosed with this issue which we hope you can put to good use and so help "Puffing Billy" get more customers.

Pin it up at work, or give it to a friend,and ride to Emerald yourself. You will then help to ensure that the sole survivor survives.

NEWS, NOTES & COMMENTS



A Great Gift to the Society

Mr.C.S.Small, an American friend of the society, was so interested in the advances made by the society into research of the Victorian private lines that he donated a copy of his fifty-three page list of the Light Railways of Tasmania, to aid the society in compiling a history of Tasmania's fascinating lines.

The list was compiled by Mr.Small from A.R.H.S. Bulletins, Light Railways, and other correct and up-to-date information that he has collected himself. It contains details of the locomotives of private lines throughout Tasmania and of the Government lines of the West Coast. It lists the details of some one hundred and forty steam locos, with cross references where a loco worked on more than one line; details the history of each one both within and outside Tasmania, with theories suggested where all details are not definitely known; dimensions of the locos where known, and dates when the lines were opened and closed, etc.

It is the only copy of the list in Australia and provides a wonderful basis for members of the society to add to and use as a reference. The list is to be held by the secretary but the aim of the society is to make it available to as many members as possible who feel that they can make useful amendments. Because it is a Tasmanian list, VLRRS Tasmanian members are being allowed to have the first use of it, but when they have finished, other members can apply for a loan. There will be a time limit of two weeks and special security arrangements have been made relating to its use.

We are deeply indebted to Mr.Small for his valuable gift and we will keep him informed as to all amendments members can make to it.

M.P.

BUMP IN A BUS

On Sat.Dec 2nd. thirty three members and friends left Melbourne at 8:00am in a comfortable road motor hired from Australian Pacific Coaches to tour the Powelltown area.

Organiser Geoff Maynard piloted the coach beyond Yarra Junction to show sites and signs of the Powelltown Tramway. At places such as Slaty Creek,Black Sands and Gilderoy passengers alighted,braving bullants and dust, to examine the archeological evidence.

A prolonged stop was made at Powelltown mill where passengers were able to see the many tramway relics surrounding it. Of added interest was the operating electric traverser.

A lunch stop was taken east of Powelltown before travelling further to tramp around,beside,above,but not inside,the "Bump"Tunnel. The last highlight was an opportunity to inspect on foot the High Lead and trestle approaches to the site of the Ada No.2 Mill.

After this full and enjoyable day,return to Melbourne was at 6:20pm.

Organised G.Maynard, J.Prideaux, F.Stamford.

OOXOO

FYANSFORD

No final decision has yet been reached regarding the disposal of the Cement Company's eight steam locomotives except that all will be preserved. However,it appears that the A.S.G. will most likely go to the A.R.H.S. museum at Newport; at least one loco will go to the P.B.P.S. museum at Menzies Creek,and it is probable that one locomotive will remain in the Geelong area.

Mark Plummer.

OOXOO

TRAM SYSTEMS MAY GO SOON (Australian 27/I0/67)

The Ballarat and Bendigo tram systems may be scrapped. An inquiry has been ordered into the public transport in the two cities.

The last annual report of the S.E.C. showed it had lost $2 million on the trams in the five years to I966.

OOXOO

STEAMCLOUDS OVER FRANKSTON

The Frankston Pleasure Park Railway.

For the past four years Mr.Griffiths,a traction engine and steam locomotive enthusiast,has been building a large caravan and pleasure park on his hundred acre property at Frankston. One of the main features of the pleasure park is a two-thirds of a mile 2'6" gauge railway line for which he has bought two of the three locomotives which formally worked at the West Melbourne Gasworks,and one diesel and one internal combustion loco from the Department of Supply.

Despite visits from "steam fans" who have "Souvenired" various parts,one of the steam locomotives has been restored. It is an 0-4-0 side tank imported from France with a Decauville plate bearing their works no.90, but Decauville did not actually build their own locos but subcontracted to others. This particular engine was built by Usines Metalurgique de Hanault (B/N986 of I886) and was named "Carbon". The number 986 can still be seen stamped on the motion. At West Melbourne it worked in an unlined green livery with polished copper and brass work. About I930 conveyor belts were installed and "Carbon",together with the other two engines,was withdrawn from regular use.

By the late I950's the works were extensively rebuilt and the locomotives were sold cheaply. Two of them went to a Mr.Russel at The Basin and one was sold to a Mr.Ferris who stored it in a yard near the Fawkner Railway station prior to transporting it to Walhalla where he ran it on a very small loop of track,giving pleasure rides. (It is possible,but unconfirmed,that Mr.Russel owned this loco also for a short time).

It came into Mr.Griffiths' possession in I965 and he took it to Frankston and completely reconditioned it, at the same time extending the footplate and adding a fuel box to enable wood to be stored there.

The boiler has a maximum pressure of I30lbs/sq.in. providing steam for a deep-throated whistle and expertly timed valve gear powering the twenty-two inch drivers. The locomotive and its car have steam operated hydraulic brakes.

The colour scheme is dark green,with light green buffer beams and yellow side tanks and cab front. All metal work is highly polished.

The coach,of which only one has so far been built,is constructed on the frame of an old V.R. "NQ" open waggon (No.28) and is built of welded"U" section steel covered in metal sheeting. It has a raised centre section enabling passengers to look out over the roof. The seats face outwards with a space between the backs for standing passengers. The coach is connected to the locomotive by a single universal,while at the other end is the standard small M.C.B. type automatic couplers. There are two other NQ waggons on the property (Nos.37 and 53) yet to be made into coaches, and the locomotive will be capable of hauling a train of all three at 10 mph.

The line is laid with A.S. 60 lb steel rail and is lightly ballasted. Very sharp curves of one and one half chain radius have been laid. The line crosses the top of a dam wall and encircles a lake,passing through thick scrub for much of its length.

The other steam loco is an 0-4-0 saddle tank built by Peckett & Sons of England.(B/N 1711 of 1926)

An interesting piece of motive power is an 0-4-0 (B) internal combustion locomotive which was aquired from the department of supply but,apart from the name "Clarkat" ,its history and builder is unknown. It has a 12 H.P. engine and is about 8 ft long and 4 ft high,with 18 in. diameter driving wheels. It has a streamlined front and is very heavy for its size. An unusual feature is that its front wheels (remember,it is 0-4-0) are pivoted to enable it to negotiate sharp curves,with springs to stop the axle from turning too far.

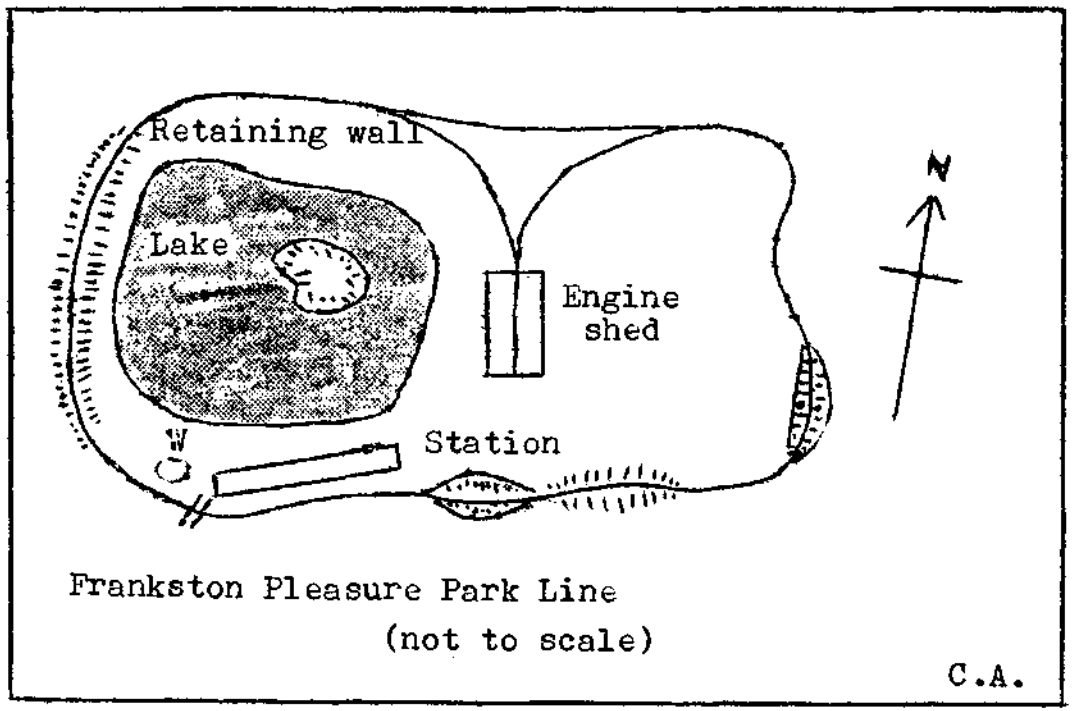
The fourth loco is a two-footer yet to be regauged. It is an 0-4-0 Malcolm Moore diesel probably built about 1950 and bearing the numbers 26-C-3. This is the type of numbering system the S.E.C. uses,but just where it worked for them is unknown,though it could have been on the Kiewa scheme.

Other interesting items on the property include points leavers bearing the inscription Z.&N.E.D. 1891 (Zeehan and North East Dundas),old timber bogies and numerous traction engines.

The area is not yet open to the public and anyone who visits it now will be unable to see anything as the locomotives are locked up and the line fenced off. However, V.L.R.R.S. has been able to arrange with Mr Griffiths to have the first railfan excursion for our members in May or June when we will journey on the train and will be allowed to examine sections of the area that the general public will not be allowed into. We hope that our members are sensible enough not to try to get in before it is opened or to assume they have privileges which, in fact, do not exist.

The author wishes to thank Mr N.Wadeson for suppling most of the details, and Mr.L.Poole and Mr.G.Bond for the early history of the locomotives.

Mark Plummer.



Frankston Pleasure Park Line

(not to scale)

C.A.

INTERESTING PROPOSALS

F.Stamford.

(I) A "ROAD-RAILS" RAILWAY

There have been many proposals for railway construction in Victoria which never came to fruition. Perhaps one of the more interesting was for a 60-mile light railway between Bruthen and Bindi, near Omeo, to carry limestone for cement making from the extensive deposits at Bindi. In a Parliamentary Standing Committee Report of 1924 it was suggested that the line be laid as a 2 ft 6 in. gauge "road-rails" railway.

A "road-rails" railway (also known as the Stronach-Dutton Loco-Tractor System) consisted of 20 lb/yd. rails laid on conventional sleepers, but outside the rails were specially constructed tracks of timber planks about 12-15 inches wide. Motive power was provided by an ordinary steam or petrol driven road tractor, the rear driving wheels being about 5 ft. in diameter and having solid rubber tyres. When operating along the railway the driving wheels ran along the wooden tracks at the side of the rails, thus giving greater traction than a conventional flanged wheel, but the front road wheels were raised, and flanged wheels placed below them to guide the tractor along the railway. Rolling stock would consist of ordinary narrow-gauge bogie vehicles, built as lightly as possible. The tractors could easily have their flanged wheels removed, and so be used on the road like any other tractor.

In proposing the Bruthen-Bindi line it was estimated that the following costs would be incurred :-

Track. 60 miles @ $5,000 per mile	$300,000
Tractors. (petrol) 20 only	72,000
Ten-ton waggons 240 only	72,000
Tractor sheds & equipment	9,000
Water supplies	2,000
Telegraph	6,000
Station buildings	3,000
Sidings	6,000
Contingencies	10,000
TOTAL	$ 480,000

These figures were based on an assumed traffic of 240,000 tons per year,all in one direction. Eight trains a day,each consisting of five waggons,would make their laborious way along the line to carry this traffic. The maximum grade would be I in 30,and the sharpest curve 2 chains radius.

Figures were even given for a "road-rails" line across the Divide from Bindi to Tallangatta,a distance of I20 miles,and requiring no less than 25 tractors and 300 waggons to carry 90,000 tons annually,at a total construction cost of $936,000. On the basis of these figures (which were probably rather optimistic) it was stated that these lines could be operated profitably, even after paying 5% interest.

An experimental "road-rails" line was constructed for demonstration purposes on disused quarry lands between Spotswood railway station and the Yarra River. The Victorian Railways,in their traditional conservative way,were not very happy with the idea of building such a line. The Commissioners felt that the system had not been in use long enough to show how high the maintenance costs would be,but they suspected these would be very high.

I think they were probably right in objecting to having this hybrid transport system foisted upon them. The South African Railways -- always prepared to experiment with something new -- built a few such lines of 2-ft. gauge. However,they soon changed over to conventional railway type operation,and to work the lines they used 2-6-2 2-6-2 Garratts,with a maximum axle load of only 3 tons I5 cwt. so that the 20 lb. rails would not be knocked about too much.

F.S.

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"H.2" LOOKS LIKE NEW!

"H.2", the Tasmanian Government Railways' recently overhauled 4-8-2 looks magnificent in its new coat of paint. Read "Tasmanian Rail News" for T.G.R. & E.B.R. news. Enquiries:- Mr.A.T. Ryan, 91 Parker St. Devonport.Tas., 7310.

MORE SANDERSON'S TRAMWAY (FOREST)

Mark Plummer

Due to the need to provide material for issue No.I8 of "Light Railways",I published the history of the tramways of the Forrest area before I had time to fully investigate all aspects of the tramways of the district. Thus the only line on which I was really sure of my facts was Mr.Henry's (with the exception of the origin of No.7 which people have since convinced me was built by Beyer Peacock). I rewrote Mr.Hayden's line in magazine No.I9 and although there are some facts which will take much longer to investigate I can now write a more accurate account of certain aspects of Messrs Sanderson & Grant's tramway,although to save space I will not repeat correct information that appeared in No.I8.

Firstly,the Baldwin 0-4-0 saddle tank. This was probably B/N 7I08 of I884, and if so it originally worked on Melbourne Harbour Trust construction from about I884 to I892. What happened to it until it arrived at Sanderson's is not known,but it worked at Sanderson's for at least eight years where it was called"Black Angel" and could have been the locomotive that collapsed through the bridge in I907. After Sanderson's death and the decreased output of the line the loco was sold to the Tasmanian Public Works Department. Before it went,however, its original whistle,which is still in existence,was removed by a sentimental employee and an inferior one installled in its place.

The locomotive was sold in August I9I5 and worked on the T.P.W.D.'s Marrawah tramway which they had aquired on May Ist. I9I4. Here it was called "Fantail" (not "Spider" as suggested in No.I8). The P.W.D. tramways were transferred to the Tas.Government Railways in September I929 but the loco still worked on the line until November I946 when it was sold to Mr.F.Jaeger for his Salmon River line. He converted it into an internal combustion engine by removing the boiler and placing an old car chassis and motor on the wheels and frame. This line closed in I963 and the wheels and frame were still in existence six months ago. Dimensions of the loco are :-
Cylinders 8" X I2" ; Wheels 32" ; Wheelbase 4' 8".
B.P. I30 lbs/sq.in. Weight just over 7 tons.

Sanderson bought an "L" class,No.32, from the Vict. Railways in October I904 for £250. This was a 2-4-0 saddle tank built by Slaughter Grunning of Bristol (B/N 4I0 of I860),which he used to power his Barwon River Mill. It was fitted with flywheels and multi-powered rope drive to the saw benches, which it operated on 60 lbs.of steam. When one cylinder failed it continued to the last (I923) on the remaining one. In I94I member Mr.R.Wilson helped a Colac scrap merchant to drag the remains out of the bush. The photos he took at the time show the frames,minus the wheels,still at 5' 3",so if the loco worked on a line at all,which is extremely doubtful, it must have been on 5' 3" and not 3' 6".

However,the other two power units which Mr.Sanderson bought from the V.R. definitely worked on the line. These were the Kitson power units out of the V.R. Rowan Car (ABDL). This was placed in service on the V.R. in I883 and consisted of a power plant,a vertical boiler, built by Kitson & Co. of Leeds (B/N 69) and fitted into a car designed by W.R.Rowan of Denmark. The vehicle was mounted on six wheels,including the four coupled drivers. A spare power unit was delivered with the car (B/N 70). For a while it operated on the Outer Circle line. About I890 the V.R. built a second steam car,using the spare engine and coupling it to a four wheeled trailer. They were withdrawn from service in the late I890's and used in the construction of the V.R. Irrewarra-Beeac line.

Mr.Sanderson bought the power units only in May I904 for £75 each. One had been mounted on a part-wooden frame,the other on an iron frame. Sanderson,with a fitter, cut through the frame twice with cold chisels (!) and joined the two halves together with plating and rivets to give him the desired gauge of 3' 6". A drawing made from a photo of one of these appeared on the cover of "Light Railways" No.I9.

These vertical boilered engines somehow aquired the nickname of "Clayton" and this mislead me to write in No.I8 that there was an engine built by Clayton of U.S.A.

After using them as locomotives at least one of the power plants was pressed into service as a logging winch and given the nickname "Lucy". It is not yet known just when they finished their careers as locomotives or as logging winches.

Thus Sanderson only had seven steam locomotives and one tractor,not nine locomotives as stated in No.I8.

Another statement which needs to be clarified is as to which line came first. Sanderson put a line down the Barwon River in I897 which was taken over by his wife and her brother,Mr.Grant,and used until I923 when the floods forced them to abandon the line and build another along the ridge to Barramunga,which was used until I937 or I939.

I wish to thank two people for adding to these notes. Mr.R.Wilson,a former employee of Sanderson's,has been very helpful both with information and in taking me to various tramway sites and providing other contacts . Mr.J.Buckland has provided historical details of the locomotives.

M.P.

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MAGAZINE REVIEW

"THE NARROW GAUGE" September I967 36 pages
Published by the Narrow Gauge Railway Society,(U.K.)

The latest issue of this publication includes articles on a visit to Dinorwic slate quarries,clay tramways of southern England,notes on narrow-gauge modelling, an article about a French light railway,Guinness's brewery line in I966,a I5-inch gauge miniature railway, and Hudswell-Clarke locomotives built for Mexico. No less than 27 photos are included,but undoubtedly pride of place must go to the superb scale drawing in the centre pages. This is of a Hunslet 0-6-4 T Single Fairlie locomotive,and shows many of its mechanical details.

Enquiries from :- M.Swift, 47 Birchington Ave.
Berchencliff, Huddersfield, England.

F.E.S.

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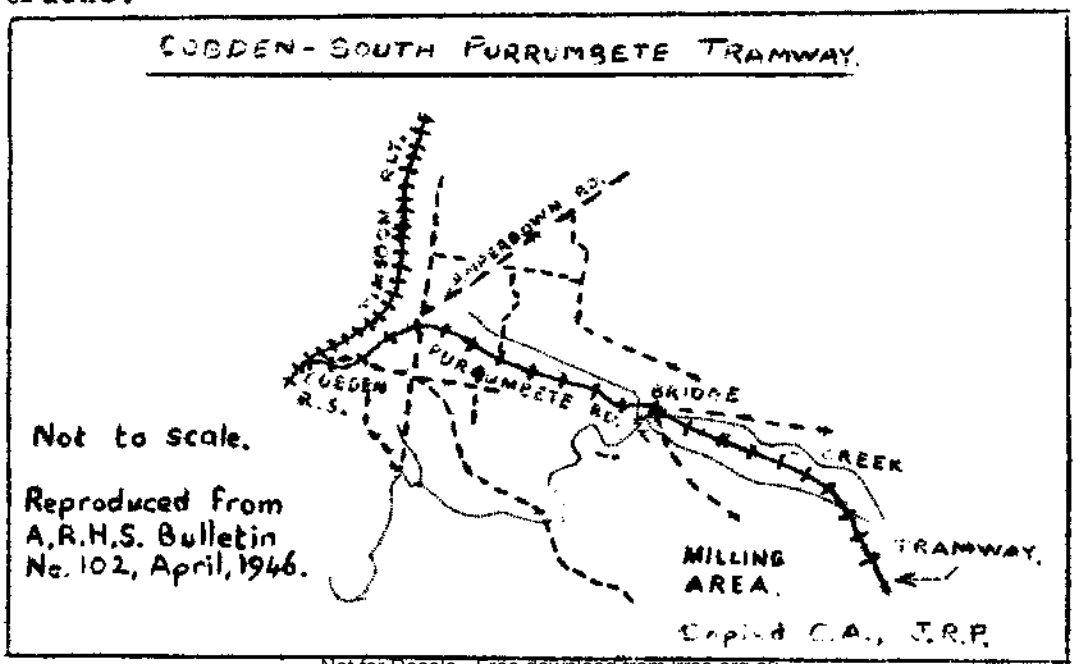
THE COBDEN-BULLAHARRE TRAMWAY

R.Weaven.

This tramway of 3-foot gauge ran from a loop alongside Cobden goods siding to a sawmill 5 ½ miles away. Tha route followed the Stoneyford road for 3 miles then went in a south-east direction to the mill. The timber from the mill was firewood for the local butter factories and for the Melbourne market. The tramway had mostly wooden rails,steel being used in the swampy places.

The mill and tramway were built by an Italian,Cesare D'Atri,about 1923. Originally the line only went from the mill to the Stoneyford road,where the firewood was loaded onto solid rubber-tyred steam trucks which carried it on to Cobden station. Unfortunately for Mr.D'Atri these heavy trucks cut up the road so much that the Shire Council ordered him to take them off,so the tramway was extended to Cobden.

The means of locomotion was a 6-cylinder Buick engine geared down by a very large gear wheel and mounted on a four wheeled trolley. Its top speed was said to be about 2mph and it pulled about 3 four-wheeled trucks.



The venture collapsed within about two years. Mr.D'Atri employed about 30 Italian migrants and it appears he could not afford to pay them Award wages. There was also some local antagonism towards the "foreigners"-- this brought about some costly derailments.

The venture is remembered more for its steam trucks than for its tramway,of which the only traces are two small cuttings and one or two piers of a bridge over a small creek. One dairy farmer adjacent to the tramway had some of the steel rails incorporated into his cow yard, while another had a 3-foot tramway from his dairy to the roadside milk can stand.

R.W.

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An article on this line,containing substantially the same information,appeared in the A.R.H.S. Bulletin for April I946. As far as we know,this is the only tramway that went from the Camperdown - Timboon line of the V.R.

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MORE COMMENTS

From Mr.P.L.Charrett :-

Congratulations with your magazine. You are doing a good job uncovering the small private railways and reporting them with good photos.

During my research into the SR&WSC Railways I have come across some information from official files which disagrees with that which you have published.

HAYDEN'S TRAMWAY, BARWON DOWNS (L.R. No.I9)

In "Lighr Railways" it is stated that the Baldwin steam tram motor ex Bendigo was sold in I9I9 for use in the Hume Reservoir construction. The SR&WSC bought Baldwin locos from both Isis Central Mill,Q'ld. and Cameron and Sutherland in June I92I. It is quite probable that the loco bought from Cameron and Sutherland was the Baldwin from Hayden's.

In November I923 Hayden Bros. of Barwon Downs asked the SR&WSC at Hume Reservoir if they had two locos for sale. The answer was "No".

Regarding M.Plummer's remark on p.32 of L.R. No20 that 4-2-0 is steam parlance,I think the correct term would be

the Whyte Classification. I think the correct term in this case would be 4-2-0 ,most small diesels being referred to in the Whyte Classification.

P.L.C.

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From Mr.H.Wright :-

As and when time permits,I have been comparing the locomotive notes in "Light Railways" with what I have recorded,with the view of adding to mine where necessary, and thus ensure accuracy,and I submit the following comment on Mr.A.Lyell's notes on the WONTHAGGI DISTRICT TRAMWAYS (L.R. No. I8, p.25).

I cannot agree with the report that the Westernport Coal Coy's. loco was ex Tasmanian Main Line Rly Co. No I4 (Neilson 2369 of I878) unless this loco was only in use for a short period and was repurchased by TMLRCo. as records show that this loco was converted to 4-4-0 wheel arrangement and became T.G.R.'s F-I (No.I) and saw service for some years,until being sold to Mr.Patterson of Hobart in I9I4,for scrap.

It is suggested that the Westernport loco was one of No.I4's sister engines -- No's I2 or I3 (Nielson 2367 and 2368 respectively of I878). Records do not list the disposal of these two locos. As they did not enter service with the T.G.R. their disposal was therefore before October I890.

Some years ago an old resident(and childhood friend of my family) of Coffs Harbour Jetty,Mr.E.W.Smith (now deceased) told me that the British Australian Timber Co., Coffs Jetty, operated an ex Tasmanian Main Line Rly Co. locomotive,which I believe to have been either No.I2 or I3, and I venture to suggest that one could have been sold by the TMLRCo to the Wonthaggi district (as confirmed by Mr.Lyell) and the other one went to the B.A.T.Co.

Which one went to which place ?

BUT --and this must be taken into account -- when the Westernport Coal Co. went into liquidation in I884 the Wonthaggi loco could have been sent to Coffs Harbour.

Only further research will determine the true picture.

H.W.

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SIDRODROMARCHEOLOGISTS REPORTS

DAYLESFORD to WOODBURN

Part of the track bed on leaving the Daylesford area appears to be used as a jeep track. The major relic is at Jubilee Lake where the line crossed Wombat Creek on a seven or eight span trestle. Much of this remains, although the upper spans are missing. A footbridge has been built below the top level to enable pedestrians to circumnavigate the lake. Woodburn is set among trees and appears to have had only one loop,of about 150 ft. The platform still exists.

M.F.

WHITTLESEA LINE

The track has not been lifted. About ½ mile beyond Epping the Darebin Creek is crossed on a trestle of about 11 spans,while a smaller one crosses a stream about one mile further on. At South Morang the platform, a loop with two derails,and the signals are still in position.

M.F.

TANJIL BREN - KIRCHUBELS

This 3 ½ mile tramway formation is easily followed from the settlement of Tanjil Bren. At the "Town" a few sleepers are embedded in the ground; otherwise there are apparently no relics. The track heads north and may be driven along for about 1½ miles,where a fallen tree blocks it. There are few remains apart from an occasional sleeper and pieces of steel rail. At 3 miles the line, having climbed steadily most of the way, crosses the West Tanjil River on a curved trestle around the lip of a series of waterfalls -quite spectacular. Much of the decking and all the main structural timbers are intact.

Of considerable interest at this point is the remains of a shallow wooden flume,along which water is still flowing,until the woodwork has decayed some little distance downstream.

Much research remains to be done on this line. Readers who can supply details are cordially invited to submit them to the editor.

A.J.S.

NOOJEE TRESTLE

This 600 foot, 27 span bridge is in good condition and is used as part of a timber road. Evidence shows that

that a bulldozer or crawler tractor uses it in safety.

To view it, drive from Noojee along the Powelltown road for just over I mile, then go South along a rough track (drivable) for about ¼ mile.

The deep cutting at Crossover is used as an access road to the Council tip, located on the right-of-way.

A.J.S.

Reports of this nature, no matter how sketchy, are always welcome. If you have sidrodromarcheologized, don't keep your findings to yourself, but let us know of them. They may provide a clue or a missing detail to someone who is particularly interested in "your" line, or, who knows, that little old track running past your place may even be a hitherto unrecorded one.

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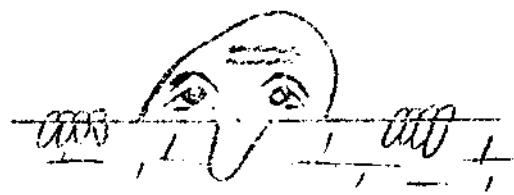


WOT -- NO PITCHERS !

Yes. Well, unfortunately pictures cost money, and perhaps a better question would be, "Wot --no money ?" If you want the art gallery --and we all do --it's up to you. Now that the Season of Goodwill, of New Year Truces and so on is well and truly over, resume your attacks on your remaining friends -- make them join this society and thus provide funds for <u>your</u> magazine -- try to suggest some benefits, they will derive from becoming members like yourself. Go on, try. WE NEED THEM.

TO CONTRIBUTORS

If you have been saying to yourself, "I must get that article written soon", we would reply, "Yes, you must". We urgently require material for future editions.

If you are planning a major article within the next few months, it might be an idea to let us know. This could prevent irritating premature publication of a lesser piece of writing, thus spoiling your effectiveness.

Editorship Changes.

After the publication of "Light Railways" No. 21, long time editor Frank Stamford resigned; when at that time, a division of oppinion arose regarding editorial policy and Society Council responsibility.

The Council is indebted to member Arthur Straffen who agreed to edit this issue.

At the time of writing this position of editor is again vacant.

NOTICE

While every effort is made to ensure the accuracy and completeness of articles published in "Light Railways", we cannot be sure that errors have not crept in. Additional information is being uncovered all the time, and this often proves that the history of tramways and locomotives was in fact different to that which was believed to be true.

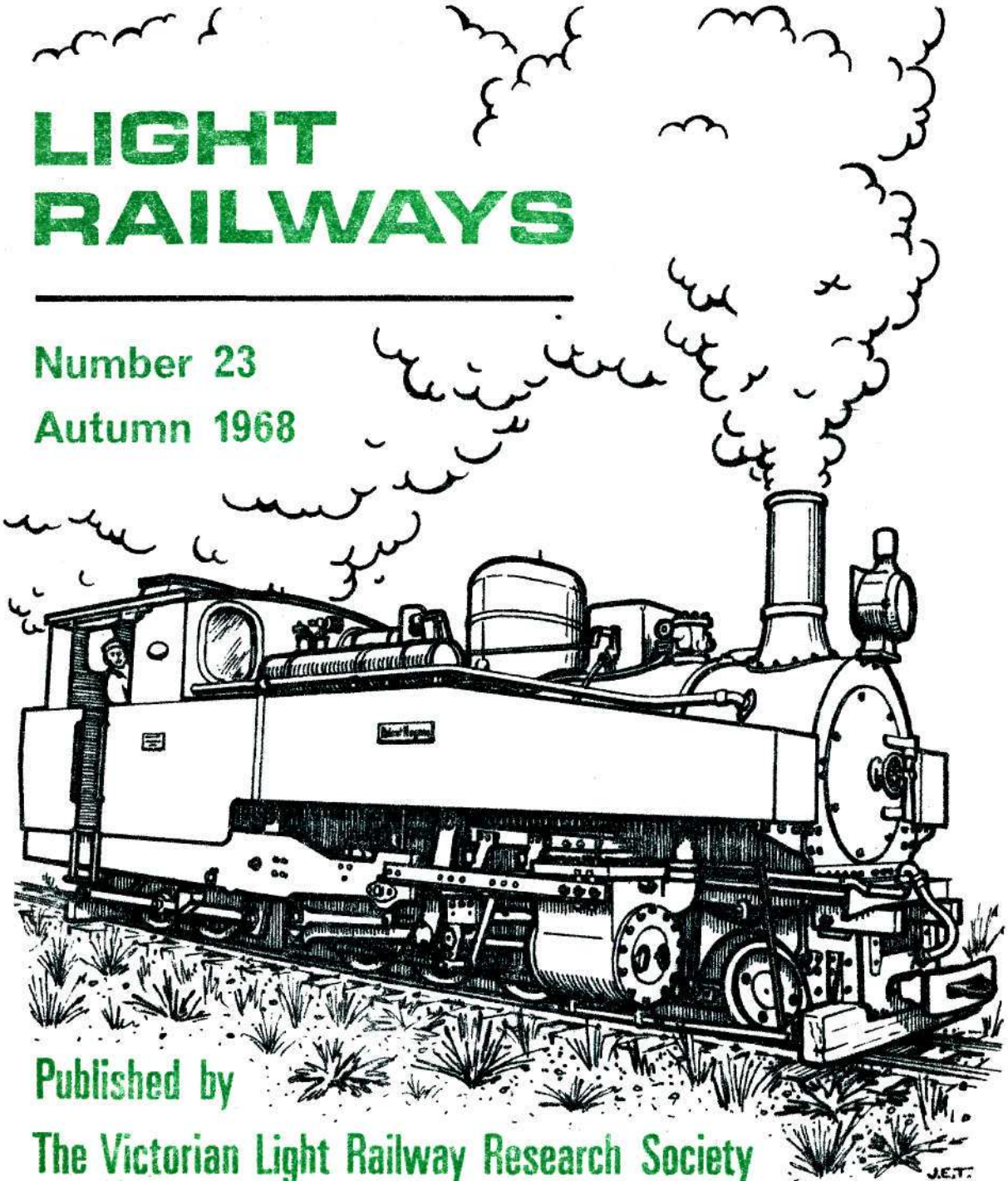
If readers see any errors in articles, or are able to add additional information, we would be very much indebted if they would forward this information in writing, to the Editor. All corrections and additional information will be considered for publication.

Without your co-operation in doing this, we will be unable to accurately record the history of Victoria's light railways.

Articles, notes, or news items for publication in the magazine are always welcome.

LIGHT RAILWAYS

Number 23
Autumn 1968



Published by
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LIGHT RAILWAYS

NO.23 AUTUMN 1968 VOL.VI.
PRICE - 25¢.

The cover drawing shows the Tasmanian Government Railways "J" class 2-ft. gauge 2-6-4-0T locomotive, of Hagans Patent articulated type, which ran on the North-east Dundas Tramway. Built by Lokomotivfabrik Hagans, Erfurt, Germany in 1901.(B/No. 436). Cover design by John Thompson and duplicated by Puffing Billy Preservation Society.

As readers will know, there has been a certain amount of difficulty on the editorial side of "Light Railways" lately. The problem has been whether the Council should be permitted to interfere in the editorial process, as they have done in the past. I feel such a policy makes the job virtually impossible. In any case another editor will be required for at least one issue, as I am fleeing the country in June on a "Jet search for Steam."

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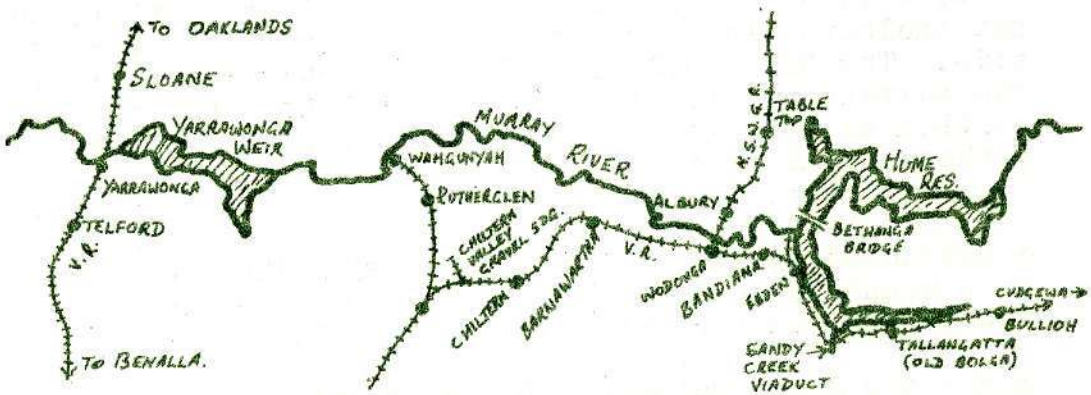
Tramways of the State Rivers & Water Supply Commission (CONT'D).

BY- F.L.CHARRETT.



HUME RESERVOIR.

The Hume Reservoir is on the Murray River immediately downstream from the junction of the Murray and Mitta Mitta rivers and five miles east of Albury. It was constructed by the S.R.&.W.S.C. and the Public Works Department of New South Wales.

Initial survey work and boring parties started on the site of the reservoir in February 1917. On 25th. April 1919 the River Murray Commission approved the construction of the Hume Reservoir storage, and subsequently on 21st. November 1919 the proposed reservoir was officially named Hume Reservoir. The first sod was turned by His Excellency Sir Ronald Munro Ferguson, Governor General of Australia on 28th November 1919.

The Hume Reservoir was possibly the first reservoir in Victoria to use light railways extensively for construction. It seems that the S.R.&.W.S.C. had had little experience with construction railways,

because in 1919 the S.R.&.W.S.C. contacted various other railway authorities on the use of light locomotives and railways.

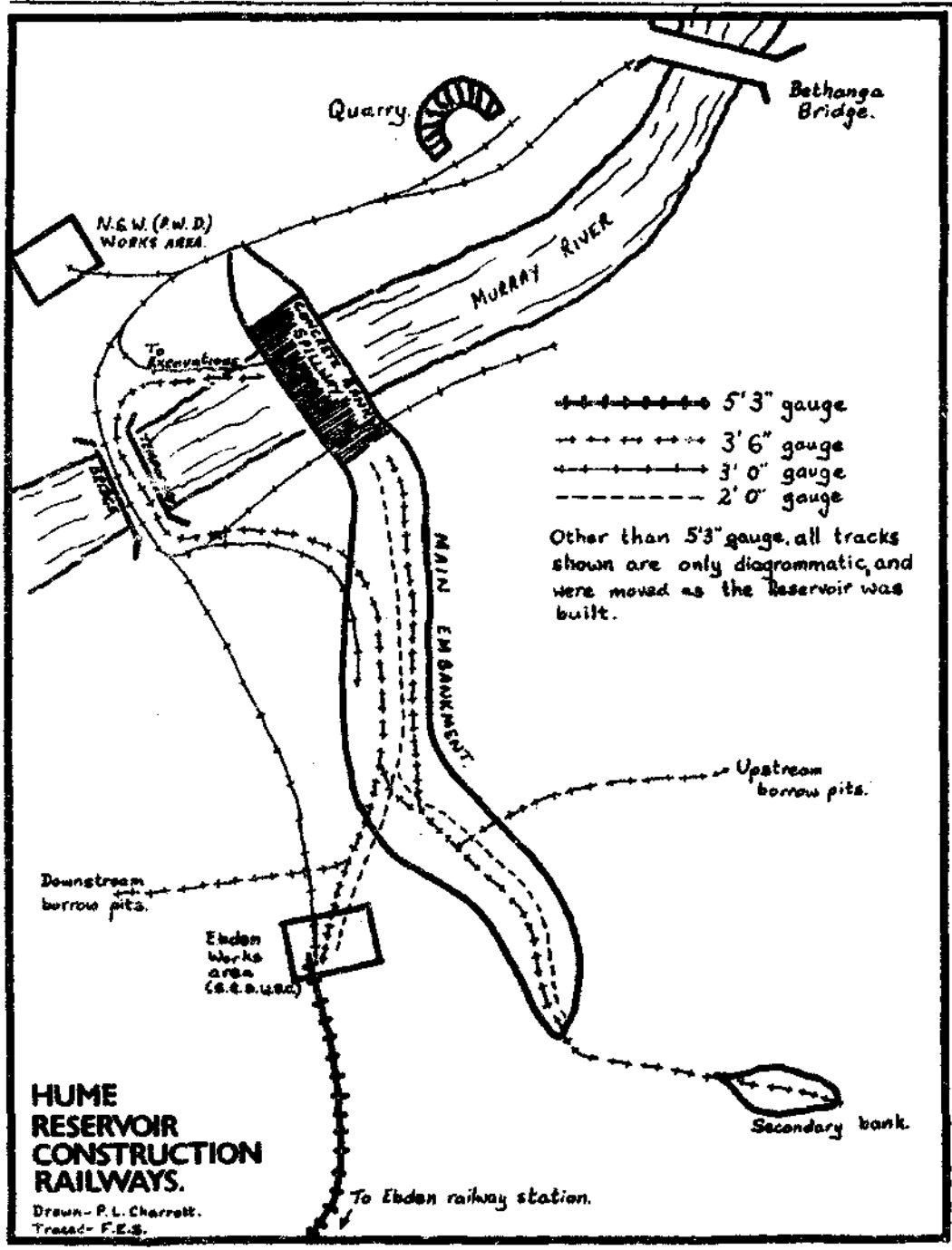
Both construction authorities worked together, but on different sections of the reservoir. The P.W.D. built most of the concrete work including all the concrete wall and spillway through the river section, but not including the concrete corewall on the Victorian side. The S.R.&.W.S.C. built the earthworks including the earthen section of the main wall from the river section to the flats. The S.R.&.W.S.C. also built the Bethanga road bridge which crossed the Murray arm of the reservoir, and connected the Bethanga district to the main road at Albury. The railway deviations were constructed by the Victorian Railways. Road deviations were constructed by the respective authorities in each state.

Early New South Wales P.W.D. Construction.

New South Wales was the first State to construct railways in the works area. As with most construction projects the first job to be done at Hume was the setting up of plant and laying the area out for efficient working. Because of the distance from Albury and the lack of fast suitable transport, houses, shops, and other essential services were provided at the works area on the N.S.W. side and also on the Victorian side.

A suitable quarry was found about 1½ miles north of the dam site and in 1920 a start was made in construction of a double track 3-ft. gauge railway to the works area. The railway was completed except for heavy ballasting by mid 1922, and had started supplying stone.

One locomotive was ordered in 1920 and arived about mid 1921, apparently only to be erected and waiting the completion of the railway. 23 dump cars arrived in 1920 from existing stock, whilst 12 timber side tipping two cubic yard capacity wagons were constructed at the



works. An additional locomotive was ordered in 1922 and delivered shortly afterwards.

A road was constructed from Albury in 1919 for access. A siding was constructed in 1921 on the main southern line north of Albury for handling materials, a shed and a coal stage being added the following year. It is thought that materials were hauled to the dam site by either traction engines or horses.

N.S.W. Public Works Department Quarry.

When the quarry was first opened out, the P.W.D. intended to use large stones (known as displacers), weighing between two and seven tons, in the dam. As the main railway was some 80-ft. below the quarry face, a balanced gravity inclined haulage was used to transport the stones from the quarry face to the locomotive worked 3-ft. gauge railway. On the balanced incline were two flat wagons, which had rails set to 3-ft. gauge on their surface, so that they could carry 3-ft. gauge wagons. As one of these platform wagons, carrying loaded 3-ft. gauge wagons, began descending from the quarry face, it hauled the other platform wagon, which carried empty 3-ft. gauge wagons up the incline. Halfway the two platform wagons crossed each other at a crossing loop.

In 1921 a 1½ cubic yard capacity steam shovel was received and placed in the quarry. This shovel was used firstly for stripping the topsoil away and preparing the quarry faces. The incline was completed about mid 1922, but probably not used extensively until the railway to the dam was completely finished in 1923.

In 1921 a Vulcan (U.S.A.) 0-4-0ST locomotive was imported and erected ready for use. This loco was put to use ballasting the railway and in the excavations for the wall. In 1922 another Vulcan 0-4-0ST locomotive was received and put to use, probably in excavations around the site of the wall.

The first of two travelling cranes for the quarry was erected in 1922. Another steam shovel was also placed in the quarry in 1923. In the same year twelve wagons were built at the works to convey displacers (as described above) from the quarry to the wall. The displacers were so named because they displaced concrete in the concrete part of the wall. These wagons had flat platform tops, with three rails laid across the platform, bent up at each end and with a chain to hold the displacers on. Later a further 24 wagons of this type were built.

From about 1922 the N.S.W. quarry supplied stone for both N.S.W. and Victoria, as stone in the original Victorian quarry was found unsuitable. Some stone was also obtained when excavating foundations.

During the latter part of 1926 little stone was used in N.S.W. and the output was either stockpiled or sent to Victoria. (It was during this period that two 3-ft.6-in. gauge locomotives were borrowed from Victoria). After this lull the quarry was working two shifts to supply the necessary stone.

Towards the end of 1927 the balanced incline was superseded when tracks on the quarry floor were junctioned with the main line. This enabled a greater quantity of displacers and spalls to be delivered in a quicker time, and this, together with another crane which was added about the same time, enabled only one shift to be worked. At this stage there were five cranes working in the quarry.

The quarry continued to supply displacers, spalls and crushed stone for concrete, until about 1935 when the wall was substantially complete.

Main Bank Construction in Victoria.

Early in 1920 pumps were installed on the flats near the river, to lower the water in lagoons which would hamper construction. After the lagoons

were pumped dry, the site of the bank was stripped of topsoil to a firm foundation material. Early in 1921 the upstream and downstream toes of the bank were built to form an enclosure against floods. Clay was obtained by wheeled scoops from borrow pits upstream of the wall, and transported in horse-drawn one cubic yard trucks (presumably 2-ft. gauge, Ed.) to the bank.

In February 1922 a new method of placing clay in the bank was introduced. Two Ruston Proctor and one Bucyrus steam shovel excavated the clay and loaded it into 4½ cubic yard capacity side dump cars, which were hauled to the bank by steam locomotives on 3-ft 6-in. gauge track. The steam locomotives may have been used from late 1921, although this is uncertain. Until late 1921 only horses (or steam traction engines for heavy haulage) were used.

In February 1922 a timber bridge was built over the Murray River, about 900-ft. downstream from the bank. Tracks of both 3-ft.6-in. and 3-ft. gauge were laid on the bridge. As soon as it was completed, Victorian 3-ft.6-in. gauge locomotives transported materials from the N.S.W. excavations to the embankment on the Victorian side. Material was transported from New South Wales until about 1928, probably by both 3-ft. and 3-ft.6-in. gauge locos.

In August 1921 operations commenced on excavation of the concrete core wall trench which runs the length of the embankment. In May 1922 the first concrete was poured for the core wall. From photographs it appears that 2-ft. gauge tracks were used for conveying the materials for the core wall. Spoil, or material from the core trench excavations suitable for the bank, was transported on 3-ft.6-in.gauge.

The quarry on the Victorian side was abandoned early in 1922, because the stone was unsuitable. All the stone required was either transported from the New South Wales quarry or obtained from the main bank excavation.

Steam locos were used for transporting clay right up to the completion of the bank. From photographs it appears that the Perry locos hauled six loaded side-tipping 4½ cubic yard wagons. 1927 to 1929 were the years when the most material was placed in the embankment, with some eleven steam locos on 3-ft.6-in. gauge.

New South Wales Spillway and Bank Construction.

As mentioned earlier, the New South Wales P.W.I constructed the spillway and concrete wall through the river section. Late in 1921 the P.W.D. started excavation for the wall on the New South Wales side of the river. A concrete mixer house with trestled railway approaches, concrete lined trenches for chutes and a belting and bucket conveyor to the bank, were completed in 1923. Sand was obtained from the river and transported over 3-ft. gauge track by steam locos to the mixer house.

In May 1925 the river was diverted from its original course so that the concrete spillway and bank could be built. About this time two 3-ft.6-in. gauge locos were borrowed from Victoria for three months, probably to transport the spoil away from the excavation of the river diversion channels. By late 1928 the banks constructed by New South Wales and Victoriawere joined together. On 1st. February 1929 the diversion channels were closed and storage of water was commenced, while construction was still being carried out.

Chiltern Gravel Heaps.

In 1920 a 5-ft.3-in. gauge siding was constructed from the main V.R. North-eastern line, north from Chiltern to the Chiltern Valley No.2 gravel heap. The gravel was loaded at Chiltern Valley and transported by the V.R. to the works at Ebden. Here the gravel was unloaded by a crane and stockpiled to be used as required. By June 1930 no more gravel was

required from Chiltern Valley, and the siding was no longer maintained by the S.R.&.W.S.C.

Victorian Secondary Bank

Because of a low gully behind the main embankment, a secondary bank was needed to retain the water. Construction on the bank was started about 1930 and completed about 1934. This bank was served with a 3-ft. 6-in. gauge track from the works, or bank area and borrow pits. Steam locos hauled the clay from the borrow pits to the bank.

Bethanga Road Bridge

In order not to inconvenience the residents of the Bethanga district by giving them considerably greater distances to travel, it was decided to build a bridge over the Murray arm of the Hume reservoir. In 1927 the New South Wales P.W.D. constructed a 3-ft. gauge track from the quarry upstream to the site of the bridge. The Victorian S.R.&.W.S.C. built a camp at the site of the bridge, and work commenced on the construction in 1927. Some gravel was transported from the Chiltern Valley gravel heaps early in 1927, presumably by the New South Wales locos, as the Victorian 3-ft. gauge loco was not delivered until about June or later in 1927.

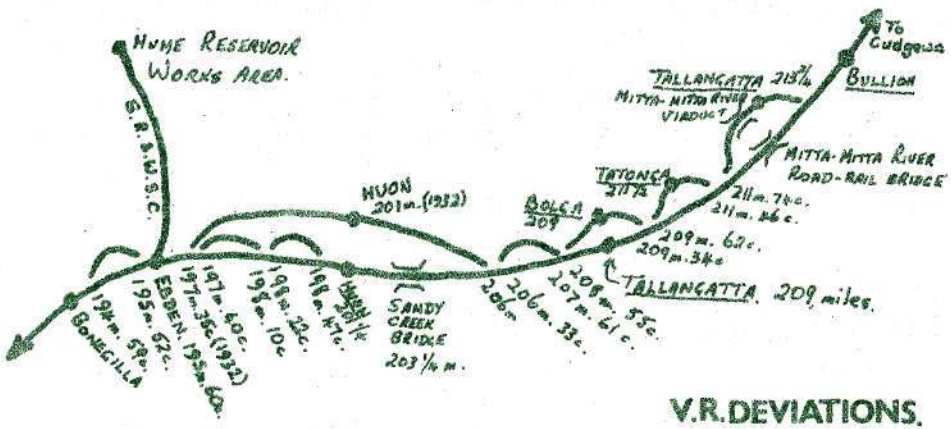
The steel for the bridge was transported from the works area at Ebden over the 3-ft. gauge line to the bridge site. The bridge itself was completed about 1933 and probably the line was dismantled soon after.

A locomotive was ordered by the S.R.&.W.S.C. from Perry Engineering Co. South Australia, for 3-ft. gauge, in December 1926. Although there was no 3-ft. gauge loco auctioned in 1936, both official files and annual reports record this 3-ft. gauge loco. I can only assume that the loco was converted to 3-ft. 6-in. gauge at the completion of the Bethanga bridge.

Deviations to Victorian Railways

For the original reservoir there was only one deviation of 8½ miles from 197½ miles to 204¾ (old mileage) on the Cudgewa line. This deviation was 1¼ miles longer than the old line. The Victorian Railways started construction of the deviation about 1929 and it was opened to traffic on 1st. February 1932, all work being completed in December 1932. Included in the deviation was an 1,866-ft. long concrete and steel bridge over the Sandy Creek and a new station at Huon.

When the capacity of Hume was increased during the 1950's no less than seven seperate deviations of the line were made between Huon and Bullioh, and all were opened for traffic between 1956 and 1958, The Sandy Creek bridge was raised 8-ft. and lengthened 120-ft. without interruption to traffic. There was a slight deviation at Bolga which became the new town of Tallangatta and was renamed such in 1958. The siding of Tatonga was isolated on a deviation and closed. On the last deviation was the old township and station of Tallangatta together with a timber viaduct of 4,660 -ft. which was replaced by a combined 750-ft. road and rail bridge.



V.R. DEVIATIONS.

2-FT. GAUGE

In 1921 service tracks of 2-ft. gauge were laid for general temporary works. At that stage the 2-ft. gauge tracks were of a rather temporary nature-photos show 2-ft. gauge on the top of the concrete corewall which could not have been worked by horses or locos. I think that men would have pushed the small wagons to where they were required.

Very little 2-ft. gauge is shown in the photos, and that only in connection with the concrete corewall construction. A photo taken on the end of the main embankment in 1932 shows the back end of what appears to be the Krauss loco from Torrumbarry, and a concrete carrying skip. Another photo taken in 1933 at the same place shows no 2-ft. gauge at all, and the bank nearly to its full height. I think that the Krauss 0-4-0T, (see Light Railways No.21, page 23 and 24), was transferred from Maffra about 1928, and some time after 1933 was transferred to Yarrawonga Weir. This loco is a mystery, because official files and reports do not record a 2-ft. gauge loco as having worked at Hume.

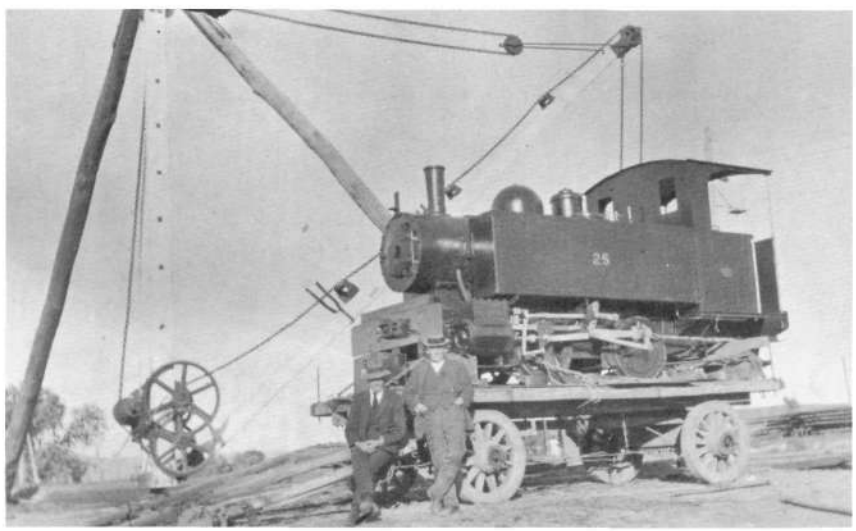
3-FT. GAUGE

3-ft. gauge was the New South Wales Public Works Department gauge. A 3-ft. gauge line was built from the New South Wales works area to the quarry in 1920, and in February 1922 another line was built across the temporary bridge into Victoria, so that stone could be transported from the N.S.W. quarry to the Victorian embankment.

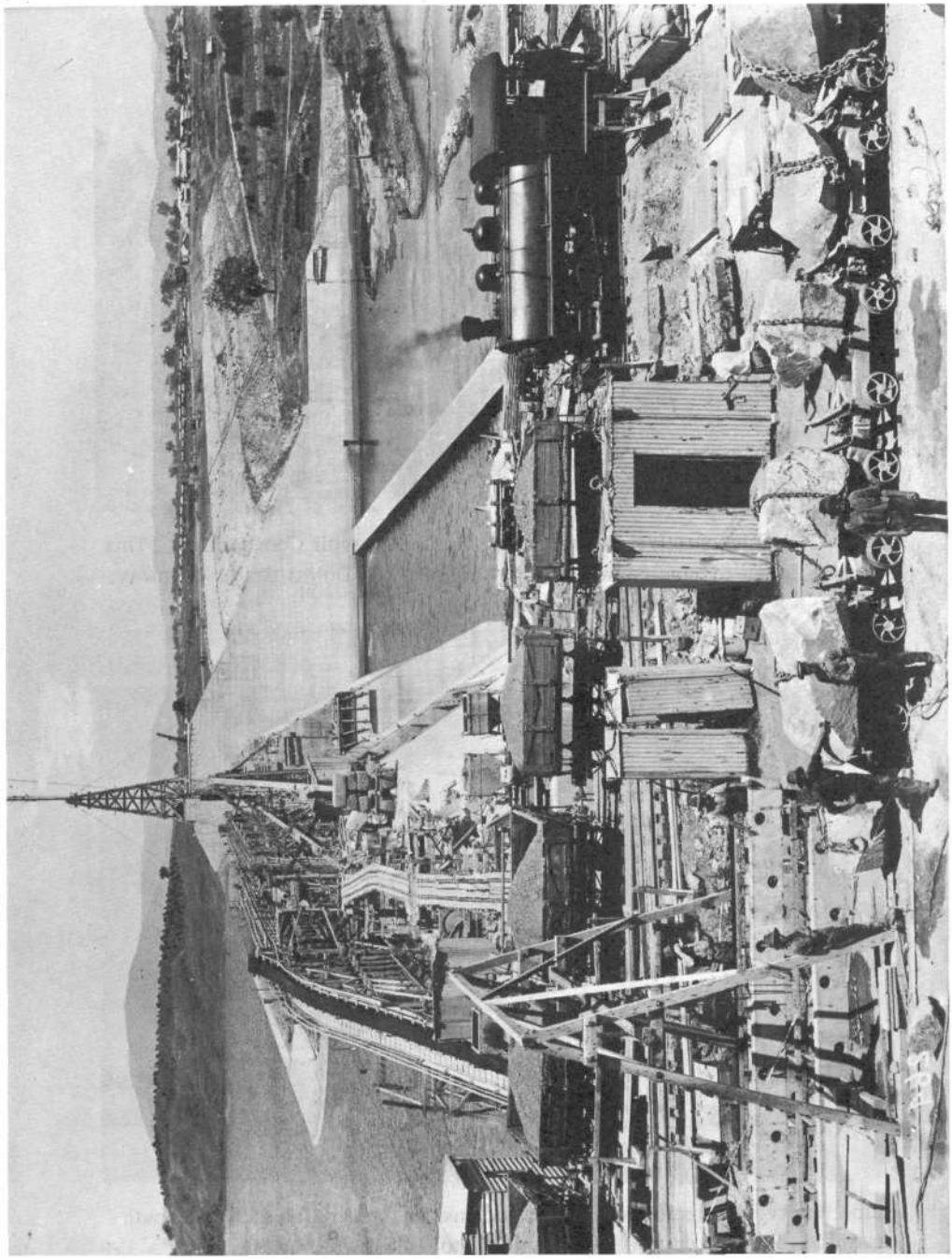
About 1927 a 3-ft. gauge line was built from the quarry to the Bethanga road bridge construction site, and another line was built to the Eboden works area to transport the steel for this bridge.

The 3-ft. gauge was used until about 1936 when construction of the reservoir was almost finished.

Baldwin 0-4-0 locomotive at work on the Hume Reservoir Construction. This loco is believed to have come from Hayden's Barwon Downs timber tramway. Photo - G. Eardley Collection.



Hume Reservoir Construction. Perry locomotive, just delivered from South Australia, on horse dray at Ebden. Photo - S.R. & W.S.C.



Hume Reservoir Construction. P.W.D. Vulcan locomotive with gravel train on northern side of spillway, looking towards Victoria. March 1931. Photo - S.R. & W.S.C.

3-FT. 6-IN. GAUGE

3-ft.6-in. gauge was the Victorian S.R.&.W.S.C. gauge. Lines of this gauge were built in 1921 from the main embankment to borrow pits on the upstream side and to the works area. In 1922 more track was laid from the bank to borrow pits on the downstream side. In February 1922 3-ft.6-in. gauge track was laid over the bridge and to the New South Wales excavations, and was probably removed about the early 1930's. Another 3-ft.6-in. gauge line was also constructed from the works area and borrow pits to the secondary bank.

The 3-ft.6-in. gauge probably used until about 1935, when the main embankment was completed.

4-FT.8-1/2-IN. GAUGE

Although it has been stated at various times that there was 4-ft.8½-in. gauge track , the nearest standard gauge was at Albury, and at the N.S.W.G.R. Hume Reservoir siding north of Albury, already mentioned on page 6.

5-FT.3-IN.GAUGE

5-ft. 3-in. gauge was used only on the two sidings - (a) Chiltern to Chiltern Valley No.2 gravel heap, and (b) Ebden to the works area, V.R. rolling stock was used on these lines.

Permanent and Temporary Track

The track around the embankment area and bank excavations was temporary and was shifted as the bank rose. It would be impossible to give a track diagram between 1920 and 1936 because most of the track was shifting, and only a general indication could be given. The more permanent tracks were the main lines from the borrow pits to the bank, from the

works area to the quarry and Bethanga Bridge, and even those would have been shifted as the need arose.

Steam Shovels and Cranes

Most of the steam shovels and cranes operated on rails of an unknown gauge - probably 4-ft.8½-in. The steam shovels and cranes could propel themselves, and so no other motive power was needed. The cranes were frequently referred to as locomotive cranes.

LOCOMOTIVES

The actual number of locomotives used at Hume is rather uncertain and would appear to be 12 or 13 steam locos and two Fordson tractors on 3-ft. 6-in. gauge (owned by the S.R.&.W.S.C.), one S.R.&. W.S.C. Perry and four P.W.D. steam locos on 3-ft. gauge, and probably only one S.R.&.W.S.C. steam loco on 2-ft. gauge.

It has been said that at one time road Nos. 1 to 12 were given to the Victorian locos. Observations from photographs and one loco seen refute this theory. Numbers seen on locos include 22, 25, 26, 29, and 118. The number 118 seen on a Perry loco is a big mystery and could be a S.R.&.W.S.C. plant number, as there never were that many locos on the S.R.&.W.S.C. The other numbers could have been total loco numbers, but the S.R.&.W.S.C. did not have 29 locos, unless traction engines were grouped with locos.

The P.W.D. locos carried New South Wales P.W.D. numbers, there being no seperate numbering series for P.W.D. locos used at the Hume Reservoir.

2-ft. Gauge Locomotives

Krauss 0-4-0T, builder's number 2437 of 1890. This loco is believed to have worked at Hume for the S.R.&.W.S.C., after having been at Torumbarry and Maffra. After working at Hume it was probably transferred to Yarrawonga Weir Construction.

There is no definite proof that this was the 2-ft. gauge loco used at Hume, but from the photograph showing the rear view of the 2-ft. gauge Hume loco, it would appear to be the same engine as that used at Torrumbarry and Maffra.

3-ft. Gauge Locomotives.

P.W.D. No.	Type	Builder	B/No.& Date.	Deliv-ered.	Sold	See Note
67	0-4-0ST	Vulcan, U.S.A.	3233 ? 1921	1921	Oct. 1936	(1)
68	0-4-0ST	Vulcan, U.S.A.	3232 ? 1921	1922-3	"	(1)
70	0-4-0T	J.Fowler, England	16130 1924	1923-4	"	(2)
74	0-4-0T	A.Barclay, Scotland	1900 1927	1927-8	"	(3)
SR&WSC loco.	0-4-0T	Perry Eng. Co.S.Aust.	271 ? 1927	1927-8	"	(4)

(1) I do not agree with the builder's numbers shown for these locos. It seems quite a coincidence that two locos have consecutive (and in reverse) builder's numbers, although delivered about two years apart, and ordered seperately. Both locos sold to W. Adams.

(2) Sold to Warburton Timber Co., later, in 1940, sold to Mt.Morgan mines.

(3) Sold to A. Johnson's Foundry, South Melbourne, and scrapped about 1940. There have been references to four Barclay locos, but I can find no evidence to support this contention.

(4) One Perry loco was delivered to the S.R. &.W.S.C. built to 3-ft. gauge, for use on the Bethanga bridge construction. The Builder's Number quoted is only a guess, since 271 was the last of the Perrys and

may have been the one built for 3-ft. gauge. I think that this loco was converted to 3-ft.6-in. gauge after completion of the Bethanga bridge.

3-ft. 6-in. Gauge Locomotives

Type	Builder	B/No. & Date	Ordered	Arrived Ebden	Cost	See Notes
0-4-0T?	Orenstein & Koppel	?	Nov. 1920	July 1921	£450 $900	(5)
0-4-2ST	Baldwin	35935 1911	June 1921	Sept. 1921	£550 $1100	(6)
0-4-0ST	Baldwin	?	June 1921	Sept. 1921	£835 $1670	(7)
0-4-0T	Perry	247 1923	June 1922	March 1923	£2400 $4800	(8) A
0-4-0T	Harman	1923	Oct. 1923	1924-5	£1825 $3650	(9) A
0-4-0T	Perry	1925	Nov. 1924	June 1925	£2205 $4410	(10) B
0-4-0T	Perry	265 1926	?	?	?	(10) B
0-4-0T	Perry	266 1926	Jan. 1926	August 1926	£4679 $9358	(11) A
0-4-0T	Perry	267 1926	Jan. 1926	August 1926		(12) A

KEEP STEAM ALIVE !

SUPPORT THE VINTAGE TRAIN

RUNS FIRST SUNDAY - EVERY MONTH !

Type	Builder	B/No.& Date	Ord-ered	Arrived Ebden	Cost	See Notes
0-4-0T	Perry	268 1926	Dec. 1926	1926-7		(13) A
0-4-0T	Perry	269 1926	Dec. 1926	1927-8	£10 680	(14) A
0-4-0T	Perry	270 1927	Dec. 1927	1927-8	$21360	(15) A
0-4-0T	Perry	271 1927				(16) A
Bo	Fordson engine		1930			(17) A
Bo	Fordson engine		1930			

Notes -

A Sold in September 1939 to Bingle-Davitt Machinery Co., Melbourne.
B Sold in September 1939 to an unknown buyer.

(5) This loco was bought from the N.S.W. P.W.D. - No. 66; and converted from 4-ft. 8½-in. gauge to 3-ft. 6-in. gauge at the Leichardt Depot, N.S.W. Its disposal is unknown, but it was probably scrapped or sold in the early 193O's.
(6) Bought from Isis Central Sugar Mill, Qld. Originally for the Belmont Council, Brisbane. Before being placed in service at Hume it was repaired by Forward Down & Co. This loco was not sold, but remained derelict at Ebden until scrapped in the mid-1950's.
(7) This loco was bought from Cameron & Sutherland who also made some alterations to it before

sending it to Ebden. It is thought that this may have been the Baldwin tram motor, ex Bendigo, sold by Hayden Bros., Barwon Downs, allegedly to the S.R.&.W.S.C. in 1919 for Hume Construction.(See Light Railways No. 19, page 13). The S.R.&.W.S.C. has no records of buying this loco in 1919, and no records of ever buying a loco from Hayden. The subsecuent disposal of this loco is unknown, but was probably sold or scrapped in the early 1930's. If it was from Hayden's tramway its builder's number would have been one of 12,241-5 of 1891.

(8) This loco was definitely ordered and built before the Harman, which was reported to be the pattern loco. Later sold to the Hydro-Electricity Commission of Tasmania in 1944, for use at Clark Dam and Butler's Gorge.

(9) Built and delivered after the above-mentioned Perry. Sold in 1944 to the Hydro Electricity Commission of Tasmania, for use at Clark Dam and Butler's Gorge.

(10) Although I have shown two locos here I think there was actually only one, - Builder's No. 265 of March 1925. However, most reports give 265 as being built in 1926. If it was, then the loco delivered in June 1925 would not be the same and would be the thirteenth loco, which I doubt the existence of. This thirteenth loco does not appear in official files or reports, although a driver at Hume said there were 13 locomotives. Nothing else is known about the 13th. loco - builder's number and disposal unknown. Loco 265 was sold to Pioneer Sugar Mill, Queensland, as "Kilrie", and in 1960 was converted to an 0-4-2T oil burner.

(11) Later sold to the S.E.C. Yallourn, and in 1947 to Australian Cement Ltd., Fyansford as No.10.
(12) Later sold to the S.E.C. Yallourn, and in 1947 to Australian Cement Ltd., Fyansford as No.11.

(13) Carried S.R.&.W.S.C. No.22. Sold in 1940 to Evans Deakin, Rocklea, Queensland as LM2, withdrawn late 1955.

(14) Sold to Mount Morgan Mines Ltd., Queensland, as 3rd No.1 and later sold to Pioneer Sugar Mill, Queensland as No. 2 "Pioneer."

(15) Sold in 1940 to Evans Deakin, Rocklea, Queensland as LM1, withdrawn late 1965.

(16) I believe that this loco was ordered for 3-ft. gauge for the Bethanga bridge construction and after completion of the bridge, was converted to 3-ft.6-in. gauge. Later sold to Mount Morgan Mines Ltd., Queensland, as 2nd. No.4, subsequently sold to Pioneer Sugar Mill, as "Klondyke" which was converted to an 0-4-2T oil burner in 1962.

(17) Tenders were called in January 1930 to supply two 3 ton kerosene Fordson engined tractors for an estimated cost of £900 ($1800) to convey materials to the concrete mixer and bank for the core-wall. No other details known at this stage.

All the locos were kept in loco sheds. The New South Wales shed was built about 1921 and the S.R.&.N.S.C. built one at the Ebden works about 1922, and another at Bethanga bridge about 1927.

Small repairs were done at the Ebden works and major repairs were done by the Victorian Railways at Newport Workshops. In September 1923 the boiler of one of the Baldwin locos was repaired at Newport. In September 1925 the wheels and axles of the Orenstein & Koppel loco were repaired at Newport. Shortly after this a second-hand lathe was bought from the Victorian Railways for £200. The Perry loco delivered in June 1925 was damaged while being delivered by the South Australian Railways and Victorian Railways. This loco was probably repaired at Ebden.

Some technical details of the locos -

	Perry & Harman locos.	Baldwin 0-4-2T
Outside cylinders	10"x 15"	10½"x 16"
Valve gear	Walschaert	Stephenson
Tractive Effort (80% B.P.)	6,000.lbs.	. .
Boiler Pressure	160 p.s.i.	120 p.s.i.
Wheel diameter	2-ft.6-in.	3-ft.
Wheelbase	5-ft.	
Weight	13-14 tons	
Water capacity	450 gallons	
Coal	20 cu.ft.	

ROLLING STOCK

2-ft. Gauge

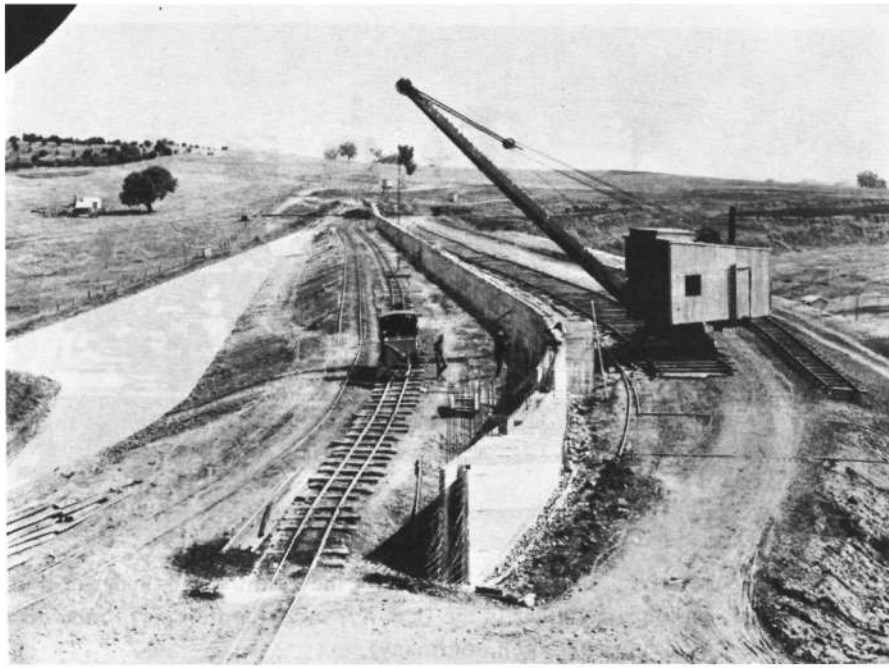
Photographs show both side-tipping steel bins and concrete skips on a frame. These were probably of 1-cu.yd. capacity. The bins may have been removable and replaceable by the skip body.

About 1922 sixty 1-cu.yd. capacity wagons were placed in service. I think these would have been of 2-ft. gauge, as the wider gauges generally used bigger vehicles than this.

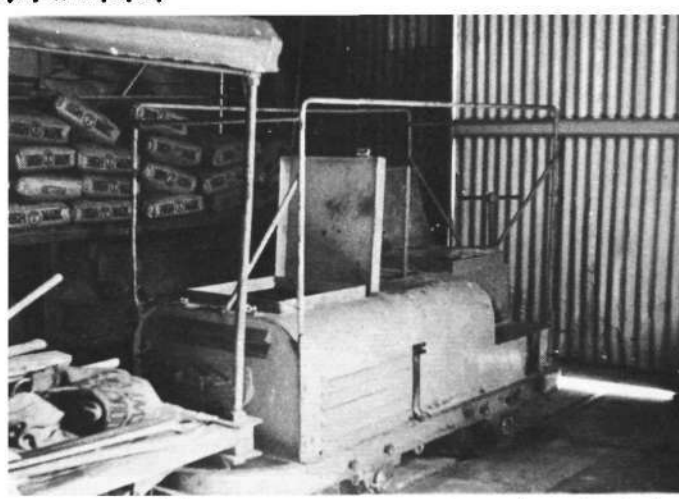
In March 1922 an order was placed for 30 1-cu.yd. capacity side-tipping wagons with G.F. Sewell & Co. These were presumably ½ of the sixty placed in service about that time. Subsequent disposal of the 2-ft. gauge rolling stock is not known.

3-ft. Gauge

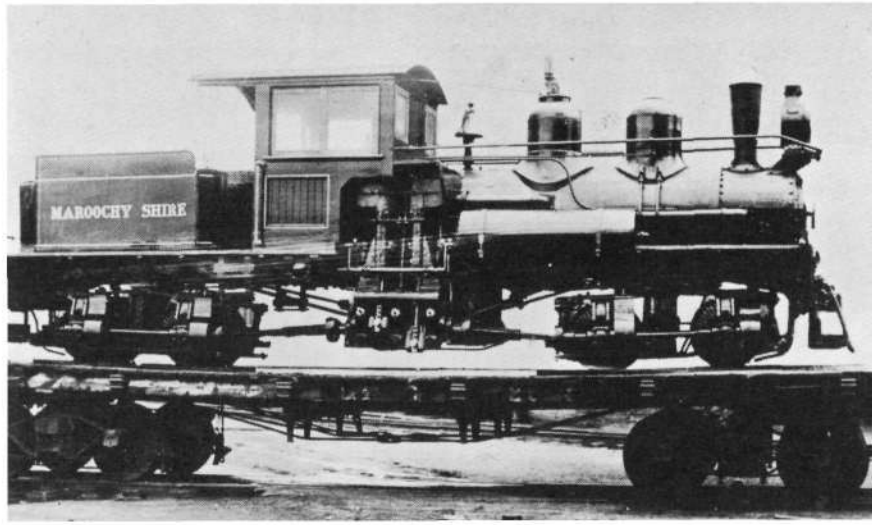
Between 1921 and 1924 about 72 timber side-tipping wagons were placed in service on the 3-ft. gauge in New South Wales. Of these, 23 were from stock, and the remainder bought new.



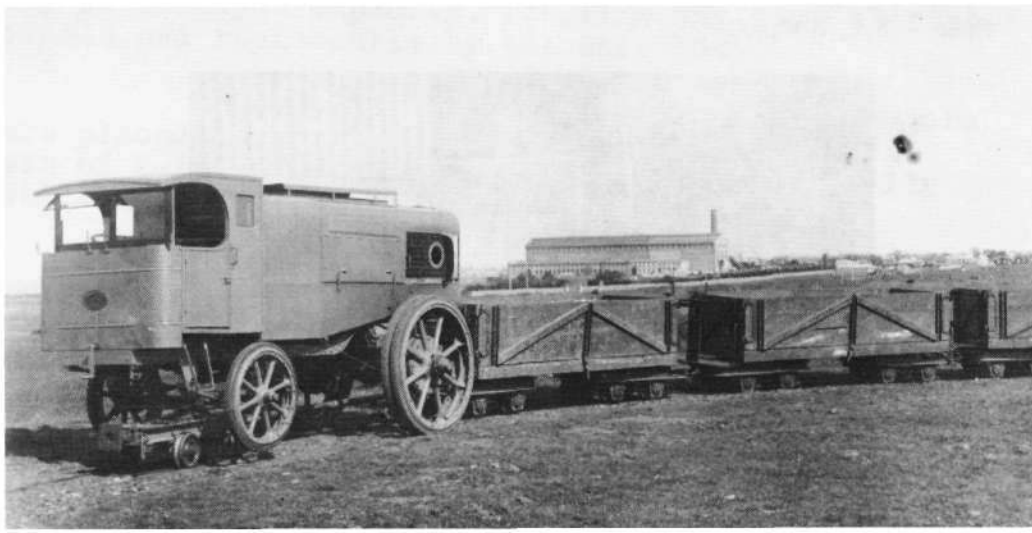
Hume Reservoir construction, showing the end of the Main Victorian Embankment. The 2-ft. gauge locomotive is believed to be the Krauss, ex Torumbarry. Photo - S.R. & W.S.C.



Small petrol locomotive at Waranga Reservoir. (See L.R. No. 21, page 18.) Photo - C. Andrews



"A" class Shay locomotive. B/N. 2823 of 1915 for the Palmwoods - Buderim tramway, Queensland, on a bogie flatcar in the U.S.A., awaiting transport to the docks. Photo - Courtesy H. Dunker (Bremen, Germany).



2-ft. gauge "Roadrails" train on demonstration track at Spotswood, Victoria. The tractor is standing over a point. Photo - N.E. Wadeson collection.

To convey the large stones (displacers) from the quarry to the wall the P.W.D. built 12 flat-tops in 1923, as previously mentioned. A further 24 were built at the works. These were of timber construction with rails and chains on top to hold the displacers.

T o convey the steel from Ebden works area to the Pethanga bridge, flat trucks were used. These may have been the displacer trucks with the rails removed from the top, or may have been new ones.

3-ft.6-in. Gauge

There were about 80 timber side-tipping trucks in service. These were built new as follows - 1921, G.F. Sewell ten,and Malcolm Moore 40; 1922, G.F. Sewell 12, and Malcolm Moore six; 1924, G.F. Sewell 12. Their subsequent disposal is unknown, but they were probably scrapped.

There may have been other rolling stock, but details are not known to the writer.

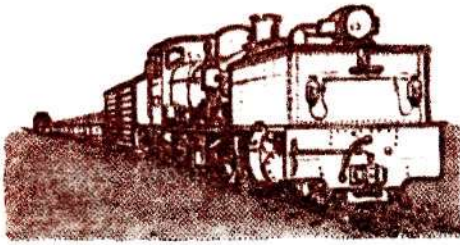
THE DEPRESSION

On 1st. January 1928 expenditure on the project was curtailed somewhat, but not stopped altogether. The effect of this is not very apparent, but it certainly slowed down construction for a few years.and would explain why the reservoir took so long to build.(1919 to 1936).

Completion of Construction

Construction was substantially completed by the end of 1935 and in June 1936 the S.R.&.W.S.C. sold all the surplus plant. Other plant which was still of use was transferred to other works, including Yarrawonga Weir Construction. On 8th. August 1936 the Reservoir was filled to capacity. It was officially opened on 21st. November 1936 by the Governor-General, Lord Gowrie.

(To be continued).



LETTERS

Mr. N. E. Wadeson writes -

A "ROAD - RAILS" RAILWAY (L.R. No.22, page 22)

The Road-Rails system was sold by "Roadrails Ltd., London," and the Australian agents were "The Melbourne Trust Ltd." Roadrails Ltd. was a British company and its tractors were manufactured by Messrs. Wm. Beardmore & Co. Ltd., Glasgow and London.

Tractors were of two basic types -
(a). Those remaining always on rail with a bogie at each end - the road wheels providing the traction.
(b). Those which could run on roads or railways, by lifting the front wheels and placing a bogie under the front.

Either type was available as steam or internal combustion powered, as desired.

The photo (on page 24) is of the Spotswood demonstration track, 2-ft. gauge. The track had at least one grade of 1 in 10 in it. The tractor is standing over points, and is of type (b) above. It was claimed to be capable of hauling twenty tons gross up the 1 in 10 grade. The rail was "about 16 pounds to the yard."

CONTRIBUTE TO -

NEWS, NOTES & COMMENTS.

Mr. A. E. Parker writes-

THE DEAN MARSH - BENWERRIN RAILWAY (L.R.No.20, p.3)

I worked on the mine itself from sometime in 1900 until the first accident during the construction of the railway in 1901. First let me state that no one was ever killed in any of the accidents. I was involved in the first accident (L.R.No.20,p.9),when the engine was derailed and ploughed into the ground, turning on its side. The truck nearest the engine overturned, the second truck ending with its wheels on top of the first, and the third was thrown off the line and came to rest at right angles to the second. There were eight people on the train including the driver and fireman, but only two were badly injured.

The engine had been pushing trucks ahead of it up the line, as we were cleaning out cuttings and widening embankments. The platelayers were just ahead of us, and we were waiting for them to finish laying rails over the embankment, which was on a fairly steep rising grade. When the driver tried to start the engine the weight of loaded trucks began to push it back, and I think the driver panicked and lost control; anyway it went for about one mile before being derailed.

Regarding the boiler explosion, the driver, fireman and guard were putting things in the last truck when the dome blew off the loco, the force of the explosion blowing it nearly a quarter of a mile across the paddock. I was working in another paddock, which would have been at least two miles from the site of the explosion, heard the explosion and saw the cloud of steam rising, and new just where it was.

I will endeavour to give you some account of the working of the mine. The coal was mined from a tunnel running under a hill, it was then hauled to the top of the hill by a powerful steam winding engine in a gully at the mine. There was a strong

wire rope, attached to winding gear at the mine, and which went round a big Bull wheel at the top of the hill and back down hill to the mine, where it was attached to skips. These took the coal up the line to a stage at the top of the hill, where it was unloaded, bagged and carted by bullock teams to Dean Marsh railway station. (The private railway not having been completed at that stage). My job was coupling skips, of which there were five or six, to the rope at the mine, then going up on them to the top of the hill, tipping them on the stage, putting them back on the line, recoupling to the rope, loading any stores for the mine, and going back on them. The skip line was nearly half a mile long, so that meant about a mile of heavy wire rope. Later I was transferred to work on the 5-ft.3-in. gauge line during its construction, until I was injured in the first accident.

The driver was, I believe, a locomotive driver in England before coming to Australia, and was dismissed from the railways for reckless driving. We knew him by the nick-name of Hellfire Jack, and he used to send that old loco up the line flat out. The fireman was his son, Monty Morris, a year or so older than I.

No doubt much of the cause of the Company's failure was the result of all the accidents, and the expenses from them, such as compensation and medical expenses which the Company was forced to pay. Then there was the time lost in putting the locomotive back on the line and repairs, and on top of that the cost of a new (ex V.R.) locomotive.

The grade on the line was so steep that they could only take three trucks of coal at a time, which could not pay. The cuttings were so narrow and steep that very often when they wanted to get a load through they would find a big fall of earth and rock, especially in the 45-ft. cutting. This could take a day or so to clear. No wonder the Company failed !

Mr. A. Howlett writes -

BENWERRIN COAL HAULAGE (L.R. No.20).

As you may know the Tramway Museum Society of Victoria has recovered one of the vehicles from this incline, this skip carries the lettering -

G.W.C. Co
MELBOURNE

This is just able to be recognized after cleaning down. The wheel tyres have more than seven years wear, and the vehicle is only 22-in. wide, and is therefore unlikely to have been regauged from 2-ft. I therefore believe that the vehicle was constructed for the Great Western Colliery Co., and that the incline haulage was always of 15-in. gauge, and not reduced to this gauge in 1942 when the mine was re-opened. I think the map which shows a 2-ft. gauge tramway running down the incline was produced by the Deans Marsh Tramway Co. for a prospectus long before the incline was actually built.

We have been told by the Beaumaris & District Historical Society that the Beaumaris horse tramway sold a large amount of rail in 1902-3 to a mine in the Otways. This is further evidence that the rails and vehicles in use between 1942 and 1949 were the original ones, dating back to Great Western Colliery Co. days.

Mr. B. MacDonald writes -

SHAY LOCOMOTIVES IN AUSTRALIA (L.R.No.22, page 15).

Regarding Mr. Wright's letters about Shay locos in the Mittagong area, there was no Shay on the Box Vale Colliery line, nor would there need to be, as it was built by a government railway contractor, graded and ballasted for government loco working. It was closed before the first Shay loco got to Australia.

The Fitzroy iron works line, in the Mittagong area, was a 2-ft gauge horse and rope job and closed up about the time Ephraim Shay was trying to get the Lima Machine Co. to build him a Shay loco. Also for Christmas Island Builders Number 1328 is not a Shay no., - there are no Shays in the 1,000 to 1,499 bracket. They were before or after that.

DARNUM - ELLINBANK TRAMWAY (L.R.No. 21).

There appears to be a discrepancy between the written description of the locomotive and the photographic illustration of same.

The description says that it was to be fitted with Joy's patent valve-gear, but the photos on page 7 show a loco fitted with valve-gear between the frames driving through a transfer shaft to the valve rod and steam chest on top of the outside cylinders. This arrangement is not uncommon in loco practice,and indeed in America, in the days of slide valves, was almost universal and was generally known as "American Stephenson." I have not found any evidence of any British builder of that period using it as typical and the few instances of it have been upon special request.

It is true that Fowlers, at that time were fitting Joy's valve gear, slightly modified, to all of their stock locomotives and had been so doing for about three years, and continued until about 1919 when Walschaert's became standard for them. However to retrace to the earlier days of Fowler, they commenced building locomotives in 1867 and were usually built against customer's order and specification to a large degree. Later they commenced building their own design, and almost straightaway adopted the method of placing the steam chest on the cylinder top, and to actuate the valves Stephenson gear was adapted with external eccentrics, which gave the locos a somewhat continental appearance, with all the works around the wheels. From this point it would be a simple and logical progression to adopt the American adaption, and so instal the eccentrics and like within the frame, but still maintain the outside cylinders and steam chests.

The foregoing preamble is leading to my main

point and that is that Mr. Cropley did not receive a locomotive that was described in the specifications sent to him. I have no proof for the ensuing theory, but anybody who has had experience in the engineering manufacturing business will agree that it is a possibility. Mr. Cropley applied to the Sydney office of Fowler (refer article) who acknowledged it forthwith by supplying Mr. Cropley with the only information that they had, that being the specifications of the standard loco. In October 1889 the Sydney office received the Deposit and instructed the Leeds works, no doubt by telegraph, that an order had been placed.

Therefore it is my contention that on receipt of the cable from Sydney, the Leeds factory acknowledged and replied offering No. 5851 for immediate delivery, because they had it on hand and wanted to get rid of it, inspite of the agreed price being for a smaller loco. 3-ft. gauge is not a very common one for English suppliers, I would think that No.5851 was available because it had been built against an anticipated order that had been cancelled.

It is obvious from the photos that the loco is much larger than the submitted specifications. The specified weight was 9¼ tons, which is less than a Mount Lyell Krauss. I would estimate the weight of No.5851 to be about 16 tons. The two 0-4-2T Fowlers on the Warburton timber tramway, on which we assume this loco also later ran, were a later version of the same pattern, and they weighed 16¾ tons. Also the the rigid and total wheelbase of the specifications are obviously less than that of the loco as delivered, and I suggest that these should be 54-in. or 60-in. respectively. In fact the two Warburton engines were 54-in. and 124-in..

Correspondence is probably missing which would no doubt indicate that Mr. Cropley was aware that he was going to receive a bigger loco than that originally specified. I feel this is evidenced by his desire to use 50-lb. rails, and when these were not available, to use 60-lb rails. The locomotive described in the specification was suitable for 25 to 35-lb. rails, according to Fowler's recommendations.

Finally, another indication that the loco was immediately available at Leeds is the fact that the line was in operation at the end of April 1889 after the curve modifications were made, so this means that the loco must have arrived at the site for assembling in late February or early March, which in turn would indicate a December sailing from England. None of this speed would have been possible if the loco had been processed in the normal way, particularly if Cropley had insisted that Joy's valve gear was not to be used.

"LIGHT RAILWAYS"

I like your practice of putting references at the end of articles, not all magazines dealing in railway history publish references, and without them, unless one knows the writer, one has to consider the article as having a fifty-fifty chance of being correct.

Have you given thought to diversifying your scope beyond Victoria (It is V.L.R.R.S. policy to encourage research into Tasmanian railways - Ed.), like change the title to the Australian Light Railway Research Society, or A.L.R. Society, or Australian Light Railway and Tramway Society. I really think you would get support, there are quite a number of people who are interested in little railways who are not catered for at present.

(B.Mc.Donald, Curator, Museum of Historic Engines, Goulburn, N.S.W.).

Errata - In "Light Railways" No.22 on page 10 Krauss builder's number 2437 is described as an 0-4-2WT, this should have been 0-4-0T, and was a typing error for which we apologize.

In "Light Railways" No.21 the photograph on the bottom of page 7 should be credited to the J.L. Buckland Collection, this was a printing error for which we apologize. The photos on the top of pages 7 and 8 were supplied by an unknown non-member, who I regret I am unable to credit.

NEWS, NOTES & COMMENTS

V.L.R.R.S. Visit to the STATE ELECTRICITY COMMISSION'S BALLARAT standard gauge electric tramway, 3rd. March 1968.

About 28 members and friends participated in this interesting tour. Four wheel car No.21 of 1909 was used for the first part of the trip, and the first terminus to be visited was Lydiard Street North. On the way to that place proceedings were enlivened when a tram coming in the opposite direction was met on the single track. The other car had to reverse to the nearest crossing loop to let us pass.

Later in the tour we changed to car No.37, a modern bogie vehicle built as recently as 1916. While on the Victoria Street line in this luxurious vehicle a delay of about 12 minutes occurred when the overhead wires went dead for no apparent reason.

All lines were visited, and many photostops were made. (F.Stamford).

M.M.B.W. SOUTH EASTERN SEWER PROJECT.- The first site from which tunneling is taking place in this project is in the vicinity of East Malvern station on the Outer Circle Railway alignment. Railways will be used in the tunnel, and on the surface for muck shifting. Initially three Gemco-Funkey locomotives of B wheel arrangement were ordered from George Moss of Leederville, W.A., the first one arriving at East Malvern on 1st. March 1968. The 2-ft.6-in. gauge eight ton locomotive has a Bedford diesel engine with Allison

torque drive with one forward and one reverse gear. This gives a top speed of 15 m.p.h. Other details - Builder's No.L618 of 1968, length 11-ft.6-in., driving wheel diam. 20-in.,wheelbase 3-ft.8-in.,height 5-ft., width 4-ft.. The locomotive is painted white with black warning stripes at each end, one headlight and a red light on top like an ambulance. It is like a box on wheels, with a chunk 23-in. high by 29-in. long taken out of the top at one end.

A considerable amount of 63lb./yd. rail is already laid and well ballasted. The heavy rail section has to take the weight of the 80 ton tunneling "Mole" which will run on the same tracks. There are two types of wagons, both bogie. One is flat-topped for carrying materials, the other is for muck transport. The mole is expected in early April, and a locomotive will be lowered into the tunnel then. The project will be completed in about six years.

(M.Plummer)

3-DAY HIKE,V.L.R.R.S Easter Tour -Don't forget this golden opportunity for a leisurely walk over the route of the Powelltown and Federal tramways. Don't delay, reserve your place by sending the reservation form to Geoff. Maynard, whose address is shown on page 2 of this issue

FRANKSTON PLEASURE PARK RAILWAY - Some further information is to hand on the steam locomotive in use on this line (See L.R. No.22, page 19). The locomotive was not built by Decauville, but was built for them by Société Anonyme Des Usines Metallurgiques Du Hainaut, Couillet, of Belgium, in 1890 (not 1886 as reported in previous references) and had Couillet's B.No. 986. However, Decauville, who acted as agents, slapped their Builder's No. 90 on it, and sent it to Melbourne. It was one of seven Couillet engines to come to Australia, six having been supplied through Decauville.

The Fédération des Amis des Chemins de Fer Secondaires (The Light Railway Enthusiasts Society of France), who supplied most of the information above, advises that this engine is the oldest of its type

still in use anywhere in the world, and possibly the oldest of its type still in existence.

(M. Plummer)

ANOTHER COUILLET LOCOMOTIVE - The other ex West Melbourne Gasworks locomotive, also previously referred to as a Decauville, was built by Couillet in 1886, with their B.No.861. This locomotive has met a much different fate in that parts of it are being used to manufacture a "synthetic" 2-4-2ST of Baldwin style. The frames have been lengthened from 11-ft. to 24-ft. and the locomotive's appearance has been completely altered.

A new weldod boiler is to be fitted with a maximum working pressure of 160 p.s.i. .

The owner of this locomotive wishes to run it on a section of 2-ft. 6-in. gauge track which he hopes to lay at Walhalla.

(F. Stamford).

PUFFING BILLY PRESERVATION SOCIETY - Ex-Victorian Railways Beyer-Garratt locomotive G.42, of 2-6-0-0-6-2 wheel arrangement was finally delivered to the Menzies Creek narrow gauge museum on Saturday February 10th. The locomotive was incorporated in a special train, which consisted of NC brake van, NBH passenger car, G.42, NBH, and NBC passenger brake van, hauled by NA class loco No.6A.. I have no doubt that the P.B.P.S. would be glad to hear from anyone who would like to assist in restoring the Garratt.

Due to the severe drought the P.B.P.S. has decided to temporarily suspend train operations, on account of the tinder dry grass and the resultant bushfire danger. Train services will resume when a reasonable fall of rain has reduced this danger.

(F. Stamford).

EMU BAY RAILWAY COMPANY - The Dubs 4-8-0 loco No.8 was placed in its final resting place in Hilder Parade, Burnie on Sunday 18th. February. Like its counterpart, A.4. in the City Park,Launceston, signs are

already evident of parts being stripped and dismantled, evidence of another misguided scheme of preservation of an historical steam locomotive.
(Tasmanian Rail News).

"THE NARROW GAUGE", No.46, published by the Narrow Gauge Railway Society (U.K.).

The latest issue includes articles on Hunslet 0-4-0T locomotive B/No. 1028, the D wheel arrangement Diesel-hydraulic locomotives built by North British, a class of 2-ft. gauge Bagnall 4-4-0T's built for South African sugar tramways(incl. scale drawing), a peat tramway at Shapwick, magnificent finely detailed scale drawings of Hunslet 0-6-4ST 2-ft. gauge locomotive "Beddgelert", a 75cm.gauge line in Spain, a cement pipe factory's tramway, and scale drawings of Hunslet B/No. 364 of 1885 1-ft.10¾-in. gauge 0-4-0ST. 29 photographs are included, including a huge one of the 4-4-0 tender locomotive used on the Fiji free train. Annual sub. £1-1-0 sterling. Enquiries - Hon. Membership Secretary, N.G.R.S., Mr. J. Buckler, 123 Howdenclough Rd., Bruntcliffe, Near Leeds.

NOTICE

While every effort is made to ensure the accuracy and completeness of articles published in "Light Railways", we cannot be sure that errors have not crept in. Additional information is being uncovered all the time, and this often proves that the history of tramways and locomotives was in fact different to that which was believed to be true.
If you see any errors, or can add additional information, please contact the Editor, and so help us to record the full history of Tasmania's and Victoria's light railways

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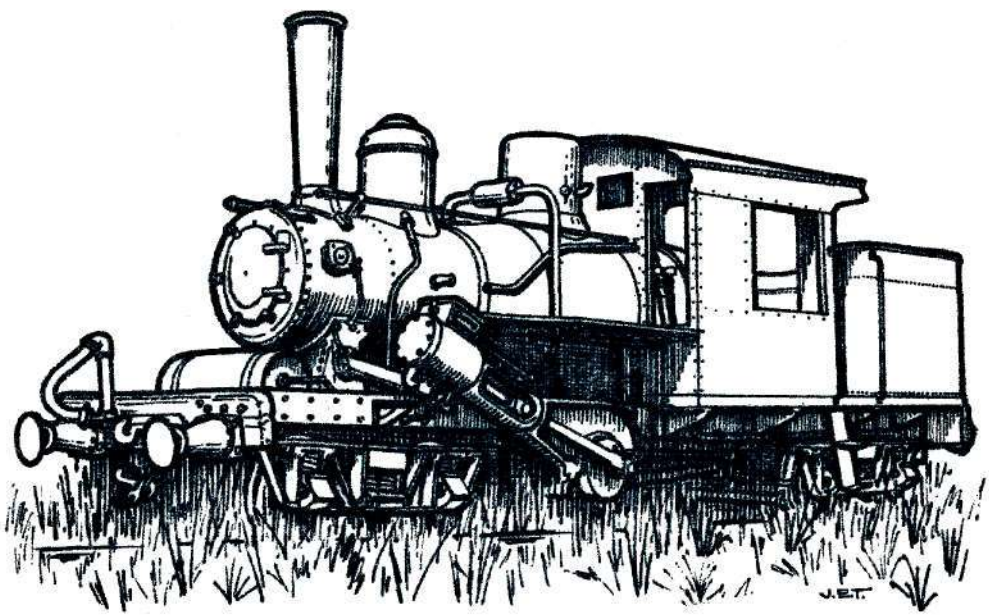
Oppinions expressed in articles or letters are not necessarily those of the Society or the Editor.

LIGHT RAILWAYS

Number 24 Winter 1968



PUBLISHED BY

THE VICTORIAN LIGHT RAILWAY RESEARCH SOCIETY

No.24 W I N T E R 1 9 6 8 vol.VI
Price 35c.

The cover shows John Thompson's drawing of a "B" class Climax locomotive, B/No. 1653, of 1923, now derelict at Maydena, Tasmania. As the cover was printed before the Annual Meeting, it shows the society's old name. This is now altered to "The Light Railway Research Society of Australia".

Editorial changes: John Alfred has kindly offered to edit the next few issues of "LIGHT RAILWAYS" and John Brady will be looking after the duplicating of this and subsequent issues. By the time members recieve this, I will be overseas, and editorial correspondence should be addressed to Mr J.Alfred. (Frank Stamford.)

New editor's note: Members who have been concerned about the way their work was being edited will be glad to know that the council has compiled a list of Editorial Rules with which I fully agree. (John Alfred)

Annual Subscription- $1.50 ($1.00 under 16) dating from 1st June 1968.

TRAMWAYS OF THE APOLLO BAY AREA: by E.G.Stuckey.

Apollo Bay was first settled in 1859 by paling splitters, who shipped out their product by coastal boats to Melbourne.

In 1852 the first sawmill was built in the present town area. The following year another mill was established on the Barham River, on the site of the present recreation grounds.

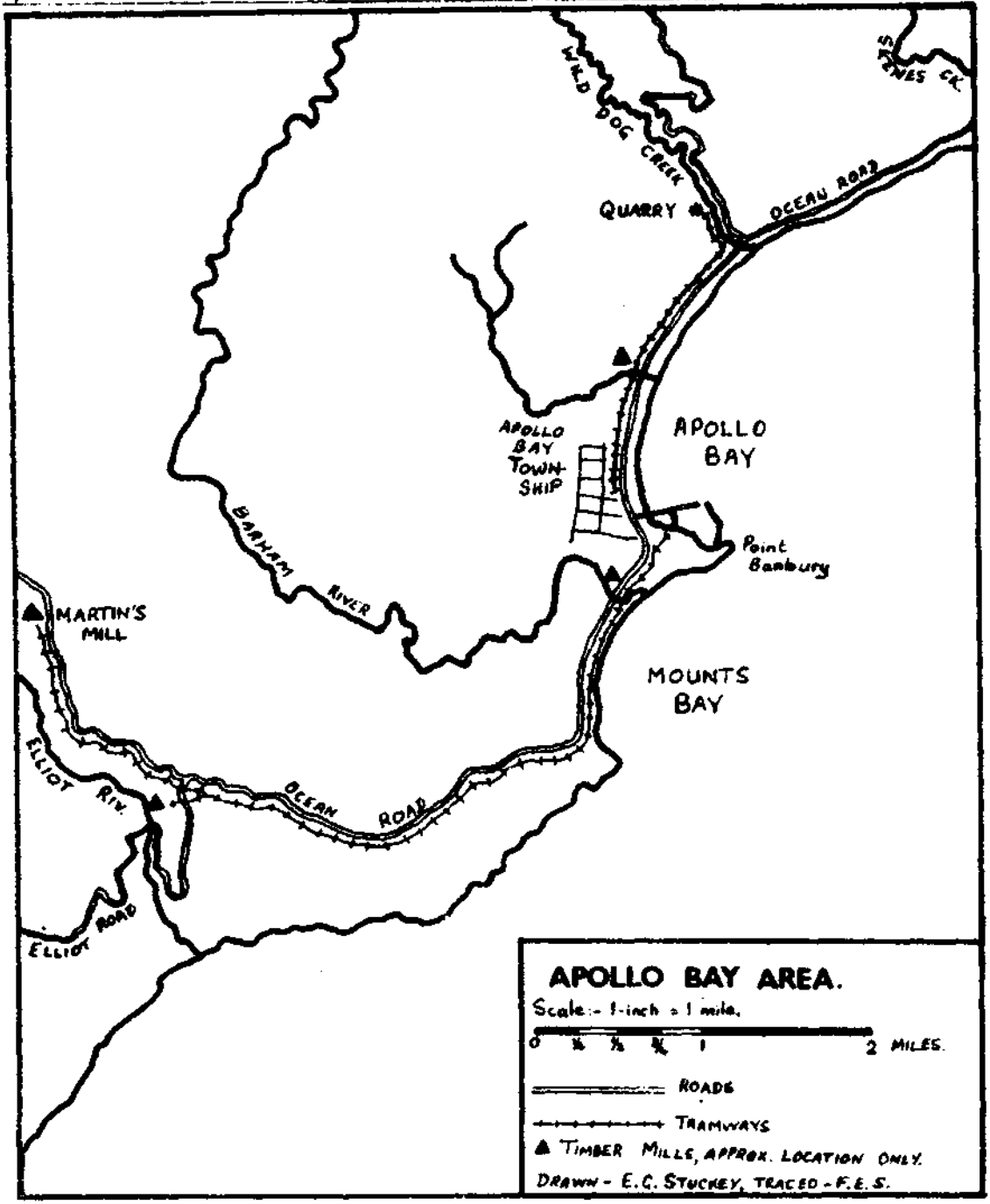
Timber was loaded onto the coastal ships by pushing small boats leaded with timber through the surf. A jetty was built in 1855 on the east side of Point Banbury to facilitate loading.

During 1855 a new mill was built near the site of the P.M.G. cable station. The timber from all the mills was carted by waggons to the jetty.

In 1882 another sawmill was established on the Elliot River, about four miles south-west of Apollo Bay. A tramline with wooden rails was constructed which followed the present Ocean Road west from Apollo Bay for a distance of about four miles, then went west from the road for about half a mile to the mill site. This mill was about a quarter mile upstream from where the present Elliot Road crosses the Elliot River. Timber was taken by horse tram to a storage yard on the hill above the jetty to await shipment.

A new and longer jetty was built in 1892 to allow deeper draft vessels into the port. About 1910 Martin's sawmill was opened two miles further up the Ocean Road from the Elliott River sawmill, the company extending the tramway to their mill. There appears to have been a period of joint use of the tramway by both mills. The Elliot River sawmill closed late in 1910, leaving Martin's sawmill to operate a few more years.

Another tramway of about two and a half miles was built to carry crushed rock from a quarry in Wild Dog Creek to the streets of Apollo Bay. The skips were horse drawn and the line so poorly laid that there were constant derailments. Eventually enough crushed rock reached the streets to enable the line to be closed.



ARCHAEOLOGY IN THE ADA VALLEY: by Frank Stamford.

(The Society's Three-Day Easter Hike)

Fourteen people took part in our highly successful hike along the Powelltown and Federal Tramways. Eleven participated in the walk, three looking after t the camp. The Organizer and Hike Leader was Geoff Maynard. Don Marshall supervised the camp, while Mrs Maynard and Mrs Marshall presided over the catering arrangements. On the first day the party was taken in three cars to Powelltown, whence we walked to Nayook West (site of the tunnel) stopping there for lunch. This stretch of the trip involved breaking through very dense undergrowth for long distances, the track obviously being rarely visited by walkers.

In the afternoon we continued along the tramway until the undergrowth became so thick that we were losing too much time, therefore we followed the road for a mile and a half, picking up the tramway formation at a clear spot. Splitters Camp, where the Shay-worked section ended and the incline began, was overgrown, but the double track trestle bridge still stands there, though it may not last much longer. A climb up the 1 in 14 High Lead finished the day, heavy rain having set in by this stage. On reaching the top of the mile-long incline, the saturated and tired sidrodromarchaeologists were taken by car to the camp, near Ada No.2 Mill, where we were welcomed with a roaring fire and hot soup.

The next day we went by car to New Federal Mill, abandoned about 1951. Some of the mill still stands, together with a few houses. Useful furniture was spread about- bathtubs, beds, kitchen tables, and other slightly used junk. From here we walked back along the Federal Tramway to the camp for lunch. The track was still very clear with many trestle bridges still standing.

In the afternoon we motorcaded to Starling's Gap and walked back along the Federal Tramway to the Ada No.1 Mill line crossing. This section was also very clear with several high trestle bridges still intact.

On the way, Ada No.1 Mill was visited and we returned via the Ada No.1 Mill branch back to camp. This line had not previously been seen, having been always hidden by dense undergrowth. It had innumerable very long trestle bridges, all still standing, though rotting and slippery.

Some had slid sideways or partly collapsed, and were at crazy angles. We finished this section just before sunset the foliage gradually closing in over the tramway, creating a natural tunnel. When we came out of the "tunnel" we realized why we hadn't ever been able to find the southern end of this line. It looked just like a wombat hole.

On the last day we walked to New Ada Mill, where some of the mill and some houses still stood. Along the line a stretch of steel-railed track was still in position, and a boiler and winch were to te seen.

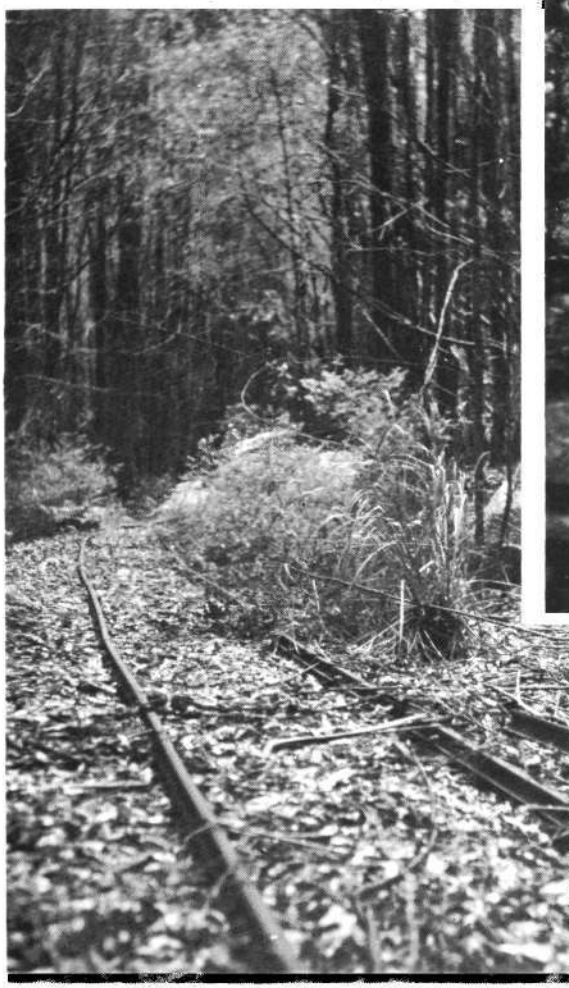
On our way home, the Brimbonga seasoning works was visited at Warburton, together with a complete six-wheel tractor.

The hike was voted a great success by everyone, and obviously a great deal of planning must have gone into its organization. Special mention must be made of the meals, which werre varied, ample, and of high Standard. Mrs Maynard and Mrs Marshall are to be congratulated for their work in this regard.

Following the success of this hike another may be arranged next year, visiting a different area.

THE EASTER HIKE

Right - Trestle bridges presented some problems. This one is on the Federal tramway, between Starling's Gap and the Ada No.1 Mill line crossing.

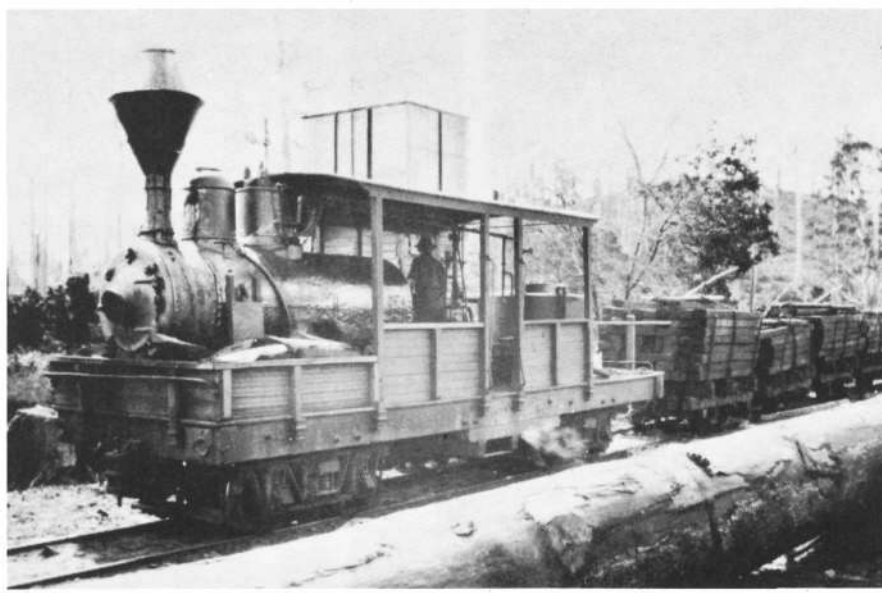


Left - Steel rails still intact on the Powelltown tramway's New Ada Mill line.

(Both photos - Ray Jude)

The only standard gauge Climax in Australia, B/No. 1375, on Longworths' timber tramway, Laurieton, N.S.W. North Coast.

Photo - P. Sellars Collection



"A" class 3-ft. 6-in. gauge Climax locomotive of 1914 at work on Allan Taylor's Mayer's Point line (N.S.W.).

Photo - I.K. Winney Collection

The Climax Locomotive

by B.Macdonald

History and Description:

The Climax Manufacturing Company had its beginning in the town of Corry, in the state of Pennsylvania, U.S.A in 1868, and it was initially organized as the Corry Mach ine Co., whose main line of business was the manufacture of farm machinery. Two years later it became incorporated and the name was changed to The Climax Mower and Reaper Company.

In the middle of 1873, due to a change in ownership, the name was changed again, becoming the Novelty Ironworks Before the end of that year, it saw another change of name this time to the Gibbs & Sterrett Manufacturing Co., and as such it rapidly expanded and diversified its operations to include the manufacture of atationary steam engines, boilers and other engineering products. However, this did not bring prosperity, and after a ten-year struggle, the company became bankrupt and was sold to a banker and businessman, R.R.Battles, who reorganized it as the Climax Manufacturing Company in 1884. He continued the same line of business, but saw the necessity of embracing aome line that was not as competitive. Several ventures were tried but none were really satisfactory, until, after several approaches by local timber millers, he decided to build a locomotive specially for the conditions of small timber-getting operations, incorporating the millers' ideas as well as his own. This pioneer of Climax locomotives was completed in March, 1888, and was immediately successfully, resulting in orders being recieved for other mainly from timber millers in Pennsylvania and neighbouring states.

As originally designed, the Climax locomotive was virtually a wooden framed bogie flat waggon, with a vertical boiler mounted about two-thirds along it and supplying steam to a two-cylinder simple expansion vertical steam engine approximately equidistant from the other end. A fuel bunker and water tank were mounted on alternative ends.

The bogies were wooden frame, four-wheel affairs without springs, and were driven by a cardan shaft with telescopic sections and universal joints, covering the total wheelbase and driving onto the axle by means of a spiral tooth pinion and crownwheel. Only one wheel of each axle was driven, the other being idle. This was introduced to give a differential effect, but this was a doubtful advantage in the face of the loss of the potential adhesion of four wheels. The drive from the engine unit was effected by having a pair of straight tooth spur gears on the crankshaft, which in turn meshed with a mating pair on the cardan shaft, and, when one or the other set was selected by means of a sliding dog-clutch on the cardan shaft, actuated by a position lever on the loco deck, so that speeds of five or ten miles per hour could be obtained, the gear ratios being 9:1 and $4\frac{1}{2}$:1.

As could be expected, after the first few locos were produced, the design was refined somewhat and more sophisticated features were introduced. These took the form of steel bogies with springs, and alterations to the drive method so that both wheels on the axle set drove.

About this time, two other designs of locos were introduced, one being a four wheel locomotive with double flanged wheels for working on what were known as "pole roads". These were railways of the most elementary nature consisting of straight wooden poles about nine inches in diameter laid directly on the ground at a suitable gauge, without benefit of sleepers, fishplates or other orthodox fitments. However, only a few of these were built, and so a small number of bogie locos were built for them. In passing, it is interesting to note that the Tasmanian timber firm of Crisp and Gunn had a pole-road system, but operated it with petrol tractors.

The other design forshadowed the later well-known "B" class loco. This had a horizontal loco boiler and vee type engine driving the cardan shaft direct. However, no locos of this design are known to have actually been built and it was re-designed in 1890 to incorporate a pair of horizontal cylinders above the leading bogie and on either side of the boiler. These drove back to a cross

shaft under the boiler and then through the change gear train onto the cardan shaft.

In 1893 this was further modified and the cylinders were retained in that position and inclined at about 40 degress and drove onto the cross-shaft which drove the cardan shaft direct through spiral bevel gears. The change gears were eliminated and the regular maximum speed was settled at about 15 miles per hour. A conventional wooden cab was mounted at the firebox and a combined fuel bunker and water tank was placed behind it over the rear bogie. This form of layout represented the "B" class and remained basically unchanged except for minor improvements.

Also available was a super power version of the "B" type, with an extra bogie carrying a watertank trailing behind the main locomotive. This of course added to the tractive effort without increasing the axle load. These were designated "C" class.

Another modification that took place in this year was that the vertical boiler as used on the "A" class was superseded by a horizontal loco type boiler and the fuel space was re-located on either side of the firebox and boiler, and sides were fitted to this area of the frame to accommodate it.

The design of loco-type boiler first used had a parallel barrel and a vertical cylindrical firebox which continued upwards beyond the top line of the barrel. This was very good for the "A" class because these, more than the others worked under the most arduous conditions in all respects and the greater water space above the firebox crown undoubtedly prevented many dozens of burnt boilers. Later, the cylindrical firebox was superseded by a square firebox, but the outer wrapper was still well above the top of the barrel. Design changes continued and for a period boilers with the firebox level with the barrel were used. However, the boilers on the "B" and "C" type locos were mainly the "waggon top" or "extended waggon top" style which was so popular in America up till the 1930's. There were also other features about the Climax locos that enabled them to be dated, the more significant being-

1911: steel frame optional for "A" class.
1912: steel cabs with two side windows introduced on "b" and "C" class
1913: steel cabs with one side window introduced on "B" and "C" classes.
1916: square water tank in lieu of round tank on "A" class.
1925: last of wood frame "A" class.

The ordering and production of Climax locos continued to increase until a peak was reached about 1920. After this, due mainly to development of logging tractors and heavy motor trucks, requirements of the timber tramways decreased. Not that the Climax was totally reliant on t is market but even in other industries modernisation was being experienced and there was a number of good second-hand geared locos available to satisfy the needs of specialised users. In considering these things, the management made the decision to close the venture, and in September 1928, the manufacturing rights, patents, parts and work on hand were sold to the General Parts Company of Detroit, Michigan. The machinery and property were sold by the end of 1934, although the office at Seattle in Washington State was open until 1945 handling spare parts for the dwindling number of "B" and "C" class locos in the larger timber operations in the western area.

Unfortunately the company's records are largely non existant, and historians in the U.S.A. have had a difficult task in piecing together the story, and more particularly, the builder's serial numbers. This latter was made more difficulty by the apparently haphazard manner in which they were issued. It is believed the builder's plates were cast in quantity batches with the relevant numbers on them. They were then thrown into a bin in the erecting shop and a sort of "lucky dip" into this bin would produce a plate which decided the number of that particular loco, and it would be affixed in the desrred position ("A" class had it on the smokebox door disc; "B" and "C" on the smokebox side). The system was made even more sketchy by the initial issue of numbers, because the consecutive numbers were not always given to the foundry. For instance, it is believed that the numbers from 1 to

250 or 300 were issued consecutively, then only odd numbers to 499. From 500 to 1,000 only even numbers were used. From 1001 to somewhere about 1585, odd numbers were again used and from there on to the finish in the 1690's, all numbers were used. It is estimated that the total number of Climax locos built would be between 1030-1060.

The "A" class locos were made in weight from 10 tons up to 20 tons; "B" class from 18 tons up to 60 tons; "C" class from 70 tons up to 100 tons. The tractive effort of the largest "C" was 44,000 lbs; that of the largest "A" in low gear was 19,360 lbs. The "A" clas was very popular because it was cheap and light, and thus suited the small-time user, whose budget and trackage was also cheap and light. It was never pretended to be anything else than functional, and right throughout the life of the company, its appearance was something that could only have been the product of a bush timber mill brainstorm.

The Climax in Australia:

The earliest recorded use of a Climax in Australia was by Lahey Bros on their 3'6" gauge timber tramway at Canungra in south-east Queensland. According to reports this locomotive, a "B" with cylindrical firebox, arrived in 1903. For some reason it was not really popular, maybe because the whole of the firebox was within the cab, and the radiated heat from a cylinder some five feet in diameter, and six feet high made it hard to live with. In any case, Laheys purchased a secondhand Shay type loco in 1905 and used it in preference to the Climax. When and to whom the Climax was disposed is unknown, but it appeared on the tramway of Messrs. Pines and Hardwoods Ltd at Simmsville on the N.S.W. central North coast in 1923, and I was told by two of the ex-employees of that company that it had come from Yarraman, in southern Queensland where the company had a previous venture. About 1930 it was sold to the Coffs Harbour Timber Company for use on their line at Crossma Glen, south of Coffs Harbour, on the N.S.W. North coast. This mill closed in 1923, and the loco was abandoned. Over the years it gradually decomposed through the periodic depredations of the scrap dealers, until only the boiler, bunker and parts of the motion are left.

The next arrival is presumed to be an "A" class of about 1912, for Millars Timber and Trading Company's line at Simmsville; they being the previous owners of that line noted above. This was described as being a rather small loco, possibly 10 tons weight, known as "coffee Pot During Pines and Hardwoods later ownership, it was dismantled and shipped to Allworth, on Myall Lake, and there to assist in the construction of a branch line and was alleged to never have returned.

In 1913 the Great Northern Timber Company imported a 3'6" gauge wood frame "A" class of 13 tons weight for their line at Woolgoolga, north of Coff's Harbour, In 1916 the line and the loco were sold to Messrs H.McKenzie & Co. for their timber venture on Fraser Island, off the Queensland south coast. This lapsed in the early twenties and about 1928 the Climax was aquired by Mr G.L.Briggs, who had a 3'6" gauge tramway at his mill in the mountains west of Coffs Harbour. The gauge difference was overcome by repositioning the wheels on the axles, but thereafter it had the habit of breaking its axles on the outside of the wheel boss, doubtless because the greater unsupported distance between the boss and the journal allowed bending fatigue to occur. This loco worked until the line was discontinued in 1943 and was sold to E.A.Marr and Sons, machinery dealers of Sydney, who dismantled it, saving only the vertical engine which was later sold to Mr E.M. Baldwin, a steam engine collector of Castle Hill near Sydney.

Also in 1913, Mr William Langley imported a steel frame"A" class for his timber tramway north of Taree on the N.S.W.North Coast. This was previously a horse tramwas of 4'2" gauge, which also set the gauge for the Climax. This was a remarkable line in many ways, inasmuch as the grades were in favour of the load except for a few places, and consequently it was a profitable line to work The log "bogies" were each equipped with brakes and had a long vertical lever as the operating handle which, when two of these bogies were strung under a log between 30' to 50' long and 4' to 5' in diameter, were connected together with ropes and pulleys, and a brakeman riding the 10" x 10" crossbar of the trailing bogie, applied the

brakes on that "set" by hauling on the ropes. A train comprised six orseven of these sets, and on the down grades the Climax would be put into neutral gear and the whole equipage would set sail for the foot of the mountains, 13 miles away. The greatest distance of uninterupted gravity working was about 5 miles. It must have been an awesome sight to see such a thing careering down grades of 1:50 at up to 30 m.p.h. on track laid with 5" x 4" wooden rails and the courageous charioteers hauling on the ropes to control the train, including the loco. It is not hard to understand William Langley Jnr's remark to me that if a new hand stayed longer than lunch time on his first day, they could bargain on a fair length of service from him. This was borne out by remarks made when Iwas interviewing one of the employees of Allan Taylor's line some 50 miles south on asking if he had any knowledge of Langley's line, he assured me that "they were all mad up there- they'd have to be". Mr Langley also told me that on one occaision they brought an injured man in the loco on its own in 15 minutes.

This system of braking was not uncommon on timber tramways, but it was used to supplement rather than implement locomotive breaking.

Langley's loco recieved a new boiler about 1930, it being made by Goninan & Co. of Newcastle.

In 1941 the line was discontinued and the loco was sold to the Circular Head Amalgamated Timber Co. of Smithton, in north-west Tasmania. The wheels were re-gauged for the 3'6" line. This loco, together with another of B/No.1265 (see below) for a few years, and, they were dismantled about 1960 to obtain bogies for incorporation into a diesel loco of the "Trail" type which was built in Smithton for Messrs Britain Brothers' timber tramway at Christmas Hills. It is understood that some form of preservation is contemplated for the remains of these two locos and it is hoped that it will be adequate to honour a loco of such a unique design, no other example of which is being preserved elsewhere in the world

Mention has been made of Allen Taylor's line, and

"CLIMAX" LOCO

B/No.	Class	Cylinders	Weight Tons	Date Built		
?	B	7" x 7"	?	1903	Lahey Bros.Canungra Qsld. No 1.1903 - ?	Pines & Ltd.Yar ? - 1
?	A	?	?	1912?	Millar's T.& T.Co., Simmsville,N.S.W., 1912-1923.	Pines & Simmsvi 1923 -
?	A	7" x 7"	15	1913	Gt.Northern Timber Co,NSW 1913-1916	H.McKen Is.Qsld
?	A	7¼" x 7"	17	1913	W.Langley & Sons NSW, 1913-41.	Circula Now der
	A A	7" x 7"	15	1914	A.Taylor & Co. Mayers Point N	
1265	A	7" x 7"	15	1914	Pines & Hardwoods Yarramin Qld 1914-23	Pines & NSW 192
[illegible]	B	?	?	1916	Longworths (Laurieton) Ltd. N	
1653	B	?	?	1923	Pines & H'woods Simmsville NSW 1923-41	AUst.Ne Tas 19
1976	A	7¼" x 7"	22	1927	A.Taylor & Co., Mayers Point,	
1964	B	9"x 12"	25	1928	Forests Commission of Vict., 1928-49. Stored to 1964.	
?	A	?	?		Davies Bros, Karriedale, Western Au	

MOTIVES IN AUSTRALIA

Owners

Hardwoods ramin Qsld. 923	Pines & Hardwoods Simmsville. N.S.W. 1923 - 50	Coffs Harbour Timber Co. N.S.W. 1930 - 1932. Scrapped 1958.
Hardwoods lle,N.S.W. ? scrapped		
zie,Fraser . 1916-28	G.L.Briggs & Son NSW. 1928-45.	Engine portion to E.M. Baldwin, N.S.W.
r Head Amalgamated Timber Co Tas 1941- ?. elict.		
SW "Aleda", 1914-40 Scrapped)		
H.Simmsville, 3-41 "Slippery"	Circ.Hd Amal.Timber Co. Tas. 1041-?. Now derelict.	
SW 1916-32 (Stored and later scrapped).		
wsprint Mills 41-50. Stored		
NSW 1927-42. Scrapped 1958.		
Puffing Billy Preservation Soc., Menzies Creek, Vic, 1964-		
stralia.		

it was the result of the success of Langley's Climax that an "A" type was ordered for that line also. So it was that in 1914 a 15-ton wood frame loco, of 3'6" gauge arrived and was christened "Lady Aleda". This loco worked the line until 1935, when it fell through a burning bridge, fatally injuring the driver and irreparably damaging itself.

In 1926 another loco was ordered, this time a 20-ton steel-frame Climax loco, B/No. 1676, with cylinders 7½" x 7". It arrived in 1927 and worked the line until closure in 1942, thereafter being stored in the engine shed at Mayers Point until cut up in 1958.

Again, mention is made of Messrs Pines and Hardwoods Ltd. It is alleged that they had a wood-frame "A" class loco at their Yarraman operation, and that it also was brought to Simmsville where it was known as "Daddy Longlegs". Photographic evidence shows an "A" there in 1929, which was six years after the other "A" was sent away for construction purposes at Allworth. The number of this Climax loco is tentatively regarded as 1265 for the reason that follows in the next description. It was sold about 1941 and went to the Circular Head Amalgamated Timber Co's line at Smithton where it was in company with the ex-Langley Vale loco.

In 1923/4 a 3'6" gauge "B" class loco, Climax No. 1635, arrived at Simmsville named "Soward" after one of the director of the company. According to Climax records the loco was ordered by Messrs Ellis & Burnard of New Zealand, and was built in 1923. It appeared in a printed booklet on the Simmsville area in 1925, so it did not stay in New Zealand for very long, if at all.
In 1929 it starred in a film named "Tall Timbers", which was an adventure-romance shot on the timber site. About 1939 it was sold and later appeared at The Australian Newsprint Mills' forest at Maydena in Tasmania, where it was little used, and after lying derelict for a number of years, some attempt has been made to preserve it. In 1965 a resident of Sydney, interested in geared locomotives applied to the company for the builder's plate and in due course recieved a plate numbered 1265 attached to a

smoke-box door disc. Therefore it is assumed that it had somehow acquired the smokebox door plate off the "A" that was at Simmsville at the same time.

The only standard gauge Climax in Australia was No.1375, a "B" class owned by Messrs Longworths of Kendall, N.S.W. North Coast, who purchased it in 1916 for their timber tramway, which finished in 1932, and after a long storage, the loco was scrapped. The driver of it, Mr Gibson, who also did the maintenance on it, developed the idea of making the crown wheel on the driving axle in two halves, thereby obviating the necessity of having to first of all remove the set of wheels and then remove one wheel off the axle to replace a gear. It is believed that this idea was adopted by the Climax Company.

One of the last locos built by Climax prior to its closure was No.1694, a "B" class weighing 25 tons, to 2'6" gauge. This was supplied to the Forests Commission of Victoria in 1928, and worked on a timber tramway in the Tyers Valley, in Gippsland, eastern Victoria. After many years of disuse, it was donated to the Puffing Billy Preservation Society Museum at Menzies Creek, near Melbourne.

The only other known Climax in Australia was a 3'6" gauge wood frame "A" of pre-1916 vintage alleged to be owned by the M.C.Davies Company in Western Australia. Other than a photograph, very little is known of it, and any information would be appreciated.

Finally, mention should be made of an advertisement exhibited many years ago in a Queensland newspaper alluding to the "Yungburra Saw & Planing Mills Ltd", showing an approximate 1907 vintage "B" class on a log train. Yungburra is on the Tableland of the Queensland North Coast, and many enquiries have failed to confirm that the mill ever had a loco. It is suspected that the publicity-minded advertiser considered that a picture of that type, possibly culled from an American timber magazine, was much more impressive than a picture of the motive power of their horse tramway. Further, the advt. goes on to describe the types of timber milled by them,

not one of them being pine, which is exactly the commodity that is shown in huge quantities on the log waggons behind the loco.

References and Acknowledgements:

(1) Climax = An Unusual Locomotive. (Railroads of America) re general description.
(2) Messrs D.Burke, George Bond, F.Sellars, re Lahey's.
(3) Messrs Carson, Penfold, Sellers, British Empire Films re companies at Simmsville.
(4) Messrs Carter and Chas.McKenzie re Great Northern Timber Co and Fraser Island.
(5) Messrs J.Briggs and E.Smithre Briggs and Coffs Harbour Timber Co.
(6) Messrs W.& K.Langley and Barnes re Langley's.
(7) Messrs Olding, Leedham, Green, and Corrigan re Allen Taylor's.
(8) Messrs A.& H.Longworths, Gibson & Sellers re Longworths.
(9) Mr G.H.Eardly re Davies'.

S.R.& W.S.C. RAILWAYS (continued) by P.Charrett.

No.11 Lock and Weir, Mildura.

Construction of the lock and weir started in August 1923. During 1923-24 plant and other materials, including the 2-foot gauge Black Hawthorn 0-4-2ST loco (see Light Railways No.21, pages 23-24) was transferred from the Torumbarry Weir to Mildura by River boat.

How this equipment was used at Mildura is rather uncertain. Presumably it was used to move materials and spoil around the works area. Early in 1923 a 5'3" gauge line was built for the South Australian Irrigation Commission from Mildura to a gravel pit to convey gravel for the River Murray Commission works in South Australia. The line was extended to the site of the Mildura Weir d was used to convey materials and other equipment to the works.

When the 5'3" gauge spur was built, another railway siding was built behind the Mildura Power House. S.R.& W.S.C. files do not state its gauge or purpose.

In 1927, the lock, weir, and navigation channel were completed and the lock was first used on August 2nd, 1927. All the tram lines were pulled up and the plant transferred to other works.

Locomotives: There is some confusion as to the type of locomotives used here. In 1924-25 the River Murray Commission stated that one steam locomotive was transferred to Mildura; the S.R.& W.S.C.Annual Report says two oil locomotives; and S.R.& W.S.C. files say two Fordson petrol driven locos. Since only one of the Torrumbarry locos (the Krauss) was transferred from Torrumbarry to Maffra, it would be very unusual for the other loco (the Black Hawthorn) to be idle from 1924 to 1936.

The locos at Mildura were probably therefore as follows-

Type	Builder	B/No. & date	Bought	Note
O-4-2WT	Black,Hawthorn	1134 of 1897 or 1173 of 1898	April 1920	(a)
	Malcolm Moore (Fordson petrol engine)	1924	Dec. 1924	(b)
	Malcolm Moore (Fordson petrol engine)	1924	Dec. 1925	(b)

Notes: (a) Eventually went to Yarrawonga Weir Construction but might have been used at Robinvale in the interim.
(b) Disposal unknown. May have gone to Yarrawonga Weir construction in 1936.

Rolling Stock:

The only known rolling stock to have been used were 25 one-cubic-yard capacity side-tip trucks bought from G.S.Sewell in October 1924. There may have been other vehicles transferred from other works, particularly Torrumbarry, but I do not know of them.

YARRAWONGA WEIR.

Construction of this weir started in 1935 with two railway sidings constructed, one on each side of the river from the 5'3" gauge Yarrawonga-Oaklands line. At least six locos of 2' gauge were used in its construction. The main use of the trams seems to have been transporting the overburden and waste away from the excavations, and may have transported materials such as stone and concrete around the works area. Construction was substantially completed by June 1939, when all surplus plant was sold. The Weir was in operation on 17th July 1939.

It is interesting to note that as early as 1927 the Victorian Railways asked the S.R.& W.S.C. if they wanted the railway bridge over the Murray built so as to allow for construction of a future weir. The S.R.& W.S.C. did not, and the Weir was built downstream from the railway bridge.

Locomotives: (all 2' guage)

No.	Type.	Builder	B/No.& date	Bought	Notes	sold for scrap
	0-4-0T	Krauss	2437 1890	May 1921	(a)	June 1939
	0-4-2WT	Black, Hawthord	1134 1897	April 1920	(b)	June 1939
	0-4-2WT	Black, Hawthorn	1173 1898	April 1920	(b)	June 1939
1	B	Malcolm Moore	Two of these were built in 1936. The other may have been transferred from other works or built new. There may have been other Malcolm Moore tractors at Yarrawonga.			
2	B	Malcolm Moore				
3	B	Malcolm Moore				

Notes: (a) Bought from Q.G.R. for use at Torrumbarry Weir, and later transferred to Maffra and thought to have been transferred to Hume Reservoir, then finally to Yarrawonga Weir, probably about 1935.

(b) One of these locos was bought from the Melbourne Harbour Trust for use at Torrumbarry Weir, and is thought to have been transferred to Mildura Weir, and then to Yarrawonga Weir. I do not know the origin of the other locomotive.

The fate of the Malcolm Moore tractors is unknown.

Rolling Stock: As shown in photos it consisted of one cubic yard side-tipping waggons, and probably transferred to other works on completion of the weir.

References: The material for this article was derived mainly from Annual Reports of the River Murray Commission; the S.R.& W.S.C.; Mr J.Buckland, and A.R.H.S. Bulletins.

THE POWELLTOWN "KERR STUART"

Exploding a Myth!!! by J.L.Buckland.
With acknowledgements to C.Andrews and C.S.Small.

Thanks largely to supporting evidence provided by my fellow collaborators enumerated above, some progress can be reported as to the identity of the real builders of Powelltown Tramway's first "Coffee Pot".

In their early days the British firm of Kerr Stuart were just factors who supplied light railways to order, with the actual manufacture of the equipment sub-contracted to others. Their own construction appears to have started circa 1896, but with locomotives still being bought from outside builders.

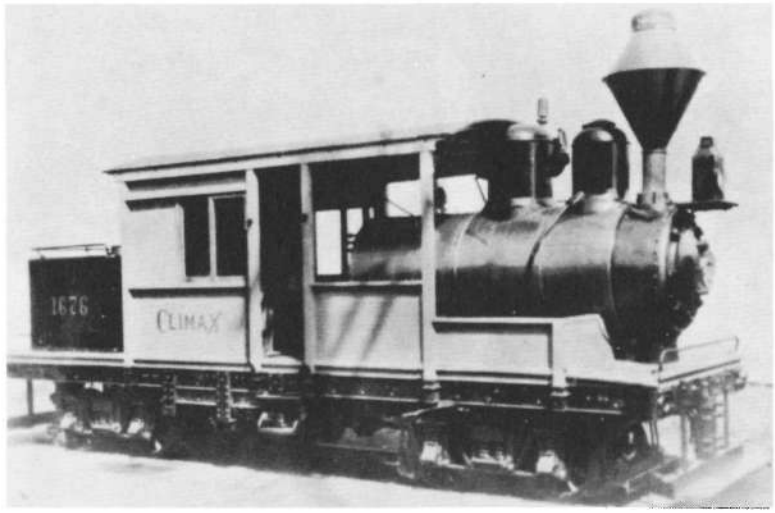
Kerr Stuart, it appears, had no qualms about putting their own maker's plates on such items, and I am convinced this is the explanation of the alleged "Ker Stuart"-built 0-4-2ST first "Coffee Pot" on the Powelltown Tramway.

My suspicions about the builder of this engine were aroused long ago. It had all the earmarks of an early Andrew Barclay engine from Kilmarnock and this belief has been strengthened by two things-

(a) A picture of an engine built by Andrew Barclay for the Joadja Railway (N.S.W.) which, apart from wheel arrangement, gauge, and specifications, is almost identical with the "Coffee Pot".

(b) Discovery by Chris Andrews of a dimensioned drawing of Baclay B/No. 267 of 1883 which appears to be identical both as to gauge, wheel arrangement and specifications with the Powelltown midget.

My conviction that this was indeed the case was strengthened by a picture of the Powelltown engine lying semi-derelict probably during the early 1930's depression period, on the cab sides sheets of which appear a large (though unfortunately illegible) builders plate identical in every respect with that of a Barclay engine, but certainly different from the flattened oval plates usually fixed to Kerr Stuart engines.



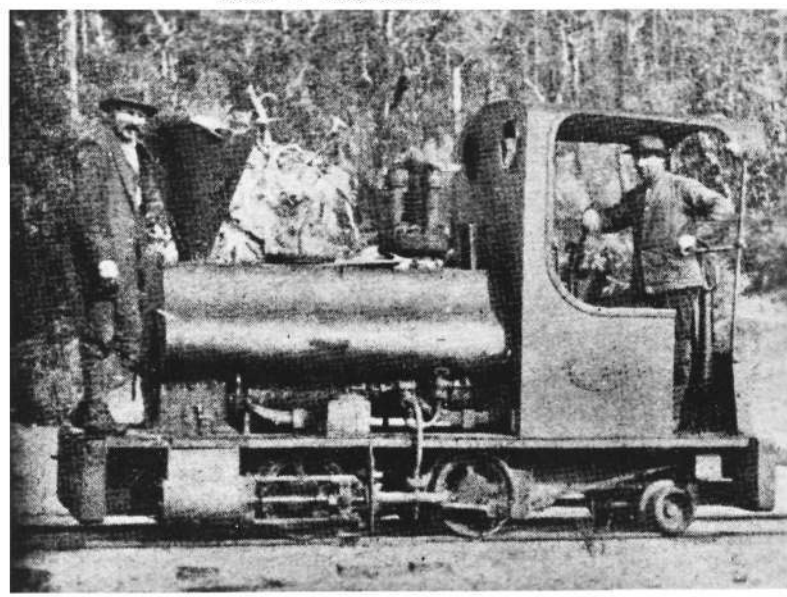
"A" class steel framed Climax locomotive of 3-ft. 6-in. gauge, for Allan Taylor's Mayer's Point line, (N.S.W.)

Photo - Courtesy B. McDonald

Yarrawonga Weir Construction. Malcolm Moore tractor No. 2 in foreground, Black Hawthorn loco and another tractor in background.

Photo - S.R. & W.S.C.

Elsewhere in this issue we report the dismantling of the Fyansford line. Here we see the line in better days - the A.S.G. entering the quarry.
Photo - Des Jowett



"Exploding a Myth!" Andrew Barclay or Kerr Stuart? The Powelltown tramway's first "Coffee Pot", about 1914.

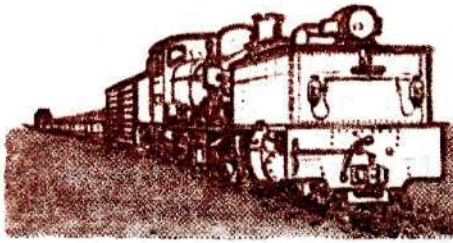
To put the record straight about the identity of the Powelltown engine, it still has to be established, if possible, for whom Barclay B/No.267 was originally built, it is my guess that it was later acquired by Kerr Stuart and given their B/No.539, together with a sister engine of identical specifications which became Kerr Stuart B/No.538. Certainly both came to Australia circa 1898, and are believed to have both worked initially at the Cullen Bullen quarry of the Cullen Bullen Lime & Cement Co. (Mudgee line, N.S.W.) which later was acquired by Commonwealth Portland Cement Co.

When their narrow-gauge operations ceased about 1912, "539" went to Victoria, and "538" to The N.S.W. Lime Co. at Ben Bullen, where it is possible both engines worked for a period. Suffice to remark that "538" subsequently came into possession of G & C. Hoskins, the Lithgow steelmakers. This engine together with one of the Powelltown Shays (ex-Lloyd Copper Co, Burraga, N.S.W.) were lying derelict near the Lithgow works in the early 1920's, according to G.H.Eardley. Both the Cullen Bullen and Ben Bullen quarries were acquired subsequently by the Hoskins Family, but their operations under original ownership dated from circa 1887-89, and were in all probability worked initially by horses

I am almost sure that Kerr Stuart's construction date of 538 and 539 should be 1896, since this is the date of two preceding engines, whica Kerr Stuart shipped to Japan- according to C.S.Small.

In conclusion I submit (but regret at this stage I am unable to prove conclusively) that Barclay B/No. 267 and/or its twin could have been returned to the makers, repaired, and later sold to Kerr Stuart, or alternatively repaired by them and later sold in or about 1896-98 to Australia.

Just as soon as confirmation may be forthcoming from Britain, I propose going into this whole vexed question in greater detail.



LETTERS

Frankston Pleasure Park Railway:
Mr Bruce MacDonald writes that the correct name of the builders of the locomotive (see issue 23, page 34) should be "Le Societe Anonyme des Ateliers Metalurgiques de Hainaut", or "Hainaut" for short, and that Hainaut were rather subcontractors for Decauville. Couillet was the town wherein the works were sited.

Torrumbarry Weir Tramway:
Mr B.MacDonald writes: (see Issue 22, page 12) that John Coulthard & Co built locomotives at Newcastle-on-Tyne from 1835-1856. This was re-organized as Black, Hawthorn & Co, and operated 1864 to about 1896 or early 1897, and again re-organized as Chapman & Furneaux, and finally closed in 1901. In that whole time approximately 1215 locomotives were built with continuous builders' numbers. As Chapmans made 70 locomotives, this gives about 1145 for Black, Hawthorn & Co, so that a builders' number of 1173 for them is not possible. There was a Chapman with number 1157 in Western Australia.

T.M.L. 14 and Shays at Mittagong:
Mr B.MacDonald writes: Concerning Mr H.Wright's mention of the Shays there, further research proves that the ("Bulletin") statement was not made as a historical claim, and has no basis in fact. Also on the matter of the ex-T.M.L. loco at Westernport Colliery, the information given here is mixed. T.M.L. 12 was converted to a 4-4-0, and became "F" Class No.1 on the T.G.R. However T.M.L. 14 was sold to Westernport and its road number was taken by a new Hunslett 4-4-0, Hunslett No.335 so becoming T.M.L. (2nd) No.14 in 1884.

Australia's First Diesel Locomotives:
Mark Plummer writes: I was most interested in the detailed account in Issue No.21. However, there are a few additions and corrections I could add. The tramway could notvhave reverted back to the Shire in 1935, as they did not own it at any stage before this date. The situation was that the tramway was originally constructed by the Rubicon Lumber and Tramway Co. in 1915 and paid to the Council a nominal rental for use of the shire roads, but agreed that at the end of a 20-year period the tramway would become the property of the council, bearing in mind that by then the Rubicon forest would be cut out. However, when that time expired in 1935, there was about six times as much timber coming out of the forest with the likelehood of many further years' supplies. The line closed in 1950, not because the 15-year lease to Clarke & Pearce had expired and also it was then more economical to get the timber out by road after 1945, the year the Forest Commission put roads into the bush. In fact in 1946-48 the company was cutting in the Snobs Creek area, but switched to the Rubicon-Royston area in 1949-1950 to make the best use of the tramway before the lease expired. One reason why the diesels were more economical to run than the Krauss was that they did not need to be refilled with water four times each journey as the Krauss had to be. Their builders' numbers were 4271 of 1935 and 5957 of 1936, respectively. Their weight was 10 tons.

Hume Reservoir Construction: (Issue 23)
Mr Mark Plummer desires to add some comments to P.Charrett's excellent and informative article, by saying that they are not his own personal observations but from the Locomotive List. "I feel that there can be no doubt that the photo on p.13 is the locomotive from Haydens tramway. Mr Hayden himself says his father sold their locomotive to the S.R.& W.S.C. for the Hume Reservoir and comparing it with a photo of the engine taken whilst on Hayden's tramway, the same Baldwin characteristic of protruding counter-

weights, smokebox front and curved motion plate while the equally un-Baldwin characteristic of a sloping steam chest are evident while the roof that extends the full length of the engine while at Barwon Downs has been cut in half and a spectacle plate and cab sides have been added to give some protection against the elements. The story of the Harman being the pattern engine probably came from the fact that a man named Leslie is supposed to have designed the engine while working for Harman, later going to work at Perry's and taking the design with him.
The Harman-built loco could be distinguished from the Perry by the round edge on the tank tops and the irregular shaped dome cover. It was scrapped in 1953 concurrently with the Perry in Tasmania. The 3' gauge Fowler of the N.S.W. P.W.D., according to Mr G.Bond, worked at Mt. Morgan until the end of the war. In 1954 they were used for a precipitation process by placing them in a stream heavily laden with copper leaving them for some time, then removing them and treating them to remove the copper that had been picked up. Later the process was dis continued, and one loco was placed in a park, the other one lying derelict. The Torrumbarry Black Hawthorn, if it came from the Melbourne Harbour Trust must be B/No.1134 of 1897, and originally from Zeehan & Western Silver Mining Co., of Zeehan, where it was known as "Western", as in 1918, a Sydney dealer, a Mr J.E.Toole, advertized for sale "a 2'" gauge locomotive by Black, Hawthorn & Co, on Williamstown Wharf, (Melbourne) named "Western". The dimensions given by S.R.& W.S.C. for the locomotive agree with the dimensions as measured by J.Thompson.

NEWS, NOTES & COMMENTS

AUSTRALIAN CEMENT LTD, Fyansford: The track has been sold to Dickson Primer, who will have removed all the mainline by the time you recieve this magazine. The ASG has been given to the ARHS for their Newport Museum; to the P.B.P.S. have been given the Perry O-4-OT, the Beyer-Garratt, the boiler off the other Bayer-Garratt, the signalling and two wooden dump trucks. The Vulcan (No.5) is to be put on a concrete block in Ringwood City Council's Jubilee Park, where it will be "preserved" in a different way.

The Geelong Sub-division of the A.R.H.S. gets the Hudswell-Clarke O-4-2ST, and Mr Gunser says they plan to run it on some land near Drysdale where they already have Council permission for a line. The other Vulcan has been given to the Lake Goldsmith Steam Engine Preservation Society at Beaufort, together with the carriage and two flat-cars, and Mr Coleman informs us that he plans to lay some track and would like to restore the engine to its original colour

The deisel, being identical to a VR "T" class, will probably go to the VR, notwithstanding that it would have to be fitted with 5'3" gauge trucks, and is not fitted for M-U operation. It is hardly used, and, with its dynamic breaking, could be very useful on such a line as Cudgewa. The steel dump trucks were pushed onto the top line by No.6 before the main line was dismantled, and will be either sold or scrapped. All locomotives will probably be moved During July or August.

-Mark Plummer.

L.R.R.S.A. Visit to "Whistle Stop" on May 25th:

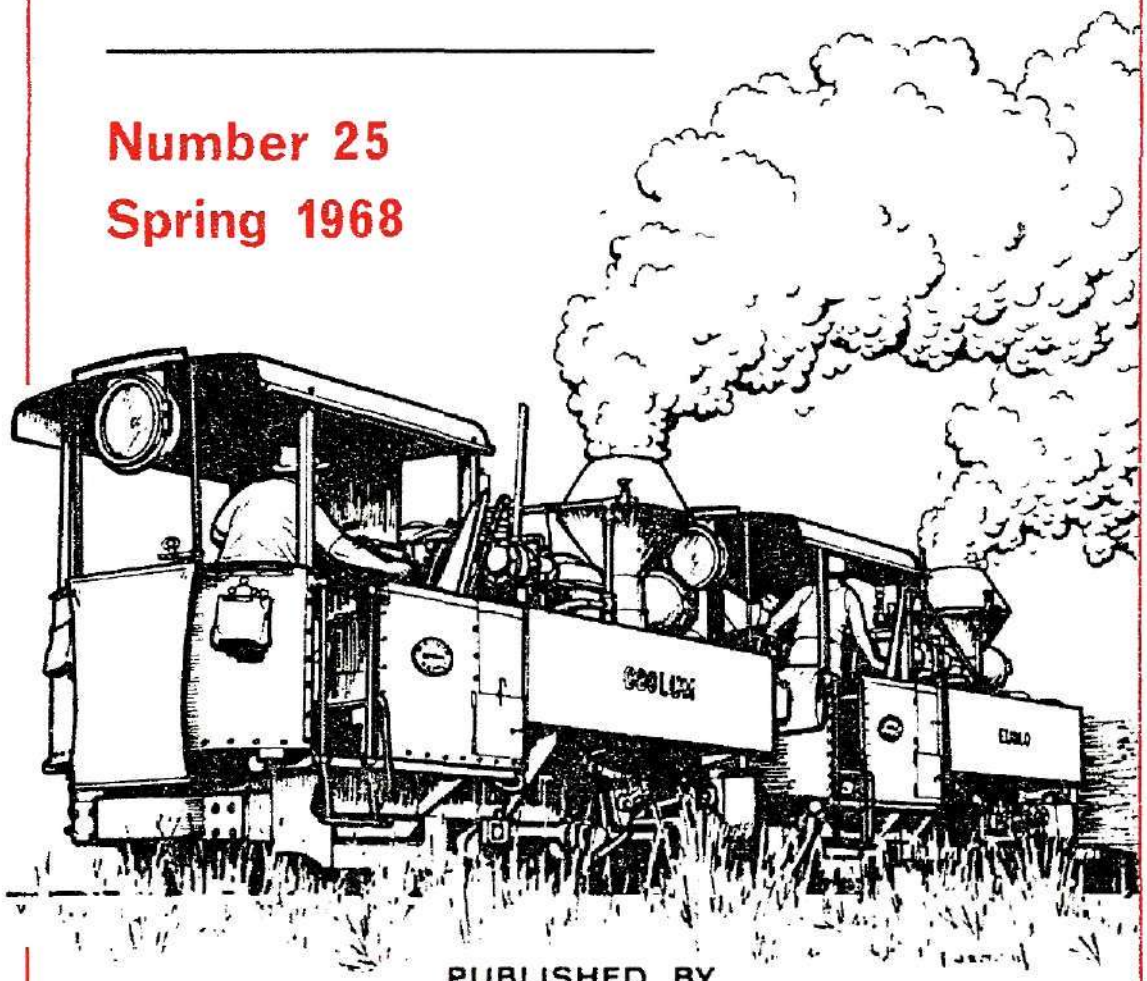
On this date 87 members and friends visited "Whistle Stop", the Frankston Pleasure Park Railway to ride behind and photograph the 2'6" gauge Couillet 0-4-0T locomotive, the oldest locomotive regularly running in Victoria- possibly in Australia. After a barbecue lunch we walked to the engine shed, where the loco was being steamed up. The superb restoration job was admired; the loco looking like new with shiny paintwork and gleaming brass. Two ¾ mile circuits were completed in the normal direction, then the engine was turned on the triangle, and we set off in the opposite direction against a steep grade. Rain fell and the rails became greasy. The engine skidded and members had to hand sand the rails. After two such runs the "Clarkat" petrol loco was brought out towing two wooden waggons, on which members rode, movie cameras whirring, giving them an unusual experience of filming one train from another running 10-20 feet in front. The Clarkat, with only two-wheel drive was found to slip more than the Couillet. Two more circuits in the normal direction ended this interesting day of light railroading. An ABC television cameraman was present- and on the next Monday the ABC News included a two-minute clip of the outing. We wish to thank the owner of "Whistle Stop" for giving us such an interesting day; and for those who have not visited the park in Skye Rd, it is open every Sunday and public holiday, and is well worth a visit.

-Mark Plummer.

Whilst ever effort is made to ensure the accuracy of material published in "LIGHT RAILWAYS" we cannot be sure that errors have not crept in. If you see errors, or can add additional information, please contact the Editor, as it is only thus the full history of Australia's light railways can be fully recorded. Opinions expressed in articles or letters are not necessarily those of the Editor or Society.

LIGHT RAILWAYS

Number 25
Spring 1968



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THE LIGHT RAILWAY RESEARCH SOCIETY OF AUSTRALIA

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Cover: John Thompson recorded a rare occurrence of "Eudlo" and "Coolum" double-heading on a sugar cane train at Nambour, just sixty miles north of Brisbane.

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The LIGHT RAILWAY RESEARCH SOCIETY of AUSTRALIA

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The next issue will be printed by offet (expense notwithstanding) with consequent additional space for more articles and photos. This means that we will have to fill those pages. Now that the society is Australia-wide in its area of interest, and, as there is (or was) an abundance of light railways to sugar mills, timber mills, mines, etc, there should be no shortage of subject matter. Remember, the PEN is mightier than the , SWORD, so WRITE.

Certain back numbers are still available if you write to the Secretary.

The BRITANNIA CREEK TRAMWAY:

By C. Maynard

Origins: Cuming Smith & Company was founded in 1872 when Charles Campbell and James Cuming Snr acquired the busines of Robert & Alexander Smith, trading as Robert Smith & Son, Sulphuric Acid Manufacturers of Yarraville. Under the dynamic leadership of James Cuming, the business expanded rapidly and the company entered the fields of fertilizers and chemical production. As a direct result of this expansion programme, Cuming, Smith & Company began investigating the prospects for the establishment of a timber distillation factory in Victoria.

Several factories had been operating quite successfully in England and on the continent, and so Cuming, Smith & Co. obtained extensive details of the process from various overseas companies. Three things are essential to the economic operation of a timber distillation works: abundant supply of raw material for distillation; fuel for the furnaces; and an adequate water supply for cooling, condensing and steam raising.

The Britannia Creek Valley filled all these requirements thus in 1907, Messrs Cuming, Smith & Co. constructed their works there. The valley, situated on an old granite formation, is said to have recieved its name in the early days of gold mining, when a settlement of gold seekers and prospectors was established in an elevated valley known as "The Braes". An ex-R.N. midshipman, Charles Bowtell, who served on H.M.S.Britannia during the Crimean War of 1854, came to the colony after his discharge and settled in this new mining community. Being an enterprising individual, Bowtell carried on an illicit trade in "spiritous liquours" in a shack which he called "The Britannia", after the ship in which he served. Thus the locality became known as "The Britannia", and the creek which flowed through the valley as Britannia Creek.

After the decline of alluvial mining, the land around "The Britannia" was surveyed by the Crown and thrown open for selection in small blocks of 20 acres. However, of the hundreds of blocks selected, only two were ever cleared and held by settlers, and these eventually formed part of the works area.

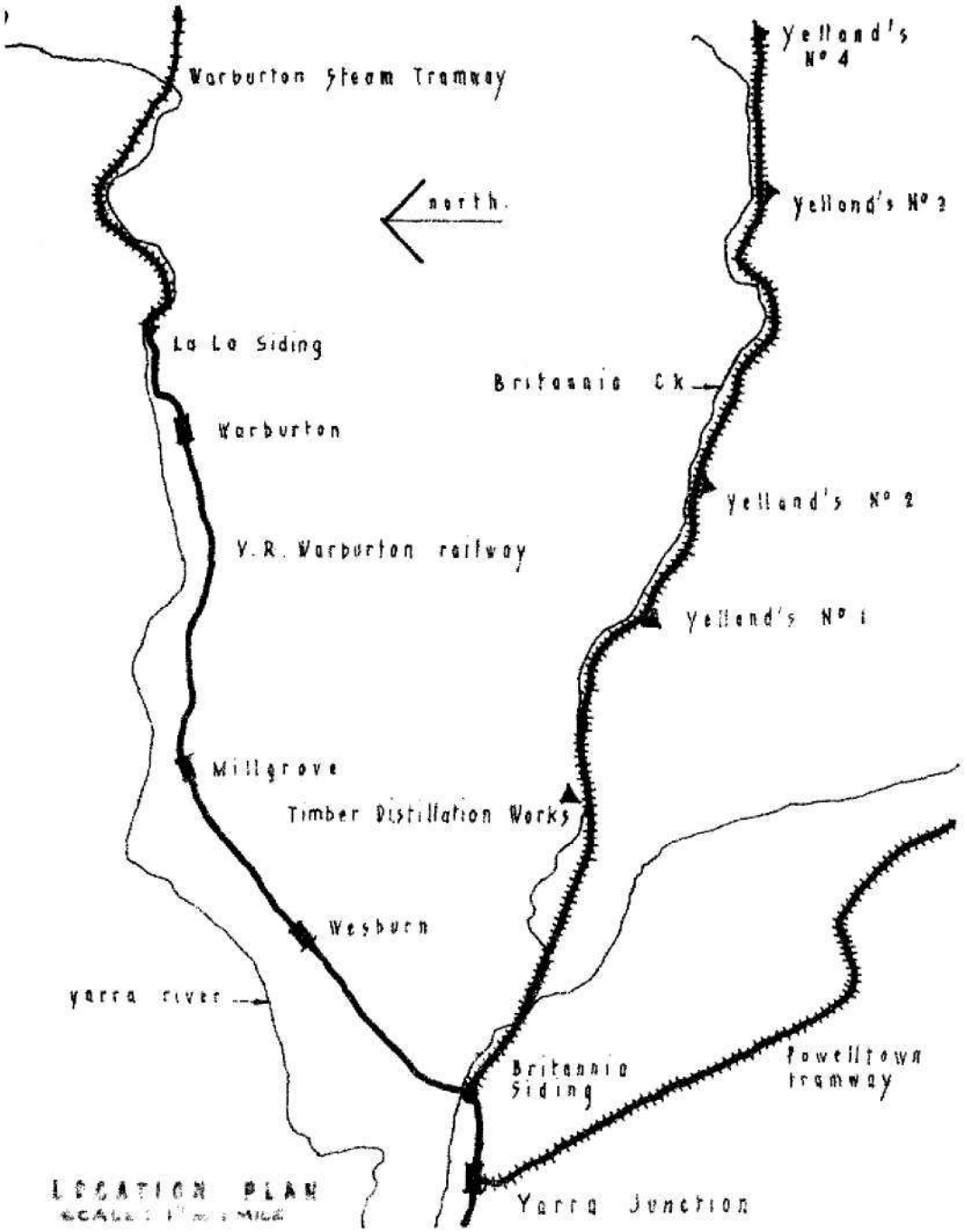
The settlement located near "The Britannia" was named Tarrango, near which Cuming, Smith & Co built their works. The cost of developing this area was in excess of £100,00, and the works commenced operations on 16th August 1907.

Development: In conjunction with the erection of this works buildings, two main tramlines of 3'0" gauge were constructed, the first an access tramway connecting the V.R. line east of Yarra Junction, and the second a milling line following the creek up the valley. Both were steel railed throughout with timber railed logging spurs/ On leaving the works, the access tramway followed a westerley course, leaving Britannia Creek and maintaining an even grade across timbered country towards Yarra Junction.

The Little Yarra River was crossed en route and shortly after the tramway entered the Old Lilydale-Warburton Rd approximately a half-mile from Britannia Siding. The main road was followed on the north side until Britannia Siding was reached, 2½ miles from the distillation works. The track arrangement at Britannia Siding was a rather unusual one, owing to the fact that the V.R.siding ran in an easterly direction on the "up" side of the main line. The tramway approached the mainline at an acute angle, then reversed back into the siding. (see diagram).

Above the works, the tramway continued for approximately a half-mile up the creek valley to the foot of an incline adjacent to the Britannia Falls. This incline, which was double track, ascended the rapidly steepening slope until No.1 Mill was reached in "The Braes". From here the tramway continued to ascend the range in a series of inclines connecting with the three other mills. No.4 Mill was 7 miles from Britannia Siding.

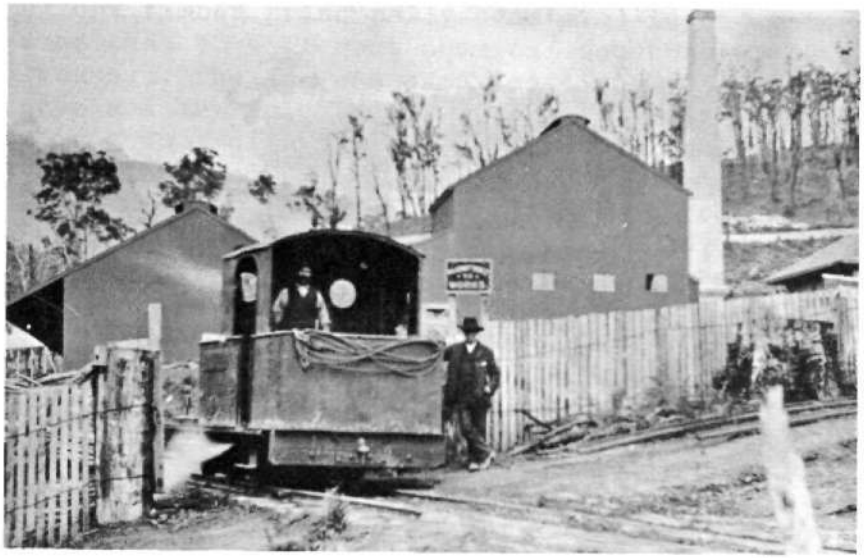
Operations: In order that they might use their timber leases economically and to best advantage, the company in conjunction with Mr J.Yelland established four mills progressively up the valley. From these mills, logging tramlines and haulage winches were set up and the forest was systematically worked along a face, every available tree being



felled and sawn into logs of various lengths. Even timber that had lain on the ground for years was taken, if sound enough to stand transporting. On arrival at the mill yard, the logs were sorted, every log with commercial value as building timber was fed into the mill to be broken down, whilst all inferior logs went to the splitting yard and cut into three-foot lengths by a steam-driven cross-cut saw. The log sections were then split by hand with maul and wedge into 4" x 5" x 3'0" billets and then loaded onto bogies for despatch to the drying area. Due to the high moisture content of green hardwood (up to 51% water) the billets were in the drying yard approximately 18 months until they had thoroughly air-dried to a moisture content of 12%-15%. To ensure continuity of timber billets for the distillation process, upwards of 12,000 tons of timber was stacked in the drying yard at any given time.

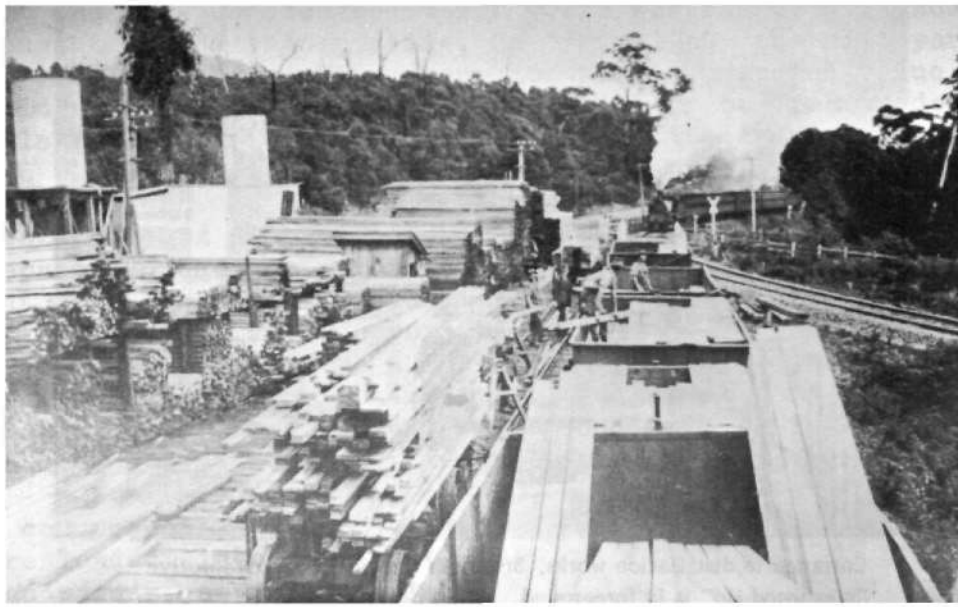
To commence the process of distillation, dry timber billets were loaded into four-wheel tubular shaped slatted wrought iron wagons, approximately 9' 0" in length. These trucks were then hauled one at a time by draught horse to a holding yard adjacent to the drying chambers. Five tracks converged at this point, terminating in a single truck turntable. (see diagram) From the turntable, a track ran alongside the drying chambers to a three-rail traverser, which ran full length of the main building. The loaded trucks were rolled onto the traverser and loaded one at a time into the brick drying chambers fronting the traverser. Four trucks were loaded into each chamber, and hot furnace gases were then passed through the chamber, heating the billets to 100°C.

From the drying chambers the trucks were moved via the traverser to the retorts and loaded again into batches of four trucks per retort. The trucks remained in the retorts for 30 hours until the distillation process was completed, leaving only a charcoal residue. When the retorts were opened, the trucks were drawn out by steam winch across the traverser directly into the cooling chambers. The charcoal was removed from the trucks and bagged ready for despatch. The distillation or decomposition of the lignocellulose (of



Entrance to distillation works, Britannia Creek. The Locomotive "Westwood Ho" is in foreground.

Timber from Yelland's Mills at Britannia Siding. Both photos from L.R.R.S.A. Archives.



Transferring timber at Britannia Siding, looking in the direction of Yarra Junction with the train for Warburton rounding the curve. Photo: L.R.R.S.A. Archives.

The Decauville loco. hauling L.R.R.S.A.'s excursion train at "Whistle Stop", Frankston, on 25/5/1968. Photo: K.S. Kings.

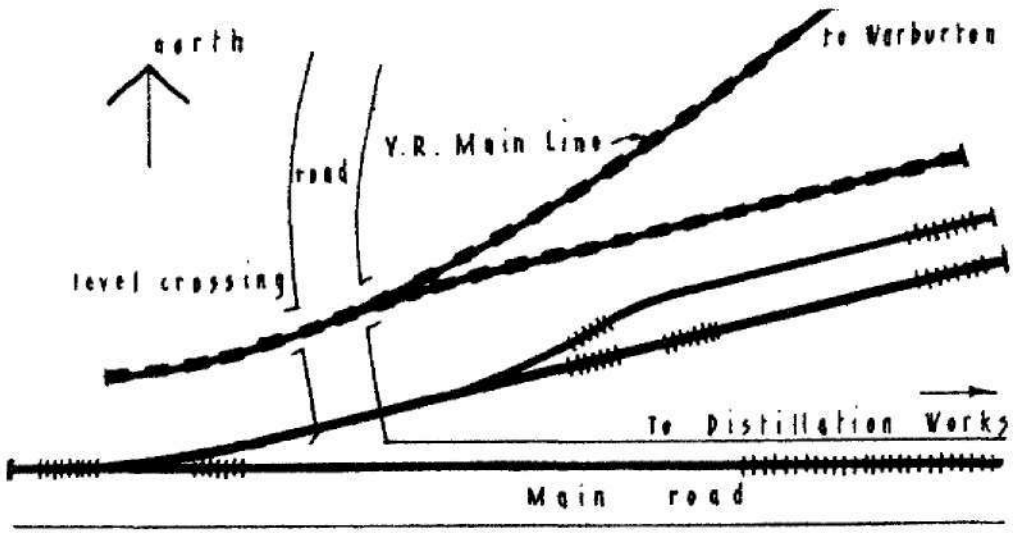
which dry timber principally consists) in the retorts, yielded more than 40 different chemical substances, both liquid and gaseous. The gas was used immediately as a fuel for the retorts and drying chambers. The liquid portion, known as pyroligneous acid, consists of water, acetic acid, wood spirit, tar, and creosote oil. By chemical processes, the tar and creosote were removed and the following products were obtained: pure acetic acid, acetone, methyl alcohol, denaturing spirit (used originally in manufacture of methylated spirits) and formalin. All these products were filled into steel barrels, earthenware or glass jars (held in wicker baskets) and despatched from the works via the tram. Apart from the processing areas, a fully equipped laboratory was maintained for product testing and development. A self-contained machine shop was also provided for carrying out of maintenance, and thus the works were almost self sufficient in their operation.

In full production, the works employed approximately 60 men, who were accompanied around the works area. Motive power on the tramway was predominantly horses, with winch/gravity working; however a steam loco was in use for several years. This loco, named "Westwood Ho" was a Fowler 2-4-0 tank, assumed to have come from Sanderson & Grant's Tramway at Forrest in 1907. As the Forrest Tramway was 3'6" "Westwood Ho" would have needed re-gauging before it could commence at Britannia Creek, but no further details of its history have been uncovered by the writer at this stage. The loco worked the section of the line from the foot of incline to the works and right through to Britannia Siding. However, by August 1915, the loco was out of service and stored under a shelter at the works, and horses had taken over completely. After the works closed the loco was cut up on the site.

Closure: Cuming, Smith & Co operated the works until 1924, closing on 17th August, due mainly to a diminishing market for charcoal, and new chemical processes having been developed for the production of several of the distilled products. Yelland Bros continued to mill the area and rail sawn timber out to Britannia Siding until the late 1930's.

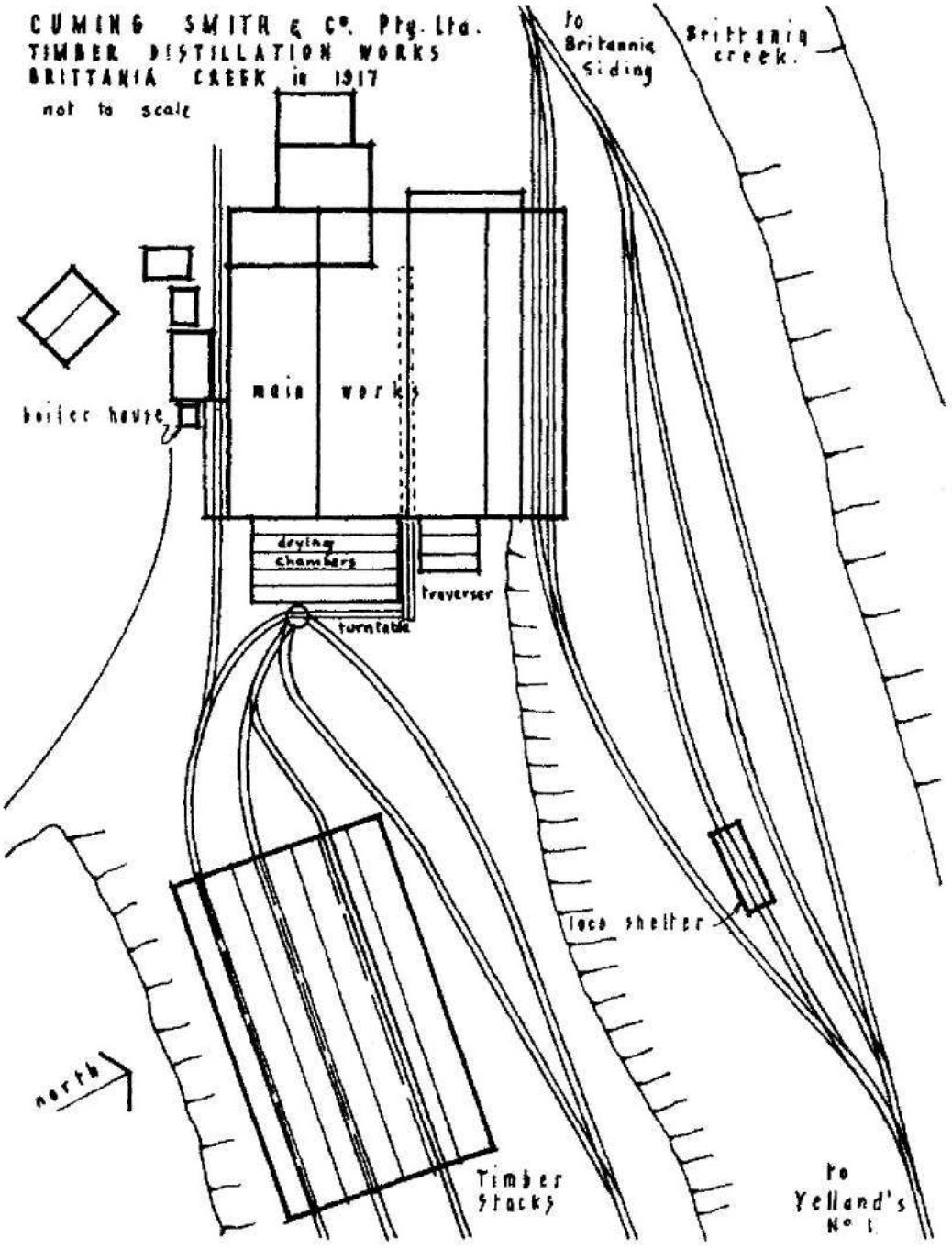
A sawmiller named Drain was also milling in the area after 1928 and apparently had running rights over the tramline from Yellands. 18 monthsafter the works closed in 1926, a bushfire ravages the area, completely destroying the works buildings and seriously damaging the tramline. Repairs were carried out by Yellands, and the line was soon in use again.

Other interests: Although they were completely finished with timber distillation in 1929, Cuming, Smith & Co were still involved in the timber indistry of the Upper Yarra area until 1932. In 1917, the Mississippi Sawmilling Company was acquired and in 1919, J.M.Grant's Seasoning Works at East Warburton came under their control. They acquired the Enterprise Sawmills in 1925, and continued to operate all of these businesses until approximately 1933.



Britannia siding:

Cuming, Smith & Co's mills produced building timber, case timbers, flooring, lining and weatherboards and also fine timber for furniture and car body building, all sold under the "Sickle" trademark. During 1928, Cuming, Smith & Co considered proposals to but the Loch Valley Tramway, Mount Horsfall Tramway, and many other existing or projected



tramlines were investigated by the company. However, the directors decided late in 1928 that they would not pursue this line of business any further, but would develop their fertilizer and chemical interests instead. Perhaps if their decision had been reversed, a very interesting complex of mills and tramways could have developed in the Warburton-Noojee area, that would have survived for many years after 1939. Today, Cuming, Smith & Co are still in existence, but as prely an investment company, being one of the major shareholders in I.C.I.A.N.Z.

An UNUSUAL TRAMWAY PROPOSAL: John Alfred

The steam trams of New South Wales were remarkable for their scale op operations, unique on account of the diverse collection of rolling stock, and astounding for the unprecedented density of traffic. It is thus to be regretted that the scheme here related did not come into existence to give that added "flavour" to their history.

To deal with the problem of removing the garbage and night-soil of Sydney, a scheme to utilise the existing tramway system was sugeested by Gustave Fischer, C.E., of the P.W.D and proposed by A.C.Mountain, M.I.C.E., to the Sydney Municipal Council in 1890. It involved the construction of a branch siding from the existing tramway, at Moore Park, near the road to the nightsoil depot, from where the trams would proceed to a point on the Botany line, there connecting by another branch line to Cooks River near the syphon then under construction, and crossing that river by either staging or a bridge with a swing opening, and proceed to an area known as Webb's Grant. At each end would be "stations" with pumps to fill and empty the trucks by pneumatic pressure, to avoid "offensive smell or waste". We are solemnly informed the "nightly output does not exceed 40 tons".

The capital cost was set out thus:

Two W.I. trucks, each 640 cubic feet capacity	£ 640
Two 6 h.p. engines and air pumps	500
Two sheds for same, at stations	250
One tram locomotive	1,800
Couplings, connections, etc.	150
¼ mile branch line and sidings to form loading station at Moore Park, with pay-way	2,000

One mile of tramline, per-way, culverts, etc, connecting Botany Rd with Cooks River	£6,000
Crossing Cooks River with Tramway on timber bridge with centre swing span of 1,100 feet	5,000
Pipes, flumes, etc.	300
Sundries	1,660
Total:	18,000

Working expenses, p.a., including 250 tons coal at £1 per ton, totalled 4,362

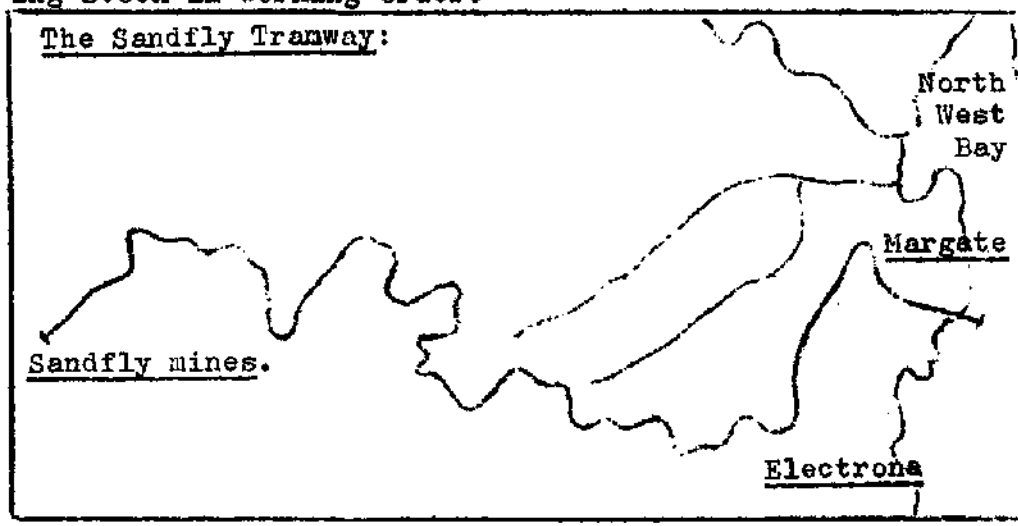
The SANDFLY TRAMWAY: John Alfred

This was one of the rather numerous tramways to the south of Hobart, being a 2' gauge line from Margate on North-West Bay to the Sandfly coal mines. Working of the tramway was said to be very difficult due to the high altitude of the mine and the rugged nature of the country. One mile from the mine, the tramway surmounted a saddle 1,400' above sea level. Operations commenced in 1881 and were discontinued in 1919, on account of destruction of the tramway bridges by fire. The reasons for the failure of several companies who operated these mines were given as the costly system of underground transportation, excessive cost of transport of the coal to Margate, etc. In the mine, coal was conveyed to the bottom of a dip tunnel in trucks of 1,000 lb.capacity by boys, and hauled by steam power to the surface.

From the jetty, the tramway crossed gently rising country for 4 miles, then climbed steeply sidelong up to the saddle near the mine. The tramway was well-designed and constructed, having generally a firm foundation, easy curves, and grades not exceeding 1 in 28. By 1922, the tram way had fallen into disrepair, the sleepers were rotted, culverts had caved in, and several bridges were burnt. The rails were a nondescript lot: four miles of 40 lbs per yard of ordinary pattern, one mile of 40 lb chair rails, and 7½ miles of 20 lb rails.

Rolling stock is given as two small Krauss locos, with three trucks of 6-ton capacity of "quite unsuitable design for the purpose". (Photographs show locos with trains

of at least twenty-side-tipping trucks on spectacular trestles). Cost of railage from mine to jetty, the grades being with the loads all the way, was 3/6 per ton, or 3½d per ton mile. Two brakesmen were required to attend to each train. Accidents on the rough and uneven railroad were not infrequent, although speeds seldom exceeded 6 m.p.h. The (spare?) loco was uncoupled at the summit and sent ahead. At the jetty, trucks were hauled to the top of the bins and emptied by hand. In 1922 it was considered doubtful whether the mine was of sufficient importance to warrant expenditure of the large sum required to put the tramway and rolling stock in working order.



The OPENING of the ALTONA BAY RAILWAY: John Alfred

Co-incidental with the Land Boom of 1887-1888, a prodigious number of tramway schemes were proposed in the suburbs of Melbourne and the provinces; also numerous railways were built under the "Octopus Act", usually to benefit some politician's land swindles. Curiously, only one railway was undertaken by a private company. A large area of flat, open grassy plain from the west of Williamstown stretching to the Geelong railway, fronting the bay, was purchaed by a syndicate, subdivided, and auctioned off in the prevailing manner of the day. Unusually, no scandal came to this company in the following collapse. The Altona Bay Estate Co, and its subsidiary, the Altona Bay Railway Co Ltd, (of which little is recorded) planned a line from the Govt

railway at Williamstown Racecourse, to traverse the estate and connect with the Geelong line, with intent to provide an alternative route to that place. In March of 1888 a contract was let to David Munro & Co Ltd to construct the line from Williamstown Racecourse platform to The Homestead, near the beach, in Altona Paddock. The loop line with the Geelong line was "contemplated".

Advertising claimed that this "colossal estate has so many advantages as a marine suburb, that it can safely claim to be the Margate of Australia", etc. This was the "land that would boom in the spring". Originally set for 1st Sep. but was set back one week for reasons not stated. The first train to actually convey passengers over this line ran on 1st September, and carried 150 ladies and gentlemen at the invitation of the proprietors. Through the first week steam trains ran continually every day taking intending buyers to the estate.

On Thursday, Friday, and the Saturday of first sale, the agent's office was besieged by applicants for pass. (free, of course) The first printingoof several thousands was quicklyexhausted, then second and third editions were made till the printers' ink gave out or the machinery broke down. The first sale was most successful, with an unprecedentedly large attendance. Large coloured views were on the hoardings surrounding St.Pauls Cathedral, and shield-shaped cardinal banners were suspended from upper windows of business establishments in the main city streets with the device: "Altona Bay Estate- September 8th".

Special trains kept running at intervals from Spencer St. Locomotives with long compliments of carriages glided to and fro along the rails, loaded with passengers. The special trains were insufficient, and an additional one had to be put on. Yet it seems more persons went by boat. S.S.Williams left Queens Wharf at 1/30 pm with 600 souls. It was top-heavy at first, many persons being on the hurricane deck. A good deal of "Altona Bay Estate" bunting was flying on the old craft. (like a circus going to sea?) Several hundred persons were on the 1,600' long pier to greet them, having come by train, and S.S.Surprise, from

Sandridge. The beach glistened in the spring sunlight. It was quite enchanting and refreshing as tiny wavelets broke with a gentle murmur on pebbles and sea-shells, seaweed and bleached cuttle shells. (!) There were no offensive smells, (oh?) only pure ozone air. The Yan Yean percolated beneath the surface. (That means water was laid on). The company had spent a half-million pounds in developing Altona. (sic)

A vast multitude (about 3,000) was at the sale. The whole of the estate was marked out in streets and allotments. The first lot sold was No.19 on the corner of Esplanade and Pier St. 114 lots were sold, to a value of £25,442/5/9. It was said the railway authorities would eventually take the Line over. Return trains were ranged alongside Altona Bay platform in readiness. These were soon crowded and steaming away on their 20-minute journey. Three steamers were at the pier: Williams, Rescue, Surprise. The stream of land-buyers hurried as whistles blew and gongs sounded. Our party boarded Surprise, and challenged Williams and Rescue. Hats were lifted, pocket-handcherchiefs waved, as gradually the beautiful foreshores of Altona Bay faded from view. Songs were sung, and a pleasant 20 minutes or so passed. The train was waiting at Sandridge, and in a few minutes we were again in the city.

Other sales were held on successive Saturdays, when one train, departing at 1.45 p.m., and one steamer, sufficed. Building operations commenced on 7th October. Just before the 7th sale on October 27th, the boom dramatically burst, bringing a quick end to the glorious fixtures of those gilded days, when 20-30 special trains left every Saturday for land sales in the suburbs and near-country areas.

The ALPHINGTON GAS MOTOR of 1886: John Alfred When comparing the great cost of the labyrinth of ropes, wheels and heavy machinery of Melbourne cable tramways, and heavy motors of the Sydney steam trams, it occurred to a number of engineers and others that by the application of a gas engine with a quantity of gas stored under pressure and compressed to keep the engine supplied, a motor could be made to work roads of ordinary grades, as effectively as

the cable, and of not more than 1/3rd the weight of a steam motor. Having matured their plans, they got consent from the Rlys.Commissioner to use the Alphington line. They got a 3½ h.p. Otto Gas Engine and constructed the experimental car. Great pains were taken in experimenting and making notes of its performances. Over 10 weeks, they ran a number of trial trips and showed it to all who wished to see it. Being anxious to put the invention to a more practical test an agreement was entered into with the Govt to carry passengers and work the Alphington line as a tramline.

Thus it was stipulated that a motor should be supplied to draw a carriage in which the passengers be carried. So a new motor was constructed with a 6 h.p. engine, and fitted with friction gears similar to the first experiment. This motor weighed 4½ tons; the carriage 35 cwt; a total of 6½ tons. The supply of gas was in four copper cylinders each 16" diameter, 6' long, tested by hydraulic pressure before used, to 200 lb per square inch. Total capacity was 28 cubic feet. The gas was compressed to 10 atmospheres, or say 150 square inches with 280 cubic feet of gas, enough for 15 miles. The pressure of 100 lb was never exceeded, which gave ample supply to reach Alphington and return to Clifton Hill.

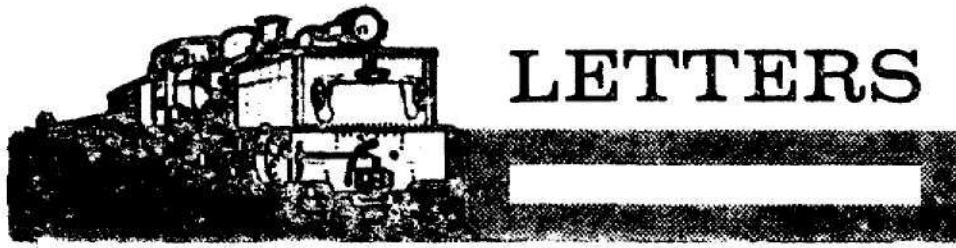
To compress the gas, an engine and compressing pumps were fixed near the line, to take the gas from the Metropolitan Co's mains, and force it into recievers, where it remained under pressure till required to be used. When the motor needed a fresh supply of gas, it was brought opposite the recievers, and containers of the motor connected by a short india-rubber hose to a pipe. A tap is turned on, and gas passed from the reciever to containers till pressure was equal, when the tap was closed, hose disconnected, and the motor ready to resume duty. Not more than two minutes was needed to charge the containers. This engine, pump, and recievers needed not to be near the line, as they may be placed one or two hundred yards away in any convenient place. The time usually taken for the 2½ miles was 16 mins. The heaviest grades were 1 in 50, of which there were three,

the sharpest curve was 18½ chains radius. Eight trips were made a day, totalling about 40 miles a day, with one extra on Saturday. Over the first four months, the average consumption of compressed gas was 702 cubic feet a day, measured by a meter.

The tram wheels were 2' diameter, made of cast iron, chilled, and cast from a pattern found at a foundry. Friction wheels were of ordinary cast iron, and were actuated by the movement of one lever for forward, reverse or stopping. The motor ran round the carriage at each end of the line. On one or two occaisions, as many as 40 passengers travelled at one time, but it was regretted that good loads were very much the exception. Traffic in winter was very light. Repairs to June 1886 were almost nil.

Captain Rowan said this was not the first time such a thing was tried on tramways, and it was one of the earliest such things tried on tramways, which statement seemed very peculiar to the others concerned, as when any trial by electricity was carefully recorded, that there were no records of trials by gas, and, as no such records could be found, they all wondered that it had not occurred to somebody before.

Professor Kernot recorded the results of an experiment on 19/5/1885 at Northcote- the total consumption of gas was 50.3 cubic feet; distance travelled was 2 miles 26 chains, 43 links and back; consumption per mile was 10.7 cubic feet; time of whole run was 30 minutes 15 seconds; average speed was 9.29 m.p.h. Efficiency of mechanism was remarkably high; the loss of only 26% was a most satisfactory; and promised long life for the engine and gearing.



LETTERS

EMU BAY REVIVES!! Mark Plummer

The Emu Bay Rly Co has ordered five new locomotives from Walkers Ltd of Maryborough, Qld, to handle projected increased tonnages on their line. This follows the decision of the Mt Lyell Mining & Rly Co Ltd to once again commit Their freight by rail. Expansion by both Mount Lyell and Electrolytic Zinc, and the decision to build a sulphuric plant at Burnie which will be in operation early 1970. This will bring the E.B.R. mainline locos to a total of nine. These new ones will be diesel-hydraulic and are expected to be equipped for multiple-unit operation, and be of approximately 750 h.p., and will have various improvements on the existing "10" class.

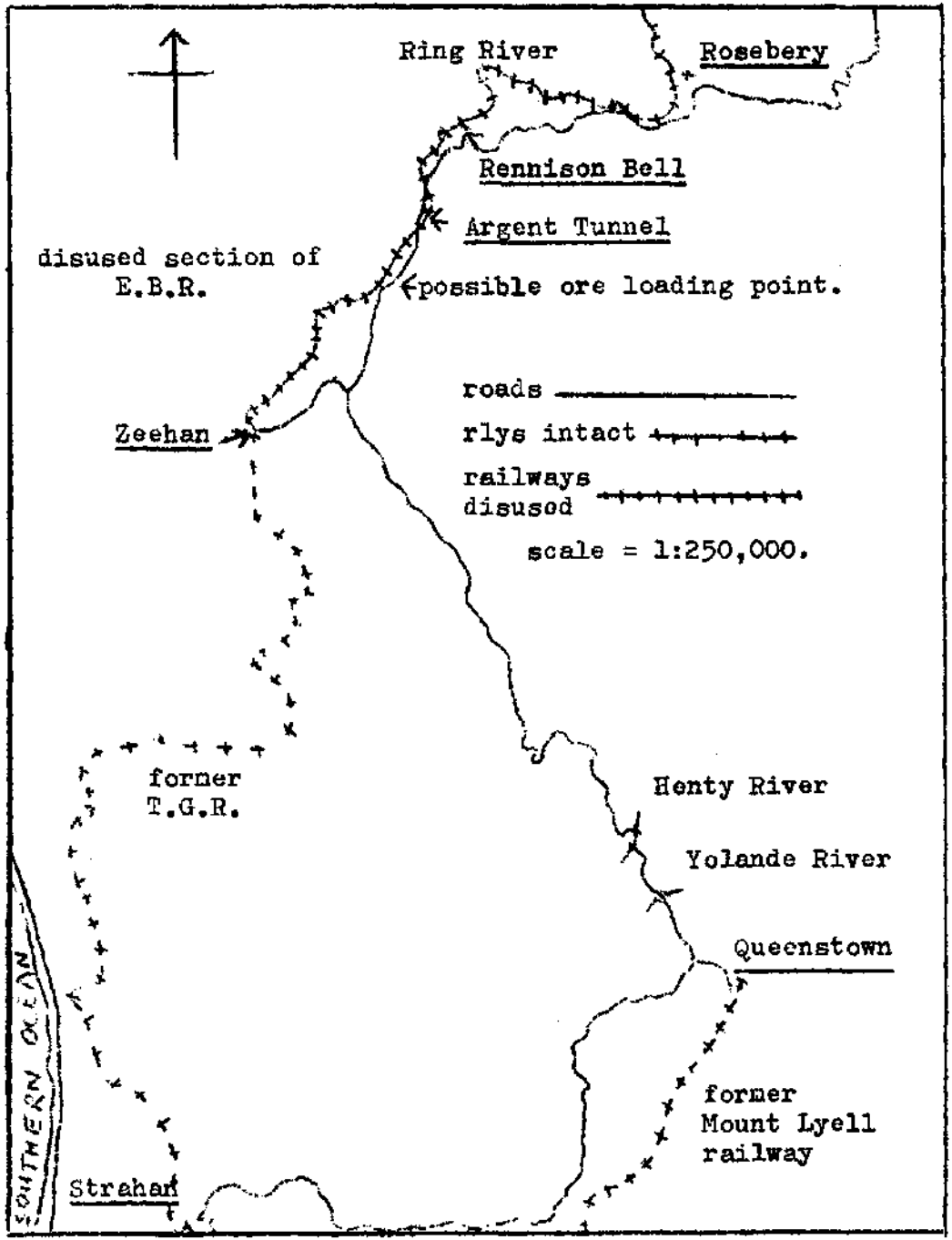
E.B.R. experimentation with double-heading of diesels for first time ever on 31/5, by combining trains 2 and 4 into one at Primrose, giving 13 loaded "Z" trucks plus two vans with a record load of 595 tons. Both locomotives were manned, the second unit having an extra tachometer in the driver's cab showing the r.p.m. of the first loco. A "Z" truck drawbar broke before the train had gone far, but the train speed to Boko up the first big grade was the same as for a single loco and six "Z" trucks. On this day, every weather condition was present- light snow, rain, and sun shine, giving all conditions of rail service. The train halted on the Que bank when a coupling chain broke between the "Z" trucks, and the locos were able to start the load with only minor wheelslip. The train was split at Guildford and completed its journey as the normal 2 and 4 trains.

E.B.R. will begin hauling pyrites from Mt Lyell mines at Queenstown for the plant at Burnie and withing a few years, about 200,000 tons of copper concentrates will be railed to

Burnie annually. This, with the double-heading, and the 500 ton loads will mean an extra 8 trains in each direction each week! To carry the increased tonnage of ore a fleet of new rolling stock is to be purchased, but no details are as yet released. It is under consideration to re-open much of the abandoned Rosebery-Zeehan section (closed 1965), possibly as far as the 83-mile post (four miles past Rennison Bell, and just after the tunnel) where a loading terminal would be built to handle ore brought over by road from Queenstown. This would also handle tin from Rennison Bell which at the present time amounts to only one track load a week, but will increase when the mine reaches full production. An inspection of this section last December showed the track and bridges intact, but a great deal of sleeper renewal and track re-conditioning would be needed to bring the line into operating condition. Such a re-opening, and carrying of Mt Lyell ore would bring the line closer to the original vision of its promotor, J.S.Reid, but the 18-mile extension to Queenstown to fulfill this vision is unlikely, although there are no great engineering difficulties involved, apart from bridging the Henty and Yolande Rivers.

It will be remembered that when the E.B.R. prospectus was issued in 1897, the version published in Melbourne showed a map with a "proposed branch to Mt Lyell", which (so it is said) was a lurk to cash in on the Lyell riches. Later it was stated "the direct trunk to Mt Lyell must be regarded as incorrect so far as present concessions go", although E.B.R. got permission to go to Mt Lyell before the opposition company. There were over 400,000 applications for the 150,000 shares, proving the tastiness of the bait. Unfortunately, the traffic never proved as remunerative as anticipated, and the line subsisted on a hand-to-mouth existence for most of its life. Ironically, only after the opening of the adjacent Murchison Highway and consequent loss of its passenger and mail traffic, and the coming of the diesels has the line come out of its state of impecuniosity. Now, perhaps, the dream may reach fulfillment.

Alterations and extensions to the E.B.R.'s diesel shop and servicing facilities are being drawn up, and work is to



commence this summer. On 29/7 the company's rather unsuccessful original D-H loco No.21 (built North British) was brought out of storage and is being serviced for use as a shunter. The company is also looking into building of a new length of track on the down side of the Hatfield River crossing (betwen Guildford and Farrell) of about half a mile. It would eliminate a loop and reduce the line by one mile. Acknowledgements to Tas.Rail News/John Alfred.

MOUNT LYELL LOCO No.3: Mark Plummer

The Mount Lyell Mining & Rly Co has donated Abt No.3 engine to the Tasmanian Transport Museum for preservation. It was stored in the old Queenstown engine shed earlier this year, now used as a carpenter's shop. It was the last engine in Queenstown, and seemed in very good condition despite its five years' storage since the line closed in 1963. Builders' plates showed it to be No.3730. No.1 was donated to the Zeehan school of Mines in June 1964; No.2 was scrapped; No.4 was being overhauled at time of closure and the boiler used in another section of the plant, the boiler being scrapped and other parts were in the company's yard in 1/68. No.5, the youngest, and only North-British-built is at Menzies Creek in Victoria. So if the Museum can raise the $300 needed for its transport to Hobart, then three of the Abt locos will be preserved.

SILVERTON TRAMWAY:

Standard gauge is now through from Perth to Port Pirie, and virtually complete from there to the N.S.W.border. Some arrangement with the Silverton Tramway Co appears to have been finalized, and the construction of a new standard gauge line is to be made on a different route. This will bring to an end the careeer of the most successful from a financial point of view of any Australian railway. it may not be generally realized how Broken Hill was once envisaged as a centre of a 3'6" gauge empire, with these projections: Tarrawingee Flux & Twy Co; Broken Hill & Pinnacles Twy; Rutland Flux & Twy Co; the Menindee Twy (to tap the then-great river steamboat traffic); and the Broken Hill Twy Co of 1887, to construct a system of street tramways. The success of the Silverton Twy Co, and success of the

Broken Hill mines, which prevailed coincidentally with the silver boom, land-boom, company-mongering-boom, and other financial racketsthat emanated from Melbourne in that wild decade, caused a rash of private railway schemes, most notable of which were those about Zeehan, which was thought to be a second Broken Hill. Here, surely, is plenty of strong meat for a budding and ambitious historian to get his teeth into.

FINIS of FYANSFORD: Mark Plummer

All track being removed from the Australian Portland Cement Co's 3-mile 3'6" gauge line, it only remained for the various societies to collect their locomotives. The first engine to be moved was No.11, the chunky 0-4-0 tank engine built by Perry Engineering Co of Sth.Aust, which was shifted on to the low loader and moved by Mayne Nick less to their Footscray yard on Friday th. Next day it was taken to its final resting place at Menzies Creek using a devious route via Chandler Highway and crossing the old Outer Circle railway bridge en route. On the same days two of the old side-tipping wooden trucks were also removed to the P.B.P.S. museum. The next loco to be moved was the 2-6-0-0-6-2 Beyer-Garratt, which was dismantled into three parts on Thursday and put onto three low-loaders and moved up the Geelong Rd to be re-assembled at Menzies Creek on Fri 16/8 This engine consists of the running gear and tanks off No.1 (B/No.6794) and boiler, frame, and cab off No.2 (B/No.6935). The boiler off No.1 was also donated to P.B.P.S. who plan to clean and paint it so visitors can view the interior of a locomotive boiler. The Garratt was pushed into the Museum on Sunday by an "Na" 2'6" gauge loco, being an unusual piece of dual gauge working.

Wednesday 21/8 was the day for the big move. Over previous weekends railfans had disconnected the three units of the 119-ton 4-8-2-2-8-4 Aust.Standard Garratt. The Clyde diesel towed the engine, held together only by the swivelling pins out of the shed. Cranes and low-loaders were waiting. The 6-ton capacity coal bin was first moved and placed on one side. Cables were put about each end of the centre section consisting of frame, boiler and cab, and lifted it up about

12". The diesel pulled the front unit forward and a small crane pulled the back unit into the shed. With the centre section about 3' in the air, a low-loader was then driven under it and the load secured. Each end unit was lifted in a similar manner, and being made secure, the strange convoy headed off down Geelong Rd.

The ASG being disposed of, the diesel shunted the two Vulcans outside, then brought the two engine units of No.2 (Beyer-Garratt) out into the open where they stayed till cut up on Tuesaday 27/8, togother with the main frame and cab off No.1 These sections which were in quite good order had ben offered to the main societies, who decided they were not worth saving from the scrappers' torch. On Thursday 22/8 the ASG was re-assembled at the Aust.Railway Hist. Society's museum at North Williamstown, only a few hundred yards from where it was built 23 years ago.

The two engine units were moved into position and placed on the track. Then the centre unit was manouvered into position (see photos) -by no means an easy task as the swivelling point must exactly correspond with the sockets in the bogie. That completed, the coal hopper was replaced and the job of connecting the fittings was started. They were fortunate in obtaining a spare boiler, firebox and smokebox shell with the loco. A plate on the back of this firebox states ASG No.40, which, according to John Brady, was not built. Clyde Engineering was to build Nos.37-43, but only 37 and 38 were actually constructed, and the boiler shell of No.40 was sold to the company as a spare.

Details of the Geelong sub-division's activities are given below, but at Fyansford, only the diesel and No.5 (Vulcan) remain of the company's roster of 12 locomotives. It is understood that tenders have been recieved for the 875-h.p 370-ton diesel from V.R., N.Z., and Queensland, but the company has not at time of writing decided to whom to sell it. The 0-6-0 Vulcan waits forlornly behind the diesel for a "fate-worse-than-death" in a Ringwood Park, whence it is expected to be removed before Xmas. All the yard before the shed is removed except the track to the diesel's abode.

The main part of the shed is to be used to store firebricks from the kilns. The tunnel (Victoria's longest at 7/8ths of a mile) has been boarded up at one end and will be utilised for mushroom culture. The bridge is to remain with the addition of a handrail for safety. After the large fleet of cement trucks waiting on the top track are scrapped, there will be little left of Victoria's most interesting industrial railway.

Fyansford locos to run again:
The Geelong sub-division of the A.R.H.S. was given No.4, a Vulcan saddle-tank of 1916, and No.6, an O-4-2ST Hudswell-Clarke product of 1903. The society has acquired a glider hangar on the edge of the Belmont Common on the Barwon Hds Road. It has sliding doors and a skylight, providing maximum security, while making the locos very accesible. The Hudswell Clarke was moved on 30/8 and the Vulcan on 13/9, with the passenger car, five flat trucks, and some rails. The move gained front page coverage in the local newspaper under the heading "Armchair ride for old No.4". The group plan to recondition the locos, and, when they get advice from the builders, to paint them in the original colours. They hope to get permission to lay three miles of track around the common, and to run it as a tourist attraction. Mr Coleman, of Ashburton, generously donated the necessary funds for transportation of the engines.

Albert A Gunsser & Geelong Suburban News

Woods Point Tramway:
The A-1 Consolidated Gold Mine was due to close on 30/8, but was reprieved, and later sold to a syndicate of local owners. The "AGE" printed a photo of a 2' (?) mining battery loco leaving an adit, towing a number of skips.

Wonthaggi Coal Mines:
These Govt-owned operations are to close at the end of the year, due to losses. Underground haulage is provided by 28 pit ponies, the last in Victoria and possibly in Australia. This motive power is home-grown. When the mine opened in 1909, there were 60 of them. Once a fire crippled the lift, trapping 20 ponies 100' underground, where they were fed and watered for several days till a new engine was fitted.

W.R.HENRY'S TUNNEL near FORREST: (refer L.R.No.18,etc) Earlier this year, an "expedition" succeeded in locating the mouth of the larger of Henry's two tunnels. It may be reached as follows: from Forrest, proceed south along Kaanglang Rd to approx.1858/2434, where an unmarked track (four wheel drive required) leaves the road to the right. This track leads to a stream flow gauge on Noonday Creek at approx. 1843/2427. The main tramway to Forrest passes about 30' east of this gauge, running north-south, and the site of the Noonday Mill is about 300' to the south. From the eastern end of the mill, a wood-railed tramway runs south-east, then east for about a mile along a small creek. From the north end, the steel-railed tramway may be followed to the mouth of the tunnel at approx. 1823/2418, a distance of about one mile. The tunnel mouth has been blown up, and being in the bed of a creek, things are very much silted up. Unfortunately, lack of time has so far prevented investigation at the other end of the tunnel. Another route of access to the tunnel area is the No.1 spur road, which leaves Kaangland Road at 1878/2419, and runs along the spur to within 500 yards of the tunnel. The road, however, is blocked in several places by fallen timber, and is passable only to foot traffic. The Noonday Mill site may be reached by a track which leaves No.1 spur road at 1845/2411 and runs north down a steep spur. Map references apply to State Aerial Survey, 873 Zone 7 A & B (Beech Forest A & B), 40 chains = 1"; and to Aerial Photo 873 Zone 7 A4 and B2.

G.Thomson & K.R.Mc Leod.

Book Review: J.L.N.Southern.

"Transporting the Black Diamond", Book I, Colliery Rlys of the Illawarra District, N.S.W.Central Section, by G.H. Eardley.

"Transporting the Black Diamond", Book I, written by Gifford Eardley, of the A.R.H.S. is a detailed description and history of the Mount Kiera, Mt Pleasant, Balgownie, Corrimal and Bellambi collieries of the N.S.W. Illawarra district and the privately-owned railways, locomotives, and rolling stock used between the mines, Govt. railways and jetties along the coast.

This group of mines covered in the book is taken as the central section of the southern coalfields, the mines to the south and those to the north are planned to be treated in two further books to come. Many photographs and at least a dozen maps and diagrams of the track layouts are included in the 78-page book. They are of extreme interest, more particularly as only two or three of the locomotives of Corrimal and South Bulli are still in existence, and a little of the private railway tracks at North Wollongong, Corrimal and Bellambi is all that remains today. All of the jetties have gone and the level crossings with the NSWGR, of which there were no less than eight in the fourteen miles from Bulli to Dapto, have all been removed.

The text is most entertaining, with impressive descriptions of the quaint locomotives, rolling stock of the crudest design, and not forgetting the safe working methods of the most rudimentary and breathtaking fashion of bygone days. It is a great pity all this has completely disappeared; the coming of Australian Iron and Steel Pty Ltd as a colliery owner transformed some of the private railways to top standard, 23-ton axle load tracks, while the export of Illawarra coal from the new Port Kembla Inner Harbour loading berth spelt the death knell to the remaining lines with their replacement by road transport. With a very interesting cover illustration on heavy art paper, "Transporting the Black Diamond" can be strongly recommended at the price of $1.50 for the book shelves of any historian enquiring in to early locomotives, particularly of private railways. It is obtainable from Traction Publications, P.O.Box 438, Canberra City, A.C.T. 2601, price $1.50 posted.

Walhalla Station re-born: Mark Plummer

Mr Griffiths, the owner of "Whistle Stop" at Frankston, when looking for a prototype on which to model his station, decided to build a two-thirds scale model of the old station building which once spanned the creek at Walhalla, the terminus of the 26-mile narrow-gauge line from Moe. Mr Griffith's splendid copy was finished recently, and can be admired with the 78-year old Decauville in front of it on any Sunday.

S.R.& W.S.C. locomotive; erratum:
John Thomson writes of an error that occurred in last issue (No.24) on page 30, which should read: The dimensions measured by him apply to a narrow-gauge locomotive boiler installed in the boiler house of a South Melbourne factory, and put there about 26 years ago. The final "Certificate of Inspection" dated 19/1/1959 shows the following details:

Nature of vessel: loco type boiler,
Horse power or No. of cubic feet: 12.3 (HP or CF?)
Pressure at which safety valve should blow off: 120 lb.
Maker's name: Black, Hawthorn & Co.,
Purpose for which used: heating.

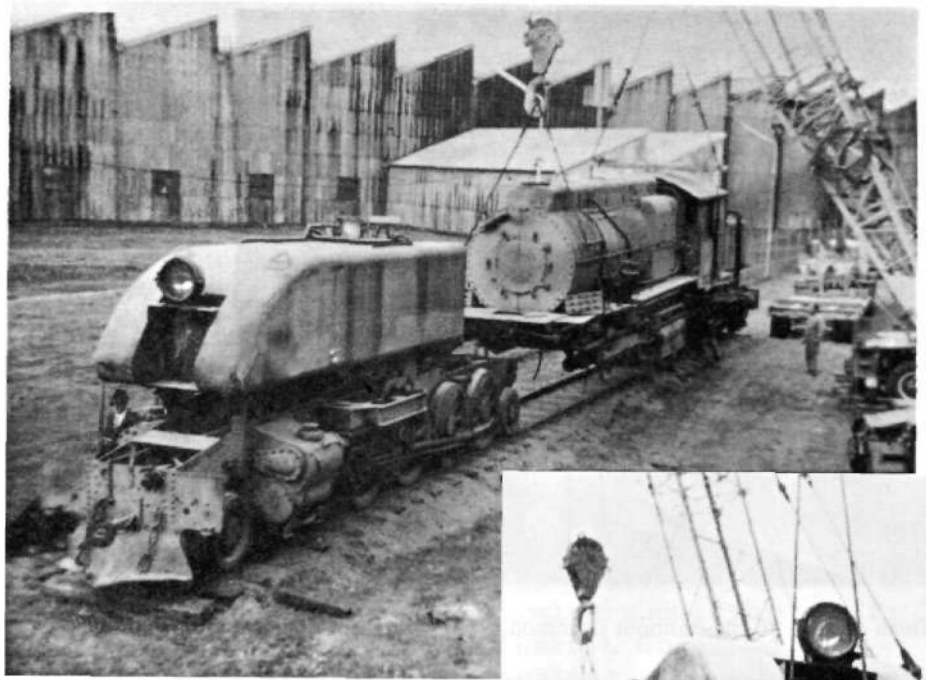
Following the installation of an oil-fired heating unit the boiler was used as an incinerator for some time and is now disued but intact. Unfortunately it is in a confined location, being difficult to inspect and impossible to photograph.

A Correction: Frank Stamford
Page 5 of the last issue contains a typing error: the High Lead incline has an average grade of 1 in 4, not 1 in 14; those participating in the hike could most certainly tell the difference!

NARBETHONG TRAMWAY: Ian Cutter
On a recently-issued 1/250,000 map of Warburton, there is a "light railway or tramway" about two miles long, marked in east of Narbethong. It can be reached by driving north-east along Granton Rd, which branches off the Acheron Way just south of where the bitumen ends. Almost exactly a mile from the turn-off, the tramway can be seen immediately to the right of the road. There are some rails in position here,

Moving the Vulcan (No. 4) to the Belmont Common. J. J. Dickson - photo.

Loading No. 6, prior to removal from Fyansford. R. Plush.



Assembling the Australian Standard Garratt at the A.R.H.S. Museum, at North Williamstown, Mark Plummer was on hand on 22/8/1968, to take these photographs.

as well as further along the tramway, and can be reached from any of the timber tracks on the uphill side of the road. The track, of gauge about 3', is a mixture of small rails a couple of inches high, and larger ex-VR material. The following inscriptions were noted on a short inspection:

Moss Bay Steel 1884 VR
Barrow Steel 6 Mo 1880 VR
B.I.Co 1874 VR
Barrow Steel X Mo 1888 3 o2 VR
Park Gate Iron Co.Ltd 1873 VR
VR A.I.Co. P73

This is to bring this tramway to the attention of the Tramway historian and/or bushwalker.

Note: the Editor's file on Sydney Steam Tramways contains a reference for 1881- "Rails were imported some years ago from the Park Gate Co, but were so bad, they were quickly replaced. The colony was swindled".Could they be the same?

POWELLTOWN'S COFFEE POT: John Buckland

Subsequent to publication of my letter in Issue No.24 further information has come to light from Mr L.G.Poole (to whom I am deeply indebted for his painstaking research which proves conclusively that the so-called "Kerr-Stuart" O-4-2ST "Coffee Pot" on the Powelltown Tramway was NOT Andrew Barclay B/No.269 of 1883 as has been suggested, but this in no way disproves that this engine (and its com panion "Kerr Stuart" B/No.538) was built by Barclay as originally contended. As it happens, Barclay B/No.269 of 1883 is recorded as having been built for working on the 2'3" gauge Campbelltown & Machrihanish Light Railway in the Kintyre district of Argyllshire, Scotland. This 6-mile line served the Argyle Colliery, which closed 1929, but the little engine was not scrapped till 1933.

It was originally built as O-4-OST but later rebuilt as O-4-2ST with the adittion of trailing wheels and carried the name "CHEVALIER". Having seen a diagram of this engine as built and then rebuilt, the resemblance of the "Kerr Stuart" is most striking; the only material differences being the cab and safety valves. These latter on the

Powelltown loco are of a later standard Barclay design, according to Mr C.Andrews. Further research is now in progress to try and pinpoint the actual builder's number and date of these two engines, which it now appears may have been built in 1898, as claimed for the "Kerr Stuart" locos B/Nos. 538 and 539, which might turn out to be the correct numbers but of Andrew Barclay manufacture! I am indebted to Messrs Poole and Andrews for their help in this identification parade.

Additional note on above: Frank Stamford
I have been in touch with members of the "Narrow Gauge Rly Society" who have access to the Kerr Stuart records, and it is confirmed quite definitely that the locomotives (see Issue No.24) that carried Stuart builder's numbers 538 and 539 were not built by Kerr Stuart, but were bought from somewhere else and had Kerr Stuart builder's numbers given them. This tends to confirm John Buckland's theory, and he is virtually convinced it is correct. The Powelltown engine bears a remarkable similarity to several Andrew Barclay saddle tanks built for the 2'3" gauge Scottosh Campbelltown Machryhanish Rly in the 1880's, these saddle tanks in particular being of identical shape.

While on this subject, it may be worthwhile to record a correction to a builder's date of one of these engines. The genuine Kerr Stuart (0-4-0T) of B/No.643 has always been shown as being built in 1902. This date is now proved wrong, the actual year of construction being 1898. This information came from Geoff Horsman of the N.G.R.S. (also a member of L.R.R.S.A.) who has access to the remaining Kerr Stuart records, thus there is no doubt the information given here is correct.

RUBICON TRAMWAY: (addendum) John Alfred
An Order-in-Council dated 10/8/1910 was granted to the Alexandra Shire Council to construct a tramway commencing at the Alexandra Railway Stn, proceeding east, south, east, south, east, south, and east, and to cross the Goulburn and Rubicon Rivers on the existing bridges. Notice was given on 7/9/1910 of intent to delegate authority to the Rubicon Lumber & Tramway Co Pty Ltd, which was done on 7/12/1910. Subsequent procedures await results of further research.

S.R.& W.S.C.TRAMWAYS: Comments by P.Charrett

(i) re B.McDonald's letter in Issue 24, page 28: The main evidence that there were two Black, Hawthorns at Yarrawonga Weir was the equipment disposals catalogue which listed as for sale two Black, Hawthorn steam locos. There was no mention of the Krauss locomotive, which is said to have been disposed of in 1938, although this is rather doubtful because the Weir was not finished until July 1939, and all the locomotives would have been needed until shortly before this time. It has been suggested that one of the Black, Hawthorn locos was in fact the Krauss, only wrongly named. I think it is quite probable that there were only two steam locomotives and that these were the Krauss, and Black, Hawthorn 1134.

(ii) re Mark Plummer's comments in Issue 24, p.29: I agree that the Baldwin in the photo on p.13 of Issue 23 is almost certainly Hayden's Baldwin, but I do not agree that Hayden sold the Baldwin direct to the S.R.& W.S.C., for their records show that the locomotive was brought from Cameron and Sutherland. I think that Hayden found out that the loco went to Hume, and said this although it had been sold to Cameron and Sutherland.

(iii) re H.S.Naughton's notes in this issue:
According to S.R.& W.S.C. records the locomotive came from Isis Central Sugar Co. I agree with the builder's number and year that Mr Naughton shows.

(iv) in the Victorian locomotive list, the Orrenstein and Koppel bought from the NSW PWD and converted from 4'8½" to 3'6" gauge is shown as being sold about 1926, and was working at Wentworth in Dec.1929. I do not agree with this in any way. The work at Hume was expanding and more locomotives were being brought at this time to speed up the work. There were certainly no references in the S.R.& W.S.C. files re this loco being sold, and the River Murray Commission Reports do not show any locos being disposed of. It is possible that the loco could have been sold after 1929 when the depression slowed down the works. It has been said that the S.R.& W.S.C. could have sold a loco which

needed heavy repairs, but I doubt this as they would have need of another loco which would have cost more, when cheapness of transport was a big consideration.

HUME RESERVOIR CONSTRUCTION: H.S. Naughton

As to the 3'6" gauge locos: Baldwin 35935 was used on the Belmont Council Tramway, Brisbane, (which was from 1918 operated by Q.G.R. locomotives) so presumably this loco then went to C.S.R.'s Huxley Mill at Childers, Qld. Huxley closed in the 1920's, so it would seem the loco then went to the Hume Reservoir, as its arrival is recorded as Sep. 1921.

Re the 3'-gauge PWD locos: my records show that PWD's 67 is B/No. is 3035, built 1922; and PWD's 68 was built 1922. I have seen references to four more Barclay 3' locos reputed to have been used there, but am glad to see research has discredited this claim at last. Some years ago, I wrote to Andrew Barclay & Son on this subject, and they replied to say that they did not supply any 3'-gauge locos directly for that scheme.

Black, Hawthorn's No.1157: A.Gunzberg

Re B.McDonald's reference in Issue No.24, p.28, to this loco being in West.Aust: it was a 2-4-2T, named "KARRI" built in 1898. That it was taken over by Chapman & Furneaux later than stated, is substantiated by (a) a fellow enthusiast who has seen the builder's plate taken from the loco; (b) official correspondence between the builders and the W.A. machinery inspector; which confirms that it was built by Black, Hawthorn & Co. The loco was built for M.C.Davies Karri & Jarrah Co, for use at Karridale, W.A., this concern being absorbed by Millars Karri & Jarrah Co. (1902) Ltd, in the 1902 amalgamation of timber companies. It was sold to the PWD in 1913, and re-sold in 1922 to the State Saw Mills. It last worked at Carlisle, near Perth, in 1925, and was cut up for scrap about 1936.

Tramways in the Forrest area: Frank Stamford

Re Mike Swift's letter in Issue No.19, p.21, and R.K. Warren's letter in Issue No.20, p.27 on loco No.7 on Henry's Tramway: I am now convinced this loco was built by

Beyer-Peacock. Having recently examined this loco's twin "DOT" (Beyer-Peacock B/No. 2817 of 1887) now houses in the Tallylin Railway Museum at Towyn, Wales, I was extremely interested to see it had a builder's plate almost identical to that described by Mr Warren. DOT's plate was rectangular but bearing no builder's number, and is as shown:

Beyer, Peacock & Co.Ltd.
Gorton Foundry
Manchester 1887

The plate was 3½" x 15¼". Assuming Henry's engine originally had the same sort of plate, which it did, according to Mr Warren, this would explain why no builder's number is shown.

L.R.R.S.A.MODELLERS' SERVICE: scale drawing of a Baldwin: Those who have purchased this drawing of the 0-4-0ST Shay, will be pleased to know that member Chris Andrews has followed this up with another highly detailed scale drawing of the same quality: an 0-4-0 standard saddle-tank Baldwin which was used all over Australia: on the Derwin Wharf in the Northern Territory; on S nderson's Tramway; the Loch Valley l'ine in Victoria; the Marrawah Tramway in Tasmania, to name a few. The drawing is modelled on the engine imported by the Melbourne Harbour Trust, and has side, front, and rear elevations, also a plan. This drawing can be recommended to modellers, whilst railway enthusiasts generally should find it of great interest. Copies are available from G.Maynard; price 35c, including postage.

Tramways go bush:
It is now known that the rails of the Box Hill-Doncaster electric tramway which ceased in 1896, were sold in 1898 to a timber tramway at CapeOtway which had suffered damage in bushfires in 1897. And an old Sydney D-type combination tramcar which was sold to the Victorian Railways after the Elwood fire of 1906, and was taken by road to Warburton in the 1920's. Any further information would be welcomed.

T.G.R. K1 Garratt loco: Frank Stamford
This loco is now at Boston Lodge workshops of the

Festiniog Railway, in Wales, heavily shrouded in tarpaulins No butchery has so far been carried out on it, and it is not expected to be rebuilt for about two years. The foreman seemed very keen to cut down the cab and put a rounded roof on it, to make it look like a "modern Garratt". A pity.

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Fyansford Finale- last engine moved: Mark Plummer

Tuesday 10th December marked the end of an era at Fyansford. In the morning the diesel moved Vulcan No.5 0-6-0ST out of the shed onto the last bit of track. By 10.30 the loco had been loaded onto the low-loader. It was a sad occaision, as for the first time in 40 years, the Aust.Portland Cement Co at Fyansford was without a steam loco. It was even sadder, as the engine was not passing into the tender hands of enthusiasts, but to the mercies of children and others at Ringwood. One could see numbers of parts that could easily be removed, and no doubt would soon be so. After a ride up Geelong Rd, and an overnight stay at Mayne Nickless' yard. No.5 was installed on its concrete pedestal in Jubilee Park. It remains to be seen what colours it will be daubed with.

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Opinions expressed in articles and letters in this publication are not necessarily those of the Society or Editor The Note on p.2 of last issue was not intended to cast aspersions on any person.

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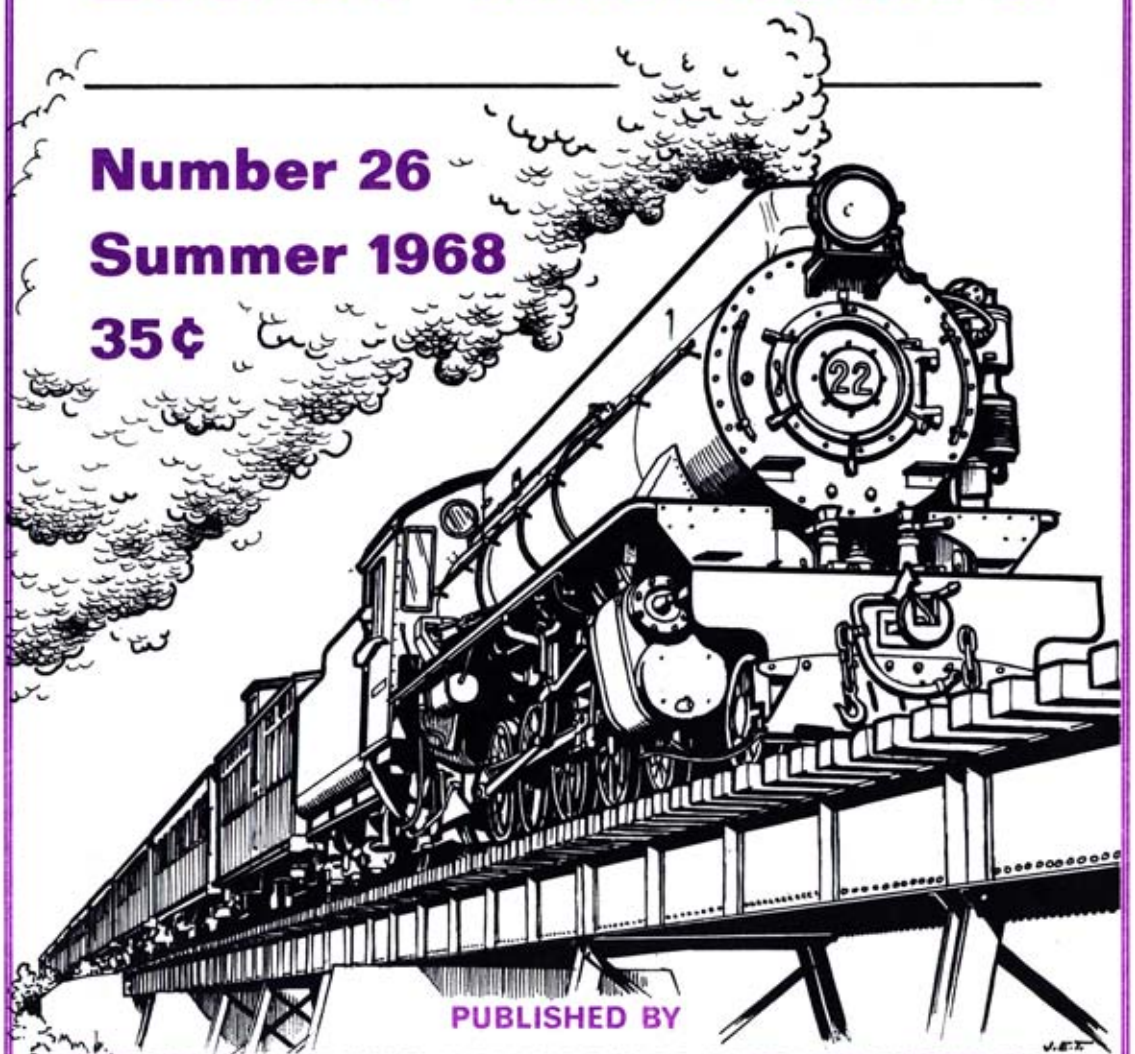
LIGHT RAILWAYS

Number 26
Summer 1968
35¢



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LIGHT RAILWAYS

No. 26 SUMMER 1969 VOL.VII.

Cover: John Thompson has drawn Silverton Tramway Co. No. 22 "JUSTIN HANCOCK", feature locomotive of the main article and the latest addition to the P.B.P.S. museum. John drew the cover from a photograph by John Davies.

It is extremely unfortunate that due to his tragic death, John Alfred should not have the honour of editing the society's first offset printed magazine. The Society's tribute to him is on page sixteen.

The following back numbers are for sale: Nos. 16, 17 and 19 - 20¢ each, Nos. 20, 21, 22, and 23 - 25¢ each. Nos. 24, 25, 26 - 35¢ each plus postage.

THE SILVERTON TRAMWAY - by JOHN DAVIES

Surely the word "tramway" has never been so mis-used as when it was applied to the 35 miles of privately owned railway between Cockburn in South Australia, and Broken Hill, in New South Wales. With steam and diesel locomotives hauling trains of up to 3000 tons at 35 m.p.h., a named passenger express, semi-streamlined locomotives and a prosperous past, it could only be the narrow gauge of 3'6" which could remind us of the more usual meaning of the word.

In the far west of New South Wales lies the Barrier Range, a scattered collection of ancient rocks nearly buried in the dreary plains of their own waste. First seen by Sturt in 1844, it was to hide its wealth for another forty years, when a chance find on a rocky outcrop was to have more profound effect on the economy of Australia than even the early gold rushes.

The first Silver-Lead ore was discovered at Thackeringa, but soon Silverton sprang up on the site of a rich vein, and later silver, lead, and zinc were discovered at Broken Hill. Transport to the remote area was limited to Cobb & Co's coaches from Adelaide, a journey of 21 days, until in 1884, the South Australian Government authorised the construction of a 3'6" gauge railway, 149 miles long, from the then railhead at Peterborough, S.A. to the New South Wales border. Almost all railway construction in the then colonies of Australia was owned directly by the colonial Governments, and the parties concerned failed to co-operate, and the New South Wales Government refused to allow the South Australian Railways to construct their line past Cockburn, and would not complete the link itself.

The situation was resolved when a private company was formed under the title of "The Silverton Tramway Company" on May 30th 1885, with a quarter million pound capital incorporated in New South Wales. The word 'tramway' was presumably a disguise to legalise the railway's position within New South Wales. The line was laid to Broken Hill, via Silverton, by October 1886, opened by the Duke of Manchester in January 1888, and

worked until 1893 by the South Australian Railways.

The final link made in 1888 completed the line from Port Pirie, on Spencer Gulf, South Australia, to Broken Hill, New South Wales, a distance of 254 miles of 3'6" gauge track. Broken Hill became linked to South Australia so closely that even the South Australian time is observed, 30 minutes in advance of Eastern Standard Time, observed elsewhere in New South Wales.

Since the opening, the ore traffic which has always formed the backbone of the line, increased steadily, till the Tramway was known as 'the best paying mine on the Barrier'.

The Silverton Tramway was to be the scene of my initiation into Australian railfan tours. Organised by the A.R.H.S. it began from Adelaide, travelling overnight with three changes of motive power, all steam, arriving in the comfort of S.A.R. sleeping cars at Broken Hill next morning.

Time had now allowed me to travel on this section, and I joined the train at Broken Hill for an afternoon ramble to Silverton, to return around 5.00 p.m. The sleeping cars were left at Railway Town, but this still left 7 coaches of mixed age and appearance to roll out of Broken Hill behind a gleaming cotswold-green "W" Class, No. 22 "Justin Hancock".

The 4-8-2 made an impressive sight at the head of the crimson-lake train, while a view of the assorted end-platform coaches from the side reminded one of South Africa or the Punjab.

Although in September, the late Australian winter, a recent dry spell had bleached the salt bush to a grey dust, and the afternoon sun parched the countryside and travellers from a brassy clear sky. Quarter mile posts (an Australian luxury) on the S.T.C. run from the origin at Cockburn, and we were soon past Picton Saleyards, at 33¼ m, where a long dead end siding served a sheep and cattle yard, and included a covered shed over the siding where cattle wagons were washed.

Limestone siding (27½m) was once a crossing loop and water tank, but now has been removed, and the curve eased for 200 yards. It was interesting to note that even in the dead-heart of Australia, farmers were cautious with their land, for soon the train drove through a cutting lined with almost vertical concrete walls, the land owner having refused to sell more land than was absolutely necessary for the right of way. Having pulled up out of Broken Hill, a short stretch of 1 in 106, the line had then been undulating, but at milepost 25-3/4 it began a rapid descent at 1 in 100, 1 in 90, and finally at 1 in 80, the ruling eastbound gradient, until flatter land was reached near Silverton.

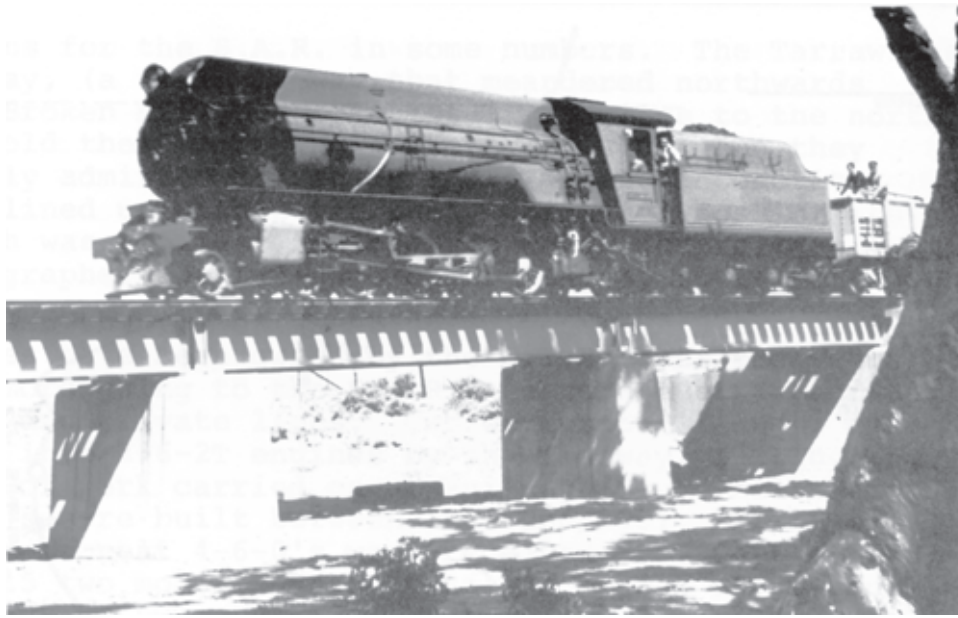
Curving round barren bluffs and crossing many dry creeks the "Silver City" of Broken Hill seemed very far away, and only a few unconcerned Emus and distant Kangaroo shared the desolation with us.

Silverton (20¼m.) was once a town of 3000 citizens, boasting ten hotels and a brewery, but now its only claim to fame is that it figures on the official list of 'Australian Ghost Towns!' The silver-lead ore ran out before the turn of the century, and now only a police station, a store, and a few dilapidated shanties remain, the more weatherproof dwellings being occupied by aborigines. Here we were to wait for 75 minutes for the watering, and run round to be completed, but a town with so much history is a poor thing without its railway relics, and the railfans soon unearthed an ex-S.T.C. 2-6-0 "Y" class, No.11, rusting away comfortably in a piece of ground known hopefully as 'Penrose Park'. Surely the least pretentious piece of preservation.

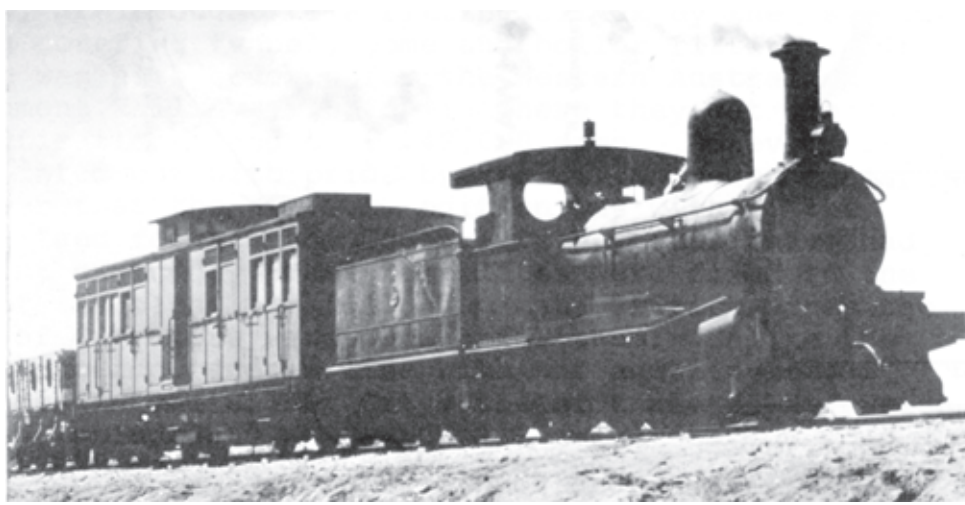
On the northern side of the line, opposite the station, lies a derelict S.A.R. side-loading 5'3" gauge coach, an acquisition to be wondered at so deep in 3'6" country. The return journey was non-stop, and a time of 35 minutes for the 15 miles gave a creditable 26 m.p.h. average against the heavy gradients.

It doesn't take very long in the desert to appreciate the bustle of city life, and Broken Hill, despite its total reliance on the vagaries of the mines, has a proud history of independance and progress. A coach tour of the town, included the two biggest mines where 3'6", the standard gauge of the eastbound New South Wales Government Railways, and the 2' gauge mine tramways crossed and paralleled each other. The S.T.C. worked into these mines, having taken over the motive power from the individual mines in 1939. Today the S.T.C. ownership ends just outside the South Group and North Group of mines, but goes well into the N.S.W.G.R. yard, where transfer sidings are equipped with huge overhead Malcolm Moore cranes. Time was when Sydney-Adelaide freight was routed through this break-of-gauge town, changing again at Terrowie in S.A. onto the S.A.R. 5'3" gauge line to Adelaide, proving quicker than the break of gauge at Albury, and a 5'3" journey via the intricate yards of Melbourne, Victoria, to Adelaide. Now that the standard gauge line runs through to Melbourne, the extra 56 miles via Melbourne have not been enough to compensate for the two gauge transfers. Also diesels, sometimes in multiple units, do this mine shunting work.

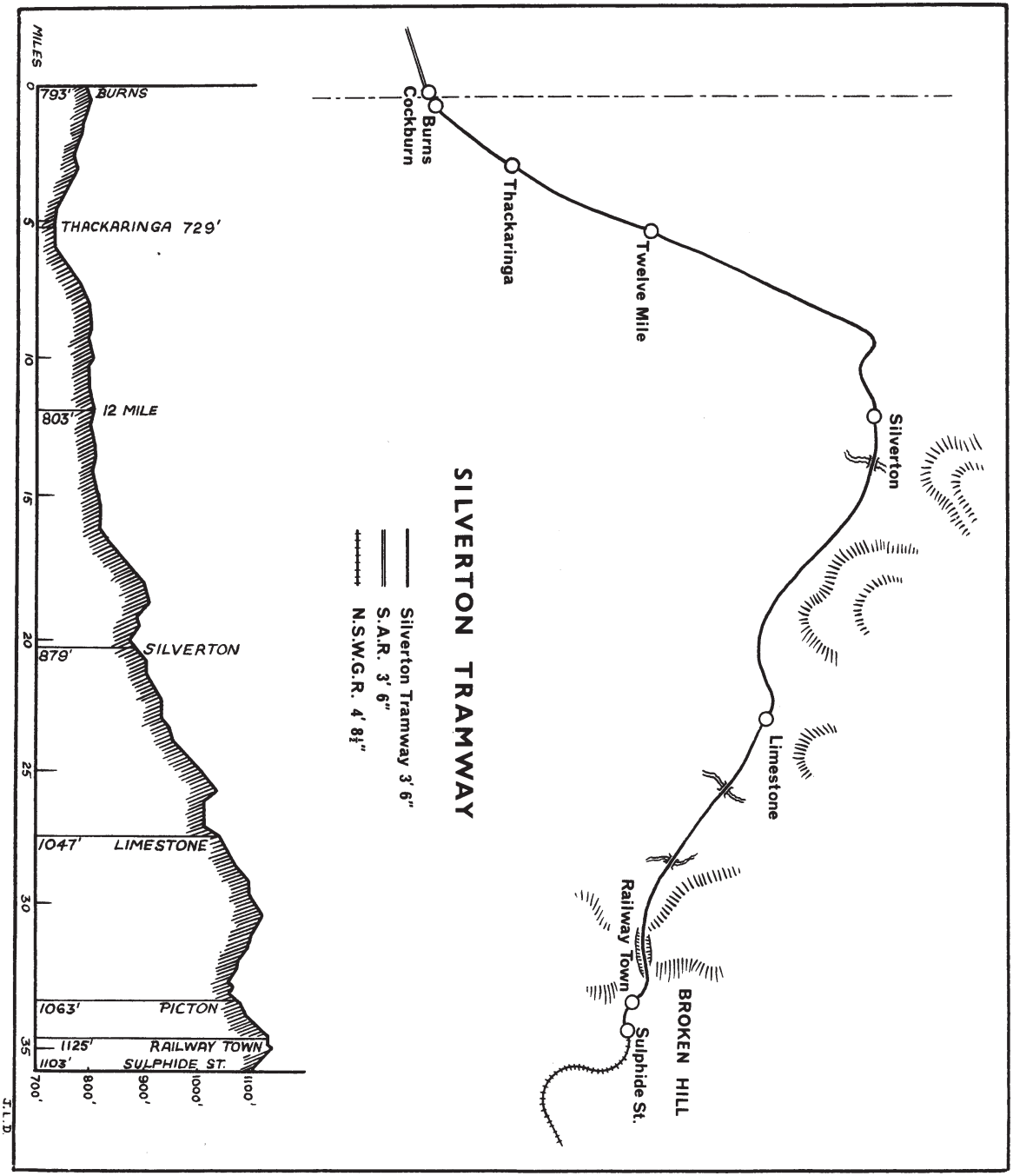
The bus tour ended at Railway Town, where the locomotive department of the S.T.C. was on view. The shed and workshops are of considerable size, and although geared primarily for diesel power, still boasted a four road shed, holding the other three "W" class locos, and the first 2-6-0 "Y" class, No.1, now sadly out of action. On the footplate at the side of the boiler can be seen lead blocks, bolted down, to add to the adhesive weight. A notable feature of the 29 steam engines owned by the Tramway was the virtual monopoly of Beyer Peacock design, all but one being fully imported from the maker, although not all by the S.T.C. The odd one was No.3, a "Y" class, which records show to be built by James Martin of Gawler, South Australia, for the Tarrawingee Tramway. I don't wish to slight Mr. Martin's originality, but the dimensions are exactly similar to the Beyer Peacock engines, the firm of Gawler having produced standard



"Justin Hancock" passes over a bridge spanning one of the many dry creeks of the area. Photo B. Brooke.



S.T.C. "Y""class No. 1 trundles across the plains hauling an ore train. Taken in 1966 by J. Davies.



designs for the S.A.R. in some numbers. The Tarrawingee Tramway, (a real tramway that meandered northwards from Broken Hill, to lose itself 38 miles to the north) had sold their lone engine to the S.T.C. when they finally admitted defeat in 1898. These locomotives were lined up within the shed, which for most of its length was roofless, whether to cater for railfan photographers or for some other reason, it is not known.

No fewer than 21 of these ubiquitous "Y" class locomotives have been owned by the S.T.C. over the years, many more going to the S.A.R., Western Australian Railways, and private lines. Two were rebuilt (No.5 and No.6) into 2-6-2T engines by the Tramway, showing the scope of work carried on at Railway Town. All these 2-6-0's were built between 1888 and 1907, but in 1912 a pair of neat 4-6-0's were received from Gorton, and in 1915 two more made the total "A" class up to four.

There is no doubt that even with the three 900 h.p. Goodwin-Alco diesel electric units (No. 27-9) the pride of place in the locomotive stud must go to the four "W" class 4-8-2's built in 1951. The massive modern appearance and the green livery, lined with black and yellow, are brought to a fitting climax by the 'skyline' casing covering funnel, dome and boiler fittings. This design was also ordered for the Western Australian Government Railways, (which is where they get the "W" classification), and cost £48,000 each. However, it was pointed out with pride by the S.T.C. Mechanical Engineer that the W.A.G.R. edition was without the casing "and for another lousy 70 they could have had a decent engine"! Brass nameplates were fixed to the side of the cabs, and following many British lines the names of directors were chosen for them. Unlike the usual practice, and in line with the equality shown elsewhere in the Silver City, the nickname of Mr. Walsh is also included.

On the centre of the smokebox door and at the rear of the tender were large circular brass plates with the running number raised on a red background. Under this plate on the tender was Beyer Peacock's builder's plate.

On the frame extensions at the front was a small oval plate, cast in brass, and lettered "Property of Stephenson and Watt. Pty. Ltd.", which appears to have been a company formed merely for the purchase of these locomotives. The choice of names, presumably Robert Stephenson and James Watt, could hardly have been more railway-like, probably enabling the S.T.C. to avoid such taxes as might apply.

The only other named locomotive, and that not officially, is the Andrew Barclay 236 h.p. diesel, which is known to one and all as "Sam". Behind the locomotive shed I found the remains of a car-on-wheels inspection truck also painted in the cotswold green of the "W"'s, but even the make of engine was now illegible.

Having travelled the route to Silverton, I had to wait for the return train to Adelaide, leaving at midnight, before covering the remainder of the S.T.C. On returning to the town station, Sulphide Street, I found the most extraordinary train waiting. It consisted of No. 22, "Justin Hancock", No.21, the last "A" class, and No.12, the last "Y" class, the last two with connecting rods removed but coupling rods intact, dead. Then came seven sleeping coaches and a kitchen and dining car, followed finally by a guard's brake. Five of the sleeping cars bore names after the fashion of Pullman cars, these being "Morambro", "Sturt", "Baroota", "Nilpena" and "Alberga", rivers in South Australia. The kitchen car was named "Light", another river, having the added distinction of being the South Australian Railway Commissioner's inspection carriage. The two un-named Sleepers were from the accident train, supplying living quarters for breakdown train staff, a necessity in the Australian outback. Dignitaries from the City were on the platform to bid farewell to what might be the last steam passenger working, and as we trundled over the street crossings, with names of minerals like Beryl, Garnet, and Galena, many cars and townspeople were out to see the passing circus.

Through Railway Town non-stop, and out into the inky black desert roared No. 22, the large headlight stabbing a path between the rails. While we were retracing the afternoon trip to Silverton, it was explained that both the "Y" and "A" class locomotives were going to Adelaide to be preserved in a museum, leaving only the "W"'s and No. 1 at Broken Hill. The sound under us changed slightly as the 94 lb. rails, laid for the first four miles out of Broken Hill, gave way to a mixture of 63, 80, and 83 lb. per yard plant. Silverton was reached in 36 minutes, the layout consisting of two loops and a siding, the watertank where we had filled up in the afternoon, and a goods shed and office. Despite its dilapidated appearance, the office dealt with a fair amount of stock movements from the stations for many miles to the north. At the point before Silverton station where a distant signal might be placed there was, instead, a 'designation board' of S.A.R. pattern, a device for warning drivers of the station approach at night, or in a dust storm.

Once away from Silverton the country was new to me, but not a light was to be seen. One felt rather than saw the train ride over another summit, and plunge down the 1 in 120, steepening to 1 in 80, as the descent of the Thackaringa Hills ran out on the Mundi Mundi Plains. These are reached at milepost 16½, whence the landscape becomes even more featureless. On the north of the track is just visible a red earth embankment, intended for the change to standard gauge. (This work was carried out by the S.T.C., but has now stopped because the Commonwealth Government has decided to build a new standard gauge line on a different alignment which will be operated by the S.A.R. - Ed.)

At Twelve Mile Siding (12½m.) there is a crossing loop to receive hot-box cases, a once common occurance in the sandy country. At Thackeringa there was once a crossing loop and another siding for the same reason, but all has gone since the arrival of the Alco's. We were now travelling south-west, and at length a light was picked up in the locomotive head-light. It was Burns designation board, but here there

was also a distant signal. These are features not often noticed in daylight, and the home was studied with as much care as is possible when leaning out of a rocking end platform. It tapered to the post, and the reverse side was white with the usual black band, the colours being red and white on the face. This too was pulled off for us, and we entered the centre road of Burns yard, controlled by the American-type switch stand, as found on the S.A.R. The roads either side of us, and our own, ran over the border into South Australia, while to the south was a siding loop and locomotive refuelling roads. There was also a siding to the north, being the platform road, a wooden station building, a further off some company houses and a hotel. This, plus a turning triangle and ash pit, comprised Burns, but Cockburn yard was more extensive, boasting a three-road loco shed for the S.A.R. steam engines. Inside the shed were two locomotives, "T" class 4-8-0's, one of which was to take the train on at 5.50 a.m. As I explored, "Justin Hancock" came off our train and turned via the triangle, returning to Railway Town light, but with as many rail-fans on the footplate as the driver would allow.

Looking back from Cockburn our train could have been mistaken for a railway version of the 'Marie Celeste', for it was now headed by the two dead engines, with connecting rods removed, and consisted of 14 coaches full of sleeping passengers, without a light to be seen. All around the desert night denied the existance of man-made objects. Even the usually crammed Burns Hotel was at last silent, the hostelry doing more business than any in Cockburn, for the State licensing laws allow a ten o'clock limit in New South Wales, but the curfew rings at six in South Australia. Having attempted to capture this phantom train on film, using P 60 bulbs, an open shutter, and miles of wire, my three companions and I drove back to Broken Hill in the early hours.

The next day the Silverton Tramway was back to its normal job of hauling the lead concentrates to Cockburn, the 11.00 a.m. morning train consisting of single

post-office red Alco diesel towing about 1400 tons of this deceptively heavy load. I was surprised to find such a moderately powered diesel, rated at 900 h.p. pulling well over a ton per h.p. up the 1 in 100 banks. The line had three trains each way on weekdays, and one on Saturdays, but it must be remembered that all freight working has to be worked through to Port Pirie, a distance of some 250 miles on single track, to the smelters.

It was only after a great struggle that Broken Hill was finally connected to Sydney by rail, as late as November 1927, and since then a portion of the ore traffic has gone eastwards. This broke the monopoly of the S.T.C. but they still carry the majority of the ore, as Sydney is 699 miles by rail. The Tramway also carries supplies for the Barrier from Adelaide, a mere 333 miles, and oil and fuel for domestic use have three special sidings on the 'Town' line. The local depots of these oil companies, the Commonwealth Oil Refinery, the Vacuum Oil Company, and the Caltex group, are all situated along this line, between Railway Town and Sulphide Street, giving the S.T.C. valuable traffic in recent years, when one in three citizens owns at least one vehicle. The Vacuum Oil Company also has a depot half a mile along the Tarrawingee Tramway track, this being the only part of that concern now worked, usually by the Andrew Barclay diesel, "Sam". Coal came from South Australia, and this was encouraged by the town as the cutting of local timber for fuel was having a serious effect on the doubtful fertility of the surrounding countryside. Locomotive steam coal is now brought from Newcastle near Sydney, while for domestic use Kerosene is brought from South Australia.

The freight vehicles for all this traffic have always been shared with the S.A.R. on a one to six ratio, consisting of mostly steel bogie wagons, but wooden sided bogies, mostly S.T.C. owned, are also used for the ore, and an assortment of tankers, stock wagons, flats and goods brakes can also be seen. The ore wagons always appear empty due to the very dense Galena ore, concentrated from the less heavy rocks, laying

well below the edge of the wagon. Even so the sag and bulge of some wooden cars have to be seen to be believed.

Passenger stock is hired on a mileage basis from the S.A.R., whose 3'6" gauge coaches are appointed just as well as their wider brothers. A photograph shows a twelve-wheeler buffet car trying hard to look American, and although the exterior does not quite match up to the 'Lincoln Car', there is no austerity about the interior, the flush-sliding double windows providing an excellent elbow rest on a hot day, while the buffet supplied all the refreshment a lack of license would allow.

The 'Broken Hill Express' performs its noble task on Mondays, Wednesdays, and Fridays, consisting of a through working on 3'6" gauge track to Terrowie, S.A. with just a change of engines at Cockburn. Travellers are then requested to change into the 5'3" coaches, unfortunately in the chilly hours of the morning, and continue their journey to Adelaide. The development of air transport, a daylight bus service to Adelaide, and the N.S.W.G.R. "Silver City Comet" diesel express have all combined to lower the importance of the train, but the full weight allowed is made up in ore wagons on the rear.

Mineral trains, the real payload of the line, are collected at the extensive yards at Railway Town, and made up into 1500 or 3000 ton trains, depending on whether one Alco or two is being used. Just over an hour and a half is allowed for the journey to Cockburn, where the train is run into the S.A.R. yard, and left to be taken on as required. The "W"'s used to turn via the triangle, which is used by both railways, the tender filled with water, and return with the east-bound train, but the diesels can run either way, and they take the waiting train of empties and back-loading freight out almost at once.

Train working is by the Train Section Order system, with a train controller at Railway Town in communication by telephone with Burns and Silverton. Occasionally

trains are crossed at the latter station, where longer crossing loops have been put in since the arrival of the diesels.

On my visit the train controller proved a most helpful host, and most of the employees are very 'public relations' minded. At the height of the "W" era a publicity train was run to Cockburn consisting of three "W" class locomotives, with 3,600 tons of concentrates behind, a much photographed stunt which is rumoured to have been the result of a bet. Since then the record train has been well and truly beaten, for on the 18th of January, 1963, all three Alco's pulled a train of 106 loaded ore wagons, and a goods brake, to Cockburn. The weight behind the coupling being calculated at 4,500 tons, of which 3,550 tons was ore payload. The train was some 3,000 feet long, and took 1 hr. 55 mins. or 1 hr. 30mins. net excluding the inspection stop at Silverton. With 2,700 h.p. this feat seems incredible but was typical of the forward thinking of the company. Now the work is well advanced on the new standard gauge in South Australia between Port Pirie and Cockburn with completion scheduled later this year. There remains the 35 miles of the Silverton tramway over which argument has raged for four years. Due to this arguing work on a new standard gauge line between Cockburn and Broken Hill has been delayed and it is now inevitable that the 2,500 mile Sydney to Perth through service will be delayed because this tiny section is incomplete. When, however, it is finished it will bring to an end the career of the Silverton Tramway Co.

THE END

My thanks are given to the compilers of the excellent brochure produced by the A.R.H.S., to articles by Mr. C.C. Singleton in the same society's magazine, and to Mr. J.A.A. James and Mr. B.J. Brooke, for their help.

OBITUARY - JOHN ALFRED

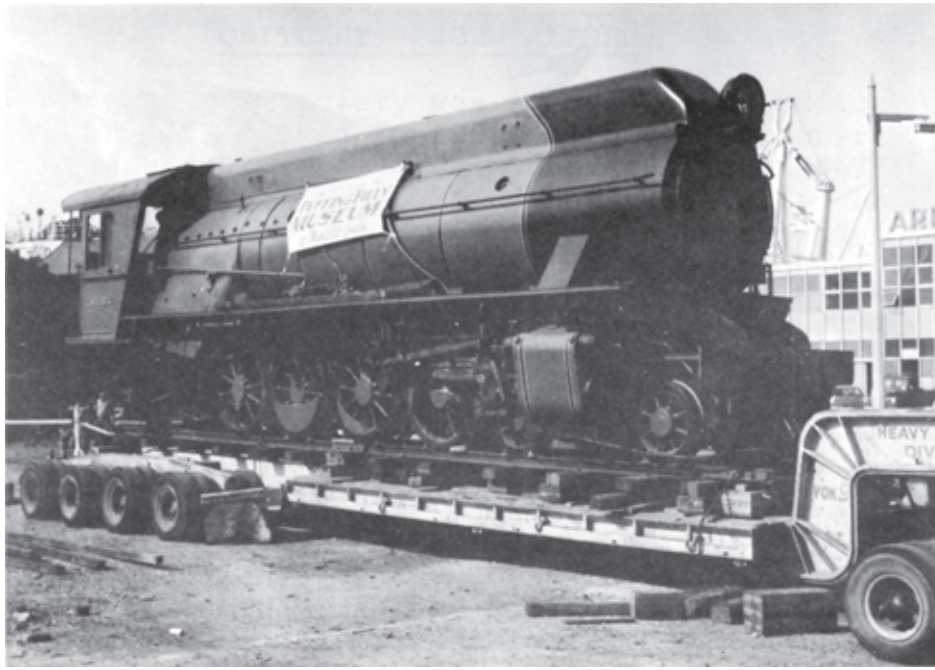
At a time when the society was in need of an Editor member John Alfred volunteered. Although Editor for only two issues before his death he applied himself to the position with an ability that resulted in an improved magazine. In his own articles he showed himself not only to have an extensive knowledge of light railways but also to be capable of presenting his knowledge in a way that re-created the atmosphere of the era. With a willingness to co-operate with the council he was looking forward to producing the Society's first offset printed issue, and had many new ideas for improving the format and content of the magazine.

John, an extremely friendly person, was known to every railfan who ever visited the Public Library at night, where he could always be seen busy researching. He was extremely active in other societies and had many articles printed in their magazines. His main interest, however, was in writing the history of the land boom of the '90's and the culmination of his years of research was to have been a large book called "The Saga of the South" which he had nearly finished writing.

It came as a great shock to learn of the car accident at Bowen in the north of Queensland on the 7th January and then of his death 10 days later without gaining consciousness. His death was made even sadder by the fact that the police were unable to contact any friends or relatives after his death, so that there was no opportunity for them to pay their last respects. To a hard researcher, a good Editor, and a great friend we say "Vale" (M. Plummer.)

Errata: In the last issue we forgot to acknowledge that Rick Bryse of the P.B.P.S. took the photograph of the double-headed cane train that was used for the cover.

Two interesting photos taken by the S.E.C. (Above) Hired S.A R. "V" class working on an overburden train about 1922 at Yallourn North. (Below) No. 5, the Hudswell-Clarke from Wallaroo doing similar work sometime after 1926.



"Justin Hancock", minus coupling rods and tender on the low loader at Appelton Dock. Photo John Buckland.

No. 86 approaches Yornup with a load of sawn timber from the Donnelly River Mill in 1967. Photo A. Gunzburg.

NEWS, NOTES & COMMENTS

BIG "W" ARRIVES IN MELBOURNE

Having read the article on the Silverton tramway earlier in the issue many members will be pleased to learn that No. 22 "Justin Hancock" of the Silverton line was donated to the Puffing Billy Preservation Society by the S.T.C. has arrived in Victoria and is now residing in the museum at Menzies Creek.

It came by rail from Broken Hill to Port Pirie where after a bit of difficulty it was loaded onto the Blue Star ship "Australia Star". They generously transported it in their hold, at no cost to the P.B.P.S., arriving in Melbourne on Thursday January 30th.

Friday morning saw many fans at Appellton Dock, taking "sickies", to watch the locomotive and tender being unloaded onto a large 58-wheeled low-loader. It remained at Appelton Dock over the weekend (Page 18) before going to Menzies Creek via the Beach road, South Road, Warrigal Road, Pakenham, and Gembrook!

"W" No. 22 was one of sixety-four similar locomotives to come to Australia in 1951. Four went to the S.T.C. and the other sixty to the W.A.G.R. Built by Beyer Peacock they were designed for the W.A.G.R. for general purpose duties and were built with a maximum axle load of 10 tons for operation on the light lines of the W.A.G.R. which were laid with 45 lb. rails. Special features on the locomotives included SKF roller bearings on all carrying axles, Hadfield power reversing gear and a specially designed boiler with a wide firebox and a large combustion chamber suitable for burning the Collie coals of W.A. The firebox was provided with a thermic syphon and two arch tubes. The master mechanics type of spark arrestor was fitted in the self-cleaning smokebox. The W.A.G.R. has all sixty of its engines running today while the S.T.C.'s four are pensioned off.

"No. 22 is painted in a large-green livery, with a black smokebox and cab roof, red buffer beam with a few more spots of red highlighting parts of the valve

gear, and black and yellow lining on the boiler and cylinders. The cab, finely proportioned, follows the slope of the boiler backhead, to avoid any unreachable corners in the front of the cab in which dirt could collect. The cab is mounted on a cantilever platform, and fitted with a double roof and ventilators. This all adds up to the locomotive imparting a very modern appearance. As a representative of modern narrow-gauge streamlined locomotives it is a welcome addition to the P.B.P.S. museum and we must congratulate the P.B.P.S. on their initiative in acquiring such a locomotive. (M. Plummer)

Technical Details
Gauge 3'6"
Wheel arrangement 4-8-2
Boiler Pressure 200 p.s.i.
Grate area 27 sq. feet
Heating surface - evaporative 1,117 sq.ft. - superheat 305 sq.ft.
Driving wheel diameter 4'0"
Cylinders 16" diameter x 24" stroke
Weight in working order 101 tons.
Tractive effort 21,760 lb.
Length over buffers 61'11"
Coal capacity in tender 7 tons
B/N 7418 of 1951.

THE DONNELLY RIVER MILL RAILWAY (W.A.) - by A.Gunzburg

The 14 mile private long railway from Yornup about 140 miles south of Perth on the Northcliffe branch, to the Donnelly River Mill represents the last vestige of the once extensive network of timber railways operated by Bunning Brothers. It is now the last private timber line operating in an area which was once covered with railways serving the timber concessions of numerous sawmillers and timber merchants.

Bunning Brothers commenced business as building contractors in Perth in 1887, but by 1904 their interests had turned to sawmilling.

Their first mill was at Lion mill, later renamed Mt. Helena, but by 1923 they took over two small timber concerns near Collie and Yornup. Bunnings operations then expanded, to cover several areas throughout the South-West of the state.

The first mill at Yornup was erected in 1927, and operated until 1948 when a modern mill was established at Donnelly River some 14 miles to the west. From a fleet of over half a dozen locomotives working on the Donnelly River line there remains only one in traffic. This was former S.A.R. "Y" class No. 86, built in 1888 by Beyer Peacock & Co. (Builders No.2913). It was purchased from the S.A.R. in 1944 and worked the Nyamup and Yornup mill lines. In November 1958, a "Yx" class Belpaire boiler was purchased from South Australia and the locomotive was rebuilt as a "Yx" class. Bunning Bros. also own a similar locomotive, former S.A.R. "Y" class No. 176, also subsequently rebuilt in W.A. as a "Yx". This locomotive is currently stored at the company's workshops at Minjinup, awaiting repairs but its future is uncertain.

The railway operates three to five days a week, depending on the amount of sawn timber awaiting delivery. All log hauling from the cutting area to the mill is now carried out by trucks. The sawn and seasoned timber is loaded onto W.A.G.R. wagons, which are then hauled to the W.A.G.R. siding at Yornup. Departure from the mill is usually 12 noon to 1 p.m. and the 28 mile return journey takes three hours. Empty wagons are left at Yornup by the W.A.G.R., and these are then hauled back to the mill by the locomotive, after the loaded trucks have been placed in the siding.

The railway is typical of the W.A. timber lines, with a minimum of formation, and limited clearances between the train and surrounding trees. A ganger is in charge of maintenance of the track and there seems some future at least for this, the last private timber tramway in Western Australia.

FRAME FOUND AT WARBURTON

Looking around the vicinity of the old "La La" siding at Warburton recently, I found the frame of an old 0-4-0 steam locomotive. The dimensions suggest that it once was part of a 2'0" gauge Orenstein and Koppel, yet no 2'0" gauge lines ran out from Warburton.

However, it is known that Mr. Ezard who had a tramway at Warburton brought a Krauss and an Orenstein and Koppel from Port Albert to Warburton in 1928 to combine into his own 3'0" gauge unconventional locomotive, and there is quite a possibility that this frame is from one of these locomotives. Anyone wanting to see the frame will find it beside the river behind the timber mill. It had been hidden all those years by blackberries which have only just been burnt away. The dimensions are - length 14'1", height 2'6", maximum width 5'4", Wheelbase 4'1". Wayne Chynoweth.

LETTER TO THE EDITOR - Roger Seccombe writes:-

BRITANNIA CREEK TRAMWAY (L.R.25)

While an abundant supply of cheap wood, good water supply and efficient working are all necessary conditions for the wood distilation industry, experts consider that the failure of the Britannia Creek project was chiefly due to the absence of a profitable market for the products of distillation. At least during its years of profitability Britannia Creek was the only plant in Australia which was ever operated on a commercial scale. It has a per charge capacity of 12 tons of hardwood (mainly mountain ash) or about 4,000 cords per annum. It produced approximately 12,000 gallons per annum of methanol, 36-40 tons of cresote, 17 tons of acetone, 280 tons of grey acetate and 150-160 tons of tar. The annual value of the products was about £20,000. Closure was due to inability to earn products despite tarriff protection. Attempts to convert the operation into joint timber production and waste distillation only alleviate the position but did not make it profitable.

PRESERVED LOCOMOTIVES IN AUSTRALIA

Compiled by P.L. Charrett

The following list of locomotives preserved is by no means complete, as more locomotives are being set aside and others placed in out of the way places. The term "preserved" in a lot of cases, particularly in parks means in spirit only because of vandalism and colour schemes. The exception to this is N.S.W. where all the locomotives are preserved in true style.

All data is listed as follows:- Previous owner, gauge, name and or number of loco, wheel arrangement, builder, builders' number, year built.

Abreviations used are:- S.M. Sugar Mill: Q.R. Queensland Railways: H/C - Husdwell Clarke: O + K Orenstein and Koppel.

QUEENSLAND

Maryborough: Walkers Ltd. - To be preserved

QGR	3'6"	B15 299		Walkers

Gympie: Andrew Fisher Memorial Park - To be preserved

QGR	3'6"	C17 45		

Virginia: Rotary Park, Goss Road - to be preserved

QGR	3'6"	C17 935		

Gympie: McDonnell Park - To be preserved

QGR	3'6"	C17 820		

Nambour: Moreton Central S.M.

Moreton Central S.M.	2'0"	Shay	2 truck	Lima	2091)(1908 2800)(1914

Mossman: Mossman Sugar Mill

Mossman S.M.	2'0"	Ivy	0-4-2T	Fowler	15947	1922

Mossman: Park in Mill St.

Mossman S.M.	2'0"	R.D. Rex	0-4-2T	Perry	7650/49/1	

Port Douglas: Reserve opposite Courthouse Hotel

Mossman S.M.	2'0"	Faugh-a-Ballagh	0-4-2T	Fowler	8733	1901

Mareeba: Park
Mulgrave S.M. 2'0" Pyramid 6 0-6-OT H/C 1521 1924

Edmonton: Hambledon Sugar Mill
Hambledon S.M. 2'0" 4 0-6-0 H/C 1549 1925

Gordonvale: Park opposite Station
Mulgrave S.M. 2'0" Nelson 4 0-4-2T Fowler 20273 1933

Babinda: Park at South end of town
Babinda S.M. Anzac 3 2'0" 0-4-2TT Fowler 14666 1914

Innisfail: Gladys Park
Goondi S.M. 2'0" 6 0-6-0 H/C 1555 1925

Innisfail: Fitzgerald Esplanade
QGR 2'0" B9½ 11

Tully: Park
Tully S.M. 2'0" 5 0-4-2T Fowler 16341

Cardwell: Beach
Tully S.M. 2'0" 2 0-4-2T Fowler 16338

Giru: Schoolground
Haughton S.M. 2'0" 7 0-4-2T Decauville 496

Mt. Isa: Childrens Playground
Mt. Isa Mines 3'6" 1 0-4-OST Peckett 1069 1905

Home Hill
Inkerman S.M. 2'0" Torpedo 0-4-2T Hunslet 1187 1915

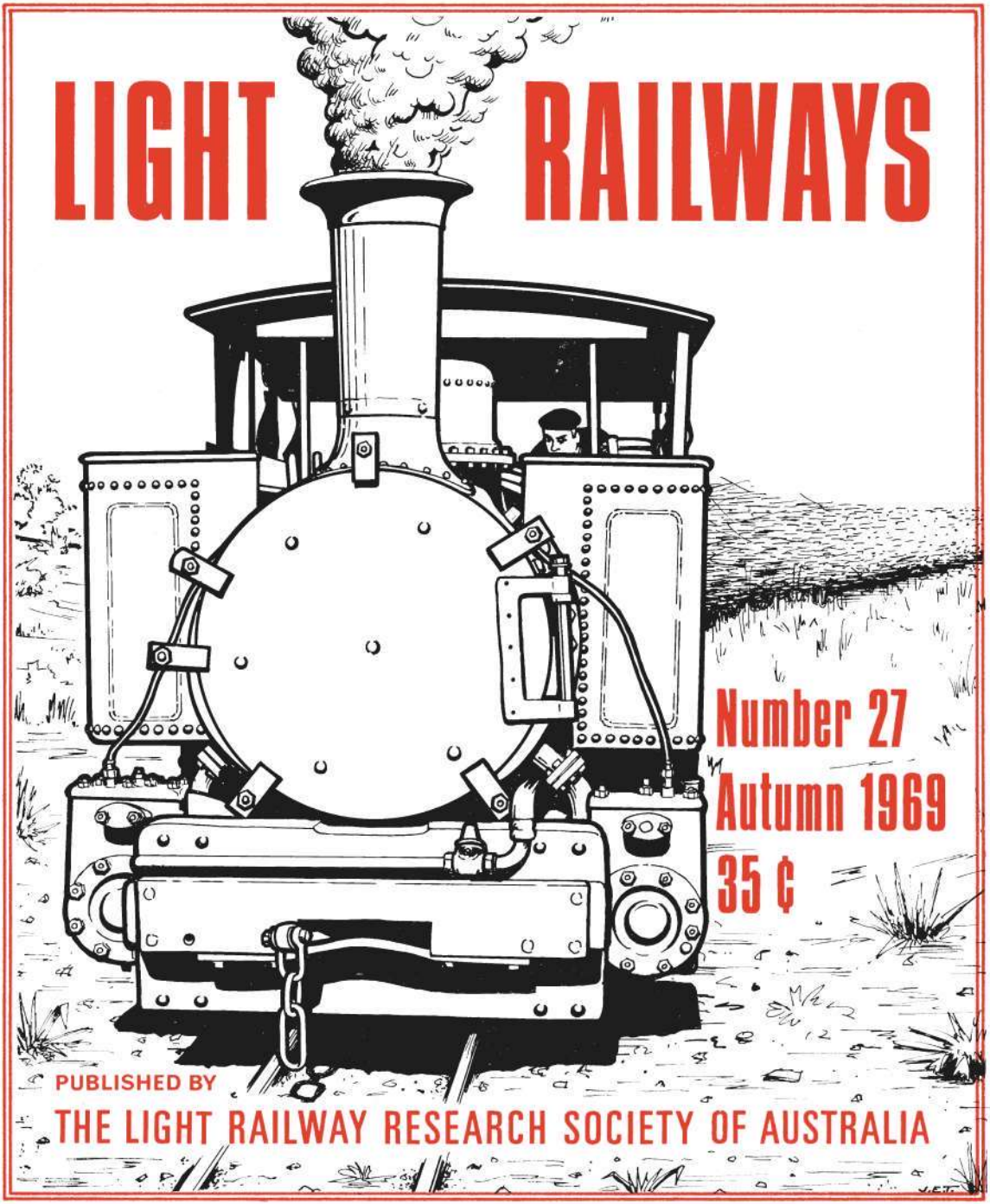
Proserpine: Playground
Proserpine S.M. 2'0" Digger 7 4-6-OT Hunslet 1317 1916

Farleigh: Farleigh Sugar Mill
Farleigh S.M. 2'0" 0-4-OT Avonside 1909 1922

To be Continued.

Whilst every effort is made to ensure the accuracy of material published in "Light Railways" we cannot be sure that errors have not crept in. If you see errors or can add additional information, please contact the Editor, as it is only thus the full history of Australia's light railways can be fully recorded. Opinions expressed in articles or letters are not necessarily those of the Editor or Society.

LIGHT RAILWAYS



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35 ¢

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LIGHT RAILWAYS

No.27 AUTUMN 1969 VOL. VII

For this issue's cover John Thompson has drawn "Fowler" from the Sons of Gwalia firewood tramway in Western Australia. The Sons of Gwalia gold mine is located at Gwalia, about 100 miles north of Kalgoorlie. The mine operated a 1'8" gauge tramway until December 1963.

Whilst every effort is made to ensure the accuracy of material published in "Light Railways" we cannot be sure that errors have not crept in. If you see any errors or you can add additional information, please contact the Editor, as it is only thus that the full history of Australia's light railways can be fully recorded.

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I wish to apologise for the late arrival of your magazine, but I hope that the contents of this magazine will justify the lateness.

Whilst this magazine has plenty of articles and news I would like to stress the need for the articles and news to keep coming in. Without your help there will be no magazine. That article that you are always going to write, don't delay, write it now.

The Editor

ELPHINSTONE TIMBER TRAMWAY

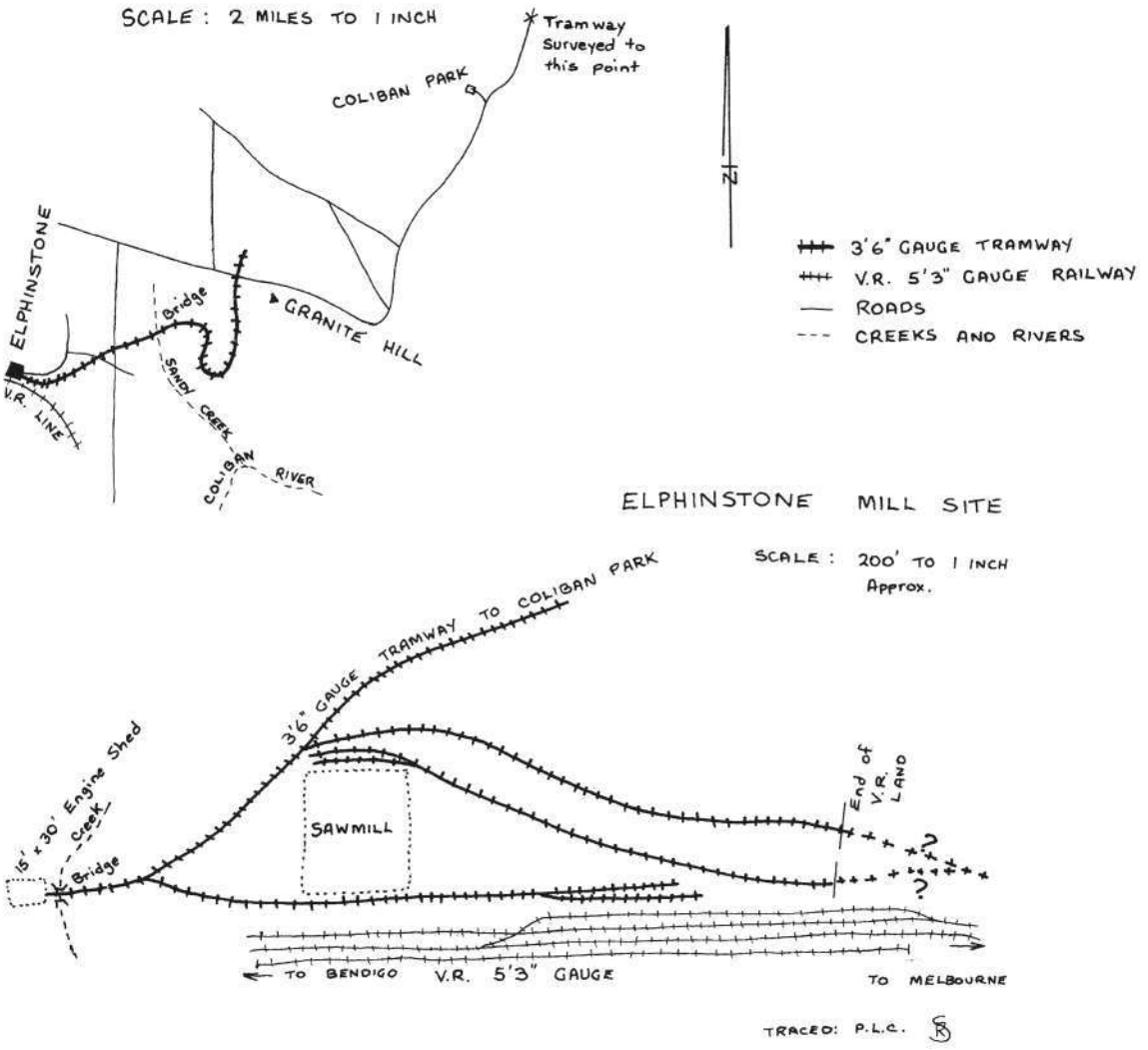
By Roger H. Seccombe,

The Elphinstone timber tramway was probably one of the shortest lived tramways of its type in Victoria. Constructed in 1923 and operated from 1924 to 1928, it had the distinction of being constructed to process a timber reserve which proved to be, at best, poor quality, or to accept the view of a contemporary observer, rotten.

The Elphinstone area (originally known as "Sawpit Gully") was settled early, having close associations with the gold boom, situated as it was on the outskirts of the Forest Creek goldfields. As on all Victorian fields, liquor was forbidden until 1854 and Sawpit Gully did a roaring trade in 1851-53 at its inn, its "five-gallon houses" and "coffee shops" (sly groggeries)! However, unlike similar "watering places" and halts for gold prospectors, such as Lancefield and Diggers Rest, Elphinstone as a settlement did not experience any period of marked decay after its heyday; life in Elphinstone had been a slow twilight after the gold rushes. In contrast-, Lancefield, with its bizarre array of empty hotels sporting the decaying facades of their early prosperity, witnesses the great disparity between the wealth brought to the town by the gold rushes and the collapse of its economy once the gold boom was over.

Elphinstone's identity changed from that of a "watering place" on the diggings to a railway settlement, when the Great Northern Railway was opened to Bendigo, (then named "Sandhurst") in 1862.

In respect of its topography, the country is partly basalt, granite and sandstone and its undulating terrain carried an extensive eucalypt cover which only began to disappear with the opening up of the area for agricultural and pastoral pursuits. The potential revenue from these timber resources was soon recognized as the neighbouring large landholders commenced felling the hardwood forests in order to implement more intensive land development. The favourable terrain was conducive to the implementation of schemes to put the felled timber to commercial use.



One of the chief properties in the vicinity of Elphinstone was "Coliban Park", established by a Mr. Crawford in 1855 and comprising 5000 acres. The owner in 1923 was Mr. A. Barber who had purchased the estate several years earlier and had developed plans to clear the property for pastoral pursuits.

The year was 1923.

THE COLIBAN PARK SCHEME

An Elphinstone sawmiller, Mr. C D. Hancock, purchased the whole of the standing red gum for milling purposes, estimated at 25 million super feet. Under the terms of the Agreement with the property owner, he had five years to cut out Coliban Park; however, the lease specified that the timber, after felling, had to be milled off the property.

As a result, Mr. Hancock planned to construct a 3'6" gauge tramway to remove the felled timber from Coliban Park to a mill and transfer siding to be located adjacent to the Victorian Railways' Elphinstone Station. The Company leased an area of land from the V.R. for the purpose of providing such a siding, capable of accommodating at least 12 timber wagons. Contemporary press reports state that Mr. Hancock intended to build a steam tramway, nine miles in length, operated by a "powerful locomotive" hauling a number of 8-wheeled bogie wagons to be obtained from the Queensland Government Railways. The felled timber would be transported from the cutting area by 15 haulage units (comprising traction engine, bullock and horse teams) to the Company's line site on Coliban Park. From here the logs would travel by the tramway to the Elphinstone mill where, after processing, the milled timber would be transferred to V.R. broad gauge wagons. The Company anticipated a mill output of 4 million super feet per annum. The timber was described as being of "splendid quality". The actual mill site would measure 60' x 130' (later revised to 90' x 145') and would be constructed upon concrete piles. "Spacious and lofty" sleeping quarters would be provided for the mill hands and high wages would be offered to attract the most "efficient and steady workers". (Press reports indicated a yearly payroll of 20,000 pounds). The unusable milling offcuts would be reduced to one foot firewood blocks for loading by elevator into V.R. vehicles. It was on this optimistic highnote that the Company embarked, towards the close of 1923, to construct the tramway.

CONSTRUCTION PROGRESS

September 1923 saw the sleepers waiting in readiness for laying to commence and on Thursday, 27th September, the first sod was turned, to the accompaniment of a "salvo" provided by a man beating with a stick on a kerosene tin, in the absence of any firearms. By now the manager's house had arrived in sections from Guildford and was awaiting erection.

The early days of October found Elphinstone a hive of industry, as between six and eight horse teams hauled lumber and supplies to the railhead. The fever of activity is described in an enterprising railroad ballad of the day set to the metre of "Banjo" Patterson's "The Man From Snowy River" :

"When it's trench in at the edges,
And it's undermine below,
A bar or two behind it,
Heave away and let her go!
And the shouting of the gangers can be heard above the din,
From the banks below the township where the lads are linking in. . . . ."

It is to be regretted that no further evidence of this ballad writer's art can be traced.

With the arrival of the rails imminent (30' lengths of 28 lb. rail) a gang of men commenced construction of the line's major bridge over Sandy Creek some two miles out from Elphinstone. Described as measuring 90' in length, the remains today indicate a four-span bridge, about 15' high and 60' in length built on piles driven into the creek bed. The method of construction followed closely the principles of V.R. trestle bridge as can be seen in the accompanying photograph (on page 10).

By 1st November work had commenced on erecting the mill manager's residence (named "The Crescent") and engine shed; about 1/4 mile of track had been laid out of Elphinstone including curves, one of which had a 3-1/2 chain radius and the line's deepest cutting of 10 feet was being excavated near Granite Hill, a distance of

some three or four miles from the mill. Supervision of track laying was carried out by Mr. E. Davitt, an ex-V.R. road-master, with a gange of twelve men.

A report of 9th October anticipated the arrival of two locomotives from Tasmania, but by 13th November only one had arrived. Reputedly weighing 15 tons with a haulage capacity of 40 tons, it was assembled from sections during the latter half of November. The bogie trucks arrived on 17th November.

The V.R. commenced laying the broad gauge transfer siding on 12th November and by 30th November the tram line had been extended another 1/4 mile and was now within 5 chains from the boundary of Coliban Park. By 11th December some 82 men were employed on construction and on 18th December the steam boiler arrived at the Mill. Concurrently, the Manager invited applications from persons interested in operating a firewood plant as an adjunct to the sawmill's activity.

The Company gained added impetus to its plans in January 1924 when Mr. Hancock won the tender for supplying timber for the construction of three Melbourne Harbour Trust wharves. Worth some 127,599 pounds, the tender specified the supply of 1.25 million super feet of timber which was expected to bring a desirable fillip to production at Elphinstone. In anticipation of completing the tramway, felling commenced on Coliban Park in the Granite Hill area. By 12th February the timber reserves in this locality had been depleted and the felled timber hauled 1/2 mile to the railhead line site by three bullock and horse teams and a traciton engine. However, the logs were still awaiting transit to the mill as the tramway had not yet commenced operation (the Company was expecting the Metcliffe Shire Council's approval of its specifications for tramway crossing points on Shire roads: after protracted discussions, approval was finally given at the Council's February meeting reported in the local press on 27th February.

In the meantime the locomotive had been tested on the line to the head of the road, about three miles out on Coliban Park, and the Company had expressed satisfaction

with the efficiency of both locomotive and track.

On 19th February a plate laying gang was putting down the 3'6" gauge sidings at the mill and the Company expected to commence railing the felled timber to the mill within a few days.

At this point we might inquire how extensive the tramway was intended to become. The present manager of Coliban Park asserts that the line was actually surveyed to a point approximately 1/4 mile south of a ford over Granite Creek on the Coliban Park - Sutton Grange Road (Map reference: Army Survey - Castlemaine No.817, Zone 7, 1" to 1 mile). Such a railhead location would have been generally in accord with the previously noted press statement which indicated the Company's original intention to construct a tramway nine miles in length. In reality, construction of the tramway appears only to have reached the vicinity of Granite Hill, movement of the felled timber to the railhead from beyond this point being handled by horse and bullock teams: when demolition of the tramway commenced in 1928 contemporary reports appear to corroborate a tramway terminus in the Granite Hill area, some three to four miles out from Elphinstone; finally, when the mill's assets were eventually disposed of in December 1928, the trackwork was described as comprising "three miles" of rails. (In preparing this history, the full length of the original formation has been traversed.)

THE LOCOMOTIVE

Despite inadequate documentation, it would appear definite that the sole locomotive purchased by the Company was an ex-Tasmanian engine. Misses K. and J. Hoinville who today occupy the original Manager's residence at Elphinstone assert that it was "definitely from Mt. Lyell".

Described by 1923 press reports as a "15 ton engine", it was otherwise estimated by Mr. J. Blow (Manager of Dickson Primer Industries Pty. Ltd. of Melbourne) who cut up the locomotive in about 1940, as having weighed close to 7.5 tons, with a copper firebox (weighing

between 1/2 and 3/4 ton on Mr, Blow's estimate), circular, screw-type, firebox door and brass tubes measuring about 6' in length. It was almost certainly a tank engine (not a saddle tank) with a "small flat" integral tender measuring some four feet wide. It is believed to have been painted dark green.

If reliance is to be placed on the contemporary weight estimate of 15 tons, it might be questioned if this included the weight of a separate tender; eg. like those often constructed as appendages to stock tank locomotives used by the Colonial Sugar Refinery. We can find corroborative evidence for such a theory in the statements of the Misses Hoinville who aver that they have, near their woodpile, portion of the tender belonging to the Elphinstone locomotive. A former axeman at Elphinstone, Mr. Ern Swift, also supports the theory of a separate tender. However, the final word should come from Mr. Blow who asserts that the locomotives he purchased from the auctioneers, E.M. Purdy and Co. of Melbourne, in about 194 0 possessed only a small integral tender.

Based on the sum of evidence from contemporary and present day sources, and Mr. Blow's view that it could have been a British (definitely not a German) locomotive, it is proposed that the locomotive may have been built by Sharp Stewart, Builder's number 2030, built in 1870 whose history is as follows: an 0-4-0 tank locomotive; cylinders 8" x 15"; diameter of driving wheels 29"; originally 4'6" gauge as used on the Mersey and Deloraine Tramway 1871-72; sold to the Tasmanian Government Railways and became No. 6B on conversion to 3'6" gauge; sold to Boland and Scott (contractors) in 1888 and re-purchased 1889; used for construction of the Mt. Lyell line; stored 1894 and sold 1895 or 1896; disposition is unknown.

The rolling stock comprised 8-wheeled bogie trucks obtained from the Queensland Government Railways.

OPERATION

Mr. Ern Swift and Mr. S. Knox (who also worked at the

Elphinstone Mill and whose wife ran the men's boarding house) recall that the locomotive used to make three or four trips a day, starting work at about 8.00 a.m. and finishing at 5.00 p.m. Mr. Swift adds that the locomotive would "often drag its own logs" (presumably out at the Company's line site on Coliban Park).

MILLING BY-PRODUCTS

After the milling processes, the offcuts yielded quantities of timber from which a Mr. T. Pidd produced supplies of one foot firewood blocks at a mill established nearby. In addition, other surplus waste was acquired free of charge by a Mr. J.J. Mazzocchi, merchant of Woodend who employed a gang of 10 Italian workmen for the purpose of producing supplies of charcoal. He constructed a series of retorts at Elphinstone and the smell of charcoal was observed to mingle with those of garlic and macaroni; a pungent aroma!

SUBSEQUENT HISTORY

Throughout the major part of 1924 the milling venture was plagued by inclement weather. As successful operation of the tramway depended intimately on the efficiency of felling and transporting methods employed on Coliban Park, it was only to be expected that the persistent heavy rains which turned the felling area into a quagmire would affect milling operations. Sandy Creek and the Coliban River were in flood in August and by October operation of the tramline and mill had halted and only a handful of men were being kept on. The local cricket team loudly lamented the enforced departure from the district (and from the cricket team) of six mill workers who had been laid off!

Besides the weather, the Company also suffered numerous accidents, generally of a minor nature, involving damaged fingers, broken legs and bruised kneecaps chiefly among the men working the breaking-down saws. There was also the case of Mr. E. Potts who was employed clearing the red gum tops on Coliban Park. One night all his possessions went up in smoke (possibly through the agency of Mr. Potts' pipe or campfire) including tent,

saddle, double-barrelled shotgun and chaff, valued at $401!

The Mill commenced again in February 1925, but prolonged rain again halted milling in the latter part of the year.

ADMINISTRATIVE PROBLEMS

However, the Company's internal problems were already beginning to multiply and were given a startling public "airing" in a legal wrangle in September 1925. On 17th September hearing of the case of the alleged wrongful dismissal of the sawmill's general manager, Thomas Alexander Wilson, commenced in Melbourne. Wilson was claiming damages against Charles Daniel Hancock, Arthur Orlando Hail and Edwin James Hooper, "directors" of the Company. Wilson had been appointed general manager of the Company for the period 24th October 1923 to 31st December 1928, at a fixed salary of $1000 per annum, together with the use of a cottage adjacent to the mill. Wilson asserted that, on 31st January 1925, he had been dismissed. Defendants claimed he was negligent and not a qualified sawmill manager.

More significant as an insight into the Company's operations, Wilson counter-claimed that, while the Mill plant was intended to treat 20,000 feet of logs per day, during 1924 the plant had only averaged 9300 feet per day. Wilson was quoted by the local press as stating that the plant was "a farce" and that "better results could be obtained from a second-hand scrapped plant". Marketable timber was averaging 1500 to 4000 feet per day against a predicted 12,000. Cutting costs (in March 1924) "varied between 11 shillings and 37/9d per 100 feet" instead of an estimated 4/4d. The Company was reported to be losing money. The case was concluded out of court, the press reported.

On 29th June 1926, a Company was registered by C D. and C.L. Hancock under the name of "The Elphinstone Redgum Milling Company Pty. Ltd.", for the purpose of acquiring the existing business of Mr. C.D. Hancock, sawmiller of Elphinstone. The nominal capital of the Company was $10,000.

However, on 6th July 1926, shareholding interests were transferred to Hall (solicitor of Geelong) and Hooper (Manager of Geelong). Named assets comprised the sidings at Elphinstone, the Mill, tramway, horses, rolling stock and motor vehicles.

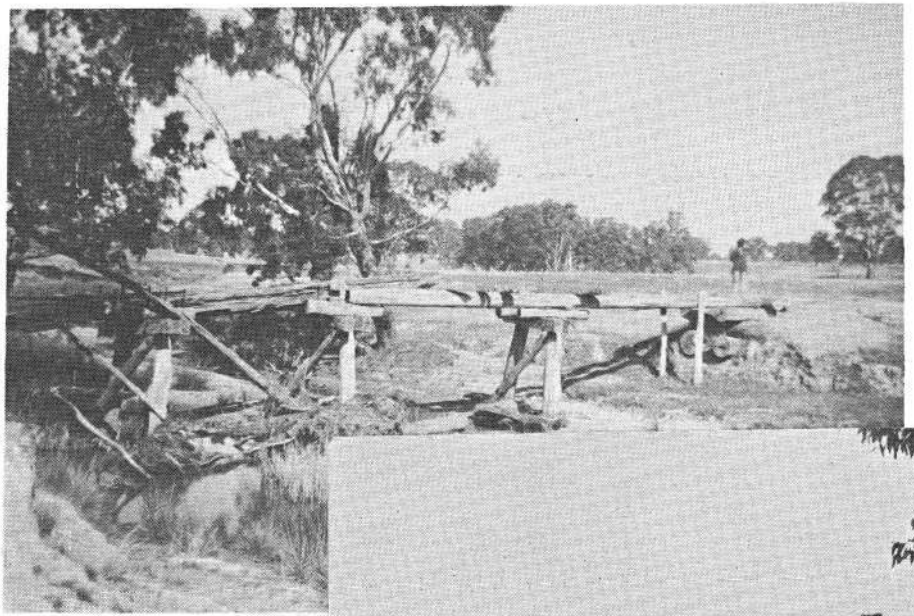
By now the demise of the milling venture could be foretold. Expectations had not been fulfilled and clearly it must have been seen as only a matter of time before the scheme foundered.

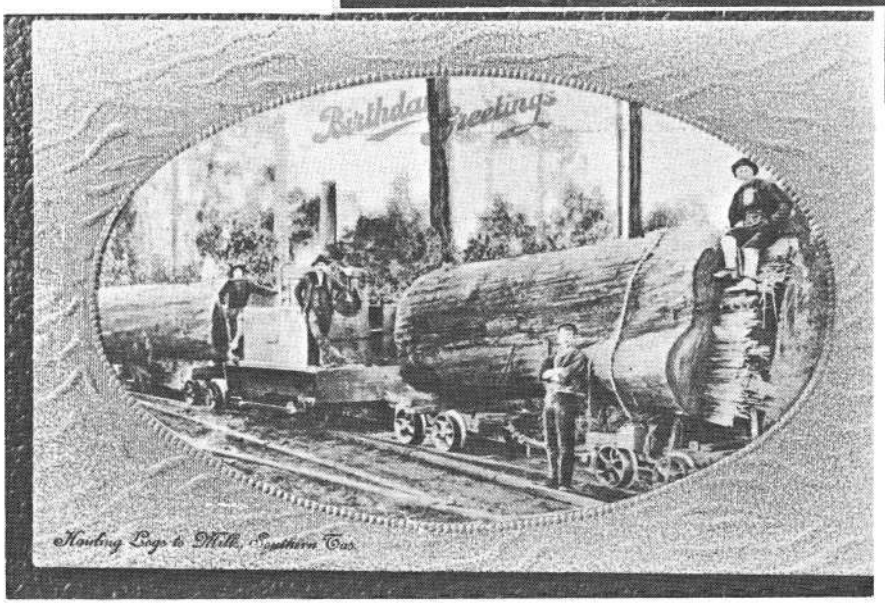
FAILURE

Why did the venture fail? It would appear that the failure was chiefly a result of inadequate planning and miscalculation, added to, if not occasioned by, the Company's internal dissension and management difficulties. While a local press report of 1st November 1923 states that Mr. Hancock had expressed satisfaction with the quality of the redgum already cut, which was described as "very solid", it would seem that this timber, probably cut in the Sandy Creek area for the purpose of constructing the bridge, was representative more of the quality in the locality of Mooney's property rather than of Coliban Park. A contemporary observer noted that the Company did not bore the trees and one can only suppose that it was assumed that the quality of the initial fellings would be representative of the red gum over the whole of Coliban Park. Reference to the accompanying photograph on page 13 (the only original photograph that has been traced) depicts several log bogies at the Mill and appears to verify the poor quality of the logs: evidence of severe splitting and deterioration is visible,

PHOTOGRAPHS ON THE OPPOSITE PAGE

TOP: An old photograph showing logs being loaded at a loading site at Elphinstone. Photo: R. Seccombe collection.
CENTRE: The remains of the trestle bridge over Sandy Creek. Photo: R. Seccombe.
BOTTOM: An old postcard showing a vertical boilered, outside framed 0-4-0 "Hauling logs to Mill, Southern Tasmania". The location is believed to be Hythe. Photo: J. Shennen Collection.





When the timber resources proved uneconomic due to their inferior quality, the Company salvaged the best of the eucalypt and then sued the owner of Coliban Park. The case was settled out of court. It is said that the only person who profited from the whole venture was Mr. Pidd, who had been turning the Mill waste into firewood blocks.

With the end in view, on 28th November 1927, the Victorian Railways gave notice to the Company that it intended to terminate maintenance on the transfer siding. The agreement governing use of the siding was cancelled on 1st March 1928, and the siding was dismantled in May 1928.

After the closure of the Mill a start was made on disposal of the Company's assets. In the latter half of June 1928 the tramway between the Mill and Granite Hill was pulled up and the rails and sleepers stacked near the Mill. On Tuesday, 11th December 1928, the sale of the Mill's assets was conducted. J.W. Styles and Son, Auctioneers, sold 370 lots including trucks, three miles of 30 lb. (sic) rails, fastenings and sleepers; the locomotive was not sold. The sawn timber was reported to have brought "a fair price" but the Mill equipment and log bogies "went cheap".

The locomotive was stored in the engine shed where it remained for many years. The shed and locomotive were subsequently purchased in about 1940 by Dickson Primer Industries of Melbourne. The Manager of Dickson Primer (Mr. J. Blow) states that he sold the shed to a local poultry farmer for 20 New Zealand pounds and brought the locomotive back to Melbourne where he cut it up. He found its copper firebox and brass tubes "very valuable". He incidentally recounts that, while inspecting the locomotive in situ at the engine shed at Elphinstone, a possum resident in the smoke box bit his hand and that, on the locomotive's arrival in Melbourne, a black snake crawled out of it!

POSTSCRIPT

Today Elphinstone has fallen asleep. As a community

centre for its area it can boast of little. Castlemaine and, further afield, Bendigo, are the magnets that draw to themselves the life of the area and direct its pattern.

However, the relics of earlier days still cling tenaciously to the present: the Manager's house (close to the site of the Mill) still stands, inhabited by Misses K. and J. Hoinville who have time to remember ... the derelict remains of a timber and iron shed nearby is reputed to be the original shed and may soon disappear beneath a new Country Roads Board overpass ... the impressions of sleepers and raised earthworks mark the course of the transfer sidings while the stark concrete foundations of the Mill linger in an open paddock.

Travel out along the old formation (most of which can still be traced) and you can locate the decaying remains of the four-span trestle over Sandy Creek. From here the formation climbs on a steeply-rising grade, scoured by water-cut gullies and the activities of myriads of ant colonies (the ardent sidrodramarcheologist is recommended not to linger too long or he may not weather the years as well as has the Sandy Creek bridge!). It is in this vicinity that the 3.5 chain radius curves can be located. On the rising grades south of Granite Hill there are numerous examples of earthworks, although the reported ten foot cutting cannot be located, the deepest cutting measured being only some five or six feet in depth. The care in road bed construction, including the provision of drainage channels, is everywhere apparent despite the passage of years, while numerous sleepers abound, their dog-spikes still in situ.

The author gratefully acknowledges the assistance of the following:-

Mr. J. Blow, Dickson Primer Industries
The Castlemaine Mail
Misses K. and J. Hoinville, Elphinstone
Mr. S. Knox, Geelong
Latrobe Library, Melbourne
Mr. M. Plummer, East Brighton
Royal Historical Society of Victoria
Mr. C.S. Small: "Locomotives of the Railways of Tasmania" (unpublished)

VICTORIA DOCK CONSTRUCTION

By Mark Plummer

In the late 1880's Melbourne's port facilities were limited to the jetties at Port Melbourne and Williamstown, with a few wharves along the river Yarra and the Coode Canal. Consequently it was planned to build a new dock at the western end of the City, just beyond the Spencer Street Railway Terminus. At that time this area was just a swamp which extended from the Yarra to the site of Melbourne's new hump yards.

The engineers planned to remove approximately two and one-quarter million cubic yards of earth from an area about 3/4 mile long by 1/4 of a mile wide and dump about 2/3 of the spoil onto an adjacent area to the north where a new railway yard and the North Melbourne Locomotive Depot were to be built. The rest was used to the south to provide a firm foundation for the North Wharf, at the other side of the new Dock which was to be known as Victoria Dock.

The contract was awarded to John Robb who purchased at least eight locomotives for the task of moving the soil from the excavation. From Krauss and Coy. of Munich, Germany, he ordered through their Melbourne agents (Shadier, Koeniger and Aron of Queen Street) six locomotives, over a hundred trucks and a large quantity of track. The locomotives were an 0-4-0 well tank of 2'0" gauge, built by Krauss in 1889 and were given the Builder's numbers of 2178 to 2181 and 2195 and 2196, with 6.5" x 12" cylinders. The wagons were V-shaped tippling wagons some one ton capacity and the remainder 3/4 ton capacity.

Contemporary newspaper reports describe the Bochum Portable railway (the Krauss technical name for their equipment) as speeding the work up considerably. Skilled labour was not required, for, three men could lay down a mile of rails in a day and curves could be of a very sharp radius which, "by the aid of the steam motor on bogie frame, a tram can be brought round in a distance of only sixteen feet"! The locomotives were

described as being light and handy, burning either wood or coal, with a speed of 5 m.p.h. whilst hauling a forty ton load, or 10 m.p.h. with empty trucks. Having a small wheelbase they were extremely useful in negotiating tight curves and were described as being very useful for this type of work, saving 50% upon the horse and dray system.

John Robb also bought two 2-6-0 Baldwins of 5'3" gauge in 1889 and named them "Emu" and "Kangaroo", bearing the Builders' numbers of 1-067 and 10075 respectively. Compared to the Krauss locomotives they were quite large, having 46" diameter driving wheels and 14" x 16" cylinders. Although it is quite definite that he bought these two locomotives there is no reference in the newspapers of the time as to their existence, so their use, if at all must have been limited. They were typical American locomotives, with a large wooden cab, enormous headlamp on top of the smokebox and a tender. A good photo of one of these appears in member Keith Turton's booklet "Farewell to the Timber Line", published by the A.R.H.S.

After the excavation was finished in 1892 or 1893 the two Baldwins were stored at Spotswood until 1905, when they were sold to the Mclvor Timber and Firewood Company at Tooborac. At Tooborac they were renamed "Mclvor" and "Major" and worked at Tooborac until cut up in 1925. ("Major" was formerly "Emu" and "Mclvor", Kangaroo" - Editor).

The six Krauss locomotives went to many parts of Australia and for a time I thought that this was going to be a history of six Krauss locomotives, rather than a history of the Victoria Dock construction.

All six locomotives left Victoria together very shortly after the excavation finished and arrived in South Australia to work on the Happy Valley Water Project until late 1894. The group then split up as follows:-

No. 2178 went to Hassell's Marion Bay Gypsum Pit in the same state in 1912, to work there until scrapped there about 35 years later.

No. 2179 was next seen with Norton Griffiths in N.S.W. in 1910, then it went to the Public Works Department in 1912 to work on their projects until acquired by the New South Wales Government Railways in 1917. After a period with the N.S.W.G.R., it went to Newbold's clay pit at Ulladulla, who eventually scrapped it in 1958.

No. 2180 went to the Tasmanian Government Railways in 1897 where it was placed in the H class, numbered H1 and was eventually scrapped in 1958.

The only one of the six to survive was No. 2181. Its first traced movement away from Happy Valley was in 1903, when the East Murchison United Gold Mine acquired it. They sold it sixteen years later to the Western Machinery Coy, Kalgoorlie, where it remained until going to the W.A. division of the A.R.H.S. for preservation.

No. 2195 went back to John Robb for his mill at Cudgen, N.S.W., then to the Condong Mill in 1930 where in November 1940 John Buckland took the photograph on page 24 of this issue. It was scrapped soon after this.

The last of the group, No. 2196 went to the Irvinebank Mining tramway in Queensland, where it was given the name "Pompey" and worked there till scrapped in 1933.

In addition to the above details, a photograph proves that one of the locomotives (probably 2179) returned to haul mullock trains on the widening of the Coode Canal which started in July 1906 and was completed in about 1910.

Thus of the six locomotives used eighty years on the Victoria Dock construction, they went to all states of Australia and now only one remains.

I would like to acknowledge the help given to me by the late John Alfred in giving me the preliminary information to start the article, Mr. B. MacDonal for helping trace the roamings of the Krauss locomotives and Mr. J.L. Buckland for his assistance.

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TASMA HARDWOOD COMPANY (HOBBS), Tasmania

By C.W. Goodwin

Recently I walked over the five miles of the extinct Hobb's tramway that followed the western bank of the Leven River and which commenced about seven miles up-stream from Ulverstone and the sea. The last time I had walked the entire length was about 1938, when it was still operating. I only once saw the locomotive and train in action and I am not sure of the locomotive's name, but it was a 3'6" gauge 0-4-0 saddle tank and I think that the name "Foster" fits into it somewhere.

Most of the route was cut into the side of the hills and varied from ten feet to twenty feet above the river level. Except for a couple of lengths of rail, it was pulled up during the war, but evidence of its existence could be seen all the way, except for sections near each end, where cultivation had obliterated the earthworks. There were about seven bridges across creeks, the main ones carrying poles are still across six creeks.

I can remember walking over one section years ago where the track went around a cliff face on trestle work over the edge of a river. It was a case of extra long strides from one sleeper to the next, and I could well imagine that it was a hair raising experience on that particular section - as people who had travelled over it by train had told me.

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THE DEAN-KORWEINGUBOORA TIMBER TRAMWAY

By A. A. GUNSSER

The closing of the Barkstead State School at Christmas 1968 reminded me that the reason this school was first opened was because of the vast amount of timber being milled by the firm of Anderson Bros. I have not been able to get from the Education Department the date of its opening, but it must have been in the early 1870's. Huge amounts of sawn timber were needed for house

building and mining timber at Ballarat, Creswick, Allandale and Clunes which were booming towns at that time.

The Barkstead Mill employed in all some 150 men when it was in full production. The mill had its own workshop complete with a lathe for their own repair work. An enormous amount of sawdust was left behind and as late as 1920 it still covered some two acres. Old residents told me it covered nearly four acres when the mill stopped production sometime in the period between 1885 and 1890. The timber being milled was Messmate (Stringybark), White Gum and Peppermint.

A depot for timber was made at Dean and a tramline was laid with 25 lb. steel rails to terminate some half mile from the Barkstead sawmill. The timber buggies, as the wagons for hauling the timber were called, were pulled up the half mile by horses.

The main logging tramway proceeded east from the Mill at Barkstead to Buggylanding. The line went east for three miles, crossed the East Moorabool River, then turned south for one mile, then turned east and crossed the main Ballan-Daylesford road about 200 yards north of Korweinguboora State School; the line then ran south for another mile to swing across a 50 feet timber bridge over the Werribee River to turn east again up Musk Creek to its terminus at a place still known as Buggylanding. This is where the locomotives picked up their load of logs. At the Buggylanding horse teams on a tramway from the terminus going both north towards Bullarto and south towards Spargo Creek fed the tramway with loaded buggies to keep the tramway running and the mill in logs.

The tramway itself cost 1000 pounds per mile to build, excluding the two bridges over the East Moorabool River and Werribee River.

A local resident, Mr. Ralph Dalziel, who is now 84 remembers the line being there when he started school, but it was not running even then. His father, the driver of the locomotives was also an engineer of some

note built one of the two locomotives used on the line. The main locomotive had Garrett written on the maker's nameplate and was an 0-6-0 side tank. (Garrett was an English builder mainly of steam traction engines, but also some steam locomotives. Perhaps some reader can furnish some more information on this builder - Editor). The other locomotive was a chain driven 0-4-0 driven by a Marshall portable engine manufactured at the Barkstead works by the late Mr. John Dalziel. This locomotive also had two 400 gallon tanks for its water supply. It is interesting to note that these tanks were brought out from England on sailing ships filled with sweets and medical supplies, sealed to keep out the sea air on its six month journey and were sold retail, empty for five pounds. One of these tanks was scrapped recently and was found to be all riveted and hand made. The Marshall was sold for scrap about 15 years ago for $20 and the scrap merchant found that the firebox was 7/8 copper with the tubes all brass. The Garrett was sold for scrapping before the turn of the century. The Garrett was the main line locomotive, but slipped a lot on the hills. The chain driven Marshall was slower, but pulled well on the hills.

As far as I could guess the gauge was about 5'0", although I could fit a 4'8.5" gauge in between the bed logs, now rotten and nearly all gone, except that the imprint is quite plain to see. The rails were 4" x 3" hardwood at first, but the weight of the Garrett (about 12 tons) split and wore them out so fast that it took one saw all the time to keep the rails up to line. To prolong the life of the rails steel strip plates were used, 2.5" x 5/8" strapped to the 4" x 3" hardwood by countersunk spikes. Pieces of this steel strap can be found in the cuttings and other areas. Most of the locals used about four feet of this strap in front of their open fireplaces.

In the summer the locomotives made four trips and in the winter three trips per day, with each trip of about 20 miles. For this Mr. John Dalziel received 14 shillings per day, a princely sum in those days. His fireman, the late Mr. Robert Young received 7/6 per day with half an

hour overtime for refuelling and oiling during the dinner hour - approx. 3/6 extra per week, to bring his wages up to 8/0 per day. The week was of six days with an early knock-off at 4 p.m. on Saturdays. Scantling timber could be bought by the men working at the mill for 2/6 per 100 super feet and both driver and fireman built their houses with this scheme. The houses are still standing today.

The name Korweinguboora means hills of the bitter waters of which there are a few mineral springs in the district.

Most of this information I know myself, but the construction and running information I received from a son of a driver on this line and I am thankful for the help and co-operation of Mr. Ralph Dalziel.

SOME ADDITIONAL FACTS by Mark Plummer

The Department of Agriculture in a report on sawmills in the Bullorrok area in May 1875 states that Anderson Bros, of Barkstead operated a 13 mile tramway.

This is the first known timber tramway in Victoria to use steam haulage and also for a steam locomotive to run on wooden rails with iron strapping, although common elsewhere.

The line today is well worth following, as cuttings and other evidence can be followed from Mollongghip to Buggylanding. The site of the mill at Barkstead can be easily seen as well as the remains of stables and the "six mile siding".

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A VISIT TO WELCOME SWAMP, Tasmania

By Mark Plummer

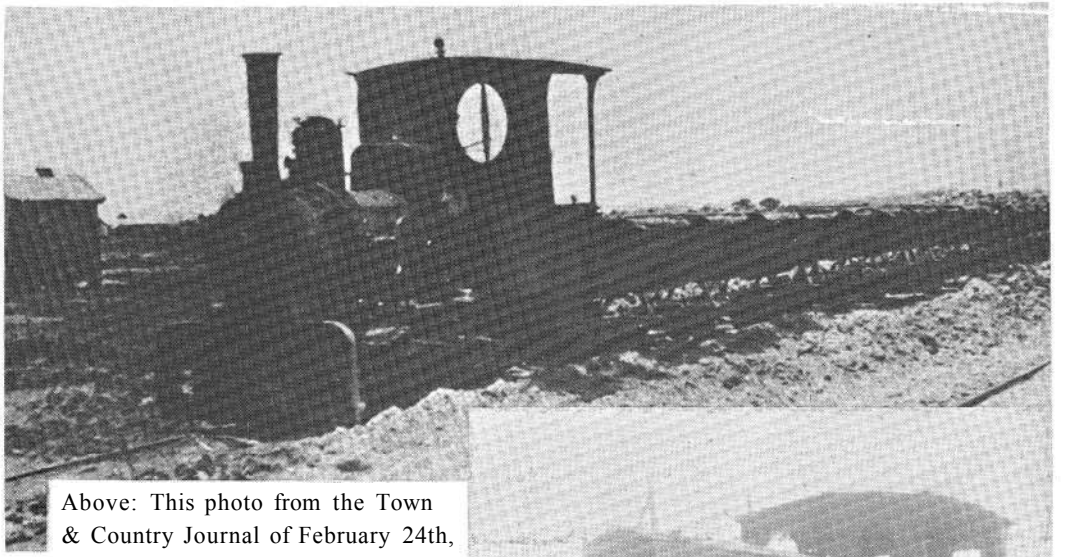
On the dirt road from Smithton to Redpa in the north-west of Tasmania there is a small clearing in the miles of scrub and bush called "Welcome Swamp". Just why anyone should feel welcome at this place I don't know, but my visit from Burnie was certainly worthwhile.

At this place a timber tramway owned by Mr. F. Jaeger and Sons had crossed the road. The tramway had operated from 1924 to 1963 from a siding on the Marrawah tramway, southwards to cross this main road. Prior to the closure all the motive power had been brought up to the main road.

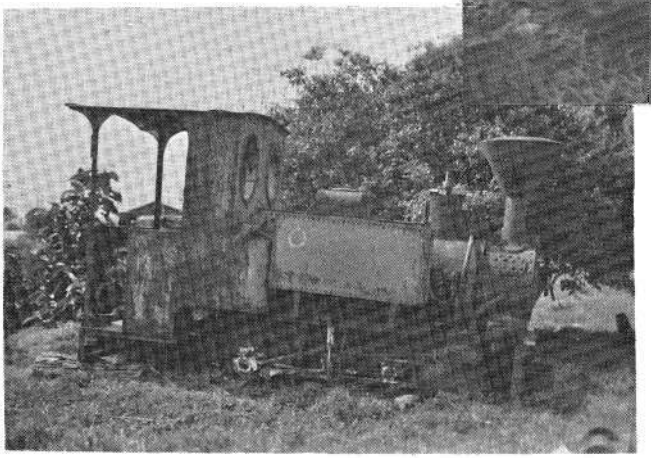
On one side of the road is an 0-6-0ST originally built by Hudswell Clarke in 1891, builder's number 380. This locomotive shows the true art of the bush mechanic. The boiler has been removed and a large internal combustion engine built by Wisconsin, inserted, with the most ingenious drive from the motor to the wheels via a large wheel fitted to the middle axle of the locomotive. The rods to the cylinders have been removed, but the coupling rod between the drivers has been left to perform its usual role. The locomotive, sitting on a short piece of track, is purple-red in colour, with the back of the cab having been built up with a few odd lengths of wood.

The other side of the road is equally interesting if not more so. The first object to strike the eye is the chassis of a motor car sitting on the top of a pair of wheels and cylinders, held together with the remnants of a locomotive frame, re-inforced with two lengths of rail. Apparently in its heyday the wheels, cylinders and frame belonged to an 0-4-0ST built by Baldwin Locomotive Works, U.S.A. in about 1884, and possibly builder's number 7108, which once worked at Forrest, Victoria, then to the P.W.D., Tasmania to end up with everything above the frame being cut up and a car chassis being used to drive it.

A bit further off the road are two gems, the remains of two A class Climax locomotives built about 1913. The remains consist of the wooden frame with all the metal attachments, such as poling holes, re-inforcing struts, etc. Above the frame is the boiler and two vertical cylinders. Both Climaxes are in the same condition, the trucks having been removed in 1960, and the full length cab (which was not much more than a box on wheels) probably having been cut back or removed while



Above: This photo from the Town & Country Journal of February 24th, 1909 shows that one of the locomotives returned for a brief period to work on the widening of the Coode Canal which took place from 1906 to about 1910.
Right: Hudswell Clarke steam locomotive converted to a diesel lying abandoned at Welcome Swamp, 1968. Photo: R.W. Chynoweth Collection.



Left: Out of use Krauss No. 2195 at C.S.R. Condong Mill, N.S.W. in November 1940. The side tanks and smokestack are additions since the Victoria Dock Construction. Photo: J.L. Buckland.

the locomotives were still running. One of these locomotives originally worked in New South Wales and the other in Queensland. (For further details see Light Railways No.24).

The last item of interest is hidden behind a clump of trees and is a portable steam engine of no small dimensions.

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THE WILLIAMSFORD HAULAGE, Tasmania

By Wayne Chynoweth

When spending a three-week holiday hiking around the West Coast of Tasmania with two other members a year ago I had the experience of riding on an extremely impressive haulage at Williamsford. This prompted me to delve into the history of this haulage, claimed to be "the longest, steepest and fastest haulage that ever operated in Tasmania".

Williamsford, four miles from Rosebery, is the township attached to Mt. Read and is at the foot of a haulage which serves the Hercules Mine, the townships' "raison d'etre". Once it was a one-shop, one-pub town, but today it is not even that, as the pub was burnt down two years ago.

Silver, lead and zinc were discovered at Mt. Read in 1893, and the word must have spread fast, as within four years eighty men had taken up residence. The 2'0" gauge North-East Dundas line from Zeehan was built to Williamsford (then known as North East Dundas) and started to carry goods in June 1898. At the same time the haulage was built to connect with the North East Dundas line and was completed by 1900.

The haulage is exactly one mile in length, but in this mile it rises a total of 1642 feet! The maximum grade is 1 in 1.5 and if you don't think that is steep then you should try climbing up it. The minimum grade which occurs once, is 1 in 7.5 and the average gradient is 1 in 3.2. The line is double track of 2'0" gauge,

originally 20 lbs. per yard, but now heavier. The flanges of the rails are notched to take dog-spikes to prevent the down-creep of rails and at intervals extra-heavy sleepers are extended right across both tracks and are bolted to the rock-formation with the same object.

The cable has a diameter of 3.5 inches and a breaking strain of 42.5 tons, to protect it from the weather (the place has an average rainfall of 100" a year) the cable is tarred. One summer a few years ago (when it was not raining) a bushfire swept through,burnt the tar, the cable broke and the top wagon came sailing down the slope, left the rails at some incredible speed at a slight crest and flew for about 500 feet! Rollers are placed between the tracks to minimise wear.

Originally some 36 trucks each with a capacity of about 8 to 12 cwt. could be found on the rope at the one time. Today two large double bogie wagons each with a capacity of six tons are used. The line is worked on a balanced funicular system, that is one truck goes up and the other goes down, and as only one wagon is full of ore this keeps the strain on the cable to a minimum.

The cost of building the tramway with a large number of trucks was 8,750 pounds and seven men were required to operate the haulage. Today this number is reduced to four. As built the bulk ore was emptied into storage trucks which discharged directly into the railway trucks and bagged ore was also handled, being passed down a wooden chute into North East Dundas wagons.

The photograph on page 33 shows the haulage in operation in the days of the North East Dundas line. The haulage comes down the centre of the photograph with a large wheel at the base to maintain tension, the wagons were unhooked and pushed to the right into the storage bins then into wagons. Just to the left of the storage bins is the wooden chute for bagged ore and the short tram to the left of that (above the 'No.14') is for working goods which have to go to the top of the haulage. The large building on the left below the horizontal tram was for crushing, sorting and classifying high grade

ore, but was discontinued after 1912. In the centre foreground is one of the first two Garratts to be built in the world, while on the right is a passenger car of the line.

At the top of the haulage two tramways ran into the hill, then to the various levels, originally horses worked this, but about three years ago battery electric locomotives were installed. Another single track haulage with a grade of 1 in 1 runs up to the old Mt. Read mine which ceased production in 1914. This haulage is used today to obtain pit wood. A track leads from there to the top of Mt. Read where there was once a township, which was probably the highest in Tasmania at 3700 feet above sea level. It must have been a bleak and exposed place of abode, but the view from there is superb.

During 1913-19 the haulage was only used spasmodically, as the Zeehan Smelters closed in 1913 and the mine depended upon these smelters to treat their ores. In 1919 the Hercules mine stopped work, only to be taken over a year later by Electrolytic Zinc Industries, their present owners. For about ten years the mine was worked by the traditional method, but E.Z. decided to take the ore out from Williamsford to Rosebery by an aerial ropeway, then to be taken up the Emu Bay Railway, thus saving about 35 miles in the journey. This sealed the fate of the Zeehan and North East Dundas line which closed on the last day in June 1930.

When E.Z. Industries decided to reduce the number of men required to work the line, they did this by installing two large wagons instead of many small wagons and speeding the line up. They could have made it more efficient by putting in a passing loop (as the wagons always pass at exactly the same place) with sprung points and removing one of the lines.

It is possible to obtain a ride on the line if you approach Electrolytic Zinc in Rosebery and sign the usual indemnity. We arrived in Rosebery on a wet day and had to walk the uphill four miles to Williamsford as there was no public transport. At Williamsford the line has been extended over the old North East Dundas

line and on this siding a passenger car resides, with seats set at an angle because of the steep slope. While we were admiring this vehicle we were informed that if we wanted a ride we would have to ride on one of the wagons at the front of which there is a small seat which revolves with the slope. Another examination of the photograph on page 33 shows a small bridge over the line and just beyond that a small station. It is at this station we boarded, the wagon having been stopped by a bell code which operates along the line. The speed of the incline is 14 m.p.h. (as compared with the Rubicon incline of 4 m.p.h.) and the 220 HP motor at the top has no gears, so it was quite a start.

For the grade the speed is quite startling and does not give one much time to admire the scenery. About half way up the remains of one of the large wagons mentioned before, is viewed. At the base the passenger car had signs warning about clearances, as well as having a very low roof, and as we approached the first loading gantry we were forced to duck quite suddenly. Our guide told us to look back now and we had a breathtaking view of the line falling away some 1400 feet below us. Our eyes swivelled around to estimate the breaking strain of the cable - yes, it did look a little frayed up there and glances as to the distance to jump to the side were hastily made. We passed the second loading gantry and stopped as quickly as we started. With trembling legs we jumped off, viewed an identical passenger car at the top and admired the view of deep green rain-forest, of valleys and hills inter-twining with each other and the tiny town of Williamsford at the foot. A quick look at the mine, then down again on the front of a wagon so that one looks at the base of the valley coming rapidly up to you and the chance of jumping off is more remote owing to the cuttings the line makes on this side. One has to have great faith in the makers of the rope! Safely at the bottom, one realises that he has actually enjoyed the,journey as he heads off for the 2.5 mile walk down the old North East Dundas formation to view the Montezuma Falls.

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OBITUARY - LESLIE GORDON POOLE

It is with the deepest regret that we have to announce the passing away at East Malvern of one of our early members - Les Poole on March 21st last. Les was known to a great many members of our society and most of the other enthusiast organisations as an ardent historian, particularly in the locomotive field.

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NEWS, NOTES AND COMMENTS

LRRSA CHEETHAM TRIP — Frank Stamford

A chartered bus took a group of LRRSA members to the Geelong area on March 1st, 1969.

The Geelong works of the Cheetham Salt Company provided the opportunity to see a salt train in action. A Ruston Hornsby diesel locomotive hauling a bogie flat wagon, took the group for a two mile trip over the salt tramway.

The good work of the Geelong Sub-division of the ARHS was next seen at Belmont Common. The ex Fyansford Hudswell Clarke 0-4-2-ST provided the power to convey the party over the first 100 yards. The Vulcan, also ex Fyansford was inspected, along with the work on the first set of points to be laid. The party was impressed with the work being done there and those responsible were congratulated.

The old Geelong electric tram depot was visited on the way to the Cheetham Company's Laverton Salt Works.

Although we were to see this tramway in operation, it was not working when we arrived. Great interest was shown in the variety of internal combustion locomotives, as well as the very complex layout of very well laid track. Eventually, an official started a Simplex four wheel locomotive and provided the party to several runs on an unsprung flat wagon.

Nearing home we called on the Altona State Explosives Reserve, where a large area of explosive magazines was once served by tramways. Nowadays only six magazines are served by short lengths of 2'0" gauge track. In an unspoiled bushland setting the energetic ran a special, a flat wagon, powered by momentum and enthusiasm. It is reported that since the recent death of the one horse-power the explosives are delivered from Nobell's Deer Park Factory by road.

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STATE EXPLOSIVES RESERVE, ALTONA, Vic.

John Prideaux/Frank Stamford

Ten four-wheeled explosives wagons from the horse tramway which was used in this area, have been placed in Apex Park - a childrens' playground, located just east of the old jetty which served the explosives magazines.

It is believed the wagons were placed there about last August. Their wheels are set in concrete, there being no rails, and they are in very good condition at the moment, but are painted in psychedelic colour schemes. Eight of the wagons are fitted with handbrakes acting on two wheels, and a couple of them have "Timken" axle-boxes. The wagons are fitted with three link couplings, and the solebars are extended to form dumb buffers.

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ABT ENGINE REACHES HOBART *Tas.* *Rail News*

Mt. Lyell Mining & Railway Company No.2 Abt locomotive (not No.3 as previously reported), which has been donated to the Tasmanian Transport Museum Society, reached Hobart after an eventful trip by road from Queenstown during which, an axle broke on the semi-trailer carrying the 27 ton locomotive.

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LOCOMOTIVE FRAME FOUND AT TAILEM BEND

About 1962 an 0-4-0T locomotive frame was found at Tailem Bend. The frame was found near where the old punt used to berth on the Murray River. Several years ago the punt terminal was moved to where the locomotive frame was situated and the frame has since disappeared. The Engineering and Water Supply Department did have locomotives in the area, but it is not known who this belonged to.

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REMAINS OF ANOTHER LOCOMOTIVE FOUND IN THE BUSH

Since member Ted Stuckey was appointed Forestry Comm. officer at Noojee, fire patrols along the routes of old timber tramways have been more observant and whilst following the Loch Valley line Ted found the firebox off one of the Baldwin locomotives that worked the line before bush fires forced its closure in 1926. From numbers found on the locomotive, it has been identified as being builder's number 9086 of February 1888, an 0-4-0ST.

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LOCOMOTIVES CUT UP AT ZEEHAN, Tasmania

Ralph Proctor/Mark Plummer

Two locomotives which have remained rusting in Zeehan for over thirty years were cut up recently. However only copper and brass was taken and all the other remains, such as underframe, cab parts, boiler shell, wheels etc. are scattered over an area further up the yard towards the old station site. Some of the old Krauss parts were even found about a mile away on the Zeehan rubbish tip, near the site of the old smelters.

The two locomotives, one jacked up with wheels missing were left alongside the old Zeehan Tramway exchange shed (which Howard used as a sawmill) and after thirty years in the open were so rusted that you could put your fist through the side of the locomotives.

The two locomotives were 2'0" gauge, Krauss B/No. 3941 of 1898 an 0-4-0T and a Orenstein and Koppel B/No. 2748 of 1898, also an 0-4-0T. The locomotives worked on the Zeehan Tramway until 1921 when the Zeehan Tramway was sold to the Dunkleytown Timber Coy., who owned the locomotives until 1932, when they were sold to J.Howard of Zeehan.

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REMAINS OF THE MARRAHWAH TRAMAY

Tas. Rail News

The Tasmanian Government Railways recently put up for tender a quantity of 40 lb. rail at Redpa, in the far north west. The rails are in the form of a turning wye near Redpa station site, which was left intact after the Marrahwah tramway was lifted several years ago. This turning wye also connected the Salmon River line to the Marrahwah tramway.

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SOUTHERN ELECTRIC AUTHORITY TRAMWAY, MURRARIE, BRISBANE

Most of the overhead wire has now been pulled down and the branch line, has been extended to Gibson Island, to Austral Pacific Fertilisers and taken over by the Queensland Government Railways. The fate of the two electric locomotives is uncertain.

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QUEENSLAND SUGAR TRAMWAY NOTES

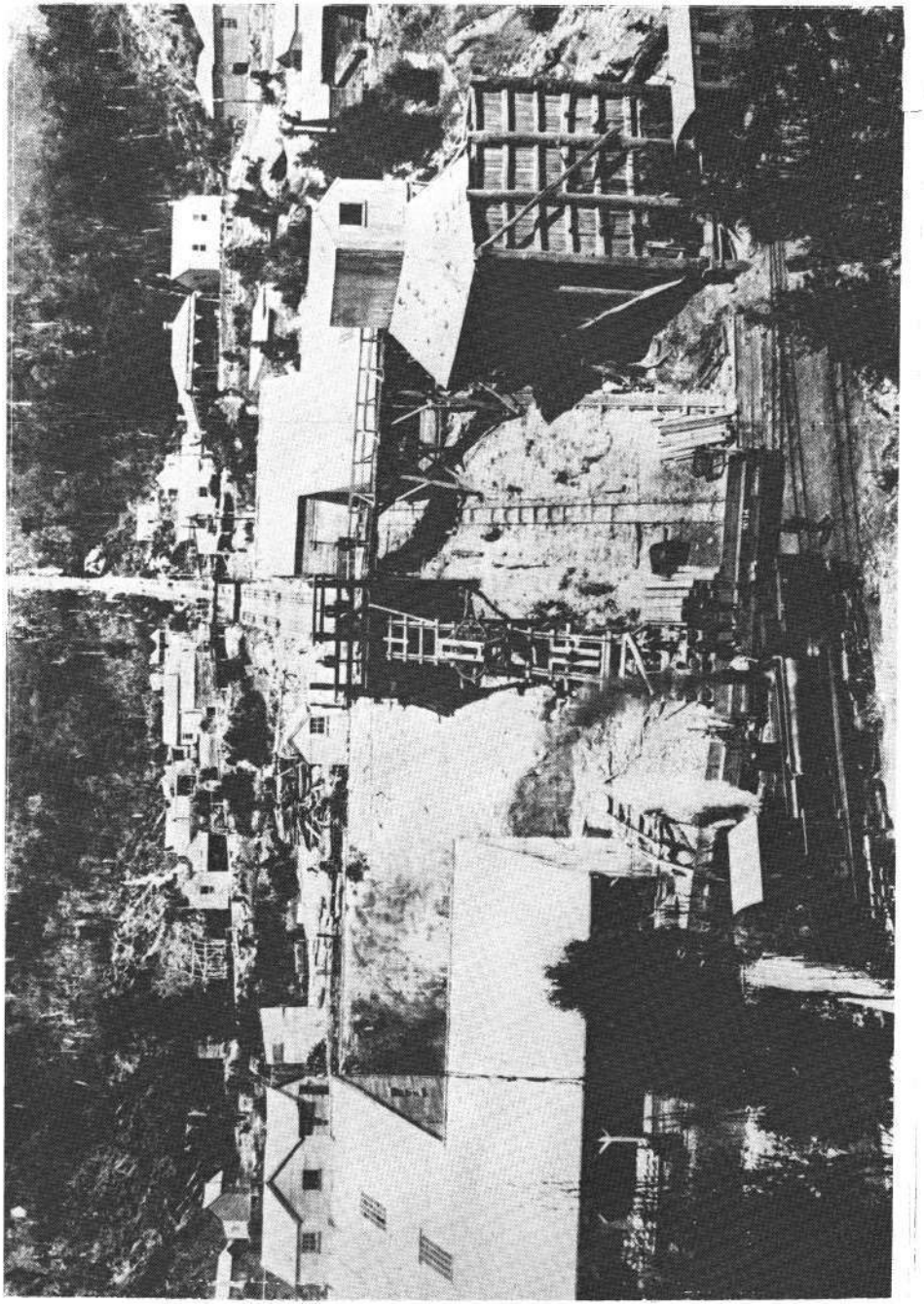
David Mewes

MORETON CENTRAL MILL, NAMBOUR

This mill used steam regularly up until the end of the 1967 season, when it was fully dieselised. All the steam locomotives at this mill have been given to the Maroochy Shire Council for preservation.

ISIS CENTRAL MILL, CHILDERS

This mill has been fully dieselised for some years.



The bottom of the Williamsford haulage in Zeehan and North East Dundas days. - Photo Rev. C.B. Thomas.

There are six Clyde diesels numbered D3 to D8 and also two diesels built by John Fowler numbered D1 and D2, D1 has a centre cab.

BINGERA MILL, BUNDABERG

The 3'6" gauge steam worked for the last time last season. This mill uses two Bundaberg Fowlers alternating on a weekly basis.

The 3'6" gauge steam locomotives are ex Q.G.R. B13 class 4-6-0 built by Dubs and numbers 48 and 79.

The 3'0" gauge steam is Bundaberg Fowler 0-6-2T "Ralf" and "Kolan", with "Perry" 0-6-2T Perry as standby.

The 2'0" gauge diesels are Com-Eng 0-6-0D/H named "Sharon", "Burnett", "Tegege", "Wattle" and "Invicta".

GIN GIN MILL, WALLAVILLE

This mill is now owned by Gibson and Howes who also own Bingera Mill and consequently some locomotive swapping has taken place.

2'0" gauge locomotives at the mill are:- "Thistle" 0-6-0D/H Com-Eng on loan from Bingera: An E.M. Baldwin 0-6-0D/H: No.5 J. Fowler 0-6-0T ex Isis Mill, standby: No.7 ("Isis") Hudswell Clarke 0-6-0 ex Isis Mill derelict. There are also three Malcom Moore rail tractors.

QUNABA MILL, BUNDABERG

This is the only mill that is still 100% steam. 2'0" gauge locomotives are:- "Invicta" J. Fowler 0-6-2T B/n 11277; Perry B/n 1850 0-6-2T; "Morelands" J. Fowler B/n 20284 0-4-2T.

MILLAQUIN MILL, BUNDABERG

This mill is also a stronghold of steam.

2'0" gauge locomotives are: Nos. 1 & 2 Clyde 0-6-OD/H: Nos. 1 & 6 Bundaberg Fowler 0-6-2T B/n 1 and 6 of 1952; No.8 Bundaberg Fowler 0-4-2T B/n 3 of 1952; No.9 Perry B/n 9737 of 1945 0-4-2T.

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LETTERS TO THE EDITOR

Jack Shennan writes re: TIMBER TRAMWAY AT HYTHE, Tas.

About mid last year I was fortunate enough to see Mr. Chas. Small's "Locomotives of the Railways of Tasmania" and therein observed a listing for a locomotive (?) at Hythe (Southport) — "Stationary engine and vertical boiler".

This listing I mentally dismissed as a haulage engine, or log hauler either on or off a rail carriage, some very big examples of these latter were used in this state once upon a time.

With time to reflect on the subject I think now there just could be something in this "Stationary engine and vertical boiler" business. While looking through some material collected some years ago, I came across a couple of old picture post cards printed in Germany before 1914 and purchased in Hobart in 1942. One shows a vertical boiler outside framed 0-4-0 "Hauling logs, Southern Tasmania". (See photograph on page 13). The other shows an engine at a mill.

Now the possible connection is that on a recent trip to the far south I came across the very same boiler off this engine lying abandoned at Hythe, exposed by the bush fires. Now a friend in Hobart tells me he has just heard that in the same area someone has come across a vertical boiler on an underframe also exposed by the fires. Now, could this be the same engine with another boiler, another similar locomotive, a rail log hauler, or what? A reliable observer may answer that. But is the picture published any connection with the whatsit in Chas. Small's list.

The locomotive in the postcards appears to be a professional job, with the boiler quite large in diameter compared with its height. There is a large firebox area with four cross tubes.

This boiler at the present time lies with other steam bits just over the fence on the north side of the road to Hythe jetty and only about a hundred yards from the jetty. It is with an old marine boiler, a single cylinder horizontal Tangye mill engine, the remains of a Tasmanian Mainline Railway locomotive boiler on bogies on the old right of way and several other items.

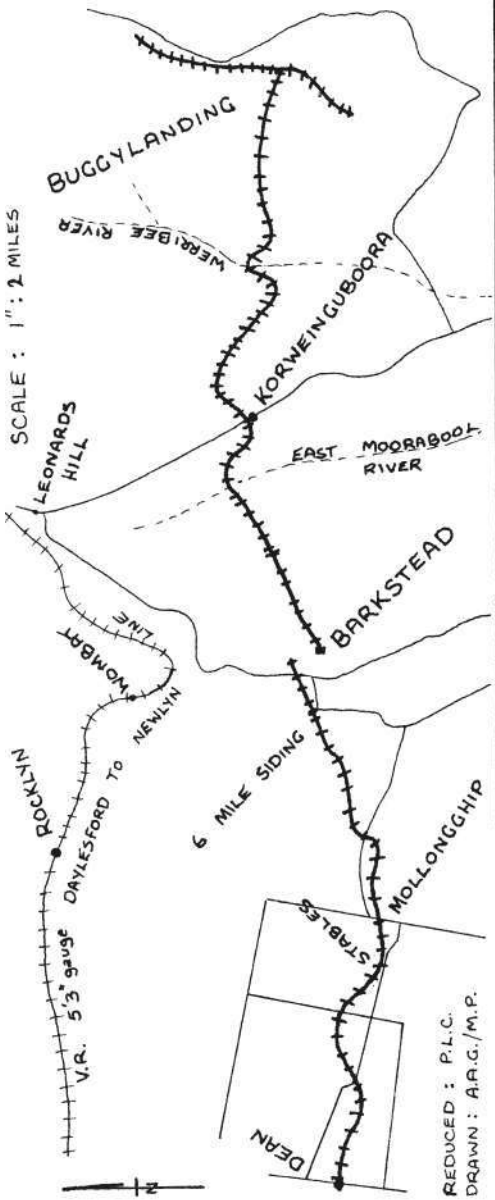
Now we have to hand a tale that there is an abandoned vertical boiler locomotive back in the bush in the Upper Derwent Valley and that it came from Hythe. This is only a handed tale so far, but it could just mean that there are two such. We have been into the area and found the old right of way, but only got perhaps within five miles of the engine.

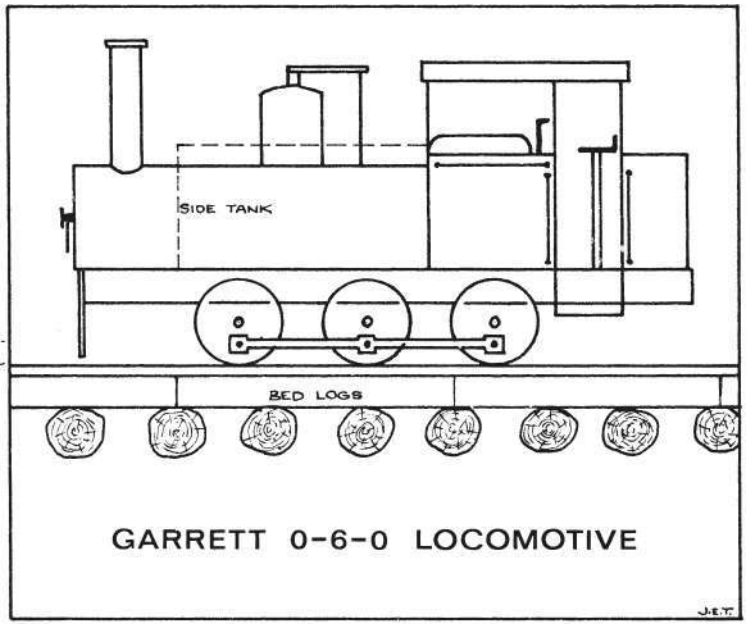
Peter Neve writes re: "THE CLIMAX LOCOMOTIVE" (L.R.24)

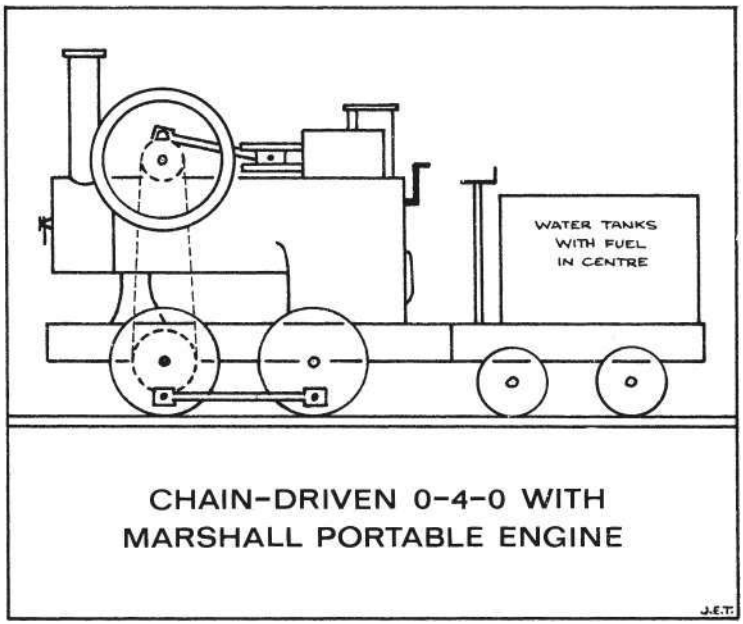
Some possible discrepancies in the article on the Climax locomotives-- Page 13, fourth last line - should this date be 1932 instead of 1923?

Page 14 second paragraph - should there be a gauge variation here?

Pages 16-17 Tabulation - The details here differ to details in the article, e.g. second engine, class "A" of 1912, mentioned on page 14 as possibly of 10 tons, disposal note, vide page 14 should read: Dismantled and shipped to Allworth on Myall Lake to assist construction of branch line. Alleged not to have been returned.







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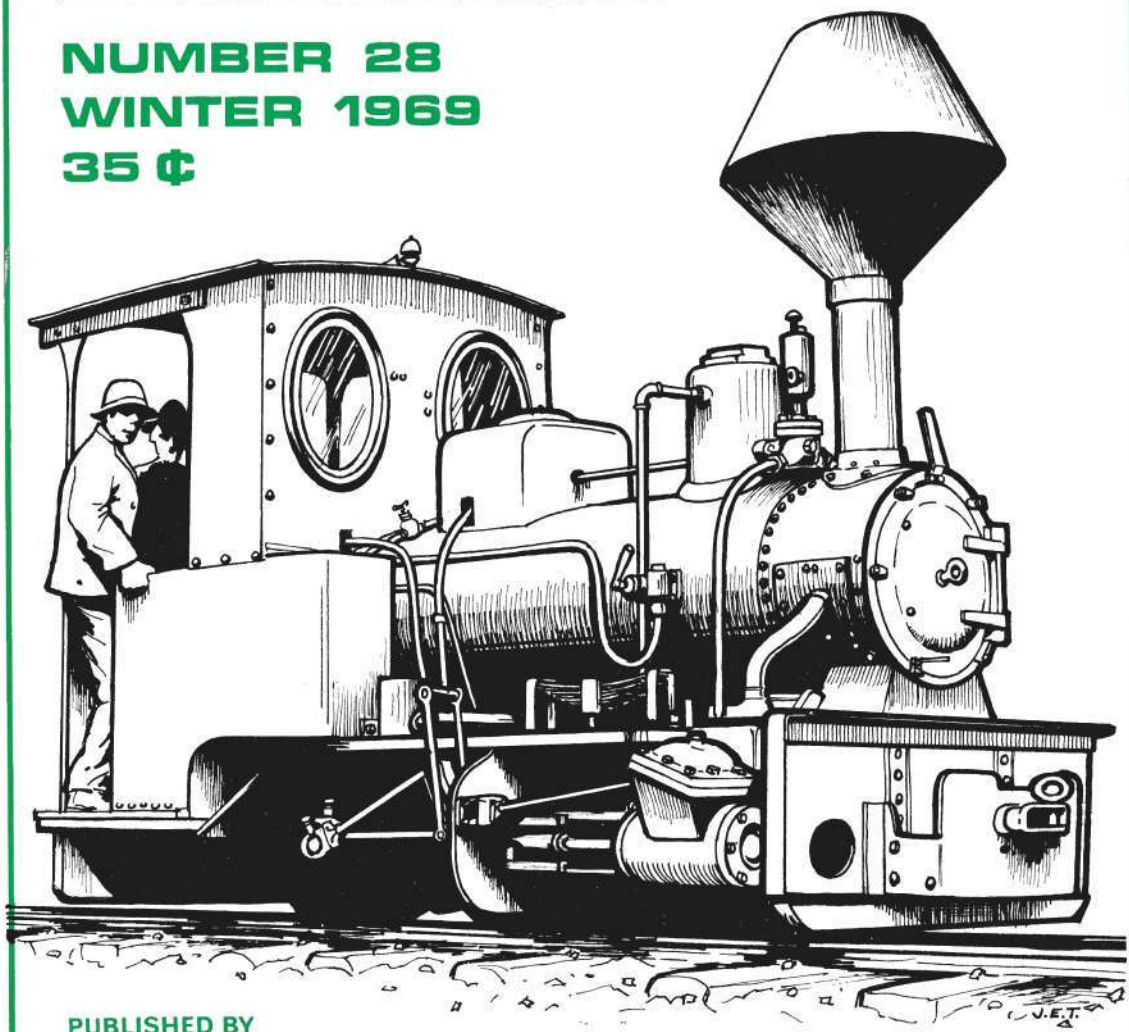

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LIGHT RAILWAYS

No. 28 WINTER 1969 Vol. VII

From the Editor

Our next issue will include articles on the Stannary Hills - Irvinebank tramway of Queensland, and the railways on the Australian territory of Christmas Island. We are eager to receive News, Notes and Comments items from members in all states, as well as full length articles.

When submitting articles please provide a full list of references used, for publication with the article, and full details of credits to be given to photographs. Contributors will be advised if their contributions are considered unsuitable for publication as submitted.

We hope you like the smaller print, which allows us to fit 36 pages into a 24 page magazine, thus substantially reducing costs.

Cover - John Thompson's drawing shows 2-ft. gauge Krauss 0-4-0T on the Rubicon Lumber & Tramway Company's timber tramway, which ran between Alexandra and Rubicon, Victoria.

Opposite - A train in full flight on the Rubicon Lumber & Tramway Company's line, hauled by the same Krauss loco. Note the furniture on top of the timber load.

(Photo - Courtesy Country Roads Board, Vic.)

TRAMWAYS OF THE RUBICON FOREST, 1906-1915

By - Frank Stamford

Following the article on the diesel locomotives used on the Alexandra-Rubicon tramway - L.R. No.21, p.10 - readers may be interested in some of the tramways in the area where these locomotives worked. This article will describe the first ten years of tramway development, and another may follow to record subsequent events.

Rail access to Alexandra

The 5-ft. 3-in. gauge line of the Victorian Railways reached Koriella (then known as Alexandra Road) in September 1890. However, Alexandra Road station was four miles from Alexandra township, and the town campaigned for an extension of the railway to Alexandra. This extension was finally opened on October 28th, 1909. Alexandra Road station was re-named Lily in August 1909, again re-named Rhodes later in 1909, and re-named Koriella in 1916.

The four mile distance between Alexandra Road station and Alexandra township definitely retarded the timber industry. No company was prepared to lay a tramway over this stretch, knowing that it would be replaced by a railway within a few years. It was only when construction of the railway extension appeared assured that timber milling in the magnificent Rubicon forest commenced.

THE FIRST VENTURE

Clark and Kidd build a tramway

Towards the end of 1905 Mr. W.J. Muntz, Chartered Engineer, surveyed a tram route which successfully crossed the Rubicon mountain, and during 1906 local businessmen Messrs. Clark and Kidd began building a water powered sawmill, and 3½ miles of wooden railed tramway along Muntz's route. Clark and Kidd traded under the name Rubicon Sawmilling Company, and in November 1906 they invited tenders for the supply of sleepers and packing for their line. This tramway was of 3-ft. 6-in. gauge.

This stretch of tramway was merely intended to carry the timber from the sawmill through the virgin forest to the main Alexandra-Thornton-Rubicon road. Clark and Kidd had more grandiose plans however and in April 1906 wrote to the Alexandra Shire Council, asking permission to lay 14 miles of tramway along the main road to Alexandra, and to cross the Eildon road bridge.

Within a month the Council decided in favour of granting this permission, and started to draw up an agreement to be signed by the two parties. However the Council had assumed that this tramway was to be a horse worked line, and became rather alarmed when they heard

that Clark and Kidd intended to build a steam worked, steel railed tramway to carry goods and passengers.

The Council decided there was no urgency in making a decision on this matter, and nothing further was heard of Clark and Kidd's proposed passenger carrying line.

So with no tramway along the main road, and with the sawmill and tramway through the bush nearing completion Clark and Kidd advertised for tenders for cartage of sawn timber by road from the terminus of their tramway to Alexandra.

Parliamentarians wild ride

By July 1907 the mill and tramway were complete, and some Cabinet Ministers and M.L.A.'s visited the mill. They rode on the tramway on two trolleys, each hauled by three horses, the three mile trip taking 1½ hours, it being a continual steep ascent all the way. After inspecting the mill these worthy gentlemen were suitably impressed with the return journey, which took only 35 minutes. The tramway wound around the mountain side on the edge of a gully hundreds of feet deep, with the Rubicon river at the bottom rushing in one continuous roar amongst the boulders and rocks. There were several trestle bridges about thirty feet high, and magnificent views stretching as far as Yea and Trawool could be had. Several members of the party said they would not be coaxed to ride down the track again.

The mill was worked by a 65 h.p. Pelton wheel, a four mile long water race having been built from the Rubicon river to power it. A wooden gutter ran under the sawing benches, so that the sawdust was washed into the gully below.

The logs were hauled down to the mill by bullocks, sawn and then sent down the tramway to the main road. From here the timber was hauled along the road by steam traction engines to Alexandra Road station. This caused the Shire Council some consternation, as traction engines were not kind to their roads. After heavy rain the traction engines could not be used and horses then did the haulage.

Clark and Kidd were apparently happy with these arrangements, they were not paying for road maintenance. For some strange reason the Council was not so happy and in October applied to the government, asking that a 14 mile long tramway be constructed along the main road to the Rubicon forest. Just prior to this, as an election promise, the Government had said they would construct forestry access tramways. They were returned to power, but never honoured their promise.

In August 1908 the Council gave Clark and Kidd permission to extend their horse tramway about two miles towards Alexandra, along the side of the road to the Rubicon river bridge, thereby reducing the road haulage of the timber.

The "American" approach

By this time the 5-ft. 3-in. railway extension into Alexandra was rapidly nearing completion, and with this improved transport more interest was being shown in the Rubicon forest. On the 5th February, 1909, two gentlemen by the name Oldfield and Skinner asked the Council for permission to lay a steel railed tramway for ten miles down the centre of the main road, from Alexandra to the terminus of a proposed extension of Clark and Kidd's horse tramway. They also wanted permission to deviate the tramway from the main road at McKenzies Hill, to maintain a reasonable grade. Skinner and Oldfield had obtained licences to cut extensive areas

of the Rubicon forest, and also had water rights for hydro-electricity purposes at the site of the Rubicon falls.

These gentlemen were in a hurry to get started, and said they wanted a decision within six weeks. They claimed that they would probably work the tramway electrically, and could most likely provide Alexandra with electricity. Their intention was to erect the latest type of "American sawmilling and planeing machinery, to be driven by electricity, generated at the falls by Pelton wheel and dynamo; also to install the latest improved American system for the artificial seasoning of timber." They planned to produce tongue and groove flooring and lining board, which up to this time had not been produced in Victoria, and was imported from Tasmania.

The Council were not going to be pushed around by these slick talking city blokes, they were still trying to get the Government to build the tramway. On the 19th February, 1909, a deputation by the Council asked the Minister of Railways for the Government to construct eight miles of light tramway from Alexandra to Thornton.

In April Clark and Kidd asked the Council's permission to extend their tramway for a further two miles towards Alexandra. This would bring Clark and Kidd's line to the point where Skinner and Oldfield's proposed tramway from Alexandra was intended to terminate.

A few weeks later the Minister of Railways advised that any government built line from Alexandra would have to be of 5-ft. 3-in. gauge capable of using ordinary locomotives and rolling stock. As the probable traffic was insufficient to support such a railway, the Government was not interested in its construction.

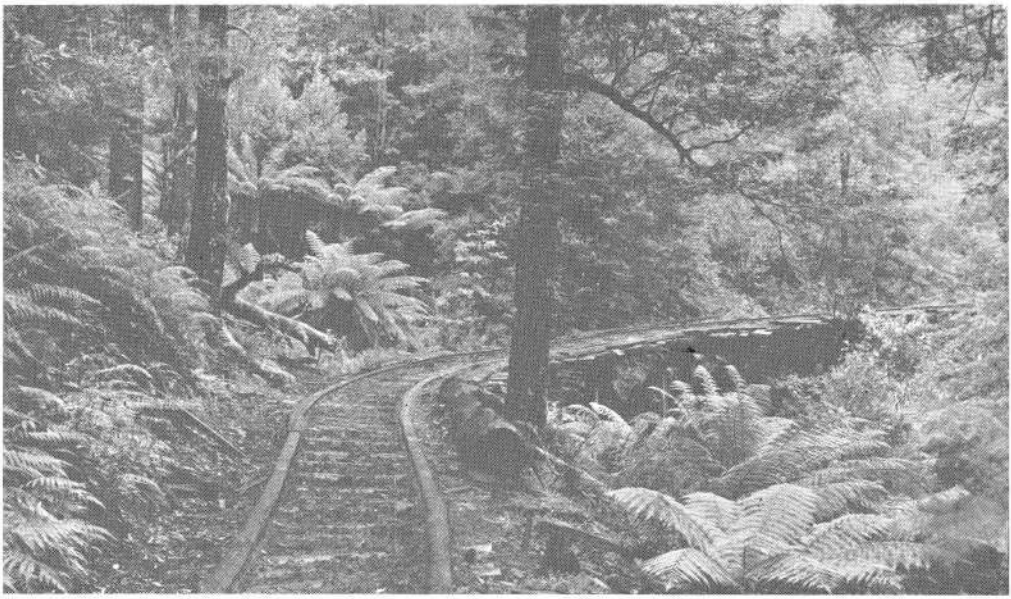
After hearing this the Council granted Clark and Kidd the permission they desired, in the form of a lease for use of the side of the road, the rental being five shillings per year. As will be seen later they never did build this extension.

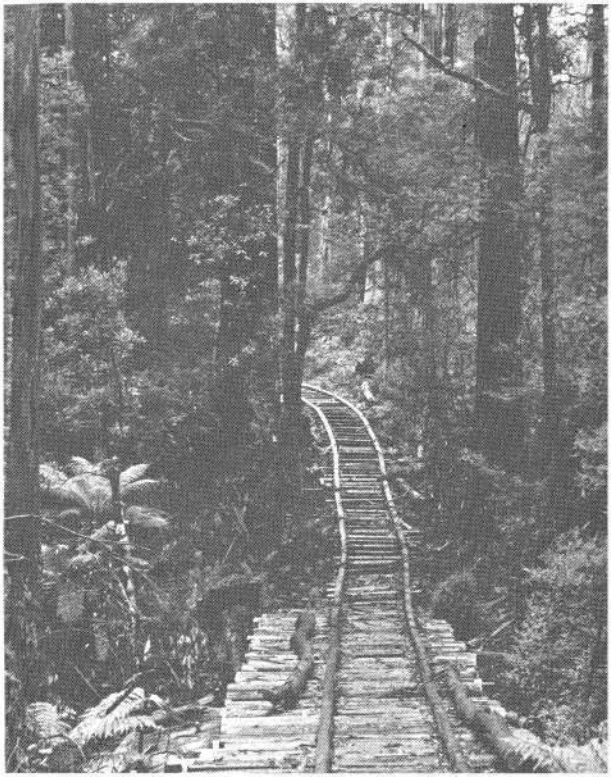
At this time one local journalist with greater imagination than knowledge of economics, forecast that once Skinner and Oldfield built their hydro-electric plant the Tallarook-Mansfield and Alexandra railways would be speedily electrified. These lines were then supporting one or two trains a day.

Three sided negotiations continued between Skinner and Oldfield, Clark and Kidd, and the Council. Skinner and Oldfield said the gauge of their proposed tramway would probably be 3-ft. 6-in. and suggested a rate of sixpence per ton per mile on timber - the Victorian Railways charged a penny per ton per mile. Clark and Kidd were not happy with the sixpenny rate, and the Council were becoming impatient with Skinner and Oldfield and accusing them of lack of action.

In August 1909 Skinner and Oldfield had formed the Rubicon Lumber and Tramway Company Pty. Ltd. Two months later they told the Council they wanted a 21 year lease for the tramway right-of-way, and they intended to run the tramway by steam, using wooden rails, which would be replaced with steel after three or four years. In fact the tramway was laid in steel rails right from the start. They were not prepared to carry passengers for at least five years. The R.L.& T. Co. gained the support of Clark and Kidd, but only after agreeing to lower the proposed rate for carrying timber to fivepence per ton per mile.

Relations between the R.L. & T. Co. and Clark and Kidd apparently became more strained, for the latter company refused to make the two mile extension to their tramway,





The First Venture

Clark and Kidd's tramway, (built 1906) near Rubicon falls.

"This is a splendid line compared to many" reported the Coroner at the inquest after a fatal accident on the line in 1915.

Note in the top picture the outer rail on the curve is strengthened with a steel rail. (LRRSA Archives)

which the Council had given them permission to do in May 1909. So the R.L. & T. Co. now had to build 12 miles of tramway from Alexandra, instead of the ten originally proposed.

Meanwhile the R.L. & T. Co. still claimed they were not sure what gauge their tramway would be. They had several engines on offer, they said, and they would choose the one they liked best, and make the tramway to fit the engine. It eventually turned out to be of 2-ft. gauge - they may have known all along but been loathe to admit that they intended to use such a narrow gauge.

Lease agreement signed

After much discussion between the Lumber Company and the Council, the lease agreement was finally signed on the 7th March, 1910, the lease being of 25 years duration. The lease rental was to be $10 per year.

Under the provisions of the Tramways Act 1890 the Alexandra Shire Council applied to the Government for permission to build and operate the tramway. This permission was given in August 1910, and the Council then delegated their authority to the R.L. & T. Co. However, as it was the Council that applied for permission in the first place it continued to have responsibility for the operation of the tramway, and therefore had to take a close interest in the R.L. & T. Co's activities.

It was necessary to take this approach because it was intended that the tramway would be a public freight carrier. If it had been built solely to carry the Company's timber, Government permission would not have been necessary, and the Shire Council would have been spared many headaches.

Certain conditions were laid down by the Government. The maximum speed was not to exceed 15 m.p.h., and the tramway was permitted to carry timber, goods and produce, but not passengers. A runaway siding had to be provided 11 miles from Alexandra, so that if a train got beyond control it would be automatically brought to a stop.

Meanwhile the R.L. & T. Co. had been busy building a 2 mile horse worked tramway which connected with Clark and Kidd's tramway at the latter company's mill. There were five bridges in this extension which terminated at the site of the R.L. & T. Co's proposed mill. It should be made clear that whereas the earlier extension of Clark and Kidd's tramway brought it closer to Alexandra, this was an extension deeper into the forest. The sleepers for the steel railed tramway were carted along this line.

In January 1911 the R.L. & T. Co. advertised for tenders for the construction of the earthworks and bridges of their tramway, the work being divided into three sections. Mr. J. Webb of Alexandra was the successful tenderer for the first and third sections, but there was no tenderer for the second section which included some heavy earthworks. This was therefore further subdivided into three sections, and tenders for its construction were invited in February. Several hundred tons of steel rails imported from the U.S.A. arrived at Alexandra in May, and three 6 horse wagons were employed to deposit them along the route. The work was held up during the winter, due to bad weather, and complaints were made that the flood openings in the tramway were too small, resulting in flooding of paddocks.

First locomotive arrives

In October 1911 rail laying commenced from the Rubicon end towards Alexandra, thus

eliminating the need to cart sleepers by road from Rubicon forest to Alexandra. A locomotive arrived in Alexandra that month and was taken by road to the Rubicon end of the line. Previous ideas that the line would be electrically worked were now shattered, as the locomotive was a tiny 2-ft. gauge Krauss 0-4-0WT, builder's number 2,459 of 1891, weighing about 6½ tons. It had 6½-in. by 12-in. cylinders and 22-in. driving wheels, and was once Tasmanian Government Railways H class No.3. It came into the hands of the Victorian Public Works Department in 1906 and then went to the R.L. & T. Co. It was the Rubicon's only loco until 1919 when the second engine arrived, but that's not part of this story.

And disaster follows . . . . .

While Alexandra settled down to celebrate Christmas, and the Shire Councillors thought their work was done for the year, the little locomotive commenced carting sleepers along the tramway from Rubicon towards the Eildon bridge. However the Council was not too confident of the strength of this structure and on the 5th December wrote to the R.L. & T. Co. asking them not to lay rails on it, or take traffic across it, until some repairs had been made. The Company complained that this would greatly inconvenience them - they were now apparently imbued with a desire to get the tramway laid as quickly as possible. The Council invited tenders for the bridge repairs; while in the second week of December, without the Council's knowledge, the Company had laid rails over the bridge, and taken their locomotive across. This had an interesting effect on the bridge - the top beam in the downstream truss of span "A" buckled.

This minor occurrence apparently did not worry the Company, for on the 16th December they tried to send the locomotive over the bridge again, this time pushing two trucks loaded with sleepers, the combined weight of the trucks being 17 tons. This had an even more interesting effect on the bridge. When nearing the Alexandra side "one of the lengthy spans suddenly opened out and collapsed, precipitating the trucks into the opening caused by a defective truss." So the Alexandra and Yea Standard reported the event. The engine tipped into the opening, but remained more or less upright and was easily rescued. Driver McGowan jumped clear and was not injured.

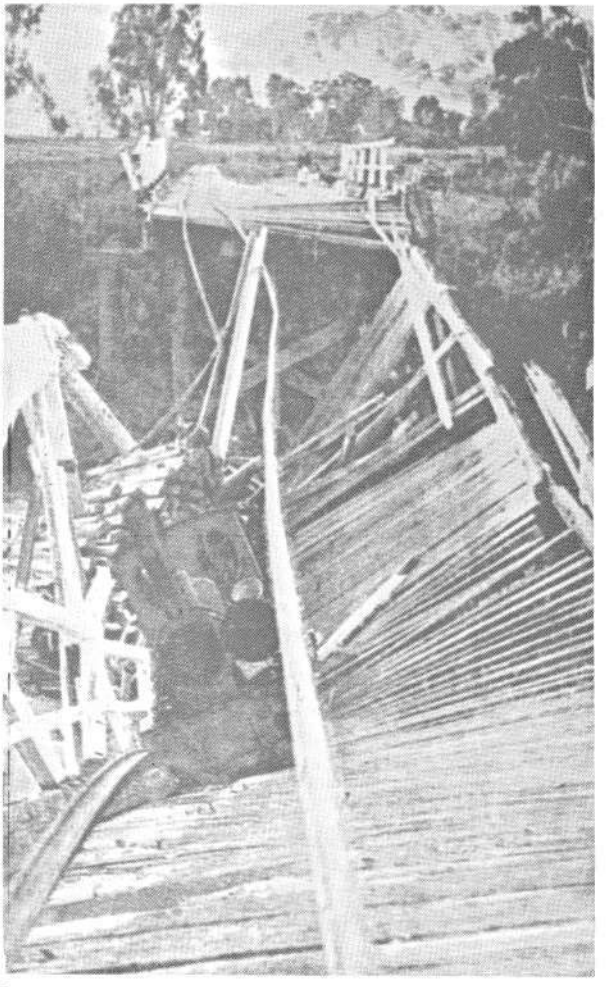
The Councillors hastily interrupted their Christmas celebrations for a Council Meeting on the 21st. The tramway construction necessarily came to a halt and the Company admitted it was liable for the damage. This was cold comfort for users of the Thornton road and a ford was hastily made across the river for road traffic.

During January 1912 the Company and the Council came to an agreement - the Council would repair and strengthen the bridge, and the Company would pay 55% of the cost. The Company would then lay their tramway down the centre of the bridge and metal the decking. In the same month the Council arranged for a public meeting to be held at the Thornton Hall to decide where the tramway's public sidings should be located.

The bridge was reopened on 22nd March, 1912, and locomotives weighing over 12 tons were not permitted to cross it. The R.L. & T. Co's midget only weighed about half this. The sleepers were laid longitudinally on the stringers and bolted to them, thus strengthening the whole structure.

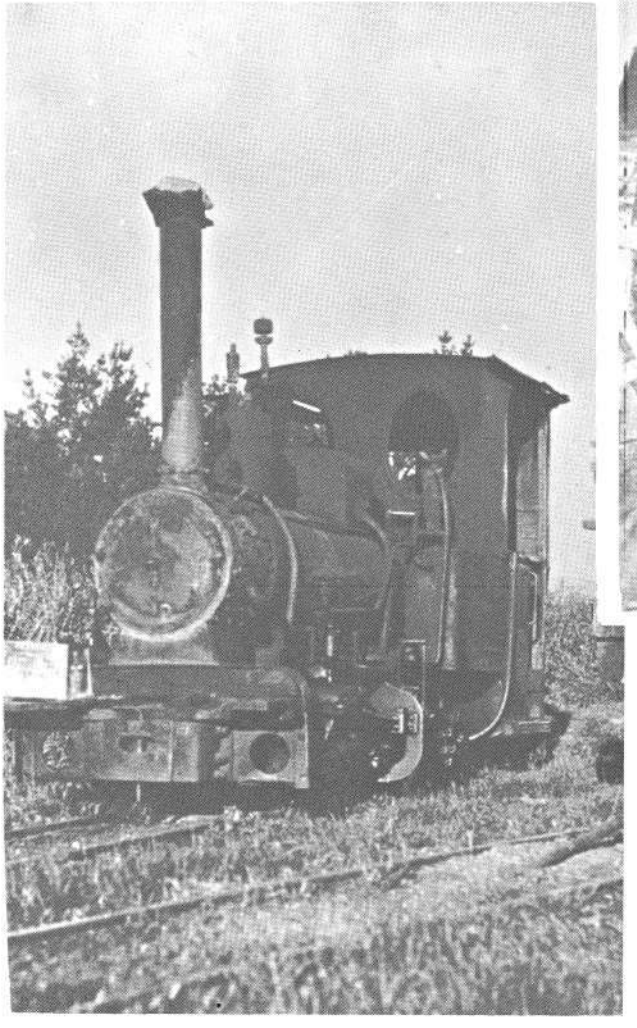
In May 1912 the local Progress Association complained that the driver was not using the whistle enough and was creating a danger to road traffic. The line crossed the main Thornton road five times.

The tramway was now nearing Alexandra, and Clark and Kidd came to an agreement with the R.L. & T. Co. whereby the latter company would lay a tramway siding at Alexandra at which Clark and Kidd could unload their timber into railway wagons. Clark and Kidd was to pay for the cost of the siding's construction. By August the R.L. & T. Co. had erected a large travelling crane at Alexandra for trans-shipment of timber, and timber was already being consigned to Melbourne. Construction of goods sheds and offices at Alexandra was about to commence.



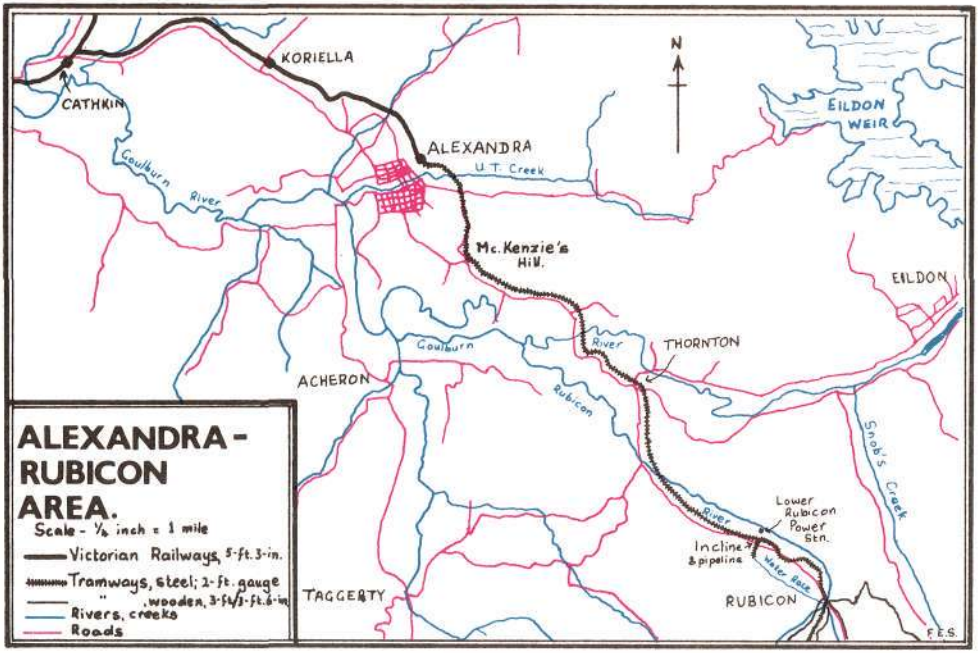
Right -

Eildon bridge collapse,
16th December, 1911.
(G. Maynard Collection)



Left -

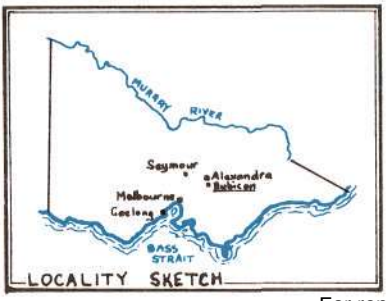
Rubicon Lumber & Tramway Co's first locomotive, at Alexandra. This was Krauss B/No. 2,459 of 1891. (LRRSA Archives)



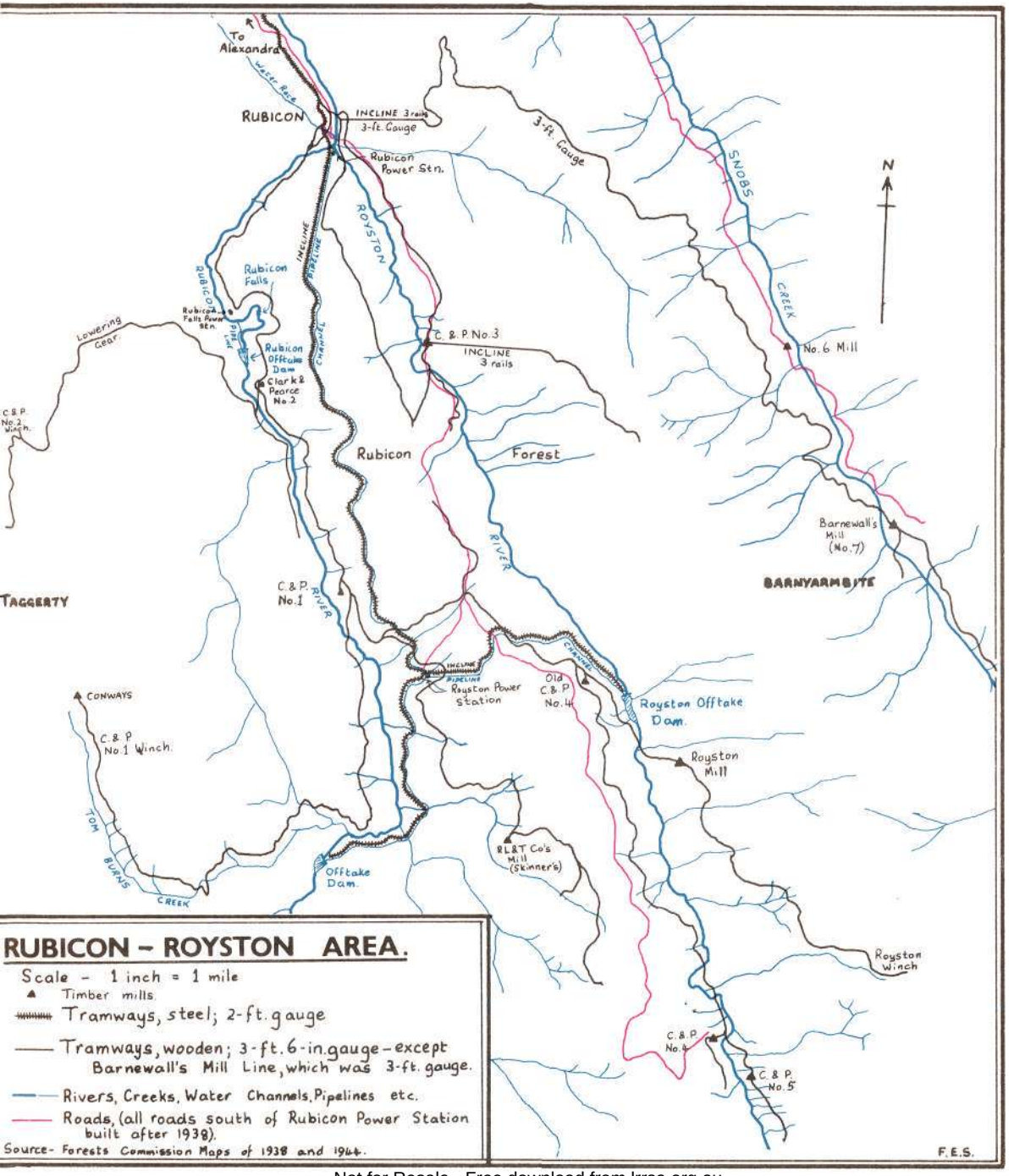
NOTES ON THE MAPS

On the small scale map above the route of the RL&T Co's 2-ft. gauge steel-railed tramway has been traced by following out the route, as authorized and published in the Government Gazette, 10th August, 1910, on a Lands Department map, and transferring this to a modern road map of the area. Unfortunately no accurate maps actually showing the tramway could be located, and the location of level crossings is not clear.

However, the 1-inch/mile map on the right has been prepared from Forests Commission 20-chain/mile maps of 1938 and 1944, and should therefore be accurate. Clark and Kidd's original tramway is the wooden railed one running south-west from "Rubicon", through Clark and Pearce No. 2 Mill down to C & P No. 1 Mill (this was Clark and Kidd's original mill).



The RL&T Co's wooden-railed tramway (as described on page 8) runs south-easterly from C & P No. 1 to RL&T Co's Mill (Skinners), with a further extension southwards. Most of the other tramways shown on the map were built after 1915, and will be the subject of a later article.



RUBICON – ROYSTON AREA.

Scale – 1 inch = 1 mile

▲ Timber mills.

Tramways, steel; 2-ft. gauge

Tramways, wooden; 3-ft. 6-in. gauge – except Barnewall's Mill Line, which was 3-ft. gauge.

Rivers, Creeks, Water Channels, Pipelines etc.

Roads, (all roads south of Rubicon Power Station built after 1938).

Source- Forests Commission Maps of 1938 and 1944.

THE ALEXANDRA AND YEA STANDARD, FRIDAY, DECEMBER 6, 1912.

Floods, fires and the line opens

The tramway was badly damaged by floods in September, in many cases the line being carried right across the road. Already complaints about the engine starting fires were being heard, and the Council asked the Company to put a spark arrestor on it. It will be recalled that diesel locomotives were constructed for the line in 1935-36 because the Council refused to allow steam locomotives to be used in summer. So the complaints about the fires dated right back to 1912.

The line was opened on 6th December, 1912, an advertisement appearing in the Alexandra and Yea Standard on that date. This is reproduced opposite. (Another writer's claim in L.R. No.24 p.29 that the tramway was constructed in 1915 is therefore not correct and has no historical factual basis to support it.)

The tramway now settled down to a fairly routine existence, however it came into the news occasionally. The licencee of the Rubicon Hotel claimed that the flood openings on the tramway's embankments were too small and caused his Hotel to be flooded. He got no satisfaction from the Company and claimed $200 damages from the Council. The Council in turn complained to the Company, and after some gentle persuasion the Company altered the flood openings.

In March 1914 it was reported that the locomotive was being repaired and fitted with new wheels. Perhaps horses worked the tramway while this work was done?

Late in 1914 things were not too rosy for the R.L. & T. Co., due to a recession in the timber industry. On the 18th December the Company asked the Council for permission to close the tramway indefinitely, as they were closing down their mill. As the tramway was a public freight carrier, and the authority to construct and operate it was ultimately in the Council's hands (it being remembered that the Council delegated this authority to the Company) the Council was very concerned with this matter. It felt that if the tramway was closed and anyone complained then the Council itself would be legally obliged to take on the responsibility of running it. Within a week the Council advised the R.L. & T. Co. that the Company must continue to operate the tramway.

At the end of 1915 further complaints were made about the engine starting bushfires. It was said the engine had a faulty ashpan, as a result of which it had burnt a hole in the decking of one of the road bridges the previous summer.

Accidents on Clark and Kidd's tramway

The R.L. & T. Co's tramway paralleled the main road, and therefore had no need to carry passengers. But Clark and Kidd's wooden railed horse tramway went into the depths of the forest, where there were no roads. Clark and Kidd did not like carrying passengers, but there was no other means of transport for the workers or their families who lived at the bush mill. If they wanted to go to Alexandra they either had to walk 3½ miles to the main road, or ride on top of a load of sawn timber. It was the same in many timber milling areas in Victoria.

Some very successful tours were made on the tramway, as in December 1912 when three trolleys were provided to convey a party of district pioneers along the line, the trolleys being hauled by three horses each. There were fifty passengers, and the trolleys were provided with rugs and cushions.

In November 1914 a trolley hauled by two horses and carrying two lady passengers on top of the load of sawn timber derailed near a trestle bridge at Crabwinch Gully. The driver yelled "jump", one of the ladies did and was uninjured, but the other was not quick enough, and when the trolley turned over its timber load crushed her legs, which had to be amputated. The driver jumped and narrowly missed being crushed by the timber load.

An even more serious accident occurred in September 1915. Two women, two men and a baby were passengers on top of a loaded horse hauled trolley which derailed at high speed. One of the women hit a rock and was killed, and one of the men was killed when the timber load fell on top of him. The others were not seriously injured.

This tramway used the conventional four wheel timber bogies, one supporting each end of the load, which rested on the swivelling bolsters. In this accident the front bogie remained on the rails, but the back one turned over, thereby throwing the load of timber - on which the unfortunate passengers were riding - down the side of the gully.

At the point of the accident the gauge of the tramway was 3-ft. 4-in., and in another place it was 3-ft. 3-in. The Forest Ranger who measured the gauge, said he considered a gauge variation of one inch to be safe, but he considered three inches to be too much. It was generally agreed that this tramway was much better than the average horse line. The nominal gauge of this tramway was 3-ft. 6-in., according to A.R.H.S. Bulletin No.37, November 1940. The only other likely gauge would be 3-ft., but I have no reason to doubt that 3-ft. 6-in. is the correct figure.

If readers have found this article of interest, another will follow dealing with the period commencing 1916.

References - "Alexandra and Yea Standard", 1906-1915.
"Government Gazette" 1910.
"Rubicon Lumber and Tramway Company Pty. Ltd.", prospectus dated 27-8-1909.
A.R.H.S. "Bulletin" No.37, November 1940, short article by C.C. Singleton and the late W.R.B. Johnson.

Acknowledgments - I would like to thank Geoff Maynard and Norm Wadeson for assistance in providing photos and maps for this article.

NOTICE

Whilst every effort is made to ensure the accuracy and completeness of articles published in "Light Railways", we cannot be sure that errors have not crept in. Additional information is being uncovered all the time, and this often contradicts previous information.

If you see any errors, or can add information, please contact the Editor, and so help us to record the full history of Australia's light railways.

If you are engaged in research yourself let the Editor know. In this way duplication of effort will be avoided, and we may be able to assist you with basic historical information on the tramway which interests you.

TRAMWAYS OF THE STATE RIVERS & WATER SUPPLY COMMISSION

Notes by F. Stamford

Referring to Peter Charrett's lengthy article on this subject (L.R. Nos. 21, 22, 23, 24 and 25) it would seem there are still quite a few lines he has not covered. Those detailed below are some that I have come across, but I suspect there were probably others. Many of these lines may have been very short lived temporary affairs.

REDCLIFFS PUMPING STATION

There were three 2-ft. gauge locomotives here, including a Kerr Stuart 0-4-2T, B/No. 742, built in 1901, and rebuilt by Kerr Stuart in 1903. It came to Redcliffs in 1924, having previously been used at Cobdogla in South Australia, and in Zeehan, Tasmania. The other two locomotives were Malcolm Moore tractors, one having an 80 h.p. Hercules diesel engine, the other having a Ford V8 petrol engine. The diesel was derelict in 1953, but the Ford engined job is retained for occasional use.

The Kerr Stuart has been "preserved" at Redcliffs.
(From LRRSA/ARHS Draft Loco list)

TATURA

Tatura, 110 miles from Melbourne on the Toolamba - Echuca line has a State Rivers & Water Supply Commission construction depot situated at the north of the town. Pre-stressed concrete beams are manufactured here, these being stacked in piles outside the plant. A 2-ft. gauge railway is used to carry them from the plant to the crane outside. The track is only five chains long, and is operated by a four-wheeled Ruston-Hornsby diesel locomotive, type 3 VSHL, B/No. 285342. This has a 3 cylinder 30 horse-power engine, 2-ft. $7\frac{1}{2}$-in. wheelbase and 15-in. driving wheels. Rolling stock consists of six four-wheel bogies coupled by link and pin.
(Source - "Light Railways" No.10, p.9)

NYAH

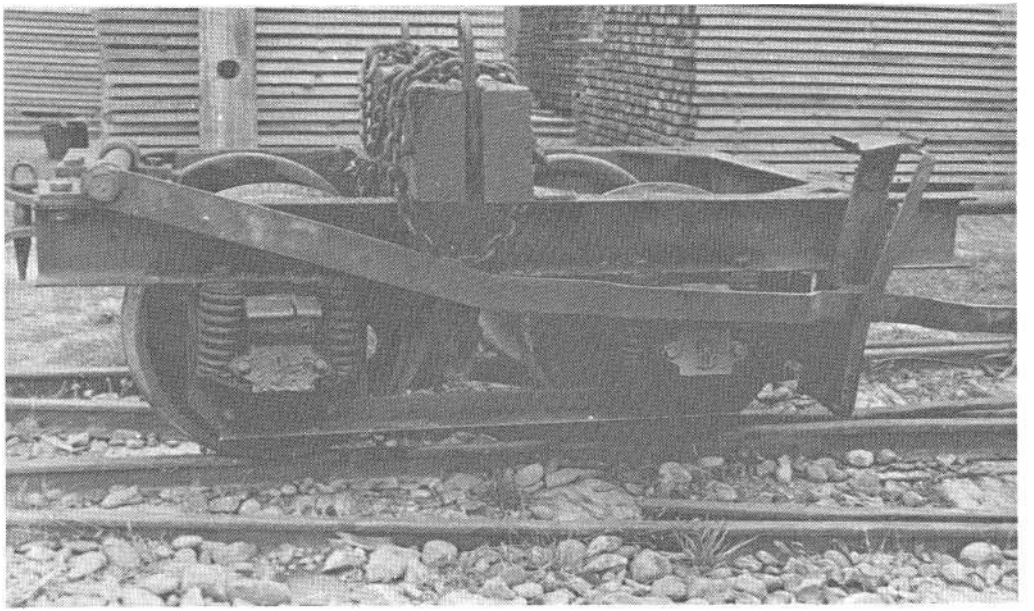
It was reported in A.R.H.S. Divisional Diary September 1967 that the S.R. & W.S.C. had called tenders for purchase of the following equipment at Nyah Pumping Station - 24 x 15-ft. lengths of 2-ft. 6-in. gauge rail track (7-lb. rails attached to 4-in. x 3-in. red gum sleepers), nine open frame trucks, one tipping truck and 54 spare wheels.

TARAGO RIVER AQUEDUCT

Between 1950 and 1957 several 2-ft. gauge 30-h.p. four wheel Ruston Hornsby, type 3 VSHL diesel locomotives were used for underground mullock transport.
(Source - A.R.H.S. Vic. Div., Research Enquiry Paper No.1, "Locomotives of the Private Railways of Victoria")

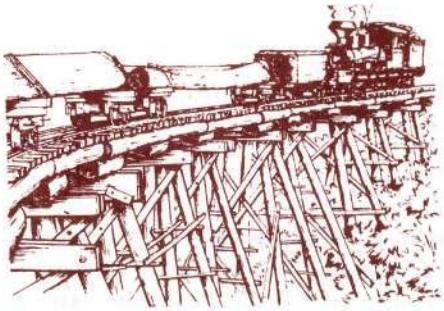
COLIBAN RESERVOIR

In A.R.H.S. Bulletin No.32, June 1940, it was reported that the S.R. & W.S.C. once had a 5-ft. 3-in. gauge tramway serving this reservoir. Whether this report was correct or not I do not know.



The Rubicon Lumber and Tramway Co. was exceptional in having steel framed, sprung timber bogies, one of which is shown above. (P. Ellis Collection)

A horse team on Clark & Kidd's tramway. (LRRSA Archives)



NEWS, NOTES & COMMENTS

Australian Cement Ltd., Fyansford, (Vic.) - The Victorian Railways has bought the Fyansford diesel - D1. It was towed from Geelong on the weekend 24-26th May, on its own behind a VR diesel. It is to be fitted with a larger main air reservoir cylinder, standard VR cab fittings (i.e. the driving side is to be changed). Auto couplers, standard pilot and steps are to be fitted, and the dynamic brakes are to be retained. It is to be numbered T413.

(Monarail)

Yarra Junction station saved from the wreckers

It was indeed pleasing to hear recently that the Upper Yarra Historical Society is to take over Yarra Junction station, on the VR's closed Warburton line, and use it as a headquarters, where items of historical interest will be kept. Yarra Junction station was perhaps the most substantial station on the Warburton line, and was once the interchange point of the Gilderoy Tramway Company's six mile 3-ft. gauge line which was legally permitted a maximum speed of 3 mph. This was replaced by the Powelltown steam tramway about 1913, which crossed and connected with hundreds of miles of other tramways. Yarra Junction's decline set in 25 years ago when the Powelltown tramway closed on 15th July, 1944. Subsequently the VR's 5-ft. 3-in. gauge Warburton line closed on 29th July, 1965, and it looked as if Yarra Junction would be wrecked.

The Upper Yarra Historical Society is itself very interested in recording the tremendously complex history of rail transport in this area, and could hardly have wished for a more appropriate headquarters. The local Shire Council have taken out a lease on the station building and platform, and the latter will be used to exhibit items of historical interest, including the Malcolm Moore six-wheel tractor from Powelltown, and a couple of timber bogies.

(Geoff Maynard)

Sons of Gwalia Ltd., Firewood Tramway, (WA) - At Leonora the preserved Sons of Gwalia locomotive survives with green tanks and cab, red boiler and smokebox. Builder's plates are intact, as are most fittings.

At Gwalia the formation of the former S.o.G. 1-ft. 8-in. gauge tramway is readily traceable. Intact is a stone bridge by which the tramway passed underneath the WAGR 3-ft. 6-in. line. A large number of four wheel wagons are left lying around the mine area. The coal stage and ash pit are intact. All items were put up for auction and carry a little painted sign - "Lot . . ."

(Rod Smith)

NEWCASTLE COAL MINING RAILWAYS (NSW)

J. & R.A. Brown, Hexham Colliery, Newcastle - During a fleeting visit on 10th March ex Great Central Railway (UK) 2-8-0 locos Nos. 23, 24, and another (number not known) were seen shunting around the works, inside the shed was an 0-6-0ST (Kitson) and 2-8-0 No.15 both of these being serviceable. Outside, derelict, were six more 2-8-0's, one 0-6-0ST, one 2-8-2T, and one 0-6-4 "Mersey" Tank.

South Maitland Railway Co. Pty. Ltd. - On 10th March at this Company's shed at East Greta Junction I found 2-8-2T's Nos. 10, 18, 23, 30 and 31 in steam, 2-8-2T's Nos. 17 and 27 inside the shed but without boilers, 2-8-2T's Nos. 26 and 28 inside the shed minus valve gear, while another 2-8-2T was in the workshops undergoing heavy overhaul. Also in the workshops was one of J. & R.A. Brown's 2-8-2T's for a major overhaul. Outside was a derelict 4-6-4T consisting of frames, wheels, cylinders, cab and dome cover and a few other fittings, two other 4-6-4T's were derelict but intact (Nos. 15 and 29), and three diesel-hydraulic railcars were derelict.

Peko-Wallsend, Hexham, Newcastle - Still in regular service here is Avonside 0-8-2T, B/No. 1559 of 1908.

Commonwealth Steel Co., Waratah, Newcastle - Shunting here on 10th March was Andrew Barclay 0-4-0ST loco, B/No. 1739 of 1923, with H.K. Porter 0-4-0T B/No. 5685 of 1915 serviceable but not in steam. Both these locos are painted an attractive green and are very well kept.

With all this industrial steam, plus steam on the NSWGR, Newcastle can still be recommended as providing a good cure for that dread disease "steam starvation" which so many Victorians suffer from. (Frank Stamford)

Walhalla Mining Tramways - Poverty Point Bridge - This 158-ft. long pre-fabricated steel bridge was described in LR's Nos. 16 and 17, and carried the 2-ft. gauge horse-worked firewood tramway of the Long Tunnel Gold Mining Company over the Thomson River, about two miles north of the VR's Thomson River bridge. We hope it still stands (it did at the time of writing), and is in an almost inaccessible location. At the Society's Annual General Meeting member Ted Godwin suggested that the Society contact the National Trust with a view to having the bridge classified. Shortly after this it was heard that the bridge was likely to be blown up at any time.

The Society immediately brought this to the notice of the National Trust, and has submitted historical material to that organization in the hope of protecting the bridge from destruction.

Relics Sub-committee formed - The Council has appointed a Sub-committee to ascertain whether there are any other tramway relics worthy of being classified. Members will be aware that many timber tramway trestle bridges have been blown-up in recent years, and this destruction continues. Initially the sub-committee consists of Arthur Straffen and Bill Jessup, and anyone wishing to make any suggestions to the sub-committee may write to Arthur, whose address is Kings Road, Harkaway, Vic. 3806.

Corrections to previous "Light Railways" - Issue No. 26, page 17, the photo captions are reversed. Issue No. 27, page 13, captions to the two top photographs are reversed.

"THE NARROW GAUGE" No. 50, published by the Narrow Gauge Railway Society (UK). Special Jubilee issue.

The latest issue of this off-set printed publication includes fully detailed scale drawings of the Listowel & Ballybunion Railway Lartigue Monorail locomotive, with several large builders photographs; metre gauge in Iraq; the Narrow Gauge Locomotives of Hudswell Clarke Ltd.; German Army Field Railways and scale drawings of the 0-8-0 tank locomotives which operated them; Railways in Iceland; Narrow Gauge Locomotives of the Hunslet Engine Company; a 2-ft. gauge electrified gold mining railway in South Africa; and many other interesting items. This Jubilee issue runs to 84 pages each 6½-in. x 8-in. and includes 54 photographs, many of which are full page reproductions. Detailed scale drawings of five locomotives are included. Copies will be available through our Sales Department at $1.10 each, plus 13 cents postage, and orders are being received now.

"GREEN OVER RED" May 1969

This off-set printed publication includes a full list of the locomotives of the Indonesian State Railways, maps and a description of that little known system, together with several photographs. With over 800 steam locomotives of over 70 different classes, on 3-ft. 6-in., 2-ft. 5½-in., and 1-ft. 11½-in. gauges the system is most interesting, particularly as many of the locomotives are either ancient or unusual, or both. These include 2-12-2T's, and five classes of Mallets. Copies available from our Sales Department at 30 cents each, plus 5 cents postage.

LRRSA SALES DEPARTMENT, 9 McGregor Street, CANTERBURY, Vic. 3126.

Back Numbers of "Light Railways" - Nos. 14, 16, 17 @ 20 cents each, Nos. 21, 22, 23 @ 25 cents each, Nos. 24, 25, 26 and 27 @ 35 cents each. All others out of print. Postage - on one issue - 5c., two issues - 9c., three or four - 13c., five or six - 17c., seven or eight - 21c., nine or ten - 25c.

Green over Red - January and March 1969 - 25c. each, May and July 1969 - 30c. each, plus postage as for "Light Railways".

"The Narrow Gauge" - No. 50 - $1.10 plus 13c. postage.

In Memoriam

Powelltown tramway and Little Yarra, Powellite, Shay 2575, Shay 2576, Coffee Pot, not forgetting the little Squirt. Died 15th July, 1944. A tribute from the LRRSA.

(This advertisement was published in the "Public Notices" of the Melbourne Sun and Age, and resulted in the publication of an item in Andrew McKay's "In Black and White" Column in the Herald. The Society also forwarded information about the tramway to the Yarra Valley News, which circulates in the area the tramway served. As a result, that newspaper published a feature on the tramway in its issues of 15th July and 22nd July.)

Yes, a quarter of a century has passed since the closing of the Powelltown tramway. This leads us to the last two pages of this issue -

Opposite - Shay locomotive hauls logs to the Powelltown mill, about three miles from Powelltown. On the left a brakeman can be seen attending to a burning brake block. (Photo - Courtesy Forests Commission of Victoria).

Back Cover - The Powelltown tramway was perhaps the backbone of a dense network of tramways - denser than the suburban railways of Melbourne. Some 250 miles of railway and tramway appear on this map, all of which have been closed. Of interest is the Gilderoy Tramway Company, described on page 19 of this issue. No doubt there were many other branches not shown on the map. If readers find any mistakes please let the Editor know.

ONLY ONE SURVIVES

The sole survivor of the once numerous steam narrow-gauge railways which operated in Victoria is the Belgrave - Emerald "Puffing Billy" line which was only saved by the work of volunteers.

You can help ensure that "Puffing Billy" continues running by spreading the word of its existence amongst your friends, neighbours and workmates, or by becoming a volunteer worker.

You will then help to ensure that the sole survivor survives.