

The MICROMETER

AUCKLAND SOCIETY OF MODEL ENGINEERS INCORPORATED

PO Box 14570, Panmure, Auckland 1072, NEW ZEALAND

Club House: Peterson Reserve, off Peterson Road, Mt Wellington, Auckland 1060

Number 660

Telephone: 09 570 5286 Club Web Site: www.asme.org.nz

September
2020

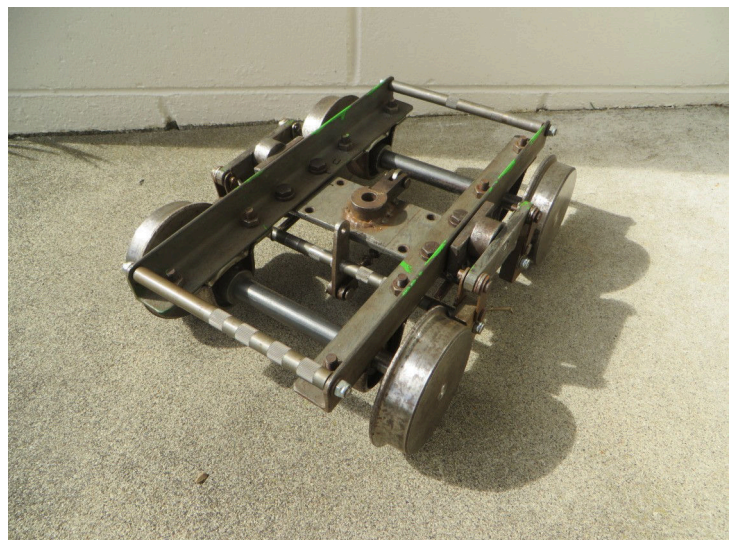
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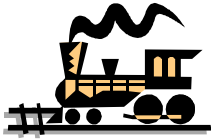
REGISTERED NEW ZEALAND PUBLICATION

What we do during lockdown:

Your editor has been busy lately, converting the bogies of an old 5" raised-track trolley for 7-1/4" running. (The second one is not quite finished yet).
(No, Greville, this is not a competition!)

Hopefully before too long this one (and its mate) will end up on a driving trolley to accompany my 3-1/2" gauge loco.





Train Roster

Date	Electric Driver	Electric Driver	Steam Driver	Train Controller	Station / Guard	Station / Guard	
6-Sep-20	M Plant	B Matchett	Voluntary	<u>B Aickin</u>	M Luxton*	D Beecher	Cancelled
13-Sep-20	D Housley	J Lankow	Voluntary	<u>P Dowdeswell</u>	R Souter*	D Vaughan	?
20-Sep-20	M Moore	R Reichardt	Voluntary	<u>T Lawrence</u>	A Stratton*	R Shearer	?
27-Sep-20	A Shirley	P Woodford	Voluntary	<u>S Meikle</u>	M Vickers*	R Stratton	?
4-Oct-20	I Ashley	A Bailey	Voluntary	<u>T Robinson</u>	P Tomkies*	D Beecher	
11-Oct-20	M Granger	M Hollis	Voluntary	<u>G Anderson</u>	R Crook*	L Brown	
18-Oct-20	D Housley	M Plant	Voluntary	<u>D Russell</u>	M Luxton*	D Vaughan	
25-Oct-20	J Lankow	M Moore	Voluntary	<u>G Wills</u>	B Matchett*	M Vickers	

Note: The Roster is rolling forward to give you advance notice of possible dates for your calendar so you can be available if the Committee agrees to re-commence Sunday running.

(Auckland is at Level 3 lockdown at present and will change to Level 2 starting Aug 31.

But we are still unable to run until we return to Level 1, whenever that may be).

Bold and Underlined Name = **Train Controller**, i.e. the person in overall control of all operations for the day

Bold with Asterisk* Name = **Stationmaster**, i.e. the person responsible for activities in the station area and for the day's takings.

Please Note:

If for some reason you are unable to attend on your rostered date, you are respectfully reminded that it is **your** responsibility to find a replacement member to fill the gap – please don't let the rest of the team for the day be left short-handed. **Note: the Train Controllers for both affected days must be informed of the swap in advance. It is the responsibility of the person who initiated the swap to do this.** Also advise Bob Aickin who is keeping track of the number of duties each of us perform during the year.

The details of the swap should be noted in the Run Book.

Also, please ensure the member you arrange a swap with is one who is rostered to undertake the same role to ensure we always have members with the appropriate training and experience on the day.

SEPTEMBER CALENDAR

Tuesday September 1st, 7.30 pm - General Meeting - Cancelled due to Covid-19 level 2 lockdown. Gatherings of only 10 participants allowed at this time.

Tuesday September 8th, 7.30 pm - Workshop Night, ASME clubrooms - may or may not be possible. Depends on whether "gatherings of 10" restriction is lifted at Cabinet meeting on September 6th.

Tuesday September 15th, 7.30 pm - Committee meeting, ASME clubrooms - can take place if necessary. To be decided.

President's Report

August 2020

Hi,

As someone cleverer than me once said, it feels like déjà vous again- frustrating, but we know we have to do our bit to get back to level 1.

In the meantime it is work for those of us who can, and more time to work on projects at home. Club nights and Sunday Running will have to be put off until then, which should give Michael Cryns plenty of time to complete his talk on restoring the Civic clock. That is not to be missed, and we will try to give you all as much notice as possible.

A special thanks again to those members who are working on club projects at this time as well; Grant, Greville and Bob Aickin, and of course John Lankow who is continuing to produce the Micrometer despite his health concerns. We really need someone to step up and help out with this important service in the future, so even if you are not confident, please come forward as we will all pitch in to help you learn the ropes.

Until we can get together again, stay safe and stay active.

Cheers,

Mike Moore.

Committee Comments – September 2020

Well, back in lockdown again! This time with some changes to Levels as requirements are tweaked by the Government. Yes, you will know all about Covid-19 as it is a major part of every news broadcast, but how is it affecting ASME? Well, we missed out on the April & May General Meetings in the first period of lockdown, now in this second lockdown period September's meeting cannot proceed, albeit Auckland will be back at Level 2 by then (on current information). While we were able to have the June General Meeting last time in Level 2 as maximum numbers were then 100, the downgrading of numbers to a maximum of 10 for Auckland's new Level 2 means September's meeting has had to be cancelled. Depending on announcements yet to be made, the workshop night in September may also be adversely affected.

At the track, we were unable to run on 12 Sundays in the first lockdown period (March to June); on current information at least another 4 run days will be lost up to & including the 6th September – and maybe a few more after that! This will mean an unprecedented number of Sundays when trains have not run in a year. As a result, there is likely to be about 22% reduction of income from train rides this financial year, but fortunately the Club's financial reserves are in excellent shape so it should not have any material financial effect. While it is a pity we haven't been able to give rides to the public during these lockdown periods, the rostered members have had an unusual chance for a well deserved rest from track duties. Likewise working bees have been cancelled on a similar basis; as such you may notice a little less progress has been achieved over this winter.

Greville Wills has now completed the prototype A & G Price trolley conversion to 7.25" g – complete with foot operated fail-safe brakes. A trial run showed it performed well, but has yet to be tested on a public runday. It is rumoured that he has made progress on some of the remaining three trolleys during the current lockdown.

Another casualty from the current Covid lockdown, is the cancellation of a visit by members from the Hamilton Model Engineers Club. About 4 of their members were planning to bring steamers up to ASME to run on Sunday 30th August – hopefully this will only be a postponement until another day.

We have now received the renewal documents from Auckland Council for the renewed lease. The Committee has approved the execution of both documents under seal (following on from the members approval given at the Special General Meeting held on 7th July).

We hope all members are staying well and safe in these difficult times. Some members are reporting the opportunity for much more time in the workshop, so hopefully there will be much in evidence to see and discuss when we all meet next!

Workshop Night 11th August 2020

Presented by Greg Burrows

Well after having nearly 3 months of freedom we have all had to go into lock-down again. Hopefully you have all been able to get back to your workshops to do some tinkering with your latest projects. Well this month saw the second of these meetings again and we got off to a good start tonight with approximately 13 members turning up. Both the club night meeting and this workshop night brought out a good supply of members' bits and pieces and plenty of good chat as well. We started the night off in the usual way with a cup of tea and a biscuit to get everyone warmed up. The meeting was closed down at around 9-30pm.

Photos-1-2 Peter Woodford has been busy in his workshop over the lockdown and discovered that the hand wheel on his lathe that winds the saddle along had 2 cracks in the spokes. He first thought of welding it up but remembered he had an aluminium one sitting as a spare in the workshop somewhere. After a little look around he dragged it out and found that with very little modification it would fit very nicely in place of the old one. The old hand wheel had a dial on it that you could rotate so you could set the zero to the start of your job. This dial had in it 3 holes that had spring loaded balls to provide friction between the handle and dial. So with the new dial Peter had a look at how he could do this a different way and went about machining a groove in the dial so he could fit an O-ring to provide the necessary friction to keep the dial where he had set it.



Photo-3 Also from Peter is a pipe spanner he found on a Chinese web site. This spanner has a very big jaw opening for its size and with a nice short handle it is very useful in getting at all those plumbing nightmare tight spots under the bench etc. It appears to be made of a sort of aluminium material so is also nice and light to handle.



Photo-4 David Housley brought along one of the slide valves for his 7-1/4" gauge Mogul Lima he is building. The main reason for him bringing it was to find out more about how to build a balanced slide valve to reduce the friction required to move it under steam pressure: we had a discussion at the last meeting about the problems that a couple of our members had found with the amount of wear in their loco's valve gear. There are quite a lot of ways this can be done so maybe it would make a talk about it at one of our meetings if there is enough interest? Basically you have to provide a space on the top side of the slide valve that is connected to the exhaust port on the bottom of the valve and is vented to the exhaust ports.

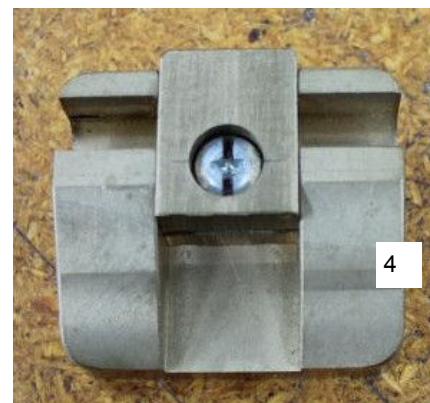


Photo-5 Michael Jack has been busy again with more parts for his 5" Gauge Class-3 locomotives and also building up his range of BR standard fittings and accessories for a variety of locos. This time he had a very nice cast lubricator housing box complete with lid that has some very small letters cast into it. Mike also supplied us with a jeweller's loupe so we could have a look and read what the letters are saying. Incredible detail.

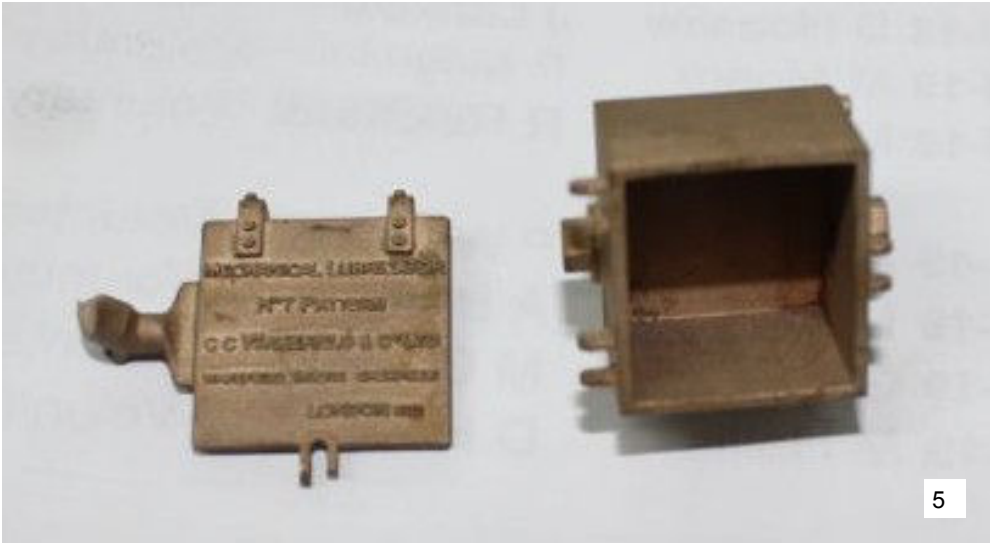


Photo-6 Murray Hollis brought along quite a large tapping attachment tool that fits into a drill press or machine that's spindle doesn't need to reverse to remove the tap after it's gone into the job. The tapping attachment commonly known as a Tapmatic (Brand name) has a clutch setup and reversing gears so when you feed the tap into your job the spindle of the drill rotates in the usual clockwise direction, but when you stop feeding it down and start to wind the quill back up the clutch disengages and the reverse gear cuts in and runs the tap in the anti-clockwise direction to wind the tap out of your job. I have put in a link to one being used that will show you how it works.

<https://www.youtube.com/watch?v=CUGz0jXvWQ>

<https://www.youtube.com/watch?v=FGWT7cURhzc>



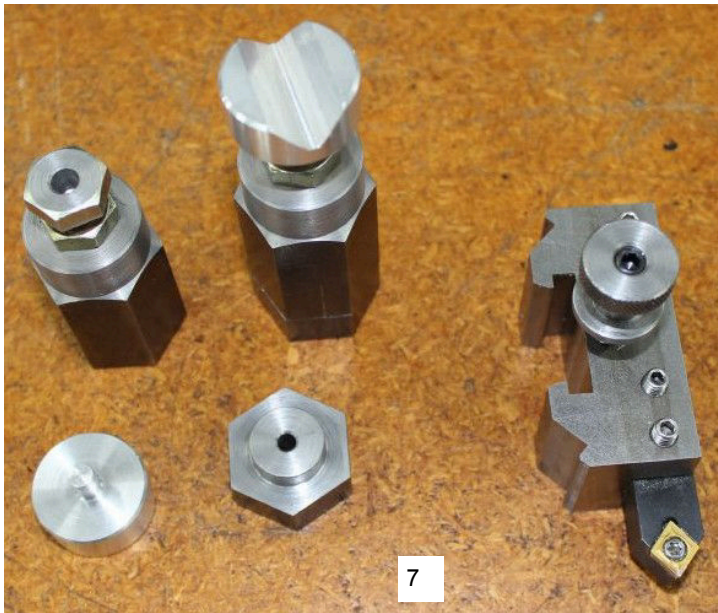


Photo-7 Graham Beazley has been very busy in his workshop again with the lock-down we had. He has been designing and making a new set of quick change tool holders for his lathe. Graham made them out of a big block of mild steel flat bar he purchased just for the job. He commented that there was a lot of work in making these compared to just buying some. But the reward for all his superb work has paid off. Lots of different setups to get them all to the same shape and dimensions, but the end result looks and works very well. He also set about making himself a set of engineer's jacks to make life easier in the workshop. These had interchangeable ends to suit his different requirements.

Photos-8 & 9 Sorry I missed who brought this along tonight. It is a Eureka Form relieving tool that is used to make milling and gear cutters. It puts the relief into the tool from the cutting edge back. (Relief: it has been described by Prof Chaddock and Ivan Law in Model Engineer Vol.158 and reproduced in "Gears and Gear Cutting" by Ivan Law). Here is a link to a video of it in operation so you can see what is going on with the offset centres and ratchet.

https://www.youtube.com/watch?v=U_kqi3dqr50



Photo-10 Bruce Cooper has one of his locos in bits and is doing his usual nice job of rebuilding it back to as good as new condition. He had with him the steam water pump off it and was wanting to know more about this pump and a little bit of how it works with regards to the steam valves and the little shuttle valve it has. By the looks of all the little dents on it someone thought the only way to get it to go was to tap it with a spanner (many times). This is an old railway trick that usually causes more damage than any good. When he pulled it apart he found out why it wouldn't go. The water pump aluminium piston had just about corroded away from sitting around for so long with water still in it; other parts were seized as well.

The pump is a Ron Harris design that he first made back in 1972.

Photos-11-12-13 were brought in by **Michael Cryns**. He is overhauling this clock for a customer. The date of manufacture of this clock is around the 1790's and when you have a look at it, it is just amazing the quality of the workmanship that has gone into it. Especially when you think back to what gear these craftsmen had to work with. Every little part had to be handmade as they didn't have all the tools we have these days. You couldn't just go down the road and buy a sheet of brass; these had to be cast and worked with very rudimentary tools and polished with pumice and other fine grits to get nice flat sheets. The details are very impressive.

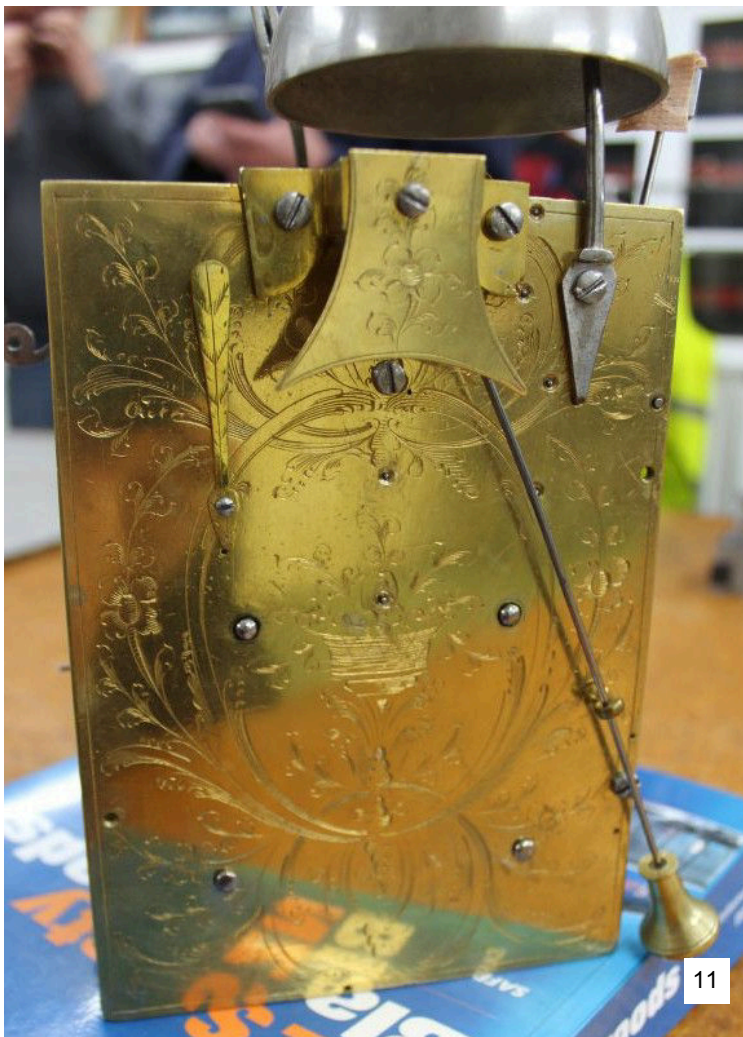
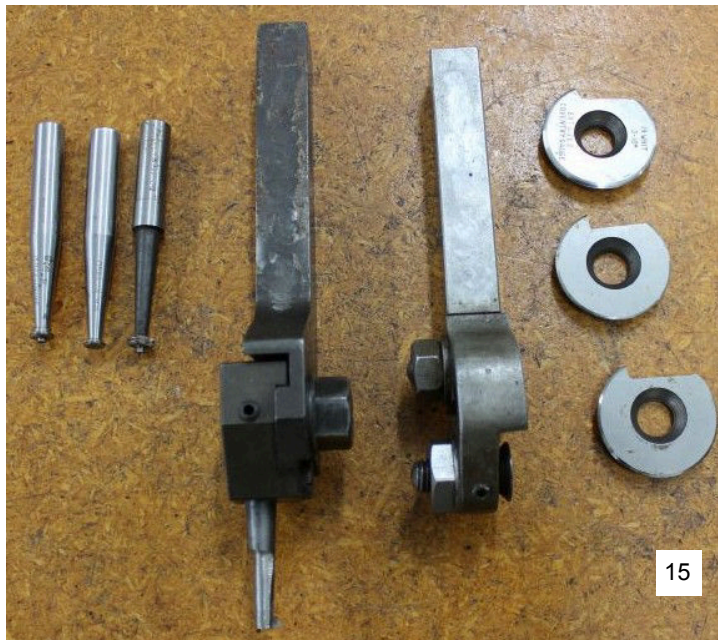


Photo-14 & 15 Greg Burrows brought in some of the old high speed steel tools he used to make up as an apprentice and were used every day on turret lathes and other centre lathes. We used to all have to spend time in the tools room making up tools for the workshop every day. You have sets of tools that had to be there every morning for the next set of guys to pick up and use. If they got broken you had to make replacements. These tools are all made out of HSS annealed bar and cut to shape with a band saw or blacksmith's hammer and then hardened and tempered before finally grinding to shape.



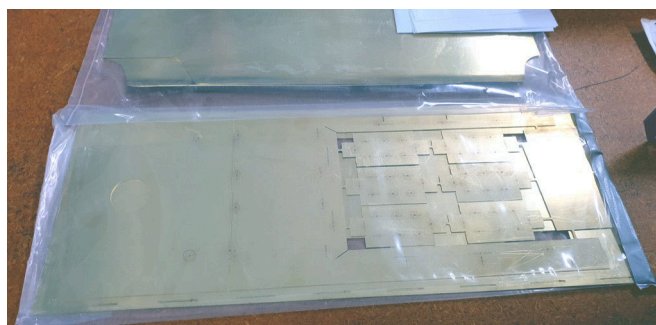
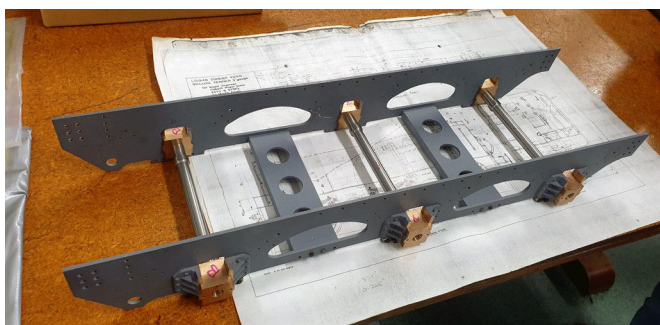
Well that is a quick round up of the workshop night and as always it is a good to see members interested in supporting this night. Remember if there are questions about engineering or other ideas on how to do something that you would like help with. Just bring them to the night

So remember this meeting takes place at 7-30 on the second Tuesday of the month and all members are welcome to come along and join in. Cheers Greg B



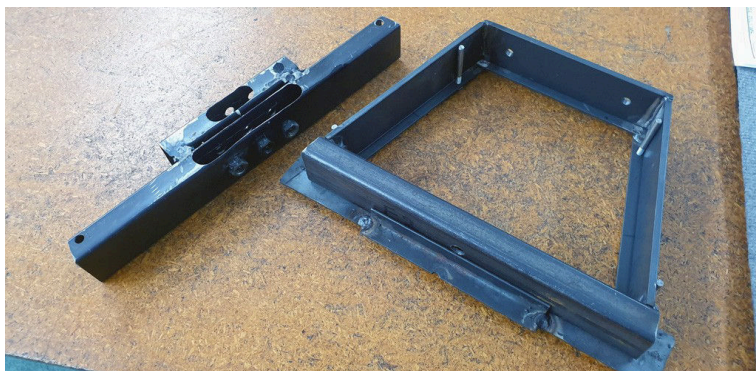
Bits and Pieces, 4th August 2020

Conducted by Mike Banks, photos and report by Dave Russell



This Royal Scot tender is being built by **Les Brown**: Les has started on the chassis and axles and has also imported the brass platework already cut for the top, bottom and sides of the tender. Looking good so far, can't wait to see the whole engine & tender complete.

Dave Housley has made up some new coupling units for the old 5" raised track A&G Price trolleys currently being converted to 7-1/4" ground level. Very nice TIG welding performed by one of his work colleagues.



As part of this same trolley project **Greville Wills** is constructing the frame parts to lift the units so they will be able to run on ground level. The couplings mentioned above fit into the front and rear stretchers and can be adjusted left or right to provide a straight fore-and-aft connection to locos of different gauges using our track.

These very fine moulding dies have been produced by Dave Housley in his full-time job. They have been made to form the threaded part on the plastic plumbing fittings we get these days.



Grant Anderson has sourced this pump as another backup to use for pumping water into his locomotive boiler. The pump should pump up to 140psi and can deliver 6 litres per minute. Mike Banks has used the same pump on the driver ride trolley of his 5" King locomotive and it works fine.

(Grant reports that this pump was actually purchased for the recently acquired Club Ajax loco; however he has a similar pump as backup for the injectors on his own loco as mentioned above - Ed)

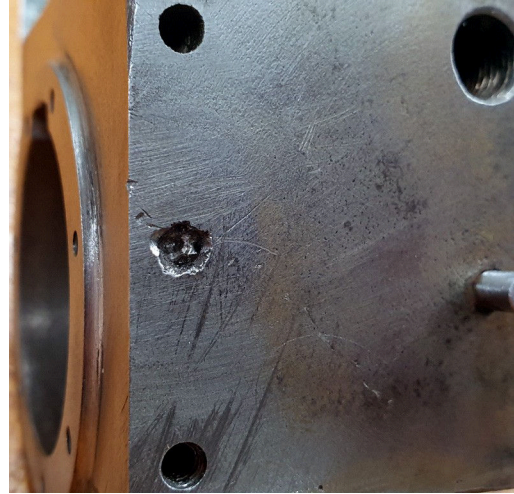
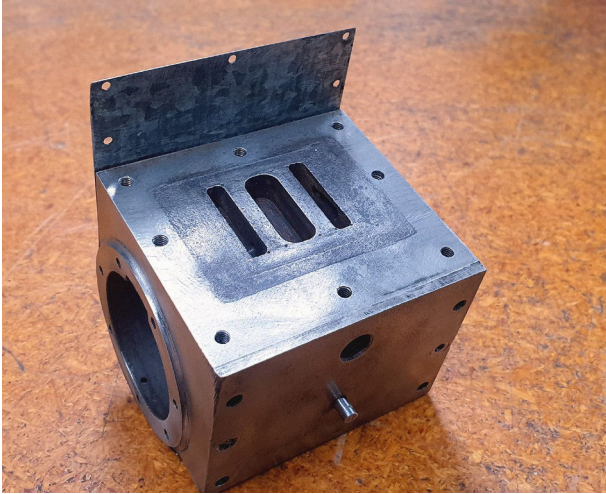


To obtain a nice smooth finish on a turned surface **Peter Woodford** has made this burnishing tool that consists of a ball bearing fitted to the end of some hard steel to hold in a tool holder. Peter says not only does the burnishing give a very smooth finish it also work-hardens the surface.

Mike Jack has decided to build himself a small "accurate" press brake suitable for folding sheet material in the sizes used in model engineering. The photo shows one side end of the machine carved from 140mm diameter grey cast iron bar. Mike says there was a lot of material machined off.



A pair of folding tools brought along and made by Mike Jack are for folding the locomotive frame stretcher shown



Now **Bruce Cooper**, our prolific workaholic member, has recently purchased “Smokey” and “Sir Warwick”- 5” locomotives from Greville Wills. Bruce’s story is that these will keep him busy while waiting for boiler parts for the “Green Maggot” to come from the UK. While stripping Sir Warwick to rebuild, Bruce discovered a broken tap in one of the cylinders (second photo) and is also having problems with some crumbling parts on the steam donkey pump.

I did not manage to get a photo but **Mike Banks** brought in a drawing of how to accurately re-grind lathe chuck jaws.

Lastly and with no photo was a small self-aligning bearing purchased from the UK by **Martin Plant** for use on the return crank end of the valve connecting rod on a model locomotive. Martin plans to use these in place of the standard bronze or cast-Iron bushes normally used.



Situation Vacant

The committee are looking for a suitable ASME member to take over the role of Editor of our monthly newsletter - the Micrometer.

This person will hopefully have access to a computer and be reasonably competent using Microsoft Word, or, better still, Microsoft Office Publisher. (There may, of course, be similar products around which can do the same job).

The applicant should have a reasonable grasp of English spelling and punctuation, bearing in mind that nobody’s perfect!. Don’t worry, there will be proofreaders available to knock things into shape before the final edition is released!

The working conditions are not arduous - just a few hours near the end of each month, and you also automatically become a member of the ASME Committee.

If you feel you meet most of the above requirements and wish to have a go, contact the Secretary or the current Editor.