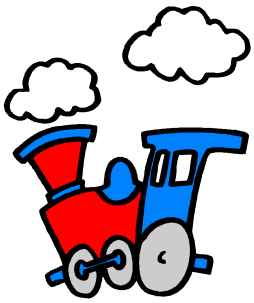
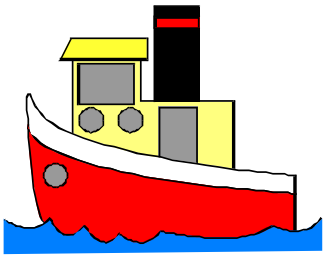


Wheels and Floats



Newsletter July 2019

TAURANGA MODEL MARINE AND ENGINEERING CLUB INC.

The Secretary
PO Box 15589
Tauranga 3112

Palmerville Station Phone 578 7293

Miniature Railway Memorial Park
Open to Public, weather permitting
Sundays in Summer: 10am to 4pm approximately
Winter. 10am to 3pm approximately
Website: www.tmmec.org.nz
Facebook: Memorial Park Railway Tauranga

MEETINGS
General Members Meeting every first Tuesday 7pm.
Committee Meeting every second Thursday at 7pm.
Maintenance Tuesday mornings from 9am.
Engineering discussions Tuesday evenings 7.30pm.

COMMITTEE

President:	Russell Prout	548 2881
Vice President:		
Club Captain	Bruce McKerras	577 0134
Secretary:	Jason Flannery	572 1165
Treasurer:	Owen Bennett	544 9807
Committee:	Ash Thomas, Max Donnelly, Joanne Knights, Bruce Harvey Brian Fitzpatrick.	
Boiler Committee:	Peter Jones, Bruce McKerras, John Heald.	
Safety Committee:	Chris Pattison (Chair), Peter Jones, Warren Karlsson.	
Editor:	Roy Robinson royrobkk@gmail.com	07 5491182

CONVENERS

Workshop:	John Nicol
Track :	Bruce Harvey, John Stent.
Librarian:	Chris Pattison
Rolling Stock:	Bruce Harvey
Website:	Murray de Lues

OPERATORS 2019

14 July	B Fitzpatrick
21 July	B Harvey
28 July	P Jones
4 August	B McKerras
11 August	N Bush
18 August	M De Lues
25 August	P Jones
1 September	B Fitzpatrick
8 September	B Harvey
15 September	P Jones
22 September	W Karlsson
29 September	B McKarras
6 October	N Bush
13 October	M De Lues
20 October	B Fitzpatrick

President's Report

In the May newsletter I mentioned I had surgery to have a total knee replacement. I am happy to report that the surgery went very well and I am now well on the way to a full recovery, albeit with a little help from my crutches and a lot of support from my wife and family.

I would like to thank those club members who visited me in hospital and carried out my duties to the club. With so many incredible club members around I was sure everything was in good stead.

Max D visited Manukau for the labour weekend run and did a Stirling job of representing our club, thank you and well done Max.

It is with considerable regret that I was presented with the resignation of father and son team Mark and Ollie Duncan. They will be taking on the mainland challenge soon when they move south to Blenheim. Thank you for your tremendous support in both club activities and executive committee involvement. Thank you to Ollie for you contributions to the safety committee and on behalf of the Tauranga club I would like to extend the very best to you both for the adventures ahead of you.

To our club members this now presents us with two positions that could do with someone stepping up. One of these positions is on the safety committee and one on the executive. Please let the secretary or myself know if your are keen to take on either of these rolls.

July 1st (our 40th anniversary) has come and gone by the time you read this but the celebrations are just beginning.

Anniversary diner on Friday 5th July, Play day and public night run on Sat 6th and our regular public running on July 7th. Enjoy the food, the company and look out for our visitors and guests as you do so well.

Happy Anniversary to you all.

Your President

Russell Prout

Big Boy

The following is article was printed in Live Steam in June 1984. It covers the construction of Big Boy as told by Tom Millar. The Editor wishes to thank Dave Bush Editor of Live Steam and Tom Millar for allowing me to reproduce this article for the members of TMMEC.

LEE E. CARLSON

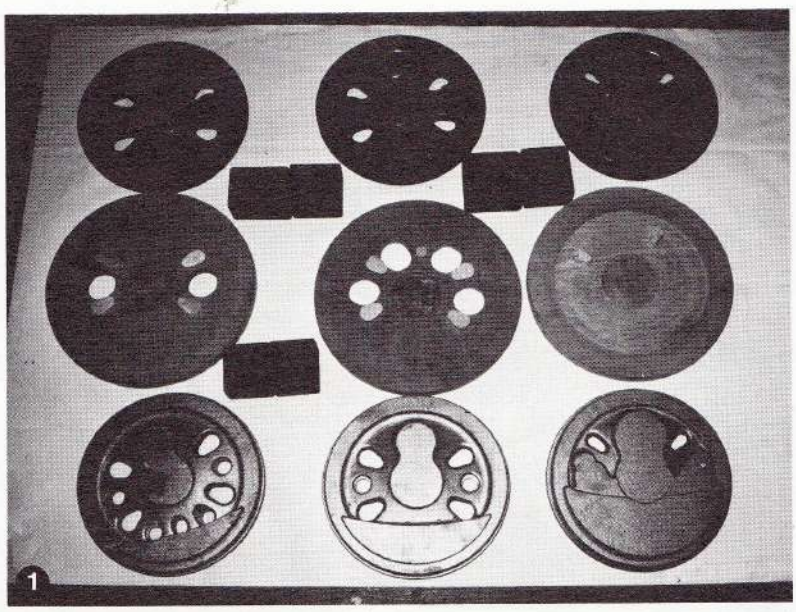
Just the thought of building a Big Boy in 1.6" scale can keep you up many nights fantasizing. I never believed I would actually attempt, complete and pull the throttle of such a monster locomotive.

I wish I could take the credit for constructing my beautiful locomotive, but that must go to Severn-Lamb Ltd. in England. Severn-Lamb Ltd. employs some of the finest model craftsmen in the world, and my Big Boy is one of their finest accomplishments. Severn-Lamb Ltd. models occupy museums around the world and run on many commercial and private railroads, as well.

The idea for a 1.6" scale Big Boy came about from a picture I saw of the 1.8" scale Big Boy Severn-Lamb Ltd. built for the Forest Railway in England. After some correspondence, Michael Lamb, President, and Les Rose, Works Manager, flew to Los Angeles in March 1979 to finalize the plans and specifications for a project that was to consume 3½ years, 16,000 man hours and in excess of $100,000.

The project started with the purchase of the original blueprints for Big Boy from Truson Buegel. These were pored over and decisions were made regarding where we would stick to prototype design and where we would "cheat" a little.

Next, a list of all available parts was put together. There is no use making what one can purchase. A major item on this list was the centipede tender castings. These were purchased from Bill McKelvey in Los Angeles. Over three hundred castings in the centipede trucks alone!



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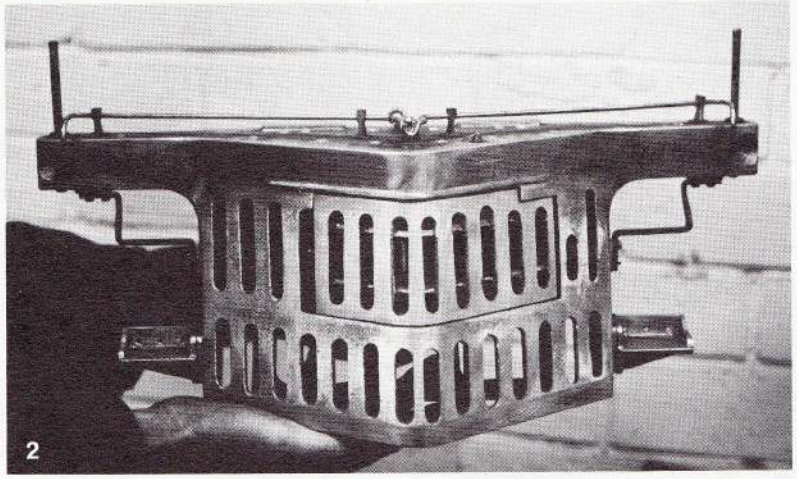

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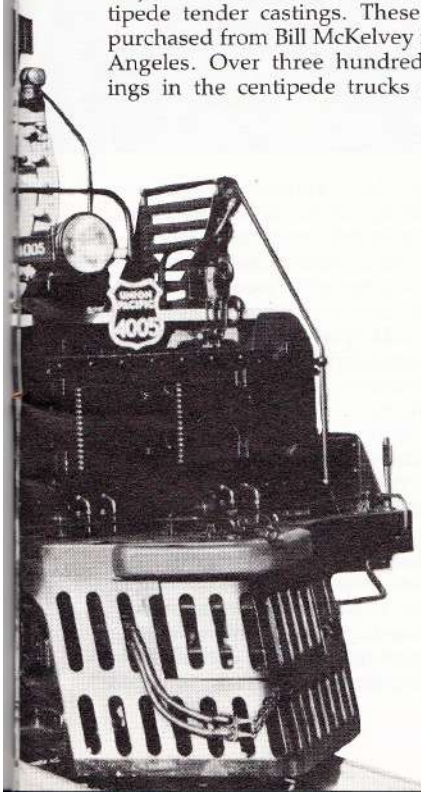
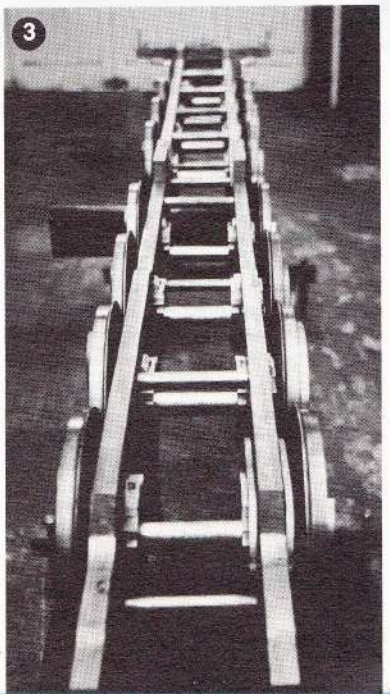


All available parts were shipped to England with all the drawings and work began. I made five trips to England during the loco's construction, to check on progress and go over specifications. Progress between trips was monitored by slide photographs sent to me monthly of current construction. I now have over 800 slides of the loco under construction.

Much of my Big Boy was built from castings. The first pattern built was for the iron wheels – three patterns in all (**Photo 1**). No cheating here – these are prototype cored wheels. Next came the pilot casting. Cast in one piece as the prototype was, it is a magnificent casting (**Photo 2**).

The frames were flame-cut from steel plate (**Photo 3**). Remember the cheating I mentioned earlier? Cast integral frames were deemed too much work.



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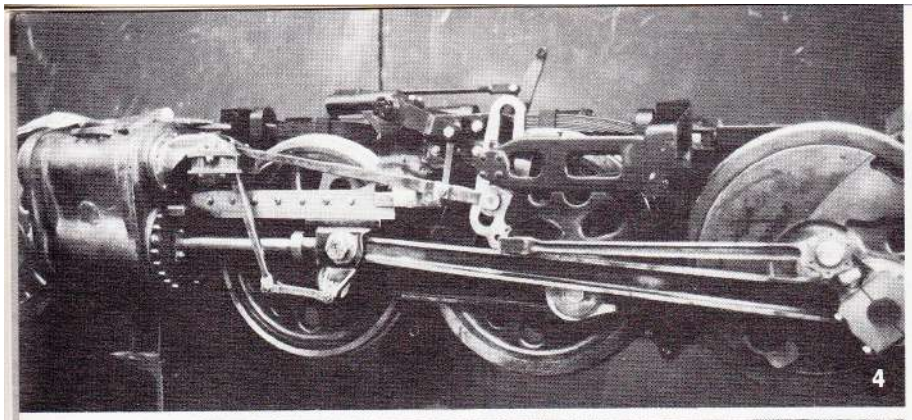
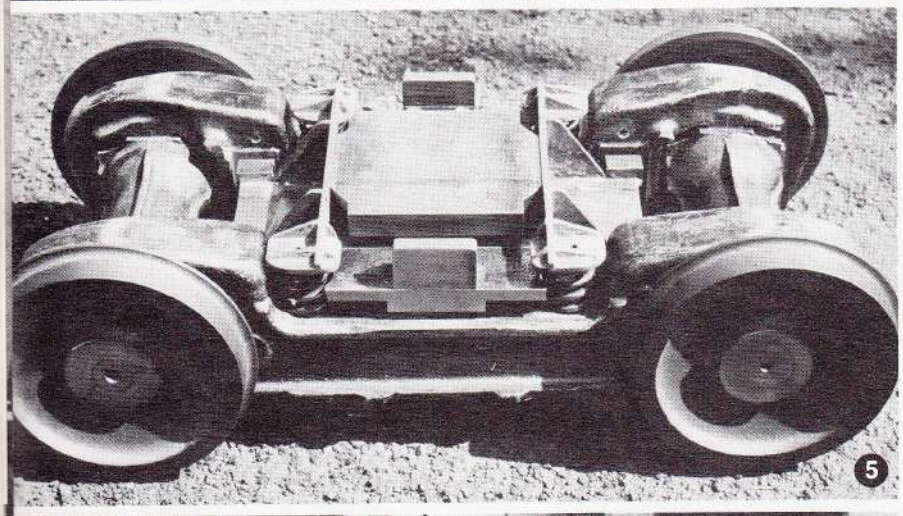
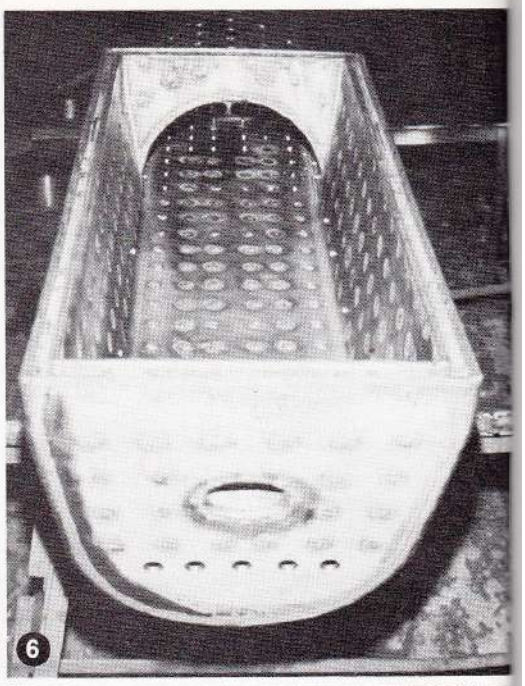
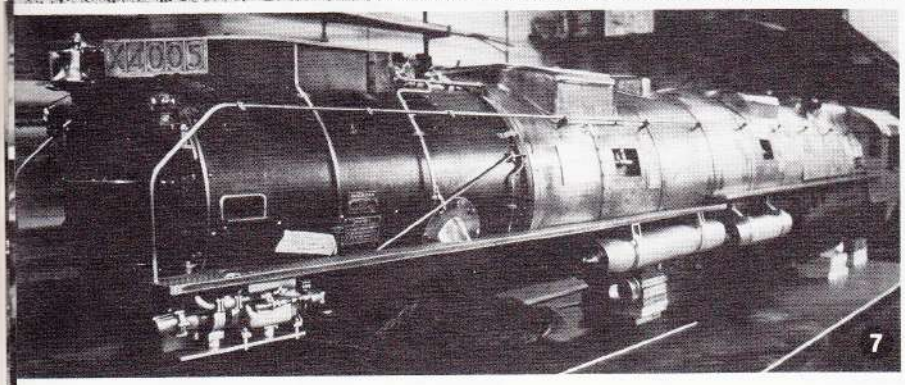
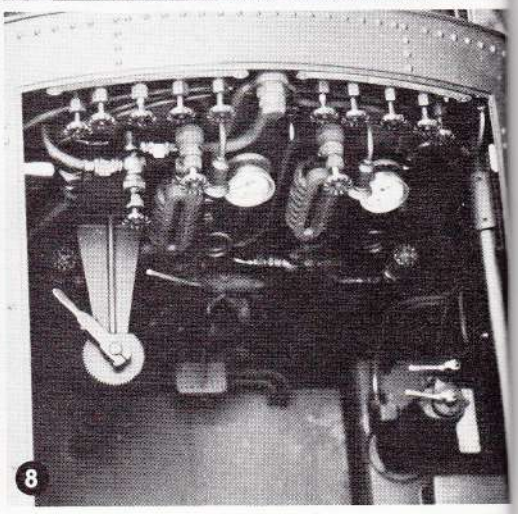










The bronze cast journal boxes have ball bearings in all cases.

The suspension is one hundred percent prototype – an unbelievable task with hundreds of parts. Many months were spent on the suspension and it all works beautifully.

The brake system and its rigging are also built to the prototype design. Lots of work here, too.

Main rods and valve gear are on bronze bushings. All rods were investment cast in steel – lots of detail here and it all works smooth as silk (**Photo 4**).

The cylinder blocks were cast in iron, as were the pistons. Iron rings finished the job (piston valves, of course).

Leading and trailing trucks were made from castings and built to the prototype drawings (**Photo 5**).

The boiler, by my request, was built from one hundred percent 321 stainless steel. The firebox, which features a combustion chamber, is almost four feet long! Flues are ¾" stainless steel and rolled in. The entire boiler was TIG welded. Lloyds of London inspected and approved the boiler before insuring it. Severn-Lamb did an incredible and beautiful job (**Photo 6**).

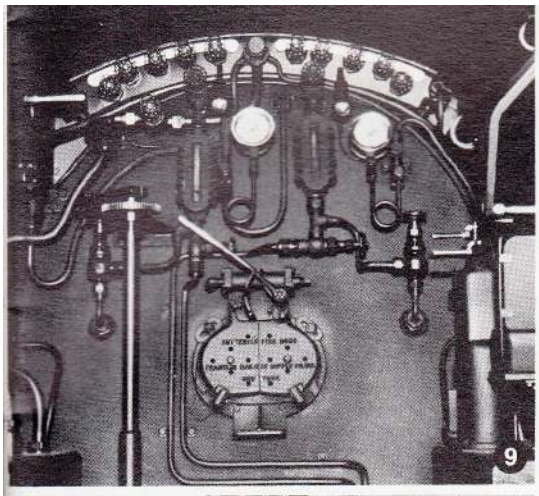
Please, no letters condemning my stainless boiler. A lot of research went into my boiler by people who are experts in their fields. It is built from the *right* material constructed the *right* way, and steams like crazy.

The cab is constructed from brass, as is much of my Big Boy. Severn-Lamb prefers to use brass whenever possible.

The loco sports two working cross-compound air compressors. These were built by Lima Locomotive Works in Australia. Air is used for the power reverse, loco and tender brakes, bell ringer and working sanders. The pumps look great, sound wonderful and make a fine addition to any loco.

The two air tanks on the left side of the loco are used for air storage, while the tank on the right side disguises the chime whistle (**Photo 7**).

The cab layout is another example of straying a bit from prototype design. A cab layout per prototype design is very difficult to operate as a model. Most of my operating valves are located on a turret that runs along the top of the cab roof. A removable section in the cab roof allows access to



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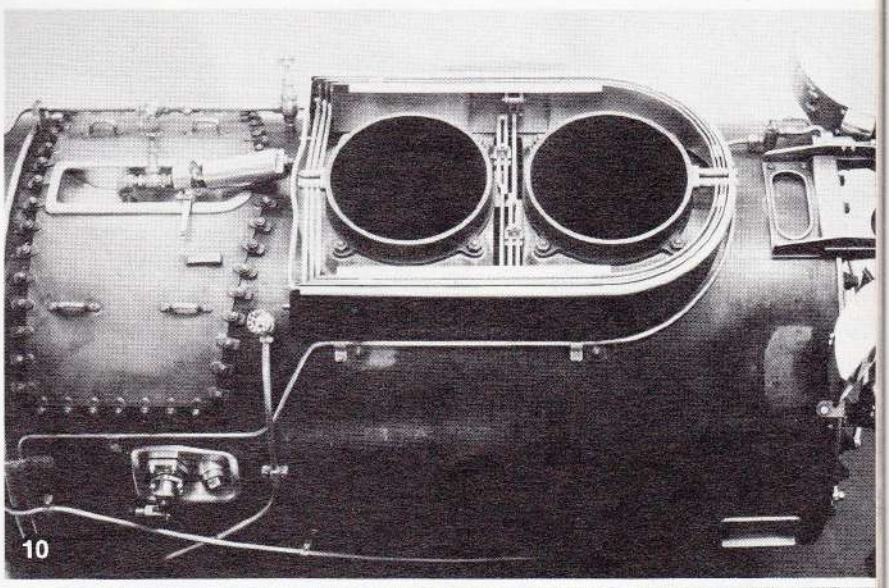

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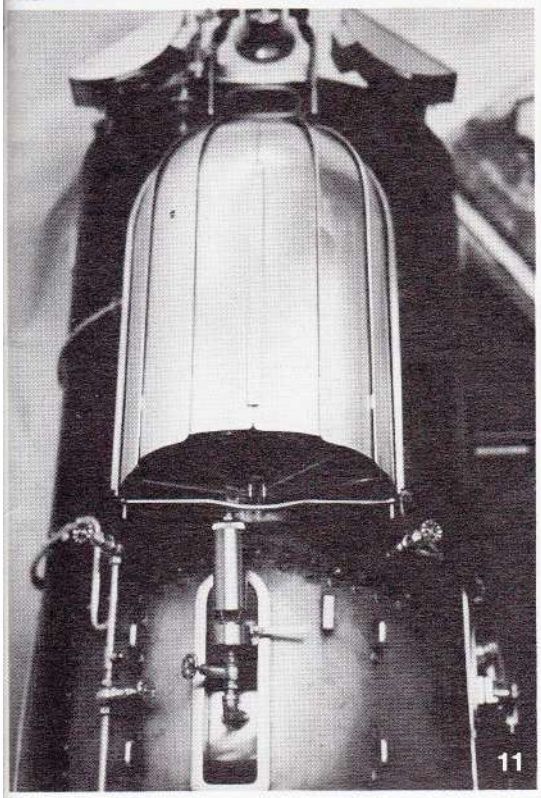

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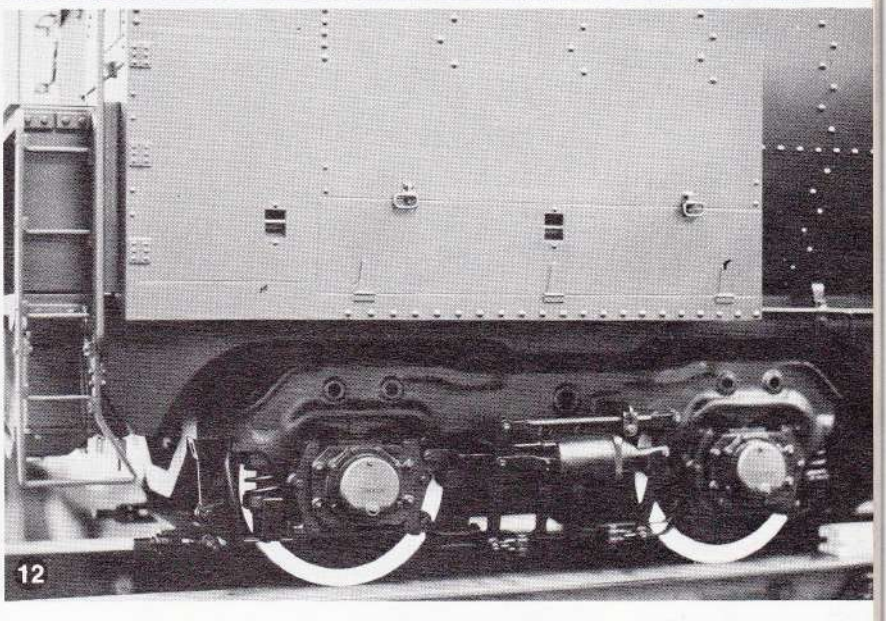


12

these valves (**Photo 8**). The throttle lever is located at the rear of the cab for easy operation. Johnson bar, water glasses, brake stand, seat, etc., are all located near their proper positions. A dummy throttle lever of prototype design is located above the engineer's seat so that photos taken in the engineer's window have proper detail.

Two water glasses are used, one mounted slightly above the other, to more easily monitor water level on grades (**Photo 9**). The water glasses were specially made for Big Boy in lost wax castings and look just like a prototype Nathan Glass. The butterfly firebox door is also a wax casting, complete with lettering detail. The cab floor is wood on both sides and diamond plate in the center, as was the prototype.

The steam generator supplies power for the cab lights. Marker lights, headlight, number boards, backup light, stop light and running board lights are all run by a battery hidden in the tender.

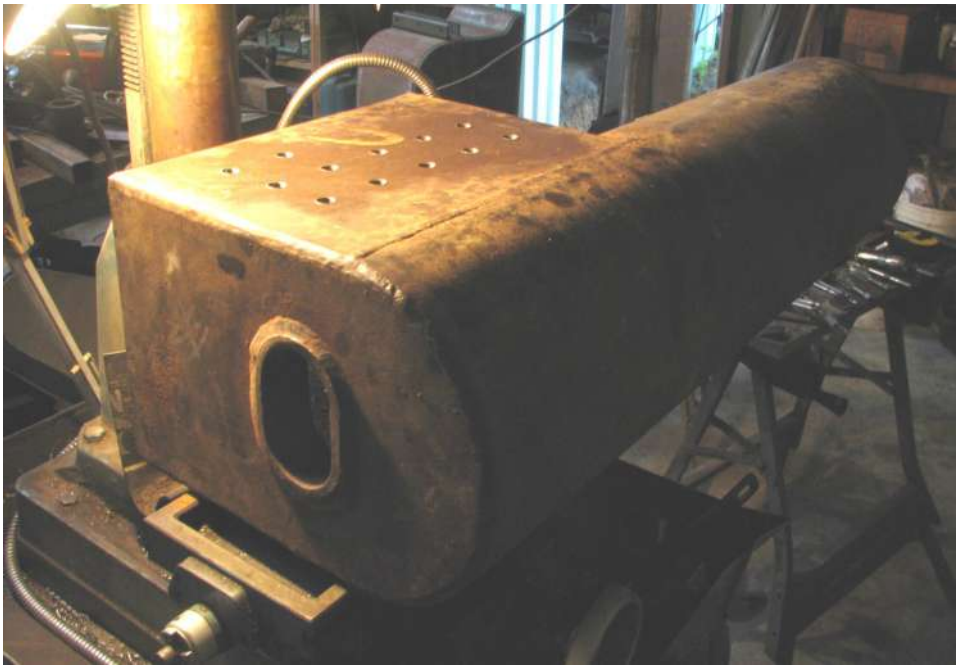
Water is supplied to the boiler by a 3/8" Penberthy and a 1/4" Ohlencamp injector. The Ohlencamp running full-time supplies slightly more water than the loco can use under normal working conditions.

Cylinder oiling is done by a rather unconventional method by most standards. A chain-driven pump is located in the tender. It is a double ram-type and each ram delivers oil to one of the two cylinder blocks. The Nathan lubricators located on the loco are just beautiful dummies.

My loco burns oil, although to look at it, one would think it burns coal. All the detail for a coal burner was applied. I find oil easier to handle. As a note of interest, that is where the loco number 4005 came from. The Union Pacific did some tests on 4005 to see if a Big Boy could burn oil (all Big Boys burned coal). The tests were unsuccessful and 4005 was returned to coal firing. I suppose it is as good a reason as any to pick a loco number for one's model. One thought worries me a little about the number 4005 – it is also the only Big Boy to end up on its side in an accident!

The prototype loco 4005 sits today in a museum in Denver. I traveled there and photographed the number shield, superheater plate, tender plate, builder's plate, etc., and

To be continued



New member Derek Coppard originally comes from Canterbury where many years ago he built a 1” Allchin traction engine. His next challenge was a 4” Burrell which after a good start was shelved because of other commitments. Now he is revisiting this project and brought the steel boiler along for assessment by the boiler committee. I went to see Derek and took some pics of progress. As you can see he is well on the way.

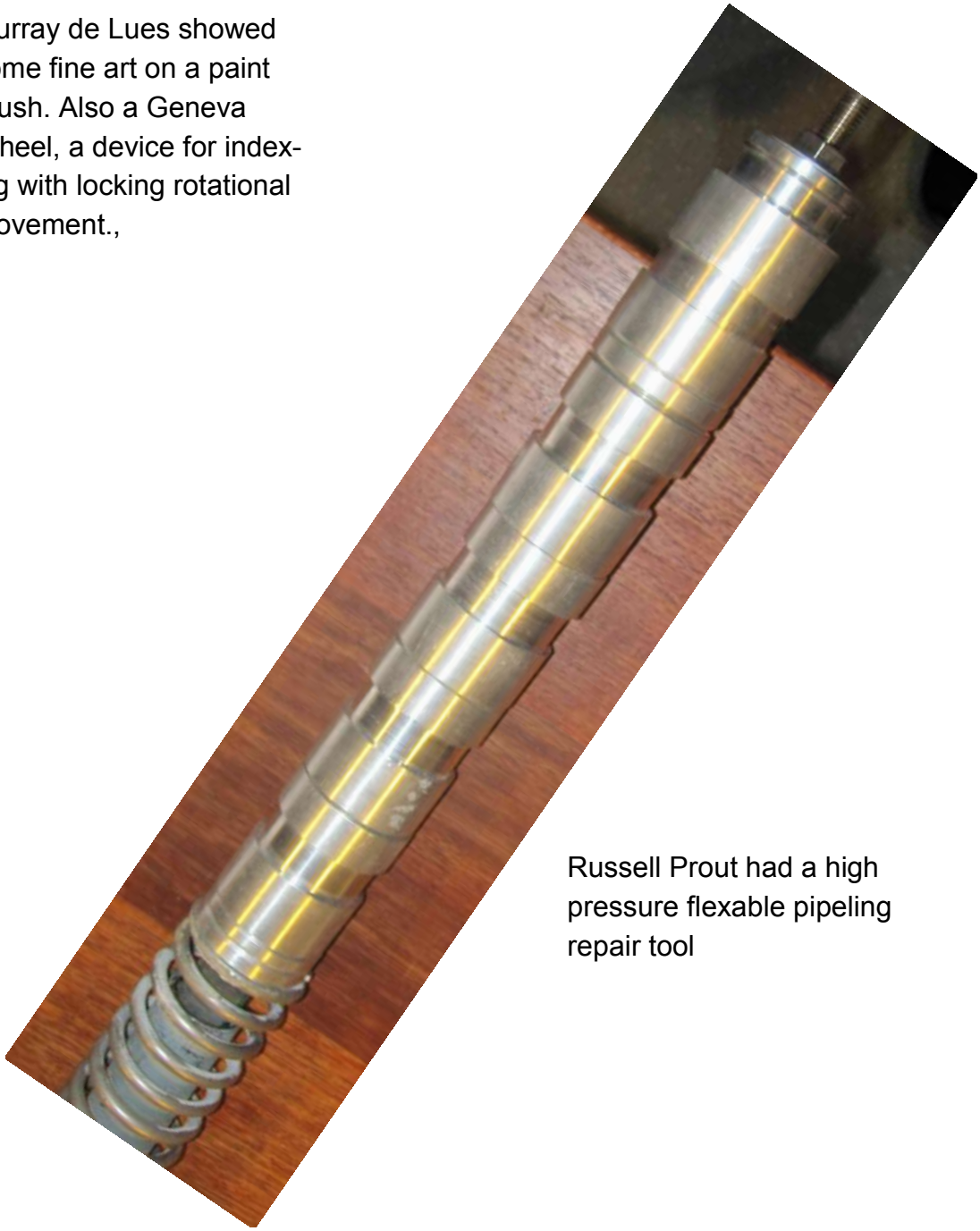
Show and Tell

This months theme was “Something unusual”.

Bruce McKerras had designed a self steering system for a yacht. Bruce carefully explained that this was Version 19 and there was still some bugs that needed to be overcome but it did work.

Peter Lawn showed the dieset, the dieset product, and the finished bunch of banana exhaust.

Murray de Lues showed some fine art on a paint brush. Also a Geneva Wheel, a device for index-ing with locking rotational movement.,



Russell Prout had a high pressure flexable pipeling repair tool

Jason and family are obviously enjoying the sights in the UK and no doubt he will have some stories to tell,

Town and Around :

At our workshop in Waiouru as part of the National Army Museum we often get “new” toys to play with. This arrived recently and is a mobile laundry. The LH pic shows the dryer with the washer in the background. TR is the back view of the dryer with the genset centre left. Below is the genset which I recon to be about 15KVA. This is a fair hunk of kit and weighs in at 4350kg. I have no idea what its capacity is but it self contained except for fuel and water.

Editor

TMMEC 2019 CALENDAR

1-07-19

	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T
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SUNDAY RUNNING DAY – 10:00 – 16:00

OFFICIAL CLUB PLAYDAY

COMMITEE MEETING – 19:00 START

GENERAL MEETING -- 19:00 START

ENGINEERING TUESDAY -- 19:30 START

OPEN WEEKEND

CANCELLED

AGM

4th MAY NIGHT RUN 5:30pm TO 9pm

5th JULY 40th DINNER CITZ CLUB

6th JULY OPEN WEEKEND AND NIGHT RUN

7th JULY OPEN WEEKEND

SAFETY COMMITTEE 18:30pm START

COMMITTEE AND SAFETY SAME DATE

EBOP EASTERN BAY OF PLENTY OPEN WEEKEND 13-14 JULY

WCR WINTER CREEK RAILWAY 26 DEC BOXING DAY, BY INVITE

MAN MANUKAU LIVE STEAMERS 1,2,3 JUNE

PN PALMERSTON NORTH OPEN DAY 26 JAN

HME HAMILTON MODEL ENGINEERS 3RD WEEKEND MARCH

CAMBRIDGE 6/7 APRIL

THA THAMES LAST WEENED OF FEB

CHR TMMEC CHRISTMAS PARTY 9 FEB