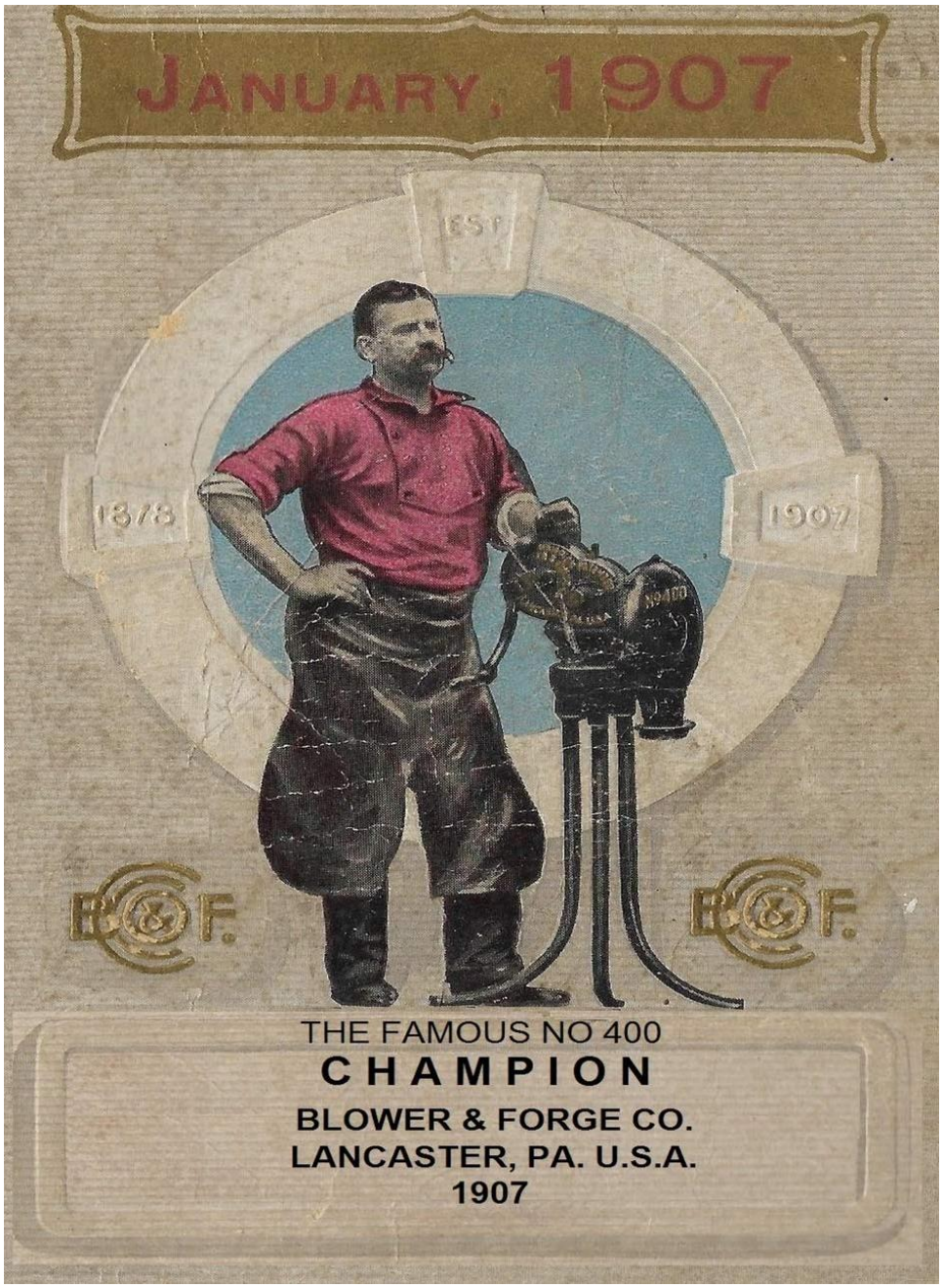
NEWS 183



March 2025

www.tttg.org.au ISSN 2206-1606

Contents

NEWS 183

March 2025

Cover: Champion – January 1907. Champion Blower & Forge Co, Lancaster, PA, USA, 1907

TTTG IS A MEMBER OF THE AUSTRALIAN MEN'S SHED ASSOCIATION

TTTG President's Report

John Deeble

It has once again been a pleasing start to the 2025 year with 21 members attending the February Members' meeting and yet another great result from the 2025 Sydney Tool Sale. On the day 24 Sellers presented a wide range of tools on 70 tables. In addition to the 24 sellers, almost 400 people attended on the day as purchasers or assistants. Well over 120 purchasers lined up early hoping to find that special bargain. Most buyers were leaving with lots of purchases with many making multiple visits back to their cars. Some appeared to stay right up to the end, perhaps hoping for some price reductions!

Special thanks must go to John Bates for his organisation of the event for yet another year. He was once again ably supported by all the TTTG Committee and some of their friends. A special mention must go to Penny and Mike Williams who again manned the TTTG Tables, selling TTTG products and promoting the group. It was most pleasing to gain some new members on the day.

Also, a big thank you to all of the Sellers. Without their support and their seemingly endless supply of quality tools, we could never hold this annual event. Promoting the Sale is another essential and we were very thankful to receive complimentary promotional support from Steve, Cameron and the team at the Carbatec Sydney Store, Linda at Australian Wood Review, the Australian Mens' Sheds and Sydney Woodworkers.

This year we surveyed those attending to determine how they heard about the sale. The most common responses were: a previous TTTG sale, a friend/TTTG Member, TTTG Email or Website, and Carbatec. Hopefully you can all spread the word for future Tool Sales both large and small.

Once again, we will be running three "Members and Friends Tool Sales" at Old Eastwood Town Hall in 2025, offering additional selling opportunities to members. Table bookings will be co-ordinated by John Bates. Get in early to book a table as space is limited. The dates for your diary are as follows:

- Sunday 18 May 2025 – 8.00am to 11.30am
- Sunday 24 August 2025 – 8.00am to 11.30am
- Sunday 7 December 2025 – 8.00am to 11.30am

The Committee is always looking for guest speakers for our members Meetings and would be most grateful for any suggestions or contacts. A focus on specific tools and recent finds or mystery items seems popular with other similar groups. Please let me know if you have any special requests or interests.

I look forward to another great year, with increasing membership, sharing knowledge and information and supporting traditional tool use and restoration.

Lastly, save the date for the next TTTG Sydney Tool Sale, now confirmed for Sunday 22 February 2026 at the Brickpit Sports Stadium, Thornleigh.

Upgrading a Vintage 'ShopSmith 10ER" Woodworking Machine

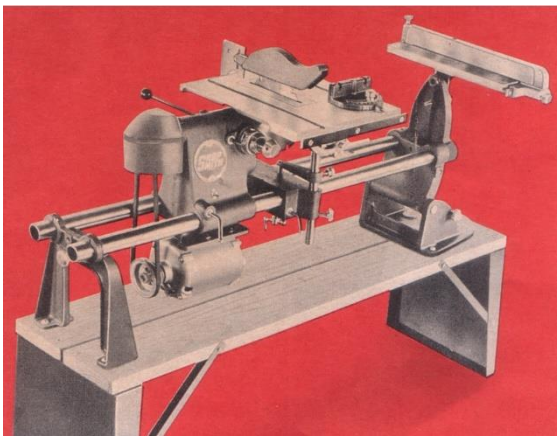
Mike Williams

Those people who have visited my home workshop will agree that there is not much room and there is a lot crammed into a fairly small space. The workshop started life as a coal (or coke) cellar beneath the house and about 25 years ago we enlarged it by digging out extra space and built retaining walls to hold back the soil and ground water. It still meant that any machines that I had in the workshop had to either be ultra-compact or multi-purpose.

Fortunately, I had bought a vintage ShopSmith machine some years previously and besides being a table saw, it could be converted in a few minutes to a medium sized wood lathe, a vertical drill press and a horizontal boring machine. The unit was actually assembled under licence in the 1950s by CC Engineering here in Sydney from castings imported from the USA and is a solidly built, very useful machine. I used the machine for some years and gradually formed plans to upgrade it and make it even more useful, adding improvements or extra functions as and when I needed them.

Increasing the saw diameter

The original table saw was equipped with an 8inch blade which, most of the time was quite adequate but every now and then, I was frustrated when I needed to make deep cuts. There was always the bandsaw of course but that lacked the table saw precision. The original safety guard/splitter also was worse than useless as it obfuscated the view of the blade and in my opinion, was more dangerous than operating without a guard so I determined to make a sled for the tabletop which would keep my fingers well away from the blade.

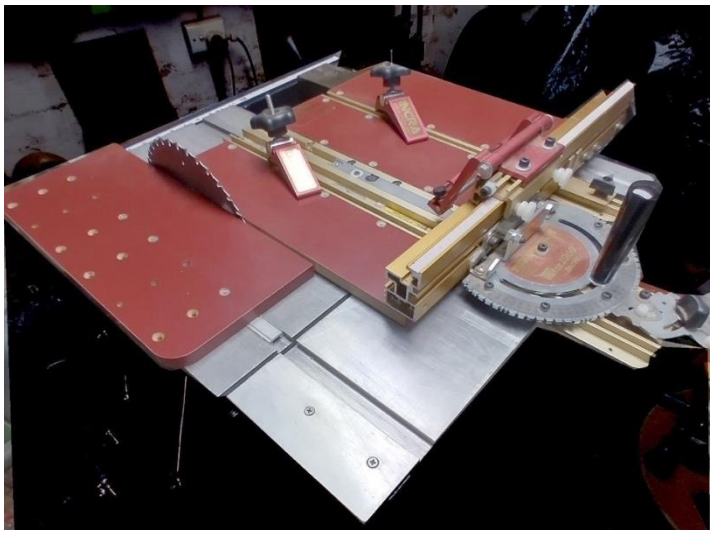


ABOVE: Original ShopSmith from the brochure

The obvious downside was that the maximum depth of cut was now decreased by the thickness of the sled, so I investigated ways of accommodating a larger blade. By carefully filing away the tabletop and insert, I was able to mount 9¼inch blades which are available in narrow kerf format, and for quite a reasonable price. I had now increased the maximum saw depth by 5/8 inch which doesn't sound a lot but often it is all I needed. More to the point however was the fact that I could now use a sled and still keep at least the original capacity of an 8inch saw blade whilst overcoming most of the (above discussed) safety concerns.

Adding a Sled

The first decision was whether to make my own sled or purchase an after-market commercial sled. Time was of the essence as I wanted to get on with another project which required the use of a sled, so I ordered one from 'Incra'. I opted to purchase their accompanying mitre gauge as the original ShopSmith one was fairly simple and not particularly accurate.



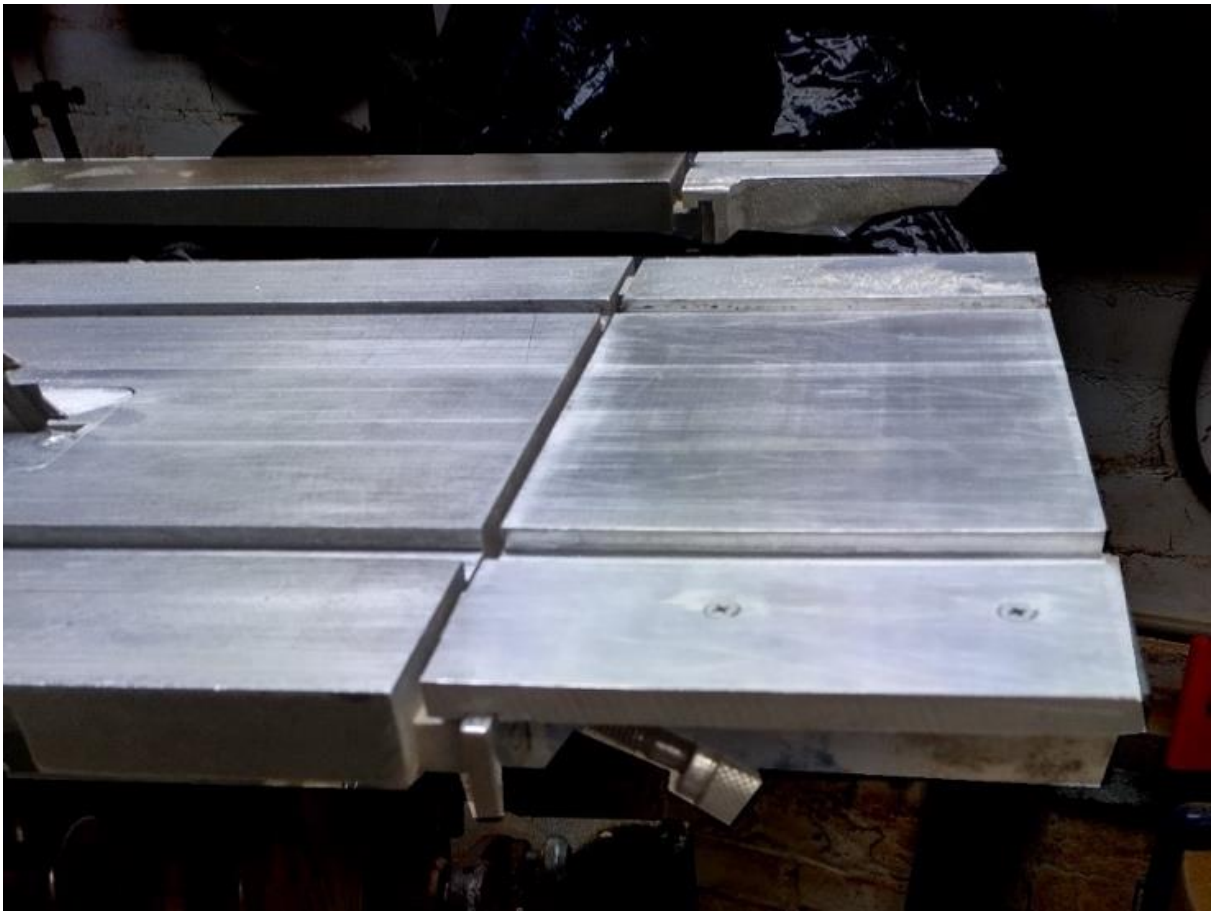
LEFT: The 'Incra' sled and mitre gauge with infeed extension

When the new sled arrived, I realised that my early ShopSmith had been made before saw table slots had been standardised and whereas my slots were 3/4 inch wide by 1/4 inch deep, the industry standard was now 3/4 inch wide by 3/8 inch deep. My saw table was too thin to deepen the slots by 1/8 inch as there were a few spots where I would have cut right through, so I had to carefully mill the Incra slides down to 1/4 inch. This was a tedious process but ultimately a successful one and the Incra sled now moved smoothly across the tabletop.

The Infeed Extension

With the larger saw blade, I was now able to make accurate and clean cuts across timber up to 2⅜ inch (60mm) thick with the sled, and 3inch (75mm) without the sled. Wide boards were however still a problem especially with the sled pulled right back when it was less supported by the saw table, and it tended to tilt up.

ShopSmith had somehow anticipated this problem even without a sled, as it provides a small infeed extension bracket which can be fastened to a rail across the front of the saw table. It was, however, far too small to fully support my new Incra sled. I made a much larger extension the full width of the saw table and attached it using this rail. The sled could now draw back much further without the tendency to tip as it had done before.



ABOVE: The infeed extension. Note the very small original ShopSmith extension on the tabletop outrigger at the top of the picture.

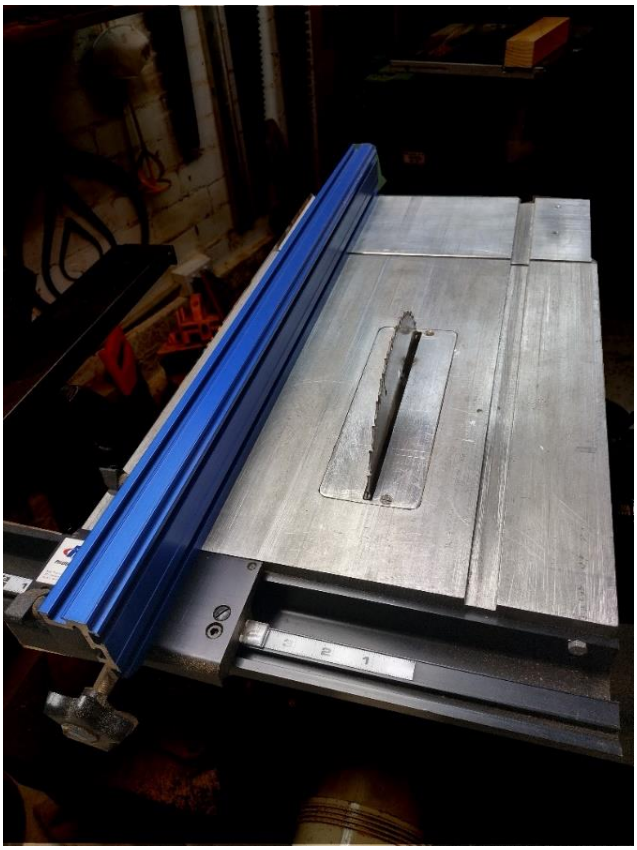
The Rip Fence Upgrade

The original ShopSmith rip fence was adequate, but it needed careful setting up as it was adjustable at both front and back and setting it at a precise distance from the blade as well as ensuring that it was exactly parallel to the blade tended to be a bit fiddly. I therefore looked around for some sort of after-market rip saw fence and settled on a Kreg one, designed primarily for a bandsaw. I could also purchase a micro-adjuster for it which sold me.

In any case, I reasoned that if I couldn't adapt it for the ShopSmith, I could always use it on the bandsaw. It turned out that it could easily be attached to the ShopSmith, the fixed slide bolted neatly to the back of the saw table and hardly ever needed to be removed, whatever the configuration the ShopSmith was set up to be. Often, quite long pieces of timber needed

to be ripped and when this was the case, the fence was not really long enough to maintain accuracy. However, I was able to purchase a longer piece of the aluminium moulding that Kreg used for the fence and with the above infeed extension, I found that I could easily rip longer pieces of wood with precision, even into thin veneers. The only constraint now was the wall of my workshop!

BELOW: Viewed from the back, the longer 'Kreg' fence now covers the infeed extension.



BELOW: The 'Kreg' micro adjuster allows you to rip in 5 thousandths of an inch increments.

A Slow Speed Pulley

The ShopSmith 10ER has 3 speeds which are selected by merely moving the driving belt to one of 3 pulleys on the headstock. I find that this restriction to 3 speeds presents no real problems. When used as a table saw, the top speed is quite adequate. When being used in the lathe mode, the bottom speed is useful for roughing cuts and the intermediate speed is just about right for general turning. However, when used in horizontal or vertical drill mode, even the slow speed is really too fast for drilling with large diameter drills. The height of the headstock above the way-bars is such that it is possible to remove the 3-step pulley and replace it with a 15inch diameter pulley (and longer belt of course), so this is what I did

ABOVE: The 15inch slow speed pulley set up for use with the indexing head.

I had a wide piece of Californian Redwood (salvaged from the back of an old cupboard) which I marked out and cut on the bandsaw into a 15inch circle. Aluminium pulley arbours are available from machinist suppliers, and I fixed one onto the centre of my Redwood disk and mounted it on the ShopSmith in its lathe configuration. At the slowest speed, I turned a groove in the Redwood disk periphery wide enough to take a driving belt. Now, by removing the original ShopSmith 3-step pulley and replacing it with my new 15inch wooden pulley, I was able to attain an extra low speed of around 100rpm, ideal for drilling with large diameter drills, especially when drilling into metal.

An Indexing Head

You might ask: What is the point of an indexing head in a wood lathe? I was intrigued when I watched a video of making a Sheraton style leg by the late Phil Lowe. The basic outline of the leg was turned in the conventional way on his lathe and then he left the leg in the lathe and carved the leg flutes one at a time by rotating the leg a fixed number of degrees for each flute. He had rigged up a simple way of indexing the lathe for the number of flutes. It had me thinking that I could do something with the large wooden pulley that I had made, particularly as one of my projects in an ever-expanding timeline was to make a replacement fluted leg for

a sewing table for Penny. The original leg had been so badly damaged by a previous owner that the only possibility was a complete replacement.

The basis of the indexing arrangement was to make a small bracket to carry a pin which could engage a number of holes arranged in a circle on the wooden pulley. To make the arrangement more flexible and be able to index a wide number of stops, I drilled several circles of holes at different radii and by putting the pin in different positions in the bracket, each circle could thus be accessed. I used the ShopSmith pulley guard mounting position to hold the pin bracket (as the pulley guard is unnecessary with the lathe stationary). I drilled four circles of holes on the large wooden pulley, 30 holes, 16 holes. 9 holes and 7 holes. Besides the obvious number of stops, by skipping a regular number of holes, a large combination of stops can be achieved ie 2,3,4,5,6,7,8,9,10,15,16 and 30. Quite enough for flute carving and regular hole drilling etc!

A Lathe Steady

Whilst on the subject of the ShopSmith lathe function, occasionally I have needed to turn a long slim turning and flexing of the timber makes it difficult. The ShopSmith lathe setup is 33 inches between centres and hence there is a danger of the timber breaking, ruining the project and it is dangerous to boot. Much of the flexing problem can be fixed by inserting a steady somewhere along the piece. Usually this is somewhere near the centre but not always and in any case, it has to be able to be moved anywhere along the length. ShopSmith never provided a steady for the 10ER (I'm not sure whether they provided one for later models either). However, I was able to purchase a Woodfast steady at one of the TTTG sales and all I had to do was modify it to suit. I have a small Unimat lathe which has 2 way-bars similar to the ShopSmith and many of the Unimat's accessories are just two halves cramped onto the way-bars top and bottom. I used this principle to mount the Woodfast steady onto the ShopSmith way-bars and it seems to work quite well. The three Woodfast steady arms are equipped with roller bearings and are fully adjustable.

Dust Collection

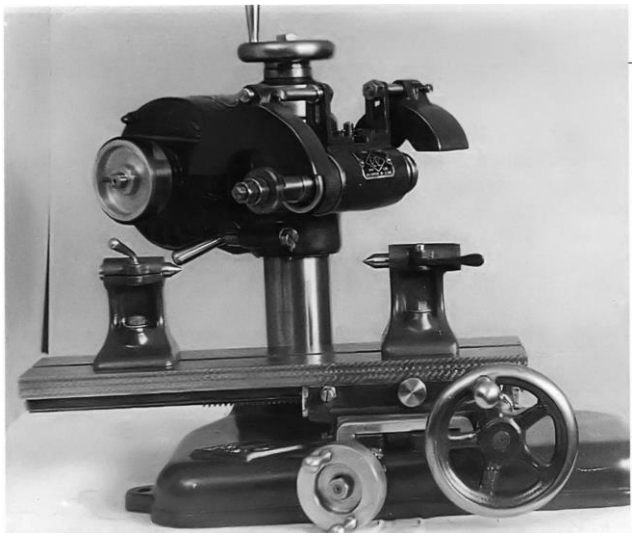
Not all of my modifications have been 100% successful and effective dust collection is one such area. The ShopSmith 10ER was designed in an era when dust collection was seen to be unimportant and because the table is raised and lowered rather than the blade, designing a method of dust collection which is efficient, and which doesn't require a fiddly setup is not easy. I purchased a vacuum extractor system which sits neatly below the ShopSmith bench, and which blows dust and chips into a large bag (also beneath the bench). I attached the

extractor to a length of 90mm plastic stormwater pipe, capped the end and cut a long slit which accommodates part of the saw blade beneath the tabletop. I estimate that less than 50% of the sawdust is captured. Because the blade only cuts essentially on the downward direction on thin stock, as the blade bites deeper into thicker stock the generated sawdust is carried more and more forward and flung towards me and the surrounding floor. This problem is especially galling as I have designed a simple dust collection system for my bandsaw which collects almost all of the sawdust and doesn't require a fiddly setup. The difference here is that of course the bandsaw cuts purely on the downstroke and an under-table dust extractor works very well.

A REQUEST FROM THE EDITOR

Those with an eagle eye may have noted that in the first photograph there is CC Engineering badge attached to the ShopSmith.

Sadly, CC Engineering is no more but many of its tools are still going strong. Others have sadly fallen into disrepair and await restoration. The Editor has one of the later, a very old (c.1950) bench-mounted tool and cutter grinder. The picture below shows how it looked when new.



If anyone has information about this fine machine, please make contact the editor vial email to reproturn@bigpond.com or call 0418 488 210.

Thanking in you in anticipation.
The Editor

CARBATEC supports TTTG

Timber Scribes and Race Knives

Neil Searle, NZVTCC*

I have three timber scribes, two are by Wynn Timmins (Heart Brand) ¾“ and a 1.½“ also one made by William Marples ½“. I have seen scribes and knives by a number of Sheffield edge tool makers, makers, Thomas Turner, George Barnsley & Sons and Wingfield, Rowbotham & Co., some from Continental Europe and many US makers.

Fig. 1. A standard shape (last 100 years) folding Race knife

A Race Knife is a tool having a U or V shaped blade, used in scribing or etching permanent marks on timber work, lines, numbers and letters. Also called a Scrive knife (mainly by Shipwrights) and a Rase knife as the groove produced by the knife is called a rase.

Some trades that used these knives:

A cooper would sometimes mark the sequence (interior) of the staves prior to being fitted …. also to mark the barrels.

A Surveyor may cut distinctive marks in witness trees (USA). A Witness Tree by definition is a tree that is associated with an important historic figure or event, biological components, a tree with a remarkable age, exceptional or unusual size, and disease resistance. Also, a surveyor would mark trees in forestry plots and so on until the next inventory (Bearing trees).

In forestry the race knife, is used to permanently cut marks in wood or trees "Used by timber cruisers (forest management) to mark the butt-ends of felled trees with brands that identify ownership."

Leather workers use a similar knife blade to make grooves in leather to bend it or to make recesses for stitching. Usually, the race knife was a non-folding tool.

A Shipwright used to mark the Futtocks (frames of wooden ships) before the two molded faces of the frame are joined together. With wooden boats they used to cut a “race” at the waterline while the boat sat in the water then the boat is removed and can be painted. Race knives with solid brass handles were used near salt water.

Carpenters and lumbermen to show ownership of timber. To tally or number with Roman numerals balks or log ends. By carpenters to register junctions for heavy frame work. Carpenters commonly used V’s, X’s and multiplied I’s at the mortised joints. Carpenters also used race knives to cut grooves for cabling and sometimes grooves for wires in relation to Butlers bells.

Fig.2. Race knife marks matching a joint in a timber framed building (Marriage Marks). Marks are also found supposedly having the power to avert evil influences or bad luck (apotropaic).

The numbering with a race knife resembles Roman numerals but the number four is usually marked IIII rather than IV and nine VIIII rather than IX because the four and nine could be mistaken for a six or eleven.

In Wineries, a non- folding race knife was kept in the cellar of wineries to mark the barrels. They often had very elaborate handles. They are called Cellarman's knives. Some Cellarman's knives also have a corkscrew attachment.

Fig.3. **French Customs Inspectors Timber scribe / Race Knives**

Customs inspectors in France used timber scribes. These were multi blade knives that cut 2, 3, 4 or 5 lines and were used by inspectors to verify the ships manifest was correct then he would cut his individual mark on the lumber. They had spur-like cutters, they were dragged across the wood. How far apart the lines are and the distance between the lines would designate a particular scribe that made that mark. Two, Three, four and five spur cutters were used.

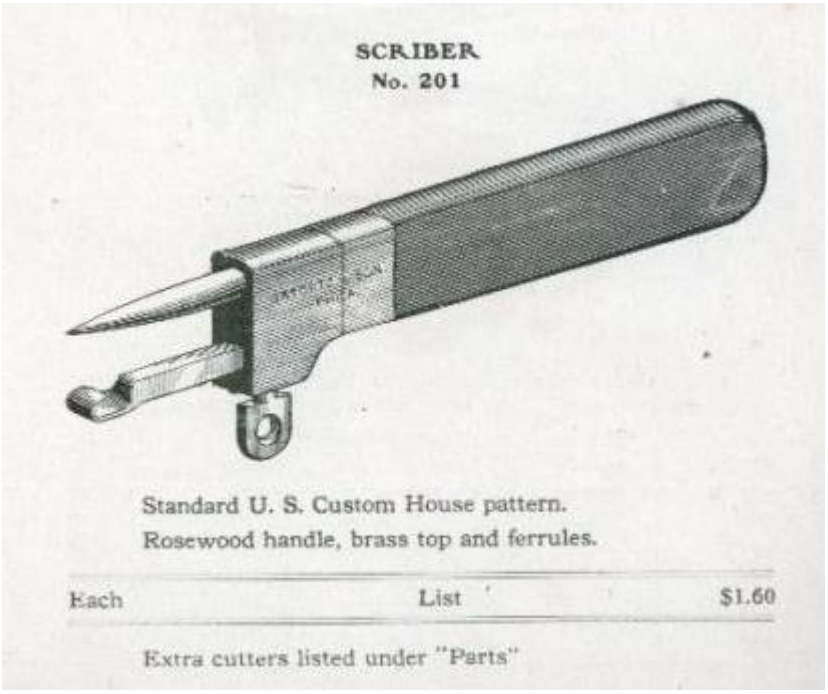


Fig.4. US Customs pattern scriber. From Colwell Cooperage Co. catalogue, NY. (1853-1920) Manufactured by F. Weise N.Y

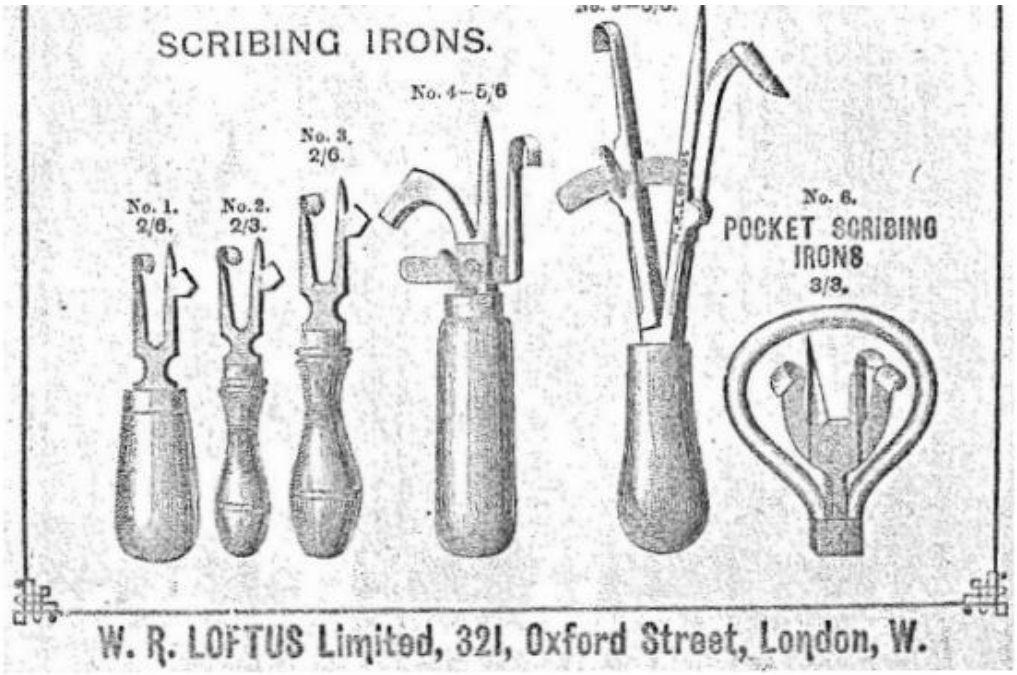
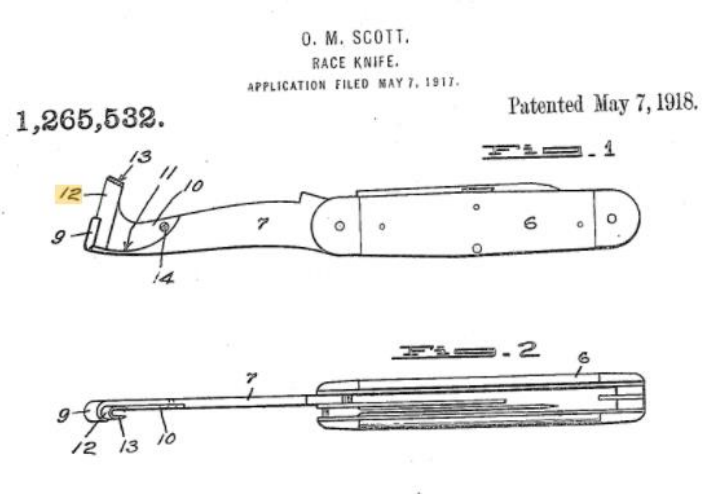


Fig.5. Timber Scribes from the catalogue" Loftus W. R. Brewing requisites" Circa late 1800s. Oxford Street and Tottenham Court Road. William Robert Loftus (c.1859-1919)

Fig. 6. Multi iron Race knife

Timber scribes and Race knives were sold with hard cases, many of which were lost over time.


O. M. SCOTT.
RACE KNIFE.
APPLICATION FILED MAY 7, 1917.

1,265,532. Patented May 7, 1918.

FIG. 1

FIG. 2

Fig. 7. O. M. Scott US Patent

OZBERT M. SCOTT, Seattle, Washington. Race Knife Patent No.167,125 May 7, 1918. This invention relates to improvements in race knives.

This was the precursor to the modern shape Race knife. Sales pitch at the time was *"is used to permanently cut marks in wood or trees (marking without chemical products). Pests that sit under the bark can be removed and mild tree diseases can be scratched out."*

Fig.8. A very early Timber scribe / race knife dated 1627. Most likely Dutch. Many were made using Buffalo Horn, boxwood and Beech.

Fig.9. A boxed timber scribe with with three groove-cutting blades.

Fig.10. Rare 17th Early 18th Century Wax Seal and Race Knife, Initials HR. Possibly custom made for a landowner of some property and standing and owning substantial woodlots.

Fig.11. A rare shipbuilders scribe.

Similar knives

Rubber tree tapping knives look very similar to a race knife and are generally larger and longer so that two hands can be used. George Barnsley, Sheffield also made a variety of these, namely the "latex", "Singon" and "Dougon".

Farriers used a very similar tool, (Hoof Knife) a hoof-cleaning blade in the shape of a hook in the plane of the blade may also be provided for removing stones and other debris from the horse's hoof.

REFERENCES:

Jim Bode Tools. https://www.jimbodetools.com

The Coopers Tool Museum. https://cooperstoolmuseum.com

University of Reading, UK. https://www.reading.ac.uk

Various Catalogues.

Official Gazette of the US Patent Office. https://www.uspto.gov/patents/search

The Professors Closet, antique race knives. http://www.youtube.com/@theprofessorscloset1676

- About the author: Neil Searle is a member of the New Zealand Vintage Tool Collectors Club and writer on diverse tool-related topics. The NZVTCC is an associate member of TTTG and Neil has kindly allowed his article to be published in NEWS

If you have some 'novel' tools why not tell us about them?

Send details to secretary@tttg.org.au

More Sidchrome Gold

by The Editor

Yet another example of Sidchrome tool mania.

This VINTAGE 1960'S SIDCHROME SIDDONS METRIC CONVERTER ADVERTISING SLIDE-CARD TOOL sold recently on eBay in Australia for $59.00 plus postage.

Not exactly ‘gold’ standard nor made by Sidchrome, but quite a hefty price for a well-aged, cardboard metric conversion chart.

JDs – William E Merritt's Tool Chest

by John Daniel

Following a talk and display at a local Men's Shed, I was approached by Chris, a member of the Shed who told me that he had an *old* railway tool box that had been passed down from his wife's family…the box had been made by William Merritt, a Journeyman[1.] who had migrated to Australia in the late 19th Century.

Several weeks later, the box, a Journeyman's Chest, was delivered to the shed with this accompanying hand-written information: -

"Willian Merritt was born in 1849 in Gloucestershire England. He trained as a carpenter. By 1881 he was residing in Derbyshire England working as a coachmaker at Derby Carriage & Wagon works.

He and his family came out to Melbourne on S.S Habsburg arrived 1887 and after 2 years moved North to Sydney to join the Eveleigh Railway Workshops, Carriage works was built 1880-1889. By 1900 several thousand people worked there building and maintaining engines and carriages for the expanding rail network.

Dedicated decorative carriages were built including sleeping and meeting and dining carriages for Premiers, State Ministers, Royals, and the Railway Commissioner."

Reading through the provenance that came with this tool chest, one can rightly assume that William Merritt made this chest, it is a typical example of a Journeyman's chest most likely made in Derbyshire, England and was part of his luggage on his journey to Australia … as to the recent history one can only assume that it was passed down through the generations, and that it.' *stayed in the family'*.

This chest was certainly not one to be taken to the workshop every day, it had been sturdily built and obviously locked at the end of each work-day…it was a chest to be 'left on the job.' The chest contained a lot of the tools that a coach-builder would need to apply his trade. William Merritt's box had a story to tell… the iron reinforced corners and strapping, the hand-forged handles secured with simple sculptured heavy blocks of wood and the overall weight says that this chest was built to last and house a full kit of a Journeyman's tools.

On opening, it was evident that the chest had belonged to a well-skilled Journeyman, not a rough box on the inside, but a modestly under-stated paneled-lining under the lid, and nicely fitted out sliding lidded boxes.

The tools were as one would expect. There was quite an assortment of Beech planes both early and later makers, an early adjustable wood compass plane spatted with paint spots (luckily undamaged), a set of coach -builder's routers, bench planes and the like, however many of the tools were missing blades, fences etc. There were no chisels, no squares although there was one nice user-made Panel gauge and a hand-forged pair of dividers… there were no bevels and only one early hammer, and no panel saws.

Old tool chests when unlocked and accessible, do arouse curiosity, and understandably, the 'tools-of-trade' become part of the oral history of their family forebears, consequently unfortunately, there is the temptation, to borrow, maybe lend, or regrettably, miss-use as is the case of the contents of William Merrit's old coach-builders tool chest of yester-year. Small saws, chisels setting-out tools are the tools that over the years, seem to be taken out of the chest to use, get lost, or just souvenired by family members, consequently it is rare to find a chest intact with a full inventory of tools.

ABOVE: Early Beech Compass Plane

ABOVE: A set of Coach Builder's Routers, many incomplete

It is worth noting that there were a few early tools that were made by well documented makers…there was a nice Moulding plane by Dyson [2.] (Benjamin Dyson operated from 1772 - 1791 in Micklegate, York, later as Dyson and Son, then, Middleton & Dyson) … the early adjustable paint-splatted Beech compass plane mentioned earlier was un-named. A Brass-backed saw made by Moulson Bros [3] of Sheffield,1828 – 1893 (1880 Cast Steel) was the only saw. There were other little early nick-nacks that seem to come with these old chests which always are interesting, and at times intriguing.

It would have been interesting to have seen William's complete set of tools, however, it was a privilege offered by a family member to go through this box, and in a way, get a glimpse into the life of a late early 19th century Journeyman, also to share this with the intrigued boys of the local Men's Shed.

It now begs the question as to what to do with this old, heavy industrial chest of old tools. The current custodian wished to pass that responsibility on with the preference that it be displayed with its contents and provenance in a railway museum.

Well, 'down the track', the Thirlmere Rail Museum [4.], NSW. was delighted to receive William Merritt's chest… a relief for Chris and his family knowing that it is now in the hands of the NSW Rail Museum which is at Thirlmere, Sydney's Southwest, home to a significant rail heritage

collection, including over 100 rolling stock items, associated with the history of the railways in NSW.

Note: A Journeyman [1] is a worker, skilled in each building trade or craft, who has successfully completed an official apprenticeship qualification. Journeymen are considered competent and authorized to work in that field as a fully qualified employee. They earn their license by education, supervised experience, and examination. Although journeymen have completed a trade certificate and are allowed to work as employees, they may not yet work as self-employed master craftsmen

REFERENCES

1. Wikipedia
2. *British Planemakers from 1700*, W. L. Goodman
3. *British Saws & Saw Makers from c1660*, Simon Barley
4. https://duckduckgo.com/?q=Thirlmere+Rail+Museum4&t=chromentp&atb=v315-1&ia=web

G15 FERRO PAK RUST PREVENTATIVE

G15 is a contact corrosion inhibitor for the protection of ferrous and non-ferrous metals.

G15 – provides long-term corrosion resistance

- Is thermally stable from -40°C to 260°C without cracking, chipping, peeling, or sagging.
- Is thixotropic and therefore will not sag, run-off and is ideal for clean trouble-free application. G15 holds on sharp edges.
- Is resistant to sunlight. It has been tested for exterior exposure under adverse conditions and has passed such long-term tests without failure.
- Does not stain metal surfaces. When used over steel, copper, aluminium, and their alloys; the coating does not stain under normal conditions of exposure.
- Has good water displacing properties.
- Can be used as a general-purpose lubricant.

TTTG's PRICE – JUST $24 PER CAN

BUY IN BULK AND SAVE

12 CANS FOR $250 !!

ON SALE AT ALL MEETINGS AND TOOL SALES

What's It

by The Editor

TTTG has had an inquiry as to the identity and use of the tool below. Anyone know what it is used for?

Nuts and Bolts

by The Editor

STAHLWILLE

Spanner opening SW: minimum dimension[1])	Spanner opening SW: maximum dimension[2])	SW: nominal size of wrench mm	Metric sizes, threaded diameters: ISO R272-1968 standard hexagon	ISO R272-1968 small hexagon	German Standard metric DIN ....[2])	German Standard DIN 561+564	German Standard DIN 6914+6915	Danish Stand. DS 17	French Standard NFE 27-111-1930[3])	Swedish Standards Metric large SMS 1412	Swedish Standards Metric small SMS 1414	Swedish Standards Whitworth large SMS 1413	Swedish Standards Whitworth small SMS 1415
2,52	2,58	2,5			1								
3,02	3,08	3			1,2+1,4								
3,22	3,28	3,2	1,6		1,6								
3,23	3,35												
3,52	3,60	3,5			1,7								
4,01	4,14												
4,02	4,12	4	2		2				2,5		2,3		
4,52	4,62	4,5			2,3						2,6		
4,83	4,95												
5,02	5,12	5	2,5		2,5+2,6				3		3		
5,21	5,33												
5,52	5,62	5,5	3		3								
5,59	5,72												
6,00	6,13												
6,03	6,15	6			3,5				3,5	3	3,5		
6,40	6,53												
6,60	6,70												
6,82	6,97												
7,03	7,15	7	4		4				4+4,5	3,5	4		
7,19	7,32												
7,60	7,70												
7,62	7,77												
8,03	8,18												
8,03	8,15	8	5		5	6			5	4	5		
8,41	8,56												
8,70	8,80												
8,81	8,97												
9,03	9,15	9			5[6])				5,5	5			
9,60	9,75												
10,04	10,19	10	6		6	8			6		6		
10,39	10,55												
11,04	11,19	11	7		7			1/4		6	7		1/4
11,18	11,33												
11,38	11,45												
11,99	12,14												
12,04	12,24	12		8					7		8		
12,80	12,95												
13,04	13,24	13	8		8	10						1/4	5/16
13,44	13,54												
13,60	13,77												
14,05	14,27	14		10	8[6])			5/16	8	8			
14,38	14,55												
15,05	15,27	15			10[5])						10	5/16	3/8
15,18	15,36												
15,34	15,44												
15,98	16,15												
16,05	16,27	16							9				
16,77	16,95												
17,05	17,30	17	10	12	10	12		3/8	10	10			
17,58	17,75												
18,05	18,30	18									12	3/8	7/16
18,16	18,29												
19,06	19,36	19	12	14	12	16		7/16	11				
19,18	19,38												
19,97	20,17												
20,06	20,36	20											
20,78	20,98												
20,86	21,16	20,8	Spark plug M 14 × 1,5 DIN 72 502										
20,95	21,08												
21,06	21,36	21							12		14	7/16	1/2
22,06	22,36	22	14	16	14		12	1/2		12+14			
22,35	22,56												
23,06	23,36	23							14			1/2	
23,52	23,67												
23,98	24,21												
24,06	24,36	24	16	18	16	20					16		5/8
24,76	24,99												
25,06	25,36	25											
25,55	25,78												
25,81	25,96												
26,08	26,48	26	Spark plug M 18 × 1,5 DIN 72501						16				
27,08	27,48	27	18	20	18		16	5/8		16	18		
27,13	27,36												
28,12	28,30												
28,08	28,48	28										5/8	3/4
28,75	29,01												
29,08	29,48	29							18				
30,08	30,48	30	20	22	20	24					20		
30,34	30,59												
30,66	30,84												
31,93	32,18												
32,08	32,48	32	22	24	22		20	3/4	20	18+20	22		
33,08	33,48	33										3/4	7/8
33,22	33,43												
33,53	33,81												
34,08	34,48	34									24		
35,10	35,60	35							22				
35,13	35,41												
35,51	35,71												
36,10	36,60	36	24	27	24	30	22	7/8		22+24			

minimum dimension[1])	maximum dimension[2])	American sizes: Nominal Size of Wrench	Thread Diameter ISO R272-1962 Bolts	ISO R272-1962 Nuts	Actual A/F	Normal Series Bolts	Normal Series Nuts	Heavy Series Bolts	Heavy Series Nuts	Nuts a Normal	Nuts b Square	Nuts c Heavy	Bolts and Screws d Normal	Bolts and Screws e Heavy	Bolts and Screws f Machine Screws	g Set Screws Square	Nuts h Machine Screw Nuts	English sizes, Thread Diam: W Whitworth Large	BS 916, 1953 and BS 1083, 1968, 1965	Width across flats inch
2,52	2,58																			
3,02	3,08																			
3,22	3,28																			
3,23	3,35	1/8	No2												No2+3					
3,52	3,60																			
4,01	4,14	5/32		No0+1													No0+1			
4,02	4,12																			
4,52	4,62																			
4,83	4,95	3/16	No3,4+5	No2+3	19										No4+5	No10	No2+3			
5,02	5,12																			
5,21	5,33	13/64																		
5,52	5,62																			
5,59	5,72	7/32														No12				
6,00	6,13	15/64																		
6,03	6,15																			
6,40	6,53	1/4	No6+8	No4	25										No6+8	1/4	No4			
6,60	6,70																	1/16		.256
6,82	6,97	17/64																		
7,03	7,15																			
7,19	7,32	9/32											No10							
7,60	7,70																	3/32		.297
7,62	7,77	19/64																		
8,03	8,18	5/16	No10+12	No5+6	31										No10+12	5/16	No5+6			
8,03	8,15																			
8,41	8,56	21/64																		
8,70	8,80																	1/8	3/16	.340
8,81	8,97	11/32		No8	34												No8			
9,03	9,15																			
9,60	9,75	3/8		No10	38								1/4*		1/4	3/8	No10			
10,04	10,19																			
10,39	10,55	13/32																		
11,04	11,19																			
11,18	11,33	7/16	1/4	No12, 1/4	44	1/4	1/4			1/4	1/4		1/4			7/16	No12, 1/4			
11,38	11,45																	3/16	1/4	.445
11,99	12,14	15/32																		
12,04	12,24																			
12,80	12,95	1/2	5/16	5/16	50	5/16	5/16		1/4	5/16		1/4	5/16		5/16	1/2				
13,04	13,24																			
13,44	13,54																	1/4	5/16	.525
13,60	13,77	17/32																		
14,05	14,27																			
14,38	14,55	9/16	3/8	3/8	56	3/8	3/8		5/16	3/8	5/16	5/16	3/8		3/8	9/16	5/16			
15,05	15,27																			
15,18	15,36	19/32																		
15,34	15,44																	5/16	3/8	.600
15,98	16,15	5/8	7/16		62	7/16					3/8		7/16			5/8	3/8			
16,05	16,27																			
16,77	16,95	21/32																		
17,05	17,30																			
17,58	17,75	11/16		7/16	69		7/16		3/8	7/16		3/8								
18,05	18,30																			
18,16	18,29																	3/8	7/16	.710
19,06	19,36																			
19,18	19,38	3/4	1/2	1/2	75	1/2	1/2		7/16	1/2	7/16	7/16	1/2			3/4				
19,97	20,17	25/32																		
20,06	20,36																			
20,78	20,98	13/16	9/16		81	9/16					1/2		9/16							
20,86	21,16																			
20,95	21,08																	7/16	1/2	.820
21,06	21,36																			
22,06	22,36																			
22,35	22,56	7/8		9/16	88		9/16	1/2	1/2	9/16	9/16	1/2		1/2		7/8				
23,06	23,36																			
23,52	23,67																	1/2	9/16	.920
23,98	24,21	15/16	5/8	5/8	94	5/8	5/8			5/8		9/16	5/8							
24,06	24,36																			
24,76	24,99	31/32																		
25,06	25,36																			
25,55	25,78	1			100						5/8					1				
25,81	25,96																	9/16	5/8	1.010
26,08	26,48																			
27,08	27,48																			
27,13	27,36	1 1/16			106			5/8	5/8			5/8		5/8						
28,12	28,30																	5/8	11/16	1.100
28,08	28,48																			
28,75	29,01	1 1/8	3/4	3/4	112	3/4	3/4			3/4	3/4		3/4			1 1/8				
29,08	29,48																			
30,08	30,48																			
30,34	30,59	1 3/16																		
30,66	30,84																	11/16	3/4	1.200
31,93	32,18	1 1/4			125			3/4	3/4			3/4		3/4		1 1/4				
32,08	32,48																			
33,08	33,48																			
33,22	33,43																	3/4	7/8	1.300
33,53	33,81	1 5/16	7/8	7/8	131	7/8	7/8			7/8	7/8		7/8							
34,08	34,48																			
35,10	35,60																			
35,13	35,41	1 3/8														1 3/8				
35,51	35,71																	13/16	15/16	1.390
36,10	36,60																			

STAHLWILLE

Spanner opening SW: minimum dimension[1]	maximum dimension[2]	SW: nominal size of wrench mm	Metric sizes – Thread diameters – ISO R 272-1968: standard hexagon	ISO R 272-1968: small hexagon	German Standard, metric: DIN.......[2]	DIN 561+564	DIN 6914+6915	Danish Stand. DS 17	French Standard: NFE 27–111–1930[3]	Swedish Standards: Metric large SMS 1412	Metric small SMS 1414	Whitworth large SMS 1413	Whitworth small SMS 1415	Nominal Size of Wrench	American sizes – Thread Diameter – ISO R 272–1962: Bolts	ISO R 272–1962: Nuts	Actual A/F	Normal Series: Bolts	Normal Series: Nuts	Heavy Series: Bolts	Heavy Series: Nuts	Nuts: Normal a	Nuts: Square b	Nuts: Heavy c	Bolts and Screws: Normal d	Bolts and Screws: Heavy e	Bolts and Screws: Machine Screws f	Bolts and Screws: Set Screws Square g	Nuts: Machine Screw Nuts h	English sizes – Thread Diam – W: Whitworth large	BS: BS 916, 1953 and BS 1083, 1968, 1965	Width across flats inch
36,73	37,01													1 7/16			144			⅞	⅞			⅞		⅞						
37,10	37,60	37										⅞	1																			
37,82	38,05																													7/8	1	1.480
38,10	38,60	38							24																							
38,30	38,61													1 1/2	1	1	150	1	1			1	1		1			1½				
39,89	40,20													1 9/16																		
40,36	40,59																													15/16	1 1/16	1.580
41,10	41,60	41	27	30	27		24	1		27																						
41,50	41,81													1 5/8			162			1	1			1		1						
42,10	42,60	42							27			1	1⅛																			
42,67	42,93																													1	1⅛	1.670
43,08	43,38													1 11/16	1⅛	1⅛	169	1⅛	1⅛			1⅛	1⅛		1⅛							
44,70	45,03													1 3/4																		
46,10	46,60	46	30	33	30	36	27	1⅛	30	30																						
46,28	46,61													1 13/16			181			1⅛	1⅛			1⅛		1⅛						
47,10	47,60	47										1⅛	1¼																			
47,52	47,80																													1 1/8	1¼	1.860
47,88	48,21													1 7/8	1¼	1¼	188	1¼	1¼			1¼	1¼		1¼							
50,10	50,60	50	33	36	33			1¼	33	33																						
51,08	51,44													2			200			1¼	1¼			1¼		1¼						
52,10	52,60	52										1¼	1⅜																			
52,37	52,68																													1 1/4	1⅜	2.050
52,68	53,04													2 1/16	1⅜	1⅜	206	1⅜	1⅜			1⅜	1⅜		1⅜							
54,12	54,72	54							36																							
54,25	54,61													2 1/8																		
55,12	55,72	55	36	39	36	42		1⅜		36																						
55,88	56,26													2 3/16			219			1⅜	1⅜			1⅜		1⅜						
56,12	56,72	56										1⅜	1½																			
56,72	57,05																													1 3/8	1½	2.220
57,45	57,84													2 1/4	1½	1½	225	1½	1½			1½	1½		1½							
58,12	58,72	58							39																							
60,12	60,72	60	39		39			1½		39		1½	1⅝																			
60,66	61,06													2 3/8			238			1½	1½			1½		1½						
61,57	61,92																													1 1/2	1⅝	2.410
62,23	62,64													2 7/16											1⅝							
63,12	63,72	63							42																							
63,83	64,24													2 1/2																		
65,12	65,72	65	42		42	48		1⅝		42		1⅝	1¾																			
65,43	65,86													2 9/16			256							1⅝		1⅝						
65,91	66,29																													1 5/8	1¾	2.580
67,03	67,46													2 5/8	1¾	1¾	262	1¾	1¾						1¾							
67,12	67,72	67							45																							
70,12	70,72	70	45		45			1¾		45		1¾	1⅞																			
70,26	70,69													2 3/4			275			1¾	1¾			1¾		1¾						
70,51	70,92																													1 3/4	2	2.760
71,12	71,72	71							48																							
71,81	72,26													2 13/16											1⅞							
75,03	75,51													2 15/16			294							1⅞		1⅞						
75,15	75,85	75	48		48	56		1⅞		48		1⅞	2																			
76,61	77,09													3	2	2	300	2	2						2							
77,15	77,85	77							52																							
79,81	80,31													3 1/8			312			2	2			2		2						
80,15	80,85	80	52		52			2		52		2																				
80,47	80,92																													2	2¼	3.150
82,15	82,85	82							56																							
85,15	85,85	85	56		56			2¼																								
86,18	86,72													3 3/8											2¼							
88,15	88,85	88							60																							
89,36	89,92													3 1/2										2¼		2¼						
90,15	90,85	90	60		60																											
90,60	91,00																														2½	3.550
94,15	94,85	94							64																							
95,15	95,85	95	64		64			2½																								
95,76	96,34													3 3/4											2½							
98,93	99,52													3 7/8										2½		2½						
99,20	99,60																														2¾	3.890
100,15	100,85	100	68		68				68																							
105,20	106,00	105	72		72			2¾	72																							
105,33	105,97													4 1/8											2¾							
106,60	107,00																														3	4.180
108,51	109,14													4 1/4										2¾								
110,20	111,00	110	96		76			3	76																							
114,91	115,57													4 1/2											3							
115,20	116,00	115	80		80																											
116,20	117,00	116							80																							
118,08	118,77													4 5/8										3		3						
120,20	121,00	120	85		85			3¼																								

[1]) max-min. dimensions for metric sizes according to DIN 475/2, series 1
[2]) DIN 439, 555, 601, 609, 610, 917, 931, 933, 934, 935, 936, 937, 960, 961, 979, 980, 985, 986, 1587, 2510/5, 6330, 6331, 7513, 7964, 7967, 7968, 7976, 7990
[3]) NFE 27-311 is identical to ISO R 272 since Oct. 1969
[4]) Standards prior to 1966
[5]) Only applicable to Motor Industry (M 10 acc. to DIN 70 613 through 70 618)
[6]) Standards prior to 1963

ANSI B 18.2.2 – 1972:
a) Hex Flat and Hex Flat Jam Nuts
Hex Nuts and Hex Jam Nuts
Hex Slotted Nuts
Hex Thick Nuts
Hex Thick Slotted Nuts
Hex Castle Nuts
b) Square Nuts
c) Heavy Square Nuts
Heavy Hex Flat Nuts
Heavy Hex Flat Jam Nuts
Heavy Hex Nuts
Heavy Hex Jam Nuts
Heavy Hex Slotted Nuts

ANSI B 18.2.1 – 1972:
d) Square Bolts
Hex Bolts
Hex Cap Screws
Lag Screws
e) Heavy Hex Bolts
Heavy Hex Structural Bolts
Heavy Hex Screws

f) ANSI B 18.6.3 – 1962
g) ANSI B 18.6.2 – 1956
h) ANSI B 18.6.3 – 1962
* Square Bolt and Lag Screw only

Printed in W.-Germany

TTTG Products

Available at all TTTG Meetings Workshops & Events

TTTG Leather Chisel Rolls ……

$25 each

TTTG Sharp Oil ……..

$6 per bottle

TTTG SHARP OIL

Best on Oil Stones & Diamond Plates – Contains 240ml

NOT TO BE TAKEN – KEEP OUT OF REACH OF CHILDREN

SHAKE WELL BEFORE USE!

BONUS BUY – 2 BOTTLES FOR $10

TTTG Citric Acid ….

$5 per 500 gm jar

G-15 'Ferro Pak' Rust Prevention ….

$24 per can
or
6 cans for $125

TTTG Members & Friends Tool Sale

SUNDAY 18 MAY 2025

Remember the time: **8.00 am to 11.30 am**

Remember the location:

Olde Eastwood Town Hall
74 Agincourt Road
MARSFIELD, NSW

Remember the entry fee:

- **$5 per person – pay at the door and please have your $5 note or $5 in coins for entry.**

Remember to bring cash with you:

- **Some sellers may have electronic purchase facilities, but the majority only take cash so bring small notes.**
- **PLEASE NOTE: THERE IS NO ATM AT THE VENUE**

TTTG Member? Got surplus tools to sell? Become a seller:

- **$25 per table – contact the Secretary to book via secretary@tttg.org.au**
- **For insurance reasons only TTTG Members can book tables – membership is only $50 per year**
- **TTTG usually runs 4 tools sales each year**

TABLES STILL AVAILABLE FOR 18 MAY SALE

NO ASSISTANT PASSES FOR THIS SALE

GARVIN TOOLS

Garvin Tools manufacture a range of precision-made and engineered tools for wood working and metal working. They also design and develop tools and products in-house to customers' specifications.

Based in New Delhi, India, Garvin started making quality tools in 1979, they now export internationally, and were ISO 9001 certified in 2015. They exhibited last year at the hardware trade show in Cologne, Germany.

KavTak.com.au, based in Glenwood, Sydney, NSW, are Garvin's exclusive Australian rep' and reseller.

The selection of tools that Garvin offer is vast, and therefore, at present it's not possible for KavTak Tools to offer the entire range - although they are always expanding their range based on customer demand.

If you can't find what your looking for online at KavTak Tools, then GarvinTools.com have online brochures, etc. Find what you need, let KavTak know and they can arrange to ship it on one of their annual visits. Or if it is urgent, air freight can be arranged.

Other Online Resources

Companies with good customer support are:

Machine Tools

machineryhouse.com.au

edisons.com.au

Tooling, Materials & Hardware

EdconSteel.com.au

aimsindustrial.com.au

boltandnut.com.au

Issue 01 - KavTak Tools - May, 2023

Finding the Balance

Time, Cost & Quality

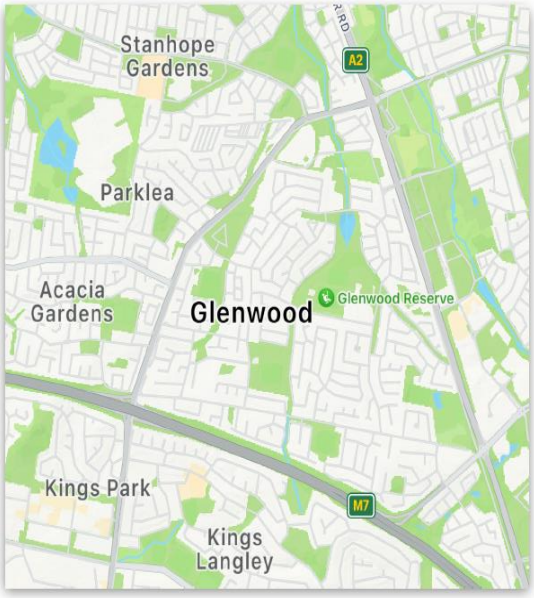
Makers are always trying to get the right balance in their own work, as well as when deciding to buy new gear, or indeed, restored gear, for their workshops.

The context at hand may sometimes require a trip to the hardware and a compromise with whatever the retailer has available at the time. But if there is enough time, waiting for local mail, or even shipping from overseas, is worth the wait.

Garvin Tools make quality products that are better priced in most cases than similar products that are made in Europe or North America.

KavTak are keen to make Garvin Tools available online to the Australian market, so check out:

kavtaktools.com.au



TTTG Fees and Contacts 2024/25

TTTG Membership & Entry Fees:

Membership (1 July 2024 to 30 June 2025)	$50.00
'Real Skills' Workshops	$70.00
Members Meetings entry	$5.00
Members & Friends Tool Sales entry	$5.00

TTTG NEWS Magazine & Tool Sales:

NEWS Magazine Editorial, Articles & Advertising:
John Bates secretary@tttg.org.au

All Tools Sales Information and Table Bookings
John Bates secretary@tttg.org.au

TTTG Memberships & Secretary:

John Bates secretary@tttg.org.au

TTTG Members Meeting & AUCTIONS

Old Eastwood Town Hall, 74 Agincourt Road, Marsfield, NSW

Members Meetings (open to all) are held on the second Tuesday in:
February, April, June, August, October and December

TTTG Auctions surplus tools – bargains galore!
Screws, locks, nuts & bolts, braces, hammers, saws, auger bits, and more. STARTING BID IS JUST $1.00

WHY DO WE HAVE TOOL AUCTIONS? WE HAVE TO PAY THE BILLS SOMEHOW!

For event details and news items see the NEW TTTG website
www.tttg.org.au