

# The Oily Rag!



Peter Clark with “Cuthbert” during the “Santa Special”.

The Taunton Model Engineers’  
magazine

# Contents

- |   |                             |
|---|-----------------------------|
| <b>3. From the Editor</b>   |                             |
| <b>3. Chairman's Notes</b>  | <b>David Hartland</b>       |
| <b>5. Vivary Park Santa Special</b>   | <b>Diana Fathers</b>        |
| <b>6. A six year old's steam lorry<br/>Introducing the project.</b>               | <b>Jeremy Mills</b>         |
| <b>7. The Porlock foundry<br/>Casting amateur and professional.</b>               | <b>Robert Dawes</b>         |
| <b>12. Tipping on the portable track<br/>Facing a recent safety problem.</b>      | <b>John Pickering</b>       |
| <b>15. Just how simple?<br/>An idea for a quick build locomotive</b>              | <b>Simpleton</b>            |
| <b>20. A fuel tank for the Thornycroft.<br/>Trials and tribulations WWI style</b> | <b>Steve Gosling</b>        |
| <b>25. A novel centrifugal clutch<br/>Just what it says on the tin!</b>           | <b>Ray Rolt</b>             |
| <b>28. "Of Ships and Things"<br/>"But it was worth it".</b>                       | <b>Fireman MN.<br/>Rtd.</b> |
| <b>29. Events Programme</b>   |                             |
- Society boiler testers inside the back cover.**

## From the Editor

Well we are still waiting, so nothing substantial in this issue about the new site. Hopefully the Spring issue will bring better news.

Having seen photos of the project so far I am looking forward to printing more about the “steam” lorry Jeremy Mills is building for his son. A great project to attract younger members. I had lost Robert Dawes article on casting but was pleased to find it and now you can enjoy it. I hope my piece on the portable track will inspire a few more of you to get involved. It is a good showcase for our activities and you do meet some very interesting people..

An article by “Simpleton” may set some of you thinking. His proposed locomotive looks almost too simple but it also looks as though it should work. Having made a small contribution to the Goslings’ latest project and been around when the problems with the tank came to light I found Steve’s article on making the new tank for the Thornycroft interesting. Ray Rolt enlarges on his ideas for a centrifugal clutch mentioned in the last issue.

Last but not least Fireman MN rtd. Reminisces on his time in the merchant navy. I hope you enjoy your magazine.

John

## Chairman’s Notes

By David Hartland

I asked our worthy editor to delay the printing of this issue of Oily Rag so that I could include news of our Planning Application for our new site at West Buckland.

Well, after waiting, we have been informed that there will be a further delay in issuing a decision. By the time you read this, there may be more news, but for the moment all I can say is that we are still optimistic we will receive the go-ahead, subject to conditions.

If the decision is to allow our application, then we will go straight to the next stage, which will be to call in the pledges. Everyone will then receive a written invitation to honour their pledges, or to make additional ones, and we will then call an Extraordinary Meeting of the Club to agree the final purchase. We could be on site in just a few weeks!

The donations received from the Santa Steamings at Vivary were donated to Children's Hospice South West, and we have received a nice acknowledgement from them. Perhaps next Christmas we can think of providing perhaps a larger event still, and really make the event memorable.

Several members were present at the memorial service for John Clark, who died in November. The service looked back at his remarkable life with so many interests and activities. He was a regular attender at Vivary, with his locomotive "Cuthbert" and entered (and nearly won!) the Clublec competition just a few weeks before he died. John was a fervent supporter of the concept of a new site for the Club, and West Buckland in particular. We send our condolences to Peter and his family.



"Cuthbert"

Sit back, read on, and be ready for a year of advancement for the Club!

# Vivary Park Santa Special

By Diana Fathers

The weather wasn't exactly dry, sunny and warm and although the rain had stopped by the time we started running trains, the public obviously preferred to stay in the warm. We were, however kept busy with those who did turn up and the children had many rides and donations were very generous so we collected a total of £150.

Julie and I once again bought and wrapped up hundreds of small gifts for the children (although we still had a lot from last year when we had to cancel because of the weather) and they all went home with quite a handful. Thanks to all the members



Diana Claus and a helper



Dave, diesel and rock cake?

who had worn festive gear, especially to Phil with his Santa outfit and reindeer decorated train. Several locos were on hand and they took turns to give rides. David and Darren brought a supply of cakes and the usual rock cakes were also on demand so, despite the cold and damp, a good time was had by all.

This year's Santa Special charity collection was in memory of Emily Rixon, aged 13, who died in June at Charlton Farm, the Children's Hospice South West in Bristol, after a very brave and long battle with a brain tumour. I am grateful to the TME Committee for accepting my proposal to donate the money to the Hospice this year. Roy and I will be going to the Hospice with Emily's parents early in the new year to make the presentation and we hope there will be a photo for the "Oily Rag's" next issue.

Well, that's all for 2018, but we start running trains again on Sunday 7th April in the meantime, a Happy new Year to you all.

## A six year old's steam lorry

By Jeremy Mills

I built my son a car when he was about two years old. I really enjoyed doing that so when he out grew the car at five, I knew he had to have something else. I gave the possible prototypes a lot of thought and came up with the idea of building him a lorry which he could take to steam rallies with me. I asked around to see if anyone had a set of drawings mainly to give me the wheel base and chassis dimensions. Unfortunately nobody locally had any but a friend of mine from a club in Birmingham said he would have a look through the "Model Engineer" magazine archive. Luckily he found what I needed, printed a copy and sent it to me. I bought a cheap mobility scooter for £30 pounds, a friend obtained some box section steel and the project began.

I have done most of the work at work in my lunch breaks as being a family man with a young boy time is never your own until later in

the evening and I am always too tired by then, so doing it at work proved better.

The chosen prototype is an Atkinson steam lorry. I am very pleased to have been asked by the editor for a “blow by blow” account of its construction . The

intention is to complete the lorry for the start of the

rally season, so with a bit of luck, the article should cover the construction from start to finish..



The prototype

## The Porlock Foundry

By Robert Dawes

Most Model Engineers must have thought of having a go at Foundry Work and I am no exception. So I have numerous books on the subject and have several times had a go at aluminium founding and have even made some usable castings in the distant past. On one of these occasions just as I had got a crucible full of aluminium ready for pouring, a pupil turned up for her flute lesson ( I had forgotten that she was coming!) and there was nothing for it but to turn off the vacuum cleaner, which was blowing the fire and dispose of the contents of the crucible and reluctantly give her a lesson.

In these circumstances I decided to give up foundry work until I had retired.

One day, after I had retired and moved to Porlock, one of my Grandsons said to me, "Grandpa, could we melt some metal?" Well! This was an opportunity and a first class excuse to have another go. So I ordered some fire clay on the internet and found a tin oil drum (they only come in plastic these days) and Toby and I made another Terry Aspin furnace together. I made a pattern for a nameplate with the word, Toby, on it and got out my moulding boxes tongs, pouring rings and all the other paraphernalia, that are needed for foundry work. We chose a day with a good weather forecast and eventually succeeded in obtaining a crucible of molten aluminium.

I had a packet of tablets which I believe are for refining the metal so we added one of these. This produced a very unpleasant smoke which made it very difficult to breath. However we soon recovered and none of us seem to have been permanently affected! Tim, my son, was given the privilege of pouring the metal and we lifted the crucible out of the fire with the special tongs and managed to get it into the pouring ring without mishap. He then poured it into the mould. All that remained for us to do was let the casting cool down and then break open the mould.

We had a cuppa while we were waiting and having got the casting , which was still very hot, out on the ground gathered round to have a look. The result of all this work can only be described as very disappointing. It was just possible to read the word, Toby, but it was not a good casting. I believe that the problem was in the moulding. We probably ought to have made more than one mould and given ourselves a bit of practice and taken more trouble to make sure that there was no loose sand lying in the mould. We sadly hadn't enough time to try again. However we all enjoyed what we had done and Toby had melted some metal.

Moving on a bit to this year, the year of my eightieth birthday.

My wife, Dori, offered me as my birthday present three nights in an Hotel in Ironbridge. The deal with the hotel included a “passport” which gave us free admission to the ten engineering museums in and around Ironbridge. This passport is valid for a year and so we can go back to each museum as often as we like.

Of course I accepted this and eventually the day came and we set off for Ironbridge. The first museum I went to was the Museum of Iron. Here I learnt how Abraham Darby discovered that it was cheaper and less labour intensive to smelt iron using coke rather than charcoal. In this museum there are lots of videos showing the foundry process and lots of interesting castings. I didn't realise that there is also an interesting clock on top of the building until it was too late for me to investigate. I wish I had taken some notes and photos but I hadn't imagined that I would be asked to do this write up.

After lunch, I went to Blists Hill, which is the Victorian village which seems to be the most important attraction of the area. When I arrived, there was a long queue for the entrance. Eventually I tumbled to the fact that my passport enabled me to bypass this and I was able to go straight in. There are lots of interesting engines (some were in steam) and workshops to see here. There is also lots of machinery on display in the open going rusty and deteriorating. There is also an “engineering works” with lots of machine tools all driven by line shafting and flat belts. It all looked as if it could be used but it was all filthy and uncared for and sad.

Then I found the Foundry. I was able to watch the man who was working there making up numerous moulds. I was able to talk to him and learnt that he would be casting the next day at 12.00 mid-day. All the castings he made were for sale. Things like door stops, bottle openers, shelf brackets. Yes! He would cast anything I wanted if I would produce a pattern,

he had a sideline in fire bars for Traction engines, BUT, He couldn't guarantee their machinability. He just put in any scrap iron he could get and he was really only doing it for the benefit of the public so that they could get an idea of what casting iron was about. It wasn't necessary for his castings to be machinable! This was his full time job, he told me. He had been doing it since he left school.



Pouring iron at Blists Hill

The next day he would be getting up at 5.00 am to light the furnace. He and another man would pour all the moulds that he had been making up all day and I could come and watch. When he had finished all the castings he would empty the furnace and, when it was cool enough, he would reline it and get it ready for the next batch of castings in a week's time.

So the next day I arrived at the foundry, with Dori, in plenty of time. It was very crowded but we managed to find a window where we could see what was being done. After a bit it became less crowded and we were able to see the whole process much more easily.

The main part of the furnace was just outside the building where he made up the moulds and they were now laid out on the floor in rows ready for pouring. He could let the molten iron out from the furnace and it flowed down a sort of trough into a refractory lined vessel (it may have been some kind of crucible. It could certainly take the heat!) which was used to convey the molten metal from the furnace to the moulds. He and his mate, who had now joined him were

already pouring the moulds when we arrived. When they had used up all the metal in the pouring crucible they just walked over to the



A Blists Hill door stop

furnace, placed the crucible under the trough so that the iron would run into it and then one of them would jiggle something in the tap hole with a sort of poker and the iron would run out.

It all looked so easy, all the castings were perfect. I thought to myself, "I could easily do that if I stuck to aluminium".

Which brings me to another point. I was talking to a coach driver, some years ago, who told me that at one time he had worked in a foundry. He told me, "You need to realise that, if you can melt aluminium, you should be able to melt iron. This is because the specific heat (that amount of heat required to raise unit mass of a substance one degree) of aluminium is roughly twice that of iron. So, although you will have to get your furnace hotter you will probably be able to use the same equipment.

All this is rather encouraging for someone who wants to try their hand at foundry work. However I have more or less decided that it is not for me. If it rains, when I have taken the trouble to get all the equipment out, it is a disaster. Operations have to stop. You can't cope with molten metal in the rain. So you really need a fire proof building of some sort where you can have your furnace in the dry and all the things you need for moulding ready to go. In these circumstance it is unlikely that I will ever attempt foundry work again. However there are plenty of other things to do!

# Tipping on the portable track.

By John Pickering

No not the driver! Although a beer provided once by a passenger went down very well. The tipping in question is due to the instability of the truck.

The problem can be divided into two, passengers standing on the toe boards when getting on and off the truck and passengers leaning out when on the run. A partial solution to the first has been to fit some timbers to the track, which project under the toe boards in the “station” and limit the amount they can go down to a level which should leave the wheels on the track. This does not solve the problem completely since there are numerous projections under the toe boards, the structure which supports them is not very stiff and the distance below the track varies along the length of the boards. As a result the clearance to prevent the toe boards from hitting the timbers means the truck can still tip by rather more than it should. But at least it cannot come off completely decanting a passenger onto the grass as has happened in the past.

The more serious problem is passengers leaning out on the run. This is a recent problem and we are not the only club to be effected. Formerly people were better behaved and they did not have mobile phones. Taking “selfies” and other pictures from the train is often the reason for leaning out. This can cause a derailment which is annoying but generally not serious. However if the truck is tipped far enough to cause the toe boards to hit the “A” frames of the track the result is a very violent stop which could be dangerous. This happened at Stockland so something had to be done.

The running rails on the track are made from channel section. The bogies are not sprung so the ride height is fixed and it is possible to design something which runs inside the channel under normal conditions and which comes into contact with the upper edge when the bogie is tipped. The rather crude stopgap was to fit pieces of scrap angle to the bogie sides. The clearance was around 1/16" which meant the bogie could not be tipped enough to derail because this is less than the flange depth. The tip of the frame was limited to an angle which gave plenty of clearance to the "A" frames. But with most of my weight on one of the toe boards the clearance was minimal due to the lack of rigidity in the frame.

It would be daft for anyone to stand on the toe boards when on the move but these days accidents are always someone else's fault and we have a responsibility to protect passengers from their own unbelievable stupidity.



One of the bogies as built



The same bogie with the anti tip angle in place

The current truck has served well for many years but it does look rather like something thrown together on a Friday when it was realised there was nothing to use on Saturday and which was not supposed to survive beyond the Sunday! Although it is now considered safe a new vehicle designed specifically for the portable track would be a great improvement.



The structure of the current truck

A new one has to be designed to be as safe as we can make it for the current climate. It also has to project a better image of the club. The portable track is a shop window for our activities and we are supposed to be engineers. A further part of the design specification is to reduce the weight. Getting the present one on and off the trailer is heavy work even for people a lot younger than most of our members.



Why use one piece of steel when you can fit in six?

Some of you will have spotted an apparent problem, how do we get the modified truck onto the track. Well just volunteer to help sometime and we will show you how!.

An update to follow  
(Eventually)

# Just how simple?

By “Simpleton”

If all goes to plan work will start on the GWR ( Great Westbuckland Railway ) next spring. The new site will have facilities for most of the many and varied aspects of our hobby, but the principal aim is to build a ground level railway. Owning a live steam 7.25" gauge engine to run on such a track is often seen as no more than a pipe dream. Building a model of a GWR King or a Tasmanian Garrat in this gauge may be an aspiration but even if this is cut down to an 0-4-0 pug building one is a daunting project. The kind of locomotive which can be rostered to run on a busy Sunday may be out of reach, but how complex does a basic 7.25" gauge steam locomotive with which to enjoy club evenings in the Summer at West Buckland, really need to be?



PYRTE

Some time ago I came across a website called [steamshed.com](http://steamshed.com) which has some useful links but is principally intended to promote the PYRTE ( Pull You Round Traction Engine ). The introduction to the design stresses it's Mamod background and claims that it is the simplest model traction engine you will ever come across.

It also talks of building one within three months spending seven or eight hours a week on the project, that is only around 100 hours! Although freelance the effective scale is around 1.5" to the foot which just happens to be close to the scale of standard gauge 7.25" gauge engines. I wondered if a viable basic locomotive could be designed along the same lines. When I saw George Hughes' book "How to build a traction engine" on "Amazon" my curiosity got the better of me and I bought it.

I did not expect what came through the post. Not a slim volume with lots of drawings and photos but a thick paper back tome with relatively few drawings and a whole lot of words. They say a picture is worth a thousand words, personally I would have preferred more pictures. However having skimmed through it became clear that indeed :-

$$\text{PYRTE} = \text{TE1A} \times 2.5$$

Gone is the oscillating cylinder, replaced by a simple slide valve engine with slip eccentric reversing, the belt drive is replaced with a two stage chain and there are detail changes such as adding bushes for shafts where the Mamod simply uses holes in the plates but the basic concept is unchanged including the pot boiler. Despite this simplicity there are videos on the net showing it pulling it's driver around.

During the nineteenth century and the beginning of the twentieth, several traction engine manufacturers also built industrial locomotives using the same technology. I thought that taking one of these as the inspiration and using a similar design philosophy to George Hughes or may be even basically using his design, a locomotive should be possible. If the "PYRTE" can haul its driver around the grass at a traction engine rally at a scale speed of around 1 mph, the far lower rolling resistance of a railway should allow a similar locomotive to haul a couple of people a bit more quickly



Avelling and Porter No. 807

A quick look on the internet soon found several suitable prototypes and Avelling and Porter No 807 looked to be the most suitable. This locomotive was built in 1872 for the Wotton Tramway. It spent much of its working life in a brickworks at Nether Heyford and is now at the Buckinghamshire Railway Centre. A great advantage of this prototype was, like the PYRTE, it uses chain drive.

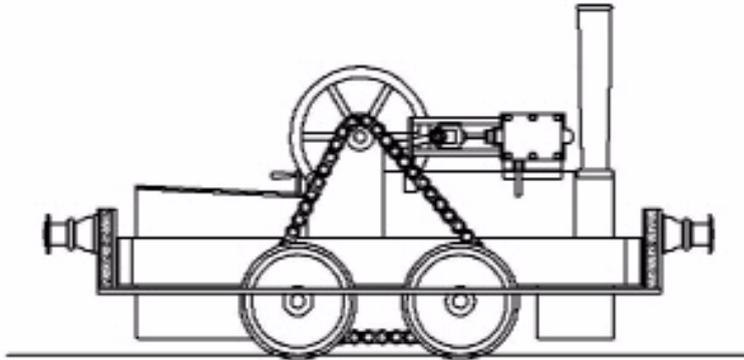
As soon as I started to think about the design it started to deviate from the George Hughes engine. He argues that the extreme simplicity of the pot boiler more than compensates for its high gas consumption. With a machine which is only going to run a few hours a year this is a valid point but there is another factor which makes me think a better boiler is a good idea. The PYRTE is gas fired, if a 3.9Kg propane cylinder is the source of the gas the recommended draw off rate is 7.5KW. 1% is a reasonable ball park figure for the efficiency of a good coal fired locomotive of the size being considered. Gas firing should make this easier to achieve but it still requires an efficient boiler, so out goes the pot boiler. At 7.5KW and 1% we can only expect around 1/10 BHP so this is hardly going to be a mighty hauler.

On the level with suitable rolling stock this should haul the driver and a friend or may be even two at 4mph. Going up hill may involve burning more gas but you save coming down!

The "battle of the boilers" showed what could be achieved with a coal fired model boiler. Before this contest one design which was very popular, even in quite large sizes was the Smithies boiler. Constructing one is not much more difficult than a pot boiler and far easier than a locomotive type, also in this size and where gas or oil firing is to be used they may even be more efficient than locomotive types. Tubal Cain suggests a gas fired horizontal boiler with circulating tubes will evaporate water at between 3 and 3.5 times the rate of a pot boiler. A great advantage of this type of boiler is that all joints are visible. So if your silver soldering is not up to snuff, leaks which could be catastrophic in a locomotive type can be corrected. Having had no difficulty making a small wet backhead Smithies boiler many year ago this was an obvious choice

Another deviation for the PYRTE boiler was in the way steam gets to the cylinder. Most traction engines have a cylinder block which also serves as a dome. The PYRTE cylinder is similar but instead of taking steam straight from the top of the boiler it is supplied with steam by a pipe from a take off at the back of the boiler. This means the condensate, which would normally dribble back into the boiler collects in the base which rather defeats the object. I have considered two options one closer to normal traction engine practice and the other treating the cylinder block as any other locomotive cylinder block. This means a different location for the regulator and safety valve. Which may be a simpler option but does not look quite as good.

Perhaps babies and bath water have come to mind. but the added complexity of the boiler is where loosing the basic simplicity of the PYRTE comes to an end. Having a readily accessible flywheel



So simple!

means there is no disadvantage in using a single cylinder slip eccentric engine. The smaller wheels and higher service speed mean the loco only needs one chain rather than two and for obvious reasons the loco does not need any steering. The wheels are simpler and if simplicity is of the essence suitable ready made ones are available off the shelf. So overall a similar complexity and build time look realistic. In its simplest form the loco could look a bit like the drawing, for simplicity there are no brakes, the locomotive type cylinder is shown and the geared counter shaft for chain tensioning is omitted. The chain can be tensioned by moving the front axle. It would weigh around 70lbs and it's principal dimensions based on No 807 would be :-

	Fulsize	1.54" / ft.
Frame length	14' 9"	22.72"
length over buffer beams	15' 6"	23.87"
Length over buffers	18' 0"	27.72"
Height to top of chimney	9' 0"	13.86"
Wheel diameter	3' 0"	4.62"
Wheel base	4' 7"	7.06"

It may be that something so far from your ideal does not appeal but if a handful of members fancied building this loco there are several corners which could be cut. Most of the structure is flat plates which could be laser cut and it may be possible to get some of the more complex and bulky items CNC machined. Perhaps having your own 7.25" gauge engine to run on the new track on long Summer evenings is not just a pipe dream after all.

## A Fuel Tank for the Thornycroft

By Steve Gosling

One of the more challenging tasks we have had with the latest lorry project is to make up the fuel tank.

We are fortunate to have the remains of an original that is beyond repair and therefore sufficient information to allow us to make a copy. The tank holds about twenty-five gallons, is four feet long, broadly triangular in section and mounted on the dashboard over the driver's knees. It has a tap in the bottom and filler in the top. The filler cap was missing and the sump had rotted out completely so I started the job by making patterns for these. Dad took them to the Bridport Foundry and then machined the resulting castings.

The filler neck had survived on the original tank. Once those were in stock, it was onto the steelwork.



The new filler cap

The wrapper is a piece of 20swg Zintec with a longitudinal seam on the top. This was cut with a fine disc cutter and then the beginning and ends of each bend were marked with a permanent marker. This proved to be most useful and made folding up the large radii on the bending rolls at the Echills Wood Railway quite straightforward.

I drew out the baffles and flanged end plates and our illustrious editor very kindly arranged for them to be laser cut in 18swg steel along with some 12mm flanging blocks. Now these flanging blocks

are big chunks of steel but only of modest cost and laser cutting really takes the graft out of making them. All I had to do was to break the corners with a file to suit the bend radii. The baffles had no corners so they were clamped between the blocks using the vice and an assortment of G-clamps and the flanges were knocked over. The end



A flanging block in use

plates are flanged all round to allow them to be rivetted in so I had to take a bit more care here. They are upset by 1/2" and are radiused at the corners by 3", 2" and 1".

I started on the 3" radius corner and that went over nicely. I did have to hit it gently a lot of times and made sure that the flanging blocks were well clamped up but after some persistence, the flanges formed nicely. The trick is to not to hit the plate too hard and when a ripple develops, to hold up a chunk of steel behind to hit against and allow it to be straightened out. The bends became progressively more difficult to achieve as the radii tightened but all went well with no

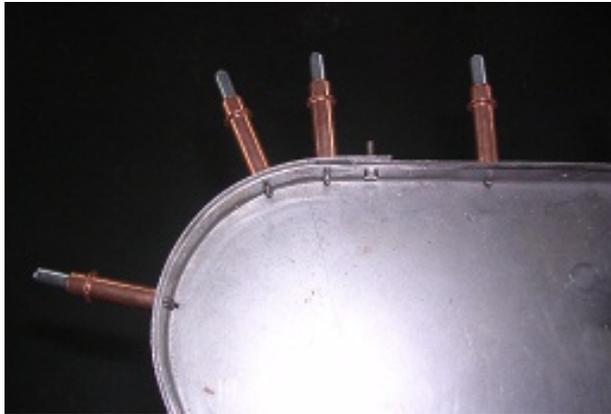
further annealing. The next task was to drill the plate for the rivets. I clamped them into place using all of my tool-makers clamps and progressively drilled holes around their periphery. As I drilled each hole, I used a “Cleco Clamp” to secure them. This is a spring-loaded sheet



The finished plates

metal worker’s clamp which pushed through the hole from one side using some special pliers to keep the spring compressed.

On releasing the spring, the clamp grips the plate on the far side and squeezes up the joint. They are an invaluable aid to the sheet metal worker and this is the first time I have used them. They can be purchased in our sizes as well as the 1/8” ones I was using here.



The “Clecos” in place

Once all of the holes had been drilled it was time to start the assembly process. The first part was to tin all of the joint faces.

For this, I used solder paint which is fearsomely expensive stuff but absolutely wonderful to use. That gave me a nice even coating wherever it was needed. I bolted up the longitudinal seam and knocked over the rivets between the baffles before inserting them and riveting them in as well with 1/8" copper rivets. A bit of attention from the propane torch and a bit of extra solder and they were in. Then it was a case of finishing the longitudinal seam and finally the end flanged plates. When riveting these in, I used a rivet squeezer made from a cheap Chinese hydraulic cable crimper. This has proven to be worth its weight in gold as I achieved nice snap heads on both sides of the plate. Once the ends were in I could solder all round and this went well. The final part of the job was to fit a second end skin to hide the flanged plate. Again, laser cutting gave me a perfect fitting plate which just dropped onto the end of the flanged plate with little effort. It remained only to leak test the tank before handing it over to the paint shop.



Steve's rivet squeezer, an idea worth copying!

The tank then went onto the lorry and has been used for the first couple of trials. It was fine for these but when we filled it ready for

a long run, the petrol started coming through a leak in the end joint. Remedial action was required but bringing a gas torch near a recently used petrol tank can ignite the remaining fuel-air mix with explosive consequences! To counter this, we emptied the tank and left it for six weeks with the cap off. Before trying to heat it, I put my dust extractor hose inside to draw out any remaining vapours. Fortunately, this all worked satisfactorily but it was of concern.

The leak proved to be due to my getting carried away whilst tinning. I left too much solder on the surface so that when the rivets were squeezed up, the plates were held apart. This was resolved by removing the rivets and then re-heating with bolts through the holes. These were tightened whilst the solder was molten in order to pull the joint up. Once this had been done, I re-riveted it and re-ran the solder again before replacing the outer skin. The tank is now back in the paint shop for repair work. Hopefully we will be able to go out on a proper run very shortly.



Fresh out of the paint shop.

# A Novel Centrifugal Clutch

By Ray Rolt

When 'Wileco', the German manufacturer of quality 'live steam' toys, announced that they were making a model of the Foden 'Steam Tractor' for the British market, I bought one when it became available.



The inspiration

This is well made, but as with 'Mamod', they cannot be remotely operated. This means that though they have steering gear, this cannot be easily operated on the move.



And the model

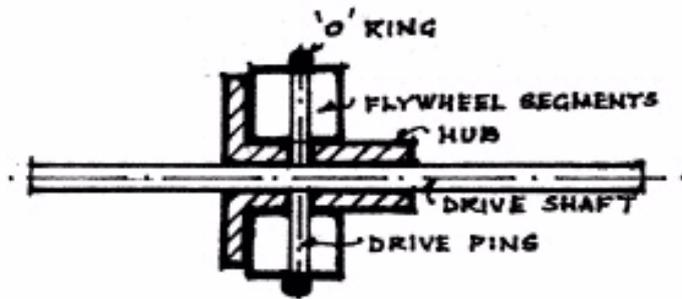
Similarly, there is no means of remotely starting and stopping or changing direction. In the modern world, where youngsters will expect this, it must reduce the potential sales. Because of this, I resolved to rectify this short coming so that I could operate it as realistically as toy radio controlled vehicles. To this end, I bought such a vehicle for £5 in a bargain shop, which had 2 channel control for steering and operating over a range of about 8 metres.

Thanks to the bodywork of the Foden, it is possible to secrete two electric motors one for operating the steering and the other driving onto the flywheel rim. As there is only a single, double-acting cylinder with slip eccentric valve gear, it should be possible to stop, start and change direction with a bi-directional, centrifugal clutch, driven by an electric motor, having intermittent action on the flywheel rim. This has resulted in the following design.

### Description

By using an expanding flywheel, grooved on the rim for a silicone rubber “O” ring, intermittent drive on the main flywheel can be achieved. This will avoid all the complication of a normal centrifugal clutch. By intermittent operation of the electric motor the drive onto the main flywheel will be by the “O” ring acting as a clutch. This will start and stop the ‘Tractor’, and when stopped it can be restarted in either direction.

The mounting of the clutch unit will have slotted holes. This will allow the distance of the “O” ring from the main flywheel rim to be adjusted by trial and error or by using a feeler gauge to give the right take up of the drive. This will depend on the torque required. The greater the gap, the greater the speed of the clutch flywheel when the drive is taken up by the “O” ring. This will require a thicker “O” ring to reduce the wear. Brief operation of the “flick” switch will give a light braking effect.



LONGITUDINAL SECTION N.T.S.

The clutch flywheel can be in 2, 3 or 4 segments on a separate hub secured to the drive shaft. This hub will have silver steel drive pins passing through the flywheel segments. These segments will be kept in alignment on one side by a thin flywheel secured to the hub. The flywheel segments will be machined in the solid, with a shallow groove machined for the “O” ring, and the drive pin holes drilled through into the central hub. They will then be cut through with a thin disc saw to form the segments. They will be kept in place by the “O” ring on assembly. The use of a single “O” ring enables braking to be achieved by light application of the clutch. Where continuous drive is required, multiple grooves and small “O” rings will give a more positive drive.

“ IT’S ALL IN ME ’ EAD ! “

I’m sure that there must be many others that, like me, think up solutions to problems but don’t put them down on paper for possible future use! They say that the best way to avoid dementia is to keep an active mind. I hope that this is true because I am always having ideas but don’t follow them up and put them into practice!

A case in point is my idea for a bi-directional centrifugal clutch using an “O” ring. This was thought up for a specific application

several years ago, but not put into practice, or on paper. It is the reason why I was able to do the article for my the “0” gauge live steam loco at short notice to help the shortage of articles for the “Oily Rag” at the end of last year.

I have finally put it down on paper, but as yet have not used it for it’s original intended purpose.

## Of Ships and Things

By

Fireman M.N Retired

If the funeral of Sister Agnes was a grand affair the wake was even grander. I don’t know who was footing the bill but it was a sitting down job. There were about five hundred people from all walks of life.

When I got back on board ship I said I had been to a funeral, which was greeted with scepticism and I was told that I would be logged as A.W.O.L. and forfeited one day’s pay and fined two day’s pay. Next day it was main news in the papers and my excuse was accepted but I still lost one day’s pay, but it was worth it.

Now for a little bit of history. Jimmy Hoffa, not to put too finer point on it was a New York gangster, who had risen to be president of the Teamsters Union with one and a half million members. He controlled all the ports along the Atlantic coast, but he wanted to take in the crews of all the ships that came into the ports as well so they could paralyse everything from Newfoundland to Mexico.

With this in mind Hoffa came aboard with eight thugs backing him up, all big ugly brutes.

He said that they wanted all crew members to join the union. The captain and the chief officer said, no chance! And politely directed them towards the gangway. I think Hoffa got a bit upset, for what was obviously a prearranged signal, all the Dockers on the ship and the quayside stopped work and the cranes became silent. Hoffa and Co all trooped ashore and that was it, stalemate.

With three more days loading to finish plus trains and buses to bring passengers Not to mention tons of stores we could be in a right pickle. After a bit of horse trading Cunard backed down and we all became honorary members of the International Brotherhood of Teamsters.

## Events Programme

### 2019

Tuesday 19th Feb	The Tramways of Weston Super Mare and Taunton by Peter Davey.
Tuesday 5th Mar	Annual Quiz by Dick Whittington
Tuesday 19th Mar	Activity Challenge with Simon Bowditch
Tuesday 2nd Apr	Annual General Meeting and New Site Discussion
Sunday 7th Apr	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Tuesday 16th Apr	Yeovil Railway Centre by Roger Marsh.

Sunday 21st April	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Sunday 5th May	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Tuesday 7th May	“Vale of Berkley Railway” a new heritage railway. Alan Price
Tuesday 14th May	Informal running evening at Vivary 1800 to 2100
Sunday 19th May	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Tuesday 21st May	Trophy Night bring along any models worked on or completed in the last year.
Sunday 25th May	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Monday 27th May	Stockland Village Fair portable track in operation, 1300 to 1700 contact John Pickering for details
Tuesday 4th June	Visit to Isle Abbott’s Railway, details to be confirmed.
Sunday 9th June	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Tuesday 11th June	Informal running evening at Vivary 1800 to 2100

Sunday 23rd June	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Tuesday 2nd July	TBA.
Sunday 7th July	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Tuesday 9th July	Informal running evening at Vivary 18.00 to 21.00
Sunday 14th July	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Tuesday 16th July	Visit to be Shute Railway, details to be confirmed.
Sunday 21st July	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Tuesday 6th August	Visit to be arranged
Sunday 11th August	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Tuesday 13th August	Informal running evening at Vivary 18.00 to 21.00
Tuesday 20th August	Visit to be arranged
Sunday 25th August	Vivary Public Running, 14.00 to 17.00 set up from 12.30

Tuesday 3rd Sept	“Bits and Pieces” bring along items of interest to the meeting. 19.30 Stoke St Mary
Sunday 8th Sept	Vivary Public Running, 14.00 to 17.00 set up from 12.30
Tuesday 10th Sept	Informal running evening at Vivary 1800 to 2100
Tuesday 17th Sept	TBA.
Thursday 19th Sept	Brean steamers visit to Vivary. TME members invited to attend. 09.30 to 15.30
Sunday 22nd Sept	Vivary Public Running, 14.00 to 17.00 set up from 12.30
29th Sept	CLUBLEC locomotive Efficiency Competition, Vivary Track. Entries to David Hartland. 12.00 to 17.00
Tuesday 1st Oct	TBA.
Sunday 6th Oct	Vivary Public Running, set up from 12.30 14.00 to 17.00
Tuesday 15th Oct	TBA.
Sunday 20th Oct	Vivary Public Running, set up from 12.30 14.00 to 17.00
Tuesday 5th Nov	Annual Auction, with Mark Davis at Stoke St Mary

Tuesday 19th Nov	Slides and chat by Peter Triggs
Tuesday 3rd Dec	TBA.
Sunday 8th Dec	Santa Special Steaming at Vivary. Set up from 11.00. running 12.00 to 15.00
Tuesday 17th Dec	“Mince Pies and Natter” Evening at Stoke St Mary

**Meetings at Stoke St. Mary start at 7.30pm unless otherwise stated**

## Subscriptions

**Ordinary Membership is £30 with a further £5 for spouse or partner. Family membership £35 Junior Membership £5  
Subscriptions are due on 1st January**

**Membership Secretary contact details—see inside front cover.  
If renewing by post, please enclose S.A.E. for Membership Card**

**The views and articles featured in this magazine do not necessarily represent the views of the Committee, Officers and Members.**

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To whet the appetite, one of the pictures of Jeremy Mills' "steam" lorry.



A taste of things to come?

The Thursday gang in the latter days at Creech

