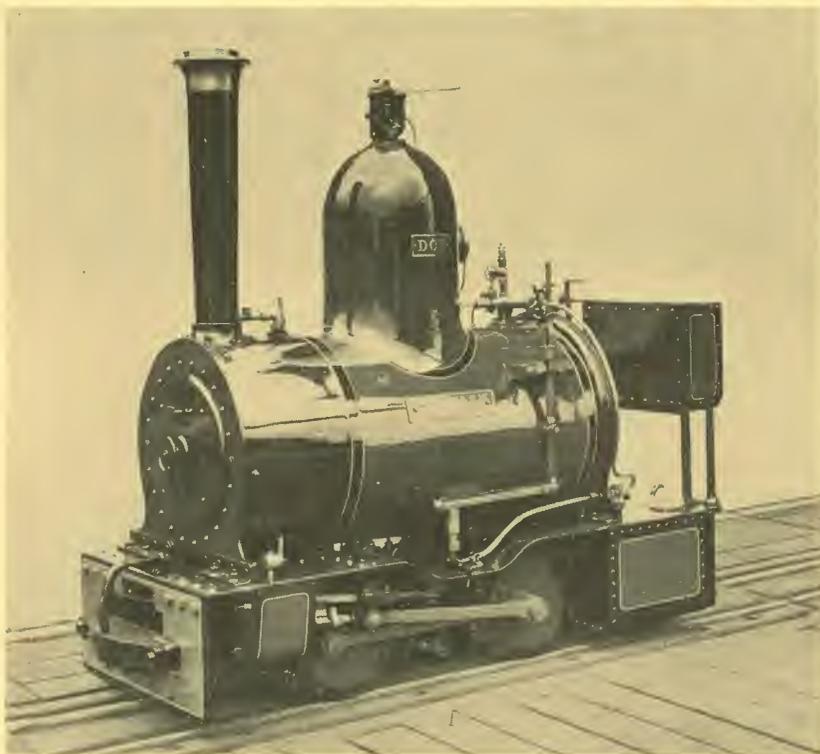


The **NARROW GAUGE**



THE NARROW GAUGE RAILWAY SOCIETY

THE NARROW GAUGE RAILWAY SOCIETY

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EDITORIAL

It is with great pleasure that we put before you our biggest magazine so far - 38 pages with a pretty varied range of subjects. We have an ever growing file of articles, but please don't let this prevent you putting pen to paper, the shorter 2 or 3 page articles are what we are looking for now.

Bill Strickland did a grand job on the modelling side recently and we publish his report in this magazine. Over 60 members took the trouble to write him, we have always included a drawing for modellers use in recent magazines and will increase the space given to drawings if only members will help and send some in to me!!

The photographic competition has been a success this year and will shortly be judged by members of the Leeds Area Committee - see next issue.

Best wishes,

Henry Holdsworth.

COVER PHOTO

"DOT" - Beyer Peacock Manchester 1887, now preserved at the Railway Museum Towyn - collection of Ron Allison.

CONTENTS - No. 43 FEBRUARY 1967

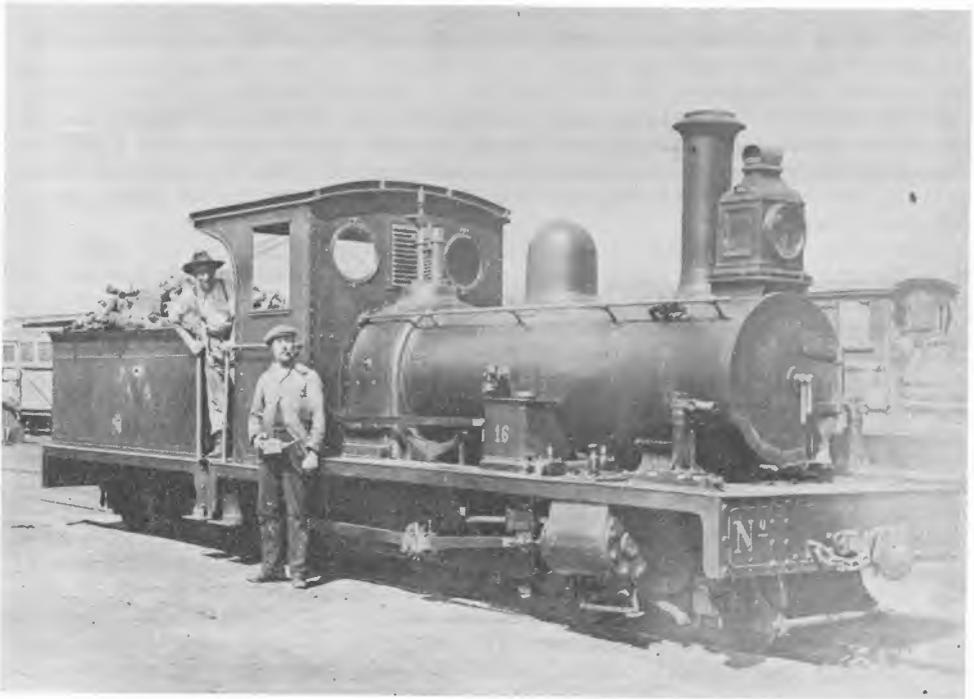
Page 1.	NARROW GAUGE IN RHODESIA	A.H. CROXTON
Page 7.	IRELAND 66	RICHARD MORRIS
Page 14.	EAST BROAD TOP (Part 3)	IVAN STEPHENSON
Page 18.	CHATTENDON & UPNOR "NORBURY"	PETER HALTON
Page 21.	"PERHAPS WE WON'T BE GOIN' AFTER ALL."	KEITH STRETCH
Page 24.	BRITISH I.C. LOCOS NO. 4 (THE HOWARD)	BRIAN WEBB
Page 27.	MODERN TWO-FOOTER (SOUTH AFRICA)	SYDNEY MOIR
Page 32.	MODELLING REPORT	BILL STRICKLAND
Page 37.	LETTERS TO THE EDITOR	

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NARROW GAUGE IN RHODESIA

By A. H. Croxton

Rhodesia has been so much to the fore politically of late that there is little need to describe its whereabouts in Central Africa. Its advent into the realm of railways was sponsored by the vision of Cecil John Rhodes and it will be interesting to readers to know that it was a close race between two gauges of line - both with the backing of Rhodes - to see which would enter Rhodesia first. From the East in 1892 construction of a 2-foot railway was commenced by the famous contractor, George Pauling, from Fontesvilla on the Pungwe river in Mocambique (Portuguese East Africa) in the direction of Rhodesia's eastern border and after many difficulties - climatic, health, constructional and mainly financial - this line was eventually completed by stages to link the then small port of Beira with the town of Umtali, just inside Rhodesia and on Feb. 4, 1898 the Beira Railway was opened throughout for its 222 miles. In the meantime access to Rhodesia from the South - Cape Colony - was being urged forward to



facilitate settlement and development of the goldfields discovered mainly in Lobengula's Matabeleland for which Rhodes had secured concessions.

Construction, again by George Pauling, had commenced in early 1897 and by dint of amazing energy this - the Bechuanaland Railway - of the standard "Cape" 3 ft. 6 in. gauge was pushed on from Mafeking over the 492 miles to Bulawayo to be opened with great ceremony on Nov. 4, 1897. Thus the 3 ft. 6 in. actually won the race to Rhodesia but the terrain through Bechuanaland was easy compared to the mountainous approach the 2 ft. had to surmount, while several rivers had been crossed by temporary tracks over the almost dry sand beds without waiting for the erection of bridges, which followed months later.

Experience soon showed that the 2-foot gauge was inadequate for the growing traffic and in January 1898 a start was made with the Mashonaland Railway's line from Umtali to Salisbury to the 3 ft. 6 in. gauge. Late in 1899 work began on the conversion of the Beira Railway to the wider "Cape" gauge, this being completed in July 1900 when the line had been shortened by deviations from 222 to 204 miles in length. The South African War of 1899 - 1902 which accelerated this work on the Beira line had delayed continued construction between Bulawayo and Salisbury - the line had been cut at Mafeking by the siege so preventing transit of supplies and materials - but the two towns of Bulawayo and Salisbury were eventually joined by rail in December 1902.

To detail all the subsequent history of the up-to-date system now known as "Rhodesia Railways" and having a total route mileage of 2,663 in Rhodesia, Zambia and Bechuanaland does not come within the scope of this article which deals with "Narrow Gauge" as we know the 2-foot gauge in Southern Africa.

The Beira Railway was the precursor of narrow gauge in Rhodesia, though only some six miles were within that colony, the other 200 odd being in Mocambique. Nevertheless the Beira Railway's influence was felt in later years, as will be seen.

Apart from two or three small tank engines used by Paulings on construction the main power consisted of two types of 4-4-0 tender locos built by the Falcon Engine and Car Works, a section of Brush Electrical Engineering Co., Loughborough. The two types were of very similar design, having 2'8" coupled driving wheels and 2' bogies, but the first batch built about 1892 had conical spark arrester chimneys and a 4-wheel tender. The later type from about 1896 had a larger boiler and longer smokebox while the chimney was straight with a lipped top; the safety valve was in the more normal position in front of the cab and not attached to the dome as on the first type; a 6-wheel tender held 780 gals. of water compared with the 500 gals. of the 4-wheel tender, while the wood fuel capacity was also

greater. Both types were fitted with inside Stephenson motion and the gross weight of the two locomotives was $11\frac{1}{2}$ and 14 tons respectively.

The highest service number of the Beira Railway was No. 44 and it is believed that the first ten were of the smaller type with the larger type probably commencing from No. 12 though the larger 6-wheel tender may not have come into service at once. According to "The Railway Magazine" of March 1966 B.R. No. 1 was an O-4-2 tender locomotive but its origin is at present obscure.

In 1900 when the Beira Railway was widened in gauge all the Falcon 4-4-0s were stored at a station called Bamboo Creek. In 1902 the Mashonaland Railway in conjunction with the Ayrshire Gold Mining Co. built a 2 ft. gauge branch line from Salisbury to Ayrshire, 83 miles long, and to operate this - the Lomagunda Railway - several of the B.R. 4-4-0s were brought to Salisbury from Bamboo Creek and ran on their new line until 1913. As well as locomotives a number of open and covered bogie wagons, one or two carriages and some guards' vans were also moved from the B.R. to the Ayrshire line.

A separate narrow gauge station was built near the main line at Salisbury and a thrice-weekly "mixed" train ran to and from Ayrshire, the journey taking 8 hrs. out and $7\frac{1}{2}$ hrs. back the next day. The European passengers travelled in an ex-B.R. third class bogie carriage with hard seats with backs to the drop windows and it was not unusual for sparks from the wood-burning engine to blow in on the backs of passengers, causing much back-slapping to put out smouldering clothes. At teatime the train stopped so that a fire could be lit at the lineside and a kettle boiled, while other stops occurred if the enginemen sighted a buck or some guinea-fowl within range of a shot from the rifle on the footplate.

With the extension of the line to Eldorado, another gold mine, the four Falcon 4-4-0s could not cope with the traffic as the ore from this mine was carried for crushing at the Ayrshire plant, so an O-6-0 side tank was ordered in 1905 from Hunslet for the Ayrshire Mine. This locomotive was named "Hans Sauer" in honour of the chairman of the mining company, but soon after arrival it was decided to strip off the side tanks and attach a 6-wheel tender to which the nameplate was transferred. "Hans Sauer" had 2 ft. coupled wheels with $9\frac{1}{2}$ " x 12" cylinders, and outside Walchaerts valve gear. A polished brass dome with round sandbox between dome and the stubby chimney were features of this locomotive which hauled 72 tons gross compared with 42 tons by the Falcons. It was very popular with the staff and ran over 92,000 miles between mid-1905 and the end of 1912. When the Salisbury - Eldorado line was extended and widened to 3'6" gauge in 1913, "Hans Sauer" and a few wagons were left at Barket Junction until the short section of 2-ft. to Ayrshire was picked up about 1916.

So ended the only public narrow gauge railway in Rhodesia but about this time other developments led to the construction of several industrial 2-ft. gauge lines and it was to one of these that "Hans Sauer" went to end its busy life. This line, now the Selukwe Peak Light Railway, is in 1966 the sole surviving narrow gauge industrial line in the country with many years' service ahead of it. Owned and operated by Rhodesia Chrome Mines Ltd. it connects their mines with the Rhodesia Railway branch line terminus at Selukwe, where the ore is transhipped into main line trucks for export. Some six miles long, with a $2\frac{1}{2}$ mile branch line, the track, originally 20 lb., is now 60 lb rail, with a maximum gradient of 1 in 45 and curves of a minimum radius of 220 ft., it winds its way over and along the side of a range of hills amid delightful scenery.

"Hans Sauer" and a Falcon 4-4-0 were the first locomotives on the S.P.L.R. The Falcon was an ex-Beira Railway loco which was one of 13 4-4-0s to have been bought off the 'dump' at Bamboo Creek from Mr. A.L. Lawley, of Paulings, by the South African Railways in 1915, when owing to the shortage of power they were glad to acquire anything useful for their 2 ft. lines. These thirteen Falcons were shipped from Beira to Durban and after some cannibalising nine locomotives emerged to form the S.A.R. NG 6 Class, Nos. 96-98 and 101-106, which worked for several years on various lines in South Africa. No. 104 was sold in 1920 to Selukwe to become S.P.L.R. No. 2 and gave good service there until in 1931 it was sold again, this time to a logging line where it put in several more years of work.

In the meantime the S.P.L.R. had bought two second-hand Orenstein & Koppel 0-6-0 and 0-4-0 side tanks from a closed gold mine, but as chrome export increased the first Peckett 21 $\frac{1}{2}$ ton 0-4-2 tank was purchased new, Works No. 1705/1926. Two others of the same type followed, W.N. 1901/1936 and 2024/1947 and these three later became 'Ivy', 'Mary' and 'Karen', looking very smart in a lined green livery. The Koppel 0-4-0 tank was named 'Margaret'. By then the Falcon had been sold, while "Hans Sauer" had been altered to a 2-4-0 wheel arrangement because the rigidity of the six coupled wheels on the curved hilly track had led to frequent derailments. About 1932 this gallant locomotive's firebox was in such a bad state that soon after it was scrapped after a 27-year life.

To assist in shunting duties two more Orenstein & Koppel 0-4-0 tanks were brought in 1935, these being only 7 $\frac{1}{2}$ ton engines. They were named "Popeye" and "Buckeye" and were conspicuous with their high chimneys and large spark arrester tops. Since replaced by diesel shunters "Popeye" and "Buckeye" a few years ago were donated to the Wankie Railway Recreation Club and the Gwelo and District Light Railway Society for the amusement of children, young and old, and to earn funds for local charities. Two Motor Rail "Simplex" B diesel-mechanical locos now perform shunting, while a 30-ton 188 h.p. Hudswell Clarke C diesel came into use in 1959, followed by a 12 ton Drewry 94 h.p. diesel and these two machines have replaced the Pecketts which are now in reserve.



In the busy steam days of the early 1950s as many as eleven trains a day in each direction ran over the stone-ballasted six-mile track, the Pecketts hauling nine loaded steel bogie wagons a trip. The S.P.L.R. then had 130 ore wagons, while two open sided carriages were in use for employees travelling to and from the Peak mine. In late 1964 it was stated that 8,300,000 tons of chrome ore had been moved out of Selukwe by Rhodesia Railways since the mine started operations and a goodly proportion of this tonnage had been carried over the S.P.L.R. A good record for narrow gauge.

Meanwhile the ex-Beira Falcons from the Ayrshire line were also busy on new ventures. Three of these 4-4-0s went to the Cam & Motor Gold Mine which needed large quantities of firewood for their roasting plant and so operated a light railway, at first some 25 miles long to the north and later the track was 'uplifted and relaid for some 15-20 miles to the south clearing large areas of mopani forest in the process. In the latter section two rivers were crossed by wooden trestle bridges but, after these had been washed away in floods, well constructed high-level bridges with a combination of timber and steel girdering were erected.

From the Ayrshire line came 15 bogie wagons which were stripped down to the frames for the cut firewood, while the little passenger carriage was bought for line inspection, timber surveying and the occasional picnic party.

The country traversed was well stocked with big game and on one occasion a rhino charged one of the old Beira 4-4-0s bending the coupling rod and entangling its horn in the engine frame. The rod had to be dismantled to extricate the dead rhino and so get the engine in for repairs. On another day as a train was passing by the bank of a river a baby elephant was sighted stuck in the mud. A herd of elephants had trampled around but the ground was too soft to free the baby and they had left it for a while. The engine driver, with some help and by using planks, hitched the little elephant to his loco with a long rope and the pull of his engine succeeded in releasing the baby from the mud.

The Cam & Motor light railway was in operation from 1915 to 1946 when the mine plant was converted to coal burning. The two surviving Falcons were then sold to a logging line in the forests north of Bulawayo where they ran for another nine years on a primitive track some 22 miles in length hauling in timber to a sawmill at Igusi on the R.R. main line. Here they were recovered in 1961 and after attention in the Rhodesia Railway workshops one was restored and has since been placed at the Umtali Museum where it stands as an interesting relic of the original Beira narrow gauge.

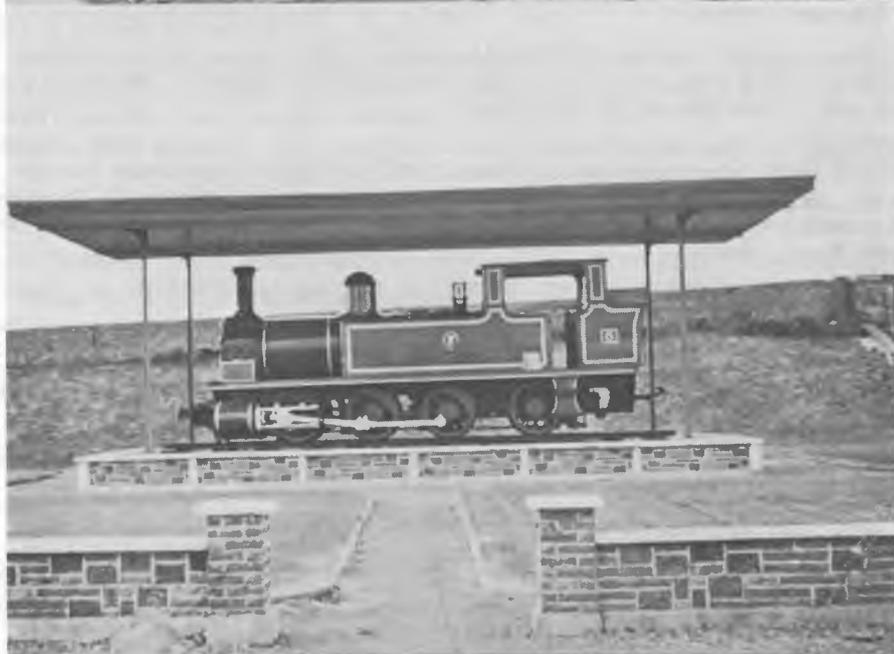
Several other 2 ft. gauge lines existed in Rhodesia and on some of these other Beira 4-4-0 Falcon locomotives served for many years, as did such stalwarts on other lines in South Africa and Mocambique. Their history provides an entrancing study, but is too long for this article.



RHODESIA

Photograph details.

- (1) BEIRA RAILWAY - 2' gauge No. 16 at UMTALI in 1899.
Loco by Falcon Engine & Car Works, Loughborough. 1897.
- (2) Bridge over UMSWESWE river on Cam & Motor Gold Mine Light Railway about 1918. Ex Beira Railway loco built Falcon 1897 - carriage also from Beira.
- (3) Ayrshire Gold Mine & Lomagunada Railway, 0-6-0 "Hans Sauer" at Bankett Junction 1913. Hunslet 867 of 1905 a side tank converted to tender - later worked on Selukwe Peak Railway.
- (4) Cam & Motor Gold - ex Beira Railway Falcon 4-4-0 No. 40 (or 44) with train of firewood for the roasting plant.



PHOTOS by Peter Excell.

1. Three 0-4-4-0 Diesels ex West Clare at Inchicore.
2. Preserved Dubs 0-6-2T at Ennis.
3. Railcar No. 16 at Stranorlar.
4. Strabane yard.

LETTERKENNY - In the middle of the station yard is No. 11 'ERNE' NW 699 of 1904 the last pure D.R. survivor, and the last 4-6-4T in the British Isles, finished unlined green, no plates. 3 burnt out wagon chassis and a van reside here.

Station still has the roof, goods shed and signal box (complete) are standing. Loco shed in private hands now.

LONDONDERRY - Victoria Road. C.D.R. signal still stands in station yard.

STRABANE - U.T.A. (Ex G.N.R.I.) Main line (Londonderry-Portadown) has now ceased and much vandalism evident. Nothing stands on rails now. Locomotives here

No. 4 'MEENGLAS' 2-6-4T NW 828 of 1907

No. 4 'DRUMBOE' 2-6-4T NW 829 of 1907

both are semi derelict, unlined red livery, no plates. Coaches Nos. 12 15 16 17 23 30 40 47 53 56 lie at drunken angles, most windows smashed, seating and lighting equipment scattered around.

Goods shed, 2 water towers and the rear wall of the loco shed stand amidst the debris. Platform roof demolished, all buildings disused except the Customs office.

The splendid viaduct (I like that word - Ed!) south of the station has been demolished some years although a few remains can still be seen, on the banks and in the waters of the river.

STRANORLAR - The magnificent station building has recently been repainted blue and buff, platforms as they were left in '59 but the track is now lifted. Signal box complete. A dump included two turntables (a Ransome Rapier and a Cowans of Sheldon) and various signalling items. In the General Stores Dept., was:-

No. 6 'COLUMBKILLE' 2-6-4T NW 830 of 1907 in lined C.D.R. red livery together with

Railcar No. 12 - (8-wheeled) in Red and Cream, and a van.

Inside the paintshop Railcar No. 18 (8-wheeled) and Coach No. 14 in Red and Cream.

Outside - No. 16 (8-wheeled) in Red and Cream, 18 vans (one numbered DR17) and also 36 burned-out van chassis).

Railcars 12, 16, 18 were all built by Walker Bros.

Stranorlar is the H.Q. of C.D.R. Road Services, all the buses and lorries sport the C.D.R. emblem on their sides.

LISTOWEL & BALLYBUNION RAILWAY - MONORAIL

BALLYBUNION - Station building virtually unaltered now a private dwelling, the occupier's husband worked on the L & B. and she has a set of five large framed photographs well worth seeing. It was stated that some coaches remain on a nearby farm, but this was not checked.

LISTOWEL - In the school there is a Bell and Works plate from one of the locos, together with a fine model of the line. Local shop with postcards. (M. Kennelly - International Travel Agency, Listowel. - 6 @ 1/- each)

TRALEE & DINGLE RAILWAY - 3' gauge -

TRALEE - N.G. track still in situ in a street to the west of the main line station.

WEST CLARE RAILWAY 3' gauge

ENNIS - Brick loco shed (with wood roof on supports of N.G. rails) is becoming an eyesore. No track, yard derelict, coaling stage still standing.

ENNIS - Main line station forecourt.

W.C.R. No. 5 0-6-2T Dubs 2890 of 1892 is set up on a plinth, protected from the weather. Green livery, lined pink and yellow! Motion carries works number 2891. A plaque on the front claims No. 5 to be called 'SLIEVE CALLAN' but no name appears on the loco itself. No vandalism. Small fittings are still intact.

BUTLIN'S MOSNEY HOLIDAY CAMP, CO. MEATH

The only place in the whole of Ireland where we were refused permission to see the railway. This is Ireland's ONLY pleasure line. Will any 1967 visitor give the Hon. Records Officer details please.

BELFAST CORPORATION - City of Belfast Transport Museum, Witham Street, off Newtownards Road, Belfast.

open - 10.00 to 18.00 hrs. every weekday, entrance in Carew Street.

There is a total of 14 Narrow Gauge large exhibits here together with broad gauge and an extensive Road Transport section including two steam vehicles. Books and P.Cs. are available from the curator. List of 3' exhibits as follows:-

BESSBROOK & NEWRY. TRAMWAY.

No. 2. Ashbury Co./Mather & Platt. 8 wheeled (040 - 4WE) Tramcar. Built 1885. Livery: Brown & Cream.

CAVAN & LEITRIM RAILWAY.

2. "KATHLEEN". R. Stephenson 2613/87. 440T.

Livery: Green, lined Black & Orange.

(Restoration now finished, loco complete with cowcatcher but without nameplates).

No. 6. Metropolitan C. & W. Co., Balcony Coach.

built 1887. Livery: Green.

(Wooden body being restored by voluntary labour and subscription).

COUNTY DONEGAL RAILWAYS JOINT COMMITTEE.

1. Alldays & Onions. 4WP Railcar. Built 1906.
Livery: Red & Cream. (Oldest extant I/C vehicle in British Isles - of small dimensions, approx. 13 ft. x 4 ft. wide, seats 5 passengers and driver. Ford 4 cyl. engine installed during 1920 rebuilding.)
2. "BLANCHE". Nasmyth-Wilson. 956/12. 264.T.
Livery: Red, lined Yellow.
3. Drewry. 8 Wheeled (2W - 4W - 2WP) Railcar. Built 1926.
Livery: Red. (Built as 5'3" gauge Railcar and converted to 3'0" gauge in 1932. Engine and transmission removed 1943, latterly in use as Trailer car).
10. Walker Bros. 8 wheeled (O40 - 4WD) Railcar.
Built 1932. Livery: Red & Cream.
(originally Clogher Valley Railway)
11. "PHOENIX". Atkinson - Walker 114/28 4WD.
Livery: Red & Cream. (Has 74 h.p. Gardner 6 cyl. engine fitted at Dundalk 1932 when converted from 4 W.T. (Geared) steam unit. No nameplates. Originally C.V.R.)
136. (Builder ?) 4 W.7. Ton Open Wagon. Livery: Grey.
- (No. ?) Carriage & Wagon Co., 6.W. Directors Coach. Built 1881.
Livery: Red & Cream.

GIANTS CAUSEWAY P. & B.V. RAILWAY & TRAMWAY.

5. (Builder ?) Toastrack Trailer. Built 1883.
Livery: Brown & Cream, lined Yellow.

PORTSTEWART. STEAM TRAMWAY.

- "B.N.C.R.2" Kitson T.84/83. O40 TRAM Loco.
(enclosed motion) Livery: Green, lined yellow.

BRITISH ALUMINIUM CO. LTD.

2. Peckett 1097/06. O40T. Livery: Green lined Black.

ARTHUR GUINNESS SON & CO. LTD. (1'10" GAUGE)

20. W. Spence. O40T. Built 1905. Livery: Green & Red.

.....continued on back cover



THE EAST BROAD TOP

Part III THE RE-OPENING

by Ivan Stephenson

(continued from No. 41 June 66)

After the shutdown, most folk in the Aughwick valley and further afield thought that the bantam coal carrier was indeed finished, their thoughts were strengthened a few weeks later with the news that the Company, both mines and railroad, had been bought by a scrap dealer. The new owners of the E.B.T. were the Kovalchick Salvage Co., of Indiana, Pennsylvania.

The new President, Mr. Nick Kovalchick, was soon to be seen inspecting the whole road, and the dusty engines and cars in the roundhouse and shops at Orbisonia, doubtless he was thinking what to do with his new railroad. The longer he thought the more he realised that he had become the owner of a unique thing, namely the East's last narrow gauge railroad, and that in it he had something with too much history and atmosphere to die at the end of the cutting torch. A determined scrapman would have burnt up the lot without second thoughts, but Mr. Kovalchick decided to keep the line intact, perhaps hoping one day to turn back the clock and re-open.

Meanwhile, the road slumbered on, the locos became dustier and the weeds began taking over the roadbed, and some railfans made suggestions that the line should be re-opened a la Tal-y-lyn. In early 1960 Mr. Kovalchick heard that the local people were planning a big celebration to commemorate Orbisonia's bi-centenary, the shindig was to take place about mid-August and that the only thing missing would be the sound and the sight of the E.B.T.'s mikadoe's chugging through the Aughwick valley, awakening the echoes with the calls of their large chime whistles.

To re-open the road after four years of inactivity would not be an easy task, but Mr. Kovalchick decided it should be done and gave orders for work to begin on the reconditioning of $3\frac{1}{2}$ miles of track, 2 locomotives and 4 passenger cars. To control the rehabilitation programme the President retained a former operating department man of the E.B.T. Mr. C.R. Wilburn, as the Operating Vice-President and all credit must go to Mr. Wilburn for the tasteful way he has handled the job, no false stacks and "Indian raids" on this line, just honest railroading!

The centre of activity was of course Orbisonia, where at the Roundhouse work started towards the end of May, on repairs to the turntable which was completely re-decked and re-painted. Meanwhile inside the 8 stall building work was progressing on the E.B.T.'s oldest and smallest engine, No. 12, and on her somewhat larger sister No. 15. Tiny No. 12 a 48 year old Baldwin responded well to the attention of the mechanics for on the 25th June she



came back to life. With clouds of damp steam roaring from her cylinder cocks a grubby No. 12 backed from the shade of the roundhouse under the gentle hand of the line's Master Mechanic. Out in the sunlight for a steam test, she was soon off on a "shakedown" trip, scattering cinders and scaring the cattle for the first time since 1956. On her return to the shops, No.12 was turned over to the painters who attacked her grime with several gallons of fresh new black and red enamel. The result was an engine anyone would be proud to own, for the "brushmen" had added a couple of extras to the basic E.B.T. dress of black, with red lettering, and red doors and cab windows. The engine now had its injectors painted silver and had been fitted with brass boiler lagging bands, two most tasteful additions.

Thus the appearance of No. 12 augered well for the second engine, the 1914 vintage No. 15 to which the mechanics were now giving their undivided attention. In the Car shop the 4 passenger cars had been cleaned out and treated to new coats of Pullman Green paint. Gangs of men were now out at work renovating the softened and weed begrown roadbed and tracks, checking the bridges and structures and transforming the grimy Orbisonia Station into the H.Q. of the new railroad, indeed with all the new paint around the locals soon realised there was "something afoot at the railroad, you don't paint a dying thing" they argued.

The Celebration Committee had decided upon August 13th to 20th as the celebration week and the E.B.T. was ready and willing to play its part. On the opening day of the shindig a real smart train simmered outside Orbisonia Station, at the head end of cars, 8, 14, 15 and the famed parlourcar No. 20 stood a well scrubbed steamer, the No. 12 awaiting the opening ceremony and the first "Highball". However, before departure a further ceremony had to be performed, the naming of the No. 12 by its owner's daughter Millie, who christened the engine with her own name.

After the ceremony the first train steamed away, being driven by the State of Pennsylvania's Secretary of Forests and Waters, under the tuition of veteran E.B.T. engineer Phillip Ott. A few moments later No. 15 followed, running light in back gear for the lack of turning facilities at the north end of the run meant having two engines on each train, one for each end!

Thus began the week's service that became so popular (4,000 passengers were carried) that the railroad extended the running season until November 5th, and provided two new passenger cars as well. The "new" cars were re-built as 'open and closed' Observation Cars from the two old flat cars Nos. 119 and 175, these were later to prove very popular with the public who often like to see "what the engineer is doing".

Encouraged by the initial success of the re-opening, Mr. K. decided to open again in June 1961 and let it be known he had further plans if support was forthcoming. Much had already been done, during the winter a further 1½ miles of track had been renovated and the service was extended to the Colgate Picnic Grove, at South Shirleysburg, where a turning wye had been laid down.

The shopmen had not been idle either for now three steamers were available for service, the newly restored engine was No. 14, sister of the 15 and just as pretty, also the big gas electric M1 which had been painted for display in 1960 was put into running order and used on occasions, thus by gradual improvement the E.B.T. continues to operate "summer only" to this day.

The plans for this year included the restoration of the big "Southern" valve geared No. 17, BLW 48075 of 1918, which should soon be adding its 30,600 lbs. of tractive effort to the E.B.T.'s stock of motive power.

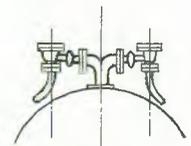
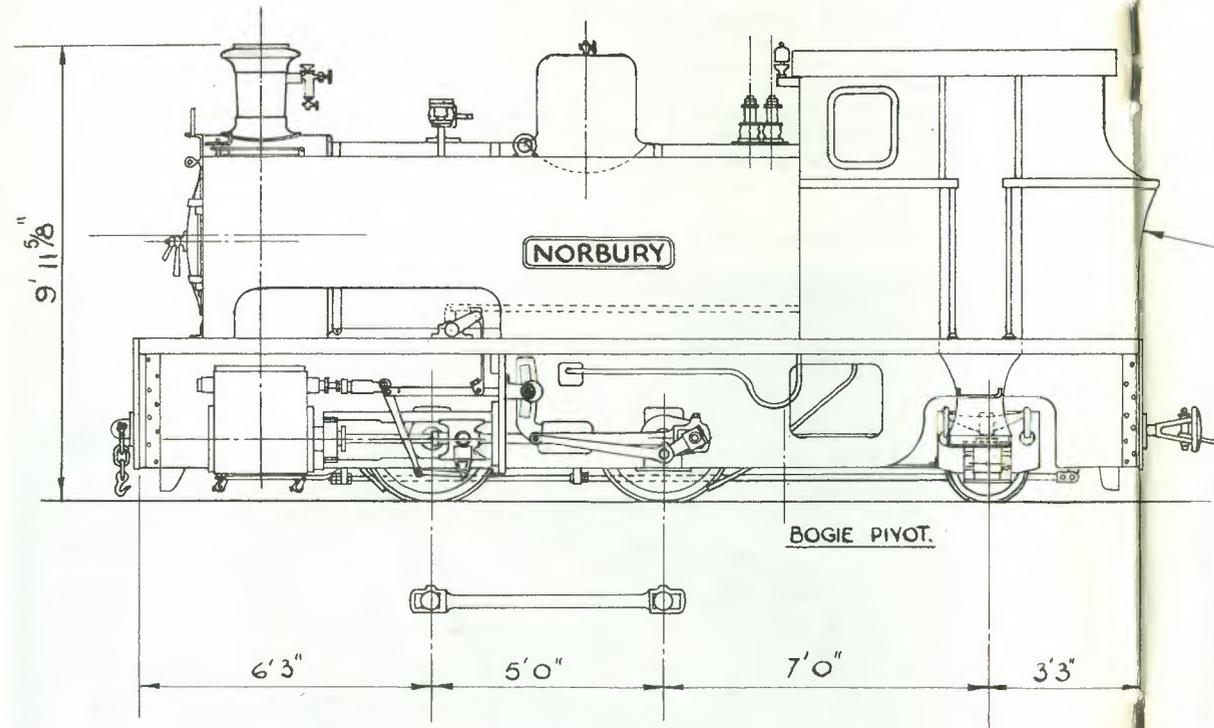
Another development envisaged was a further track extension into Shirleysburg itself, using the former "Depot" there. Further extensions are possible if and when patronage warrants them, and who knows the E.B.T. now designated a "National Historic Landmark" may one day see the steam trains over its 32 mile main line once again!

(Photos by courtesy of - STEAM LOCO AND RAILROAD TRADITION)

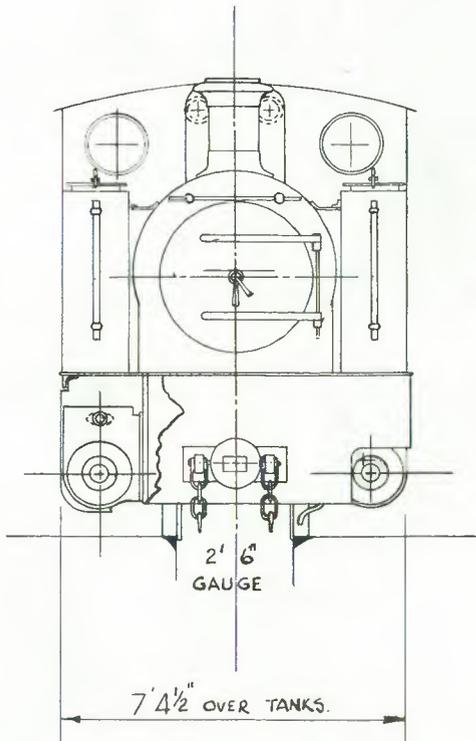




PLAN OF TANK FRONT



DETAIL OF TOP FEED.



CL OF BOILER ABOVE RAIL 5' 9 1/2"
DRIVING WHEELS 2' 9" DIA.
TRAILING WHEELS 1' 8" DIA.

CYLINDER CRS 5' 10 1/4"
DISTANCE BETWEEN FRAMES 3' 10 1/2"
LENGTH OVER COUPLERS 24' 1"

CHATTENDEN & UPNOR RAILWAY

0 - 4 - 2T NORBURY

PECKETT 1868/35

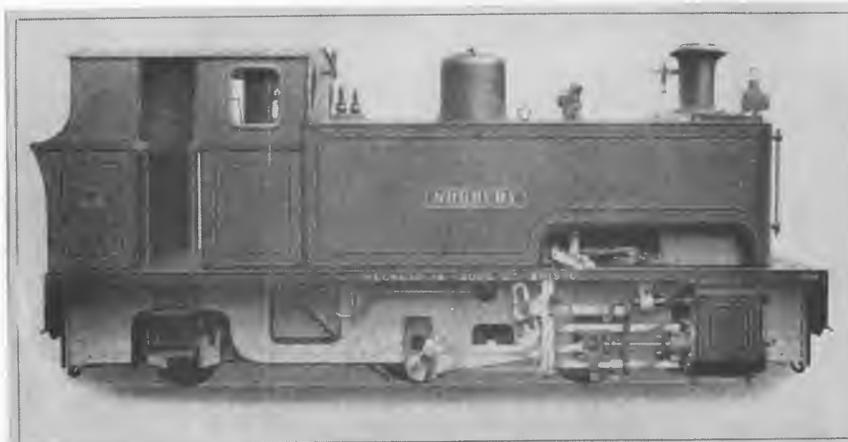


SCALE OF FEET.

CHATTENDON & UPNOR RAILWAY

Part II

Drawing: Peter Halton



To support the centre spread drawing of Norbury we can only offer the small photograph culled from the Peckett Catalogue. The second illustration is the Greenwood & Batley Battery Loco No. 43 which worked on the line for some time.

(Photo S.A. Leleux)

"PERHAPS WE WON'T BE GOIN' AFTER ALL"

By E. K. Stretch

Ballinamore, 20th August 1958. The daily mixed to Arigna is obviously very unremunerative. Four passengers occupy the extremely battered open-platform brake-composite, No. 5L, and behind this is a string of empty cattle trucks. Only a few minutes after scheduled time, ex-Tralee & Dingle 2-6-OT No. 3T comes to life and the train lumbers off across the level crossing. Two of the passengers alight at Ballyduff, the first halt.

At Drumshanbo, a furious orgy of shunting takes place. The sidings are full of vans and wagons and the main point of the shunting operation seems to be leave every vehicle in a different place. The local Civic Guard has wandered down to the station to watch the fun, and stands in a thoughtful pose on the platform.

Finally, having exceeded the booked ten-minute stop by twenty minutes or so, we are off to Arigna, with myself now the only passenger and the train reduced to just the locomotive and coach. After a short distance we pass a tinker's cart - the engine driver blows the whistle furiously, the tinker's horse stampedes, and the tinker shakes his fist furiously at the rapidly retreating train.

At Arigna, the coach is left in the loop, the loco goes off to the sidings, and after being turned assembles a train of empty coal wagons. Meanwhile, the guard, seeing me busy with a camera, has approached me and asked, "Would ye be wanting to go wit' us to the mines?" Naturally I agree. Finally all is ready - then the guard approaches me again with a long face: "Perhaps we shan't be goin' after all. They're ather losing the staff. 'Tisn't the first time; there's sure to be throuble for someone." After much frantic consultation with the stationmistress, the guard puts a phone call through to Ballinamore to see if the staff has been left on the loco which had worked a coal special the previous day. Eventually the message comes back: "Go without it." "Phwat use is that?" says the driver, "We won't be gettin' in the sidings at all, and we'll have to be bringin' the empties back down again." However, off we go, propelling the wagons across the road and up the mineral line to Derreenavogy.

The missing staff is found still in the ground frame. Shunting is quickly completed, and the engine couples up to a train of loaded coal wagons. We are about to leave when a messenger hurries up: "The manager wants to load two more wagons." The driver grumbles, but agrees to wait, and the job is soon done. We set off cautiously down to Arigna station: the ruling gradient is 1 in 50. After various manoeuvres, the coach is attached between the engine and the wagons. It is already half an hour after the scheduled 4.15 p.m. departure time, but another five minutes are occupied in filling a huge tin bath with hot water from the engine, presumably for the stationmistress to wash her children! "I've been readin' the rules," says she, "and I should be takin' the staff off ye when ye come down." "Och, I shouldn't worry about things like that." replies the guard.

At last we are on our way. Although the train is due in Ballinamore at 5.35, the "connection" for Dromod does not leave until 7.0, so there is no real hurry. Nevertheless we tear along at top speed, shooting wildly across the road crossings to the accompaniment of furious blasts on the whistle, and Ballinamore is reached about 5.50, some twenty minutes having been made up.

I was the only passenger all the way back from Arigna, and the guard insisted on presenting me with that week's C.I.E. weekly traffic notice ("There's nothing for this line in there.") and all the six tickets collected that week so far. "Don't you have to hand these in or send them to Dublin or somewhere?" I asked. Replied the guard, "So I should, but phwat would they be wantin' wit' a lot of ould tickuts?"

Photos - Top Loco 3T & Coach 5L at Arigna 20/8/58
Bottom 3T shunting Derreenavoggy 20/8/58



THE BRITISH INTERNAL COMBUSTION LOCOMOTIVE NO. 4

By Brian Webb

The firm of James and Frederick Howard Ltd. was formed during the 1850's, in Bedford and built the Britannia Iron Works. They were in business as agricultural engineers and also built steam traction and agricultural engines. From about the mid 1920's until the firms closure in 1931 they entered the internal combustion locomotive market and brought out a range of standardised petrol locomotives for narrow and gauges up to 5'6".

The narrow gauge designs were known as types H and S and were most robust machines incorporating as did all the Howard locos a massive open box type steel frame. The transmission in all types was via roller chains and in the narrow gauge locos drive was via two roller chains (one in the S type) to the front axle with the drive taken from this to the rear axle by further chains.

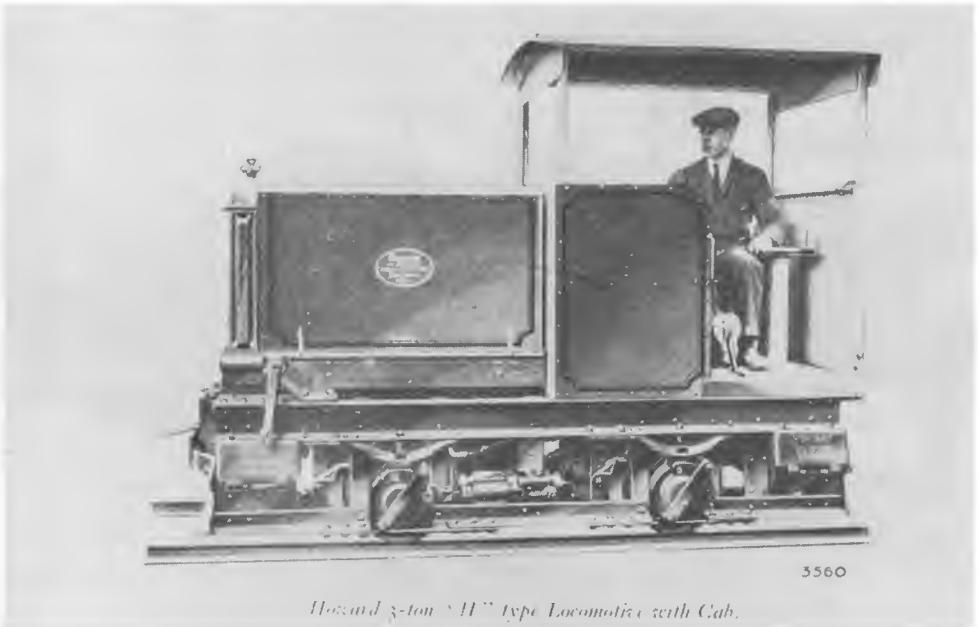
At least one of the narrow gauge locomotives was supplied to the W.D. about 1924 and had an arrangement whereby a rubber tyred wheel was incorporated in a central position between the rails and could be lowered as required and driven along with the rail wheels. The idea being to use this fifth wheel to provide extra adhesion over steeply graded lines and lower it onto a special base plate laid between the running rails.

Examples were supplied to Brickworks, Cement Manufacturers and Contractors in the U.K. and a small number were also exported.

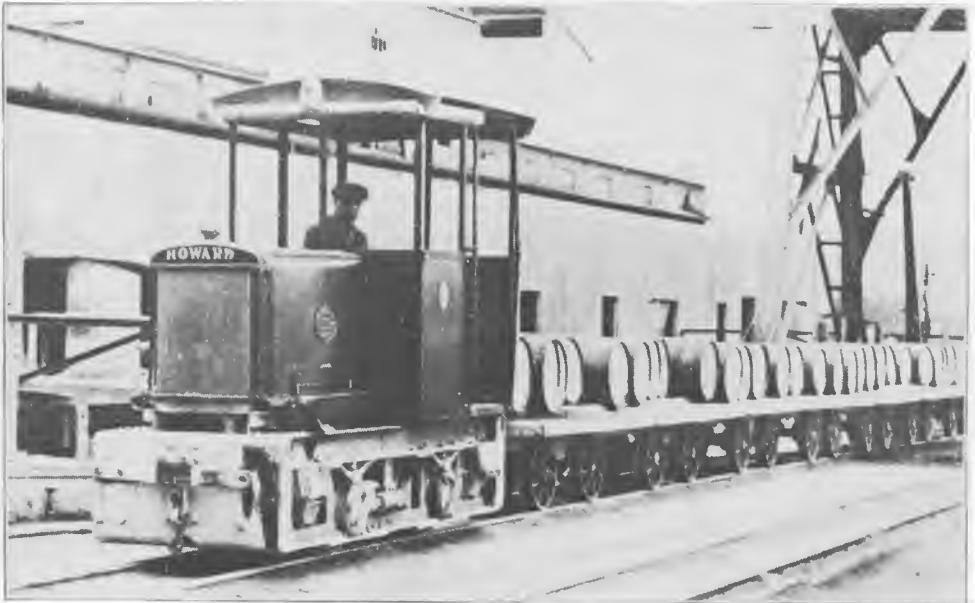
After the firm closed down the works were taken over by Britannia Iron & Steel Works Ltd. and used for the production of malleable tube fittings and castings while the loco business was purchased by F.C. Hibberd & Co. Ltd. who added the range of Howard designs to its own Planet locomotive range.

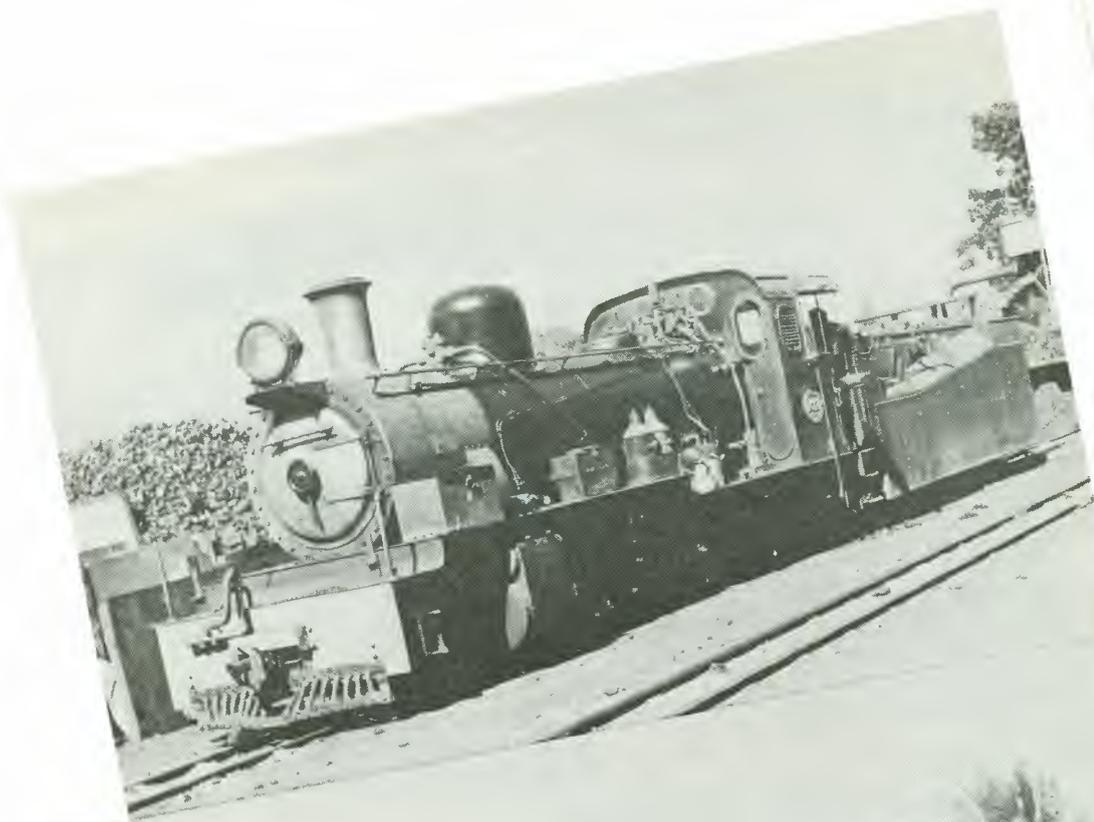
Comparative details of the H and S type locomotives 4 wheel petrol narrow gauge.

Type	Engine	H.P. Range	Gauges	Weight in Working Order	Overall Length	Height over Cab.	Width over Cab.	Wheel Diam.	Wheel Base
S	4 cyl. 75 mm Bore x 120 mm Stroke	20/28	1'4" to 2'0"	2, 2½ and 3 Ton	9'7"	6'6"	4'0"	1'6"	3'3"
H	4 cyl. 95 mm Bore x 140 mm Stroke	31/48	60cm to 3'6"	3,4,5 and 6 Ton	10'1"	7'0"	4'6½"	1'6"	3'11"



Howard 3-ton "H" type Locomotive with Cab.





THE MODERN TWO-FOOTER

By Sydney Moir

To the South African, narrow-gauge in England - and in America, too - has something of the appearance of a museum piece. Railways kept alive by artificial respiration applied by devotees compare badly with those handling 1,500,000 tons of goods traffic every year: wobbly antiques from the last century are hardly on a par with Garratt locomotives capable of handling six-hundred ton loads on the level.

Let us look, then, at the locomotives and goods stock of the Avontuur Branch of the South African Railways - one-hundred-and-seventy-seven miles of narrow gauge railway, described at times as being a main line cursed with an undersized gauge.

CLASS Ng. 15. These 2-8-2 tender engines were constructed for use on the n.g. line running for three hundred miles between Usakos and Tsumeb, in South West Africa. The class originally consisted of sixteen engines - batches being built in 1931, 1939, 1950 and 1953 - but has been brought up to twenty-one by the acquisition of five locomotives built to the same design in 1958 for the Tsumeb Corporation.

The narrow gauge branch over which they worked having been converted to 3'6" (the South African standard gauge) the entire class was railed down to Port Elizabeth, being shedded at Humewood Road depot for working over the Avontuur Branch. Their arrival released a number of Garratt engines, which were then railed to Natal, to serve on the two-foot branches in that province. No Class NG.15 could be used in Natal, owing to the sharper curves of the branches - the Avontuur Branch has minimum curves of 10 chains radius.

The use of the tender engines has entailed the construction of triangles for turning at various stations: Loerie alone has a turntable - a "second-hand" one, taken from a 3'6" depot where it was no longer in use. Prior to their coming, the Garratt engines were only turned at long intervals, purely in order to equalise the wear on the flanges - this was done at Humewood Road.

In the same way as their predecessors had grumbled at changing from the open-back cabs of the 'Pacific' type tender engines to the enclosed cabs of the Garratts during the early thirties, so the enginemen complained about the cabs of the NG.15. As the Avontuur is operated with both tender engines and Garratts, drivers and firemen work on both types and presumably have adapted themselves.

Having a T.F. of 16,610 lbs. the 2-8-2 is only slightly less powerful than the 18,850 lb. T.F. Garratts of Classes N.G.G.13 and N.G.G.16. Hauling trains of limestone up Loerie Bank, a 2-8-2 is cut into the centre of the train to assist the Garratt on the head end: the alternative would be to handle the train up the Bank in two runs, combining it again at the top - and the quantity of limestone transported every day does not permit tying the line up for the time taken for the double run or of delaying delivery to the Company engine at Chelsea interchange.

These photos, then, show a modern narrow-gauge tender engine - nearly sixty-eight tons of locomotive and tender - fifty-four feet long over the buffers - ten and a half feet to the funnel-top - well over six tons load on each driving axle - it's a lot of narrow-gauge engine!

Photo 1 At the coal-bank at Assegaibos station. This locomotive is one of the series built for the S.A.R. All the ex S.W.A. locos were delivered to the Avontuur Branch with the tender sides already modified.

Photo 2 Entering Humansdorp station. The engine is an ex Tsumeb Corporation one, for it has the slab-sided tender, as originally fitted to all locomotives of this class.

Photo 3 Heading a mixed train out of Jeffery's Bay station. The traversing jack is visible on the footplate, together with a pair of re-railing frogs carried on the tender-deck.

Photo 4 Two NG.15 at Humewood Road sheds. The difference in appearance is due to the fact that the drivers of "assigned" engines often wield the paintbrush in an attempt to titivate their charges. The "pool" engines remain in the sombre black that is the S.A.R. standard.

Photo 5 The turntable at Loerie, taken during installation. The walk on either side of the rails had still to be installed, while the ground around the pit had not been brought up to level.

