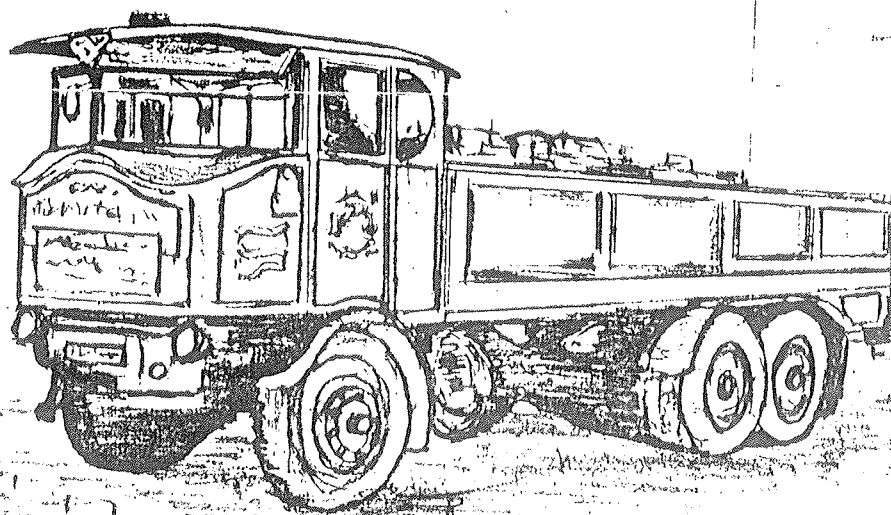


MAIDSTONE MODEL ENGINEERING SOCIETY



MNR 1285

NEWSLETTER - Summer 1985

DATES FOR THE DIARY

July 1985 to Autumn

Friday July 5th : Preparation Evening
Saturday July 6th : Open Day
Friday August 2nd : Evening Run and Barbecue
Saturday August 31st : Visit to Sutton Club
Friday September 6th : Evening Run and Fish 'n' Chip Night
Sunday September 15th : Sheppey Track Opening
Saturday September 21st : Southern Federation Rally at Tonbridge.
Friday October 4th : Video Extravaganza

TRAFFIC CONTROLLER ROTA

Please do your duty :

July 7th	M. Knott
July 14th	D. Lewis
July 21st	S. Ludford
July 28th	P. Martin
August 4th	C. Neil
August 11th	P. Neilson
August 18th	M. Newlove
August 25th	N. Nicholls
August 26th	D. Paterson
September 1st	R. Ransley
September 8th	P. Ransley
September 15th	G. Riddles
September 22nd	R. Spencer
September 29th	R. Stagg
October 6th	T. Stamp
October 13th	A. Tate
October 20th	R. Vane

Also a reminder for all those with locomotives - please turn up for public running whenever possible . This year has not been very good so far and your support will be much appreciated. The above need something to control!

MISSING

Lost : Have you seen (or inadvertently borrowed!) a book which Ken Linkins brought into the Clubhouse to lend to Jim Ewins. The book was about exhaust injectors by Davis and Metcalfe, with pull out drawings, and was foolscap size and about $\frac{1}{4}$ " thick. Ken would very much like to see his book again.

NEW MEMBERS

Please welcome the following :

Mrs Dorothy Arnold of Rochester, a retired Government Scientist, interested in live steam locomotive operation
and
John Rice of Rochester, a Diplomat, into locomotives, stationary engines and clocks.

SUE'S SPOT

Hallo everybody and welcome to your summer edition of the M.M.E.S. Newsletter. Not that the weather has been very summery so far, but we live in hope.

PAST

The Bring and Buy Sale in early April was a very hectic affair with a fast moving auction taking place. Few people went home empty handed but possibly a few wallets were empty by the end of the evening! The Bits and Pieces Night in May and resulting competition was won by Jim Ewins with his Schools chassis. I was rather disappointed having entered my 10" gauge bread pudding (100 lb p.s.i.) not to win a prize but never mind. The Club trip on the Kent and East Sussex Railway Wealden Pullman later that month was much enjoyed by all present and this will definitely be arranged again for next year. It was a lovely leisurely meal, with the Kent countryside rolling by, plenty of wine, I mean plenty of food, and immaculate service. I was lucky enough to be on the footplate from Rolyenden up to Tenterden and I will not ever forget the heat, smell and sound of Northiam (0-6-0 saddle tank) going flat out up the bank, the sparks flying out of the chimney in straight unbroken lines. Happy Day. Sutton Club made the sun shine as usual on their visit to Mote Park and it was nice to see them all again. Unfortunately the weather put the mockers on our first evening run and barbecue of the season - the barbecue went ahead anyway but there was a definite lack of engines! Sad Day.

PRESENT AND FUTURE

It's close to our Open Day and the time to pull together as a club. The preparation evening on Friday July 5th is to get everything clean, tidy and as up straight as possible ready for Saturday July 6th. Please bring models started, half-finished or completed for display on the day and all hands will be a boon in the kitchen.

A barbecue and evening run is planned for the August Club Night when hopefully the weather will be more clement to us. A reminder to Bernard : Don't forget 1) the wine, and 2) the engine! We are seeing Sutton again on August 31st, this time at their place for a run and barbecue (frying pans with long handles required).

The September Club Night is an evening run and Fish 'n' Chip meal so be ready to decide what you want and despatch from the local chippie will be arranged. Sheppey open their track on Sunday September 15th and on Saturday September 21st there is a Southern Federation Rally at Tonbridge.

On Friday October 4th there will be another not-to-be-missed Video Extravaganza with Club material and other steary stuff. All events are definitely worth attending!

ACCESS TO MOTE PARK

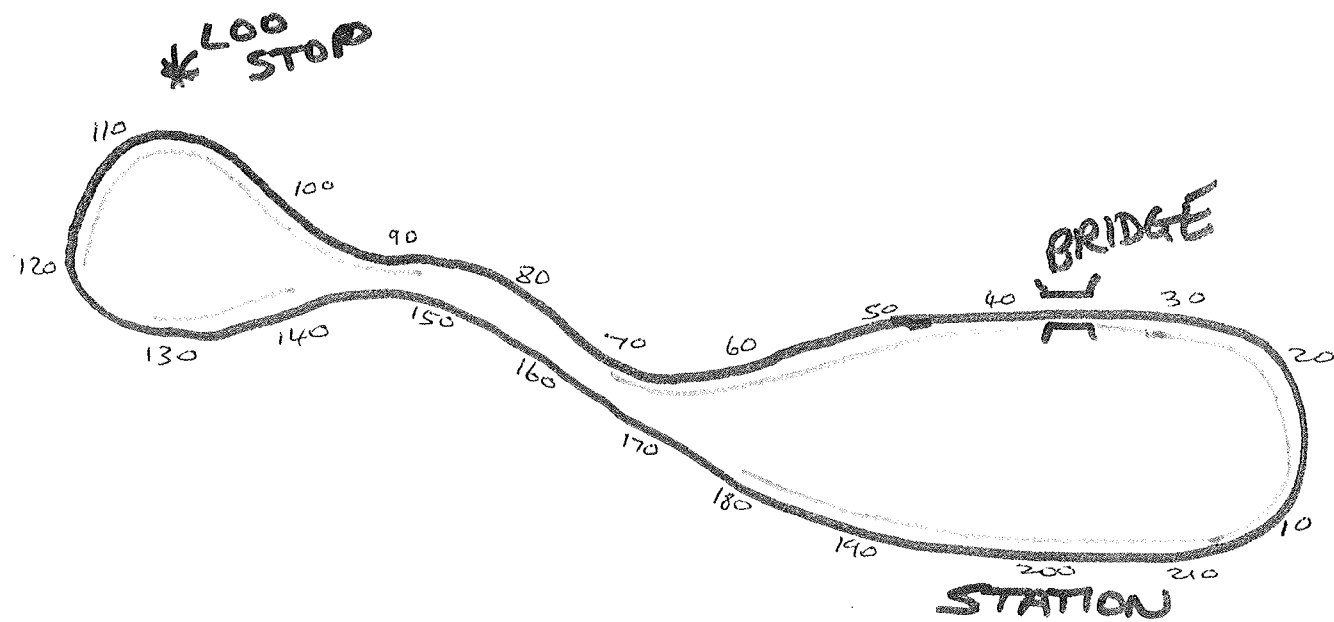
Some of the local yokels amongst us will have heard the rumours about the local Borough Council closing Mote Park at dusk. Well, the latest information we have is that the council do not now intend to close the entire park. Instead they are implementing certain fencing works to enclose all grassed areas within the Park to control vehicular access and confine traffic to the tarmac roadways. The grass area and roadway adjacent to Raigersfield lodge and leading to our Clubhouse is to be enclosed by fencing and a barrier placed where it joins the roadway leading to the Ashford Road. The Club will be issued with keys for access when the gate is locked. The barrier will be open no doubt during the day anyway. The Sailing Club will also have a similar arrangement. This is all planned for the future, we know not when, but at least we will have no problems in going to and fro. Also the Police are increasing their surveillance in the Park which should also decrease the vandalism.

IN CONCLUSION

It has been a rather slow start to the running season this year but I look forward to seeing things improve, and with luck all the painting done before too long. Many thanks to all those who have tackled the Guard Rail so far and I will do a roll call of honour when all is complete. May everyone enjoy there summer holidays, see you soon,

Sue X

GUARD RAIL PAINTING UPDATE 6/85



ROUGH DIAGRAM OF TRACK - DEFINITELY NOT TO SCALE!

ALL SECTIONS EQUAL - 10 BEAMS TO A SECTION

INNER BROKEN LINE INDICATES THAT ALREADY PLEDGED / PAINTED.

HAVE YOU DONE YOUR BIT?

STILL TO BE PLEDGED:

70 - 80
80 - 90
120 - 130
140 - 150
150 - 160
160 - 170
170 - 180

MASTER DRAWING IN CLUBHOUSE - PLEASE ADD YOUR NAME TO DO A SECTION.
ALL MATERIALS IN COAL SHED.
LET'S GET IT DONE!

Pop Safety Valves

by

Jim Ewins

At the end of my article entitled "Dangerous Safety Valves" I intimated that I might provide some information on "Pop" type valves. In full size operation this type of valve became common during the latter stages of development owing to the more precise control of pressure they afforded. For the same reason they are to be preferred in model practice for, whilst it is possible as described in the article mentioned above to design the ordinary valve to limit the upper pressure suitably, one cannot do the same at the lower end of the pressure range because these valves do not seat reliably and continue to discharge well below the working pressure. With the pop action the closing is definite and complete and in the design I shall describe can be regulated to give any desired differential i.e the difference in pressure between release and closing.

The problem with the pop valves usually described by the designing fraternity is that they are based on L.B.S.C's ideas which are now out-moded by more recent research particularly that of my friend Bert Holmes who developed the valve I shall presently describe. The earlier pop valves were erratic in their operation whilst discharging to vigorously and being prone to 'buzzing' with too wide a differential. The Holmes valve came as a great advance having a differential of about 5 p.s.i. and a well defined action with virtually no leakage when closed. The valve I shall describe differs a little from the original design in order to make it more convenient to adjust particularly in respect of the pressure differential and the avoidance of buzzing.

Making the Valve

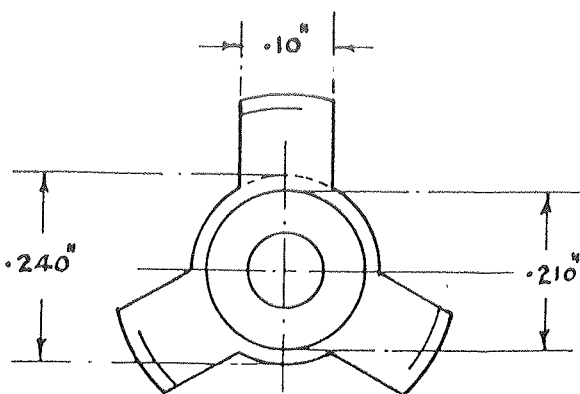
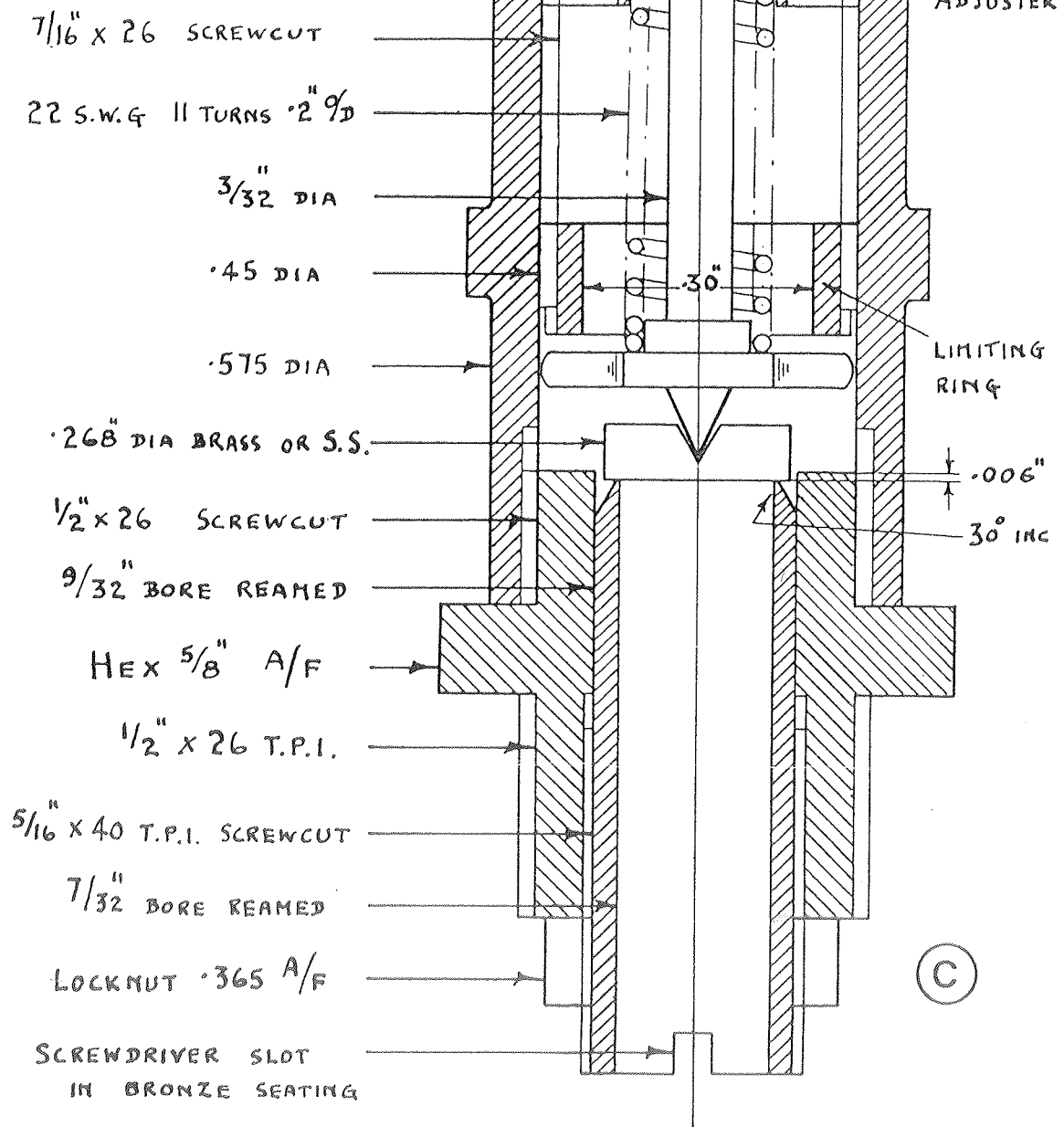
The drawing shows all the critical dimensions which must be kept to for success. Dimensions not given (mostly vertical ones) can be scaled from the drawing which is four times full size. Where screw-cutting is specified for threads this is necessary to preserve concentricity which is very important. These threads may of course be finished off using a tap or die as is appropriate. The valve body and seating are best made in drawn bronze whilst the valve itself can be made in brass or stainless steel. The valve stem, adjuster and limiter are satisfactory if made from brass. The spring must

be accurately made from 22 s.w.g. piano wire wound on a .128 in dia mandrel (No 30 drill) to a pitch of 16 t.p.i. The best way of doing this is to set up the lathe as for screw cutting 16 t.p.i. and with a No 30 drill in the chuck as a mandrel wind on several close turns by passing the wire over a notch in a piece of brass supported in the tool holder. Next drop the leadscrew nut into engagement and count 11 whole turns from the point where all slack has been taken up and the wire is seen to be feeding properly. Now disengage the leadscrew and wind on several more close turns. Finally grind off the surplus turns on the side of a grindstone with the spring held in a vee-block clamped square to the grindstone surface.

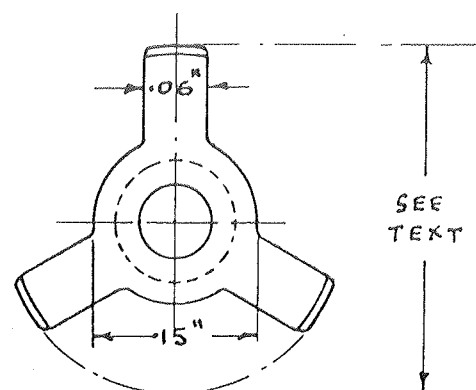
The valve itself should be accurately turned to a diameter of .268" with a conical recess (about 60° included angle) bored into its upper surface. The bottom of this recess may be rounded but its radius must be less than that of the pointed valve stem which locates in it and also the angle of this recess must be a little greater than that of the valve stem. The finishing of the valve seating surface should be by lapping against a flat surface (a piece of plate glass say). The bronze seating against which the valve seals should be turned with the 30° chamfer so as to provide a seating width of between .006" and .010". This seating should also be lapped to a fine polish.

The valve stem is centered by a three armed 'spider' which is an easy but not sloppy fit in the bore of the body and the sharp edges removed. The bore in which the spider works should also be well finished and care should be taken when producing the threads in the body that the spider works over an unthreaded portion.

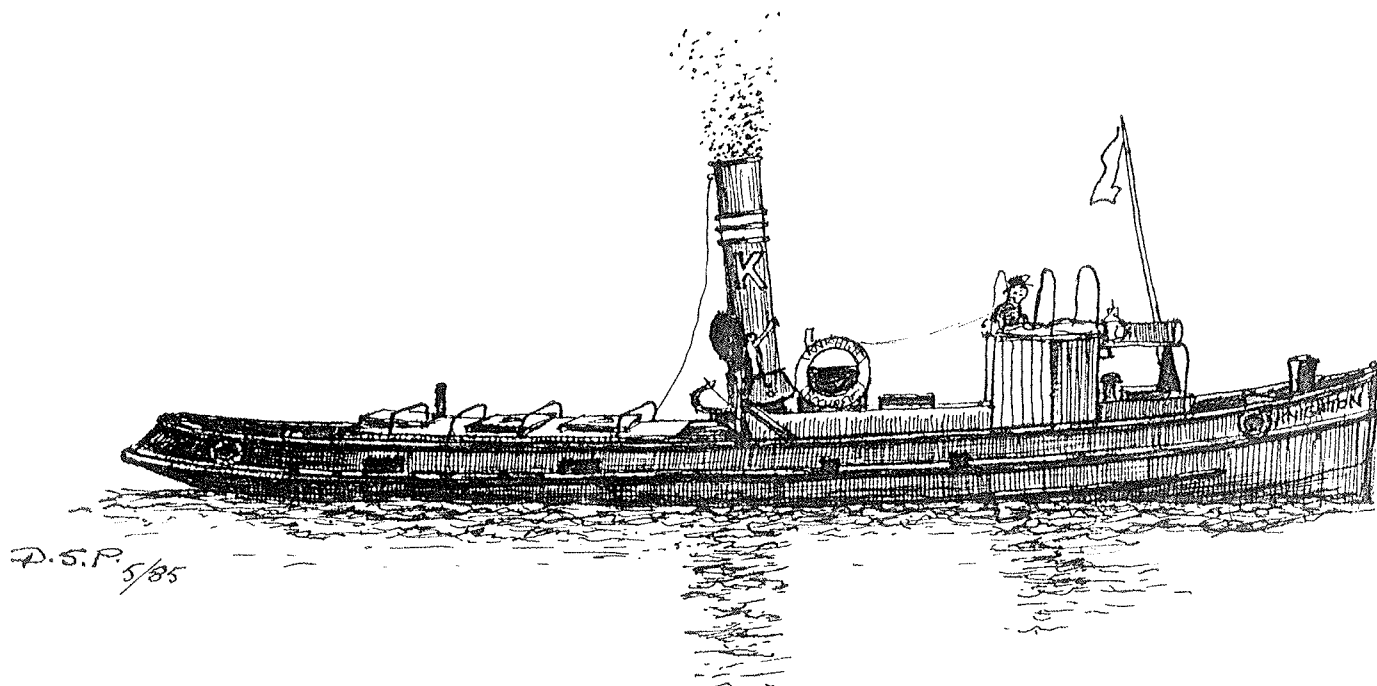
The opening of the valve is limited by the limiting ring screwed into the 7/16" body thread and adjusted to allow the spider to rise .020". This ring does not show very clearly in the sectional drawing but it is simply a thin cylinder .30" bore carrying an external thread 7/16" X 26. The cylinder is adjusted to pass beyond the end of the body thread until it contacts the upper surface of the spider when this is raised due to the opening of the valve. The ring is locked by being split and slightly sprung outwards. It is screwed into position by two driving slots in its upper end using a special tool or an old pair of tweezers as I do. The setting can be checked by a depth gauge either at the pintel end or up through the bottom onto the valve proper. The amount of rise here specified should be adequate for grate areas up to 20 square inches but in any event the release should be checked when first installed to see that it conforms to the Southern Federation requirement of pressure rise not to exceed 10% of working pressure.



ADJUSTER
 END VIEW (UNDERSIDE)



VALVE STEM
 END VIEW (UNDERSIDE)



STEAM TUGS AT MAIDSTONE

It seems almost unbelievable now to think that only about 35 years ago the Medway above Allington still carried quite a lot of waterbourne traffic brought up by barges and lighters towed by tugs. Down river went ragstone from Tovil and beer of course from the breweries of Style & Winch, Masons and Fremlins.

Right up to the 40's and 50's there were steam tugs owned by J.P. Knight Ltd. of Rochester, who handled all the sailing barges together with the Cory and London & Rochester lighters up to Maidstone.

Just to divert for a moment - isn't it fascinating to recall that years ago sailing barges used to go right up as far as Tonbridge wharf! The last barge trading up there in the late 20's was the little 'JIM WIGLEY' - a "stumpy barge" without topmast or bowsprit. However, to return to our theme - there were the steam tugs 'KENLEY', 'KESTREL', 'MEDWAY' and 'KNIGHTON' with the motor tug 'FEARNOUGHT'.

Mr. J.P. Knight, who died in his 80's in August 1982 was originally a locomotive engineer with the L.B. & S.C.R. under Billinton at Brighton Works. In J.P. Knight's office at Rochester is a beautifully executed framed working drawing he did of a Terrier's motion work.

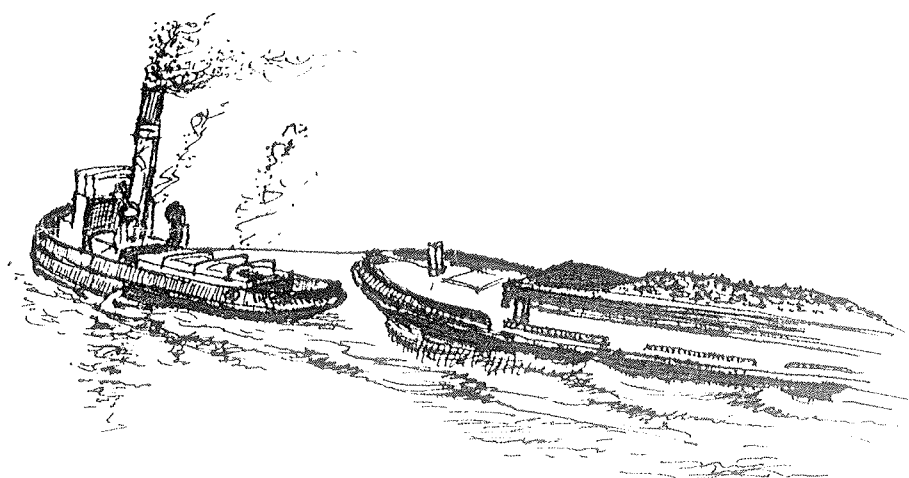
After his time at Brighton, he went out to the Argentine Railways and married out there. On his return to England, he went on to the marine side of things with the Company who, as well as being steam and motor tug owners, also owned the Medway Shipbuilding and Engineering Company who built the 'KNIGHTON' in 1924 specially for towage between Allington and Maidstone.

The 'KNIGHTON' was 47 feet between perpendiculars, with an overall length of 50 feet, a beam of 10 foot 6 inches and draft aft of 5 foot. She had a lowering funnel fitted with counterweights and was fitted with a lovely little Mumford Compound Surface Condensing engine with cylinders 8 inches and 16 inches by 10 inches stroke turning a 3 foot 8 inch diameter propellor and taking steam at a working pressure of 120 lbs per square inch from a 6 foot diameter times 6 foot 6 inches long single furnace scotch boiler by Riley Brothers. Her original 75 indicated horse power was dramatically increased to 100 shaft horse power in 1937 when a Kort nozzle was fitted. This device may well be described as a cylindrical ring fitted round the propellor. The section resembles an aircraft wing, thereby producing 'lift' which results in a forward directed accelerating force. The effect of the nozzle is reduced by the speed of the vessel through the water, therefore it is used to best effect to increase pulling power when the speed is slow - as when tugs are actually at work with a tow. The first successful propeller nozzles were developed in the early 1930's by a German engineer called Ludwig Kort - hence the name 'Kort Nozzle'. With her nozzle the 'KNIGHTON' could handle up to six barges. I cannot help feeling that Mr. Knight was just a little hard on her when he wrote on her register "The worst tug we ever built, ugly and underpowered"! Don't you feel that perhaps she had something of the charm of our ugly duckling?!

She handled nearly all the towage above Allington and worked up as far as Tovil and sometimes a little beyond to bring down the rag stone barges. During some very hard Winters she occasionally did the job of icebreaking on the river. She had a crew of three - skipper, deckhand and engineer or "driver" as he was called. Her last skipper was Sid Cheeseman who lived in King Street. At night she used to lay up by the old electricity works at Fairmeadow and go away down river to Cory's wharf at Chatham about once a fortnight for coaling.

On one of her trips down river she was in collision with the Style and Winch beer barge "VIVID" down near Aylesford. The end of steam towage on the upper Medway came to an end when the old "KNIGHTON" was eventually sold for scrap in 1957 at Pollocks Shipyard, Faversham. Just imagine the interest she would create today if she were to steam up to Maidstone bridge - lower the funnel and shoot through with three or four barges in tow!

Actually motor barges were coming up to Maidstone in the early 70's and in fact right up to the time the new bridge was being built. The restrictions that this work imposed on the navigation eventually finished off all the commercial traffic. Coir, peanuts, timber and coal were all being carried up by barges and lighters. Hutsons of Maidstone owned seven lighters named after the seven dwarfs, 'DOPEY', 'SNEEZY' and 'HAPPY', etc. and these were handled by the 'KNIGHTON'S' successors, the small motor tugs 'NUDGET', 'SHOVE IT' and 'PULLIT'. The fully motorised sailing barges like the 'VIGILANT' and 'CORONATION' came up and down under their own power of course. The last cargo of coal carried to Maidstone by a rigged sailing barge was unloaded at Hutson's wharf by the auxillary 'ALAN' in September 1956.



DON PATERSON

HEART ATTACK - COUNTER ATTACK!

I am pleased (with the indulgence of our News Editor) to have the opportunity to thank those who were kind enough to send cards and good wishes during my recent illness. Most of these messages were received whilst I was still in hospital at a time when weakness and apprehension makes a lift doubly important.

Though it seems that I will have to have my 'firebox' patched and my plumbing and valve gear re-arranged before being pronounced fit, the enforced idleness since leaving one hospital and waiting for the next is a time for planning the next model.

I am presently engaged on my fifth loco, the bits and pieces being of modest dimensions, so that I can manage without too much effort. That is the extent of my counter attack for the present though if they make a good job of my overhaul I hope to finish the loco this Summer and start a new project this Winter.

This is almost certain to be a 'Fowler Road Loco' or 'Scenic Engine' in 4" - 5" scale.

I know that to speak of road engines almost amounts to heresy but they are great fun to build and drive. Perhaps Sue will allow me to relate some road engine stories for the next Newsletter.

Ray Milliken

22.6.85

Ed : I know that you will all join me in wishing Ray every success & a speedy recovery from his internal engineering. Stories? Yes please, everybody!

ARE YOU INTERESTED IN THE FOLLOWING:

INSURANCE OF MODEL ENGINEERING EQUIPMENT

Details of Cover

This insurance is against all risks of loss or damage to a model or track, subject to the usual exclusions of war or civil disturbance, wear and tear, etc, and also excluding the following :-

- loss or damage attributable to the subject undergoing repair, adjustment, cleaning or restoration.
- mechanical derangement not arising from external impact (ie the policy does not cover purely mechanical or electrical breakdown).
- the Company shall not be liable for loss from any unattended vehicle.

The Policy includes loss or damage to a model whilst it is displayed at an exhibition providing all reasonable precautions are taken. Damage caused by boiler explosion is included, provided the boiler has been inspected at regular intervals and confirms to the requirements either of the society of which the Certificate Holder is a member, or to the minimum requirements of the Southern Federation.

Where the Cover Applies

Anywhere in the United Kingdom and would include damage to models whilst in use, and whilst the model is:-

- in the Certificate Holder's custody, including whilst in transit but please note (c) above.
- contained in any dwelling or building where the Certificate Holder is residing ('dwelling' includes any outbuilding on the same premises, e.g. an outside workshop).
- whilst contained in any other building of standard construction (i.e. constructed of brick, stone or concrete walls and roofed with slate or tiles) which is either securely locked at all points of access or is constantly attended.

What the Policy Pays

In the event of a model being totally lost or damaged beyond economical repair the Company will pay the value of the model at the date of the loss or damage, not exceeding the sum insured shown on the Application Form/Cover Note. In the event of other damage the Company pay the cost of the material required to repair the model plus an equal amount as an allowance for the labour involved and expenses incurred in carrying out the repair, excluding the first £2.50 of each and every claim.

Any loss or damage should be reported immediately, direct to the Federation Insurance Secretary, also the police. Our insurance company will require the address of the police station to whom you report the loss.

With regard to tracks. The Policy covers loss of the whole or part loss of track material by theft or damage caused by outside parties. It applies to both portable or permanent tracks from 2½" gauge up to and including 7¼" gauge both ground level and elevated. Any damage caused by derailment of rolling stock is not covered.

What the Cover Costs

The annual premium for this insurance is 20p per £100 on the total sum insured.

Period of Insurance

The Policy runs from 1st July each year to the 30th June the following year. It is not possible to insure for part of the year since the premium is based on the subject being in use only during a limited season, but our insurance company does offer pro-rata rates to members starting cover late in the year to the following 30th June.

These rates are as below :-

Time of Joining	Premium Percentage Payable
1st July — 30th Sept	100%
1st Oct — 31st Dec	75%
1st Jan — 31st March	50%
1st April — 30th June	25%

The minimum premium is £3.00 whichever quarter you join the scheme.

How to Obtain Cover

Application Forms are available from the Federation Insurance Secretary. Also club secretaries may have these forms. You will note that the Application Form will need to be countersigned by the club Secretary or Chairman before being sent to the Insurance Secretary for verification.

MAIDSTONE MODEL ENGINEERING SOCIETY OFFICERS 1985

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Secretary : M.N. Parham Esq. (Martin) Bramleys Old Loose Maidstone Kent ME15 OBS. Maidstone 44175.
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