

LION'S HEART

1992 Issue 2

May 1992

A.G.M. TO BE IN BIRMINGHAM

The 1992 OLCO Annual General Meeting will be held at Birmingham Railway Museum on Saturday, 11th July. On that day, OLCO members will have free admission to the museum from 10 o'clock.

Many members have fond memories of visits to Birmingham Railway Museum during LION's 150th celebrations, which coincided with the 150th anniversary of the opening of the London and Birmingham Railway. Since then, LION has not steamed and Birmingham Railway Museum has experienced the trauma of loss of funding from the local authority.

The museum has achieved great success with its 'Learn to be a Driver' scheme and two locomotives are normally steamed on Saturdays and Sundays for training purposes. All being well, on the day of the A.G.M., 'Castle' class 'Defiant' will be one of the engines in steam.

You are free to arrive at any time after 10 o'clock but at 2.30 p.m. there will be a conducted tour of the museum facilities especially for OLCO. This will feature the extensive workshop facilities and show the progress on the 'Bloomer' replica.

The museum now boasts not one, but two signalboxes! One controls the yard and demonstration line and a second, recently moved from Cradley Heath, has been erected next to the level crossing and is being fitted-out.

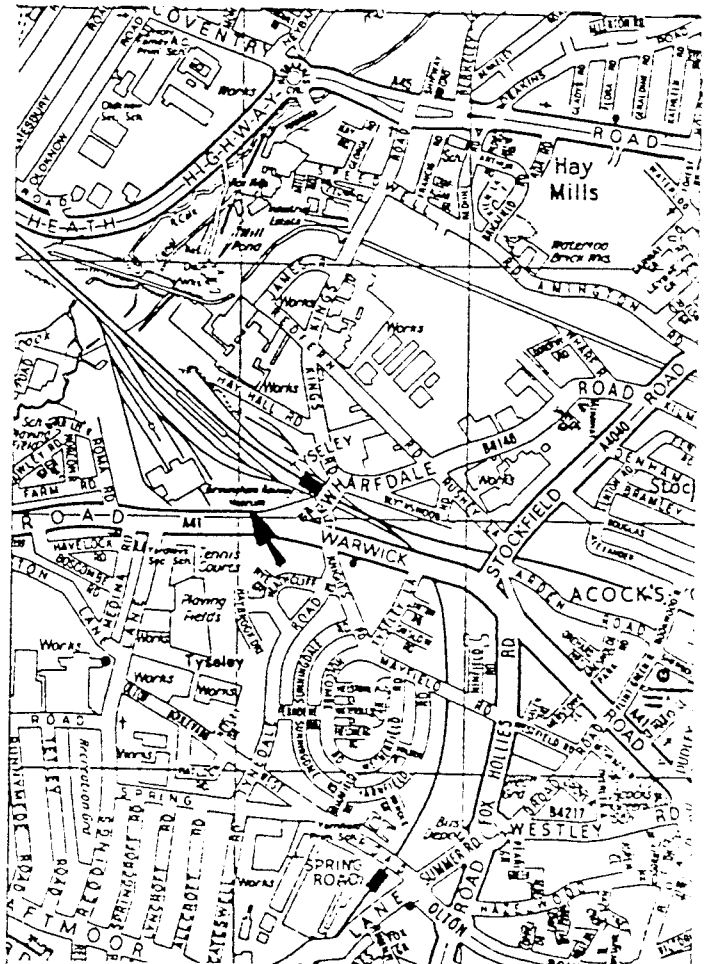
The OLCO Annual General Meeting will take place in a converted Stanier bogie coach, starting at 4.30pm.

Following the A.G.M., the 'Learn to be a Driver' activity will have finished and the museum will be closed to the public, allowing OLCO members a further, private view of the exhibits.

The day will finish with the OLCO Annual Dinner, also at the museum.

Birmingham Railway Museum is about 2 miles South-East of the city centre on the A41 Warwick Road, which is a bus route. The A45 Coventry Road lies to the North and the A34 Stratford Road to the South.

Alternately, there's a regular train service from Birmingham Snow Hill or Birmingham Moor Street (walking distance from Birmingham New Street Inter-City station) to Tyseley. Turn right on leaving Tyseley Station and a few minutes walk brings you to the Museum.



ELECTION OF OFFICERS

OLCO DINNER

At each A.G.M., the entire executive committee stands down and the meeting elects the executive officers for the following year.

Under our constitution, members can seek re-election 4 times, meaning that after serving for 5 consecutive years, executive officers must stand down for at least one year.

For the guidance of members, the status of the current executive committee members is as follows:-

Alan McKirdy (Chairman): Not eligible for re-election.

Barry Smith: Not eligible for re-election.

Charles Taylor (Treasurer): Not seeking re-election.

Eddie Hall: Eligible to serve for 1 more year.

Mike Parrott: Eligible to serve for 2 more years.

Jan Ford (Secretary): Eligible to serve for 2 more years.

Vernon Smallwood: Eligible to serve for 3 more years.

Nominations are taken from the floor during the A.G.M. and require a seconder. The nominee must be a paid-up member and willing to serve, if elected.

The OLCO Annual Dinner this year will be held at Birmingham Railway Museum, starting at 7.0 p.m. on Saturday 11th July, following the A.G.M. Even if you can't attend the A.G.M. itself, you will be welcome at the dinner, which is invariably a jolly affair. Non-members are welcome as guests.

The Museum's catering staff are putting on a three-course meal offering exceptional value at only £6 per person, including the special admission charge for the day.

The timetable for the day is:-

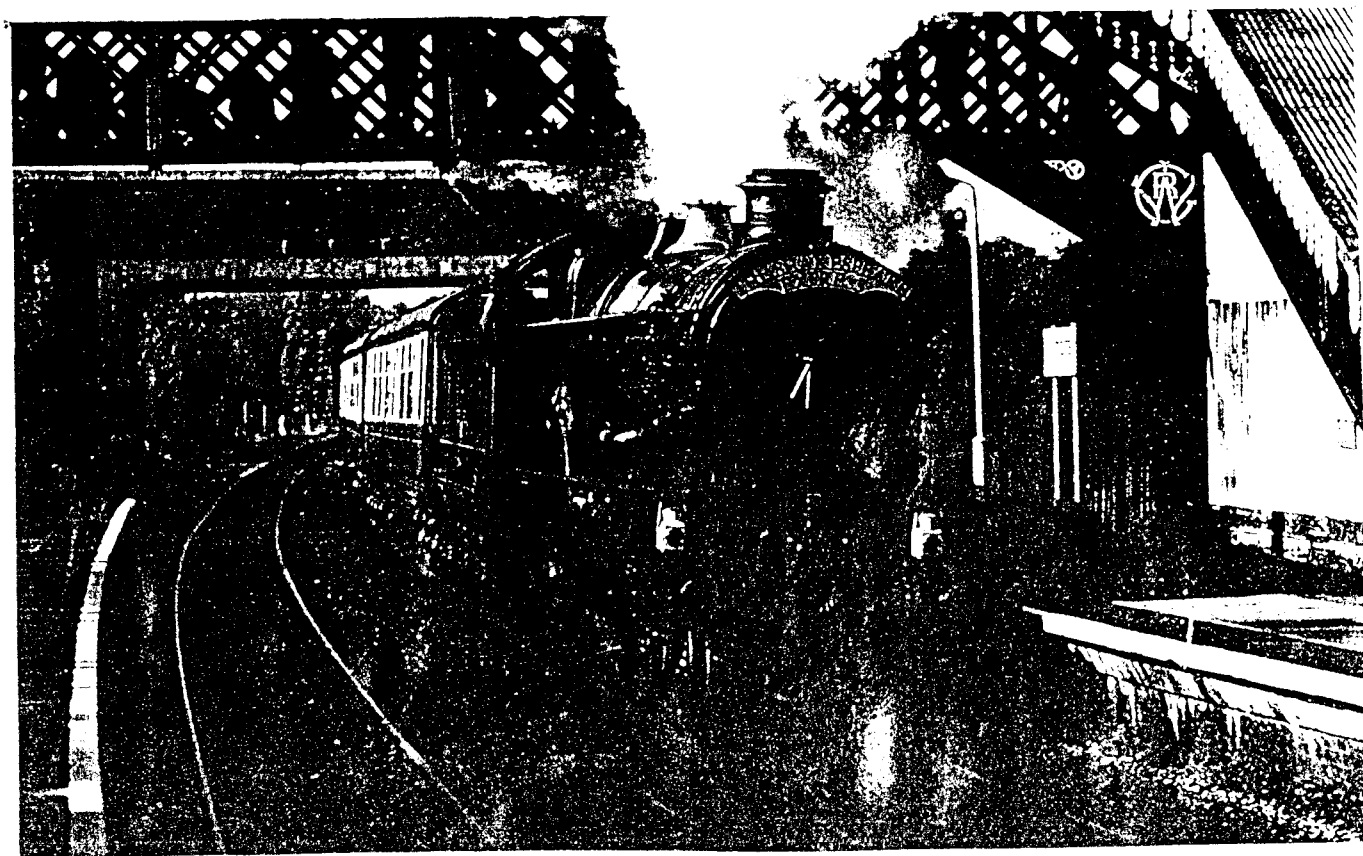
Museum open to public: 10.0 to 6.0.

OLCO Tour: 2.30; meet at Visitor Centre

A.G.M.: 4.30 p.m. in Stanier Coach.

Dinner: 7.0 p.m. in Restaurant.

The photograph below by Dr. John Cooper-Smith shows Birmingham Railway Museum's 'Defiant' storming through Wilmcote on a 'Shakespeare Express' from Tyseley.



A VETERAN OF THE LINE

This article originally appeared in 'The Locomotive' for January 15th, 1929.

Ninety-one years old this year, the locomotive depicted herewith was built in 1838 by Messrs. Todd, Kitson and Laird (forerunners of Messrs. Kitson, Leeds), to the order of the old Liverpool and Manchester Ry. This relic of early railway days is of the front-coupled, or 0-4-2 type, with "sandwich" outside frames and bearings. The cylinders are inside, 12 in. diameter by 18 in. stroke, the valve motion being of the gab type, while the flat slide valves work on top of the cylinders with a 2-1/2 in. travel. The coupled wheels have a diameter of 5 ft., and the trailing pair, 3 ft. 7 in. The boiler barrel is 8 ft. 6 in. long between tube-plates with an inside diameter of 3 ft. 9 in., and has 97 tubes. The 'Lion', as she is called, was sold by the late London and North Western Ry. to the Mersey Docks and Harbour Board on May 26, 1859, and has thus acted as a stationary engine for sixty-nine years. In this capacity she worked the old chain pumps at the Board's Princes Graving Dock, but recently these have been replaced by electric ones. The 'Lion' has been presented by the M.D. and H.B. authorities to the Liverpool Engineering Society, with a view to her preservation for the City of Liverpool, the latter body intending to recondition and properly "house" the old engine. As will be seen from the photograph, the 'Lion' has been shorn of her coupling-rods and trailing axle

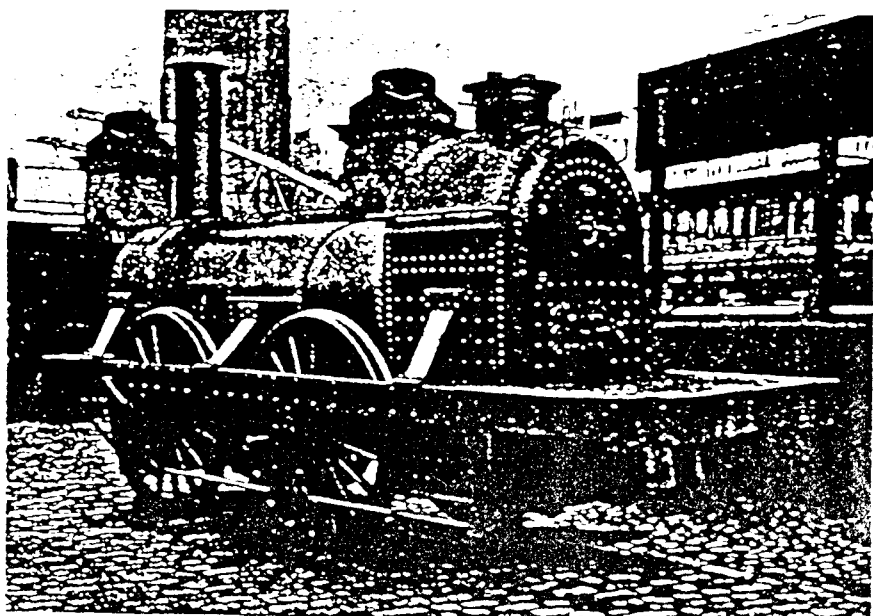
for space economy reasons during her "life" as a stationary engine, but the trailing axle and wheels are in existence. The tender, however, has vanished, and cannot be traced. The 'Lion' bore the running number 57 while with the Liverpool and Manchester line, and upon the fusion resulting in the formation of the L. & N. W. Ry. in 1846, took the Northern Division number, 116. This is a point worth bearing in mind, as the two Southern Division engines bearing the same numbers were of totally different design and built by a different firm, namely Messrs. Bury and Co., of Liverpool, during the years 1841 - 45. Duplication of names given to locomotives in the past has been a source of trouble to historians, and it may be of interest, in this connection, to note that one of three locomotives built by Sharp, Roberts & Co. in 1838 for the Great Western Ry., bore the name and number 'Lion' 7. They were, of course, for running on the seven-foot gauge of that line between Paddington and Temple Meads (Bristol).

The writer tenders his thanks to Mr. F. W. Gaskin, Hon. Secretary of the Liverpool Engineering Society, and to Messrs. The Mersey Docks and Harbour Board, to whom he is indebted for particulars of the 'Lion' and permission to reproduce the photograph, respectively.

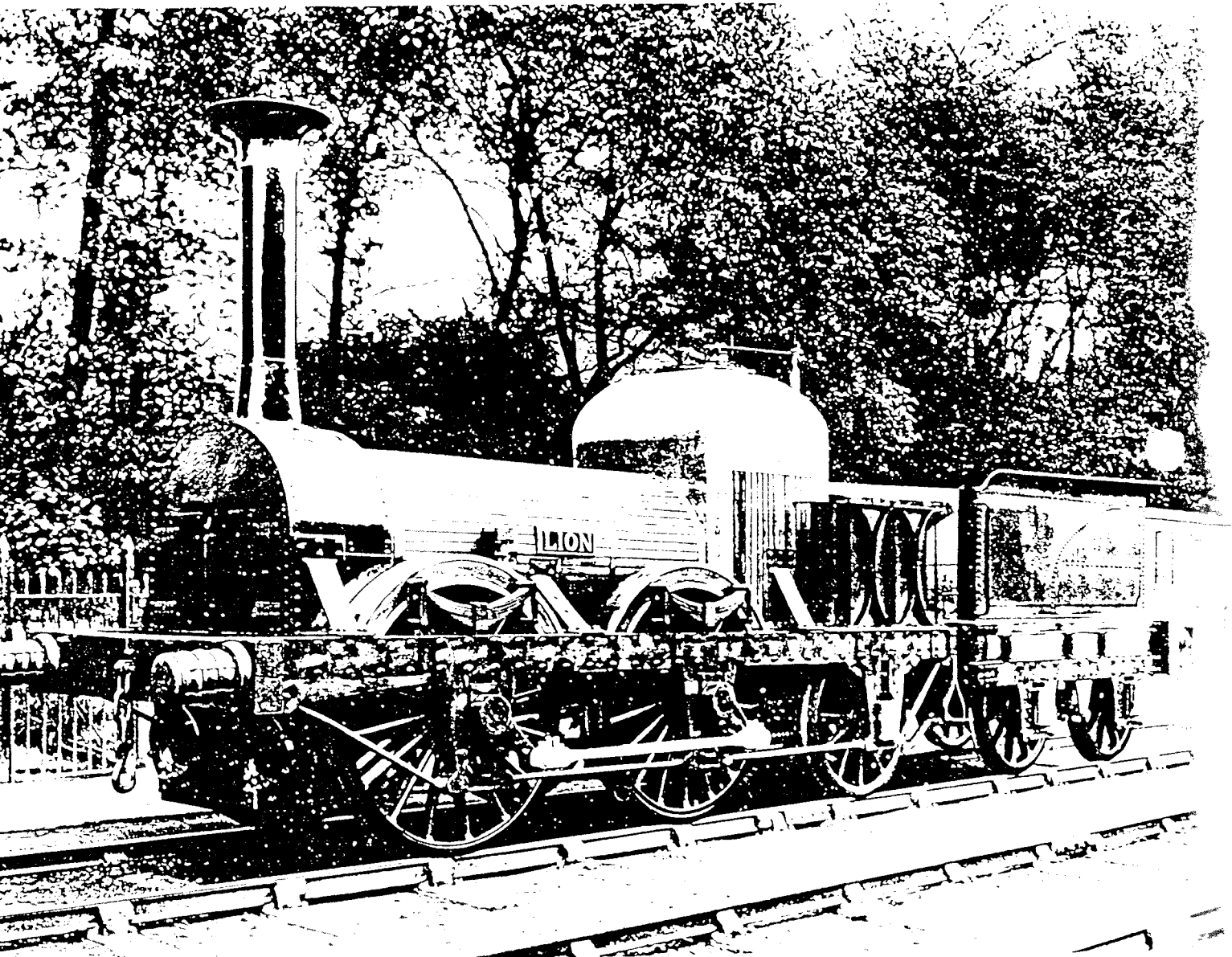
W.E.S.B.

This photograph accompanied the original article, with the caption 'LOCOMOTIVE "LION", FORMERLY OF THE LIVERPOOL & MANCHESTER RY., AT PRINCE'S DOCK, LIVERPOOL'.

Incidentally, this photograph also appeared in LIONSHEART No. 5 in July, 1965.



"The Locomotive" published this superb study of LION at Crewe Works as a supplement to the September 15th edition in 1930. Regrettably, our method of reproduction does not do justice to this photograph. The original caption appears underneath the picture.



LIVERPOOL AND MANCHESTER RAILWAY.

"Lion," 0-4-2 locomotive as restored for the Liverpool and Manchester Railway Centenary Celebrations, September 13 to 20, 1930.

The original locomotive was built in 1838 by Todd, Kitson & Laird, now Kitson & Co. Ltd., Leeds.

FROM THE SECRETARY

The 92/93 membership year started at the beginning of April, 1992 and we now invite you to continue your membership by remitting the appropriate fee (unless already paid).

OLCO has always had a policy of allowing a generous period to elapse during which subscriptions can be paid but, unfortunately, this does mean that certain members are in arrears.

A renewal slip is enclosed with this LIONSHEART which confirms your current standing according to our records. Please return this with the appropriate remittance, unless already paid or you have any query in which case we will try to resolve it as quickly as possible after receipt of your enquiry.

Remember, to have a vote at the A.G.M., membership fees must be paid up before the start of the A.G.M. (but the secretary will be delighted to collect subscriptions immediately before the meeting starts!).

VALVE MOTIONS

by '41901'

I was very interested to read the comments on valve motions in the Technical Editor's Smallpiece in the last LIONSHEART. Perhaps we can have more on this fascinating topic?

Regarding the history of Stephenson's Link Motion, the Technical Editor says "Stephenson himself always referred to it as Howe's Link Motion".

Well, that's certainly the view advanced by Clement Stretton (1), who says "Howe was the inventor and Mr. R. Stephenson himself always spoke of it as Howe's".

But previous LIONSHEARTS (2,3) jointly credit Williams and Howe. Another source, covering the history of Robert Stephenson and Company (4), gives more detail on the convoluted background.

In 1846, 'Practical Mechanic and Engineers' Magazine' credited the invention of the link motion to Williams. Howe challenged this, saying that William's conception (with the link attached directly to the eccentrics) was unworkable and claiming that only his addition of eccentric rods made the arrangement feasible.

It appears that when a testimonial to Howe was proposed in 1870, George Robert Stephenson wrote:

'I have always heard my predecessors, who best knew the rights of this question, give Mr. Howe the highest praise for the part he took in bringing out the Link Motion, but never without associating Mr. Williams' name also with the invention; and I would willingly not only have contributed to a testimonial to a man I respect, but would have made myself a partisan to its success, had I felt that the merits if both had been fairly dealt with'.

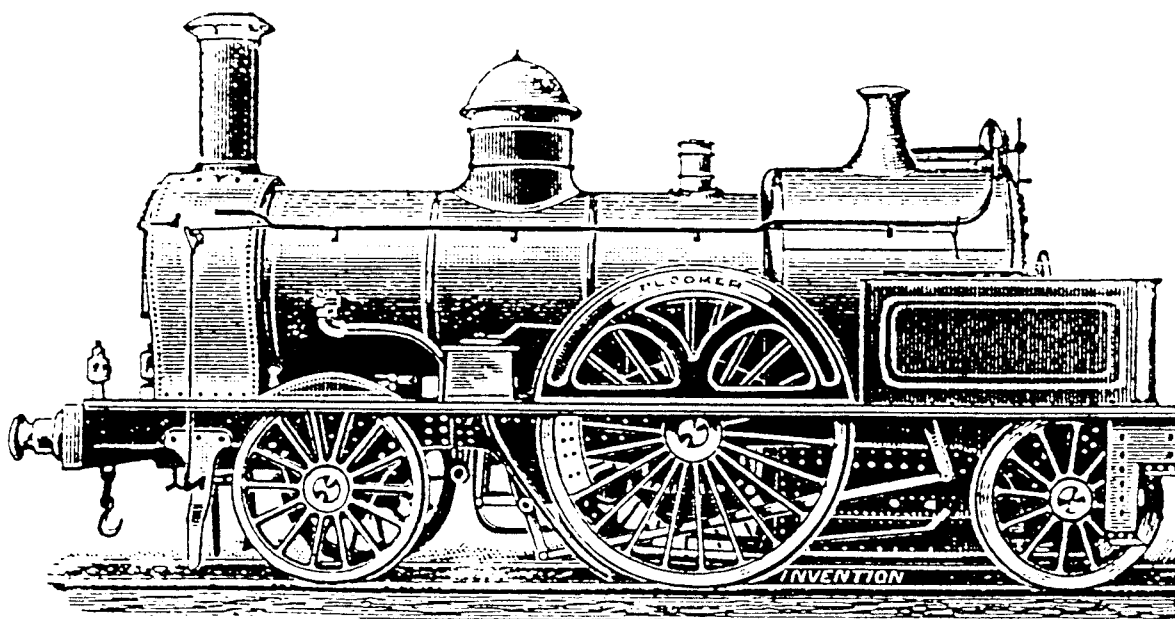
In 1871 a new appeal was launched for 'A Testimonial for the Invention of the Link Motion in which the names of Williams and Howe are combined.'

This hornets nest was stirred up again in 1904 by Whyte (a contemporary of Howe and Williams at Stephenson's) when he disputed Howe's claim.

The link motion is rightly regarded as a major advance on earlier motions like that used on LION. D. K. Clark (5) waxes quite lyrical:

'Nothing but an impulse of genius could have given birth to this exquisite motion; and though in its first conception by Mr. Williams it was rude, and even impracticable, the idea was there, and it had only to be cleverly worked out by Mr. Howe to render it, in conjunction with the lap of the valve, the most felicitous acquisition to the locomotive since the introduction of the blast-pipe and the multitubular flue'.

But even LION's reversing gear is a model of convenience compared with what



Birmingham Railway Museum is constructing a working, full-size replica of a "Bloomer". This contemporary engraving shows a locomotive built in 1850, only 12 years after LION. The design for these famous single-wheelers by J. E. McConnell was derived from his earlier experience building similar locomotives for the Birmingham and Gloucester Railway.

drivers of earlier engines with slip eccentrics (such as the 'Planet' class) had to contend with. A book published around the end of the 19th century (6) includes this description:-

'Among the advances leading up to the present motion was the employment of a single eccentric for each valve and cylinder, loose upon the axle, and having catches at each side to engage studs upon the axle when moved laterally. A lever and gear worked by a treadle on the footplate controlled the position of the eccentrics. When starting the engine, the driver put the eccentrics out of gear by the treadle, then by means of a lever he raised the small ends of the eccentric rods, and noting the positions of the cranks, or if more convenient the balance weights in the wheels, he, by means of another handle, moved the valves to open the necessary ports to steam, and worked them by hand until the engine was moving, then, with the treadle, he threw the eccentrics over to engage the studs, at the same time dropping the small ends of the rods to engage pins upon the valve spindles so that they

continued to keep up the movement of the valve. It follows that the valve levers upon the footplate were constantly moving backwards and forwards while the engine was running and the eccentrics were in gear'.

You certainly have to admire the driver coping with this complication every time he had to change direction.

As always, the men are as interesting as the machines they worked with.

References:

- (1) 'The Development of the Locomotive - A Popular History 1803 - 1896' by Clement E. Stretton.
- (2) 'LION'S MOTION', LIONSHEART, Summer 1989.
- (3) 'LION - STILL AN ENIGMA', LIONSHEART, January 1991.
- (4) 'A Century of Locomotive building by Robert Stephenson & Co. 1823-1923' by J.G.H. Warren.
- (5) 'Railway Machinery' by D. K. Clark, published 1855.
- (6) 'The Locomotive of Today' published by the Locomotive Publishing Co. Ltd.

A LIGHTHEARTED LOOK AT RELATIVE VALUES

by

Geoff Wright

I am a "newish" member of OLCO, building a 7.25" Lion which has now reached the rolling chassis stage. The other day I took the model to a Bits and Pieces Evening at Guildford S.M.E., of which OLCO Member David Neish and I are both members. During my brief talk I mentioned that Lion cost £1100 when built in 1838.

After the meeting, David commented that by coincidence it now costs about as much to build a one eighth scale model as the original full-size engine cost. I think David's about right, as I have so far spent some £200 on castings, the boiler is costing £575, metal will probably total £100 or so, and the many other items such as pressure gauge will certainly make the total top £1000.

This gave me further food for thought. We all know volume is "cubic", so one eighth in length means one sixty-fourth in area and one five hundred and twelfth in volume. Assuming cost equates with volume, would a 7.25" Lion in 1838 have cost about £2? By the same analogy, if a small Lion now costs, say, £1000, would a modern replica cost approximately £500,000?

If so, that's sad, because I agree with Jan Ford's suggestion that a replica may be necessary to replace Lion for running duties. Well, I'm prepared to donate £100 towards it, so all we want now is for 4,999 others to follow suit!

FEEDBACK

I would like to renew my membership to OLCO. I have been interested in LION since my youth when I was on the film set in the making of the film 'The Titfield Thunderbolt'.

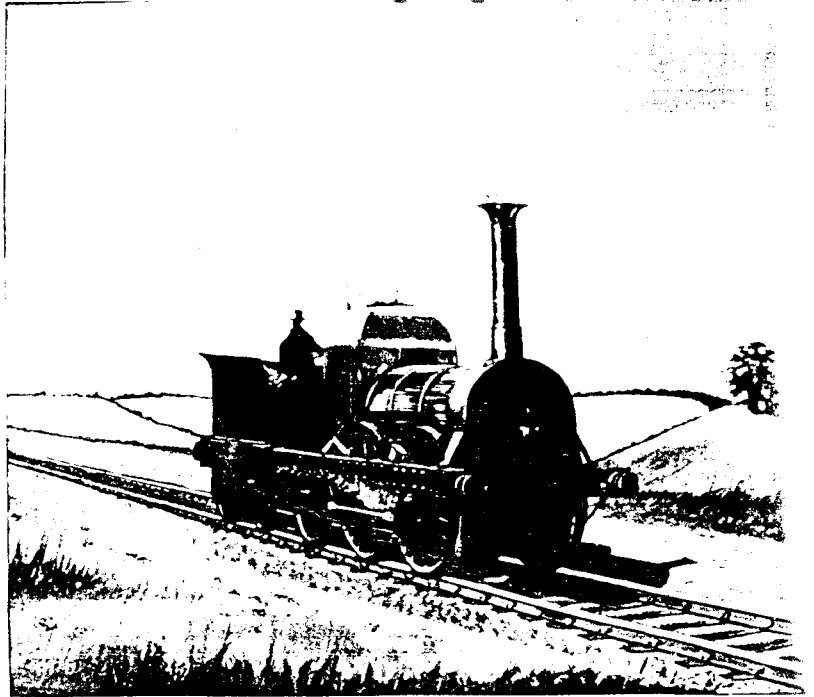
I am making two models of LION in 5" gauge although at the present time the pressure of work has slowed their progress down.

Recently I commissioned an artist to paint a picture in oils of LION for me and I enclose a photograph for you to see. Perhaps you would like to comment on it. I am not sure whether the driver is in the right proportion to the engine.

I have also programmed a C.N.C. machine to engrave plaques of LION and I intend making several desk pen holders with the plaque installed.

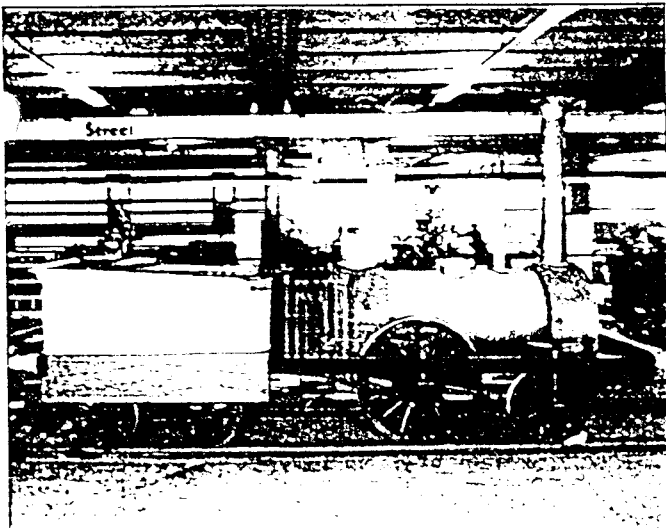
It is hoped that LION will be maintained so that it will steam and not be just a static display. Seeing I am retiring very soon I will be able to play a more active part regarding OLCO and attend the A.G.M. etc.

Yours truly,
D. G. Townsend.



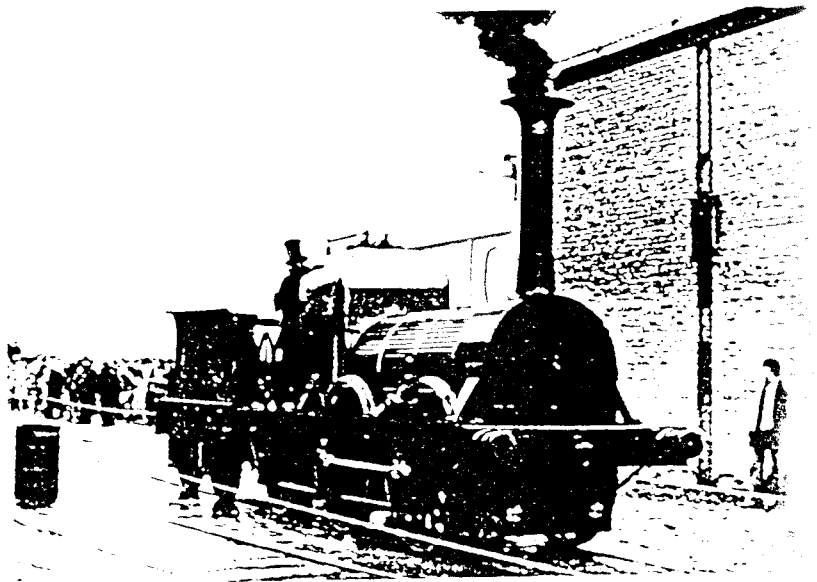
This is the painting referred to by Mr. Townsend in his letter. For comparison, underneath is a photograph of the real LION from almost the same angle. The photograph shows LION in February 1980 at Ruston Diesels, Earlestown. It was taken by N.R.Knight and appears in 'Liverpool to Manchester' by Fields, Gilbert and Knight, published by the Manchester Transport Museum Society in 1980.

PLANET PROGRESS



Manchester Museum of Science and Industry have now successfully completed the static steam trials on 'Planet' and test running is expected to commence in the next few weeks.

Secretary of the Friends Ray Sharples has invited OLCO to assist with information allowing train crews to appear in period dress. OLCO members will also be made welcome in costume when 'Planet' steams.



OLCO's Executive Committee is currently setting up a visit to the Museum to see 'Planet'. This is likely to be this September, by which time 'Planet' should be in service.

We hope to have full details in the next LIONSHEART. In the meantime, if you have any information on suitable period uniforms, or would like to become involved in OLCO's Costume Group, please let the OLCO Secretary know in the first instance (address on back page).

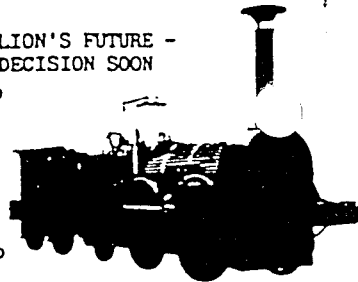
OLCO MEMBER BACK FROM JAPAN

LION SURVEY IN PROGRESS



LION'S FUTURE - DECISION SOON

LION'S FUTURE - DECISION SOON



IMPORTANT ANNOUNCEMENT

THE EDITOR WRITES...

On this page there's a reminder of the editions produced over the last 3 years, totalling some 110-odd pages. It's just 3 years since I took on the thankless task of Editor. In that time, LION has not steamed and activities have consequently been low-key. The cry is always for 'more editions' but even our modest publication requires considerable effort from the small editorial team. Whilst thanking past contributors, I must regret that members have not been more willing to share their knowledge and experiences. Incidentally, back numbers of these or earlier LIONSHEARTS can be purchased. We are pleased to be able to publish details of this year's A.G.M., which moves to an earlier date than last year. Birmingham is centrally located with good transport connections by road and rail, which should make the travelling easier for members everywhere.

There's a lot to see: apart from 'big green engines' in various stages of restoration and 'Scots Guardsman' (which members may remember from her former home at Dinting) there are industrials and a variety of passenger and freight rolling stock, together with a large steam crane. 'Modern-image' enthusiasts can see a working '08', a '40' and '50' in restoration, and no less than 5 small industrial diesel shunters awaiting attention! Tyseley TMD is adjacent with opportunities to see examples of both the earliest and latest DMUs on British Rail.

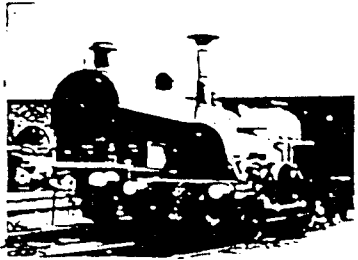
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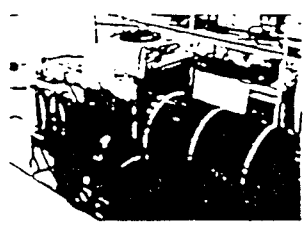
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LION REPORT

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LION LEAVES LIVERPOOL



LIONSMEET AT FALCONWOOD

