



# Maidstone Model Engineering Society

President:  
JOS. N. LIVERSAGE

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## NEWSLETTER '76

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SPRING EDITION

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ACKNOWLEDGEMENTS

We acknowledge, with thanks, the receipt of the following Societies' Newsletters:

Bracknell Railway Society  
Brighton & Hove Society of Miniature Locomotive Engineers  
Bristol Society of Model & Experimental Engineers  
Southampton & District Model Engineering Society  
Sussex Miniature Locomotive Society

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Please note that this Newsletter is the receipt for your 1976 subscription.

## EDITORIAL

May I take this opportunity to welcome you to this, the first edition of the M.M.E.S. Newsletter, under the new management. I hope that subsequent editions will be published on time, but due to circumstances a little beyond my control, I must apologise for the late arrival of this edition.

My aim this year is to try to approach the excellent standards quality and content set by Graham Baseden our outgoing Hon. Press Officer, to whom the Society owes a vote of thanks for the vast amount of work, that has provided, so much entertaining reading, for us within the Society, and those in other Societies which receive a copy of our Newsletter.

A further, perhaps less hopeful, aim is to broaden the scope of the Newsletter, to include facets of Model Making other than miniature steam locomotives, but this depends upon YOU, the members, to reveal that secret, locked away, moment of weakness - yes Fred, some of us know about that half finished petrol engine. Seriously, though, if anyone cares to submit a good, meaty, article, however short, about any subject, other than railway engines, I will fit it in somewhere.

Although I do not have an accurate costing for materials so far obtained, for the production of this years' editions, I am very hopeful that the next three editions, ie. Summer, Autumn and the Christmas, may have at least one, perhaps two, pages, set aside for diagrams, which would compliment articles in the above editions. However, articles submitted with sketches, must be of good standard in both content, and in the clarity of diagrams included, to warrant publication.

I would also like to thank those thoughtful members, who, as they wished to have their Newsletter mailed to them, enclosed funds, with their subscription, to cover postal charges. Thankyou.

In conclusion, I would like to thank you for electing me to the post of Hon. Press Officer and to ask for your support throughout the coming year in the form of a copious supply articles for your M.M.E.S. Newsletter.

Brian Harris

## MESSAGE FROM THE PRESIDENT

I feel that I must put on record my thanks to the members of the Society for appointing me, your president.

This, after many, many, years of Model Engineering - which started with the tin plate, "O" gauge equipment, all stamped G.B.N. and a steam "Dribbler", which left a trail of burning meths, wherever it went - is the culminating point of a very happy association with Model Engineers, particularly at Maidstone, spanning a long period.

I am really "CHUFFED".

Jos. N. Liversage.

## CHAIRMAN'S MATTER SPOT

We have Easter just round the corner and still quite a lot of work to complete at our Home Park track. You will have read in the last News Letter, work was in hand on steaming bays, a coal store, and a roadway.

I'm pleased to say, to date, the progress is as follows:

- (1) Construction of the brick coal store, and the internal electrics are now complete, thanks to the efforts of Chas. and Ray.
- (2) Steaming bays are now nearly complete, with a concrete base and drains laid, thanks to Chas's gang and Ken's volunteers.
- (3) Transporter almost finished, just a few minor adjustments required, thanks to our "Site" foreman and his mate.
- (4) Concrete mixed and barrowed, earth removed, drain covers made under the direction of Martin and helpers.
- (5) Painting carried out by Reg and his Company?
- (6) Roadway completed by arrangement, Ray & Martin.

The track turntable has been removed and replaced by a concrete beam cast in situ with the rails relaid. All drivers know this has been a rough spot, but the ride over the new beam has proved very smooth.

I have picked out some of the membership by name, but I wish to thank all the members who have helped to get the work so far advanced, in such a short time, including the Ladies, who have also been observed wheeling barrows and breaking stones.

The Kent & East Sussex Railway ran an exhibition, in Maidstone last Saturday, which some of our membership attended, along with their locos, while Fred and Charlie, plus wives, ran their engines outside on a portable track.

Well there it is, a prelude to our 26th. season, which I hope will be a good one. I look forward to the rewards of a winters' hard work, when the membership can get down to enjoying their hobby - driving trains?

A.H.W. Payne (Jack)  
29th. March '76.

## SECRETARY'S NOTES

For the benefit of those members who were unable to attend the Annual General Meeting there were two changes in the administration for 1976.

Councillor Robinson, President of the Society for the past fourteen years, was unanimously voted a Life Member and J.H.Liversage becomes President. Peter Robinson has been able, during his term as President, to forge a link with the Council, which has resulted in what I am sure is a greater understanding between Maidstone Model Engineering Society and its landlords at the Town Hall. The present relationship with Mr. Sheppard and Mr. Shepperd, representing the Council, is also, I am sure, one of mutual understanding.

This rapport between M.M.E.S. and its landlords is most important to grace and favour tenants such as we. When I met Mr. Shepperd on site to discuss our rebuilding programme and to ask for a further 1000 square feet of park land, it was made quite clear that, should our application be successful, we in turn, must undertake more rigid maintenance of our comp und.

This seemed to me an infinitely fair arrangement, the park and track being for the mutual benefit of ratepayers, children and M.M.E.S.

May I, therefore, say thank you to Peter Robinson for your service and help to our Society over the past fourteen years.

Jos.H.Liversage M.I.C.E., M.I.Mech.E. of Herne Bay, the new President, can be no stanger to anyone in model engineering circles. Prolific builder of loco's from "0" gauge up to 9½" gauge, writer on obscure valve gears and such like, must be one of the foremost authorities on Model Engineering alive today.

We are indeed most fortunate to have him in our midst each Sunday in the summer, whereby he is a great source of inspiration and advice to members such as I. A telephone call, or better still a post card, to Joe in the winter, and one is able to draw on a wealth of theoretical and practical experience, which is endlessly forthcoming and which in many cases includes the material. Judging by the reception at his election at the A.G.M., the Society is both honoured and delighted to have 'Joe' as President and long may he continue in office.

Graham Baseden, our errudite and intellectual Press Officer resigned this year aspress officer. The Society will sorely miss his dedication in producing of recent years a newsletter doubtlessly in the vanguard of such publications with an indirect circulation from Los Angeles to Australia. May Isay on behalf of M.M.E.S., thank you for your efforts Graham, without which, the Society would have been the poorer.

Brian Harris takes over from Mr.Baseden with the daunting task, and the Society wishes him every fortune and assistance in the face of rising costs of production. The Newsletter forms an

(Cont. over)

integral part of the society and the exchange system built up - an important facet of the integration with other Societies and the Southern Federation, for the benefit of all members.

The Society enters its 47th year, and its 26th year in Hote Park, with further changes still at present under construction. We started the winter with the prospect of demolishing the entire compound of steaming bays, retaining wall, equipment store, etc., with a view to a complete replacement by Easter, including a 1000 sq. ft. vehicle unloading area, enabling us to unload from car or trailer, direct onto the bays. This project, because of its extent, has had to be done with the minimum of outside help or mechanization, to keep the cost within the means of the Society. The response from the members has been much better than anticipated at the outset, even though digging out trees and rocks to the tune of 40 tons by hand is hardly Model Engineering. The whole scheme is going really well with even our irrepressible lady members, carting away, literally tons of rock and concrete. Additional to this irksome work, they have provided hot meals etc. to continually sustain the workers. Moreover, Connie La Roche, assisted by the other ladies, has run her husband's "Groombridge" every dry Sunday throughout the winter to bolster the funds necessary to complete the work on time. This effort alone, will indicate the benefits accrued from having lady members who genuinely seek to share the work load, as well as the entertainment during the summer months. At the time of writing these notes (10th. March), we have already completed the new building, half finished the 10 new bays (each equipped with compressed air and dual voltage), completed the traverser and its track, and cleared the site for the roadway, ready for tarmac. There would seem no reason at present why the whole scheme should not be ready by April 18th. as planned. A good illustration of what can be done by the combined expertise of those involved in seeking to further the achievements of the Society.

This central work has meant, of course, that general maintenance work on the track, painting, etc., has been neglected so there is still plenty of scope for enthusiastic members to spend a few hours at the park before the summer.

There are a great number of visits, rallies, etc., available this coming season, a list of which appears on the Notice Board. In spite of the fuel costs, do try and attend some. Where ever one goes your hosts are as we and always provide an entertaining day out for the family.

The Society has, this year, joined the Southern Federation insurance scheme for third party risks, at a premium of only one tenth our present arrangement, though still retaining cover for the various buildings etc. with the present company.

Further to this, the Southern Federation, has launched a personal insurance for engines at home, in transit, etc. Details of this scheme appear in the Southern Federation Newsletter on the Notice Board. Remember, engines left in the engine shed are not covered by the Society.

Ray Milliken

## A TERRIER

When William Stroudley took office at Brighton Works in February, 1870, the major motive power problem of the L.B.&S.C.Rly. was to be found around London, where a varied selection of Craven relics were to be found, waging a losing battle with the heavier services. It was vital to provide a class of powerful, yet light engines. Light; to cope with the track construction of that period, but capable of rapid acceleration, to get smartly away from the frequent stops. The distance between stations were not great, the journeys not long, so, accordingly, a small tank engine was designed and built.

Based on an 0-6-0, designed during Stroudley's previous appointment with the Highland Railway, fifty of these diminutive tank engines were constructed, between 1872 and 1880. Quikly they gained a special fame, with their eye catching livery and snappy performance, which lasts to this day, for ten still exist, most in running condition.

For such a long time I've been especially attracted to these little engines, that a start was made in 1972, on a miniature replica, based on Martin Evans series that appeared in the H.E's. of 1965. His design is a jolly good piece of. Some recent experiences have taught me that it's so easy to pick out minor errors in designs, but so awfully difficult to produce a design that still looks like the original. One has to keep thinking three dimensionally and three jumps ahead the whole time.

With the aid of C.J. Binnie's excellent book "The Brighton Terriers", some personal research, and measurements at Rolvenden; a couple of trips up to "Boxhill" herself at Clapham and a whole lot of photographs of Terriers in original condition, I set out to catch as much of the character of these engines as possible.

To save cost, I made up a pattern for the cylinders and had them cast, locally, in phosphor bronze. They are a very simple shape, and, four sets have found -or are finding-their way into other engines.

The 4 $\frac{1}{2}$ " dia. wheels were just about the largest I could manage on my old 4", Drummond round bed. Being devoid of any back gear, its slowest speed is 188 rpm., which makes a carbide tipped tool a useful item.

The inside motion, eccentrics, and crankshaft, proved quite a problem to oil up prior to running. It's all so dark and inaccessible back there, one could almost be tempted to just drown the whole lot in a generous flood of oil, when Jack isn't looking. Actually I've found a less drastic answer, by soldering about 4" of small bore, brass tube, into the end of a small size, "Wesco", pump type, oiler, the outlet being turned downwards to locate in the various oiling points.

The cab roof, although a delightfully, curvy, touch of Victoriana, presented quite a problem. Having different curvature in both side and front elevations, a solution, not involving press tools or hours of panel beating, was required. The answer was found by producing a simple glass fibre moulding. So far, the fixed half of the roof has not warped or caught fire, but even in that eventuality, the mould once made, can produce an unlimited number of replicas as required.

Painting and lining in full Stroudley livery was not as awfull a problem as I imagined. The principle colours were checked at Clapham and also against "Como" at Brighton, so I do not think it is very far out.

All the painting was carried out in brushed oil colour. I found that a roll of  $\frac{1}{4}$ " wide adhesive tape, as sold by drawing office suppliers, was especially useful in laying down the basic panels of lining, while a little metal template was made for the inturned corners, to ensure they were more or less the same size.

The actual lining was carried out using a mixture of Humbrol enamel and petrol as thinners. This was applied with a ruling pen, which is not at all difficult, while a great deal of the final effect is achieved by subsequent touching up. The black was carried out in "Blackfriars" eggshell finish, which, contrasts nicely with the adjoining, varnished, surfaces. Painting is just a question of a job that cannot be hurried.

As far as I know, the stud of Terriers within the Society now numbers three. Peter Chislett's engine has already proved itself tremendously successful, while Clive Younge's "Brighton", (No.40), progresses steadily. My own "Boxhill", (No.82), is now complete and has had a fire inside her at last. Things look hopeful enough for her to enter service at any time now.

Don Patterson

#### COMING EVENTS

##### MAY

- 8th. Welling Society to visit Note Park.
- 15th. Southern Federation Rally at Cambridge.
- 16th. Maidstone M.E.S. invitation to visit Malden. (X)
- 22nd. Polgate opening day of new track. (X)
- 30th. Maidstone H.E.S. visit to Chingford. (X)

##### JUNE

- 13th. North London open day.
- 27th. I.H.L.E.C. at Kinver.

##### JULY

- 10th. North London to visit Note Park.
- 17th. 18th. Guildford Rally.

##### SEPTEMBER

- 4th. Eltham visit Note Park.
- 11th. Southern Federation Rally at Brighton.
- 25th. Kent & East Sussex Rly. open day at Tenderden.

##### OCTOBER

- 2nd. & 3rd. Beechurst Rally. (X)
- 9th. Romney Marsh M.E.S. visit Note Park.

If you intend to visit the events marked (X), please add your name, and if you intend to take an engine, to the list, on the notice board, in our club house at Note Park.

STOP PRESS Hastings Society to visit Note Park on July 24th.

## SO YOU WANT TO PAINT IT

First you make your model, and, compared to painting it, that is the easy part. Two, three, or four thousand hours can go into building a model locomotive and the various problems associated with it's manufacture, but those problems, in my opinion, pale to insignificance when compared to painting it.

There appear to be no set of rules, or procedure, by which one can even start, without previous experience, to finish a model to the satisfaction of all the critics. You can buy a book on how to paint your model, and it will tell you all about the different types of paint, but not which one, or which brand, would be the most suitable to use or why it is best.

Some modellers advocate matt finishes, and whilst this does appear to smooth all but the worst surfaces, because of it's non-reflecting properties, whoever saw a full size locomotive looking as if it was made of sprayed felt.

My own particular problem is not lessened by the fact, that, I cannot even find out what colour my locomotive should be, but then, I would have to choose a foreigner to model, albeit British made. Built by Robert Stephenson & Hawthorns Ltd., of Darlington, it left these shores painted in grey undercoat, destined for the Buenos Ayres & Pacific Rly., but I cannot find any record of it's final colour, so it will have to be black, with red inside the frames, and lining as I think fit.

One thing I have discovered is the Humbrol Air Brush. Costing around £3, this is a very small, neat, spray gun, which is clean to use and sprays an area of about one square inch at a time, using a gas pressure can, priced at £1. This is a very convenient supply of compressed gas, but, if a lot of work has to be done, can get quite expensive, so my solution of this problem may be of interest.

I had an old domestic refrigerator, in the back of which, was a standard, fully enclosed, freezer unit, comprising an electric motor and pump. These units appear to run for years without any attention whatsoever and are quiet, with nothing visible on them, except a terminal block and three pipes. One thicker pipe is short and sealed up and is the one through which the unit is charged when it is made. It can be ignored. The other two pipes, one thick, one thin, are connected to the freezer pipes and I cut these with a junior hacksaw fairly near to the unit. I am told that the gas that escapes is harmless, but "windows open" for a few minutes is the safest plan. The unit is then removed.

I had in my possession an old insecticide spray, made of brass, into the top of which, I soft soldered one inch of 3/16 dia. copper pipe. I then made, from a screw and a tap washer, a small safety valve, which was fitted into the filler cap. Finally, another 3/16 dia. copper pipe was soldered into this container, while a similar piece was soldered into the bottom of an empty pressure can, the top of which has the threaded connection for the air brush supply pipe.



A small rubber pipe was then connected to the small pipe on the refrigerator unit and onto the one inch pipe on the brass can. Switch on the unit and you have a small supply of compressed air.

Set the safety valve at quite a low pressure and adjust it up, until the spray gun works satisfactorily. I don't know what pressure should be used, but I think it will be quite low.

An old paraffin blow lamp body would do for the container of course, and I would think that old refrigerator units would be easy to pick up, as they are quite useless for anything else. I think the safety valve is important, as I feel there may be quite high pressures available.

For the actual painting I used Humbrol Enamel thinned down with Humbrol Thinners, one to one ratio, a consistency the same as milk. After spraying, the articles are stoved in an electric oven, 150 to 200 on the dial.

Finally, when your wife says, out of the blue, "Why is your pillow turning red", you know you've got your paint job in your hair.

Ken R. Rose.

THE KENT & EAST SUSSEX RLY.  
MODEL RAILWAY EXHIBITION

On Saturday, 27th. March, a railway exhibition was held in Maidstone, at the Methodist Youth Centre, on behalf of the Kent & East Sussex Rly., Newmill Bridge Project. Our Society participated, with a display of locomotives, while Charlie Hayward, assisted by Fred LaRoche, gave live steam rides for the kiddies, using Charlie's portable track.

There were 23 stands inside the two floor hall, plus a continuous film show, while outside, in addition to the train rides, a mobile organ of the fairground variety, supplied constant entertainment.

Of particular interest inside, was a railway layout in "Z" gauge covering an area of only 3' x 2'. In addition there were various trade stands, including the K.&E.S.Rly. sales stand and the Talyllyn Railway Preservation Society stand, and upstairs, could be found a working set of block signalling instruments belonging to the K.&E.S.Rly.

Exhibits on our Society's stand were as follows:-

"Duke of York" 4-8-2 proposed L.N.E.R. tender engine built by

Ray Milliken

"Linda" 0-4-0 tank engine, an "Ajax", also by Mr. Milliken

A Sterling "Single" built by Martin Parham

"Boxhill" a Brighton Terrier recently completed by Don Patterson

Mr. E. Pursey's 4-4-0 N.E. 3½" gauge tender engine

Mr. A. Probyn's "Road Railer", a convertable traction engine which has been featured in the Newsletter previously.

Reg Robinson's half finished Metro tank, Mr. R. Pursey's half finished Western diesel, and Miss Julia King's recently started Rob Roy.

This Exhibition was well organised, supported very well by various local Societies, and enjoyed by the many hundreds who came to see the exhibits.

Tim Gregson

### A SIMPLE LOCOMOTIVE

The discerning visitor to Mote Park may have, on occasion, seen a locomotive, which emits neither steam or fumes. On closer inspection the secret is revealed; a diesel shunter powered by a car battery.

Before the cries of shame are heard from the steam fraternity, perhaps I should explain why the diesel was built. At the end of my teacher training course I had time left, which I decided to devote to designing and building, a small loco., suitable for older children to make in school. The end result was the diesel shunter.

A battery loco. has a number of advantages over steam or petrol. It is cheaper, quicker, and less complicated in construction, also easier and more safe to drive, there being little risk of burns or scalds. A 3yr. old child has driven my diesel with ease. The engine can be made ready for the road in about two minutes; packing up at the end of a run is even quicker.

The body is a one piece, glass fibre, moulding, which means that any number of fully detailed bodies can be produced with ease. The mould was made round a wooden former, a "plug", the exact shape and size of the finished body. All external details, radiators, inspection covers, doors, etc., were cut from ply or perspex, and glued onto the plug.

The mould had to be made in several parts, which were subsequently bolted together, as there is no draw on the plug to allow its removal. Each body is laid up inside the reassembled mould using, first, a gell coat and then a single thickness of glass fibre matt. To finish, the body needs only windows, hand rails, a cab roof and a chimney, (yes, some diesels do have chimneys).

The motive power is supplied by a car dynamo run off a small car battery. This may not be as efficient as a proper 12 volt motor, but the use of old automotive products does keep down costs. Thanks to the advice of our Hon. Secretary and Chairman, reversing was easily accomplished, by reversing the polarity of the field windings only. The switch used had spent many years reversing my Hornby-Douglas electric railway engines.

Drive is taken from the motor to a lay shaft, by bevel gears, thence, through outside coupling rods, to the wheels as in full size practice. A simplified version could use chain transmission.

The first motor used was a normal size dynamo but this proved to be under powered and was replaced with a larger variety, which gives better performance. (7 mph. with 4 adults is about its limit). The chassis is of brazed steel construction and there are no castings used at all.

As an experiment, I tried using two batteries, one on the passenger trolley. This transformed the performance and my diminutive shunter was able to keep up with those Amazons of the track who frequent the park on Sunday afternoons.

The obvious next step was to make a mainline diesel housing two batteries, using two bodies back to back. A centre cab, Bo-Bo diesel was used by the New South Wales Government Railways so this provides the prototype.

Unfortunately, pressure of work, and a move of house means that progress is slow, and it will be a long time before the second diesel is finished. Anyone wishing to use the mould or seeking advice on glass fibre work is welcome to contact me.

Andy Probyn

VERY URGENTLY REQUIRED

COPY for the Summer Edition of the Newsletter is required by myself before or on the 4th, of JULY. Please bear in mind that that to make this periodical an informative and interesting production, articles, by you, the membership at large, are a vital part of the above aim.

REMEMBER: CLOSING DATE FOR COPY 4th, JULY.

Press Officers' Department

1. The first part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order and include the names of the members of the committee and their respective addresses.

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### MEMBERS OF THE COMMITTEE

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