

LIONSHEART

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March 1998

The Editor's Bit

Its getting close to the end of March and I'm beginning to panic. So much to do, so little time. I must get this out to give you reasonable notice of subscription renewals, the AGM, Lionsmeet and anything else that comes to mind.

First of all though, it would be churlish of me not to wish you all a Happy New Year - a bit late, perhaps, but nevertheless a sincere wish. I trust you had a peaceful Christmas and New Year and I thank you for all your cards and communications over the last few weeks. Writing this newsletter is quite hard work and it is good to know that it is read and appreciated.

Dates for your Diaries

Lion Cleaning - Liverpool Museum - Saturday 16th May at 9.00 am - Transport Gallery.

OLCO AGM - Liverpool Museum - Saturday 16th May at 2.00 pm in the Lecture Theatre.

Lionsmeet - Stockport and District Society of Model Engineers- Saturday 15th August.

In This Issue...

	Page
The Editor's Bit	One
Dates for your Diaries	One
The OLCO AGM	Two
An Appeal for Lion Cleaners	Two
All the Fun of the Fair - Proposals for the Regulation of Miniature Railways	Three
What goes Around Comes Around - Lions Wheels Large and Small.	Four
An Evening at the Cinema - The Showing of Titfield Thunderbolt	Seven
Railway Receipts - An Interesting Contribution from Charles	Seven
Readers' Letters - A Plea for Help	Ten
Lion in Model Engineer - A list of all the LBSC Articles and Correspondence	Ten
Subscriptions - New Ways to Pay	Eleven

The OLCO AGM

Once again the Annual General Meeting draws nigh. This year, as last, it is to be held in the Lecture Theatre of Liverpool Museum in William Brown Street, just a short walk from Lime Street Station. Once again, we are able to take advantage of the Live it up in Liverpool promotion, in which, provided one arrives in the city by train, one is able to take advantage of very generous reductions in hotel booking rates, entry into a host of attractions, restaurants and so on. For an information pack, which is free, ring 0151 709 3631. We will of course, be repairing to a nearby restaurant in the evening for our Annual Dinner, but more details at the AGM.

AGENDA

1. Apologies for Absence;
2. Minutes of Last AGM;
3. Chairman's Report;
4. Treasurer's Report;
5. Subscription Rates for 1999;
6. Election of Officers;
7. Report from Representative of NMGM;
8. Any Other business.

Item 2 - Minutes of last AGM were published in Lionsheart No. 42.

Item 6 - Election of Officers. The retiring Executive Committee is as follows:-

E F Clark	-	Chairman. Has served one year. Still eligible for re-election;
J Swindlehurst	-	Treasurer. Has served one year. Still eligible for re-election;
J P Hawley	-	Secretary. Has served four years. Still eligible for re-election.

Although arrangements are not fully in place yet, it is hoped that E F Clark will be able to show some of his 16mm films on Lion, the Bombay - Poona electrified line up the Ghat and a cab ride of the Gothard Tunnel route, travelling from south to north. No, it won't be all dark! He also has some original Kitson books which would be well worth examination. Do come. I think we could have a good meeting

This year, it is hoped to combine the AGM with a task which both OLCO and the Museum have been moving towards for some years now, namely the opportunity to get really close to our lady and to give her a good cleaning over. More details below.....

An Appeal for Lion Cleaners

For some years now, OLCO and the Museum have been mentioning the possibility of OLCO being involved more closely with Lion in whatever way it can. In the past, on the occasions she was in steam, there was ample opportunity to get really close to her, in preparing, firing, driving, 'mucking out' and so on. Whilst she was at Whaley Bridge, undergoing examination and partial refurbishment by Dorothea Restorations, there was the very rare opportunity to get on, under, inside and so on. It was while she was in this state that I was able to get so much useful information for the CAD drawings I have produced. These are held up for a while due to other workloads and until I get a CAD system installed at home. (The drawings done so far were produced at work and provided a valuable learning curve).

Anyway, David Neish at least and perhaps others, has been promoting the idea that OLCO could help the museum by offering to clean Lion, perhaps once or twice a year. Now that idea is coming to fruition. The plan is that we arrange a cleaning party to turn up at 9.00 o'clock on the morning of Saturday 16th May and work through until about noon. After a generous lunch break, we re-convene in the Lecture Theatre for the AGM at 2.00 pm.

To make a good job of this, I suspect we will need to put in an appearance on the Sunday as well. We need to start at say, 10.00 am and work through until we have finished, become thoroughly exhausted, or have to leave to get back home. Since this is the first time we have tried this out, we have little feel for how long it will take and how successful the exercise will be. However....

Will you come? We need about four people. More might get in each other's way. If there is a good response, a rota could be arranged. Ring me on 01275 472023 so that I can draw up a plan of action.

What is required? Soft soled shoes and plenty of Weetabix for breakfast. The museum will provide cleaning materials, disposable overalls, lighting, etc. It is not planned during this session to get as high as the chimney. Access will be restricted to ground level, footplate and 'running boards'.

All the Fun of the Fair

There are rumblings in the air of legislation and of guidelines on the application of the Health and Safety at Work Act 1974 to miniature railways. The Southern Federation of Model Engineering Societies (Is there a Northern Fed? - Ed) attended a seminar on Guidance on Safe Practice at Fairgrounds and Amusement Parks on 21st January this year. Apparently, portable or fixed miniature railways to which the public have access are to be classified as Fairground Rides and as such, will become subject to the various legal and safety regulations which are applied to those installations. Risk assessments, Design Appraisal and Conformity, Safe Operating Procedures, Inspection Schedules, etc., will have to be produced by each club and are to be enforced (by the HSE?) with effect from the 1999 season. This applies to all rides to which the public have access whether or not they pay for them.

I am in possession of HSE Technical Note TN3 - "Guidelines on the Application of the Health and Safety at Work Act 1974 to Miniature Railways" and also an HSE Information Sheet on "Fairgrounds and Amusement Parks", Sheet No. 5. The former includes a general description of "Miniature Railways" and states that they are "passenger carrying railways below 350mm gauge(13.78" - Ed) which do not normally come under the jurisdiction of HM Railway Inspectorate (HMRI). They are generally provided for entertainment, or as a means of demonstrating model engineering skills...". The Note goes on to lay down specifications for track, rolling stock, general structure, workshops, operations, clearances and so on, but it "should not be quoted as a formal "Requirement" of HMRI.". The second document introduces the contents of the new guidance agreed with the fairground and amusement parks industry through the Joint Advisory Committee on fairgrounds and amusement parks. It mentions Legal Requirements, Inspection Bodies, Trading in 'Devices' (*Locomotives?* - Ed), Modifications, Attendants and so on. **If anyone would like a copy, please contact me.**

Of course, we, OLCO, are in the clear on all this, aren't we?. We do not have a track. We do not give rides to the public during Lionsmeets. We do not charge for rides during Lionsmeets. So, that's all right then. Oh, no, it's not! We depend upon the generosity and hard work of all those societies whom we visit for our Lionsmeet outings. It is they to whom falls the responsibility of maintaining tracks and operating procedures in the manner to which the HSE must satisfy itself. It is they to whom we should be giving our backing in ensuring that onerous and impractical standards of safety are not imposed by those outside our hobby who do not understand or accept our already high standards.

The Southern Federation is compiling a case to put forward to the HSE. What that case is I do not know, but they are hardly likely to accept legislation without some form of negotiation. They would like to hear from clubs or individuals and their address is :-

Mr S Bishop, 3 Queens Walk, ASHFORD, Middlesex, TW15 3JG.

Envelopes should be marked at the top left - **HSE**

What Goes Around, Comes Around

I'm not sure if that heading makes any sense, but... I am getting a little exercised about my Lion's wheels. It was only a few months ago when I was examining the driving wheel castings that I began to realise that they would need a fair bit of fettling if they were to be truly representative of the real thing, especially where the spokes join the hub. This is particularly apparent on the driving wheel. Also, especially on the leading wheel, there is no sign of the large fillet radii that one normally associates with locomotive wheels. I had thought that Lion's wheels were cast until I received a copy of a letter recently from our Chairman E F Clark. The letter described how Lion's wheels were built up from several components - hub, spokes, the outer rim and finally the tyre - very much following the practice used during the construction of the farm wagon wheels of the day.

Take the leading 16 spoke coupled wheel. This has a simpler geometry in elevation than the 18 spoke driver. First, there was the hub, just a large cylinder of cast iron, roughly 13" in diameter and 7" thick, bored through 6 1/2" - 7" dia. for the axle onto which it would eventually be pressed and probably keyed. The hub would have been slotted to accept the rectangular section wrought iron spokes. At their junction with the hub, the spokes are 4" x 2" in section, reducing to 3" x 1 3/8" just outside the hub, then tapering slightly towards the rim. How they were fitted into the slots, no one seems quite sure. Were they parallel? Were they tapered? How deep did they penetrate into the hub? Interestingly, since the cast iron hub is insufficiently strong to accept a press fit onto the axle, it is re-inforced by wrought iron bands around each side. This again is a copy of heavy duty wooden wagon wheel practice, though for slightly different reasons. Thus, on Lion, since the spokes are fitted into the hub as in farm wagon wheel practice there is no fillet radius at that point.

At their outer ends the spokes join the rim, again of wrought iron, though quite flimsy. My measurements taken at Dorothea Restorations show that the rim section is approximately 4 1/2" wide x 1 1/4" thick. The spokes may have been forge welded to the inner surface of the rim, though how I do not know, since if the rim were in one piece, which I think was the case, it would have to be correctly located all around before welding could begin. Thus access to the point of welding would have been restricted. So also, would the amount of metal available for the welding process. Alternatively, there were wheels which were built by splitting the spokes at their outer ends and splaying each half around to meet and be welded to its neighbour from the adjacent spoke.

Once the wheel had been built up and machined, the tyre would be shrunk on. In Lion's case, the wrought iron tyre was also secured by tapered bolts inserted from the outside, then secured by nuts on the inside of the rim. Presumably, wrought iron being of rather inconsistent quality, wheelwrights were rather reluctant to depend upon its ability to sustain a good shrink fit and felt that through bolting gave them a belt and braces solution.

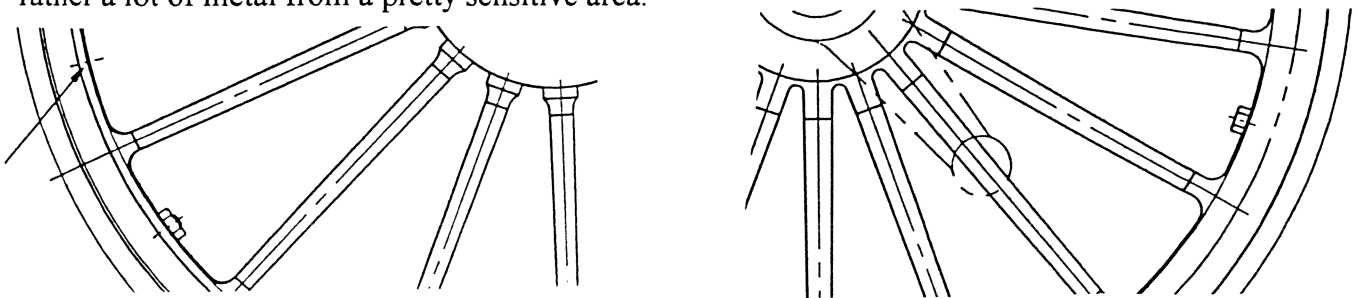
Thinking about it, the manufacture and maintenance of the early steam locomotives must have been a bit of nightmare. The development of cast steel in the 1880s must have been manna from heaven. The difficulties involved in building wheels, for example, may be the reason that Lion has fewer spokes on the front drivers than the rear. On the other hand, can that be true? Both leading and rear wheels transmit power. The rear axle is driven by the pistons, connecting rods and cranks. Part of the torque is transmitted directly to the 18 spoke wheels. The rest of the torque is passed to the front axle by means of the flycranks, then back out to the 16 spoke wheel. Both front and rear wheels are pressed and probably keyed to their axles, as are the flycranks. Thus, the rear wheels would appear to take no more torque load than those at the front. Indeed, the front wheels take the sideways load as the locomotive encounters curves in the track. It could be argued, therefore, that they are more highly stressed than the rear drivers.

Could it be that Lion's wheels are not a set after all. Look at the left hand half of each of the drawings on the next page. These halves are drawn directly from the locomotive. Although at the rim both sets of spokes are similar, they are significantly different at the hub. Oh, dear, this is more complicated than I bargained for. I would welcome contributions from readers.

Perhaps a background in high integrity mechanical engineering design has led to my unease about castings. Some of the work I was involved with was for a deep sea environment, in which component failure could not be tolerated. In the early '70s, when I started this work, there were several castings in highly critical areas. These had to be extensively radiographed for internal flaws. Even then, some flaws only became apparent following machining and pressure test. In some cases, excavation of the flawed area was permitted, followed by weld repair (These were, of course, steel castings). In cases of through porosity, repair was not permitted and the casting had to be scrapped. The cost of such a course of action was high. Not only was the cost of the casting lost, but also all the work done on it to the point of rejection. Then of course, there was the time delay to the whole assembly until a replacement could be manufactured.

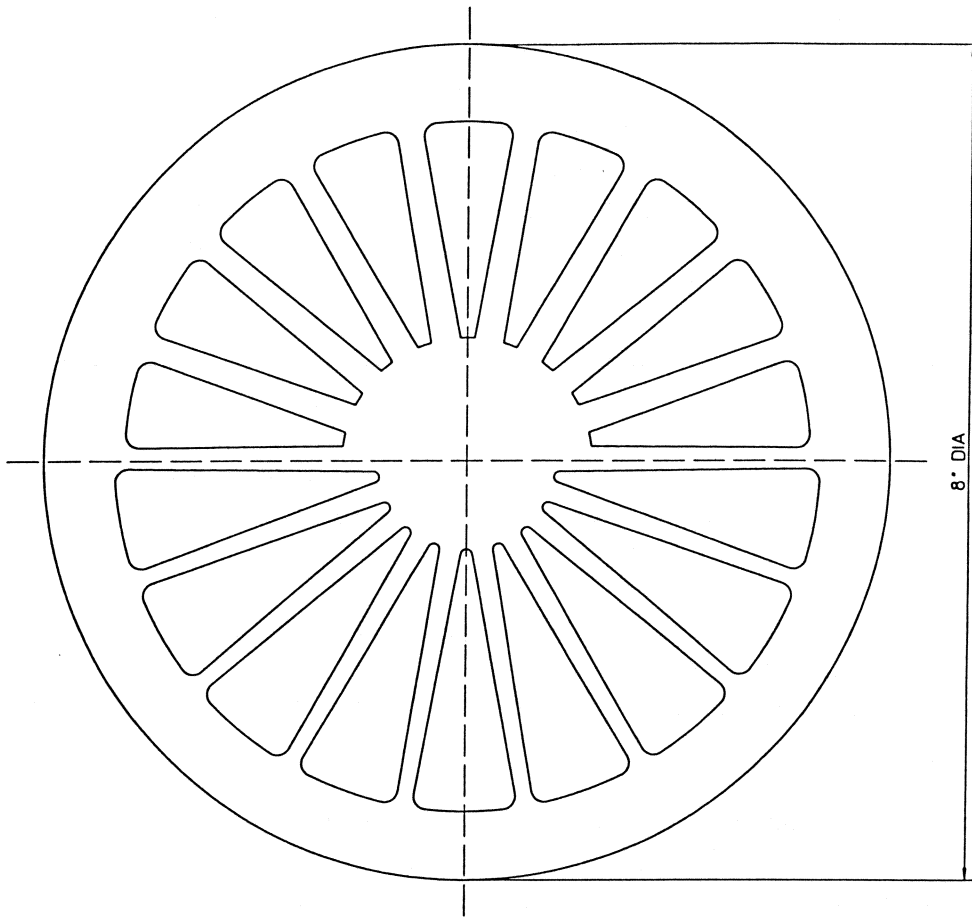
Such uncertainty and expense were gradually overcome by the use of fabrications and forgings, some of the largest being produced on a 30,000 ton multi-ram extrusion press in Scotland. These items were still expensive, especially since they needed complex machining, but at least the rejection rate went down to practically zero.

Now, I'm not saying for a moment that the castings I have for Lion's wheels will not do - there is ample evidence to show that they are perfectly adequate. However, I feel uneasy, especially since there is a fair bit of fettling required to make them look right, notably in the area of the hub. The drawings on the following page illustrate my point. The wheel on the left is the 16 spoke leading coupled wheel. That on the right is the 18 spoke driving wheel. In each drawing, the right half has been traced from the castings, while the left half is what the wheel should look like. To get the casting to look right involves taking out rather a lot of metal from a pretty sensitive area.



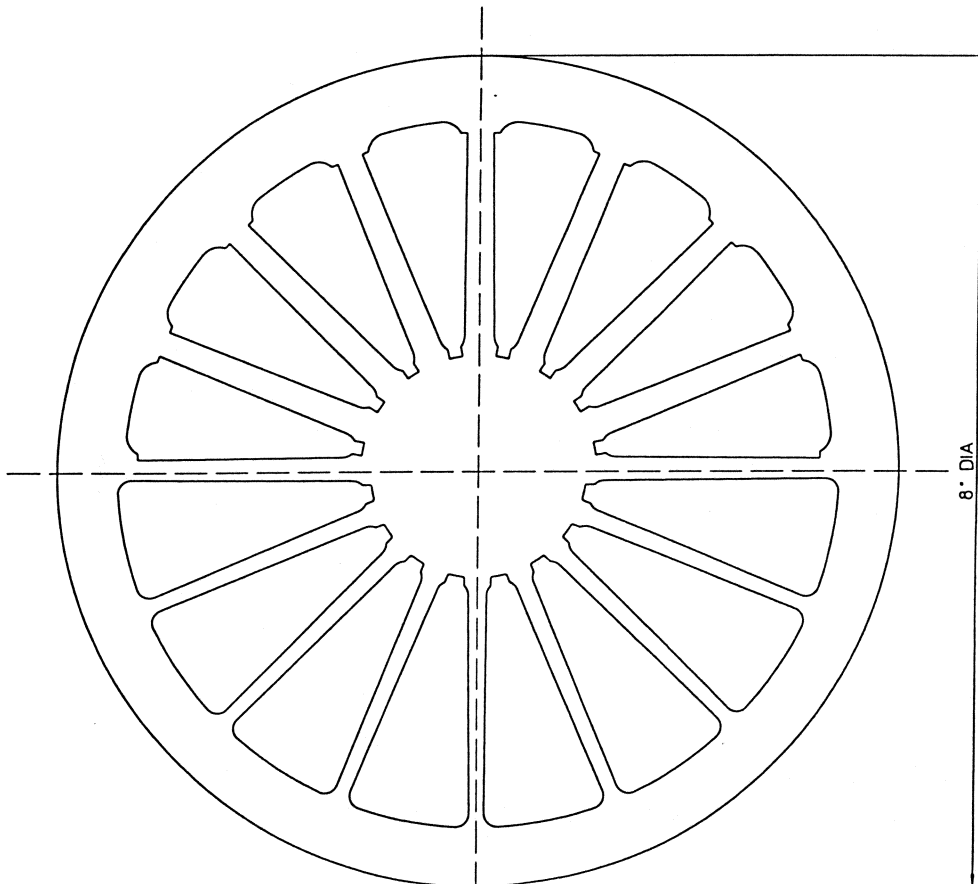
I began to wonder if I could not do better by cutting the wheels from the solid and promised in Lionsheart some time ago to investigate the possibility. That project is just starting to get under way. It began following a talk given at my local (Bristol) MES about laser cutting of steel. The speaker had had some frames cut and the result was truly impressive. Despite the intense heat of the cutting action, there was no visible discoloration or heat affected zone and the surface finish of the cut was such that no further treatment was necessary. I had wondered for some time whether or not I should get my 7 1/4" Lion frames and horn plates cut by this method, but felt that a little bit of elbow grease should be expended to justify the expression "I made it." Anyway, I don't believe that those items are complex enough to justify sending them out to be done. The wheels are a different matter.

To date I have drawn the wheels on a computer aided drafting system (CAD). The next step is to copy the electronic information about the wheel shape from the computer onto a floppy disc in a language that the laser profiling machine can read. The language in this case is known as DXF (Data Exchange Format) and is one of the most commonly used exchange formats between CAD systems. I will report further as the task progresses.



True Scale As Cast

Driving - 18 Spoke



True Scale As Cast

Leading - 16 Spoke

Lion's Coupled Wheels

An Evening at the Cinema

There was an air of expectancy in the Liverpool Philharmonic Hall on the evening of Friday, November 21st last year. Some 500 people were gathered together to see a public showing of the film *Titfield Thunderbolt*, starring of course, Lion, but also John Gregson, Stanley Holloway, George Relph, Hugh Griffith, Godfrey Tearle. Sadly, I believe, they are all gone, except of course, Lion herself.

The occasion was one of a series of films in the Philharmonic's Classic Film Season. The foyer was equipped with a display of things Lion, photographs, enlarged cuttings from various publications, leaflets and so on. Before the film, a few of we OLCO people enjoyed some very well presented refreshment in the downstairs restaurant, called, I believe, the Lower Place. Other films in the series included *His Girl Friday*, *King Kong*, *The Spiral Staircase*, *Vertigo*, *My fair Lady*, etc.

I received a very nice letter from reader Desmond Hill, declining the invitation to attend the film, but explaining that he and Mrs Hill don't get out much, being in their 80s. He is however, building a 7 1/4" Lion. I am sure I speak for all when I offer congratulations and best wishes for a successful completion. Such a project is beyond me at the moment.

Inside the hall the organ was being played, very much part of the scene in cinemas throughout the country in the days when *Titfield Thunderbolt* first appeared. I was at first confused by the lack of a screen onto which the film would be projected. But then, the Philharmonic is not a cinema - it is a concert hall, built in the 1930s - art decor and very attractive too, especially since its recent renovation. To have a permanent screen would spoil the ambience during the many musical concerts they have there. (This is the home of the Liverpool Philharmonic Orchestra). All became clear when the organ 'sank' from view, very much as in the old days. For a moment, nothing. Then...the huge screen, some 20 feet high and perhaps 25 wide, curtains and all, rose slowly from its cavernous well. The film was about to start.

Of course, the film was being shown to the 'converted'. Most of the audience had, I am quite sure, seen the film more than once. Reaction to the various highlights in the film tended to build up before the event, rather than as a consequence of it. Though I've watched the film many times on the small screen at home, there is nothing like the atmosphere of a real cinema, with its audience, anticipation and sheer scale. Since this was a special occasion, there was a large gathering at the bar afterwards, during which many like minded people got together for reminiscences, or perhaps, to meet for the first time. It was good to see Sharon Brown and Justin Garside-Taylor from the museum, plus several OLCO members. I was sad to have to leave early to catch my train.

Railway Receipts

And now another contribution from Charles Taylor-Nobbs, recently returned from a trip around the World, during which he spent some time in New Zealand, Australia and America. I have not re-typed this, since time is short and there is nothing I can do to improve on Charles's unique communication skills and his incisive wit. Please forgive the slight mis-match of textual style, but I think you need a break. The story starts on the eve of the film show...

On the evening before we all had the wonderful opportunity of attending the showing of *Titfield Thunderbolt* at the Philharmonic Hall in Liverpool, which, for those who missed it, was accompanied by a magnificent Exhibition designed and executed so brilliantly by Sharon Brown and her team from the Museum. our chairman, EF, came to visit me and avail himself of another browse through my archives.

A facsimile copy, which I had not realised would turn out to be so interesting, of the very first *News of the World* dated Sunday 1st. October 1843 caught his eye. Unlike *The Illustrated London News*, founded the previous year in 1842, there were no illustrations and virtually no reports of scandals and peccadilloes which abound in that paper today.

What did catch our eye was a paragraph on the back page headed RAILWAY RECEIPTS FOR THE WEEK Bearing in mind Cooke and Wheatstone had only patented their Electric Telegraph in 1837, just one year before *LION*. Steel split pens had been patented in 1830, the year the Liverpool & Manchester had opened.

We could only marvel at the sheer magnitude of the task of counting and recording the incoming cash at the various booking offices up and down the country.

<u>RAILWAY COMPANY</u>	<u>RECEIPTS</u> for the week 1 st . Oct. 1843 (<i>News of the World</i>)	<u>MILEAGE</u> <u>OPEN</u> source <i>WHISHAW</i> 1842	<u>INCOME</u> <u>PER MILE</u>
EASTERN COUNTIES	£ 2,960	18.575	£ 159 7/4d.
BIRMINGHAM & GLOUCESTER	£ 2,275	66.153	£ 34 7/7d.
LONDON & BIRMINGHAM	£ 17,638	112.25	£ 157 2/8d.
GRAND JUNCTION	£ 8,825	82.63	£ 106 16/-
LONDON & BRIGHTON	£ 5,344	47.9125	£ 111 10/9d.
NORTH MIDLAND	£ 4,707	72.5	£ 64 18/5d.
LONDON & SOUTH WESTERN	£ 6,924	76.7	£ 90 5/6d.
HULL & SELBY	£ 1,041	30.65	£ 33 19/7d.
LIVERPOOL & MANCHESTER	£ 4,774	30.66	£ 155 14/-
GREAT NORTH of ENGLAND	£ 1,347	45.06	£ 26 18/-
GREAT WESTERN	£ 15,529	117.4	£ 132 5/7d.
NORTHERN & EASTERN	£ 1,761	28.75	£ 61 5/3d.
BIRMINGHAM & DERBY	£ 1,601	38.85	£ 41 4/2d.
GLASGOW PAISLEY & AYR.	£ 1,347	29.4	£ 45 16/1d.
EDINBURGH & GLASGOW	£ 2,909	46	£ 63 4/11d.
LONDON & BLACKWALL	£ 1,040	3.48	£ 298 17/-
LONDON & GREENWICH	£ 826	3.75	£ 220 5/3d.
LONDON & CROYDON	£ 328	8.76	£ 37 8/10d.
MANCHESTER & BIRMINGHAM	£ 3,316	40.5	£ 81 17/9d.
MANCHESTER & LEEDS	£ 6,509	49.95	£ 131 9/9d.
MIDLAND COUNTIES	£ 2,660	55.3	£ 48 2/-
SOUTH EAST & DOVER	£ 4,474	66.25	£ 67 10/8d.
YORK & NORTH MIDLAND	£ 1,790	27.137	£ 55 19/2d.
NEWCASTLE & CARLISLE	£ 1,570	61.84	£ 25 7/6d.
SHEFFIELD & MANCHESTER	£ 672	WHISHAW	TOO EARLY

The vision of clerks working on high stools using scratchy nibs and inkwells, then telegraphing the information to somewhere central for it to be typeset on the Saturday night, makes Dickens picture of Scrooge and Marley's counting house very real.

The amount of track that had been laid by each Railway Company was recorded in Whishaw's 1842 edition of his guide to *The Railways of Great Britain and Ireland*. One might suppose that a lot more track had been laid in the intervening year for perhaps the majority of the companies, thus reducing the Revenue *per Mile* somewhat. Many, of course, would have reached the saturation point for track mileage, and the figures in the table would be fairly accurate. Whishaw gives the mileage in either decimals of a mile or in furlongs and chains. To suit the pocket calculator everything has been converted to a decimal fraction of 80 chains (for those who have forgotten the number of chains in a mile, or younger members who have never been taught what a mile actually is!)

A chain is 22 yards (20.3 metres) or the length of a cricket pitch.

The income per mile has been approximately converted to proper money. By that I mean the currency used BDD. (Before the Decimal Diddle) when we had an Empire and Queen Victoria ruled. When two bob was a meaningful amount in a way which 10p. will never be.

As an aside have you noticed, that even after twenty years, there are no affectionate terms for our present coinage. We used to have 'bob' and 'tanner'. The Americans have 'nickel' and 'dime'. Maybe we do not trust our currency enough to have any affection for it. Just wait for the 'Euro'. Germany, with the strongest economy, will be in charge and name it after their major river, it will be the 'eur-rhine', with a value that will really take the piss out of our pound.

Charles has done a very good job on the table, since all he had to go on was the rather cramped text that I have reproduced below.

Do. 5 p Cent.		53		53		53		53		53	
Belgian		104		101		101		101		101	
Column. 6 p Ct.		26		25		25		25		25	
PRICES OF SHARES.											
RAILWAYS, &c.											
Birmingham and Derby, 100	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Ditto and Gloucester ..	100	0 0	54	0 0	36	0 0	36	0 0	36	0 0	36
Eastern Counties	23	0 0	2	0 0	2	0 0	2	0 0	2	0 0	2
Great Western	65	0 0	55	15	0 0	86	5 0	86	5 0	86	5 0
Ditto (New)	50	0 0	0	0 0	0	0 0	63	5 0	63	5 0	63
Grand Junction	100	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0
Great North of England, 100	0 0	0 0	0	0 0	0	0 0	70	0 0	70	0 0	70
Liverpool & Manchester, 100	0 0	0 0	0	0 0	0	0 0	202	0 0	202	0 0	202
London and Brighton ..	50	0 0	36	0 0	36	10 0	36	10 0	36	10 0	36
London and Blackwall ..	16	13	4	2	6	0 0	4	2	6	0 0	4
London and Birmingham	100	0 0	217	0 0	219	0 0	219	0 0	219	0 0	219
Ditto, Quarter Shares ..	28	0 0	53	10	0 0	55	0 0	55	0 0	55	0 0
Ditto, New Shares	40	0 0	23	0 0	23	0 0	23	0 0	23	0 0	23
London and Greenwich ..	12	15	4	0 0	4	5 0	4	5	0	12	10 0
London and Croydon ..	13	15	9	0 0	0 0	12	10 0	12	10 0	12	10 0
London & South Western, 41	6	10	0	0 0	0 0	65	5 0	65	5 0	65	5 0
Belouas	150	0 0	0	0 0	0 0	5	2 6	5	2 6	5	2 6
Real de la Torre, (unrec.)	—	70	0 0	3	10	0 0	3	10	0 0	3	10
RAILWAY RECEIPTS FOR THE WEEK.—Eastern Counties, £2,960; Birmingham and Gloucester, £2,275; London and Birmingham, £17,638; Grand Junction, £8,825; London and Brighton, £5,344; North Midland, £4,707; London and South Western, £6,924; Hull and Selby, £1,041; Liverpool and Manchester, £4,774; Great North of England, £1,347; Great Western, £15,529; Northern and Eastern, £1,761; Birmingham and Derby, £1,601; Glasgow, Paisley and Ayr, £1,347; Edinburgh and Glasgow, £2,909; London and Blackwall, £1,040; London and Greenwich, £326; London and Croydon, £328; Manchester and Birmingham, £3,316; Manchester and Leeds, £6,509; Midland Counties, £4,660; Paris and Orleans, £5,321; Paris and Rouen, 5,485; South Eastern and Dover, £4,474; York and North Midland, £1,790; Newcastle, and Carlisle, £1,570; Sheffield and Manchester, £672											
A MAN IN THE STOCKS.—A very novel sign has been exhibited at York. Robert Hubby, of Marygate, a well-known character, was suspected of having been drunk, and creating such a disturbance on Sunday, as to interrupt the performance of divine service in St. Olave's Church. He was then fined 5s, and 4s fid costs, but having refused to pay, was adjudged to sit in the stocks for six hours. Accordingly, a pair of new stocks were provided and placed near the top of Marygate, and the man's legs securely fastened in them. His friends tried to make him as comfortable as possible by plying him well with liquor, and the disgraceful position in which he was placed appeared to have no effect upon him.											
ROBBERY.—On Tuesday night the following robbery was committed at the Lodge of St. Andrew's Burial-ground, Gray's Inn-road:—It appears that Mr. Hicks, who is sexton of St. Andrew's Church, having occasion to go out for a short time, left a man, named Brewer, to take care of the premises.											

Readers' Letters

Well, only one, really. I've received a plea for help on valve gear from a 5" Lion builder in Belgium, Mr Ferre Fredrickx. He obtained my address from Les Dalton, whom those present at Lionsmeet last year at Peterborough will remember for his storming performance on the 7 1/4" track resulting in his winning the Cup. I hope someone will be able to help. We have had good responses to queries in the past and I'm sure this will be no exception. I've not printed the letter word for word, but the gist of it is here:-

"I have under construction a 5" gauge Lion, but am having problems with the gab gear. I can go from neutral to forward and neutral to reverse gear while the locomotive is standing in any position. In neutral, I can push the locomotive and there is no movement of the slide valves. However, when the inlet port on the buffer beam side is 1/8" open, I cannot move the reversing lever to backward, though when the port is 3/32" open, there is no problem. It's just that 1/8" - 3/32". All other movements work in each position."

Now I do know that LBSC never built the Lion, even though he gave a very good description of its design and construction in Model Engineer in the '50s. Though generally a successful design, there were one or two problems and I think they involved the valve gear. Does anyone understand Mr Fredrickx's problem and can they offer a solution. He does not say if he is using LBSC's notes, but I know of no others. I will of course pass on any information. I hope the problem can be solved and that we shall see Mr Fredrickx at a Lionsmeet before long!

Lion in Model Engineer

About once a year we publish a list of the articles detailing the construction of 3 1/2" and 5" gauge Lions which were published in Model Engineer way back in 1953-4. Written by the immortal LBSC, the articles contain the drawings, the procedure and of course the various wrinkles which collectively, formed the 'words and music' for which he was famous. A word of warning, though. He never built the engine, so there were a few mistakes which those who followed his instructions found to their cost. We therefore include in the list the letters and articles sent in by builders and which it would be wise to read first.

We are unable to supply copies of these articles for copyright reasons. However, back numbers of Model Engineer and many other publications may be obtained from TEE Publishing, Tel: 01926 614101.

Date	Vol/Issue	Pages	Title
16/04/53	108/2708	469	The Titfield Thunderbolt (Just a brief Introduction)
11/06/53	" /2716	698-701	1. Frames
02/07/53	109/2719	2-5, 8	2. Motion Plate - Wheels
23/07/53	" /2722	95-99	3. Cranks - Rods - Springs
13/08/53	" /2725	186-190	4. Cylinders
20/08/53	" /2726	224-226, 232	5. Slide Valves
10/09/53	" /2729	311-315	6. Cross Heads - Connecting Rods
01/10/53	" /2732	403-405, 409	7. Feed Pumps
22/10/53	" /2735	492-495	8. eccentrics
12/11/53	" /2738	578-582	9. Gab Gear
03/12/53	" /2741	656-659, 662	10. Reversing Shaft - Links
17/12/53	" /2743	726	-- Letter from M H Cox
24/12/53	" /2744	758-762	11. Gear Lever - Lubricator
14/01/54	110/2747	28-31, 34	12. Boiler
04/02/54	" /2750	124-127, 131	13. Boiler, 5" Gauge
11/02/54	" /2751	160	-- Letter from R F J Pounds
25/02/54	" /2753	214-217	14. Boiler Tubes
18/03/54	" /2756	291-293, 296	15. Dome - 3 1/2" Lubricator
08/04/54	" /2759	381-383, 392	16. Blower - Boiler Stays
29/04/54	" /2762	470-472, 474	17. Smokebox

20/05/54	“ /2765	551-553	18. Regulator - Superheater
10/06/54	“ /2768	653-656	19. 5” Gauge Regulator
01/07/54	111/2771	16-18, 20	20. Safety Valves
22/07/54	“ /2774	98-100	21. Boiler Fittings
12/08/54	“ /2777	198-200, 203	22. Boiler Details
02/09/54	“ /2780	274-276	23. The Plumbing Job
23/09/54	“ /2783	358-360	24. Injector - Handpump - Clack
14/10/54	“ /2786	450-452	25. Finishing Touches
04/11/54	“ /2789	534-536, 544	26. Details of the Tender
25/11/54	“ /2792	630-633	27. Horns - Axle Boxes - 5” Gauge Tender
23/12/54	“ /2796	744-747	28. Tender Brake Gear
30/12/54	“ /2797	758-759	-- L B Parkin’s “Lion”
15/05/58	118/2973	638-641	“A Lion is Born” by F Few
02/10/70	136/3402	948-951	“Model Lion” by L A Saxby
21/12/73	139/3479	1222-1224	“Modifications” by L A Saxby
06/07/79	145/3612	784-787	“Lubricator” by D A Neish
01/04/83	150/3702	430	Letter from N Smith
20/05/83	“ /3705	620-621	Letter from C E Taylor-Nobbs
17/06/83	“ /3707	714-718	“Modifications” by K C Miller
01/07/83	151/3708	48	Letter from R F Austin
05/08/83	“ /3710	137-139	“Historical Notes” by C E Taylor-Nobbs
21/10/83	“ /3715	476	Letter from M Smithers
17/02/84	152/3723	190-193	“Lion’s Crown” by K C Miller
03/08/84	153/3734	130-132	“Boiler Origins” by C E Taylor-Nobbs
19/04/85	154/3751	439-442	“Tender Origins” by C E Taylor-Nobbs
02/08/85	155/3758	150-151	Scale Boiler Lagging - Product Review
03/06/88	160/3826	657-660	“A Century of Progress” by C E Taylor-Nobbs

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Please note that payment can now be made to cover a period of one year or five years. Also, subscription rates have reduced dramatically.

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