

# LIONSHEART

Number 55

July 2003

## LIONSMEET GOES TO EREWASH VALLEY

This year's 'Lionsmeet' is being held at the track of the Erewash Valley Model Engineering Society on Saturday, 16<sup>th</sup> August 2003. We do hope that OLCO Members will be able to attend in force and you are welcome to bring guests. Even if you don't have a 'Lion' to enter in the competition, you are assured of

an entertaining day. The host club invariably makes a big effort to make OLCO Members welcome so, in appreciation, we hope to make a strong showing. Please do try to attend. Full details of the event are given on page 9.

## IMLEC 2003

John Hawley

You (may have) heard it here first. Congratulations to David Neish on his superb run with Bessborough, coming third in what appeared to be a Guildford MES benefit event at Bristol on 12<sup>th</sup>/13<sup>th</sup> July, in the most wonderful weather one could ask for. The first three places were:

1 <sup>st</sup>	John Ellis (Sutton), on Geoff Moore's	LBSC	Minx	0-6-0	@	2.456%
2 <sup>nd</sup>	Geoff Moore (Guildford) on his own	LNER B1	Impala	4-6-0	@	2.383%
3 <sup>rd</sup>	David Neish (Guildford)	LBSCR J2	Bessborough	4-6-2T	@	2.314%

All were 5" gauge.

The 3 1/2" gauge competition was won by:

Tony Huxtable from North Devon MES on his SR S15 Greene King 4-6-0 with 0.576" efficiency.

## OLCO AGM 7<sup>th</sup> JUNE 2003

Once again, the AGM was held at the Museum of Science and Industry in Manchester, allowing members who attended to clamber over the 12-inches-to-the-foot 'Lion'. Full report on page 5.

The 'Planet' replica was giving rides outside and members were able to have footplate rides during the hour prior to the AGM starting. Watching Jan Ford

struggle to reverse the 'Planet', which features the same slip eccentric reversing gear as 'Rocket', clearly demonstrated the relative sophistication of the gab motion on 'Lion'! The "felicitous" mechanism of the Link Motion (as D.K. Clark referred to it) which permitted variable cut-off was still a few years away when 'Lion' was built.

## View from the Chair

John Hawley

### *Reflections on the AGM*

Well, that's another AGM under our collective belt. My thanks to all who took the trouble to attend though we did miss some familiar faces. The AGM is one of only two regular events in which we all have the opportunity to meet each other during the year, the

other being Lionsmeet, which is imminent (see elsewhere in this issue). Mind you, for some, if not all, there is the hidden agenda at AGM that we get the chance to see Lion, even if it does involve the expenditure of a certain amount of elbow grease. For my part, I had to endure a certain amount of ribbing as I tried to establish the angular relationship between the outside cranks and the various features on the coupled

wheels. However, I think I've cracked that problem now, provided I can interpret my rather scrawled sketches.

You will find the AGM Minutes in this issue of Lionsheart, so I will apologise now if I repeat any of the comments therein. However, I would like to express my thanks to all who have supported me during the past year in official or unofficial capacities. At various times in the past I have dabbled in some of the tasks involved in running OLCO and can appreciate the work involved. My special thanks to Bill Stubbs, who so gallantly stepped in at Lionsmeet 2002 to become Acting Editor, a task I think we can all agree that he has carried out in exemplary style. I must admit to a certain nervousness though, when he asked me how good was my singing voice? I had fears that we were all going to have to sing the 'OLCO anthem' at the AGM, so ably penned by Bill on page 10 of the last issue. Luckily though, they couldn't get the piano in through the museum door. However, it seemed to have the desired effect. Quite a few turned up for the meeting. Thank you, Bill, for all your work.

### **Welcome Jan**

Sadly, Bill has declined the opportunity to carry on the duty on a full time basis. However, I have no qualms in extending a warm welcome to Jan Ford, elected unanimously at the meeting, though she did warn us that she is very hard pressed by business commitments. Jan was OLCO Secretary between May 1989 and November 1994 and was closely associated with the editing and production of Lionsheart during that period. Jan has been associated with the railway preservation movement for a number of years and has driven more main line steam locos than I've had hot dinners, including some of the giants of Indian Railways. I once had the pleasure of taking driving lessons from her on GWR Castle class Defiant at Tyseley, in Birmingham, on a freezing day some years ago.

So, copy please, to Jan, in whatever format she specifies in these pages. Don't forget, a news letter Editor's job is most difficult when there is nothing to issue, so get to it, with pen, typewriter or good old fashioned PC, using post, plain email or email with attachments. We all have a story, anecdote, query, problem or grouse and it's so much better out in the open. Just think – if each OLCO member wrote just one item a year, we would be swamped – but don't let that stop you!

### **The Chairman's Loco**

Ah, I sense a few sage heads nodding in agreement. My knowledge of inverted commas and their application is limited, but I think the heading is correct. Now that I've retired, people are expecting piles of swarf to be issuing from my workshop. Alas, if only it were so simple. The normal duties of any husband/householder are bad enough, but somehow I've been roped into the organisation of the Bristol Model Engineering and Hobbies Exhibition in August,

so model work has had to remain on a back burner (well, that's the current excuse). The exhibition runs from 15<sup>th</sup> – 17<sup>th</sup> August in the Leisure Centre, Thornbury, just a few miles north of Bristol and close to J14 or 15 of the M5 and J20 of the M4. Do come along and make yourself known at the OLCO stand. Don't miss Lionsmeet, though, details of which are in this issue.

### **The Scale of the Problem**

Talking of modelling, the other thing on my mind right now is the small matter of scale. What is the correct scale for 7 ¼" gauge? One immediately suggests 1/8<sup>th</sup>, but dividing 7 ¼" into 4' 8 ½" gives 1/7.8, give or take a gnat's. I'm not sure that working to specific fractions of a foot (ie, 1 1/16" to the foot for 5" gauge, 1 ½" to the foot for 7 ¼" gauge, etc) is particularly helpful anyway. Very few of the full size dimensions we work to are anything like tidy whole feet or neat fractions of a foot and with modern pocket calculators, the business of scaling down any dimension to any scale is no problem. Then again, the model wheel standards do create a problem in that they are not to scale on the tyre width. In cases of limited clearance as on Lion, we could run into a few nasties, unless some thought is directed at the problem in the early stages. I have my own ideas, which I may divulge as I start work, but for now it's over to **you**. Drop us a line (via Lionsheart of course) and let's get some discussion going.

### **Lionsmeet – the future**

Andrew Neish, last year's winner, has put forward an interesting proposition. He writes: "I would like to suggest a change. The winner is currently required to produce the most work done in a fixed time. Could we perhaps change this to "most work from a fixed amount of coal" (say a firebox full), with no time limit. This would be a truer efficiency competition and would reduce the temptation to drive at excessive speed! What do you think? Additionally, if everyone pulled the same load (as last year), then we could dispense with the dynamometer car and simply count laps, with the winner travelling the furthest."

Again, over to **you**. Certainly the dynamometer car is an extremely useful tool for our purposes at Lionsmeet, enabling reasonable comparisons to be made over successive years, though variations in venue and weather conditions have to be taken into account. However, it is asking a lot to expect Andrew's father, David, (one of OLCO's founders), to have to lug his Lion *and* the dynamometer car to whatever site we compete at. We owe David a lot for the work he has done so far and of course, our thanks go to Guildford MES for their willingness to let us have the car for so many years without a break.

Mind you, "most work from a fixed amount of coal" can bring its own difficulties. Being involved in a very minor capacity in this year's IMLEC at Bristol has given me a bit of an insight into the 'tricks of the trade'. We have people who increase their tractive

capacity by tying on lumps of lead wherever they can. We have people who pack their fireboxes to the limit with charcoal before going on to the measured coal. We have people who 'adjust' their spring loadings to put more weight onto the driving wheels. I expect there are other dodges as well. What do **you** think?

### *The Annual Dinner*

This has virtually disappeared now, with people having to make long journeys home on clogged motorways or dubious railways. However, Peter Mountford took the trouble to organise just such an event after the AGM. He made it early, so that we avoided the delay between museum and restaurant and could get away before it got really late. The first venue fell through, I'm not sure why, so several of us repaired to Dimitri's Greek Restaurant, just a few yards from the museum, where OLCO have eaten in the past. After some discussion about what was what, we enjoyed the meal, said our goodbyes and went our separate ways.

When Lion is eventually returned to her home in Liverpool, those who enjoy Greek food might do worse than to take the trouble to seek out Eureka, which is to be found behind Myrtle Parade, near Edge Hill. Under the watchful eye of proprietor George Iakovakis, this is a real Greek experience, though not, I hasten to assure you, to the extent that we all link arms and do 'the

dance'. (And no, I've not been promised a free meal!).

John Hawley

---

### *Tailpiece*

From City Diary, The Times Business section, 9<sup>th</sup> July 2003.

### **"Sight unseen**

GNER, the East Coast rail operator, is running a series of ads featuring great vistas that can be seen from the windows of its first class service. "If only it had a balcony," says one, featuring a view of a headland topped by a rather distinctive tower.

Very distinctive; it is Stepper Point on the north coast of Cornwall, about 300 miles from the nearest GNER line and 30 miles from any railway for that matter. The ads are, er, "illustrative", the company admits. "On a clear day you can see for miles – but not that far."

Makes one wonder what can be seen from second class. Any suggestions?

---

## The "Lion" Locomotive

### LIVERPOOL AND MANCHESTER RAILWAY, 1838

The following is from The Engineer, Nov 14, 1930 (p535).  
The original text has been retained and only minor changes have been made.

Perhaps the most interesting feature of the Liverpool and Manchester Railway Centenary Celebrations, held at Liverpool from September 13<sup>th</sup>, was the "Train of 1830" drawn by the reconstructed "Lion", which carried passengers round a circular railway specially laid down at the Wavertree ground.

According to Wishaw, this locomotive was built for the Liverpool and Manchester Railway in 1838 by Messrs. Todd and Co. It now appears that the company consisted of Charles Todd, James Kitson and a Laird, and that they began manufacturing early in 1838. In 1839 Kitson and Laird withdrew and started a new firm, which has developed into the present Kitson and Co., while Todd continued the original business with a new partner under the title Shepherd and Todd of the Railway Foundry. After 1846 the foundry was carried on by E. B. Wilson and was eventually acquired by Messrs. Manning, Wardle and Co.

Two engines, the "Lion" and the "Tiger," were built at about the same time; the "Lion" is believed to have been delivered in July, 1838, and both were at work before October of that year. Edward Woods, the company's engineer at that time, when sending out a specification for new boilers, quoted these engines as examples to be followed as regards materials and

workmanship. The "Lion" was No. 57 on the company's list and was taken over, with other stock, by the Grand Junction Railway in August 1845. In 1846, when the London and North-Western Railway was formed by further amalgamation, it became No. 116 of that line.

The "Lion" was sold for the sum of £400 to the Mersey Docks and Harbour Board on May 26<sup>th</sup>, 1859, and worked as a pumping engine at Princes Graving Dock from that date until August 1928, when it was presented by the Board to the Liverpool Engineering Society, whose property it remains, in order that it might be preserved for the city of Liverpool. It has been restored during the present year in the Crewe shops of the London, Midland and Scottish Railway, with the assistance of Mr. J. G. H. Warren.

The engine is of the inside cylinder, 0-4-2 type, which was one of the forms of six-wheeled engine introduced by Robert Stephenson in 1833, and extensively copied by other engine builders. The cylinders are now 14in. diameter by 18in. stroke, but the figures given by Wishaw in 1840 were 11in. diameter and 20in. stroke. In a list of about 1846, by John Dewrance, who succeeded Edward Woods, the cylinder diameter is given as 12in. and the stroke as

18in., so that it would appear that the cylinders were changed for larger sizes at least twice, but the changes were no doubt made before the engine ceased work as a locomotive.

The driving wheels are 5ft. diameter and the trailing pair 42in. diameter. The wheelbase is 12ft., equally divided. The cylinders are placed low down so that the piston-rods pass below the leading axle with an upwards inclination of 1 in 13. The valve chests are placed on the tops of the cylinders, as was then usual, and the valves are driven through rocking levers, the upper ends of which are connected with the valve spindles, while their lower ends carry pins with which the eccentric rods engage.

The valve gear is of the four-excentric type, introduced in 1835, in which, for each cylinder, there is a fixed excentric for each direction of motion, and the excentric rod ends are provided with notches or gabs that engage with the pins on the valve levers. The gabs are furnished with spreading jaws or forks, which enable them to engage with the pins without the aid of hand levers on the footplate.

The reversing gear is that variety of the forked gab type introduced about 1840 and usually associated with the name of William Buddicom, who was Edward Wood's assistant at the Liverpool end of the line. In this form the forks of the excentric rods face one another and the rod ends are linked to levers on a reversing shaft placed below them, so that both are lowered or raised together, and either the upper or lower gab is engaged with the pin of the valve lever.

The valves now on the engine have an outside lap of 13/16in. and a travel of 3 13/16in., the cut-off being 81 per cent. When the engine was built the valves had little or no lap, but Woods records that all the Liverpool and Manchester engines were altered or provided with new cylinders and valves, with lap and longer travel, between 1840 and 1842. It was probably at that time that the 12in. by 18in. cylinders were fitted, and very likely the present valve gear as well.

The engine has outside sandwich frames of wood between iron plates, the axle-box horns being bolted to them. Inside the wheels there are two wrought frames – extending from the smoke-box to the fire-box – which carry extra bearings for the crank axle only. The springs for the coupled axles are mounted above the frames, and those for the trailing axle below them. The boiler and cylinders are supported by brackets from the outside frames. The guide bars are carried at the front end by the cylinder covers and at the rear end by spectacle plates hanging from the middle boiler support.

The present boiler is of comparatively late date, somewhat larger than the original one, and having a very high fire-box crown. It is not certain what kind of outer fire-box the “Lion” originally had. Liverpool and Manchester engines of the period usually had a slightly raised crown, but Kitson and Laird appear to have favoured the haystack form in their early engines, so that, if they had a free hand in the design of the “Lion”, its fire-box may have had that form. In the reconstruction the high crown of the existing boiler has been masked by a cover of the haystack form. Whishaw gives the original boiler dimensions as:- Barrel, 39in. by 42in. and 7.4ft. long; 126 tubes, 1.625in. diameter diameter and 8ft. long; inner fire-box, 30in. long, 39in. wide and 36in. from grate to crown. The total heating surface was 460.3 square feet and the grate area 8.12 square feet. The steam pressure was 50 lb. Per square inch and the tractive effort at 85 per cent. Boiler pressure is 2499ib. with the present cylinders. The regulator is within the fire-box crown, which is surmounted by two lever safety valves loaded by Salter spring balances; these balances also serve to indicate roughly the steam pressure. Edward Woods' boiler specification of October 1838, required a dome over the firebox with one safety valve, as well as a second dome, another safety valve on a pillar, and a manhole on the boiler barrel.

The weight of the “Tiger”, which was closely like the “Lion”, is given by Whishaw as 14.47 tons; in its present state the “Lion” weighs 18.85 tons.

The four-wheeled tender has been adapted from an early tender from the Furness Railway, and is very similar to those in use about 1840. The engine and tender together weigh 26.55 tons, and their overall length is 32.74ft.

The train drawn by the “Lion” consisted of replicas of the first and second-class coaches of 1830, evidently based on the well-known Ackermann prints. The first-class coaches were excellent copies of the reconstructed model of the coach “Experiment”, dated from 1834, now belonging to the L.M.S. Railway; but the second-class vehicles, while being apparently copied from the Ackermann prints, were incorrect in that they were seatless. The tickets issued for these were described at the booking office as “third class” instead of second; third class did not, of course, exist in 1830.

The “Lion” is to be given a place of honour at Lime-street Station, Liverpool, over the buffer stops between platforms Nos. 3 and 4.

---

## Editor's Piece

Jan Ford

Many thanks to Bill Stubbs for the excellent editions of ‘Lionsheart’ produced whilst he was “in the chair”. Sadly, despite my voluble protests, I was apparently elected unanimously to replace Bill. I'm afraid that this present edition of ‘Lionsheart’ is something of an

‘austerity’ publication because of time pressures and the rapidly-approaching ‘Lionsmeet’. We'll see if something like normal service can be resumed in the future. You can help to ensure that by forwarding articles, photographs and news items for inclusion in

future editions. Even if you've not tried your hand at being published before, your contributions are welcome (although the Editor does reserve the right to adapt or amend to suit the vagaries of our method of publication). If you can supply material in electronic format by e-mail, that's ideal, but floppy disk is fine. 'Word', Rich Text Format or old-fashioned DOS text is OK. But if you have no truck with these new-fangled ideas, manuscript or typewritten on paper is equally acceptable. It's the content that's important.

- 0 -

The Editorial Offices are now as below:-

Ms. Jan Ford  
The Old Locomotive Committee  
Brewood Hall  
Brewood  
Stafford  
ST19 9DB

Telephone: 01902 850095 (evenings)  
e-mail: [jan@fordelectronics.co.uk](mailto:jan@fordelectronics.co.uk)

---

## Minutes of the Nineteenth Annual General Meeting

Held at the Museum of Science and Industry in Manchester on Saturday, 7<sup>th</sup> June 2003, following a cleaning session on LION in the morning.

### Present:

John Hawley (Chairman)  
Peter Mountford (Secretary/Treasurer)  
Alan Bibby (Modellers' Representative)  
John Archer  
Jan Ford  
Alfred Lloyd  
John Mills  
Jon Swindlehurst  
David Wainwright

The Chairman opened the meeting by thanking Nick Forder and the Museum for providing facilities to hold the AGM, members for their attendance and welcoming the new members.

### Apologies:

J Brandrick  
E F Clark  
I Kemp  
D Neish  
C Taylor-Nobbs  
W Stubbs  
S Brown (Liverpool Museum)

### Minutes of the Eighteenth AGM:

The minutes having been circulated in LIONSHEART were taken as read and approved (proposed Jan Ford, seconded Jon Swindlehurst).

### Chairman's report:

The Chairman read his report and a copy is appended. The report was accepted (proposed Jan Ford, seconded Jon Swindlehurst).

### Treasurer's report:

Jon Swindlehurst, on behalf of the Treasurer, tabled the Financial Statement and Treasurer's report for the year ending 31<sup>st</sup> March 2003. A copy is appended. The Treasurer's report was accepted (proposed Jan Ford, seconded Alfred Lloyd). The Chairman thanked Jon for his work in assisting the Treasurer.

### Election of Officers:

It was agreed that the Chairman, Secretary and Modellers' Representative be re-elected for a further term. Jon Swindlehurst was proposed as Treasurer (proposed Peter Mountford, seconded Alan Bibby). This was agreed by all. Jan Ford was proposed as

LIONSHEART Editor (proposed Peter Mountford, seconded Alfred Lloyd). This was agreed by all.

### Other Business:

*Removal of 5 year limit for office bearers:* Peter Mountford raised the subject of the 5 year limit and suggested that as no practical reason existed and that it could cause problems in filling positions (*vis a vis* the post of Treasurer at the 2002 AGM) it be deleted from the Constitution. Also office bearers would not be obligated to stand and should the Committee not wish an office bearer to continue it could do this by not re-electing the individual. The Constitution precluded any action being taken on this matter without formal notice and without adequate attendance at the AGM. It was agreed that the Chairman and Secretary look into ways to amend the constitution to better meet the needs of the Committee and Members.

*2008 Liverpool Capital of Culture; Re-steaming of Lion:* With the potential influx of funding to Liverpool following its nomination as the Capital of Culture it was suggested that the Liverpool Museum and the Liverpool Council be urged to finance the refurbishment of Lion so that she could once again operate under her own steam (!) It was proposed by Peter Mountford and seconded by Jan Ford that the necessary approaches be made.

*Lionsmeet 2003:* Alan Bibby reported that he had written to Engineering in Miniature and Model Engineer and enquired about placing an advert in the latter. In view of the cost and limited benefit from such adverts it was agreed not to go ahead. He added that he had placed an advert in the Northern Association of Model Engineers magazine and would also be sending posters to clubs in the Area. Alan mentioned that he was compiling a list of individuals who had built/owned Lions with view to encouraging them to participate in future Lionsmeets.

*Membership list:* John Hawley proposed that the Treasurer maintain the official copy of the OLCO membership list and that this should be available only to committee members. This was seconded by Jan Ford and agreed by all.

*Yellow Book:* John Hawley advised that he had been in contact with Sharon Brown but little progress had been made towards production of an updated version of the Yellow Book. Peter Mountford suggested that as



I hope that the AGM goes well and please pass on my best wishes to all OLCO members.”

### Liverpool – City of Culture

We must not let this opportunity pass without offering congratulations to Liverpool on recently gaining European City of Culture status. This accolade must surely add to the sense of pride that its inhabitants already feel for their city and will surely add impetus and financial muscle to the various projects planned or indeed already under way.

### Welcome to New Members

We extend a warm welcome to recent new members John Archer, David Boydell, Stephen Jackson and John Mills. We wish them an enjoyable and beneficial membership.

The Old Locomotive Committee  
has pleasure in announcing that

# LIONSMEET

will be hosted this year by the  
Erewash Valley  
Model Engineering Society  
at their excellent track site at Borrowwash on  
Saturday 16th August 2003

Lionsmeet is an informal annual gathering of all those with an interest in Lion in all its manifestations and gauges. All such persons are invited to bring their locomotives, in any gauge, finished or not, and any Lion memorabilia they may have to the event for display or demonstration. There will be an competition, limited to 3½" and 5" gauge engines, to establish the hardest working Lion based on the measurement of work done by the engine during a ten minute run. The track will be open to those wishing to practice from 10.00 am and the competition will start at 2.00pm Period dress is optional. Prior application is unnecessary, but further information and directions are available by emailed request to:  
alan\_pb@yahoo.co.uk, or phone 01254 812049.

