NEWS 167

February 2021

www.tttg.org.au **ISSN 2206-1606**

What is TTTG?

TTTG is the Traditional Tools Group; a not-for-profit group of like-minded enthusiasts interested in the history and preservation of traditional trade skills, techniques and tools, including hand tools, machinery and other old technologies. TTTG was established in 1992.

Our bi-monthly Members' meetings feature a guest speaker presenting diverse topics related to tools, trades and technology.

Keeping traditional tool skills alive is a key objective of TTTG.
"Real Skills" workshops have been held every year since 2005.
These popular fee-based workshops, open to all, are designed to guide participants in developing their tool skills and practicing new techniques.

The Group sells old tools and machinery at affordable prices.
Three "members and friends" tool sales are held each year.
These tool sales are at the Old Eastwood Town Hall.

Every February TTTG runs Sydney's largest second-hand tools sale.
The Annual Tool sale is at The Brick Pit Sports Stadium in Thornleigh.

The TTTG digital magazine, "NEWS", is published four times a year.

Membership of the Traditional Tools Group is open to anyone with an interest in traditional tools, history, techniques and skills.

TTTG Membership Rules

The MEMBERSHIP YEAR starts 1 July and ends on the following 30 June.

The MEMBERSHIP FEE is currently $50.

The MEMBERSHIP FEE is due to be paid on 1 July each year and must be paid on or before August 15.

A Member may choose to pay the Membership *Fee* one year in advance, but only from 1 January in the current Membership Year and only for one year. *Other advance payments will not be accepted.*

A Member who has NOT paid their Membership Fee by August 15 becomes an UN-FINANCIAL MEMBER.
From August 15 an UN-FINANCIAL MEMBER and will cease to receive the NEWS magazine. Access to the Members' area of the TTTG website will also cease.

A NEW MEMBER joining between July 1 and March 31 the following year is a full Member for the remainder of that Membership Year only.

A NEW MEMBER joining between April1and June 30 does not become a full Member until the following Membership Year and must pay the Membership *Fee applicable to that Membership Year.*

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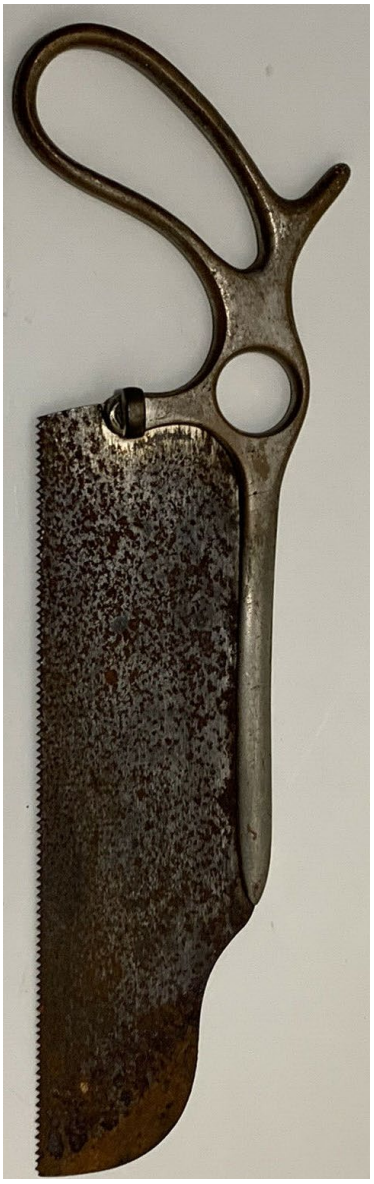

Surgeon's Saw

Next Meeting: Tuesday16 February 2021

"RARE AS"

COVID-19 Restrictions only 47 admitted

Email johnbates@tttg.org.au

NEWS Magazine, Contacts & Fees 2020/21

NEWS Magazine is sent to all financial members during

FEBRUARY MAY AUGUST NOVEMBER

From 30 June 2020 NEWS only by email.

2020/21

TTG Fees

Membership	***$50***
Workshops	***$60***
Tool Sales	**$10**
Meetings	**$5**

TTTG Contacts

Editorial/Advertising Enquiries:

Bob Crosbie
bobcrosbie@tttg.org.au

Membership Enquiries:

John Bates -
johnbates@tttg.org.au

Next Meeting
Tuesday 16 February 2021
6.30pm

Max 47 persons only
Email johnbates@tttg.org.au

& tell us you will be there.

RARE AS

What is it?
What was it used for?
How was it used?
How much is it worth?

Bring rare tools for discussion.

Entry only $5

Volunteers Wanted

-To demonstrate skills.

-To "sell" TTTG.

-To write articles.

-To help with the website.

-To sort tools.

-To repair tools.

-To repair old machines.

TTTG needs members who can talk to an audience and can demonstrate "real skills".

Why not get more involved?

The Next Meeting

Tuesday 16 February 2021 Old Eastwood Town Hall 6.30pm

RARE AS

Some old tools stand out and ask: -

What is it?
What was it used for?
How was it used?
How much is it worth?

These tools are often called *RARE AS*.

Members are invited to bring some of their Rare As tools for discussion.
There will be a display table of TTTG's Rare As tools.

During the meeting there will be a discussion of these seldom seen tools.

TTTG is overstocked with small tools.
There will be a bargain table of tools priced from 50 cents to $5.
TTTG products will also be available.

A meeting not to be missed!

Due to COVID-19 Restrictions 47 only

Email johnbates@tttg.org.au & tell us you will be there. Only 47 admitted.

The Next Workshop

Sunday 7 March

Old Eastwood Town Hall 9.30am

* Repairing and Using Moulding Planes

TTTG has boxes of moulding planes needing some TLC.
Each member of the class gets to pick a plane to keep.
Spare parts and wedge blanks will be provided.

You start with a sad looking bundle of junk.
You leave with a working plane and a length of moulding.

Other planes needing some TLC for sale at $5 each

$60 Enrol online or pay on the day

Workshops are limited to six participants.

Workshop dates will be announced on the website three weeks in advance.

Just a Sec from the TTTG Secretary

John Bates

Welcome to 2021 and NEWS 167 our first magazine of the year.

Unfortunately, COVID continues to cast a shadow over TTTG activities and events. Latest casualty is the annual TTTG Sydney Tool Sale, it was scheduled to be held on 21 February but has now been cancelled.
An email notice was sent out to all Members in early January.

2021Sydney Tool Sale

Good news is we have a date for next year so put Sunday 20 February 2022 in your diary or paint it on the wall of your workshop.

Real Skills Workshops

Keep an eye on the TTTG website www.tttg.org.au as there will be some great 'Real Skills' workshops on offer. Be sure to tell your friends and family too as our workshops are open to everyone and keenly priced.

Members' Meetings

Visitors are always welcome to our bi-monthly Members' Meetings which will now be held in the Old Eastwood Town Hall. Please see the TTTG Website for meeting dates and times. Next meeting is Tuesday 16 February. Doors open at 6.00pm and the meeting starts at 6.30pm. Hope to see you there.

Masks are recommended.

The February Meeting will focus on rare tools so bring something that nobody else has – no I do not mean COVID.

Tools for sale

More tools and ironmongery for sale and on display at the Marsfield workshop. Among the items is a nice vintage machinist-made tool chest c.1950s on offer and a few machinist tools to boot and a large cast iron off-set vice. No reasonable offers will be refused.

Members' Tool Sales

We are working on holding another Members and Friends Tool Sale at Marsfield soon. Nothing certain yet but keep an eye on the website and your inbox for an announcement.

I would like to hear from Members who are interested in selling at or attending such a sale so drop me an email.

Email secretary@tttg.org.au

or text message 0418488210 and let me know.

Committee Vacancy

We still have a vacancy on the Committee if anyone feels inclined.

Just a Word from the *NEWS* Editor

Bob Crosbie

The Future for TTTG?

The future is in the hands of the members. TTTG needs members to step forward and become actively involved.

COVID-19 permitting the 2022 Annual Tool Sale will be on!

Sunday 20 February 2022

How is TTTG going during COVID-19?

The good news:	Membership is growing!
The bad news:	Numbers at venues are restricted.

The sales of tools continue to be strong!

The Committee's decision for NEWS to go digital, combined with sound financial management and income producing general meetings, tool sales and workshops allows TTTG to remain solvent despite COVID-19.

TTTG is emailing anyone interested in tools and machines.

TTTG has a growing mailing list and is sending out regular updates.

TTTG is improving the website.

The existing TTTG website was looking old so changes have now started.

COVID means slow progress but work continues to revitalise website.

The COVID-19 Crisis and TTTG to date.

The limited size meetings and workshops produced below average revenue.
The pandemic restrictions have prevented full size meetings.
The "6 max." workshops and "47max." meetings have been successful.
The February Sydney Tool Sale was cancelled due to COVID restrictions.

The new COVID clusters in January mean we are on a "day by day" basis.

Future Events and Workshops

The 2021 Sydney Wood Show

In late December, the organiser was confident the 2021 Show would go ahead. TTTG will again be there!

Workshops

New workshops are being developed. Post COVID there will be more classes.

Keeping watching the TTTG website and reading the TTTG emails.

Real Skills Classes

The TTTG "real skills" classes continue!

The TTTG "real skills" classes concentrate on the need to develop skills before buying numerous jigs or gadgets.

The workshops organiser's motto is "*Don't throw money at it."*

The three core "real skills" classes are:

-Saw Sharpening

-Plane and Chisel Sharpening

-Tool selection and use

The advanced "real skills" classes are:

-Using planes

-Using saws and chisels

-Making Router Jigs

-Dovetail Joints

Getting the most from TTTG classes

TTTG classes are in a safe workshop and taught by competent teachers. To get the most you need to be prepared to follow the advice offered.

Come to a workshop prepared to follow instructions and use the tools provided. Bring your tools but ask the presenter if they are suitable and sharp. Most people have problems preparing material and cutting joints because they are using the wrong tools or are using blunt tools.

The key to acquiring any skills is understanding technique and practice.

This is what you need at a "real skills" workshop.

-Safe sensible clothing.

-Foot wear with leather uppers.

-You don't need an apron but you do need to bring your lunch.

Attitude helps!

Show the instructor the tools you use but be prepared to listen. If you don't agree tell the instructor. Don't take it personally!

Real Skills Classes are limited to six. Enrol online. $60

"Real Skills" Classes ***Offered despite COVID19***

The Old Eastwood Town Hall
74 Agincourt Road Marsfield

Sunday 9.30am start ***$60 fee*** ***Enrol and pay online***

Next workshop Sunday 7 March

TTTG offers quality of courses in a safe workshop

- Teaching traditional skills to a high standard.
- Teaching traditional skills in a safe workshop space.
- Teaching efficient hand and machine skill techniques.
- Teaching the right tools and machines for the job.

All TTTG "Real Skills" Classes are limited to six participants.
This ensures each participant will have a quality learning experience.

Proposed Workshop Anyone interested?

Make a spokeshave or scraper

TTTG will supply a quality old spokeshave blade

TTTG will supply the wood (American Beech)

Or

You can bring a blade

You can bring your own wood

The scraper will be a "Chairmakers' Devil"

A sharp Devil makes shaving any hardwood a pleasure!

BUST the RUST

Dissolve rust with **TTTG CITRIC ACID**

450gram Jar $5

RAZOR SHARP

The best for Oilstones and Diamond Plates

TTTG SHARP OIL $6 a bottle

Trad Tools

The second issue of the new TTTG monthly bulletin ***Trad Tools*** was emailed to all members in the first week of January 2021.

The third issue of the new TTTG monthly bulletin ***Trad Tools*** was emailed to all members in the first week of February 2021.

Trad Tools will remain a four to six pages supplement to ***NEWS***.

The next ***Trad Tools*** will be emailed to members in March 2021.

Trad Tools will alert members to coming events.

Trad Tools will compliment and supplement ***NEWS***.

The aim is to update the content of ***NEWS*** each month.

Two New "Real Skills" Workshops

Matt Pryor has offered to team teach with Bob Crosbie

* Repairing and Using Moulding Planes

Sunday 7 March

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Spare parts and wedge blanks will be provided.

You start with a sad looking bundle of junk.
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Other planes needing some TLC for sale at $5 each

* Looking After Grand Dad's Tools

You bring in some old tools, even your grandad's tools.

Matt and Bob show you how to get them back to work.

Probably a good idea to tell us what you will bring.

Matt reckons this will bring in the Hipsters! *

Two teachers will let Bob tell tales of 1960's tool buying.

Anyone interested?

Suggestions taken onboard.

For a picture of a Hipster see Vintage Tools page 50

Correspondence

Starrett Universal Bevel No. 47

Jim Davey asked John Bates this question;

What is the function of the offset slot?

John Deeble replied,

The three links below provide some explanation of the reasons for the unusual slot arrangement on the special sliding bevel. I hope this helps.

Jim Davey added,

Thanks John D but I already knew that from both Starrett and PEC product notes. What I'm looking for is an example.
I've sent a message to PEC for further explanation.

John Bates replied to Jim,

Yes, I looked for an example as well. On the web in my workshop practice books etc but came up empty handed. Indeed, I could not even find a picture of the No.47 with the tongue inserted to use the angled slot.
Lost in the mists of time.
I will be most interested to see what PEC has to say.

When PEC answers pass it on to me. Remind me to write a page for NEWS.
I will include your price for a PEC 47 in the feature.

https://toolsforworkingwood.com/store/item/ST-47

Joh replied to Jim

Been over and around this one many times.
I think the notch allows setting much shallower angle than possible without it.

Starrett never replied to my email. Did you get anything from PEC?

Yes, I did. Got it. No, I haven't.

Jim Davey to John Bates

PEC replied that it is to get into tight places, at any angle.

I remembered that I use it for setting the 45 degree on my Mini Mitre boards,

see photo attached.

Not a real tight situation but I do have it set with a bit of the offset.

It could possibly be useful to check the angle of teeth in a rack. Maybe?

Website Changes

In January a new feature appeared Recent article from NEWS.

John Bates' Tool Steels series of articles ended in NEWS 166. The "essential facts" content is now available on the website.

This new feature replaces the long running Latest Article.

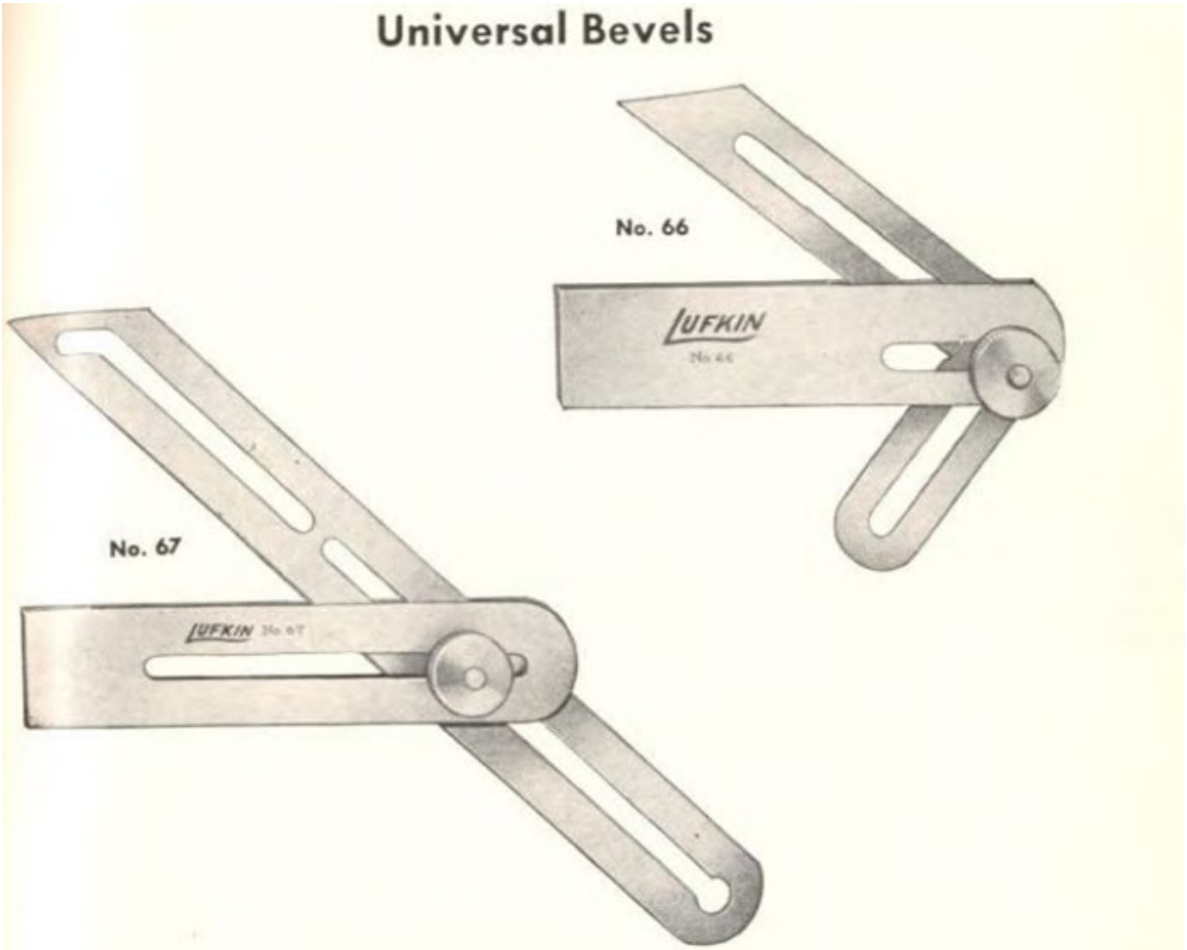
Tool Sale Snaps has been replaced with Website only article

The first Website Only" is A Collection of Cooper's Tools

Other improvements and changes are being be made!

The Lufkin No.67.

Universal Bevels



No. 66

very popular tool, necessary in many ses of work. Blade and stock are so slotted shaped that any angle may be obtained. ing provides constant tension and blade can ocked firmly at any angle with the knurled mb nut. Head of clamping bolt sets in a ss, allowing stock to lie flat on the work. of the blade having beveled end is 3 inches . Stock is 3 inches long, and, while slotted,

No. 67

This tool, having both straight and offset slots in blade and long slot in stock, will take adjustments and angles which cannot be obtained with any common bevels. Blade is 6 inches long; stock 3½ inches. Spring provides constant tension and knurled thumb nut locks blade in any desired angle. Head of clamp bolt sets in a recess, allowing stock to lie flat on the work.

Does anyone know the answer?

Why is the offset slot?

The NEWS Editor will publish the convincing answers in NEWS 168

Correspondence

Parts for a Stanley #50

In NEWS 166 John Sutton writes seeking parts for a Stanley #50.

While I'm not sure what parts are missing from John's #50 – I couldn't see a listing of the parts John needs.

John might be able to source suitable spare parts for the Veritas small plough or Veritas combination plane from Carbatec – https://www.carbatec.com.au/search?ProductSearch=hand%20planes

It is highly probable that the Veritas plane blades will fit John's Stanley #50 with some minor modification using a Dremel cutting or grinding disk.

It is also possible that the Veritas Combination plane's shaving deflector will fit the Stanley #50 as these types of combination plane have a lot of commonality when it comes to "spare parts".

If John has no luck spare parts at TTTG's next two tool sales or through Carbatec (spare parts for Veritas planes), he could try Patrick Leach's monthly tool letter.

Send an email to leach@supertool.com and insert "Sign Me Up for Your Tool list..." in the subject line. Patrick is in Ashby, Massachusetts so his prices are in USD and exclude the cost of shipping.

John may get lucky with what Patrick has in his "spare parts bins".

A complete set of cutters for a #50 would include:

Grooving – 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 7/8"

Tongue – 1/4", which is matched with the 1/4" grooving cutter

Beading – 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2"

Hope this helps

Ian Neuhaus

Why not use Correspondence?

All it takes is an email to the NEWS Editor. You will get a reply.

Finding Parts

Buying old tools with missing parts is a two-edged sword. The price may be right but finding the missing part may be a frustrating challenge.

A fellow TTTG member may have what you want and be willing to sell.

If the NEWS editor will run a Wanted column when he gets entries!

Stanley Plane Screw Threads and Parts

Matthew Pryor suggests;

Scroll down through the products on this page, this guy has had taps and dies manufactured to suit Stanley threads, have you seen anyone else produce these yet?

https://aplanelife.us/products-%26-services

Bob Crosbie suspects these are standard "non preferred size" taps and dies.

John Bates adds;

You can buy new Stanley parts https://www.ebay.com.au/usr/toamic1 at very reasonable prices.

At least one person in Australia (plus Bob Crosbie of course) has seen the market possibilities.

Bob Crosbie sells hardwood plane handles at $10 each (at TTTG events). At his low price I do not think Bob will have any significant competition.

Stanley taps and dies are covered in my Stanley booklets.

Rutland Tools was supplying Stanley taps and dies but the company was taken over by MSC and they are not in the current MSC online catalogue. But at the prices the eBay seller is charging why would anyone make their own replacement Stanley threads?

A final word from Bob

Stanley spares turn up at all TTTG Tool Sales. TTTG can have a "Stanley screw thread part" made if you are prepared to pay for the machining time. A "one off" will cost as much as 10 plus parts.

Read Stanley Planes Screw Threads by John Bates (on the TTTG Website)

Stanley made numerous planes. Spare screws are found in broken planes. Get back the money for a broken plane by selling the bits you don't want.

Plane Facts

For the best part of a century Stanley Tools were the world leaders in metal planes but they had competitors. Some of Stanley's rivals developed designs different from Stanley planes but some copied Stanley planes. In fact, some Stanley competitors made planes virtually identical to the Stanley range of planes.

The majority of the screw threads in Record and Turner planes are the same screw threads as the screw threads found in Stanley planes.

Atomic Era “Buck Rodgers” Tools

Working by Hand November 29, 2013
https://workingbyhand.wordpress.com/2013/11/29/atomic-era-buck-rogers-tools/

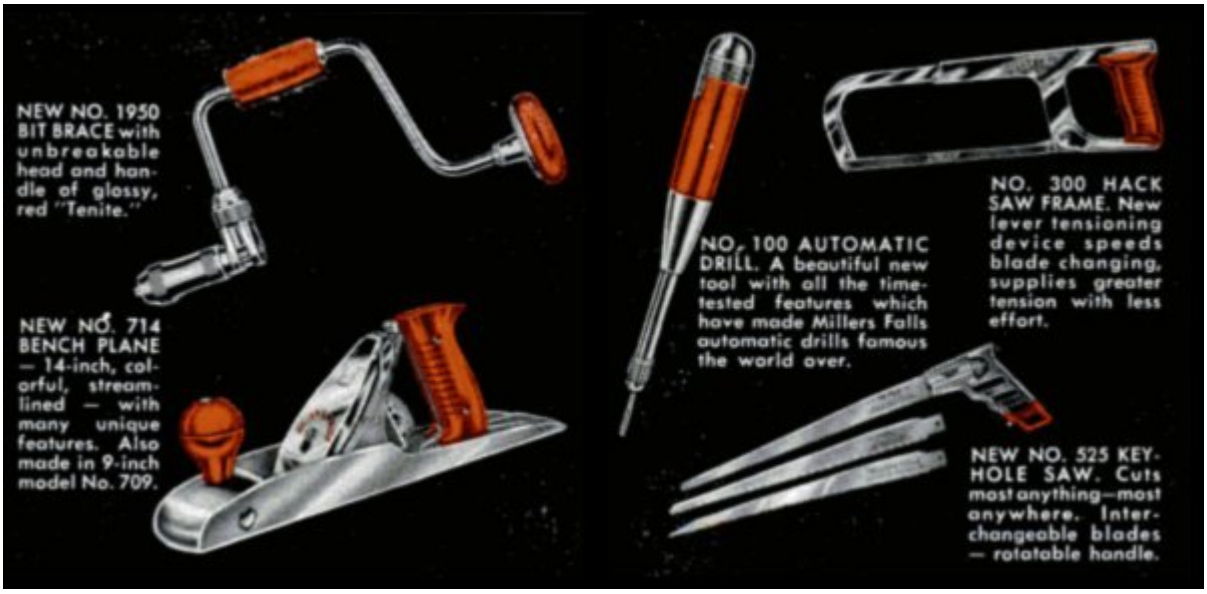
The 1950’s heralded the atomic era, which from a design perspective brought in many sleek, futuristic objects built with the use of plastic and aluminium. No tool manufacturer embraced this more than Millers Falls. The primary identifiable features – the opaque red plastic handle material known as *Tenite* (MF also used a translucent red permaloid plastic in circa late 1930s tools such as the No.5010 Parsons De Luxe brace, and the #209 De Luxe Smooth plane), and the widespread use of aluminium.
Tupperware had its debut in 1948 and plastic became a major force in the clothing industry – polyester, lycra and nylon.
The basic benefits of plastic – easier to mould, “unbreakable”, through-body colour, and cheaper to manufacture than their natural alternatives. Aluminium too, could be easily cast, is light, and won’t rust.
The 1950s also signalled the age of mass consumption. Both aluminium and plastic helped drive this new way of life. There was an increase in spending power, and suburbs were rapidly expanding, bringing an investment in items based around home and family life.

The following tools are identified as “Buck Rogers”-era
Millers Falls: #100 Automatic drill
#104/308 Hand drills
#300 Hacksaw frame
#1950 Bit Brace
#525 Metal keyhole saw
#709 Smoothing plane
#714 Jack plan
#1220 Plane-’R-File
#1950 Bit Brace

Most Buck Rogers Millers Falls Tools can be readily identified by their unique red-grey colouring. Only the No.525 contained no plastic component. These tools were designed by industrial designers Francesco Collura (104, 308, 300), L. Garth Huxtable (100, 525, 1220), and Robert W. Huxtable (709, 714, 525).

Millers Falls Tools with *Tenite*

Classic “Buck Rodgers”



Turner Handles: Red cellulose acetate

Turner planes were fitted with red cellulose acetate handles. The handles were advertised as unbreakable. In reality Turner handles were prone to breaking. Turner planes also were fitted with die cast aluminium frogs. The frogs distort! In every other respect Turner planes are superb planes.

All Turner plane components are interchangeable with Stanley and Record planes. Turner plane blades were made by Berg (Sweden).

From Wikipedia

Cellulose acetate refers to any acetate ester of cellulose, usually cellulose diacetate. It was first prepared in 1865.

http://www.interplexindia.com/aca.htm

Cellulose Acetate is a natural plastic, which is manufactured from purified natural cellulose. In the manufacturing process of Cellulose Acetate, natural cellulose is reacted with acetic anhydride to produce Cellulose Acetate, which comes out in a flake form. This flake is then ground to a fine powder.

Cellulose Acetate in primary form cannot be processed as a thermoplastic. It can only be processed by dissolving in a solvent and spinning or casting. However, it can be processed by normal plastics processing techniques in compounded form. For this, Cellulose Acetate has to be blended with a suitable combination of plasticizers and additives and melt compounded to get Cellulose Acetate Granules. Cellulose Acetate Granules can then be processed by all standard techniques.

Turner Australia Planes

Red cellulose acetate handles

The Village Woodworker November 21, 2012

http://thevillagewoodworker.blogspot.com/2012/11turner-hand-planes-small-review.html

Taking the Arris

A sharp plane and skill will produce perfect chamfers rapidly. Simple job. The Edge CR50 Corner Plane guarantees perfect chamfers. At a cost.

EZ Edge Corner Plane Deluxe Set SKU: EZEDEL-21-FW

Includes Four EZ-Edge Corner Planes, 1/8", 3/16", 1/4" Radius, 45 Degree Chamfer, and 4 Rack-Its

Out of stock $499.99~~$519.99~~

You may have to wait until they are in stock! In high demand in the USA?

The plane's design and performance are superb but this plane necessary?

My prediction, an iconic collectors' tool for the future. Good investment?

Radial Arm Saw

Bob Crosbie

A few years ago, TTTG had a workshop full of “old tools and a few machines” to sell on consignment. In the corner of the two-car garage was an old, probably1960s, OMGA 450 Radial Arm Saw. Among the spare blades were two aluminium alloy and one bronze trenching heads. I made an offer and became the owner of the OMGA 450 and the “tooling”. The two aluminium trenching heads influenced my decision to buy and I knew OMGA machines are top quality Italian engineering. My intention was to keep a trenching head in the radial arm saw and use it for machining tenons.

During the move the height adjustment handle was broken. This was the first of many delays. I found OMGA on the internet and discovered this pattern of handle was no longer in production. I also found how expensive are original OMGA parts. The handle is made from a hard plastic. I found the right epoxy and repaired the handle. Using thin high-quality plywood and epoxy plus innovative redesign I produced a handle identical to the original and as strong! One day I will give it a few coats of Model-maker’s black paint and no one will know it has been repaired.

The 450 was without a stand so I made a Stand/Cupboard for the machine. The 450 sat on this stand for too long. Finding the right size Wood Ruff key for the repaired handle was my excuse. A few weeks ago, I had to solve my “not enough space” issue. In my workshop I also had a Myford Super 7 Metal Lathe. Wrong place for an engineer’s lathe in a workshop full of wood dust producing machines. The solution I came up with, loan the Myford to TTTG. TTTG now has a working Myford Super 7 in the TTTG Workshop.

With the Myford Super 7 evicted I now had no excuse to delay getting the 450 working. First step go online. I found manuals for more recent OMGA Radial Arm Saws but not my model. So, I then searched for information on Radial Arm Saws. This is when I entered a “machine parallel universe”. To my surprise I discovered Radial Arm Saws are dangerous and obsolete. Radial Arm Saws are still in production and seem to sell in USA.

I quickly walked away from the “how to use” blogs on Radial Arm Saws. One claim kept haunting me, “Radial Arm Saws bite so many users because you have to plunge the blade into the wood and draw the blade towards you”. Maybe I’m missing something, but I cannot see how anyone can plunge a saw running parallel to the table top into a workpiece on the table. I have used “drop and slide” saws for years and I’m more than happy with my current saw. I could have walked away but I was now motivated!

The OMGA 450 had been in a damp garage for maybe a decade. The first step was to clean and lubricate. This is when G15 proved its’ worth. Next move was to fit the height adjustment handle.

I fitted a ‘near to right size” Wood Ruff key and tightened the nut securing the handle. Too much play but it worked well. With the right Wood Ruff key, it will move the motor up and down like velvet. Repairing and fitting the adjustment handle proved to be the easy part.

When I first acquired the saw, I had the motor and all the electrical gear professionally repaired. The motor purrs like an over-fed Ginger Tom cat. The next steps should have been easy.

I admit to being a bit dyslectic, but I can tell a left from a right-hand thread. The 450 spindle has a left-hand thread. Steel shaft with bronze nut. Years in a damp environment and as expected the nut was tight. Getting that nut off proved to be a challenge. Big pair of Stilsons, large spanner and Thor Hammer. No movement. Half an hour heating up the nut with a hot air gun. Leverage plus tapping with some swearing and finally the nut moved.

All the online talk of Radial Arms being dangerous hadn't helped. There were moments when I questioned whether I knew right from left. I calmed down and sorted out all the collars that came with the trenching heads. The plan was to "fit and try" the smaller trenching head first. The old guard was fitted, the motor turned on and the first "pushing into the work-piece" cut made. Less noise than a "drop and slide" and a top-quality trench.

A few simple temporary tables and the 450 was set up to cut "fast and clean tenons' in minutes. When I was taking the first cut on the 450, I was trying to understand why Radial Arm Saws have a reputation for being dangerous. I will probably never use the 450 for cross cutting because my modern DeWalt Drop and Slide Saw is more than adequate for what I need. Also, if I did intend to use the 450 for cross cutting, I would need to fit a modern OMGA guard and that would probably cost more than I originally paid for "the saw and the tooling".

Worth Remembering

Despite COVID-19 TTTG continues to offer events and stay solvent.

Real Skills Workshops

The Real Skills Workshops continue. The numbers are limited to six.

This has a positive side; for only $60 the teacher/learner ratio is ideal.

TTTG wants to offer classes tool using public want.

We can only do this if TTTG members tell us what they want.

Tool Sales

John Bates is working hard to make the tool sales happen.

The December 6 Tool sale was very successful.

The Next Sale is a few months off.

The Next Meeting

Saturday 13 February 2021 at Old Eastwood Town Hall

Cutting gears on a Shaper

Michael Williams

In May 2018, I introduced readers of News to my then recently acquired Adept 2 hand operated Shaper and excitedly looked forward to all the things that I could do on the machine.

I have to admit that since that article, although I have used the shaper on many occasions, it has always just been to plane metal surfaces to a fine finish and indeed it does a great job in that respect.

Recently, John Bates suggested that I write another Shaper article incorporating something a bit more exciting than just planing surfaces flat.

The literature suggests that planers can be used to cut gear teeth and with a specially shaped cutter, I guess that this would be quite possible. But what advantage does this have over a Mill?

In both cases specially shaped cutters would be required, and one of the touted advantages of a shaper is that cutters are usually simple and can be made easily in the small workshop. However, there is an ingenious method of cutting perfect involute gear teeth with a Shaper using a simple cutter and only a small modification to the Shaper so read on!

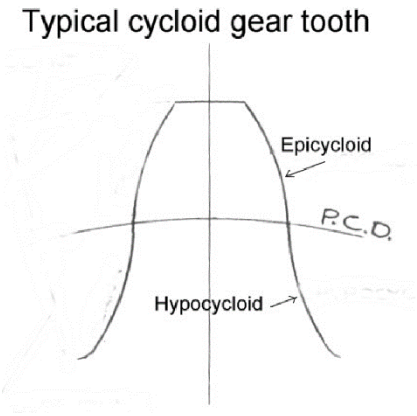
A brief gear primer

There are really only two major requirements for the shape of gear teeth, and these are:
a) To minimise friction, the teeth should roll together and not slide against one another, and
b) Ensure that the driving gear imparts a constant velocity to the driven gear.
It turns out that there are two shapes of gear tooth that satisfy these two requirements, and these are based on the cycloidal and the involute shape, respectively.

The **cycloid shape** consists of two part-shapes, the epicycloid and the hypocycloid. As you might expect for a tooth which requires a rolling action, both these cycloids shapes are generated by circles rolling around other circles and in the case of the epicycloid, it is the curve generated by a point on a circle which is rolling around the **outside** of another circle.

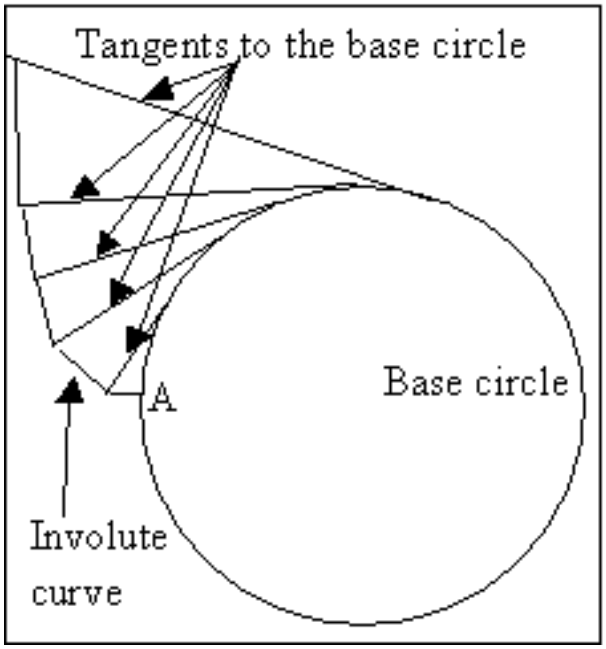
The hypocycloid is generated by a point on a circle which is rolling around the **inside** of a larger circle. Now if we imagine two gear wheels with an infinite number of infinitely small gear teeth, one driving the other, the diameters of the gears are referred to as the "**pitch circle diameters**" of the gears or more usually known as the PCDs and the ratio of the PCDs will give us the ratio of the speed change between the two gears.

A cycloid gear tooth has an epicycloid shape above the PCD and a hypocycloid shape below the PCD. The PCD is where these two shapes join seamlessly and teeth made to this shape by the same rolling generating circles will roll together perfectly and as they do so, will impart a constant velocity from drive to driven gear.



Cycloidal teeth are probably the oldest shape of tooth to be developed but have largely fallen out of favour for two reasons. They are more difficult to machine and secondly, they are very sensitive to the distance apart of the two gear centres, since to work perfectly, the junctions between epi and hypo curves must occur at the same time on both gears. This means that the pitch circle diameters must <u>just</u> touch. Otherwise, perfect rolling will not occur, and slight velocity variations will happen through each gear tooth engagement.

Enter the **Involute tooth shape**.

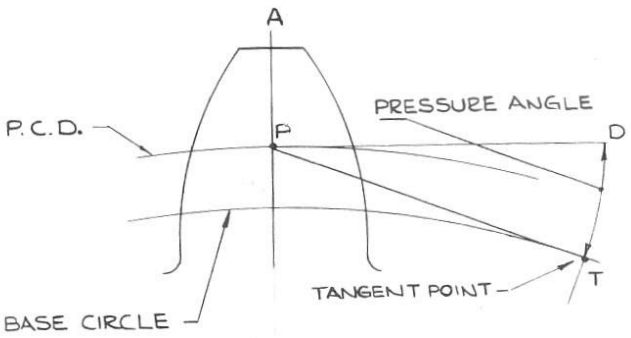


The involute curve can be described as the curve traced out by a cord being unwound from a circular disc which, since it is the generating disc, is called the base circle. As the cord is unwound, at any point it is a tangent to the base circle and the length of the tangent is the distance along the circumference to that point of unwinding. A diagram might make all this a little clearer. The length of each tangent is the distance around the base circle that it is from the starting point “A” and although the diagram shows the involute curve as a series of straight lines, if many tangents are drawn, the involute approaches a smooth curve.

The only part of the curve that is of interest for gear teeth is a short section starting at “A”. Exactly why the involute curve satisfies the two basic requirements of gear teeth is not readily apparent from simple inspection, but this should not concern us here.

However, it does satisfy the requirements and because it is a single curve it is easier to manufacture and is more tolerant of any slight misalignment in the distance between gear wheels.

As we have seen, the base circle is the circle from which the involute curve is generated and is not the pitch circle. In fact, it is slightly smaller in diameter to the PCD and the relationship between the two is expressed as an angle called the **pressure angle**.



Once again, a diagram helps to understand this.

Fortunately, most involute gears these days are manufactured with a pressure angle of 20 degrees but previously, the standard tended to be 14.5 degrees.

Change gears on many lathes were made to the 14.5-degree standard. The larger the pressure angle, the "stubbier" the tooth shape becomes, and 20 degrees seems to be a good compromise between a good tooth shape and a strong tooth root.

Manufacturing an involute toothed gear with mill and cutters.
Home hobbyists have little choice when faced with the challenge of making their own gears. Sets of gear cutters are available which can be used in a mill with an indexing attachment but anyone who has investigated this route, rapidly comes to realise that cutters are usually sold in sets as the shape varies with the number of teeth required on any one wheel and different diametral pitches require different sets. The expense of all this is not inconsiderable.

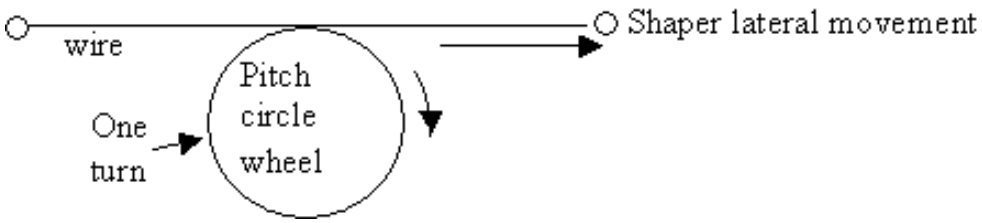
Fortunately, there are ways of first making your own cutters then hardening them and a small paperback, #17 in the Workshop Practice Series "Gears and Gear Cutting" by Ivan Law will tell you how. We are trading expense for time and effort here, but the challenge might be everything!

The Shaper Method of Cutting Gears.
Because I own an Adept hand operated shaper, I trawled through the web and found an article in "The Model Engineer" of September 14 1950 which describes a way of cutting gear teeth with a shaper directly, <u>without special involute shaped cutters</u>.

The author made no claim to originality as it uses an ingenious method of gear cutting developed by Maag and Lees-Bradner many years before but more importantly, the method generates an exact involute.

(See TTTG NEWS 148 in May 2016 for John Bates' excellent article on the Micro-Maag Gauge, where he gives a brief history of Max Maag.)

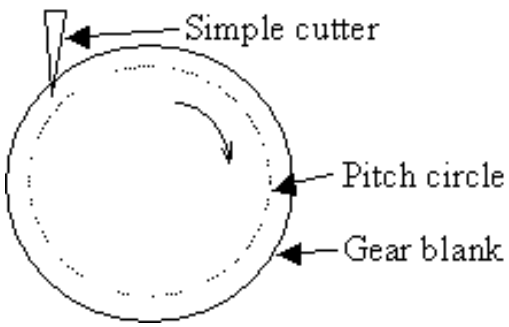
The method relies on a pitch circle wheel with one turn of wire wrapped around it, the ends of which are attached to the shaper lateral moving member. As the shaper head moves laterally, the pitch circle wheel is pulled around by the wire and as this is mounted co-axial with the gear blank, it also rotates the blank through the same angle.

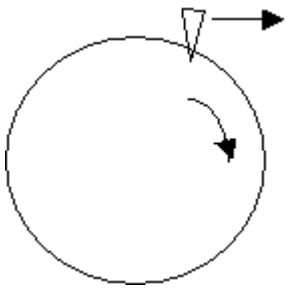


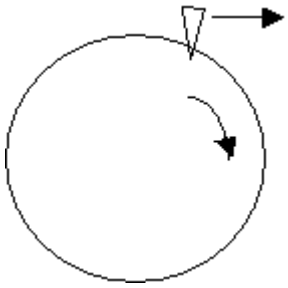
This means that the gear wheel to be cut rocks back and forth as the shaper traverses laterally and the degree of rocking is determined by the relationship of the traversed distance to the pitch circle circumference. As the shaper traverses laterally, the cutter in the head first misses the gear and then slowly cuts a tooth incrementally until it reaches its deepest cut when the head is in line with the axis of the pitch circle wheel and the gear blank.

As the shaper traverses further, the cutter depth decreases until it misses the gear blank on the other side. An indexing attachment then is used to turn the gear to be cut through one tooth angle with respect to the base wheel and the cycle repeated. The cutter, which is held in the shaper, is of simple form but should be ground to be twice the pressure angle (in our case 20 degrees, so ground at 40 degrees). Once again, a diagram might make all this a bit simpler to understand. Note however that the pitch circle wheel is being rotated by the wire which is always a tangent to the pitch circle. This is important to guarantee an involute shape to the gear teeth.

This first diagram shows the cutter just starting to cut into the blank. As the shaper head with the cutter traverses laterally from left to right, the blank rotates in the direction shown and the cutter cuts deeper into the blank, starting to generate the top left side of the first tooth. (Well actually the space between the first two teeth). The second diagram shows it cutting deeper.





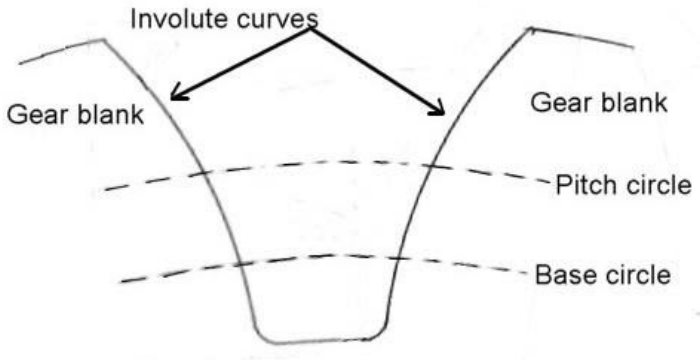


When the cutter is directly above the centre of the blank, the cutter is making its deepest cut and then as it passes this point, the other side of the cutter comes into play and cuts the left-hand side of the space between the teeth. The third diagram shows this.

By inspection, you can see that the space between the two teeth will be wider at the top and narrower at the bottom as more cutting time is spent at the top of the space but perhaps what is not quite so immediately obvious is that the shape of this space (and therefore the shape of the teeth on either side) is an involute. Trust me, it is!

In practice the cutter doesn't come to a point as this would mean that the space between the teeth would come to a point at the bottom. The cutter point is therefore cut off squarely so that the space between the teeth at the bottom is finite and is dictated by the size and number of teeth. It is also backed off so that it cuts cleanly and doesn't drag across the tooth bottom.

Let us imagine that we have cut the first gear space to its full depth. An enlarged view would look like this:



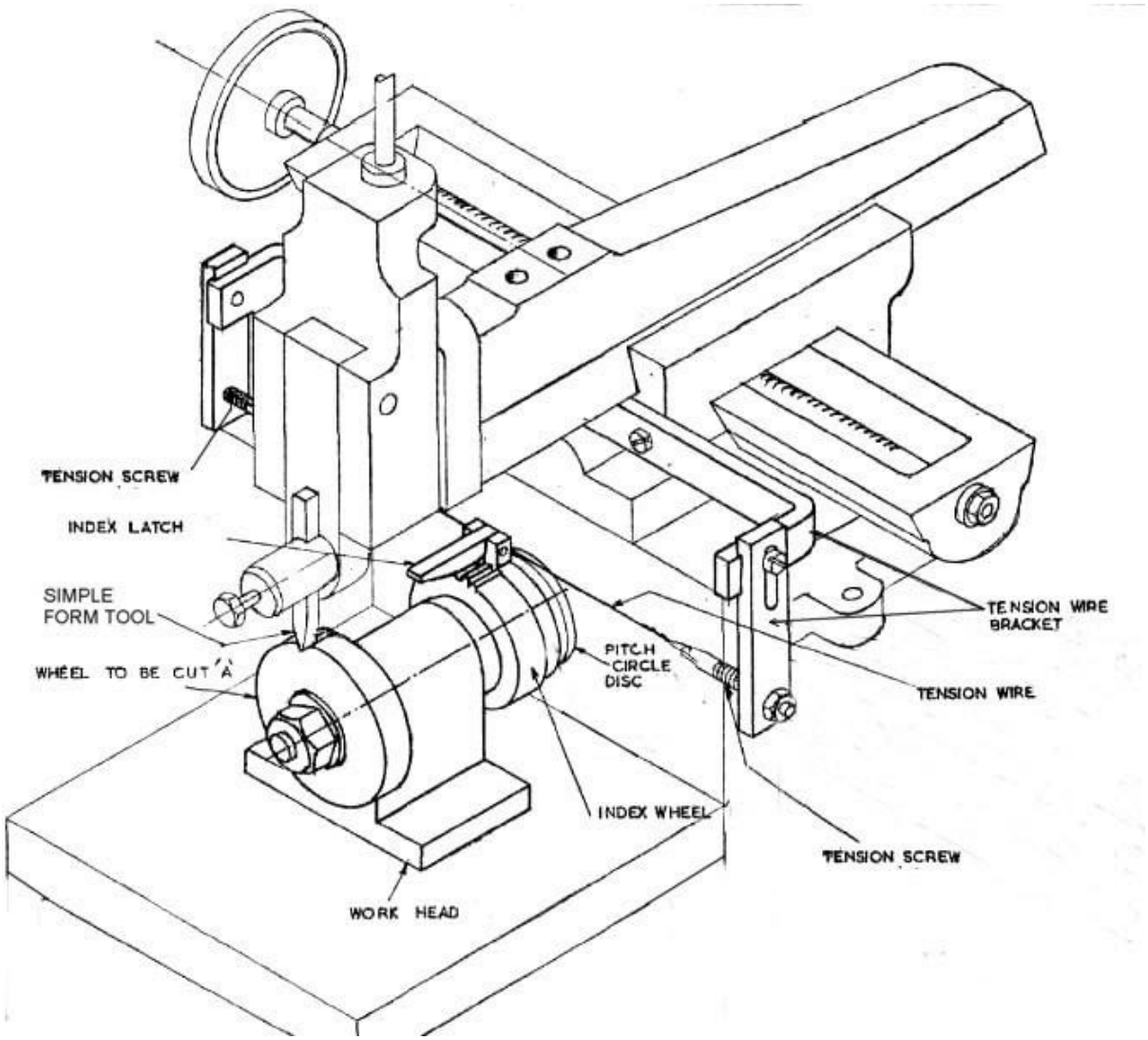
If the pitch circle wheel and blank are then advanced by one tooth with an indexing arrangement, a second tooth space can be cut and so on. In practice, and especially the case with a hand operated shaper, the teeth need not be cut to their full depth in one cut, but the full depth can be approached over a number of cuts.

The most critical dimension in this whole setup is the diameter of the pitch generating wheel and in fact, it is important to take into account the thickness of the wrap-around wire when establishing its diameter as the pitch circle.

The included angle of the cutter is not really critical, any variation here will only affect the pressure angle and if two gears are being made with the same cutter, they will both have the same pressure angle and will mesh correctly.

The only modification that has to be made to the shaper is to attach a bracket which tensions the wire which wraps around the pitch circle wheel. The bracket must be made adjustable so that different size pitch circle wheels can be accommodated, and this is shown in the following diagram. All the rest of the setup is housed onto the shaper work platform.

The diagram shows the complete setup for cutting a gear wheel.



I have omitted some of the detail for making the work-head on the platform as probably few of our readers possess a shaper and of those that do, probably none will actually want to experiment with making gears in this way but it is a very viable way of making involute gears and in fact, nearly three decades after this method was described in the Model Engineer, one of their readers cut a number of gears for a model locomotive that he was building and enthused about both the method and the result. His article appeared in Model Engineer 17 February 1989.

Comments from John Bates

Thanks for the article. I think it is much better than the original. Just two points you may like to expand upon.

The first is the 'pitch circle wheel' and how you calculate the correct size to use for the gear you intend to cut. Also, the degree of accuracy that is needed in terms of the diameter.

The second concerns the cross feed and whether it is done by hand rather than power feed when using this method. I guess you could use power feed (if you have it) but I think hand feed would give better control over the process.

This later article highlights the fact that the thickness of the tension wire has to be taken into account when making the pitch circle disc.

This is especially critical when cutting small gears of course as the blank disc to be cut should be 1+2/N times the pitch circle diameter (where N is the number of teeth) and the thickness of the wire could be very significant.

Metal Working Classes

Centre Lathe Workshop

TTTG is installing a Myford Super 7 Lathe in the TTTG Workshop.

Later in the year TTTG plans to offer classes on using a centre lathe.

Making Blades

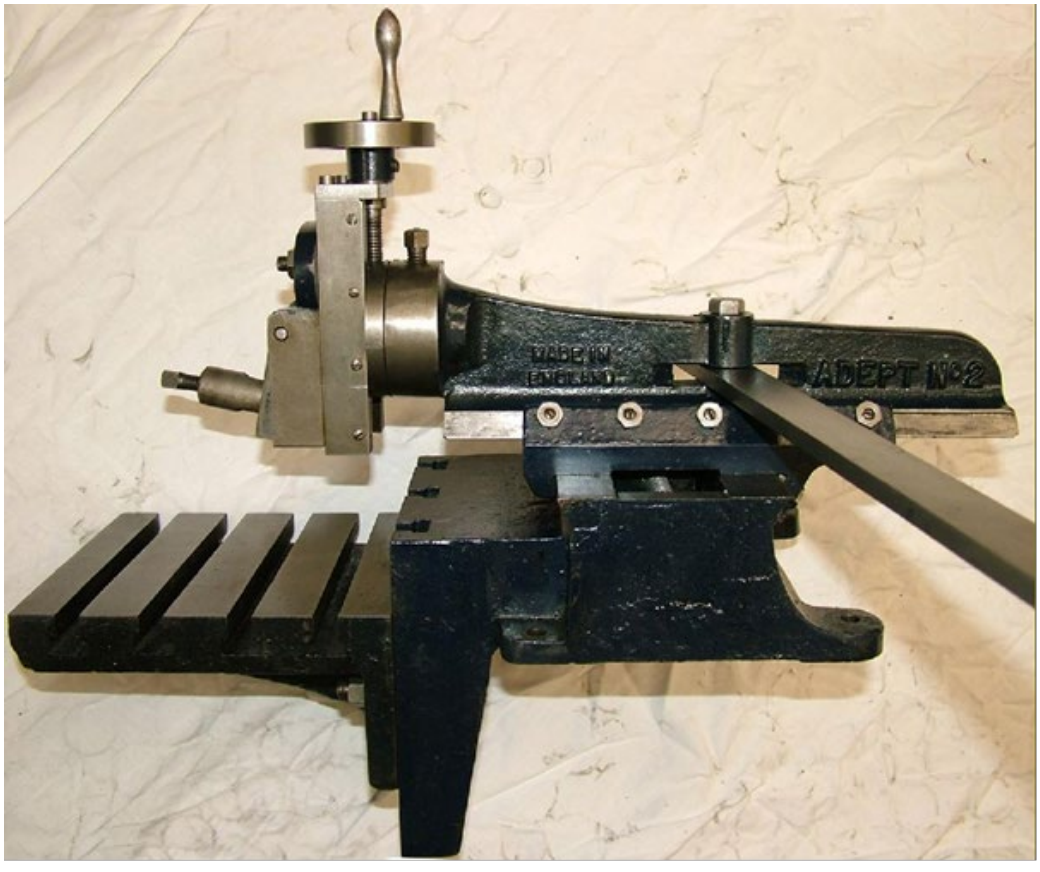
Many “hard to replace” blades can be made from Ground Flat Stock.

TTTG will offer a class on making blades.

Tell us if you are interested.

This will make setting dates and content to suit demand easier.


ADEPT N°2


ADEPT N°2

The Case of the Missing Carriage Lock

Mike Williams

There seem always to be articles in Fine Woodworking and the other popular magazines and on the web on how you can add an extra out-feed table to your table saw but my experience is that an extended in-feed is more useful, especially when resawing or ripping and I set myself the task of building one for my ancient ShopSmith machine.

The original designer of the ShopSmith must have thought along the same lines since it came with a small in-feed extension which can be slid along a rail on the in-feed side of the table. This is a useful device but, in many cases, far too small, so I bought a piece of 10mm thick aluminium plate to make a longer extension piece and started the job.

Now this job requires quite a bit of careful milling to cut the table slots into the extension piece and also to miss several bits and pieces of the table saw. I don't possess a milling machine, but I do have a vertical milling slide for my Kin Shin metal lathe which promised to be big enough for the job, so I set up the Kin Shin for the operation.

I had purchased a cheap digital readout for the Kin Shin at a sale some time back so I thought that I could read and control the milling depth with some accuracy. This was very important as some of the milling depths were nearly 7mm and hence close to the total thickness of my 10mm sheet.

Picture #1 shows the Kin Shin set up as a vertical mill with a test piece of aluminium in the milling vice.

I was pleasantly surprised that I could fairly easily set the milling depth with 0.1mm accuracy just with the carriage handwheel. So far so good.

However, as I milled across the test piece, the depth tended to wander as the carriage moved slightly. Well, I just needed to lock the carriage to stop it moving and all should be well!

I hadn't needed to actually lock the carriage in the past as any facing that I did in the lathe wasn't critical enough to worry about the odd thousandth of an inch carriage wander and this was my first foray into vertical milling.

But where was the carriage lock?

As far as I could see, there was no indication that there ever was a carriage lock, so I turned to the web in search of a manual or other guidance.

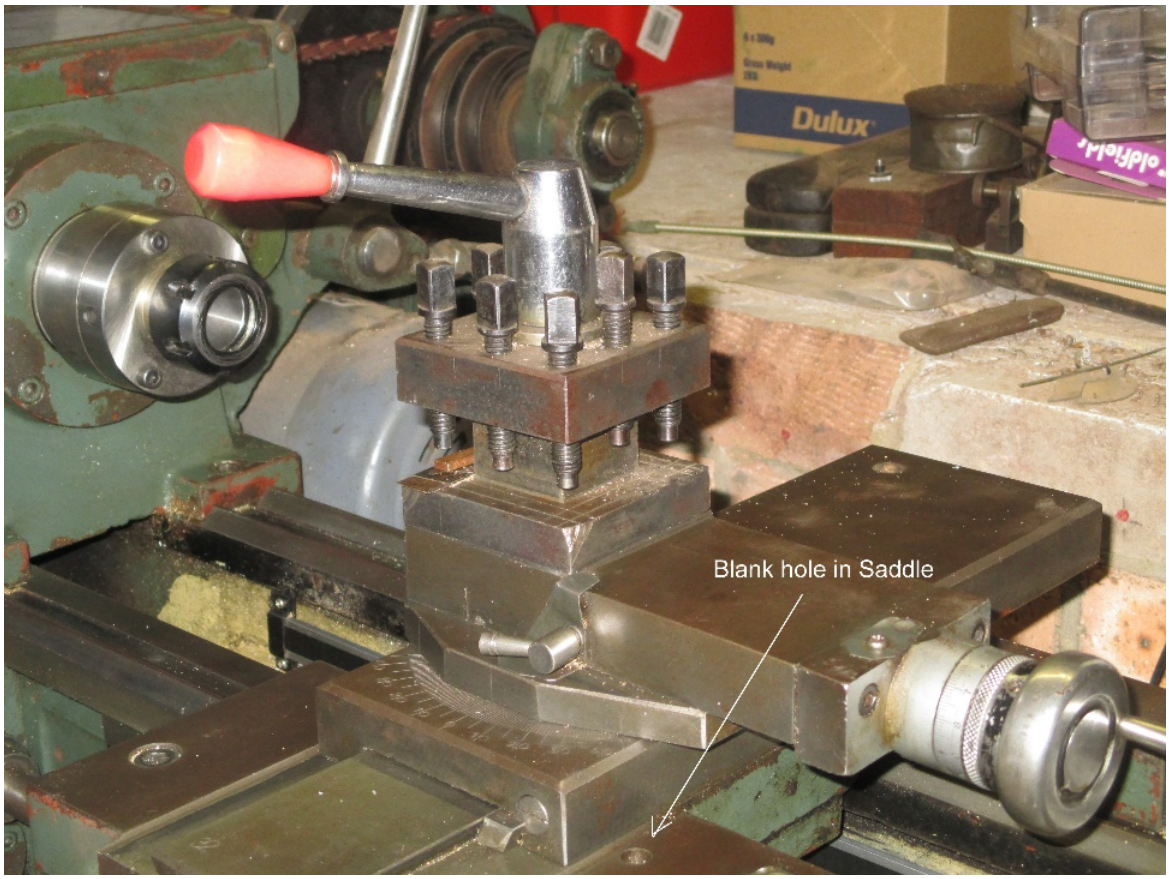
My Kin Shin lathe is a generic Taiwanese model of the 1970s, roughly based on the American South Bend lathe so here was a starting point. There are a number of YouTube sites showing how to make a carriage lock for a South Bend lathe. Perhaps South Bend lathe carriage locks were easily damaged?

The Australian Hercus lathe was based on the South Bend, so much so that many of the parts are interchangeable. I have a copy of "Textbook of Turning" 1970 edition by Hercus so maybe the answer was in there.

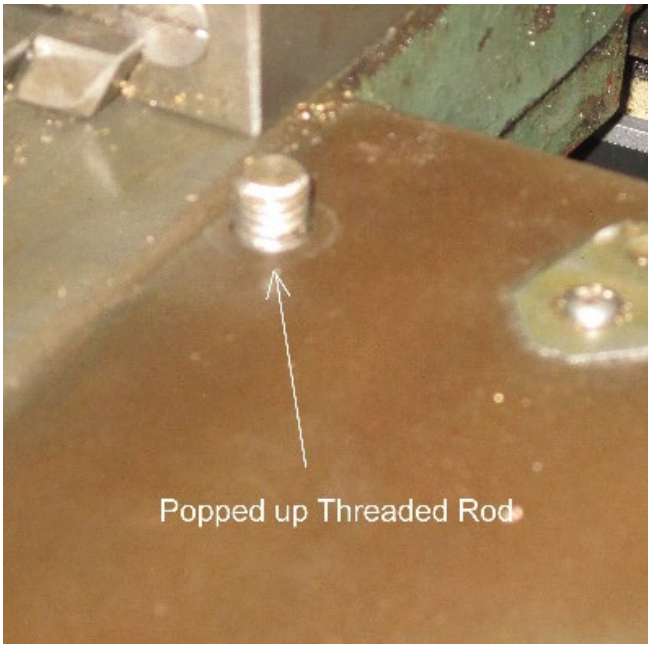
Unfortunately, there isn't much detail of the Hercus carriage lock in the book; I probably needed a Hercus manual for that, but I was sure that John Bates might be able to shed some light on the problem. Better than that, John was able to direct me to a website where I could buy a genuine Hercus carriage lock for $39. Perhaps I should buy one and see whether I could adapt it for the Kin Shin? It seemed like an affordable chance!

Now knowing what a Hercus carriage lock looks like, I studied the grainy picture in the Hercus textbook again and could see that it stuck up from the carriage saddle probably about 15mm. I went back to the Kin Shin and looked around that area of the saddle for anything that looked like it once might have been a small post. A little closer to the cross slide, appeared to be a blind hole about 9mm in diameter and 7mm deep.

However, when I examined this hole under a strong light and magnifying glass, I could see that what I thought was the bottom of the hole was in fact the top of a 9mm shaft. Bingo! Perhaps this was all that was left of the carriage lock; perhaps the previous owner had broken it off and knocked the remainder down the hole; or more hopefully, perhaps the lock was still there behind the apron and it had just been pushed or fallen back down the hole. Poking at it with a sharp point didn't move it at all as it seemed to be jammed with muck so I filled the hole with WD40 and did something else.



John Bates and Bob Crosbie were encouraging me to take off the saddle and see if the lock was still there and I reluctantly agreed that was the best course of action, so I supported the apron on a block of wood (on good advice from John) and removed the cross slide and compound tool holder to lessen the weight. I then unbolted the apron from the saddle and removed the back keeper from under the rear way.



The apron now slumped onto its wooden block support, but I couldn't remove the saddle because there was a front keeper bolted underneath the front way, and to remove that, I would have had to remove the apron with all its controls.

However, because of the slight drop of the apron, I could now see behind it from the side and with a strong light, I could just see a vague shape underneath where the 9mm hole was.

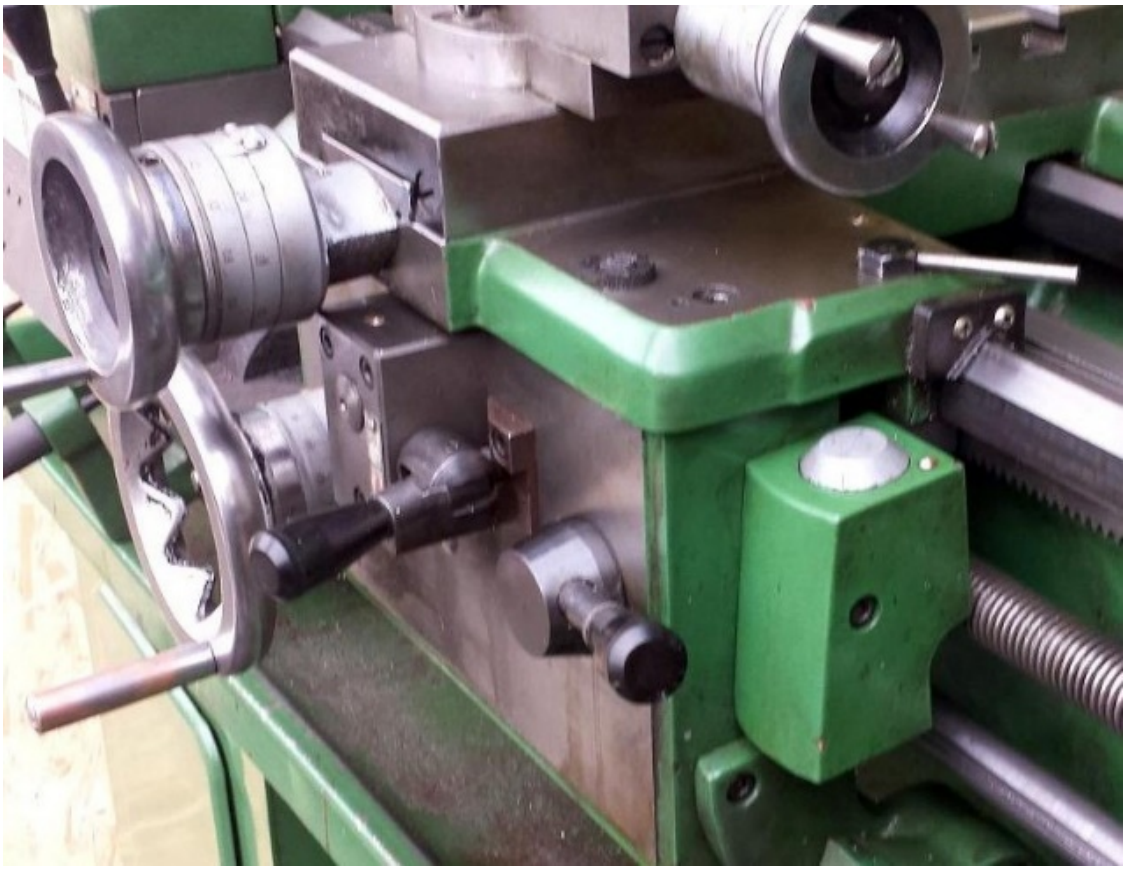
I managed to get a long screwdriver blade in and levering off the carriage gear (and thanks to the WD40), I slowly managed to lift the post up from the hole until it stood about 10mm above the saddle.

I grabbed it with a pair of lock-on pliers so it couldn't disappear again and hurriedly screwed the saddle and apron back together again.

To my surprise, it was a threaded rod and even more surprising, it was metric M9 with a non-standard 1.5mm pitch. I was sure that I didn't have any M9x1.5 nuts in my nuts-and-bolts bucket, but I tried an M10x1.5 nut and although it started very sloppily (quite understandably), it did fasten down and by carefully tightening it with a wrench, the carriage locked! I still don't know exactly what it looks like down behind the apron, but it was all there, and it worked!

I now needed to make an M9 nut with a 1.5mm pitch. Taps of that non-standard size are available from the USA and UK but only at an eye-watering price so I spent a couple of hours making an internal threading cutter which had to be small enough to work inside a 7.5mm hole and still be strong enough not to break. I had some phosphor-bronze rod left over from a previous job which I thought would make it easier on the cutter rather than use steel.

I set the lathe gearbox to cut a 1.5mm thread and started cutting. The resulting internal thread looked OK but was still a bit tight on the locking post, so I turned an M9x1.5 external thread on a piece of 9mm steel, (a much easier job), cut a channel in it with a Dremel grinding wheel and worked it a few times through the nut. Much better!



I could now hypothesise what had happened to the locking post originally. If it just had a simple nut to tighten and pull the locking device up hard against the front way, it probably came undone sometime and the post then slipped back below the saddle surface where it stayed as it was difficult to retrieve. On the web, I found a picture of a lathe with a lever sticking out of the locking nut and since my Kin Shin carriage lock is much closer to the cross slide, a lever like that would have the added advantage of stopping the nut undoing more than one turn. Hence, I drilled and tapped a short length of 5/32 inch steel rod into the side of the nut and the last picture shows the finished result. Just ¼ turn of the nut firmly locks the carriage and I can now face and mill accurately. Problem solved.

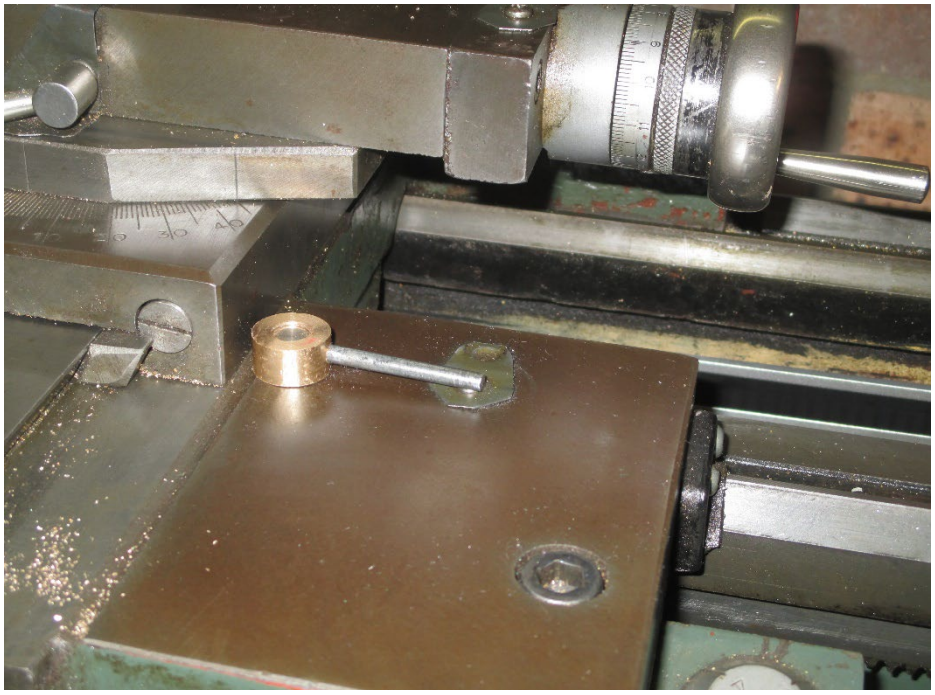
Centre Lathe Workshop

TTTG is installing a Myford Super 7 Lathe in the TTTG Workshop.

TTTG plans to offer classes on using a centre lathe.

Tell us if you are interested

This will make setting dates and content to suit demand easier. The class will include how to grind tool bits.



A useful book on overhauling South Bend Lathes

"*A Guide to Renovating the 9" South Bend Precision Lathe*" ISBN:978-0-578-03554-3 pages 11-13 describe disassembling the Saddle Locking Nut and the Saddle on the various South Bend lathes. Worth looking for a copy.

Worth Buying

TTTG "products" and old tools are sold at all events.

Citric Acid $5 a jar Sharp Oil $6 a bottle

Plane Handles #2-7 Stanley/Record type $10 ea.

Scraper Burnishers $20 ea. Dovetail Templates$2 ea.

Surplus Old Tools from 50 cents to $5

Handsaws $2 to $10Planes $15 to $150

REMEMBER

TTTG sells old tools on consignment

TTTG may have it! Just Ask

TTTG accepts donations of tools.

Replacing Plane Blades

"Stanley Type" Metal planes

There are two ways to obtain a new plane blade "as good" as a veteran blade, find a "full length" old plane blade *or* buy a quality new blade.

The NEWS Editor prefers old original plane blades but most of the planes he uses regularly are fitted with new blades. Old plane blades are hard to find!

Quality new plane blades are thicker than old plane blades. The makers and sellers of new plane blades push the "thicker is better" line. Sales hype?

Are thick plane blades better?

Search through the technical wood working literature and the proposition "thin blades chatter" is a recent fundamental belief among wood workers. The joined at the hip other article of faith is "modern steels are better".

Are thin plane blades still made?

Ray Iles in the UK makes Carbon Steel Replacement Plane Irons. Made to the same sizes and standard as the original blades for "Stanley type" planes. Ray also makes spokeshave blades and thicker plane blades.
Go online and buy these blades if you have the time and cash.

New thick replacement blades

When the NEWS Editor needs a new plane blade, he "asks Jim Davey". Jim stocks the best USA made replacement plane blades he can find. Years spent beside Jim at the Sydney Wood Show and TTTG workshops gives me the confidence to unreservedly recommend Jim Davey's products.

The plane blades not currently available

A few of the older "Stanley type" plane blades are no longer in production. The pre 1940 Stanley $5^{1/2}$ has a $2^{1/4"}$ blade. Record also made this plane. Old blades rarely surface so the only option is to grind a wider blade to $2^{1/4"}$, or order one from Ray Iles.

Make you own?

Ground Flat Stock is available. Go online for specifications and suppliers. There will be a thickness and width to match the blade you want.

If you have the metal working skills making a blade isn't too difficult.

Years ago, I had a Preston Spokeshave with a worn-out blade. I also had access to a gas torch and fire bricks! Making the blade from the "right size ground flat stock was a basic setting out, hack sawing, drilling and filling. Hardening and tempering was done "by eye and colour". Sounds easy, takes practice! The cutting bevel was ground after heat treatment. A useful tip! Keep looking for an original blade but if you really need it buy from Jim.

Ray Iles Plane Blades

The traditionally made plane irons by Ray Iles revive a lost feature of traditional blade making: the warp created in the process of hardening the steel. When the irons are ground after hardening, it is not uncommon for a few thousandths of the warp to remain. This is a good thing. What Ray does is check every iron for concavity and then grind the bevel on the side that is slightly convex. What you end up with is an iron with edges that quickly contact the stone, so you get a quick area of flatness right next to the edge where it matters. But that is not all.... Over time as you sharpen the iron, you will chase the burr front and back, and slowly wear the back. If the back of the iron was initially flat, you would not only have a lot more wear and tear on your stones as you flattened the entire back but chasing the burr would round over the edge of the iron, requiring eventual re-grinding of the tool. With a slightly concave back, the flat portion at the edge just makes its way up the blade as the blade wears.

Review from Tools for Working Wood.

https://toolsforworkingwood.com

Ray Iles Plane Blades available from Tools for Working Wood

Plane blades sizes, Stanley/Record Number and price (United Kingdom)

1 3/8" with 3/8" slot for older Stanley Nos. 60, 60 1/2 ,61,103, Record 0230 ($23.95) In Stock
1 5/8" with 3/8" slot for older Stanley (and Record) Nos. 9 1/2, 9 3/4, 15,15 1/2, 16, 17, 18, 19, 118, 220, A18 ($23.93) In Stock
For Stanley No. 3 (1 3/4" wide) ($33.95) In Stock
For Stanley No. 4,5 (2" wide) ($36.95) In Stock
For Stanley No. 4 1/2,5 1/2,6,7 (2 3/8" wide) ($39.95) Not available
For Stanley No. 8 (2 5/8" wide) ($46.95) In Stock
Stanley no.10, 10 1/4, 10 1/2; and
Record 010, 010 1/2 plane irons. ($36.95) In Stock

Ray Iles Products

Visit Ray's website

Traditional tools made by traditional methods.

https://www.oldtoolstore.co.uk

W W DAVISON

Fred Murrell

About 25 years ago I bought two sash shaves at auction. There were three on display, but someone thought he or she was entitled to take one without bidding for it, but I was fortunate to be able to buy the remaining two.

The name stamp on them was W W Davison which I assumed was an owner's stamp. Over the years I have been able to buy another six tools stamped W W Davison. Two from TTTG and the others at various markets around Sydney. Two of the six later acquired do not have the name stamp of W W Davison but have a date stamp with figures matching exactly those with the name stamp and bearing the date of manufacture. The shaves are all made of exotic, probably tropical, timbers and are quite finely made.

Subsequently I bought a hand router (or Old Woman' Tooth router) in David Stanley's jargon) bearing the name stamp and the date 1888. The two unnamed shaves bear the dates 1879 and 1881. The router was made of timber with a pressed steel sole and came with no cutter or device to hold the cutter.

The bench plane in the photos is a skew mouth badger plane and was bought from a central coast dealer. It has a lever adjuster of a type I have not seen before. It is 300mm long and was made of mahogany with a sheet steel sole which wraps around the right-hand side with a gap in the corner for the point of the iron to protrude so the user can cut right into the corner of a rebate. Where the steel folds around the sole the angle edge is crisp and sharp not rounded as one would expect to see in a fold unless the maker was a professional.

The lever cap is cast gunmetal and is of the same design as Stanley uses. The name stamp appears on the reverse of the lever cap and on the side of the timber beneath the steel wraparound sole and reads W W Davison Maker 1894.

Also in the photos is a Lancashire pattern shoulder plane, described by the online seller as a 'shoot board plane' which, of course, it has nothing to do with. It is a gun metal plane with a brass lever cap and is 270mm long. The underside of the blade is stamped with the maker's name as is the handle which is not fixed to the plane and can easily be removed by pulling it backwards. The plane is stamped with the date 1892. As with most Lancashire pattern shoulder planes this one is not adjustable.

I mention this because I am aware of one by Davison that has a mechanical adjuster on the rack and pinion system (see photo). The plane is a good 25mm longer than any other Lancashire pattern shoulder plane I have seen.

Another plane (not in my collection) is an iron bull nose plane with a fine grain mahogany wedge bearing the name stamp W W Davison both on the body of the plane and the iron.

Who was W W Davison?

I searched "British Planemakers" (Goodman) with no result and "Wooden Planes in 19th Century America" and "Patented Transitional & Metallic Planes in America" also with no result so I emailed Jane Rees, author of the current 'Goodman' to see if she had any unpublished record of the name.

Jane searched her own and worldwide records and drew a blank. Jane's conclusion was that he could only be an Australian maker. Of course, I had searched "Australian Planemakers". I contacted a genealogist who was able to tell me that a man by the name of William Walter Davison of Shepherd St. Sydney (now Chippendale) died in 1901. We have not been able to find out what he did for a living, but it seems very likely that he was the maker considering that all but one of the tools, I have acquired and two which are owned by a friend and the one stolen from the auction, were acquired in Sydney. The plane that was not acquired in Sydney is the Lancashire pattern shoulder plane appearing in the photos which I bought online from a person in Victoria.

Locally made Tools

Tools have been made locally for over two centuries.
Some of the tool makers are listed. Most are probably not listed.

If you have a number of tools with the same name stamp *and* they look professionally made send the details to NEWS.

Goodman's British Plane Makers Jane Rees, editor **4th Edition**

TATHS announced this publication in late 2019 and with a distributor. There is no Australian distributor. Google the title and buy online.

Davison Planes

Sydney made? 1890's? Do you have any?

Send a photo and description of any "unlisted' plane to the NEWS Editor

Locally Made Tools

Commercially Made and User Made

Tools made in quantity for resale usually have a manufacturers' mark.

Most user made tools are usually obvious but some are very well made. Often only the materials and design suggest "this is a one off".

Tradesmen often made small tools such as marking gauges.

Larger tools, such as cast-iron planes, were made in large workshops.

There is an old Sydney saying about the Eveleigh Railway Workshops

"Made everything, including Prime Ministers"

Eveleigh made cast-iron and brass copies of planes often surface.

There are a number of these tools in the TTTG Collection, dated 1927.

Chinese type planes were made locally in the nineteenth century.

Fred Murrell has a number of these Chinese type planes.

Sydney Chinese planes are well made and fitted with English blades.

Do you have any locally made tools?

Gage Planes

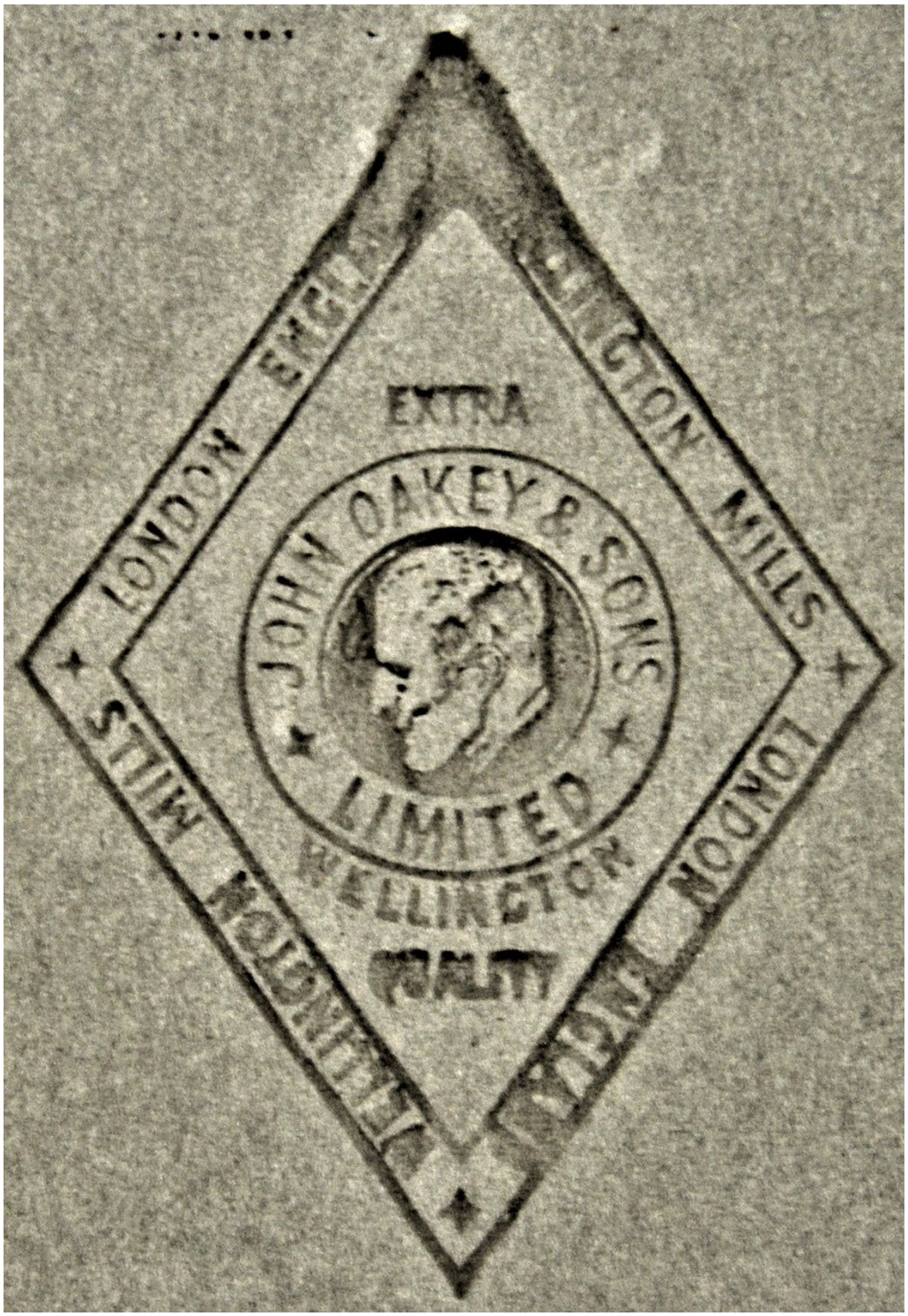
There were a few Gage Planes at the December Members' Tool sale. Maybe these planes are starting to surface at reasonable prices. Gage planes were one of Stanley Planes strongest competitors. So much so that Stanley acquired the company, manufactured the planes for a few years and then eliminated the Gage products.

Gage planes are lighter than Stanley planes and easier to adjust. Finding replacement blades is the only hurdle. Anyone with metal working skills can easily make the blades out of Ground Flat Stock and have the blade heat treated to 62 Rockwell C.

However, Gage planes with full length blades often surface at Tool Sales.

JD's *John Oakey:* **Abrasives Manufacturer** John Daniel

Recently I needed to brighten up the surface of a small jeweller's anvil, so without too much thought, I pulled out a sheet of 'wet & dry' emery paper from a pile of abrasive papers that a mate had salvaged from a shed clean-out several months earlier; well to cut a long story short, I was so pleased with the result that I checked the back of the paper to see who the manufacturer was.



The paper was quite faded and obviously had been in the old shed for many years, however the maker's name was legible enough to make out the name "JOHN OAKEY & SONS", so predictably, I took a photo, enhanced it, and, as one can clearly see, it was worth the effort. On the back also was the 'grade', CL-1C- IG and 14j09 (?), and the 'classification', Polishing Paper.

Now who was this JOHN OAKEY?… where better to satisfy one's curiosity than the font of all knowledge, Mr GOOGLE; I trust that he won't mind if I share the result of my search with the readers.

John Oakey (1813 – 10 January 1887) was an English inventor and founder of John Oakey & Sons Ltd. a manufacturer of sandpaper and polishing materials.

Oakey was apprenticed to a piano maker where he learnt to make sandpaper by gluing sand or powdered glass onto paper. He developed a better process suitable for mass-production and set up in business at Walworth, London in 1833, before moving his business to Wellington Mill at Westminster Bridge Road. He subsequently developed many wet and dry sand and emery papers, and a range of polishing compounds including lead blacking, Wellington Knife Polish, Silversmith's Soap and Plate Powder, and furniture polishes.

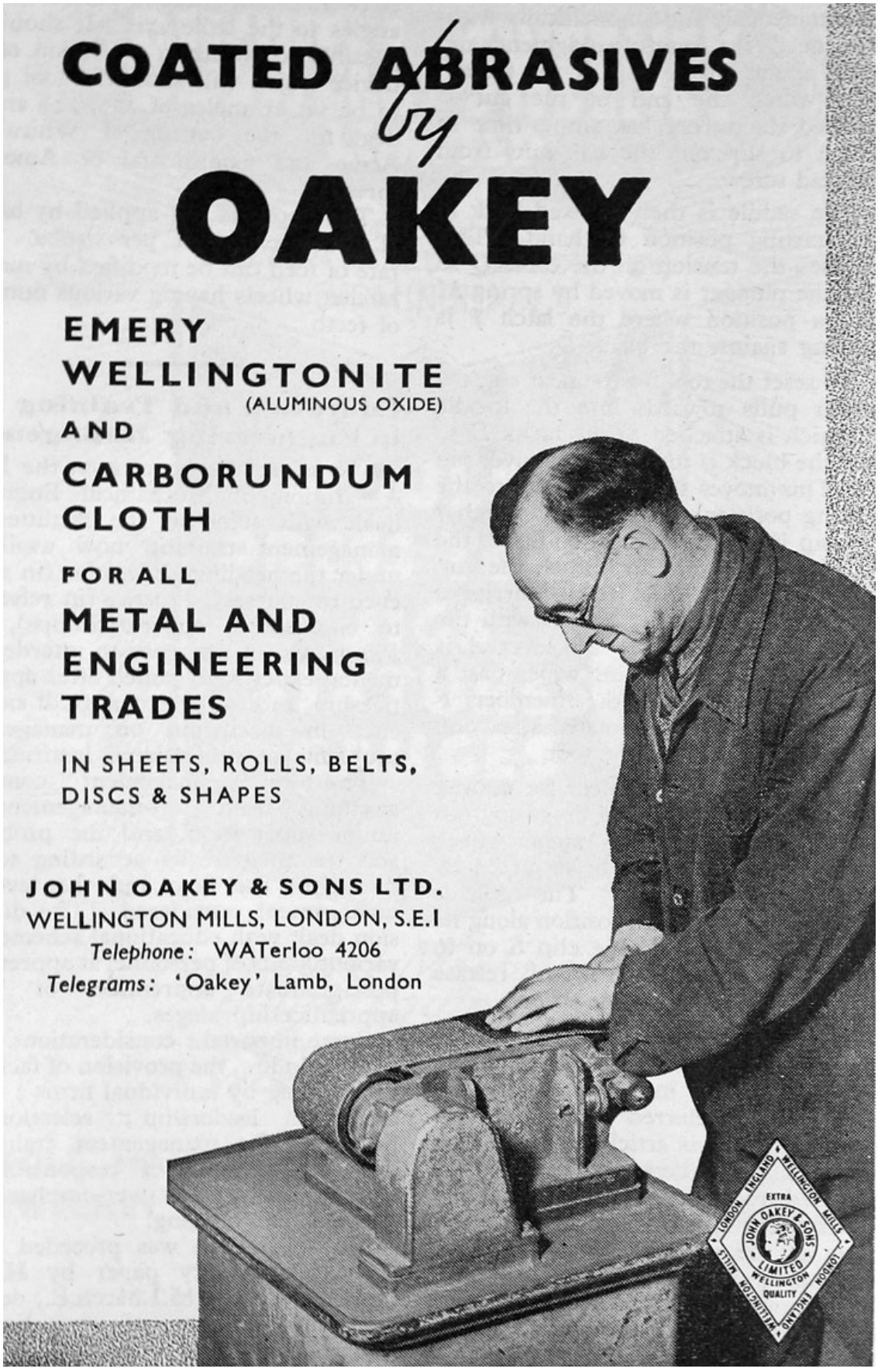
John Oakey from Wikipedia, the free encyclopedia

The History of Oakey from Piano Makers Apprentice to Great Britain's Leading Manufacturer of Abrasives & Polishes - the English inventor John Oakey was born in 1814. John Oakey Apprenticed to a piano manufacturer, one of his tasks was to prepare sanded paper to rub down the wood and coatings. Taking pages from old ledgers, he would coat them in glue, subsequently sifting sand or powdered glass over them. After acquiring a detailed understanding of the processes that made these compounds bond firmly, he founded John Oakey & Sons Limited in 1833, with the aim of mechanising the production of abrasives".

Originally, the process of making glass paper and emery cloth was carried out by hand, requiring a five-year apprenticeship. Paper was carefully and evenly pasted with hot animal glue and then allowed to cool slightly so that it became tacky. At precisely the right moment the abrasive powder was sprinkled on, taking care to get an even coating. The coated paper was then reheated to soften the glue, allowing the abrasive to sink, creating an even stronger bond. After cooling, the paper was cut to size by hand.

Over time Oakey mechanised this process, using machines that he invented and patented. Mechanisation enabled larger sizes of paper and cloth to be handled and rolls of 50 yards by 48 Inches were commonly. Waterproof papers and cloths required a slightly different process, which he kept secret for many years.

Sandpaper Was Just the Start.



1950's Advert.

Since then, generations of tradespersons have made Oakey their first choice for abrasive papers – a tradition that is still going strong to this day"!

Well, I'd be first to admit it, I'm a bit of a hoarder, and must add, a "use whatever I have at hand" rather than going out and buying the latest recommended product or that 'must-have tool' designed specifically for a specific task, consequently, I'm reluctant to throw things out that 'may be of use one day'.

In regard to the JOHN OAKEY abrasive paper, it may have been well out of its expectant 'use-by' date, however it was every bit as 'fit for purpose' as the day it left the factory so many years ago. That *pile of abrasive papers* from the *shed clean-out* has now been relocated to a higher shelf, not just for a reminder of the quality of the product, also for the history behind it.

References:

Graces Guide to British Industrial History
https://www.gracesguide.co.uk/John_Oakey_and_Sons

Wikipedia https://en.wikipedia.org/wiki/John_Oakey

Think before dumping

John's experience is an example of what is out there worth keeping.

The Traditional Tools Group promotes sustainability and "real skills".

The NEWS Editor always has a look at the piles of junk on the kerb.

It is amazing what gets thrown out!

Files and Rasps

The range of new files and rasps is limited, they are expensive and arguably not as good as the files and rasps of the past. Most people throw out old rusty files and rasps. It wasn't always so!

Traditionally files and rasps were resharpened

You can easily resharpen old files and rasps by soaking in Citric Acid.

Buy a plastic bucket, rubber gloves and a jar of TTTG Citric Acid.
With the money you saved buying TTTG Citric Acid buy a wire brush.
The BBQ Cleaner brushes are cheap and last a long time.
Fill the bucket with hot water and half a jar of TTTG Citric Acid.
Soak the files or rasps overnight. Wash and brush in hot soapy water.

Rust Removal with Citric Acid

Why Citric Acid?

Using Citric Acid for rust removal is *Simple, Cheap and Safe*.
TTTG sells Citric Acid. Supermarkets also sell it but at a far higher price.

What do you need?

Two plastic buckets or trays. Cat Litter Trays are inexpensive and last.
Also check out the Brush Ware and Cleaning section in a large supermarket.
Tile grout cleaning brushes and BBQ cleaning brushes are ideal and cheap.
You also need rubber gloves. Green kitchen pads are also useful.
The essential equipment is on the supermarket shelves, often "on special".

One bucket is for hot soapy water, detergent and citric acid.
The other for hot soapy water and detergent to clean off the dissolved rust.

How much citric acid and how long?

You will soon find "what works for you", half a jar in a bucket is about right.
The water should be hot, also add a few drops of washing up liquid.
Heavily rusted tools should be soaked overnight.
Tools with light rust should be checked and cleaned at hourly intervals.

How do I remove the dissolved rust?

Put on the rubber gloves and fill the second bucket with hot soapy water.
Wash each tool in the soapy water using a brush or kitchen pad. Wash in clean water and set aside to dry. If there is rust remaining, soak again.

I don't like the finish!

Citric acid will not remove pitting. The black finish is iron oxide.
The black surface is easily removed with metal polish.

Can I de-rust saws? Yes.

Citric acid is an etching compound. Any steel "in tension" needs caution.
Springs soaked in citric acid will crack and saws will lose their stiffness.
Remove the surface rust on saws by "controlled" immersion in citric acid.
Put the saw in the hot citric acid solution, give it ten minutes, clean the soft rust off the saw. Wash and dry and then use an abrasive to polish the saw.

Can I de-rust planes? Yes

Disassemble the plane and soak the body in the citric acid solution.
The citric acid will not damage the painted surface inside the casting.
The citric acid will soften the hard skin of the cast iron. The plane body will be easier to file or abrade. Leave the casting for a few days to harden.

Can I resharpen Files and Rasps? Yes.

Vintage Tools

Vintage Tool Shop has sold Antique & Vintage hand tools since 2012.
Vintage Tool Shop is open Wed-Sun 11am-6pm
The address is 549 High Street, Northcote, Melbourne.
https://vintagetoolshop.com.au/
INSTAGRAM: @vintage_tool_shop and @heritage_saws for updates.

The editor recently checked out the Vintage Tools website and I was so impressed he immediately emailed Fred Murrell.

Fred replied instantly,

I know Mike Subritzky, he bought a box of wood saws from me a couple of years ago at our tool sale. I have something that would entice him to come. It is a saw doctor's anvil and a heap of twist face and dog head hammers. I know he would drive to Sydney to get them. He has said so. I understand his wife sharpens the saws he sells. I have not yet decided that I would sell them, but he might be able to twist my arm.

In my email I had canvassed the possibility of getting Vintage Tools to be a seller at the February TTTG Annual Tool Sale.

Why was the NEWS editor impressed with Vintage Tools?

Since Hans Brunner has ceased trading there has been a vacuum waiting to be filled. Hans' auctions and website were an indication of "market value". The descriptions of the tools for sale were always accurate.

The Vintage Tools' identification and description of tools are accurate. The prices are also a reasonable indication of "what people will pay".

Check out Vintage Tools yourself and let me know what you think.

Our HERITAGE SAWS are hand SHAPED & fashioned, MADE BY MEN & not just machines in NORTHCOTE, Melbourne in VINTAGE TOOL SHOP.

MIKE SUBRITZKY & JIM ANDERSON are serious about SAWS & are PROUD to offer saws that are par with the saw makers of yesteryear, these saws are made in the **TRADITIONAL WAY pre-industrial revolution style**.

They were unhappy with the hand saw offerings at most retailers, so they decided to make their own. Every saw that comes out of our workshop is **UNIQUE**, they **TAKE TIME** to make, but sometimes things are worth waiting for. It's about getting back to the fundamental **heart of WOODWORKING**, hand-eye coordination, being totally I**N THE MOMENT** and at one with the tool. Our saws have currently a waiting list of 3.1/2 months for saw customers.

HERITAGE SAWS are exclusively sold through VINTAGE TOOL SHOP (Mike's tool shop), please contact HERITAGE SAWS if you wish to discuss your saw requirements.

CONTACT: phone- 0401 091 970

E-mail: heritagesaws@gmail.com

Instagram: @heritage_saws

Go online and look at the photos of the saws made by Heritage Saws.

If you are in Melbourne visit the shop.

Both the hand tools and the new saws are the best available anywhere

Grinding Plane Blades and Chisels

What you really need?

Grinder

200mm diameter wheels. High speed or low speed.
The speed does not “burn the steel”, this is caused by the operator.
Old Grinders are mechanically better made but check the electrics.

The wheels

Soft bond Aluminium Oxide. 46grit or 60grit.
Save yourself a frustrating search and buy the wheels from Timbecon.

ABRASIFLEX

Abrasiflex Aluminium Oxide Bench Grinder Wheels

SKU: AOW-20025-X

Aluminium oxide grinding wheels are the woodworker’s choice for bench grinding wheels as they provide a cool yet maximum cutting rate on hardened tool and high-speed steel commonly found in woodworking tools.

The grit refers to the density of the crystalline structure of the plate – the higher the density the slower the material stock removal – therefore acting as a “finer grit” but this also can lead to increased heat build-up with the chance of changing the structure of the cutting edge or “burning” the edge.

Timbecon, and the NEWS Editor, recommends a 46 or 60 “Grit” wheel for most woodworking applications.

Dressing the wheels

Dressing trues and sharpens the wheel. A Dressing stick is best!

Where to Get It

Carbatec Sydney
113 Station Rd, Auburn NSW 2144
Woodworking supplies

Hare & Forbes Machinery House
1/2 Windsor Rd, Northmead NSW 2152
Machinery and engineering tools

Lee Bros. Engineering Supplies Pty. Ltd.
6 Dunlop St, North Parramatta NSW 2151
The "nut house" is the place where you are likely to match a screw thread. Great stock and helpful staff.

Jim Davey Nowra
10 Gardner Rd, Falls Creek NSW 2540
Great stock plus Jim know what he is selling, goes out of his way to help. Jim sells tools online at https://www.jimdaveyhandtools.com.au/

Davro Assembly Products
2/66 Clapham Road. Sefton NSW 2162
www.davroproducts.com.au/ Solid rivets

Timbecon
http://www.timbecon.com.au
The owner knows what he is selling!
Package and delivery is outstanding.

Birdsall Leather and Crafts
6 Bay Rd, Taren Point NSW 2229
Nice place for leather in Sydney

Edcon Steel Stores
Three Sydney locations – Brookvale, Revesby and Blacktown
https://www.edconsteel.com.au/ A huge range of Stainless Steel, Mild Steels, Brass, Aluminium and Sheet Steel all cut to your requirements.

Palloys
68 Smith St, Marrickville NSW 2204
Precious Metals

Gameco - Gas Equipment Supplies
161 Parramatta Rd, Auburn NSW 2144
Blacksmithing supplies, including tool and blade steel.

Can you recommend a supplier?

Send the details to the Editor!

Review

Bob Crosbie

Fine Woodworking

Tools & Shops Annual Issue Winter 2021

Straight up declaration: I buy the Tools & Shops Annual Issue to find out what are the current developments in woodworking in the USA.

The Fine Woodworking annuals are a guide to what tools the leading tool makers are promoting and what trends are motivating tool users. Under all the sales hype there is some usual information. The pictures are good too.

When you are over looking at the pictures and making a wish list of tools to buy two articles are stand out "should read".

Setting up and using a shoulder plane Bob Van Dyke pages 18-23

Bob is using a Veritas Shoulder plane, he isn't "selling" this plane but makes the independent concluding statement,

'The shoulder planes being produced these days by premier tool manufacturers allow even novice woodworkers to have success with this versatile tool. All aspiring furniture makers should have one."

Before buying a shoulder plane read this article.
The Veritas shoulder plane is the best of the new shoulder planes.
This plane is an improved copy of the Record Shoulder Plane.

Twenty Years with a Tool Chest Christopher Schwarz pages 37-43

Chris takes a practical approach to any problem and usually begins with investigating out what was done in the past. The traditional Joiner's Tool Chest is presented as the most practical way to store and use tools.

Another "must read" article from Chris.

Hand Tool Buyer's Guide pages 58-65

A comprehensive and informative guide to the best tools currently available.

Reviews in NEWS

The NEWS Editor invites TTTG members to write and submit reviews.

NEWS does not automatically review publications sent by other groups.

TTTG strongly encourages TTTG members to join TATHS, HPAAA etc.

Send your draft reviews to the NEWS Editor.

The submitted review will be edited published with your approval.

Other "similar interest" Journals

The Tool Chest Issue 138 November 2020

Journal of the Hand Tool Preservation Association of Australia Inc.

Blowlamps in Australia
Mal Mutimer and Arthur McNamara. Pages 1-12

All the leading brands with photos, a comprehensive guide to the subject.

Tinkling of the Bullock Bells
James Donaldson. Pages 13-17

Measuring Up Graeme Plaw. Pages 18-27

A comprehensive guide to retractable tape measures in Australia.
Locally made and imported retractable tape measures 1960s to 1980s.

HTPAA Website www.htpaa.org.au

Why not consider joining The Hand Tool Preservation Association Australia?

For anyone interested in Spanners, HTPAA Special Interest Spanner Group publishes a newsletter, Spanner & Wrench Collector.

HTPAA publishes a newsletter, The Sharp Edge,

Printed Journals **Full Colour** **Glossy Paper**

The NEWS Editor is often asked *Why doesn't TTTG print NEWS?*

The comparison will then be made to the HTPAA and TATHS journals.

The answer is TTTG cannot finance a printed journal.

When postage and printing costs consumed too much, we went digital.

The NEWS Editor is then asked *How can HTPAA afford a print journal?*

The answer is HTPAA has sponsorship.

In contrast TTTG has no sponsors and gets no government funding.

When the NEWS Editor offers this observation he will be asked, *why?*

TTTG is a not-for-profit inclusive organisation with a long track record.
TTTG encourages the preservation of heritage technology.
TTTG teaches traditional 'real skills". TTTG communicates effectively.

TTTG needs to find out if sponsorship or funding is possible.

If you have any ideas please contact the TTTG Secretary.

Other "similar interest" Journals and Magazines

The Tools and Trades History Society Newsletter 147

Autumn 2020

Planes with Low Angles Pages 4-7

An Early Spar Plane Pages 8,9

Handrail Planes Pages 9-11

Medieval Lathe Pages 21-29

Griffiths London Pages 30-31

TTTG emails NEWS to TATHS

NEWS is now on the TATHS website.

Early Planes in local hands

TATHS often reports planes with unlisted plane maker's marks.

If you have any planes with marks "not in the book" send the details to the NEWS Editor.

Are you a member of a "similar interest" group?

Do you read "similar interest" magazines?

The NEWS Editor wants to include reviews of other publications. This can only happen when TTTG members write reviews.

Mortise & Tenon Magazine

Issue 1X 2020 https://www.mortiseandtenonmag.com/

The production quality of this American magazine is exceptional. The photos compliment the text. Anyone interested in traditional technology should subscribe to Mortise and Tenon Magazine. "Hands On" old technology?

There is something for those wanting an "unplugged experience" and an understanding of "how it was done". This issue includes an article on making an orthodox icon panel and a review of "Shop craft is Soul craft".

Making an Icon Panel Pages 8-21
Reading this will instil an understanding of traditional joinery principles.

Making the Sussex Chair Pages 22-37
Green woodworking, from tree to chair.

The Legacy of Cesar Chelor Pages 49
Early American plane-maker and the planes he made in action.

Scribes of Nature Pages 50-69
An introduction to Dendrochronology and wooden objects.

Iterative Design in Vernacular Workholding Pages 81-97
Problem solving with green wood and traditional tools.

Profile

Jim Davey has been supplying Premium Hand Tools to Australian woodworkers for many years.

Jim Davey's website is all about Quality and Sharp
Essential ingredients for Fine Woodwork

Experience the joy of Quality tools
All Hand Planes sold by Jim are honed and ready to use

Other Hand Tools essential to the woodworker
Including Stones and Guides to keep the edge tools Sharp

Jim also sells ramped Shooting Boards made by JD

Jim teaches regular Workshops
Jim will always talk about Sharpening and Plane Tuning problems

Check out Jim's current specials

**** "Shed Isolation" Special on Veritas Tools*

*inc. Veritas PM-V11 Chisels****

**** Special on WoodRiver Std Angle Block Planes*

**** Special on WoodRiver #6 with Super M-2 HSS Blade*

Office 02 4447 8822

Mobile 0418 475 123

Check out Jim's Website

https://www.jimdaveyhandtools.com.au/

Woodworking Hand Tools

Jim sells woodworking tools that suit a variety of purposes.

Whether you have taken up woodworking to create large furniture pieces for your home or want to create small pieces that match its elegant, functional design with your specific interior decor, you'll be able to find the tools you need with JD Woodworm.

With 60 years of experience in woodworking, Jim knows how to point you to the exact tools that you need, for the finish that you want!

For Sale

Offset JOPLIN cast-iron vice **~~$210~~** **SOLD**

Dawn and Joplin vices are the best 'Made in Australia" vices.

The Joplin TTTG is selling is in very good "some use" condition.

TTTG is asking $210. A never to be repeated bargain price.

Tool Makers' Tool Chest **~~$110~~** ***SOLD***

Fitted small tool, drawers and tool compartments.

Made circa 1950. Silky oak and meranti. A well-made chest. Good condition but "needs a clean". New green baize lining.

Tool Makers' tools at bargain prices.

Contact: John Bates johnbates@tttg.org.au

15% Discount for TTTG Members

"Hands On" Philosophy