

## WINTER NEWSLETTER 1975

FABRICATED MACHINE VISE	PAGE 1
SECRETARY'S REPORT; CHAIRMAN'S REPORT FOR 1975	PAGE 2
EVENING MEETINGS	PAGE 3
"STEAM BELOW THE CATHEDRAL"	PAGE 4
COMING EVENTS	PAGE 5
"CAYALTI"	PAGE 6
STANDARD PIPE UNIONS	PAGE 10
NEW MEMBERS; INFORMATION WANTED; STILL MORE METRICATION	PAGE 11
A BOY'S DELIGHT	PAGE 14
STROUDLEY'S DISEASE	PAGE 15
EDITORIAL	PAGE 16
A.G.M. NOTICE	PAGE 17
SUBSCRIPTIONS; NEWSLETTERS; NOMINATIONS	PAGE 18

### ACKNOWLEDGEMENTS

We acknowledge, with thanks, receipt of the following organisations' newsletters:

Bracknell Railway Society  
Brighton & Hove Society of Miniature Locomotive Engineers  
Bristol Society of Model & Experimental Engineers  
Colchester & District Model Engineering Club  
Guildford Model Engineering Society  
Malden & District Society of Model Engineers Ltd.  
North London Society of Model Engineers  
Nottingham Society of Model & Experimental Engineers  
Romney Marsh Model Engineering Society  
Southampton & District Model Engineering Society  
Southern Federation of Model Engineering Societies  
Sussex Miniature Locomotive Society

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President: Councillor P.J. Robinson

Hon. Chairman	Hon. Secretary	Hon. Treasurer	Hon. Press Officer
A.H.W. Payne, 38 Oxford Road, Maidstone, Kent.	R. Milliken, 14 Hurstwood, Chatham, Kent.	P.A. Roots, 97 Tonbridge Road, Maidstone, Kent	G.B. Baseden, 56 High Street, Eastchurch, Sheppey, Kent.

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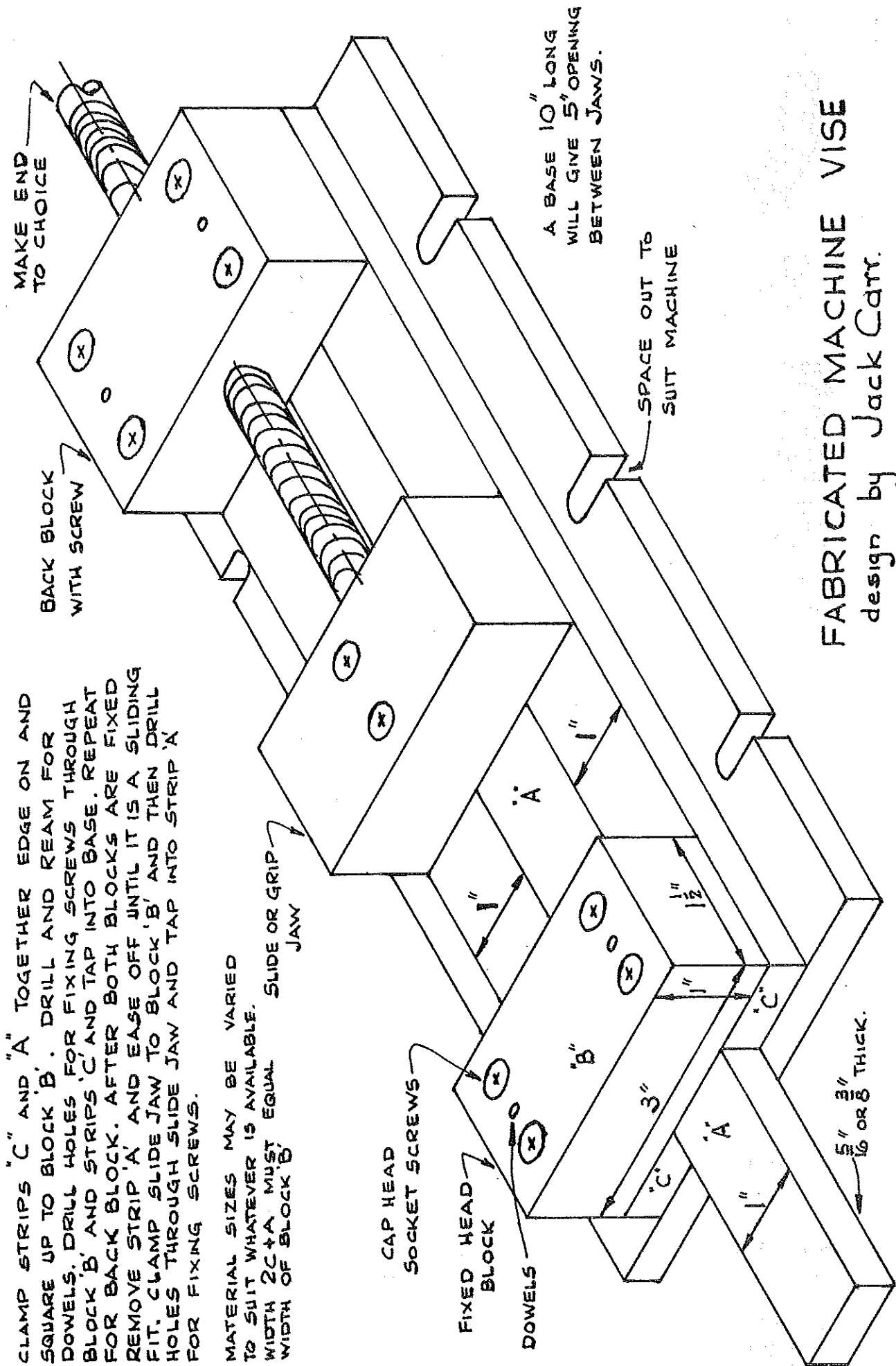
Maidstone: 57545    Medway: 67978    Maidstone: 58599

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Any contribution to the Newsletter is gratefully received, although it may be held over for a future issue. Drawings must be black ink on white paper and fit within the page for same size reproduction. Material for the Spring edition should be received by the Press Officer not later than March 1st.

CLAMP STRIPS "C" AND "A" TOGETHER EDGE ON AND SQUARE UP TO BLOCK "B". DRILL AND REAM FOR DOWELS. DRILL HOLES FOR FIXING SCREWS THROUGH BLOCK "B" AND STRIPS "C" AND TAP INTO BASE. REPEAT FOR BACK BLOCK. AFTER BOTH BLOCKS ARE FIXED REMOVE STRIP "A" AND EASE OFF UNTIL IT IS A SLIDING FIT. CLAMP SLIDE JAW TO BLOCK "B" AND THEN DRILL HOLES THROUGH SLIDE JAW AND TAP INTO STRIP "A" FOR FIXING SCREWS.

MATERIAL SIZES MAY BE VARIED TO SUIT WHATEVER IS AVAILABLE. WIDTH  $2C + A$  MUST BE EQUAL WIDTH OF BLOCK "B".



FABRICATED MACHINE VISE  
design by Jack Carr.

## SECRETARY'S REPORT

Owing to an enormous increase in the cost of producing Newsletters, I must curtail the customary December resumé of the year's affairs.

From a financial viewpoint the income from the track has been quite satisfactory, even though the Inland Revenue now take an interest in our affairs. We have fortunately, in association with our accountants, successfully arranged a technical "loss" for 1975 of around six hundred pounds. This "loss" does in fact mean that we have sufficient funds to finance this winter a scheme (which incidently has taken six months to negotiate with the Council) to replace all our steaming bays with a completely new design to facilitate ease of operation, with no lifting of heavy engines and more room. This project alone necessitated the removal of the giant tree stump, retaining wall, and many tons of soil from the compound. In addition permission has been granted to demolish and replace the coal and equipment store with a brick built building adjacent to the engine shed. This work is to be by "direct labour", with the building construction by Charlie Hayward to whom we are most grateful. To enable us to make full use of these improved facilities we have been granted permission to construct a large roadway and unloading bay outside the compound. This major and very necessary adjunct will prove far the most expensive and is the reason why all these improvements are being carried out as far as possible by Members. Those Members sufficiently interested will have seen that considerable progress has already been made whilst the ladies operate our winter passenger service.

Having spent more time and money in 1975 enjoying clubs visiting, Note Park and more trips out to other clubs etc., the Committee have decided that, rather than go into debt, the work will be done by Members so that during 1976 we can repeat these subsidised outings with a clear conscience. The Committee therefore, urge all who can spare the time to attend in the winter months for construction, repairs, painting etc. The Society is only as good as its Membership and the more Members sharing the load the more the mutual benefit.

Finally, with regard to the forthcoming Annual General Meeting, please let me have the Nominations in good time and please try to attend so that the M.M.E.S. Committee is truly representative of its Members' wishes.

Raymond Milliken  
Hon. Secretary.

## CHAIRMAN'S REPORT FOR 1975

Our 25th year has been one of various fortunes. As the year unfolded it was overshadowed by the loss of some of our Members and friends, but to break through these sad clouds came the opening of our running season. The ceremony was attended by our President, Mr. Peter Robinson and his wife Mrs. Susan Robinson, who is also one of our Vice-Presidents. The day was very warm and sunny which helped to make it a record day for passenger hauling, which was so different to the weather when we held our Open Air Exhibition on the 10th August! Work during the year has been completed on the following items:-

- Storage for our rolling stock,
- A compressor and air line,
- A hot water supply in the carriage shed,
- And last but not least the hard work put into finally settling the problem of Corporation Tax.

My thanks to all concerned.

Some work has been done on the painting of the guardrail but this is not yet complete. I hasten to add that this is not due to any lack of hard work by some of our Members. Work in hand is the reconstruction of the steaming bays, constructing a roadway to the unloading bay and the building of a brick coal store. There will be a lot of hard work to put in between now and the start of our running season in 1976 and I ask all Members to give what help they can.

Visits have been made to, and received from other societies during the season. I think that most Members have enjoyed these visits and being host to our visiting societies. Also I am pleased to be able to report that we have a number of locos in the building, and I'm sure we will be happy to see them on the track during 1976.

Of my ten years of Chairmanship you have made, for me, this last year the most successful. Thank you one and all. To conclude this Jubilee Season, even if it has waxed and waned, I think we came out on top in the end.

Thanks for reading.

Jack Payne.  
Chairman.

#### EVENING MEETINGS

The October meeting of the Winter Programme was devoted to an Engineering Evening. There were fifteen entries ranging from a copper L.M.S. style oil lamp to an aero-engine. This latter was a three cylinder freelance design by Graham Kimber and collected a deserved first place. Not far behind was Reg Holdstock with his 2-4-2 5" g. chassis; well, everyone knows Reg's standard of workmanship. Even fewer points separated second and third place which was taken by Ron Heathcote's unfinished tender for his B 12. In fact the overall standard was so good that all the entries received totals of marks between 141 and 202.

Other items of interest were the machine vice by Peter Chislett based on the design published elsewhere in this issue, and a hot air engine by Ray Wilkinson created a lot of interest. Fred La Roche showed a "weeny feeder" injector and Don Paterson brought along the Westinghouse pump for his "Terrier". Altogether a good and varied selection of exhibits with the variety due in some small way to the Autumn Editorial perhaps? The evening was rounded off by some 16 mm films from America, kindly loaned to us by the Romney Marsh M.E.S. The first film was concerned with club activities etc., on the other side, whilst the other was about snow clearing on the Southern Pacific line over the Sierra Nevada mountains during 1951. They employed (and probably still do) six rotary ploughs and various other equipment to clear an estimated 2,000,000 tons of snow. And this country grinds to a halt when we have six inches of snowfall!

Members were entertained in November by a talk given by a relatively new Member, Ron Draper. He lived and worked in Australia for several years and returned home with a wealth of knowledge and colour slides of the way they enjoy our hobby "Down Under". There are some superb models to be seen and also some very nice tracks. Ron also gave us some very interesting facts about the full size railways in Australia.

The Christmas Social was the event in December and it was enjoyed by all those present, young and not so young. It was quite an edifying

Continued: page 10

## "STEAM BELOW THE CATHEDRAL"

or

### A DAY WITH THE LINCOLN M.E. SOCIETY

It must have been just over a year ago that, whilst going about my duties as a service engineer for a Gravesend company which produce environmental test chambers, that I happened to find myself in a remote part of England (Lincolnshire). Here I was fortunate enough to discover, hidden away in a small room in the midst of "Ruston Turbine Works" in Lincoln, a friendly and cheerful chap by the name of Charlie Nicholson. No ordinary fellow this, for Charlie turned out to be the Hon. Treasurer of the Lincoln Model Engineering Society. We had a very enjoyable talk about model railways and engineering before the time came for me to travel on to the next service call. Since that first meeting I have kept in touch with my new found friend and, thanks to our Press Officer, I have been able to send the Lincoln Society a regular copy of the M.M.E.S. Newsletter, which they all enjoy reading.

During a telephone conversation in early September I discovered that Lincoln Society were to hold their first-ever exhibition. That evening I got to thinking about this latest piece of news - well what is 190 odd miles when I cover 1,000 miles almost every week. The next step was to approach "the guv'nor" (wife) and tentatively put forward the idea of going to Lincoln to visit the exhibition. As my wife is always telling me I "never take her anywhere" she agreed to the idea. Arrangements were made for looking after the family and all that remained was to await the 27th September.

The first thing any visitor to the City of Lincoln will see, if arriving after dark, is the wonderful sight of the Cathedral, standing high above the rest of the city and illuminated by a mass of floodlights. We stayed at the comfortable "Grand Hotel", which by pure coincidence happened to be just across the road from the railway station (alas, no steam in sight).

Saturday the 27th September had finally arrived and the morning was spent sight-seeing round a truly beautiful old city (a word of warning - if any readers happen to visit Lincoln, go to the Cathedral by bus! - the hill is far steeper than it looks). After an excellent lunch at the Hotel we set off in search of "St. Botolph's Church Hall". (I couldn't pronounce the name either and still can't!) When we arrived, the exhibition was well underway. There were a very large number of people filling the main hall, all eager to see the great many items of the members' work on show. It was a truly wonderful show for a small but up-and-coming Society.

It was not long before I found my friend Charlie Nicholson and Charlie introduced us to his wife Gladys, who was kept busy at the door. We left the ladies to get acquainted and started what was to be a most enjoyable afternoon touring the exhibition. I was introduced to the Society's President, Ron Hugh and one of the largest exhibits on show was Ron's 2" scale traction engine which won the M.E. Championship Cup in 1972. This engine is a truly magnificent example of model engineering, beautifully finished in green and red with yellow lining.

The next member I met was the Chairman, Jack Bruce, who is following the President's lead by building a traction engine, but in a smaller scale. Jack gave me a very warm welcome, and was pleased to have somebody from another far-off society present at their first-ever show. He then introduced me to his son John, who is also the Hon. Secretary of the Society. Another committee member was Harry Templeton who provided almost a one-man

show. Harry is building a very interesting 5" g. 2" Scale "Mallet" tank engine. Other examples of his work were a 3½" g. ¾" scale "Garrett" and a 3½" g. "Black Five". By way of relaxation Harry also enjoys putting ships in bottles and two examples were also on display.

A break was taken from struggling through the crowds and refreshments were provided by the ever faithful "Ladies", whom no society could do without. Continuing with our tour, we came across several road engines built by Stanley Norval. I particularly liked his Foden "C Type" wagon, which was in fact the last vehicle Stanley drove back in 1933. Yet another eye-catching locomotive was a superbly built Derby 4F (No. 4238) by Mr. R.S. Jaques. The exhibition also staged a very nice OO gauge layout in front of the stage, which was very popular with the younger visitors.

As a mere beginner myself, I must mention another "beginner" (his words), Mr. Brian Ives, who for reasons best known to himself, has decided to start with a 5" g. "Oliver Cromwell". Brian told me he has spent two years machining the cylinders and motion, assembling the frames and partly constructing the boiler. Brian had laid out his work on large boards, and everybody agreed it made an impressive sight. The workmanship was really first class.

All too soon it seemed, the exhibition was drawing to a close. Our hosts for the day then took us back to their home for a very nice meal, before returning to the hall to help take down tables and transport the models to the members' homes. I said my farewells to Jack Bruce and the other members of the society, thanking them all for a very enjoyable afternoon. They really are a fine bunch of chaps.

The rest of Saturday evening was spent with our hosts at their cosy little bungalow on the outskirts of Lincoln (the spare bedroom makes a marvellous workshop!) We finally said goodbye to my friends Charlie and Gladys Nicholson and crept into our hotel at 1.45 a.m. to get a few hours sleep before returning home on Sunday morning.

Hugh Beacon.

M.B. It is hoped to arrange a two-way visit between our societies, possibly in 1977. I shall be contacting Ray about working out details nearer the time. I also have several photographs of the exhibition which I shall be pleased to make available to any Members wishing to see them.

Hugh Beacon.

#### COMING EVENTS

SATURDAY, 24th JANUARY 16 mm film show given by John Liddell. It is hoped to show a "Shell" film "Frontiers of Friction" and members will have another chance to see John's excellent sound film about his visit to South African Railways and other film(s) if there is time.

FRIDAY, 20th FEBRUARY See A.G.N. details at rear of Newsletter.

SATURDAY, 20th MARCH Lecture by a representative from the makers of the "Loctite" range. This is about two hours long, with slides and demonstrations. The gentleman in question is coming a long way for our benefit; don't let him and our Society down by not coming to this or any of the other meetings.

STOP PRESS: A LONG WEEKEND IN BELGIUM HAS BEEN SUGGESTED TO VISIT MODEL ENGINEERS AND THEIR TRACKS, PROBABLY IN MAY, ESTIMATED COST £40 PER CAR (INC. OCCUPANTS) FOR THE FERRY, £5. PER PERSON PER NIGHT (3) FOR BED & BREAKFAST, PLUS £3 PER DAY FOR FOOD; PETROL EXTRA. ANYONE WHO IS INTERESTED CONTACT RAY MILLIKEN, NOW.

## "CAYALTI"

When I am contemplating another miniature locomotive I usually like to find a prototype with unusual features and most of all one which, to my knowledge, has not been built by anyone previously. For a number of years I have been keen on making an articulated engine, not the "Shay" type but either the "Climax" or "Heisler" variation. The former has the cylinders at a steep slope alongside the smokebox, and the latter with a 90° Vee engine with the cylinders either side of the boiler, and both with shaft drive and bevel gears to each bogie axle. Unfortunately I have not been able to obtain sufficient necessary information about these little engines to make a good and accurate representation.

With one of these prototypes in mind I borrowed the book "Articulated Locomotives" by L. Wiener, a book which gives a fair description of most, if not all the differing types. One engine did strike my fancy and, although the information given was rather scanty, it aroused my interest. This was a 2 ft. gauge 0-4-0 + 0-4-0 engine, constructed on the "Schwartzkoff Patent" system, of German make, and which had the very unusual arrangement of the axles being driven by chain.

Two not very good photographs were given, a full size view and a close up of one of the power bogies. The general look of the engine with its balloon chimney suited my ideas, and the bogies being quite separate could be handled without much effort.

I traced the two pictures but could not make out the type of valve gear used. With a magnifying glass I could not see any eccentrics so I concluded that the engine may have had "Joy" gear, and this, after three or four other gears were tried, was adopted.

Quite a number of problems cropped up (which I rather like) in drawing out the bogies. The crankshaft should ideally be situated on the centre line of the wheels and axles so that any up and down movement of these would not interfere with the tension in the chains, provided of course that this movement wasn't too great. In this case doing this would have brought in further troubles as then the cylinders would have interfered with one of the axles, so these had to be raised slightly. The alternative would have been to incline the cylinders and this again would have caused trouble with the main frame since the bogie had to partially rotate.

The fact that the crankshaft is somewhat above the centre of the axles can therefore slacken the chains as the wheels rise, but I always prefer to use very stiff springs, thus restricting any up and down movement caused by uneven track. To my mind most locos. seem to have very flexible springs, this being particularly noticeable with the small 0-4-0 types running at Ilote Park, possibly due to being provided with home-made coil springs.

The chain sprockets, four to each bogie, were made from 3/16" thick steel plate, the teeth being divided on the lathe using a "Dumore" tool post grinder with a small "Slocumb" drill fitted into the spindle chuck. I didn't fancy making a special milling cutter and milling the teeth, so having drilled the holes out to a diameter and reamed to the size of the chain rollers, the rest of the gaps were cut out on a bandsaw and the flanks filed to shape by eye on a filing machine. Hanging the chain on the sprocket and slowly rotating it round the tight spots which were then filled a little so that eventually the wheel could be rotated fully, with the chain easing itself to the bottom of the teeth all round.

The flexible joints in the steam and exhaust circuits did worry me

for a time. The type of joint used on the "Mallets" would not be suitable, so on looking up my collection of articles and drawings I eventually found a suitable idea which was used some time ago on a series of locos. made for the Egyptian Government Railways. This joint had a bolted up socket. This would have made this item too big and unsightly, and I rearranged the same idea with a screwed cap, using 26 T.P.I. threads. Between the cap and the socket which clamps the ball a string of graphited yarn was introduced to prevent leakage of steam, and which has proved quite satisfactory.

Having turned the ball portion to size one has quite a fiddling job to get the sockets machined to be exactly the same size. A radius tool has to be reversed from cutting a convex surface to a concave one, and to do this took some time with blue marking on a sample ball. Some concern was felt regarding the actual movement of these joints as they could not be tested at home because I had no means of representing the curves to be negotiated. They were worked out with the worst bit of curvature on our track in mind, as pointed out to me by the Chairman.

The engine was completed in 1973 and ran on a stand a number of times to iron out the little troubles we usually have and also to adjust the pop safety valve, but unfortunately could not again be tried until June 1975, when sundry difficulties arose due to its standing for two years.

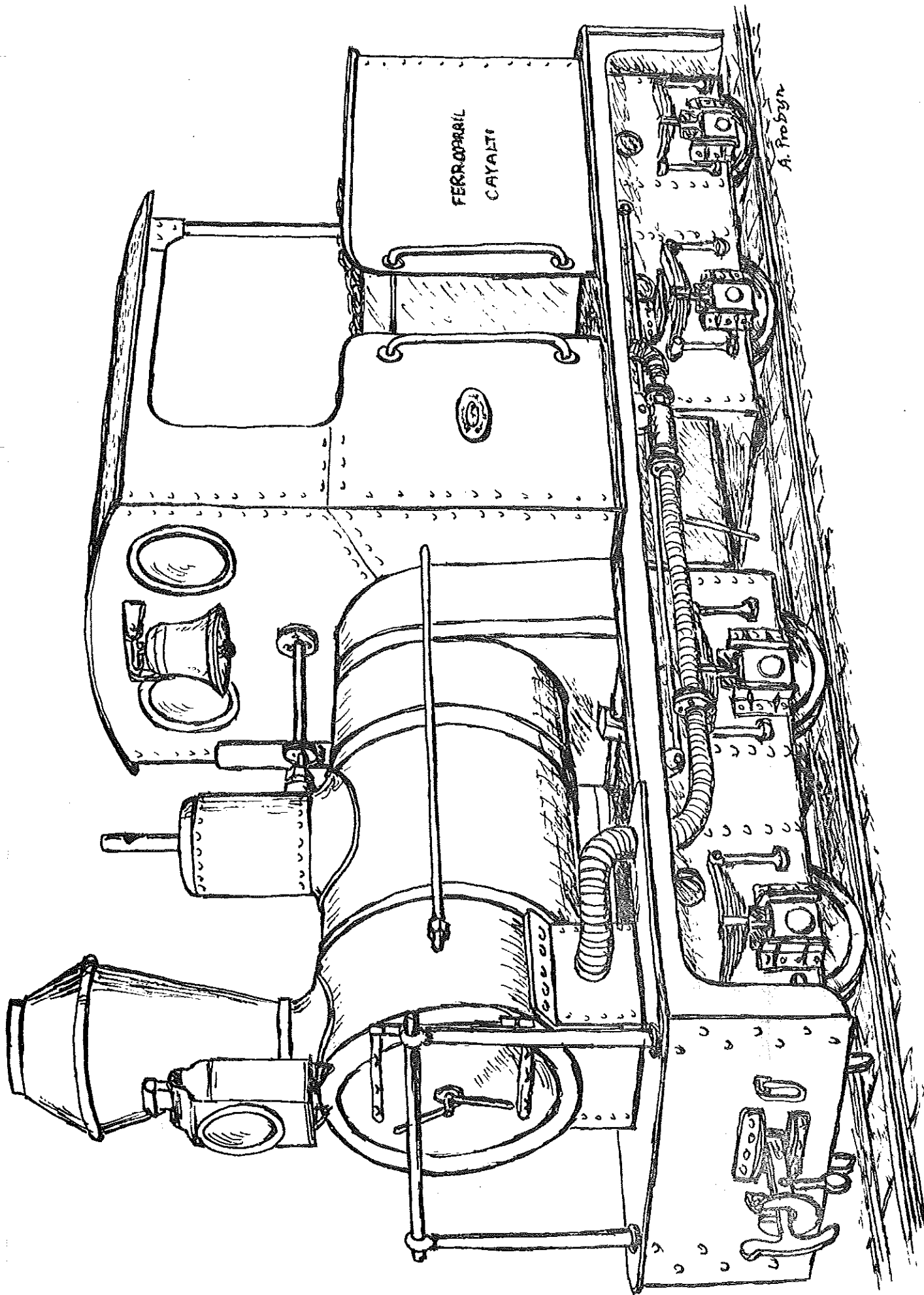
The first run at Mote Park was a disaster. The chimney had been fitted with a baffle plate as is usual with all these spark arresting chimneys, and this probably choked the front end. Pressure was lost very quickly and as vacuum brakes had been fitted, the brakes gradually leaked on and due to the general excitement one has on a first run, it didn't occur to me what had happened until we got back to the steaming bays. When the plate had been removed later in the day, things went better and some good runs round the track were made.

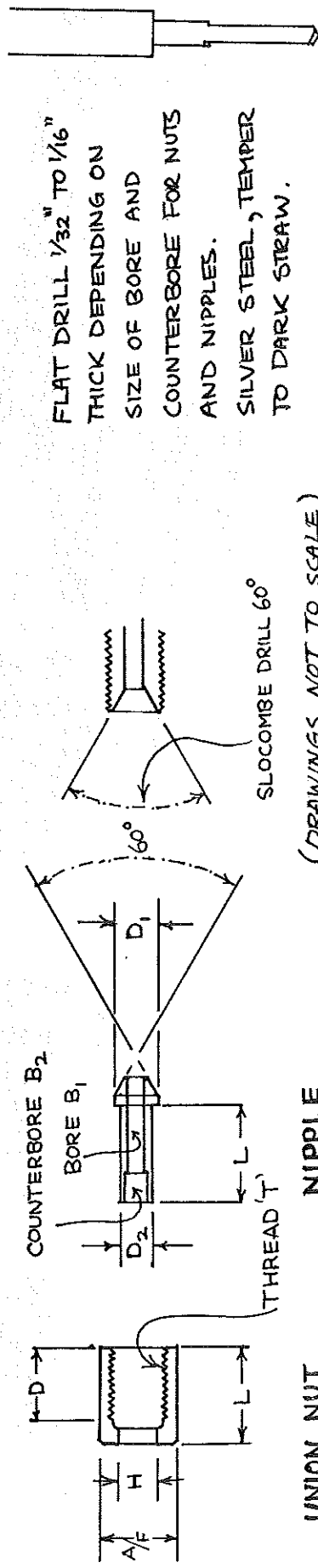
I decided on the vacuum brake instead of a steam brake because I didn't relish the idea of another pair of flexible pipes to the cylinders on each bogie. The ejector creates roughly 20-21" of vacuum at 80 lbs. per sq. inch, but at 60 lbs. this drops to about 15" and the brakes start to operate. Since the first run a limiting valve has been fitted and this keeps the vacuum at about 15" at any steam pressure above 60 or so, but in the event of any trouble with brakes working when they shouldn't, a release valve has been added to one of the reservoirs to allow air to the top of the cylinders, in a position where it can be got at by the driver.

Originally I had no knowledge as to where this engine ran, except that the book said Peru. Looking through Jane's "All the World's Railways" gave some information on all the Railways in Peru, quite a good number being of the 2ft. gauge, and judging by the length of line of each of these it seemed to me that the "Cayalti" line was the most likely. However a little later I chanced across a book "Railways of the Andes" by Brian Fawcett, so thinking that he may be able to help I wrote to him asking if he knew anything about the engine and where it ran. Unfortunately he could not tell me the exact location, but said that it was not one of the Peruvian Government engines and that the probable owners were the "Cayalti" firm who had an extensive line and at least fourteen similar locos. all built in Germany. All these locos. were arranged to burn the waste from the crushing of sugar cane, the reason for the balloon stack. Mr. Fawcett gave me the full title of the Railway as being "Ferrocarril de la Hacienda Cayalti", usually shortened to F.C. on most railways of Latin America, but had I used this shortened version on the tender of this engine, i.e. "F.C. Cayalti" I am afraid we should have been pestered with queries about what league they play in and where is their ground.

Jos. N. Liversage.







FLAT DRILL  $\frac{1}{32}$ " TO  $\frac{1}{16}$ " THICK DEPENDING ON SIZE OF BORE AND COUNTERBORE FOR NUTS AND NIPPLES. SILVER STEEL, TEMPER TO DARK STRAW.

(DRAWINGS NOT TO SCALE)

UNION NUT NIPPLE

Union Nut

Nipple

Misc.

PIPE DIA. INCHES	A/F HEX.	LENGTH	TAP	DRILL		TAP DEPTH
				TAP	HOLE	
$\frac{1}{16}$	$\frac{3}{16}$	$\frac{3}{32}$	$\frac{5}{32} \times 40$	30	41	$\frac{5}{64}$
$\frac{3}{32}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{3}{16} \times 40$	22	30	$\frac{1}{8} +$
$\frac{1}{8}$	$\frac{5}{16}$	$0.225$	$\frac{7}{32} \times 40$	12	21	$\frac{5}{32}$
$\frac{5}{32}$	$\frac{5}{16}$	$\frac{7}{32}$	$\frac{9}{32} \times 40$	F	12	$\frac{3}{16} -$
$\frac{3}{16}$	$\frac{3}{8}$	$\frac{1}{4}$	$\frac{5}{16} \times 32$	K	A	$\frac{7}{32} -$
$\frac{1}{4}$	$\frac{7}{16}$	$\frac{5}{16}$	$\frac{3}{8} \times 32$	S	N	$\frac{1}{4}$
$\frac{5}{16}$	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{1}{2} \times 26$	$\frac{15}{32}$	V	$\frac{5}{16}$
$\frac{3}{8}$	$\frac{5}{8}$	$\frac{13}{32}$	$\frac{9}{16} \times 26$	$\frac{33}{64}$	$\frac{7}{16}$	$\frac{5}{16}$

L T H D

DIAMETERS		TAIL LENGTH	DRILL	
HEAD	TAIL		BORE	C <sup>3</sup> BORE
0.125	0.093	$\frac{1}{8}$	55	52
0.156	0.125	$\frac{5}{32}$	48	41
0.187	0.156	$\frac{3}{16}$	41	30
0.25	0.187	$\frac{7}{32}$	31	22
0.281	0.230	$\frac{1}{4}$	24	12
0.343	0.296	$\frac{9}{32}$	7	E
0.455	0.375	$\frac{5}{16}$	B	O
0.500	0.425	$\frac{11}{32}$	O	W

D<sub>1</sub> D<sub>2</sub> L B<sub>1</sub> B<sub>2</sub>

APPROX. PIPE BORE	CEN. DRILL SLOC 'M.	PIPE DIA. INCHES
55		$\frac{1}{16}$
48	D	$\frac{3}{32}$
41	D	$\frac{1}{8}$
31	D	$\frac{5}{32}$
24	B	$\frac{3}{16}$
7	B	$\frac{1}{4}$
B	G	$\frac{5}{16}$
O	SPEC.	$\frac{3}{8}$

Lengths are in inches as measured with rule or tailstock graduations; diameters in decimals as these measured with micrometer.

experience to see some of the, shall we say more senior, Society Members doing the "knees up". It was too much like hard work for me! I think everyone finds it pleasant to dress up once in a while to go to "the Park", as a change from our more usual working clothes. We hope that the second half of our Winter Programme is as successful as the first half has been.

Graham Baseden.

### STANDARD PIPE UNIONS

I set out these union standards for myself a long time ago, as I was (and still am) rather disgusted with the conglomeration of sizes and threads specified from time to time by different writers and contributors in our magazines.

The nipple sometimes specified, mainly in the past by L.B.S.C. in the Model Engineer seemed to me hopeless, being simply a small collar of coned brass soldered to the end of the pipe. To me this is a very poor arrangement; maybe it works all right in many cases, (I have used it myself on occasion) but it has limitations. For one thing there is no means of keeping the male and female parts of the union in line, especially so if you have a quick bend near to the joint. Another and more important point is that if you bend a pipe of any size, whether round a former with proper tools or not, there is always some deformation of the pipe and so with the nut only drilled just a clearance hole for the pipe, this deformation will prevent the nut from being threaded along the pipe.

Nipples with a "tail" are normal practice in "full size" and are free of the objections mentioned. In the table the nut is on the long side compared with the usual union, but not ungainly in appearance and could if required be shortened a little (L). Full size nuts to scale would be too short for this type of coned union, as even for a thread of about  $1\frac{1}{4}$ " diameter, the nut length is only about  $\frac{3}{4}$ " and hardly enough to start thread in our small sizes. They can be made but with a flat faced nipple they are not so good at keeping steam tight under pressure.

Both the nuts and nipples are very easy to make, and if a special drill is made up as per the sketch for any of the sizes given, a dozen or so nuts and nipples can be made in a short time. Years ago I made a complete set of these drills for pipes up to  $\frac{1}{2}$ " diameter and at the same time made up a quantity of each size nuts and nipples and since then, apart from the  $\frac{1}{4}$ " size which have been replenished on one occasion, keep dipping into the supply when carrying out any plumbing on a model loco. With my latest I have at last used up the supply of  $\frac{1}{8}$ ".

One final point; don't ever solder the nipple on to the pipe with soft solder. Use "Easy-Flo" silver solder for a safe joint which won't come apart when tightening the nut, and you will find that even if the joint is not in perfect alignment the tail of the nipple will pull the pipe square provided that the thread can be started satisfactorily. Then, when taken apart for painting or other work the pipe will go back in place without any pushing and easing.

Jos. N. Liversage.

### INFORMATION WANTED

Can any member supply details (sketch, measurements, etc.,) of L.S.W.R. Engine Headlamps in use around the 1920's or later?

D. Mount of 30 Albany Road, Sittingbourne, Kent, would be grateful for any help to pass on to an overseas visitor.

### NEW MEMBERS

We welcome the following new Members and hope to see them frequently at "The Park":

T.A. Greenwood. 3 Home Mead; Cedar Close, Meopham, Kent.

J. Monday. 667 Lower Road, Rainham, Kent.

R. Pursey. 46 Hedley Street, Maidstone, Kent.

R.G. Warren. 62 Hillcrest Road, Orpington, Kent.

M. Winwood. 6 Readscroft Road, Parkwood, Rainham, Kent.

### INFORMATION WANTED

To provide a vital link in the chain of preparation of an article for a future edition of our Newsletter I need the dry weight of as many locomotives as possible. Most loco. owners probably have bathroom scales so it would be appreciated if anyone who can would have a weighing session and let me have the following details:-

Loco. type

Wheel arrangement

Gauge

Loco. dry weight - lbs., stones and lbs. or kilogrammes

Estimated quantity or weight of water to working level

Please help if you can as the more feed-back I get the more accurate I can attempt to make the article. Please forward details to:-

B. Lawson, Esq., "Bonnie View", Barn End Lane, Wilmington, Dartford Kent. DA2 7PP. Telephone: Dartford 27120

### STILL MORE METRICATION FOR MAIDSTONE MEMBERS

Well - it has started to happen as predicted. The flat bar for the new steaming bays was only available in metric sizes. Although this is "Black" material, it shows the future trend in the material supply industry. And anyone who has tried to buy a few odd nuts and bolts at an iron mongers recently will have found only metric sizes on offer.

Although the engineering industry, through the guidance of the British Standards Institution, has decided on a range of standard metric sizes for raw material, it does not mean that a particular stockist will hold them all. Additionally a rolling mill will produce any size providing that a certain minimum quantity is ordered by a customer. This means that where there appear to be gaps in the standard range they may well be filled by certain sources.

You will notice in the accompanying tables that the corner of some squares has been blocked in. This denotes that it is a "non-preferred" or "2nd choice" size. However, for the reasons already stated, they will probably be on offer from some raw material suppliers. No data has been given for stainless steels or for the smaller ferrous and non ferrous sizes because, at the time of writing, no data has been discovered. However the search is on and anything found will be passed on in a future edition.

Barry Lawson.

# STANDARD METRIC RAW MATERIALS.

## ROUND. BRIGHT MILD STEEL

mm	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5	20	20.5
inches	.551	.571	.591	.61	.63	.65	.669	.689	.709	.728	.748	.768	.787	.807
mm	21	21.5	22	22.5	23	23.5	24	24.5	25	26	27	28	29	30
inches	.827	.846	.866	.886	.906	.925	.945	.965	.984	1.024	1.063	1.102	1.142	1.181
mm	31	32	33	35	36	38	39	40	41	42	45	48	50	52
inches	1.22	1.26	1.299	1.378	1.417	1.496	1.535	1.575	1.614	1.654	1.772	1.89	1.968	2.047

## SQUARE BMS.

mm	13	14	15	16	17	18	19	20	22	24	25	27
inches	.512	.551	.591	.63	.669	.709	.748	.787	.866	.945	.984	1.063
mm	28	30	32	35	36	40	41	45	46	50	55	
inches	1.102	1.181	1.26	1.378	1.417	1.575	1.614	1.772	1.811	1.968	2.165	

NON-PREFERRED  
SIZES.

## HEXAGON BMS. A/F.

mm	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
inches	.472	.512	.551	.591	.63	.669	.709	.748	.787	.827	.866	.906	.945	.984	1.024
mm	27	28	29	30	31	32	35	36	37	38	40	41	46	50	
inches	1.063	1.102	1.142	1.181	1.22	1.26	1.378	1.417	1.457	1.496	1.575	1.614	1.811	1.968	

## FLATS. BMS.

mm	10	12	14	16	18	20	22	25	28	30	32	35	40	45	50	
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.118"
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.157"
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.196"
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.236"
7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.276"
8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.315"
10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.394"
12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.472"
15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.591"
18	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.709"
	.394"	.472"	.551"	.63"	.709"	.787"	.866"	.984"	1.102"	1.181"	1.26"	1.378"	1.575"	1.772"	1.968"	

## ROUND, COPPER & COPPER ALLOYS.

mm	3	4	5	6	7	8	9	10	12	14
inches	.118	.157	.197	.236	.276	.315	.354	.394	.472	.551
mm	16	18	20	22	25	28	30	32	35	
inches	.63	.709	.787	.866	.984	1.102	1.181	1.26	1.378	

## SQUARE, COPPER & COPPER ALLOYS.

mm	3	4	5	6	8	10	12	14	16	18	20	22	25	30	32	36
inches	.118	.157	.197	.236	.315	.394	.472	.551	.63	.709	.787	.866	.984	1.181	1.26	1.417

# HEXAGON, COPPER & COPPER ALLOYS A/F

mm	3.2	4	5	5.5	7	8	10	11	12	13
Inches	.126	.157	.196	.216	.276	.315	.394	.433	.472	.512
mm	14	17	19	22	24	27	30	32	36	
Inches	.551	.669	.748	.866	.945	1.063	1.181	1.26	1.417	

## FLATS, COPPER & COPPER ALLOYS.

mm	1.6	2	3	4	5	6	8	10	12	
10	•	•	•	•	•	•	•		•	.394"
12	•	•	•	•		•	•	•		.472"
16	•		•	•		•	•	•	•	.63"
20		•	•	•	•	•		•	•	.787"
25			•	•	•	•	•	•	•	.984"
	.063"	.079"	.118"	.157"	.196"	.236"	.315"	.394"	.472"	

"AND NOW A WORD FROM OUR SPONSOR..."



SIX MUNCES UGO I, CUTNT  
EVON SPEL INTUNEER—  
—AN NOW I ARE ONE oooo

A BOY'S DELIGHT

We've just had a marvellous holiday -  
So much sunshine, and so little rain.  
We had ice-creams and lollies, and picnics -  
But the best thing of all was the train.

I don't mean the train we arrived on,  
Or the train that we left on, oh no!  
And it wasn't a new diesel engine,  
Or a goods train that's lumbering and slow.  
I don't mean a smooth Inter-City,  
Nor a train on electric rails,  
And it wasn't the sleek super-fast kind,  
Nor a long one that carries our mail.

The engine, exact in each detail,  
Was a miniature steam one, you see,  
When it hissed, and it puffed like a real one -  
The sound was like magic to me.  
It was driven, all gleaming and polished,  
By the man who had made it his joy,  
He built it, each screw and each piston,  
Like the ones he had seen as a boy.

Although it was small, it was sturdy,  
For it pulled a small carriage behind,  
Like a long seat, with no roof, or windscreen,  
But nobody seemed to mind.  
All the steam and the smuts lent enchantment,  
As it ran round the edge of the park,  
Twice round was good value per ticket;  
It kept going from morning to dark.

I haunted that brave little engine,  
I had rides, yet I still wanted more,  
For the noise of the wheels was exciting,  
And the hooter thrilled me to the core.  
I was sad when the time came to leave it,  
How I envied the nice engineer,  
He could stay with his smart little engine,  
While I said "Goodbye" 'til next year.

We had such a marvellous holiday,  
(And next year we'll do so again),  
We had outings, and milk-shakes, and picnics -  
But, the best thing of all was the train!

READ: 26th October 1975  
CHARLIE CHESTER SHOW  
BBC Radio 2

Joy Leslie  
Thornton Heath  
Surrey

Thanks to Ray Wilkinson for taking the trouble to  
obtain a copy of this poem from the B.B.C. - Ed.

## STROUDLEY'S DISEASE

It was a fairly filthy day, and seemed filthier because of the contrast with the summer that had gone before. Naturally, someone had arranged for a guard rail painting party. But the club-house was warm, the kettle was hot, and a Good Fairy had left a bread-and-butter pudding behind. We talked of materials and of difficulties in procuring them. My mundane requirement was for some  $1\frac{1}{4}$ " square mild steel. I had located 100 tons of this which I could have for the asking. Enough for four buffer stocks was, I found, a bit more difficult. Don had a different problem. He was finding difficulty with 14BA brass screws. "Well", I said, "surely you can get them from Smith's of Clerkenwell". "Yes", he replied, "but not hex." Hex, forsooth! The mind boggles! Mine did, in fact, boggle. A short cross-examination elicited the following information:

1. Don is building a Brighton "Terrier" (as is Peter, who was also among those present).
2. The cab spectacle frames are a prominent feature.
3. The frames are attached (in full size) by hex. headed screws, and apparently 14BA is exactly scale.

Muttering sourly in my beard that this was all very praiseworthy, but that I was prepared to bet that the originals were Admiralty bronze and not brass, I went home to gaze at my own "Mona" in a mood of some disenchantment. The heads of 5BA frame stay bolts are  $7/32$ " AF. At  $\frac{3}{4}$ " = 1', that makes them about  $3\frac{1}{4}$ " AF in full size. Some bolts! The first time he drove my loco., Barry (I think it was) emitted a strong smell of grilled chops from his fingers as he operated the blower wheel, so I fitted "Tufnol" tyres (Fascinating mental picture of R.A. Riddles laying in hundreds of feet of 10" "Tufnol" bar and 40 gallons of Araldite therewith to modify B.R.'s fleet.) It was no good; I didn't feel in the least guilty, any more than I do in confessing that the inter-frame stretchers on my current tender are milled from  $1" \times \frac{1}{2}"$  L72 (dural to you) because that's what I happened to have.

In search of balm for the soul, I turned to browsing through back numbers of the Model Engineer. Opening it at random, I found an article on the very first Brighton fanatic. (M.E. Nos. 3491 and 3492) It seems that one Doctor Winter spent 13 years from 1884 to 1897 in building a model of "Como", a Brighton loco., with a tender but otherwise not unlike the "Terrier". He machined (I read) everything from solid Bessemer steel (whatever that may be); made his own screws and rivets (A.J. Reeves having presumably not been born); and generally lavished on the model a degree of painstaking and detailed attention that I hope his patients also received. Was there, I reflected in my bath, something about "Terriers"?

To start with, there is of course the eccentric form, associated as we all know with "Stephenson's" valve gear. Afficionados consider that a mere four eccentrics between the frames are too easy, so it is customary to add one for the feed pump, another for the lubricator drive, and for all I know, two or three to jiggle the lamps (it stops them going out, of course, what else?) and to ensure that the sand is agitated so as to emerge evenly from the sandboxes. Somewhere or other one must leave room for the crank journals, since "Terriers" have inside cylinders. This, you might suppose, would satisfy the most dedicated perfectionist, but the trouble is that it engenders only private satisfaction, since, when the boiler and platework are in place, you can't see the eccentrics. Nor can you adjust them, but that's half the fun. It was Milton who said "I cannot praise a fugitive and cloistered virtue", but the "Terrier" fanatic need not worry about incurring that great poet's displeasure, because he can let himself go on



the paintwork. Here is the art of the industrial artist run riot, what with several colours, three rows of lining, and a main colour called "improved engine green" (which is actually a sea-sick yellow) to make things more difficult.

Why do they do it? Why pick on this particular engine, which doesn't even go uncommonly well? Why not tackle something simple, like "Fury"?

In my medical encyclopedia (my wife, who is a psychologist, confirms this) I read that there is a recognised mental affliction the main symptom of which is an obsession with detail. A sort of pathological "wood-and-trees" syndrome. I am convinced that I have discovered a variant of this to which model engineers are susceptible. It is customary to give the discoverer's name to a new medical condition, e.g. Parkinson's disease, Bright's disease and so on. I thought of calling mine Winter's disease (after the "Como" doctor). But I don't think that he recognised the symptoms in himself. Modesty prevents me from seeing my own name in the columns of the Lancet. So I have called it "Stroudley's Disease", after the designer of the full-size "Terrier".

Only one thing troubles me. Most diseases are discomfiting, disabling or even fatal. This one appears to induce in the sufferer great personal satisfaction coupled with sustained euphoria and an equability of temperament amounting almost to smugness. Some even write up their symptoms in this Newsletter with every appearance of pride. General health is unimpaired and may actually improve; and the life-expectancy of sufferers is often enhanced. I have made a careful self-examination, and as far as I can tell I am completely free of the disease. Please, where can I catch it?

Lionel Alexander.

#### EDITORIAL

A few friends have known for some months now of my intention not to stand for re-election as Press Officer or Committee Member. I am writing my last Editorial with very mixed feelings, relief that I shall not have deadlines to meet anymore and a lot more free time, but regret that I shan't be enjoying the support and encouragement which has made the job and the end result very rewarding. I am sure that this support will carry over to my successor along with any help that I can render; I'll even loan him my thumb screws for use on reluctant contributors!

The first thing which will have struck most of you reading this Newsletter is the new format. I think everyone will agree that this is a retrograde step but one which has been forced upon us by inflation. The estimated cost of producing this issue was £50.00 - £90.00, of which even the lower figure is a staggering increase on what we have been paying. So unless there is someone in our ranks who has access to offset litho machinery we shall have to continue with this method. This should not however mean a reduction in the quality or content of the Newsletter.

In conclusion may I again thank those Members who have taken the time and trouble to contribute to the Newsletters in the past two years. There were many of them, and a lot more who have expressed their appreciation of our combined efforts. And that to my mind is the essence of a good society.

Graham Baseden.  
Hon. Press Officer.

MAIDSTONE MODEL ENGINEERING SOCIETY

Notice is hereby given that the Annual General Meeting of the Society will be held at the Clubhouse, Note Park, Maidstone, on Friday 20th February, 1976, commencing at 7.30 p.m. to consider the undernoted Agenda.

Raymond Milliken.  
Hon. Secretary

AGENDA

1. To read the Notice convening the meeting.
2. To confirm the Minutes of the Annual General Meeting held on 21st February, 1975.
3. To consider any matters arising from these Minutes.
4. To approve the Hon. Treasurer's Report and Accounts for the year ended 31st December, 1975.
5. To approve the Report of the Chairman of the Society for the year ended 31st December 1975.
6. To elect Officers of the Society for the ensuing year, namely:

President	..	..	..	..	..	..	..	..	..	..
Vice Presidents	..	..	..	..	..	..	..	..	..	..
Chairman	..	..	..	..	..	..	..	..	..	..
Vice Chairman	..	..	..	..	..	..	..	..	..	..
Chairman - Model Race Car Section	..	..	..	..	..	..	..	..	..	..
Hon. Secretary	..	..	..	..	..	..	..	..	..	..
Hon. Treasurer	..	..	..	..	..	..	..	..	..	..
Hon. Press Officer	..	..	..	..	..	..	..	..	..	..
7. To elect the Council of the Society for the ensuing year:

..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..
8. To elect Honorary Members of the Society for the ensuing year.
9. To consider any other relevant business of which SEVEN DAYS' ADVANCE NOTICE has been given in writing to the Hon. Secretary at:

14, Hurstwood, Chatham, Kent