

LIONSHEART

Number 31

September 1993

GOOD TURNOUT FOR LIONSMEET



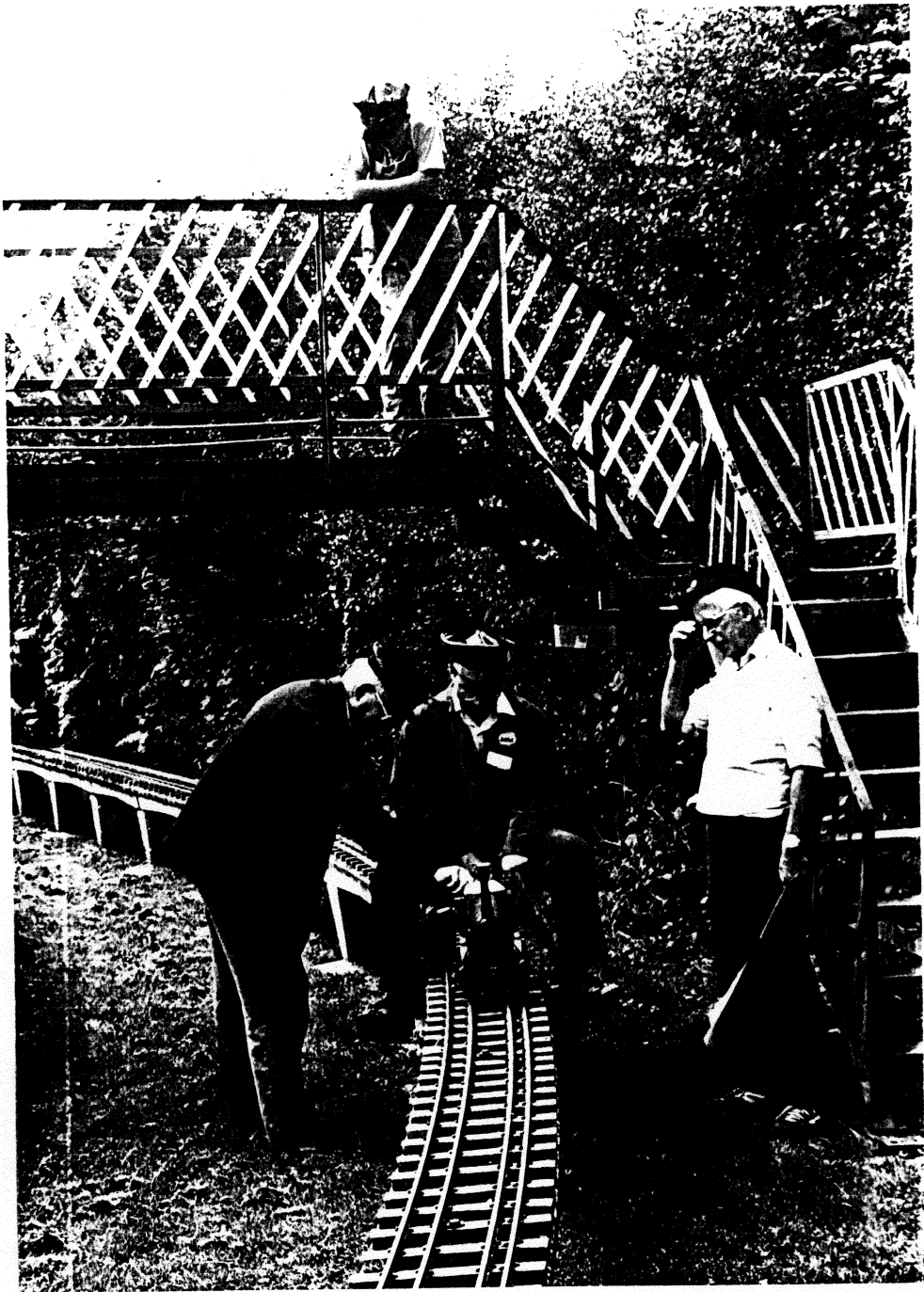
LIONSMEET this year was well-supported and we're grateful to High Wycombe M.E.S. for making us so welcome.

Our picture shows Mike Parrott tackling the gradient past the steaming bays hauling a heavy load and watched by quite a crowd.

No less than seven working LIONS were on view, plus two others in course of erection.

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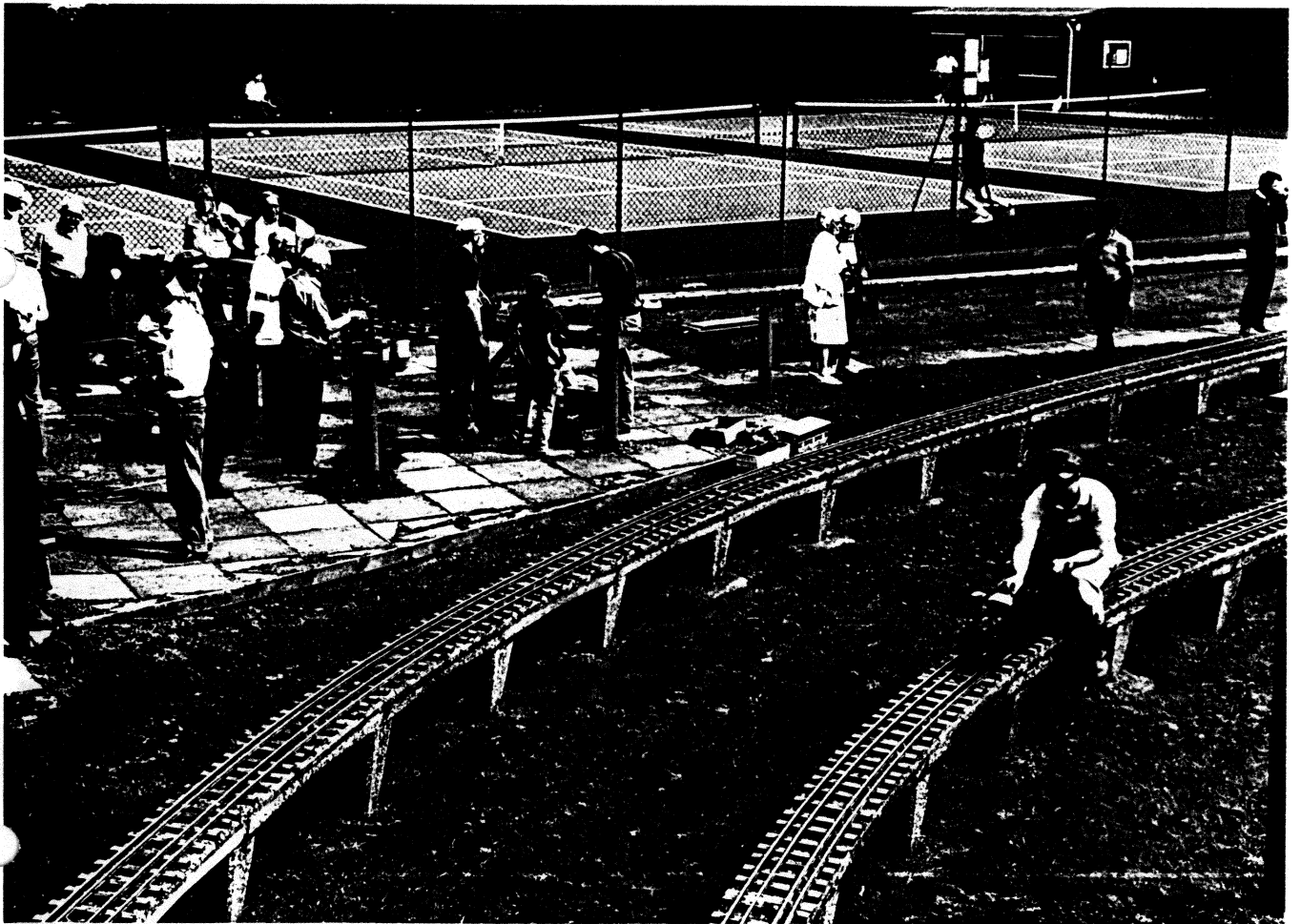
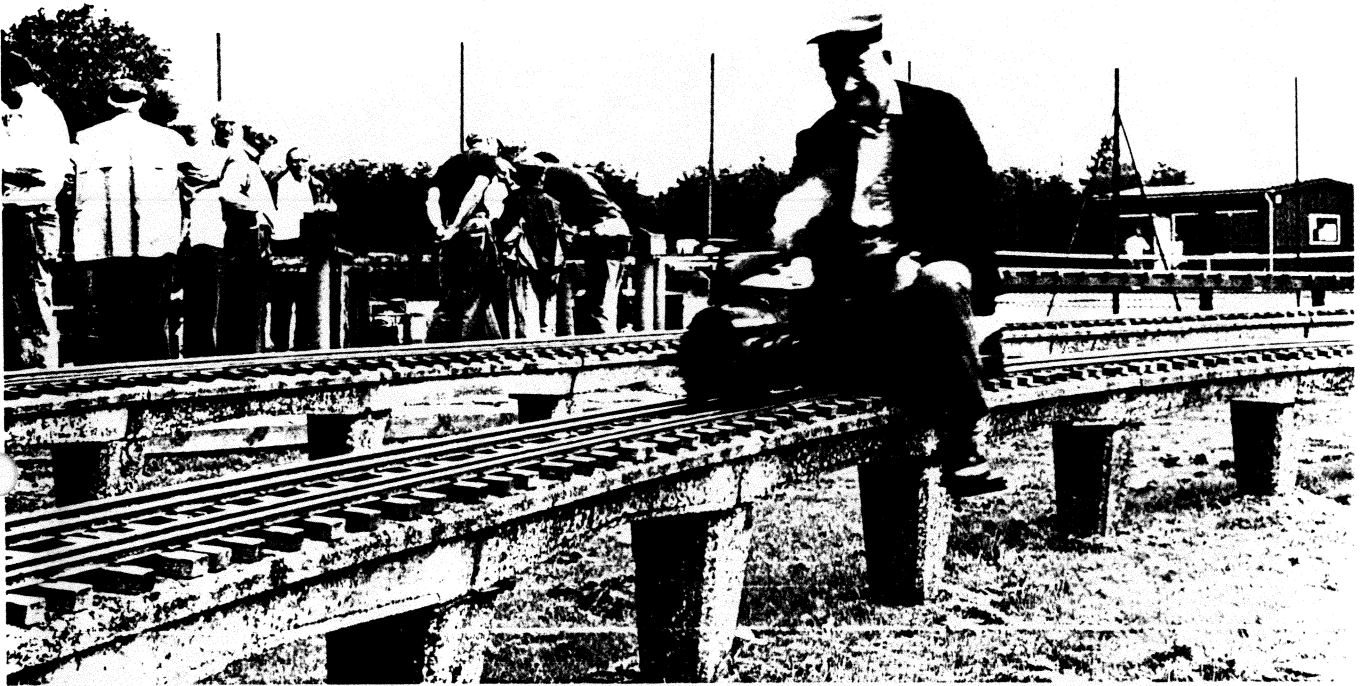


LIONSMEET IN PICTURES

Above: David Neish (left) makes a check of his model, whilst Andrew Neish waits for the green flag. The flagman is used to prevent drivers approaching the traverser whilst locomotives are moving to and from the steaming bays. Edward Parrott watches from the footbridge. (Photo: Jan Ford)

Opposite page, top: David Neish at speed during the morning session. In the background, considerable activity around the steaming bays as other locomotives are prepared. (Photo: Jan Ford)

Opposite page, bottom: Mike Parrott at the same location. The higher angle shows the steaming bays radiating from the turntable and, in the background, the tennis players oblivious to the live steam activity! (Photo: Jan Ford)





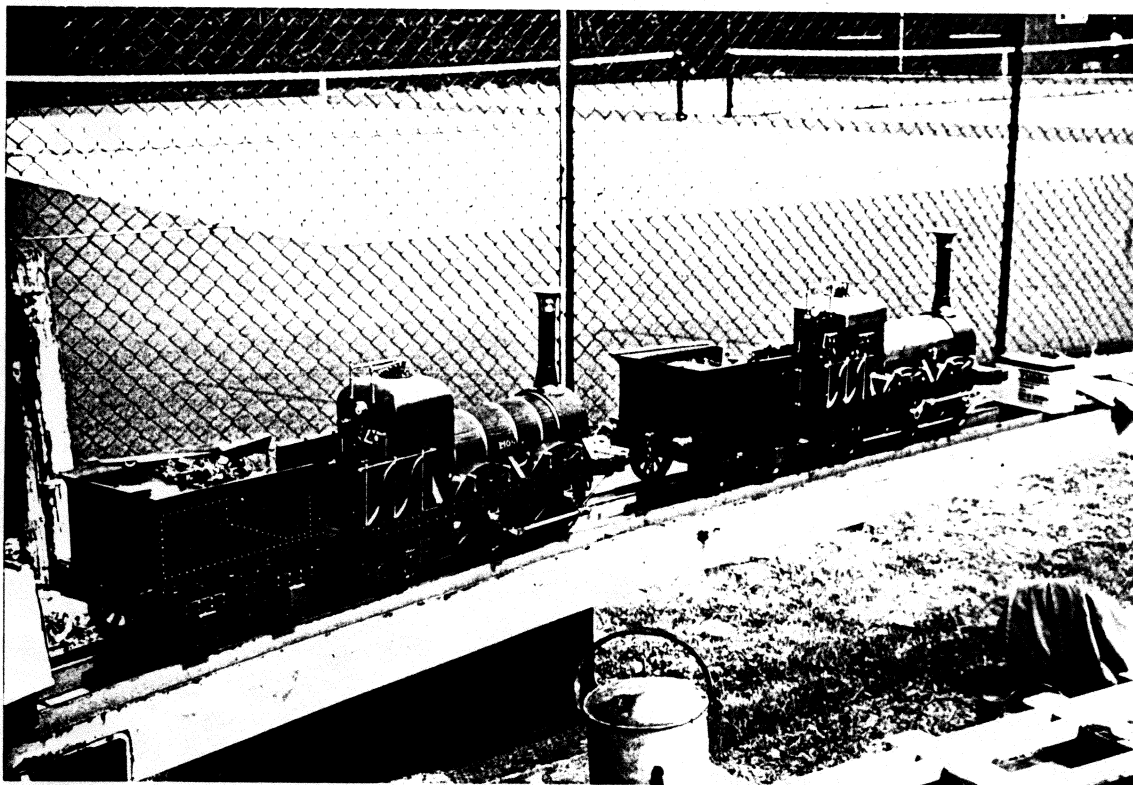
LIONSMEET 1993

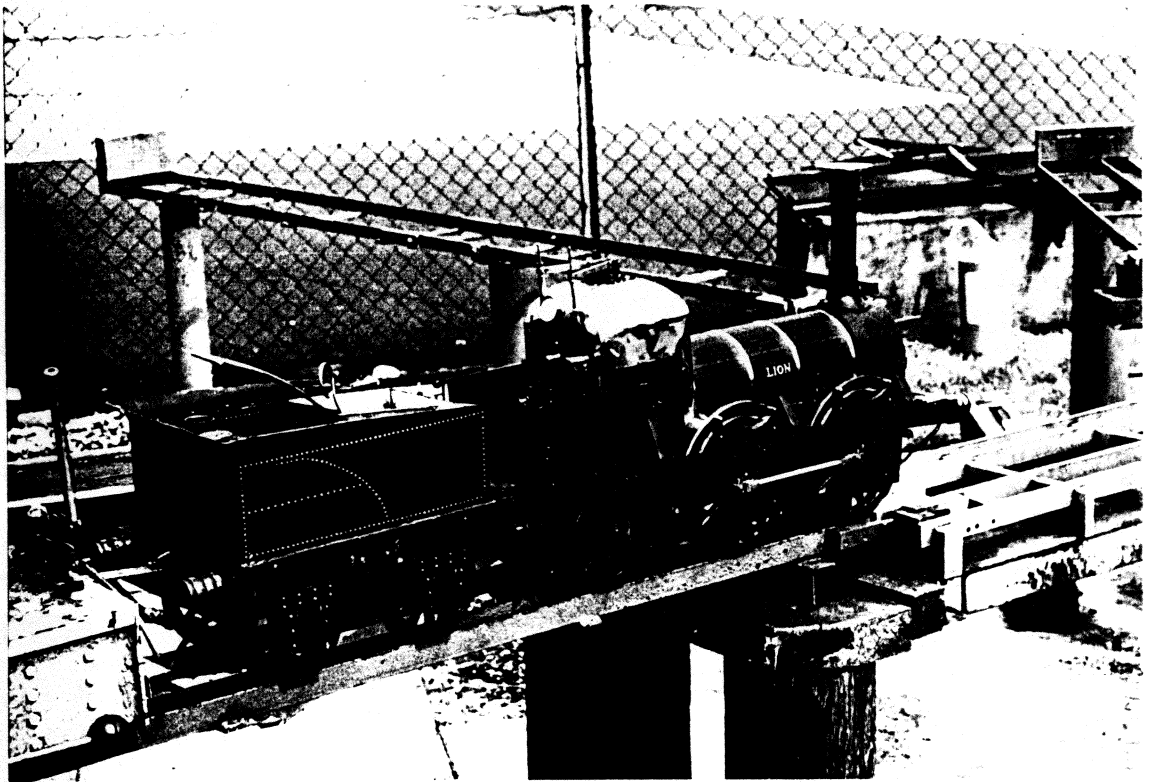
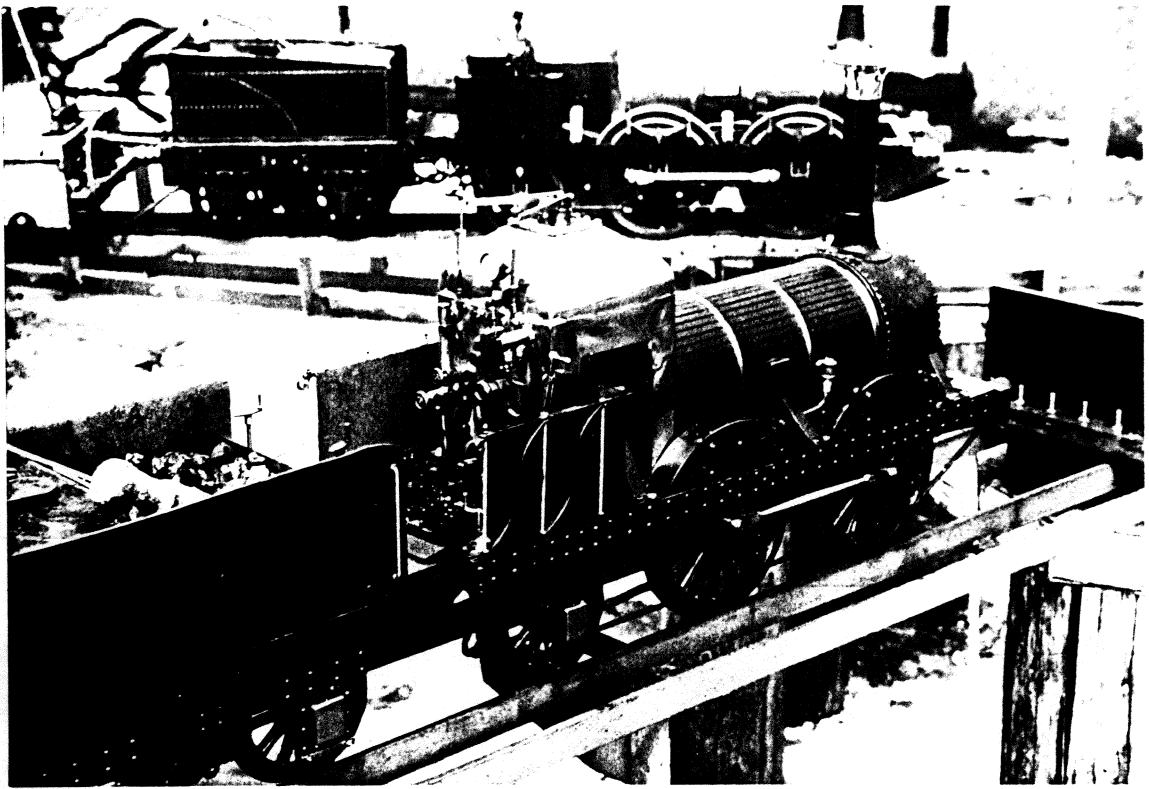
Opposite page, top: John Kidger, of Cheltenham M.E.S., prepares his 'Lion'.
(Photo: Jan Ford)

Opposite page, bottom: Peter Taylor, also from Cheltenham, beside his 'Lion'.
John Kidger looks on (Photo: Jan Ford)

This page, top: A nice study of two LIONS with Peter Taylor's on the left, John
Kidger's on the right. (Photo: A. Hall-Patch)

This page, bottom: Jan Ford tries out Bob Davies's LION. Bob Davies is on the
passenger truck and Mr. Davies senior stands on the right. (Photo: A. Hall-
Patch).





This page, top: The footplate fittings show up clearly on this study of Mike Cox's LION. Although initially steamed in the morning, this loco. was 'failed' by Mike and was unable to compete for the Chairman's Trophy (Photo: A. Hall-Patch).

This page, bottom: The clean lines of Mike Parrott's LION. Although Mike had carried out some work on his model, it wasn't enough to win back the Chairman's Trophy, which Mike has held a number of times. (Photo: A. Hall-Patch)

Opposite page, top: This low-level shot gives a good impression of the bulk of Peter Gardner's 7-1/4" LION, built by Eric Lindsey. (Photo: Jan Ford)

Opposite page, bottom: Edward Parrott makes a close inspection of the 7-1/4" LION as she prepares to leave the station. (Photo: Jan Ford)

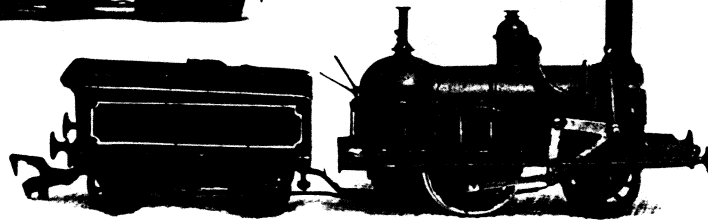
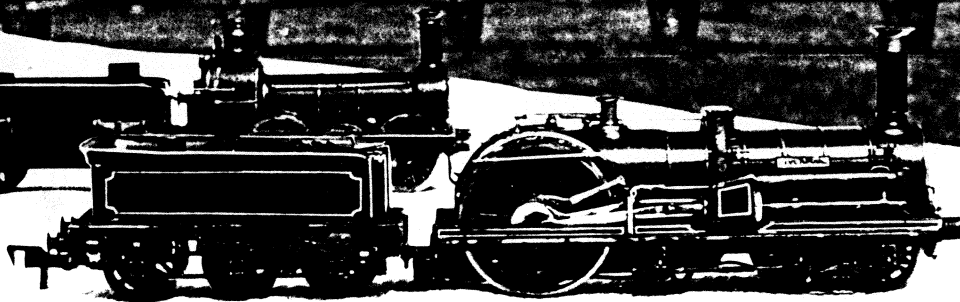
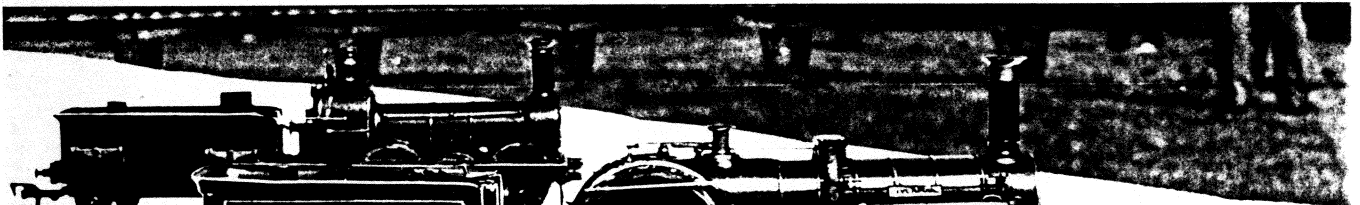
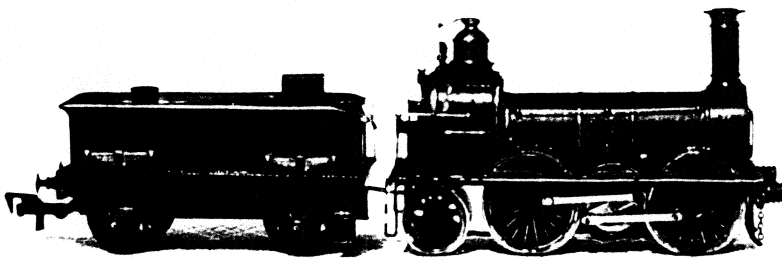




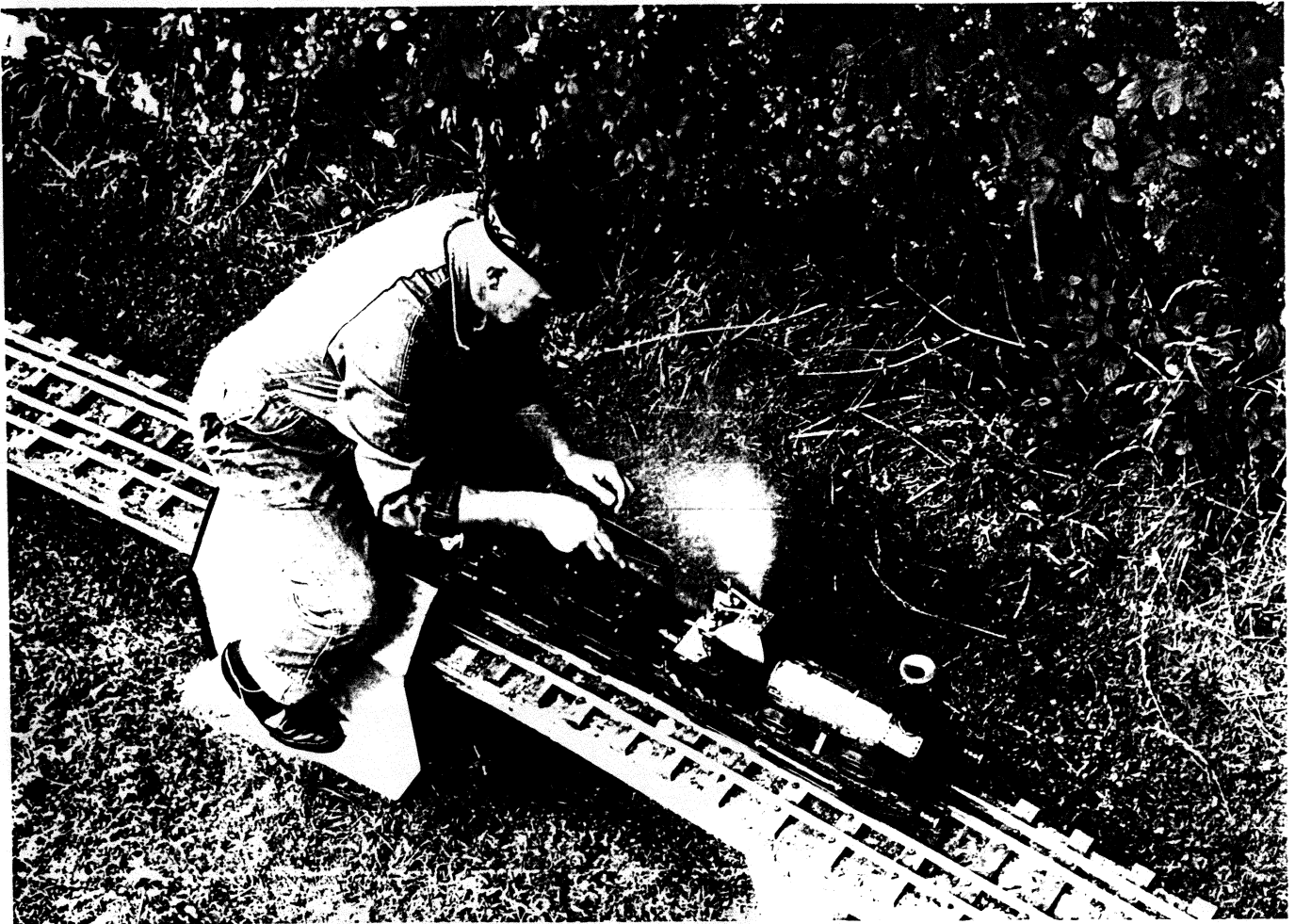
Above: Paul Andrew prepares 'Rocket' for a run by David Andrew. In the background, OLCO members watch the following train approach the station, left to right Geoff Wright, John Hawley, Ron Broyd and John Biss. (Photos: Jan Ford)

Below: David Andrew at speed on 'Rocket' during the dynamometer run.





OLCO member Graham Bilbe created a lot of interest with a group of 4mm electrically-driven working models he has acquired. From top to bottom, 'Albion' (1848), an unmistakable Crampton 'Liverpool' (1848), and Dublin and Kingstown 'Heron' (1834). (Photos: Jan Ford)



Above: Bob Davies at speed with his LION during the morning. (Photos: Jan Ford)

Below: Bob Davies, winner of the 1993 Chairman's Trophy, receives the award from the Chairman, David Neish.



LIONSMEET 1993

by Mike Parrott

I am pleased to be able to report that this year's LIONSMEET was the best supported for several years, so much so that by the time I arrived at about 10.40 a.m., my LION was the fourth to arrive and the steaming bay area was well filled. No sooner had I signed in than I was presented with a cup of tea - the first of many available from the modern equivalent of Elijah's Jug - the Model Engineers' Teapot, of which our hosts had an excellent example.

Before I had raised steam with my LION, two of the others had got on the track, and I had been joined by a 7-1/4" gauge LION and a 5" gauge 'Rocket', both accompanied by period carriages, and very fine they looked too. No doubt our Secretary will have had her camera pointed in their direction, and be able to provide illustrations.

As usual the morning was devoted to general running, subject to a limit of four engines on the track at once, as there are no signals, and the various loops are well hedged in. This makes for a very secluded setting - far more so than the track plan published in LIONSHEART would suggest - but requires the drivers to keep their wits about them to know where the engine in front is. Because the track caters for 7-1/4" gauge as well as the 3-1/2" and 5" gauges, there are four rails, and I frequently found myself imagining I was driving an 'OO' gauge train along the left hand pair, and expecting to see an 'O' gauge train approaching on the right hand pair - very disconcerting! During the morning two more 5" gauge LIONS arrived from the Cheltenham area to make a total of six 5" gauge LIONS, one 7-1/4" gauge LION and a 5" gauge 'Rocket'. Unfortunately, Mike Cox's LION was not able to steam, but later in the afternoon his 5" gauge 'Coppernob' ran (and very impressively too) and his 5" 'Aerolite' was also on display in the refreshment tent. Among the other items on display were some 'OO' gauge models of early engines, including one improbable looking one driven by an oscillating valve mechanism mounted transversely between the two axles. Apparently the full size one actually ran like this for a couple of years before conversion to more normal style.

David Neish had as usual brought the Guildford MES Dynamometer car, and after lunch proceeded to carry out a clearance test with it. This required some careful adjustment of the legirons to ensure a satisfactory fit to the extra wide track base, on which the 5" gauge rails are offset from centre.

As the Cheltenham engines were still in steam, John Kidger opened the competition for the Chairman's Trophy. With a moderate load, John went as fast as he dared, and as an observer I think I had a dose of my own medicine - I now know what it must have felt like on some of my high speed runs in the past. Watching the speedo. on the back of the dynamometer car hovering round the 10 and 11 m.p.h. mark approaching - and going through - some of the quite sharp bends is quite nerve wracking! It says a lot for the quality of the track that everything stayed on all afternoon. The average speed of 8.34 m.p.h. remained the highest all day.

Peter Taylor, also from Cheltenham, then had a turn, and with a similar load also ran fast, though at an average of 7.72 m.p.h. my nerves were a little steadier!

The main 'hazard' in the competition was the ability of the engine to surmount the relatively short, but quite steep gradient alongside the steaming bays and over the turntable. As it would have been almost impossible to start a train from the turntable, the competition runs started from the station (where else?) which is on a gentle downward gradient. Taking advantage of this David Neish took an extra adult for his load, and though not going so far and fast, managed a higher work done figure to take the lead at this stage.

The next entry was Bob Davies of Welling and District MES whose Falconwood track was the site of LIONSMEET 1991. On that occasion Bob had brought his engine along in its unfinished state, as he had bought it. Having seen the other LIONS running, he was spurred on to finish his. At this point I handed over the 'observing' duty to David Neish so that I could go and attend to getting my own engine ready, so I was somewhat amazed when I saw what Bob had achieved.

With the benefit of knowing what I had to beat, as last runner I took an extra 2 children as load, the highest of the day, but despite covering an extra 1000 feet was unable to come anywhere near Bob's power output.

Unfortunately it was not possible to couple Peter Gardner's 7-1/4" LION to the dynamometer car, but the little 'Rocket' was coupled up, and with a

very light load managed a very creditable performance, even more so as the boiler feed pump had become deranged earlier in the day and all the water had to be hand pumped into the boiler.

This completed a most enjoyable day, and the Chairman's Trophy was duly presented to Bob Davies for his outstanding performance. May I express my thanks to all those who attended, to David Neish and the Guildford MES for the use of the Dynamometer Car, and especially to Mike Cox and the High Wycombe MEC for being our hosts.

As it is now nearly six years since I took over the job of LIONSMEET Organiser, I shall not be able to stand for re-election to the Executive at the next A.G.M., so I shall end with a double plea.

Firstly, where would you like the next LIONSMEET to be held? A suggestion has been received for a venue in the south, with a ground level track

catering for 3-1/2", 5" and 7-1/4" gauges, but traditionally LIONSMEET has alternated between the north and south ends of the country. If anyone has any alternative suggestions for venues, or comments about ground level versus raised track would they please let either myself or the Secretary know. In view of the increasing interest in 7-1/4" LIONS, I think that in future we should try to make sure that this gauge is catered for wherever LIONSMEET is held, even though this may limit the choice of venues.

Secondly, to put it bluntly, would anyone like the opportunity to organise the next LIONSMEET? I am prepared to carry on the duty until next A.G.M., by which time I would hope to have arranged a date and venue, so it is not too difficult a task.

Answers, (not necessarily limited to being on a postcard!) to either myself or the Secretary, please.

Name	Work done ft. lbs.	Distance feet	Load	Av. Speed m.p.h.	Drawbar pull lbs.	H.P.
John Kidger	26955	7340	3A	8.34	3.67	0.082
Peter Taylor	24720	6790	3A	7.72	3.64	0.075
David Neish	28950	6330	4A	7.19	4.57	0.088
Bob Davies	46665	5670	4A	6.44	8.23	0.141
Mike Parrott	33390	6670	4A+2C	7.58	5.01	0.101
David Andrew (Rocket)	11940	4580	1C	5.2	2.61	0.036

'Load' includes driver. A: Adult, C: Child

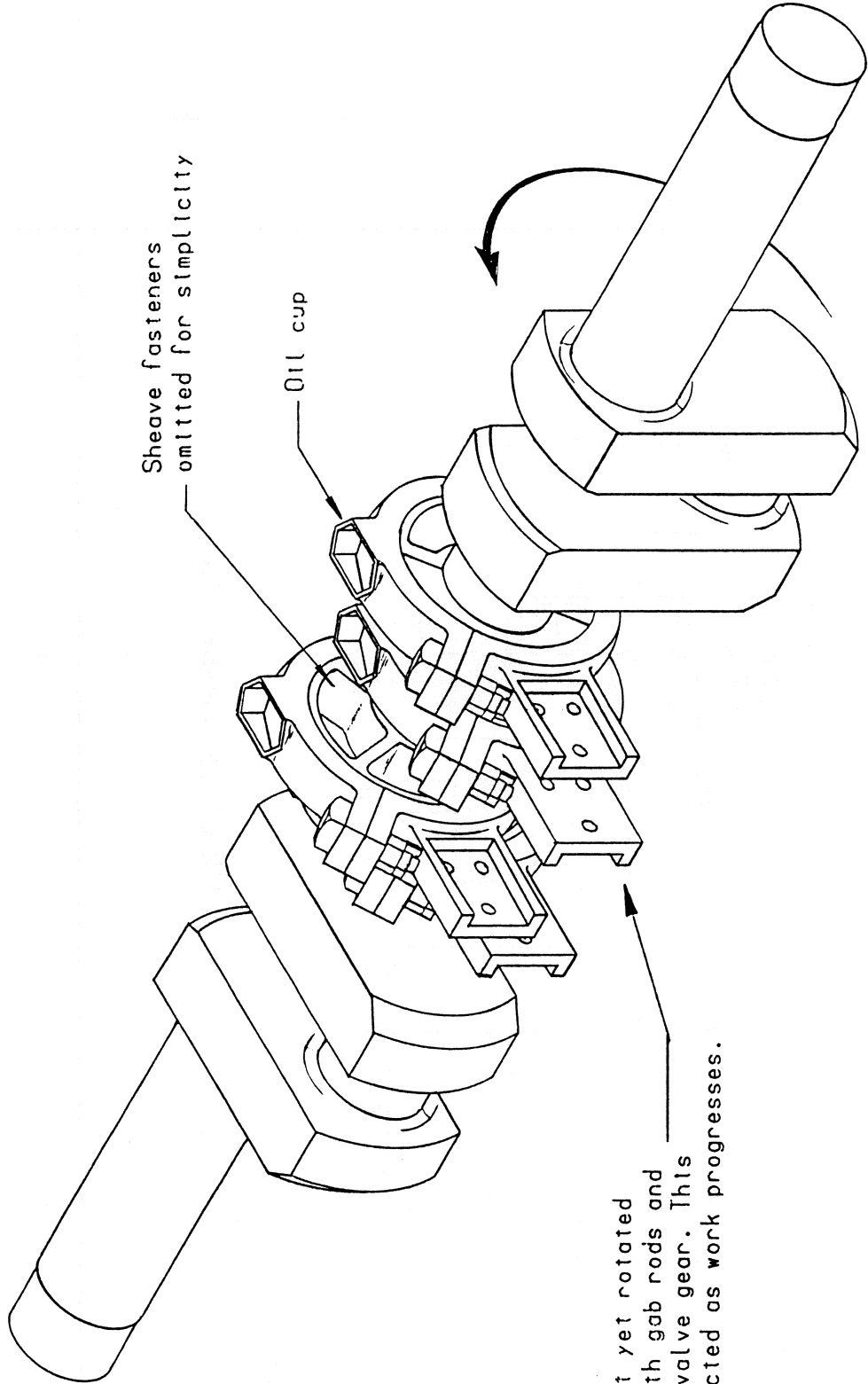
THE JOHN HAWLEY SURVEY

As reported in earlier LIONSHEARTs, John Hawley has been engaged in a meticulous survey of the original LION. He has agreed to let us publish drawings of various parts of LION, and we start this month with an isometric view of the crank axle on page 13 and a plan view of the crank axle on page 14. John Hawley comments as follows:-

"Drawings are to no particular scale. They are drawn to fit the A4 size sheet.

Some minor details are omitted for clarity.

I have done my utmost to ensure accuracy. If any errors are present, I hope people will advise me, perhaps through the pages of LIONSHEART."

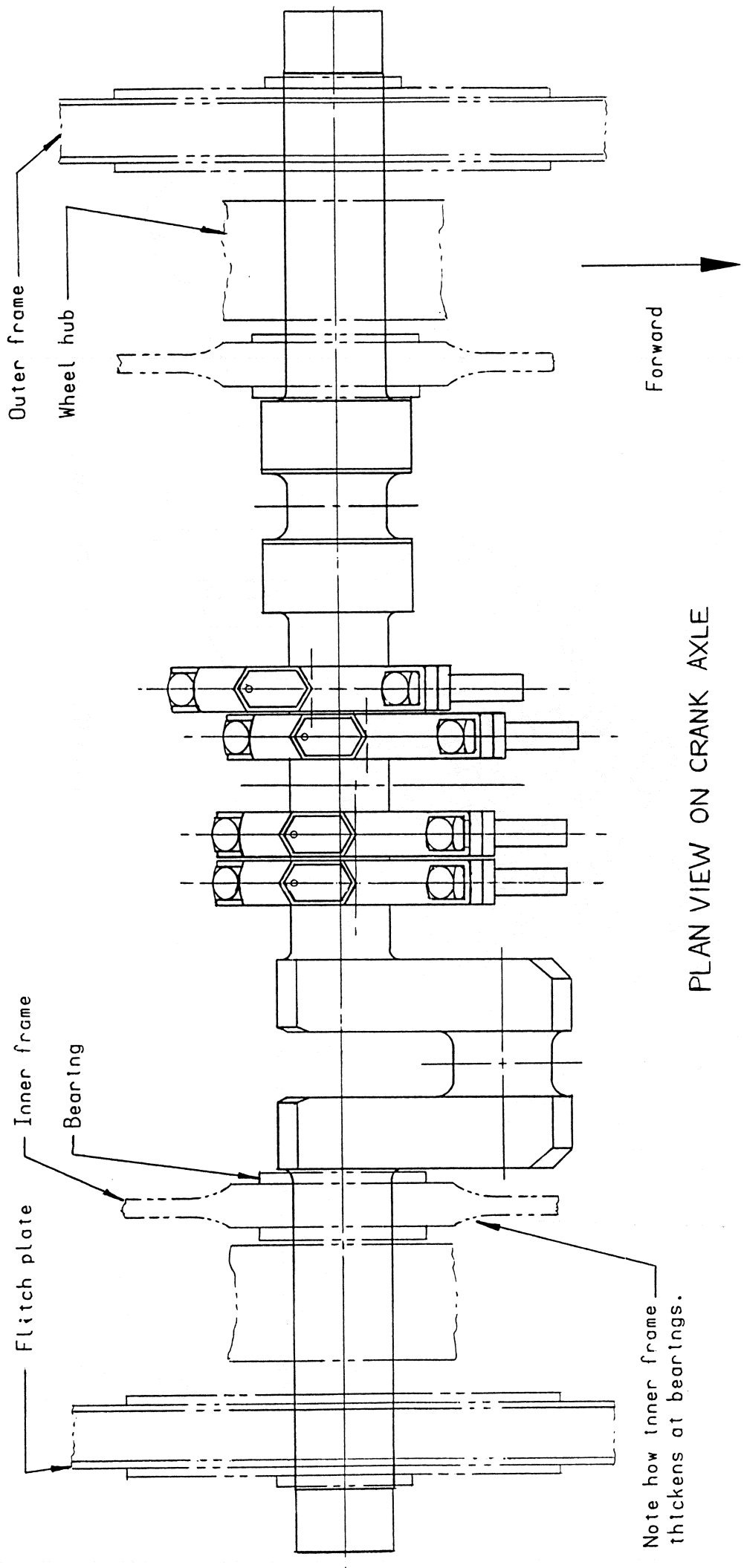


Sheave fasteners
omitted for simplicity

Oil cup

Straps are not yet rotated
to line up with gab rods and
remainder of valve gear. This
will be corrected as work progresses.

ISOMETRIC VIEW ON CRANK AXLE - FROM LEFT SIDE

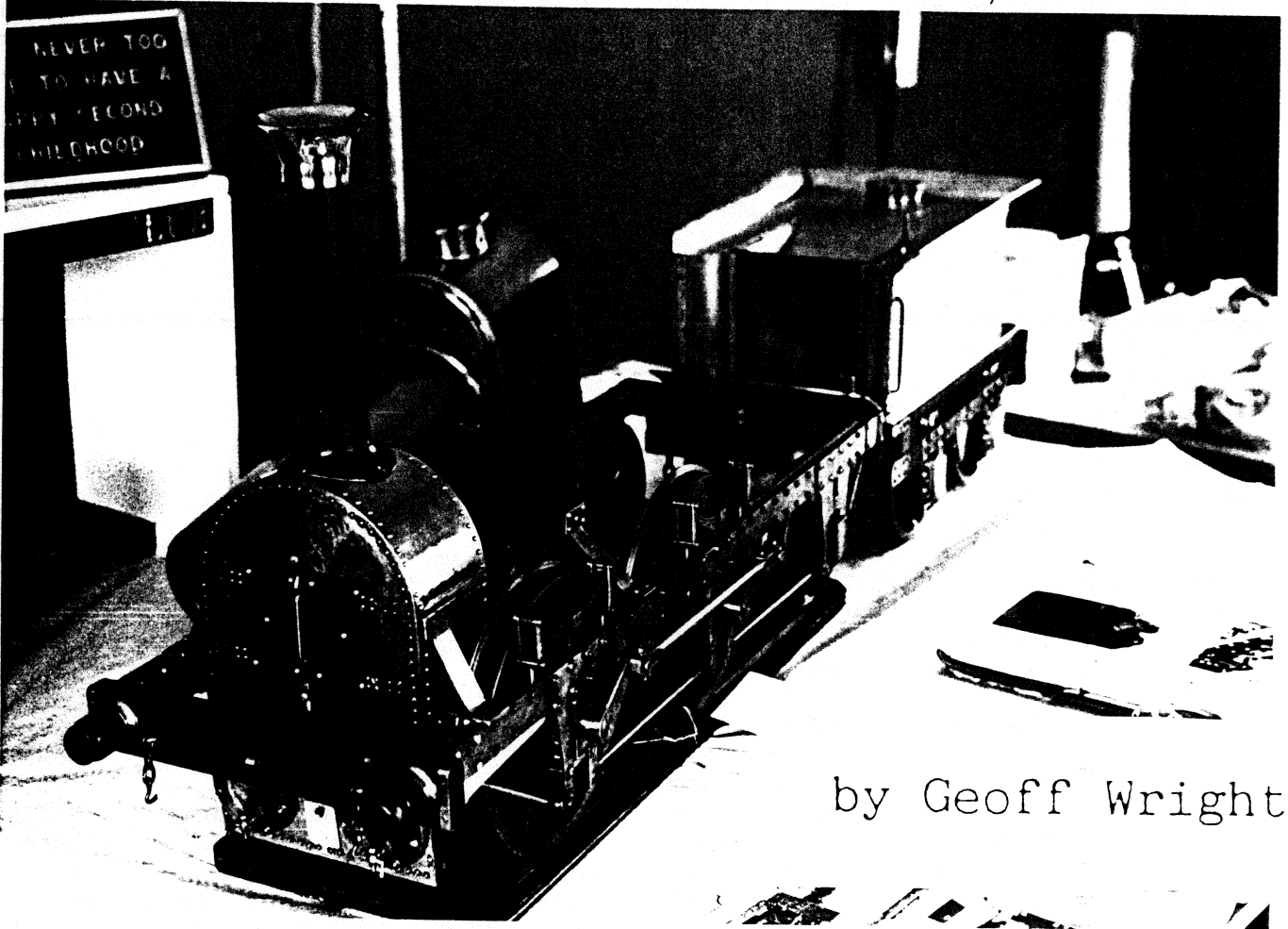


PLAN VIEW ON CRANK AXLE

Note how inner frame thickens at bearings.

NOTES ON A 7-1/4 INCH LION

(How not to build one)



by Geoff Wright

About three years ago, when I thought that OLCO was a patent steam oil, I was admiring David Neish's 5" Lion at one of our Guildford Model Engineering Society's exhibitions. Just off the cuff I said to David that I would love to build a 7-1/4" version. He replied that several members of OLCO, himself included, were going to do just that, and that I had better join both OLCO and the "syndicate", which I did.

Eventually, a meeting took place at David's home, attended by Charles Taylor-Nobbs, John Hawley, Harold Wells (a Guildford club member), David and myself. We talked for hours, and I came away with an entirely helpful set of notes given to me by Charles. We had all agreed that as you can never copy a full size boiler for a model, this should be a priority. Eric Lindsay was known to have built a 7-1/4" model (and another has been built in Belgium), and Eric kindly sent me a copy of his boiler plan.

I now know that designing a boiler by committee is a sure recipe for delay. John Hawley, who is currently preparing complete and superb plans of the full size engine, undertook drawing

the model boiler plan, and he has my deepest sympathy! After about a year of correspondence between John and prospective builders, the plan was agreed, and John put it out to tender. To cut a long story short, on 15th June 1992 David and I collected our magnificent boilers from Peter Carr of Kingswood Boilers, and John took delivery of his a little later.

In the meantime, David Neish, Harold Wells and myself, all living in the same area, wereliassing together. I prepared a list of metal required for starters, and after approval by the other two, collected three sets from Flapstock Ltd., near Milton Keynes, at a cost of £41.30 per set, on 11th December 1991. By the way, before you congratulate me on my good memory, I confess that I have kept a daily diary from the outset.

So, on 23rd December I started cutting metal, and by 7th March 1992 and 145 hours of working time, I had finished the chassis. Since probably only about one third of OLCO members are interested in the modelling side, I won't bore everyone with details of construction, but I will, of course, be pleased to help when asked. BUT, I

suggest we wait to see if my Lion works before anyone relies on my ideas. In fact, David told me quite frankly that he will start his Lion when I've finished, so that he won't need to make the mistakes I do (With friends like that, who needs enemies?).

The logical step from the chassis is to make the axle boxes, axles and wheels. Through the good offices of Mike Parrott and Keith Taylor-Nobbs, we obtained castings for all ten wheels and the cylinder block and steam chests in cast iron, plus valves and buckles in gunmetal. For all other necessary castings you are on your own, so I set out to make wood patterns for axleboxes, chimney base, and eventually others for eccentric straps and various engine parts. A local foundry produced the goods at very reasonable prices. My rolling chassis was finished by 27th May - total hours, 342.

A day's visit to Charles Taylor-Nobbs and his huge set of slides had given me a wealth of information and advice, and I recovered from mental indigestion after about a week! At his suggestion, I acquired from a local scrap metal dealer, by an amazing piece of luck, a bronze tube over a foot long, 6-1/2 inches wide and one inch thick (it was said to have come from a naval gun). Cutting off the four inches I needed for my smoke box, and this alone weighing 16 pounds, I passed over the rest to David and Harold.

The chimney was easy enough, being simply copper tube, but the flared copper cap was another story. I found that 1-1/2 inch 16 gauge copper tube does not like being spun out to over three inches, however often it is annealed, and I fear the result is far from perfect. The front of the smoke box is built exactly as the original, with hinged doors held shut by a metal strip with two clips, but as it would be quite impracticable to get at the inside of the box through the doors, the whole front comes away when you unscrew a large countersunk screw revealed by opening the proper doors. David's 5" Lion has a front which is simply a push fit, but he is a far better engineer than I am. If I tried that, my front (or rather, my model's front) would either fall off or jam solid.

Whilst on the front of the engine, I made the two cylinder drain cocks, which are, of course, three-way. Lever up for open, straight out in front for filling the "goldfish bowl" with oil after running the engine, and down for closed. I have a full-size plan of the full-size drain cock, and as it looked huge I anticipated no problems. I soon

discovered otherwise, for at one eighth size it involves drilling two 40 thou. holes in a tapered stainless steel plug less than one eighth of an inch diameter, one halfway into the plug and the other at 90 degrees, both meeting in the middle. I managed to make both cocks eventually, but whether or not they will leak remains to be seen. Be warned, fellow modellers; I would strongly recommend normal simple on/off cocks.

The next job was to machine the cast iron cylinder block weighing some 16 pounds - not an easy task with limited equipment, but by first cutting off an excess slice 3" x 6" by 3/8" thick on my bandsaw (poor thing), flycutting all the surfaces on my ancient vertical milling machine, and boring the cylinders on my equally elderly lathe, followed by honing, the job was done at last.

By this time, it was the end of August '92, and the hours totalled 478. I needed a change from "heavy engineering", so I then embarked on the tender. The delights of model engineering allow you to use so many different skills (or lack of them), and a spot of woodwork and platework appealed to me.

Making the engine itself in 7-1/4 inch gauge is very frustrating. I have the Royle plans of the full-size engine, but these are incomplete. I also have LBSC's 3-1/2" and 5" drawings, but he made some awful blunders, and his plans were not in any case meant to represent a real scale model. It is impossible to follow big Lion exactly, as you can't scale nature, and I certainly don't intend to hang valve gear from the boiler, so there is a constant battle trying to decide how much alteration from the original is necessary.

However, the tender CAN follow the original, and here I was thoroughly spoilt. I not only have Charles Taylor-Nobbs excellent drawings, but his instructions as well, so it was only a case of "following the words and music". Being even worse at woodwork than I am at metalwork I cheated a little, and had the wood strips for the chassis, involving three different and precise sections, cut and supplied to me by a local supplier. The £10 it cost me was money well spent.

Even thus helped, the tender took some four months, and nearly 400 hours to build. The chassis looks deceptively simple, but being in three layers, and with dozens of brackets and hand-made screws (round head, hexagon and square), it is fascinating but time consuming. The platework in brass is

also somewhat fiddly, as the tender shape is not, as we all know, just a rectangular box like more modern tenders. I shudder to think how many 1/16" brass and copper rivets I used, and even so I also araldited all the joints as I rivetted them to ensure water-tightness. I think that the final accolade stems from the fact that Charles Taylor-Nobbs (Mr. Inspector Meticulous) saw the tender recently at our Guildford Rally, and only found about half a dozen faults! Praise indeed from Lion's walking encyclopaedia.

After further work on the engine, I decided to make the driving truck - I hate the word "trolley", it sounds like the supermarket variety. I know that with most 7-1/4" locos you sit on the tender, but I can't think of anything more absurd than a bald 70 year old 15 stones and who resembles Mr. Pickwick, so I'm told, sitting on a 4-wheel tender not much more than a foot long. I have a photo of the Belgian owner I referred to earlier, sitting on his tender, and he ruins the look of Lion (Elephants and Lions don't go together).

I made the driving truck as simply as I could. Angle iron chassis, wooden body grooved to resemble planks, to look as much like a coal waggon as possible. Of course, the effect is somewhat spoilt by the necessity for a padded seat and foot rests, but at least the former is detachable for display purposes. In keeping with our club policy, Lion will have a tiny ejector tucked away under the footplate, so the truck is fitted with vacuum brakes. Incidentally, I have painted the chassis and wheels black, and the body light grey, though I've no idea what colour L and M waggons of the 1840s would have been.

The truck completed, I am currently (July '93) giving myself severe headaches grappling with the gab gear. I won't know whether or not I've got it right till I can air test the engine in a couple of month's time. I do hope that if our worthy Editor Peter Servis sees fit to print this at all, he will have cut it into chunks as "stocking fillers", otherwise you will all be bored stiff. I will, however, write the remaining chapter if and when the blooming thing works!

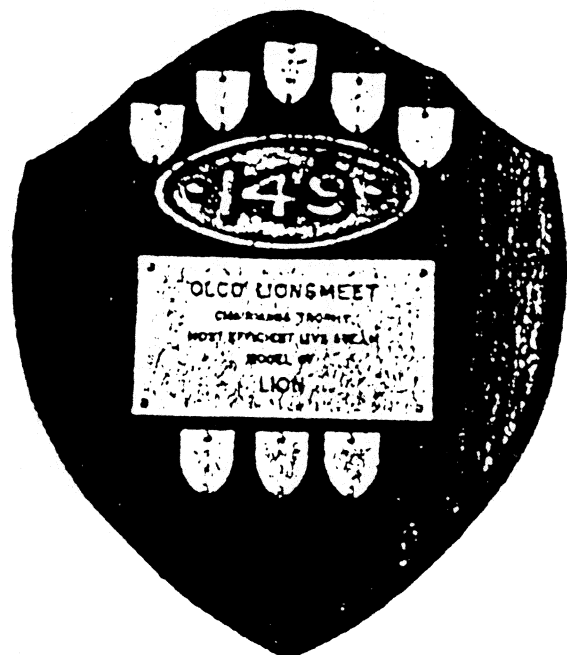
 We are sorry to disappoint the author by publishing his article intact. The picture at the head of the article (by Jan Ford) shows Geoff's LION as displayed at the recent LIONSMEET. The small card in front of the engine reads as follows:-

"To Members of the Rivet Counters Association: Yes I know that many of the fastenings are not authentic. They will be replaced but only when I know the damn thing works!!!" - Editor.

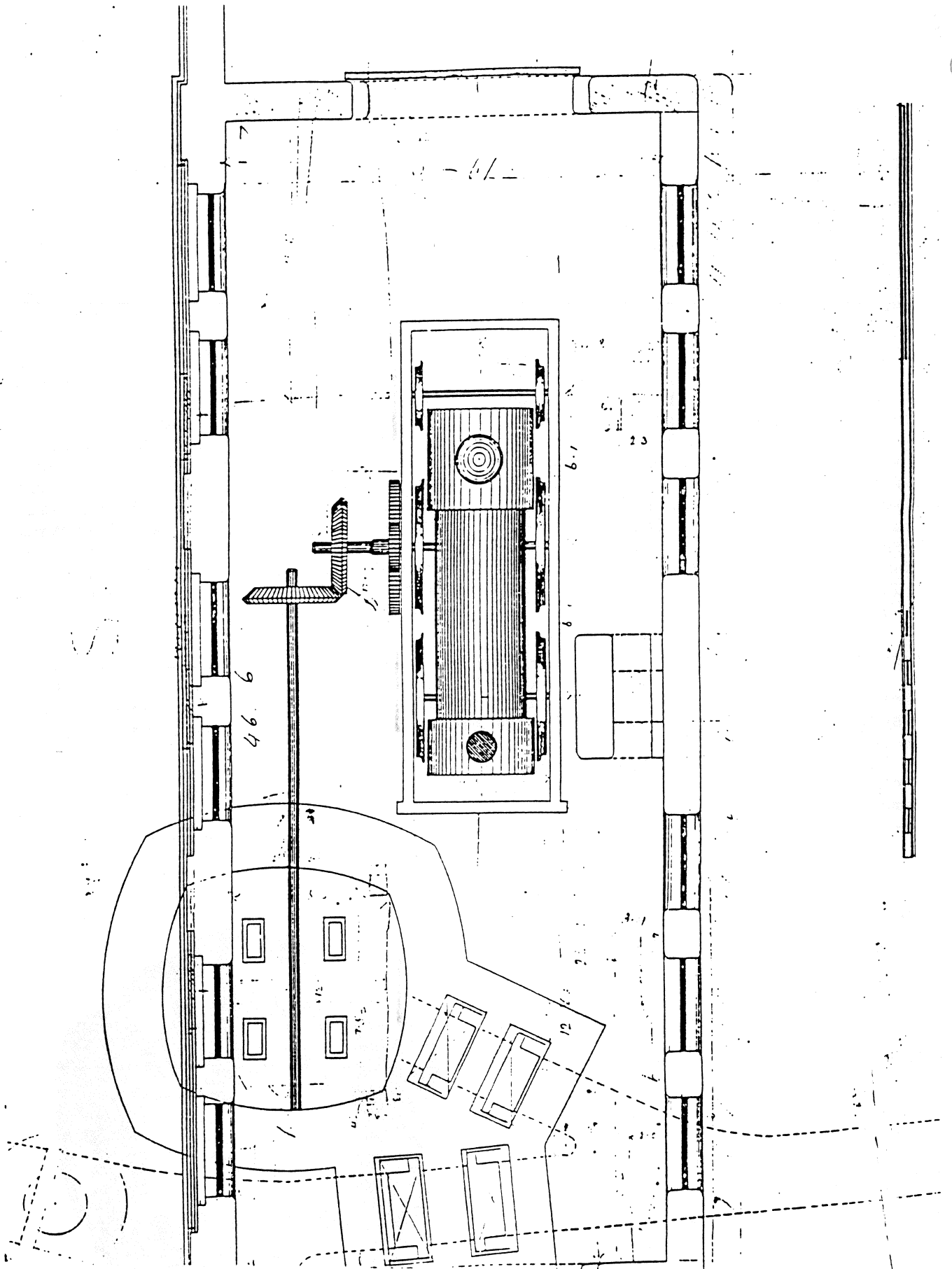
THE CHAIRMAN'S TROPHY

Below we give the Roll of Honour of winners of the Chairman's Trophy to date.

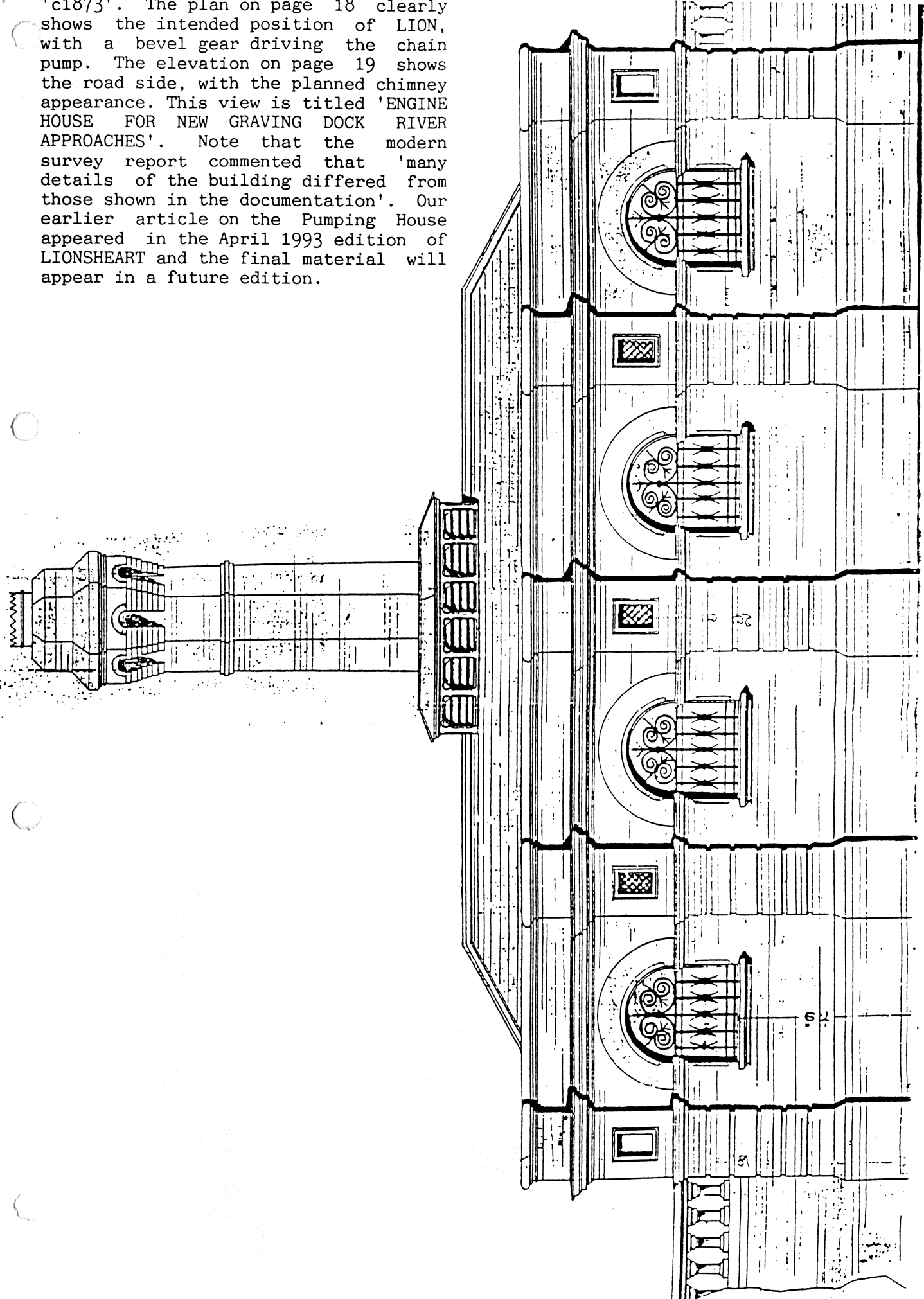
Year	Winner	Venue
1985	David Neish	Guildford
1986	D. Gadsby	Warrington
1987	Jim Mercer	Dinting
1988	--	Not contested
1989	Mike Parrott	Cheltenham
1990	Mike Parrott	Warrington
1991	Mike Parrott	Welling
1992	David Neish	Chesterfield
1993	Bob Davies	High Wycombe



LION PUMPING SHED



Here are two more drawings from the Pumping House Archives, both annotated 'c1873'. The plan on page 18 clearly shows the intended position of LION, with a bevel gear driving the chain pump. The elevation on page 19 shows the road side, with the planned chimney appearance. This view is titled 'ENGINE HOUSE FOR NEW GRAVING DOCK RIVER APPROACHES'. Note that the modern survey report commented that 'many details of the building differed from those shown in the documentation'. Our earlier article on the Pumping House appeared in the April 1993 edition of LIONSHEART and the final material will appear in a future edition.



FEEDBACK

PATRICK WHITEHOUSE
1922-1993

From: R. E. Davies
Bexleyheath

We would like to thank the OLCO Committee for arranging a very good LIONSMEET at High Wycombe. My father and I had a most enjoyable day. The members of the host club gave us a warm welcome and ensured that we had a pleasant visit.

It was nice to see a selection of locomotives especially the "Rocket" going well, this has now encouraged myself to resume the building of the two Lions on the bench.

I hope that the information for "Locomotion" (supplied to the Committee) will be of help to any of the other club members who showed an interest at the meet, who may wish to build such a model.

Hope to see you all again soon.

Yours sincerely,

R. E. Davies

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The world of railway preservation has been shocked by the death of Patrick Whitehouse, prolific railway author and photographer. He was a pioneer in the preservation of steam locomotives when British Railways withdrew from steam and responsible for the creation of Birmingham Railway Museum.

The memorial service held at St. Augustine's Church, Edgbaston on 20th July was attended by over 200 people, many associated with railway preservation. At the reception at Birmingham Railway Museum following the service, 5080 'Defiant' was steamed in tribute.

THE EDITOR WRITES...

Because of the small print run, LIONSHEART is a photocopied publication, so half-tone reproduction is tricky at the best of times. Many of the photographs we include are colour prints, so we do the best we can to give you interesting pictures, with due apologies to the photographers. This time, we're using a larger format print for many of the pictures and we'd be pleased to know if you find this an improvement or not.

Many of you may have pictures of the recent LIONSMEET. We'll be pleased to include them, or LION pictures, in future editions. Detail shots of the prototype LION are particularly useful.

