

LIONSHEART

Number 56

December 2003

LIONSMEET 2003 SUCCESS

Once again, 'Lionsmeet' enjoyed fine weather for the visit to the Erewash Valley Model Engineering Society on Saturday, 16th August 2003. As always, we were made most welcome by our hosts. The location is discreetly hidden between an embankment carrying the by-pass and the back gardens of houses in a quiet estate.

The elevated multi-gauge track is in the form of a single oval, with anti-clockwise running. A large moveable bridge in the curve at the lower end of the running track allows cars to be parked inside the oval where the clubhouse is located. As you enter the oval, the station is on the left and the clubhouse and steaming bays on the right.

Outside the elevated track, a splendid figure-of-eight ground level track, featuring a bridge and tunnel is under construction, but not yet in use.

The features of the track used for Lionsmeet are most easily described by taking an imaginary journey, starting at the station. The station has an all-over roof, complete with clock tower surmounted by a weather vane. To the delight of OLCO members, the weather vane features 'Lion'! The station is furnished with a number of hand-painted reproductions of period posters which add considerably to the atmosphere. Leaving the station, a splendid somersault signal protects the moveable bridge then you pass a signal box and under a footbridge which gives pedestrian access to the inside of the oval when trains are running. The sharp left-hand curve behind the clubhouse presents some difficulties to trains starting away and then, entering the back straight, there is a continuous adverse gradient. The extensive covered steaming bays and carriage shed lie on the left, then there is an upper-quadrant signal protecting the traverser which gives

access to the steaming bays and carriage shed. At the far end of the site there is then a semicircle to bring you to the fast downhill straight approaching the station.

As usual in the morning, there was informal practice running, plenty of tea and good conversation between visitors and hosts.

After lunch, provided by the stalwart ladies of the host society, there was the serious business of competing. Once again, the competition track presented some problems for 'Lions' and tactics proved very significant. As always, the competing driver sits on the dynamometer car, made available through the good offices of Guilford M.E.S. and David Neish. The observer, once again Jan Ford, was perched on a spare driving trolley behind the dynamometer car. After some experimentation with the rather heavy passenger vehicles, a bogie open wagon was chosen as the load. Each driver then arranged suitable ballast in the open wagon.

The competition is to produce maximum work done in 10 minutes. This can be done by hauling a very heavy load for a short distance or a light load for a long distance. The best result is usually obtained by hauling an intermediate load over an intermediate distance, but deciding on the balance between load and speed (and thus distance) is a matter for judgement by each competitor.

This year, Jon Swindlehurst was a very popular winner. Everybody agreed that a good time was had by all.

The Chairman's photographs, p5
Lionsmeet in Pictures, page 9.

Full results of the trials are given on page 9.

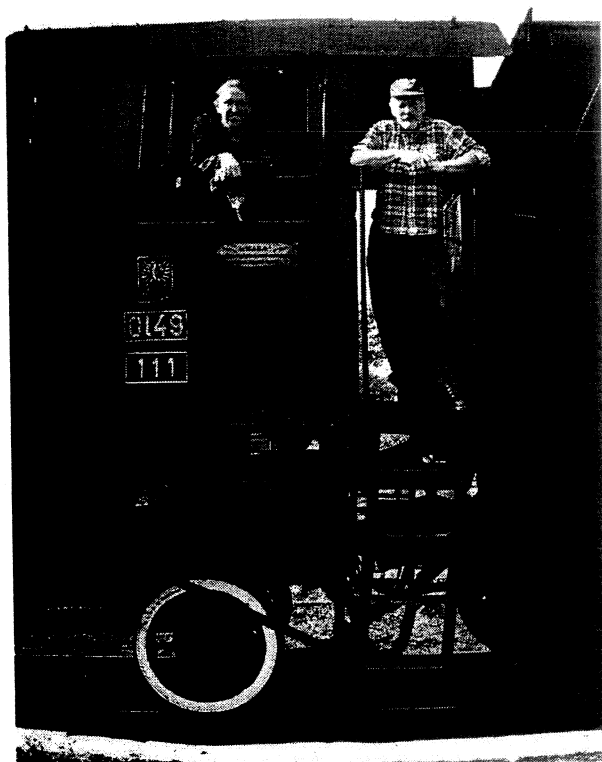
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As it's nearly Christmas, we've tried to give you some variety. Not only can you re-live the sun of Lionsmeet, remember an event from 14 years ago, plan the re-steaming of 'Lion' and buy your Christmas Cards but, if you're particularly determined, you can make your own cardboard model of 'Lion'!

Editor's Piece

Jan Ford



WOLSZTYN EXPERIENCE

The heading photograph, by Bob Roberts, shows the editor on a Polish 2-6-2 earlier this year with Peak Rail driver Mike Edwards.

FREE THE LIVERPOOL TWO!

We commented in the last issue about Liverpool becoming the 'European Capital of Culture' in 2008. Surely one of the marks of culture is a proper regard for the past and its formative effect on the present? Liverpool is lavishly provided with many excellent galleries and museums, most of which now feature free admission. What more needs to be done? Liverpool Museum has always made it clear that one aim is to repatriate 'Lion' from Manchester to Liverpool, when gallery space permits.

Many OLCO members will be aware that, before Dorothea Restorations brought 'Lion' to her present state of 'cosmetic restoration', OLCO supported an initiative to bring 'Lion' back to steampable condition. Such a proposal always involves a debate about the conflict between interpretation and curatorial responsibility.

The 'interpretation' argument holds that the only way people can understand what a steam locomotive means is to put a fire in it and make it go. The 'curatorial' argument holds that any unique artefact should be conserved by the least invasive means possible so that it is available for study by future generations. One solution is the construction of some form of replica

because the original is either too precious or unavailable. 'Planet', at the Museum of Science and Industry in Manchester, and 'Iron Duke', at the National Railway Museum, represent that school of thought. But, as some of our members have experienced, there's something special about an 'original' that's lacking in any replica. I'm aware that we could debate at length just how much original material remains in 'Lion' but I think some 'essence' survives even drastic rebuilding to provide a more intense link with the past and the people who built and operated early railways.

Remember, OLCO is so named in recognition of the members of the Liverpool Engineering Society who, once before, formed a committee to bring an 'Old Locomotive' back into steam and present her to a wider public, initially in the L&M Centenary celebrations at Wavertree Park. What better ambassador for the Capital of Culture could Liverpool have than its faithful servant 'Lion'? In 2005, the Liverpool and Manchester celebrates its 175th birthday. Could there yet be time for 'Lion' to actively participate in this birthday party?

In 'The Titfield Thunderbolt', there is a glorious scene where the Vicar and the Town Clerk discuss line closures. "They closed the Canterbury and Whitstable!" argues the Town Clerk. "Perhaps there were not men of sufficient faith in Canterbury" counters the Vicar, oblivious for the moment to Canterbury's role in the Church of England. Are there men of sufficient faith today?

But if 'Lion' is the first of the 'Liverpool Two', who is the second? Why, 'Cecil Raikes' (the locomotive, not the historical figure). This massive 0-6-4 condensing tank was one of a fleet built by Beyer Peacock for the Mersey Railway. Can you imagine being on the footplate, provided with a spectacle plate but no cab, in the tunnel accelerating down the slope of the river crossing so as to achieve sufficient momentum to get up the bank to out the other side? No wonder the Mersey Railway electrified after a few years! One of the class ended up in Australia and 'Cecil Raikes' had a long, useful life in colliery service before passing to Liverpool Museums because of the local associations. The later years have not been kind to 'Cecil Raikes'. Is it possible that this centenarian could once again come alive?

AIREDALE FOUNDRY LUNCHEON

There's a brief feature in this issue on a luncheon OLCO organised some time ago. A great time was had by all and the venue, which ended up at Armley Mills Museum, not as advertised, was educational too. There are plenty of anniversaries we could celebrate now. Is it something that would interest the membership? However, such events take a lot of effort to organise and have a financial risk, so don't say 'Yes' unless you're prepared to support such initiatives. Please write to the Editor with your views.

Letter to the Editor

Alfred Lloyd writes:

I trust the following will be considered suitable material for inclusion in 'Lionsheart'.

It's to take up the topic that John Hawley raised in issue 55 regarding scales for engines in the era of 'Lion'. The subject has been for a long time a problem for me as to how close one should follow convention and its effects on the final product.

As 'Lion' is typical of the period its construction is relatively delicate when compared with later designs and therefore it's very easy to produce a model which is a caricature of the original, as John rightly points out wheel proportions accepted as standard are significantly oversized when compared with the original.

The easy option is to produce a showcase model to a scale which allows the smaller visible details to be satisfactorily made with the facilities available.

To produce a satisfactory working engine without being too grotesque has a number of factors which require serious consideration at the design/drawing stage.

The main ones I envisage are:

- 1) Adequate clearance for vertical movement of axles.
- 2) Cylinder length will be greater than the original as will the width and height.
- 3) The standard port openings produce a greater valve travel than the original and therefore results in larger eccentrics, and greater movement of links.
- 4) It is desirable in small gauge engines to provide superheated steam to the cylinders. This makes space in the smokebox restricted even if a limited amount of recessing of the smokebox tube plate is feasible.

Finding space for a cylinder lubricating system also has space implications.

A further problem in the boiler layout is to get an adequate heating surface to match the grate area and also provide sufficient volume to ensure good combustion in the firebox.

Depending on which prototype is being considered other factors may have attendant problems.

It seems to me that whatever scale factor is taken addressing the above will have an effect on the choice.

I am mainly involved with 2½" gauge engines and three scales are or have been used in the past for certain designs. These are ½", 17/32" and 9/16" to one foot.

17/32" is nowadays the generally accepted standard.

The ½" scale is primarily an American one. As their loading gauge is significantly greater than here in the UK and their engines tend to be larger anyway, the choice of this scale has merit in producing a smaller and more manageable engine.

All this is something of an aside from John's original point on the choice of scale from the point of view of accuracy of measuring the resulting dimensions. If one has access to modern digital readout systems and pocket calculators this is not a problem.

There is also the question of geometric accuracy in construction which is usually the cause of much trouble during construction and commissioning which the choice of scale will do little to alleviate.

In my opinion, the choice of scale should be based on the above listed factors to produce a satisfactory and reliable working engine. Obviously the larger the gauge/scale chosen the better but then cost and logistics start to have an impact. I'm sure there are other influences which affect miniature engine design and construction.

I hope the foregoing is considered suitable for publication and will engender (provoke?) comment from our members, particularly those with experience in designing and building engines of unusual configuration and layout. After all, the period up to 1850 was littered with different types of locomotives before settling down into the accepted configuration. I've always considered 'Cornwall' in its original condition a real test of ingenuity and skill in building a scaled down version of it and attempting to make it work satisfactorily in the light of hindsight and technological innovation.

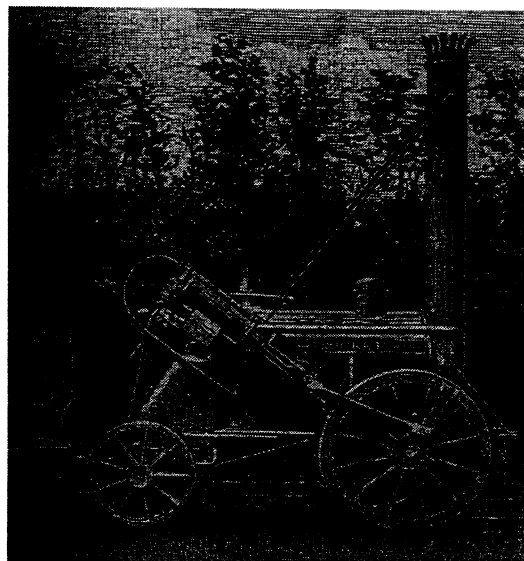
Comments on Alfred's letter, or on any other topic of interest to OLCO Members are welcome.

Contact details for the editor are as below:-

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View from the Chair by John Hawley

Season's Greetings!

By the time you read this, you will be well on the way to completing plans for Christmas. May I take this opportunity to wish you all a happy and peaceful time. If I could I would give all you hard working modellers the time to complete (or to renovate) your models in time for Lionsmeet 2004. There must be many Lions under construction - why not take a few minutes to write and tell us about your project and of the various difficulties you have experienced on the way. Maybe we can suggest solutions. I wish you also a Happy New Year and look forward to meeting you at the AGM, Lionsmeet or the Bristol Exhibition.

Nice Little Earner - 1.

The Bristol Model Engineering and Hobbies Exhibition.

The OLCO stand at the Bristol Exhibition attracted a fair bit of interest and we gained new members. On display from the Taylor-Nobbs stable were a 5" gauge prize winning Lion, the Aster Gauge One Lion and its train, wheel patterns and other details. Also on the stand were a 7 ¼" gauge boiler, a tiny 1/100th scale card Lion and tender, castings, books, pictures and posters and many other items.

My thanks to all of you who loaned items for the exhibition. I would like to thank especially Charles Taylor-Nobbs and Peter and Trixie Mountford, who gave so much of their time to help set up, man and dismantle the stand. Also Keith Taylor-Nobbs and Bill Stubbs, who made long journeys to get their prized possessions to and from the show.

For those of you who were unable to get there, you missed a good show - some say better value than that at Donnington. Newport club member, Peter Rich is building a model of a GWR loco and had on show his own lost wax castings for all sorts of components including the cylinders.

There was a model of an aircraft rotary engine with two banks of cylinders which was displayed in a stripped down state. The finned cylinder barrels, valve gear and the number of internal gears had to be seen to be believed.

Another item was a working model jet engine. This engine, measuring about 6" diameter, idled at 35,000RPM and reaches 100,000rpm at full power, developing about 17 lbs of thrust.

There were so many items of interest that it would be impossible to list them all here. All the usual traders were there and the advantage of this exhibition is that there is easy motorway access and plentiful free parking. However, of immediate interest is that we had our funds boosted by a cheque for £50 for our attendance. Next year's show is scheduled for 20th to 22nd August at the same place. Hope to see you there.

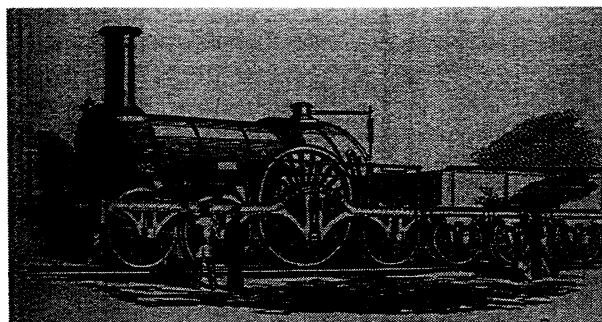
Nice Little Earner - 2. The OLCO Christmas Card.

Those of you who attended the AGM back in June may remember that I mentioned the artist Edward Bawden (1903 - 1989) and the work he did to produce the poster for the film 'Titfield Thunderbolt'. (Anyone heard of this film?). What had been little known (certainly among the OLCO fraternity) until recently is that he also painted a Christmas Card depicting the star of that film. Now, by some good fortune our President, E F Clark, attended a lecture at the Cecil Higgins Museum in Bedford early this year and came across this very card. After careful negotiation he was able to secure the rights for OLCO to copy the image and to produce their own version of the card. Rather surprisingly, those present at the AGM thought that this may not be a very successful venture, so the matter was not pressed.

However, at their own expense, two prominent members of OLCO went ahead and funded enquiries, production and publicity for the Card. All this has now been done and I think that you will find details elsewhere in this issue. The project will be at no cost to OLCO, but, generously, they have agreed to donate any profits that may arise from this exercise to OLCO. So, put in your orders now, while stocks last. Many have already been sold.

For Sale

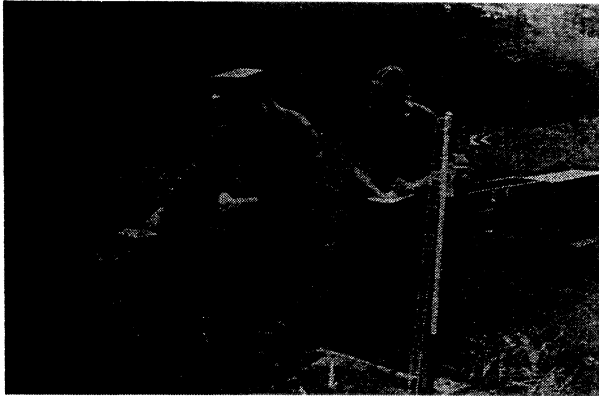
Band saw blade - 100' of 5/8" wide bandsaw blade, 18 TPI, for a tenner. Contact John Hawley - 01275 472023.



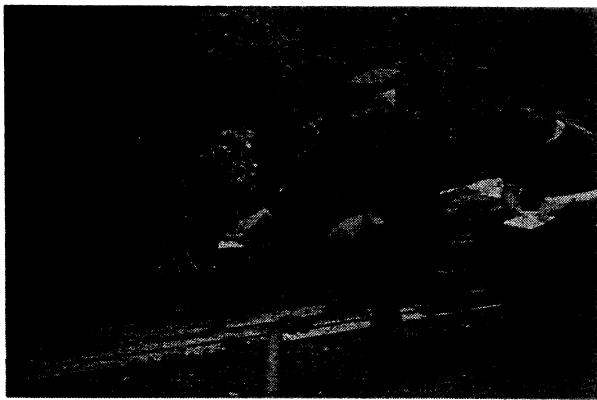
The Chairman's Photographs



David Wainwright on his ill-starred run. We wish David better luck next year!



As last year's winner, Andrew Neish prepares for the first competition run, on his father's locomotive. The upper quadrant distant signal in the foreground protects the traverser.



With the locomotive nicely warmed through from the first run, second contestant David Neish preparing for his run.

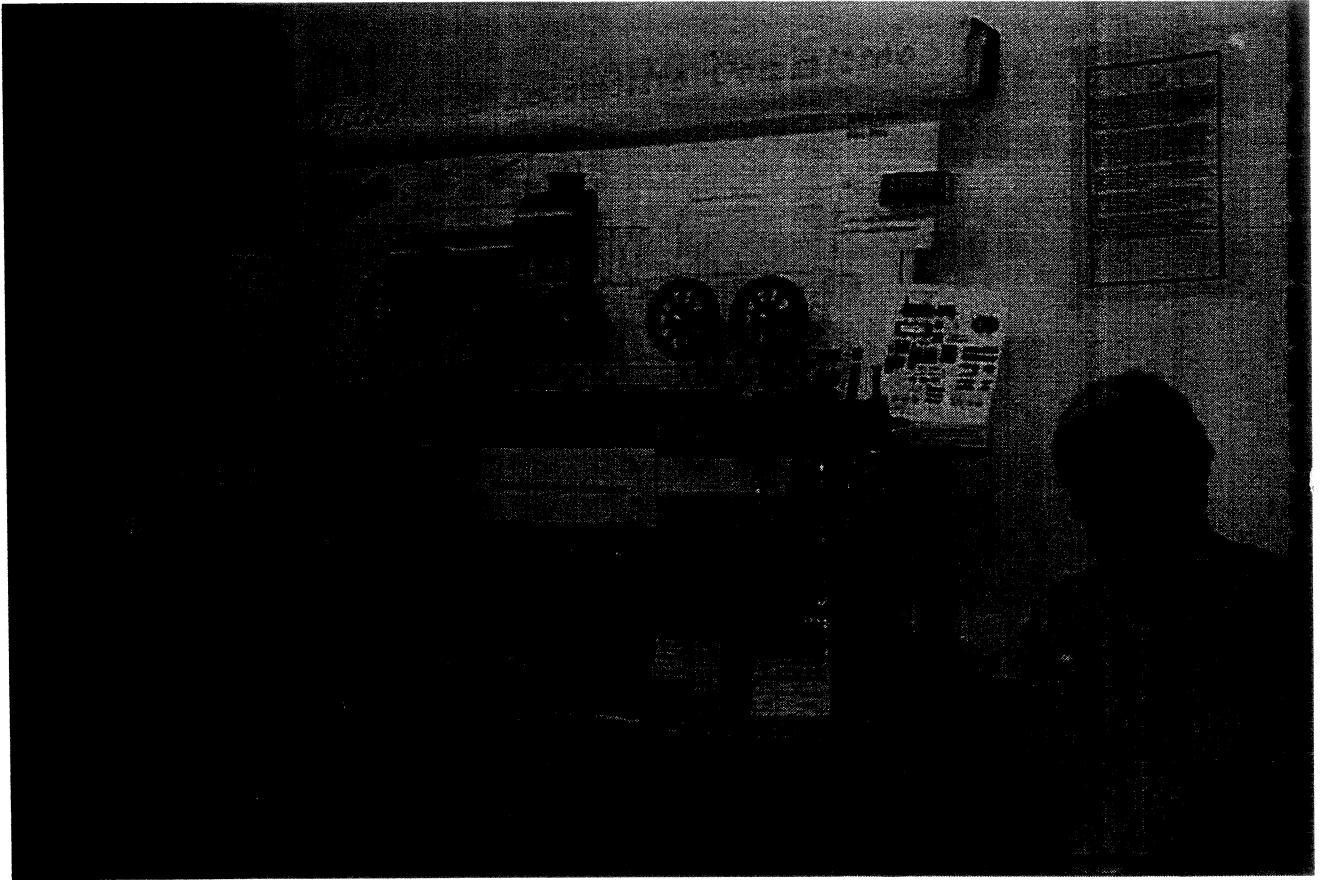


Alan Bibby flies through Erewash station on his run. This was a characteristically strong run from Alan and, at the time, looked set to take the competition.



Jon Swindlehurst on his winning run which surpassed the excellent standard set by Alan a few minutes earlier. Visible in the background is the tunnel mouth on the ground level track which is under construction.

The Chairman's Photographs



The final photograph from the Chairman shows the OLCO stand at the Bristol Model Engineering and Hobbies Exhibition.

On the right, OLCO Founder Member Charles Taylor-Nobbs mans the stand.

At the top of the display is one of John Hawley's drawings of 'Lion' with John's boiler and wheels inset in the correct positions (but when are you going to steam it, John?).

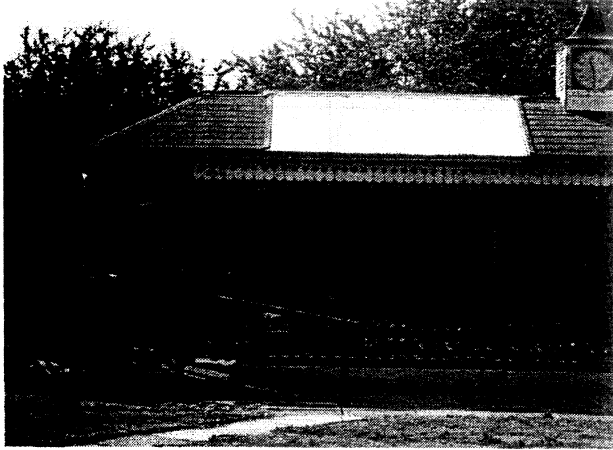
To the right is displayed a commercially-available card model of 'Lion' (described in an earlier Lionsheart).

On the shelf is the Aster 'Lion complete with train.

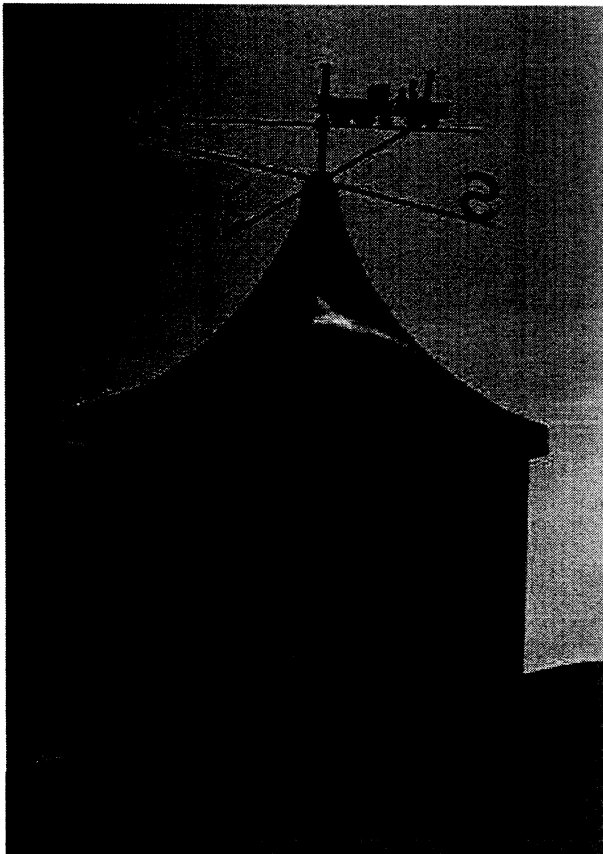
On the table is the well-known print of 'Lion' at Edge Hill, the 'Toad' brakevan and emergency passenger vehicle (Dan's home) from 'Titfield Thunderbolt', Keith Taylor-Nobbs' 'Lion' and, right, the Mike Parrott Memorial Cup.

Lionsmeet 2003 in Pictures

We are grateful to Linda Mills for this photographic record of Lionsmeet. We apologise to the photographer and readers that our method of reproduction does not do justice to the digital photographs which she generously made available.



Erewash station. Note the part-glazed overall roof, Midland Railway-style fencing, posters and clock tower.



This detail of the clock tower shows the weathervane: a charming silhouette of 'Lion'. Are readers aware of any other 'Lion' weather vanes?



Another view of Erewash station, this time from the footbridge. Jon Swindlehurst prepares his 'Lion' for action. Note the working water crane, the somersault signal with the arm dropped into the 'off' position and the signalbox.



A general view of the extensive steaming bays. Some of the tubular steel in the roof trusses is made from smoke tubes taken from a 12 inches to the foot 'Princess' at the Midland Railway Centre! The building on the left in the background is the clubhouse. The smaller building right background is the signal box.



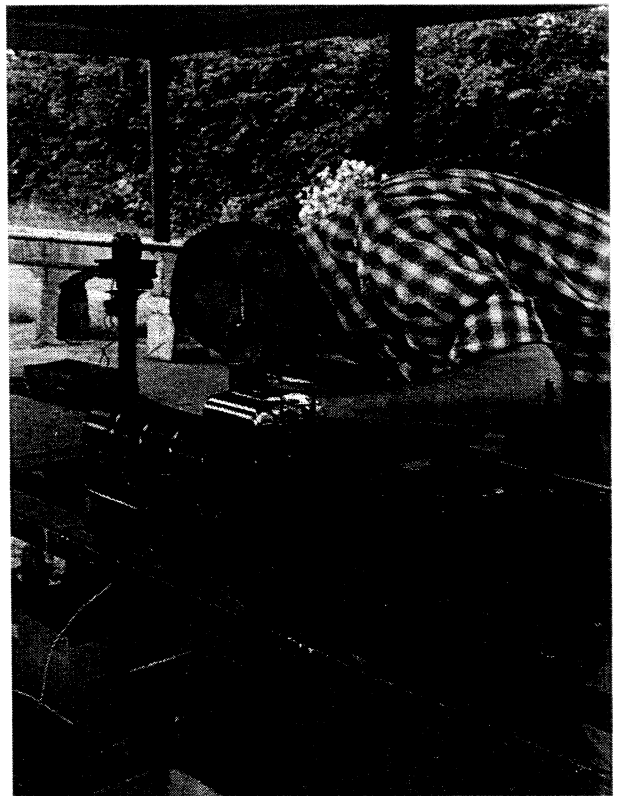
Keen interest as David Wainwright 'brews up'.



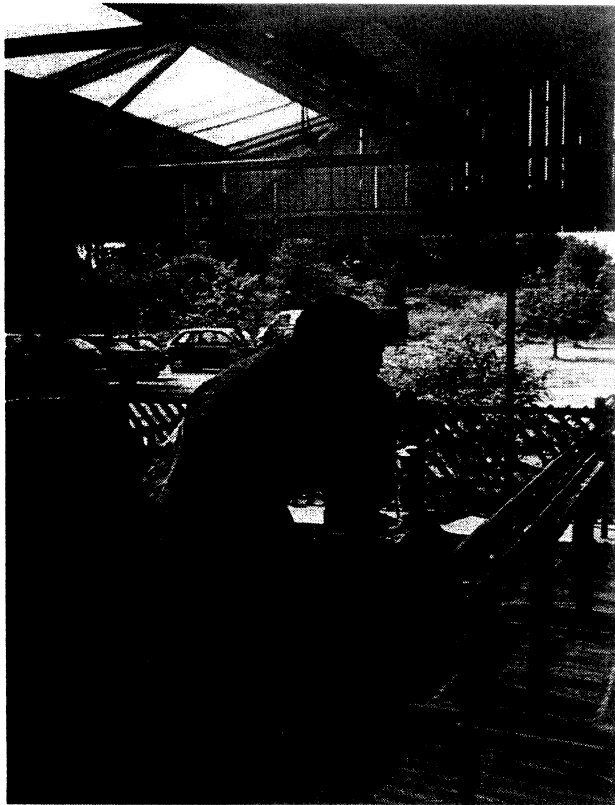
David Wainwright, ready for the road, complete with trademark hat. Although his locomotive performed flawlessly during the morning, David experienced severe starting difficulties, due to poor adhesion, during the competition and retired.



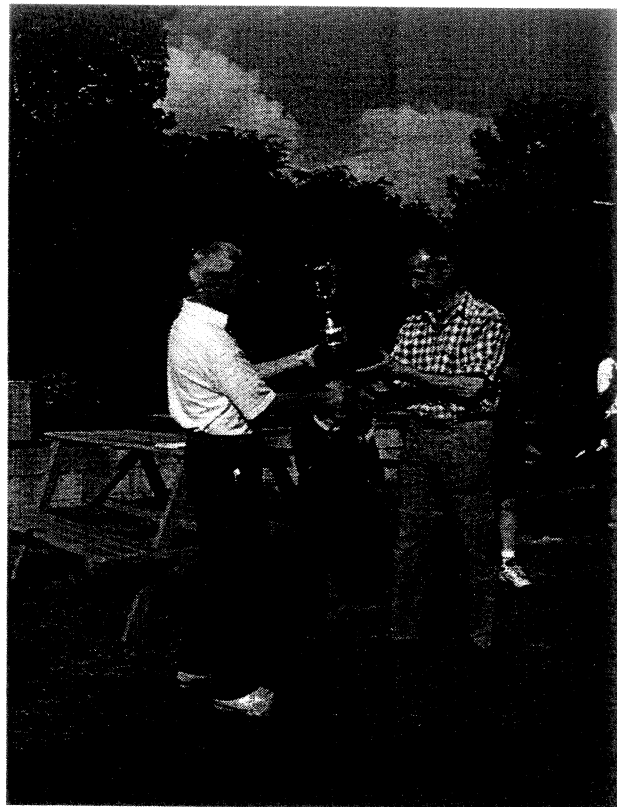
David Neish preparing his 'Lion'. This has been a reliable performer for a number of years. Last year, his son Andrew won the competition driving this locomotive.



Intense concentration as Jon Swindlehurst prepares his model. This year, the preparation certainly paid off.



Modellers representative Allan Bibby breaks off from his loco preparation to give the photographer a greeting. All the arrangements with the host club were made by Allan and the success of the day is due, in no small measure, to all the preparatory work by Allan.



This year's winner, Jon Swindlehurst, receives his award from the OLCO Chairman, John Hawley.



The serious business of the pre-competition briefing. OLCO President E F Clark (far left) observes the proceedings.



After the award, a group shot, showing the competitors together with John Hawley (far left) and Jan Ford (far right).

Lionsmeet Results

Run	Driver	Loco Owner	Distance run meter			Work done meter		
			Start	Finish	Difference	Start	Finish	Difference
1	Andrew Neish	David Neish	2930	7620	4690	15820	49920	34100
2	David Neish	David Neish	8430	12810	4380	54710	85650	30940
3	David Wainwright	David Wainwright	14190	17710	3520	92820	108090	15270
4	Alan Bibby	Alan Bibby	19660	25520	5860	117070	158420	41350
5	Jon Swindlehurst	Jon Swindlehurst	27180	33500	6320	169220	219710	50490

A Card for Christmas

Edward Bawden produced a 'Titfield Thunderbolt' Christmas Card 50 years ago at the time of the making of the film. OLCO President E. F. Clark has obtained permissions for reproduction and, together with OLCO Founding Member Charles Taylor Nobbs, they have financed a print run. The card is illustrated below full size, but only in black-and white. If you are a paid up member, you should find enclosed a sample of the actual card (unless we think you've already seen the coloured version). Mr. E. F. Clark is offering these cards to OLCO Members, complete with envelopes, at 31p each. Even if you've already procured your cards for this year, why not put some in stock for next year? Remember, all profits will go to OLCO.

Please contact:

Mr. E. F. Clark
Ballards
Knotting Green
Bedford MK44 1AA

Telephone: 01234 781224

E-mail: efyec@knottgreen.fsnet.co.uk.



Don't miss future issues of Lionsheart!

If your subscription is not up-to-date, you may find a reminder slip enclosed with this copy of Lionsheart. Remember, £20 to Jon Swindlehurst will give you a full five year's membership – a saving over paying annually.

Subscriptions to:-

Mr J Swindlehurst
Old Locomotive Committee
20 Ford Lane
Upton
Wirral
CH49 0TT

FIREBOX MODIFICATION TO A 5^g LION

I have been running my Lion now for about 8 yrs and have been impressed by how well it performs, particularly its low water consumption. It has run continuously for over 20 mins. on a single tender filling. However, the coal consumption is a very different story, with much frequent shoveling having to take place.

After a couple of hours running the smokebox would be very full, not just ash, but what looked like very small pieces of unburnt coal. At first I tried a larger blast nozzle to reduce the suction but this had little effect on the amount of material being brought through the tubes and steaming was also not as good.

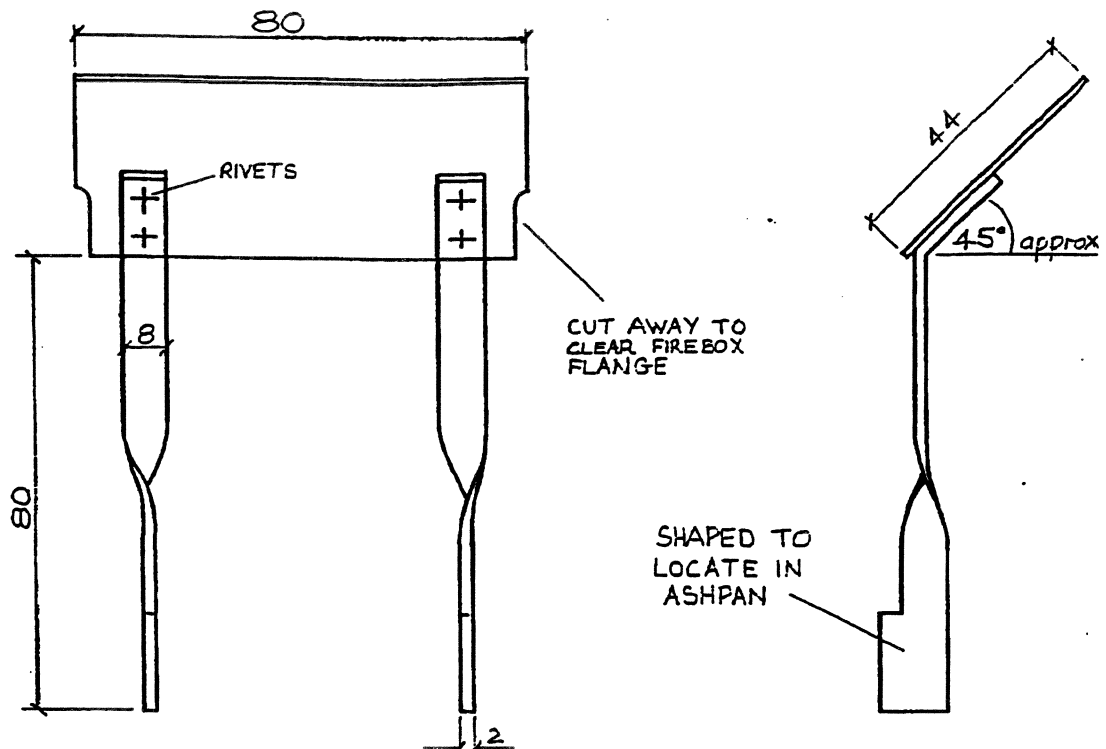
After some further thought I decided to follow the common full size practice of putting an arch into the firebox to deflect the combusting gases towards the backhead thus giving further time for combustion to take place and in my case, lessening the likelihood of small pieces of coal being lifted from the fire and carried to the smokebox. For simplicity I designed my arch to stand on the ashpan, (rather than attach something direct to the firebox), with 2 legs passing through the bars at the front of the grate. Once in position, the arch cannot move as it is held in place by the sides of the firebox and the shape of the legs is such that they locate positively in the grate and ashpan.

I made the first arch out of mild steel for ease of construction just to see if the idea would work. First results were very impressive, although raising steam seemed to take a bit longer. Contents of the smokebox after a run were reduced by about 80% with no apparent effect on steaming during the run. Because the firebox of Lion is quite short the top of the arch extends about half way to the firehole so I have to be careful when shoveling not to throw coal over the top of the arch.

After about 6 runs the mild steel arch was getting very blistered and starting to distort because of thinning metal, so I decided to make a Mk 2 arch from stainless steel, which should last much longer.

For anyone who has problems with their smokebox filling up too much I think my basic idea could be adopted to most locomotives and may well be of benefit.

Jon Swindlehurst



RECALLING AIREDALE FOUNDRY LUNCHEON

Founder Member E. F. Clark recently added to the OLCO Archives some ephemera from an earlier OLCO function – the Airedale Foundry Luncheon in 1989. We are grateful to Mr. Clark for this information. Long-standing members may care to be reminded of the event: more recent members may be interested to hear a little about it.

Locomotive building in the early days was restricted to a handful of locations. Everybody knows the importance of Tyneside, but Leeds was early into the game. 'Lion', of course, was built in 1838 by the

partnership of Todd, Kitson and Laird in Leeds. But, shortly afterwards, the partnership was dissolved and Charles Todd joined with John Shepherd trading from the Railway Foundry. This enterprise survived until 1858. Meanwhile, in 1839, Kitson and Laird traded from Airedale Foundry, ultimately becoming Kitson and Company Limited and continuing a proud record of locomotive building into the 1930s. Airedale Foundry opened on 13th May 1839 and, exactly 150 years later, OLCO held an anniversary luncheon.

AIREDALE FOUNDRY LEEDS
150th ANNIVERSARY

KITSON & CO. LTD.
AIREDALE FOUNDRY
LEEDS-10

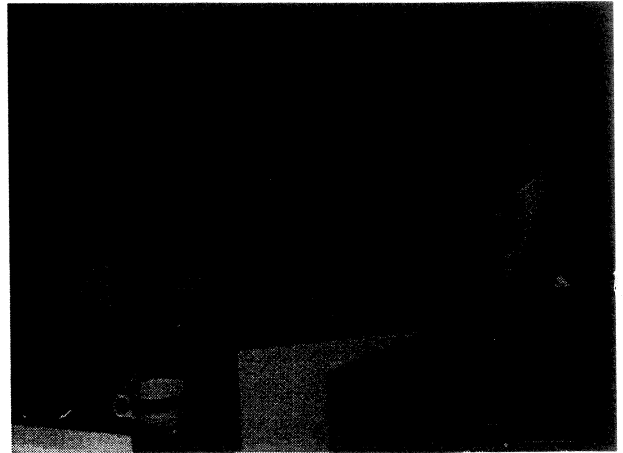
A Luncheon is to be held to celebrate
the opening of
AIREDALE FOUNDRY
Leeds
on 13th May 1839

to be held at
KITSON COLLEGE OF TECHNOLOGY, LEEDS
Cookridge Street, Leeds LS2 8BL
(by kind permission of R. J. O'Brien Esq., Principal)
on
SATURDAY 13th MAY 1989
12.00 noon for 1.00pm
£15.50 per ticket including wine with meal

Applications to:
Airedale Locomotion
Ground Hall
Ground
Stafford ST19 9DB
(an S.N.C. would be appreciated)
Phone: 0113 254 7812/4

The above arrangements may be
modified or cancelled in the
event of difficulties
arising, in which case all
notice will be returned.

PLAN OF
AIREDALE FOUNDRY,
LEEDS.
1923.



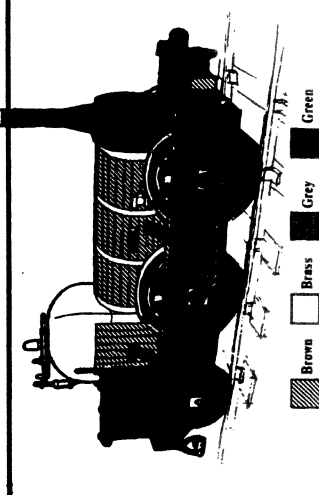
Above: Jan Ford and the much-missed Mike Satow during the lunch. Mike Satow was particularly associated with the building of the 'Locomotion' replica, now at Beamish Museum. He developed an unobtrusive emergency air brake system for this project which has been used on a number of replicas and formed the basis of the emergency braking system on 'Lion'.

Left: The 'flyer' which advertised the event.

PUZZLE PICTURE ANSWER

From 'Lionsheart' Number 55

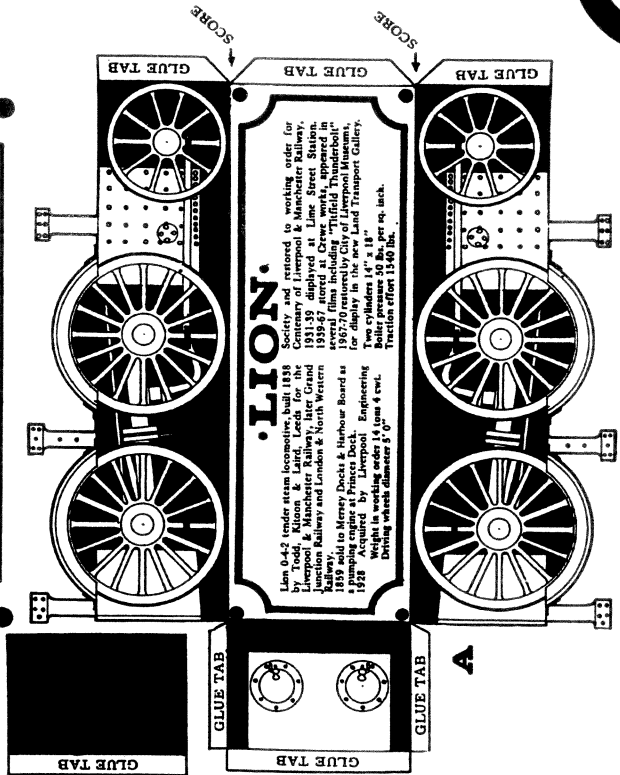
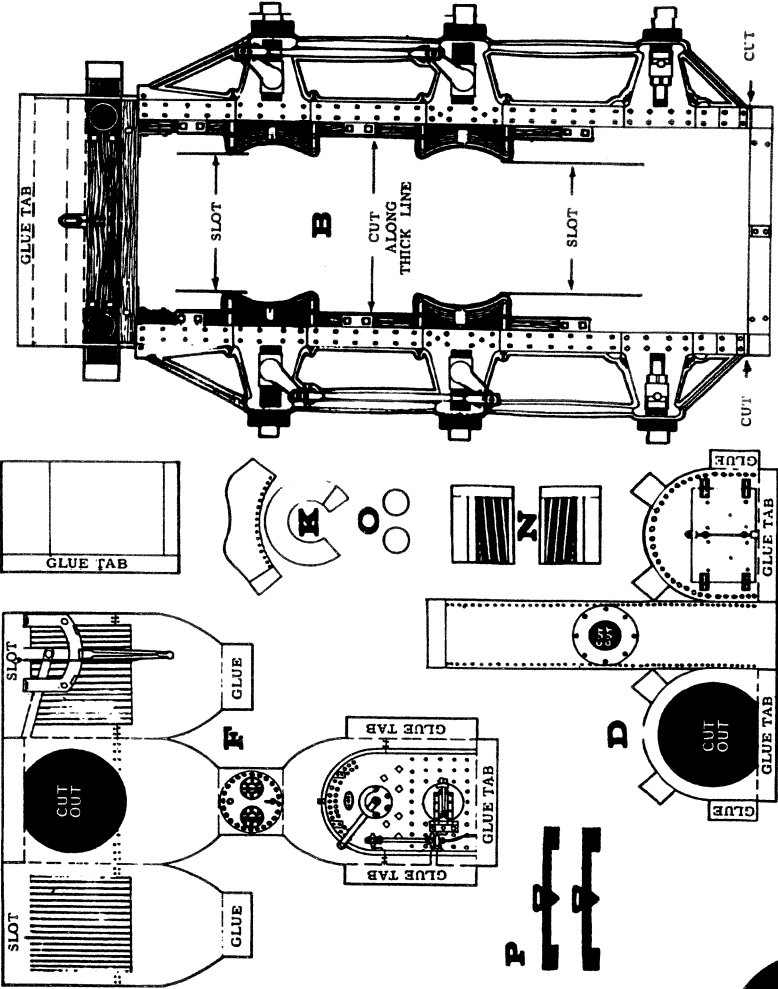
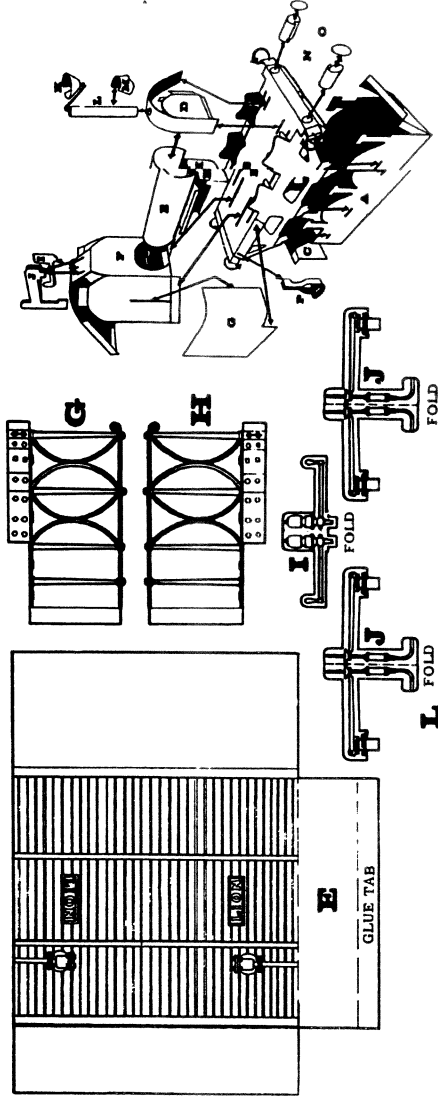
The 'puzzle' in 'Lionsheart' Number 55 wasn't that difficult, was it? Some years ago, Merseyside County Museums (as they were then) produced a card model kit for 'Lion'. It was to a scale of about 10mm to the foot on a sheet of card about 24 inches by 17 inches. It was printed in black, allowing the modeller to choose his own livery. There was no tender. The Editor has seen at least one built up and painted and it looked very well. We'd be interested to learn of others. On the next page, we reproduce the complete sheet (as well as we are able). Eagle-eyed readers may note that the scale is about 4mm to the foot so, if anyone were determined enough, you could build it up and, for instance, put it on a plinth outside a station on a '00' gauge layout.



The Lion locomotive is normally on show at the Merseyside County Museum, William Brown Street, Liverpool L3 8ER

ASSEMBLY INSTRUCTIONS

- 1 If you wish, this model can be painted. The diagram shows the parts to be painted. For best results paint the model before you start assembly. When the paint is dry, cut around outside edge with sharp pair of scissors, and check against diagram.
- 2 Create and cut part A, B & C. Fold part A and glue part C to tabs on A.
- 3 Cut and assemble parts D, E, F & G shown in diagram. Fold part D, E, F & G and glue tabs under D, E, F and G and apply glue. Fix these parts into slots in A as shown. Glue tabs under D, E, F and G.
- 4 Cut and bend part H & G and glue in to position. Fold together parts I and J (if off) and insert into slots in F.
- 5 Cut and roll K, L and M, as shown and glue in to position. Fix parts O onto end and glue in to position. Fix parts N (2 off) to form buffers glue in to position. Fix parts O onto end and glue in.
- 6 Cut out strips and glue as shown.



LION.
 Society was ordered to working order for the Centenary of Liverpool & Manchester Railway, 191-39 displayed at Lime Street Station, Liverpool & Manchester Railway, later Grand Central Railway and London & North Western Railway. It was preserved at Crewe, Cheshire, in 1959 sold to Mersey Docks & Harbour Board as a museum piece. It was restored by City of Liverpool Museum, 1962-70 restored by City of Liverpool Museum, 1978. Acquired by Liverpool Engineering Society in 1978. It is on display at the Liverpool Engineering Society, 19-21, Seacombe Road, Seacombe, Merseyside. Weight in working order 14 tons 4 cwt. Driving wheels diameter 5' 0". Tractive effort 13,400 lbs.

