

# ***NEWS* 155**



**February 2018**

**[www.tttg.org.au](http://www.tttg.org.au)  
ISSN 2206-1606**

## **TTTG Magazine & Newsletter**

**NEWS Magazine** is quarterly and mailed to financial members during the 3rd week of;

MAY                                      AUGUST  
NOVEMBER                                FEBRUARY

### **NEWS “DIGITAL” Magazine by email**

The cost of printing a copy of *NEWS* for every member is greater the revenue from membership fees.

Receiving *NEWS* by email has the added benefit getting *NEWS* early.

### **E-mail Newsletter**

#### **“OFFCUTS” by email**

TTTG’s newsletter, is posted on the TTTG website and emailed to all financial members.

#### **To get NEWS by email**

*NEWS* can be sent by email.

Send your email address to the TTTG Secretary, John Bates  
[johnbates@tttg.org.au](mailto:johnbates@tttg.org.au)

## **TTTG Membership Rules**

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

A Member may choose to pay the Membership Fee one (1) year in advance, but only from 1 January in the current Membership Year and only for one (1) year.

**The MEMBERSHIP FEE is determined by the Committee and from 1 October 2017 the fee is \$60.**

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

A Member who has NOT paid their Membership Fee by August 15 becomes an UN-FINANCIAL MEMBER from that date and will cease to receive the *NEWS* magazine or the bi-monthly Newsletter. 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 April 1 and June 30 does not become a full Member until the following Membership Year and must pay the Membership Fee applicable to that Membership Year.

John Bates, Bob Crosbie. August 2017

# NEWS 155

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## 2017/2018 TTTG Fees

<b>Membership 1yr</b>	<b>\$60</b>
<b>Workshops each</b>	<b>\$50</b>
<b>Member's Sale</b>	<b>\$10</b>
<b>Annual Tool Sale</b>	<b>\$10</b>
<b>Members' Meetings</b>	<b>\$5</b>

### Volunteers Wanted

*To represent TTTG  
TTTG wants Members who can  
talk to an audience and can  
demonstrate "real skills".*

**Why not get more involved**

## **April Meeting**

**Tuesday 12 April 2018**

Brush Farm House  
Forster Hall  
19 Lawson Street  
Eastwood NSW

### **“PICK AND PAY”**

#### ***When to buy?***

#### ***“Pick and Pay”***

Half hour before the meeting

During the intermission

Take the tools and your money to  
the Cashier’s Desk

*Take the free tools out the door*

Exact amount appreciated!

### ***TTTG’s Future***

The TTTG Committee will field  
audience questions.

#### **Workshops**

#Can TTTG continue to offer skills-  
based classes without premises?

#### **Volunteers**

#Can TTTG continue to offer skills-  
based classes without volunteers?

#Can TTTG continue to attend  
events without volunteers?

#### **Our Name**

#Should the TTTG name change?

Suggestions include:

***Trade Tools*** and ***Trad. Tools***

## **Cover**

Instructions for using  
PRIMUS  
LP-gas soldering set  
Undated

### **“PICK AND PAY”**

At TTTG General Meetings

Bargain tools at set prices:

**\$2 \$5 \$10 \$20**

**“FREE TABLE” featuring**

free ironmongery

Tea and coffee provided

**\$5 Entry**

**Doors Open 7pm**

### **ONCE A YEAR TTTG**

## **Sydney Tool Sale**

**Sunday 25 Feb 2018**

Brickpit Sports Stadium  
1A Dartford Road, Thornleigh

***Entry \$10***

***9am to 1pm***

Looking for tools?

This is where they are!

*Tools for all trades*

## Previous Members' Meetings

**Tuesday 12 December**

### **The Tool Collection**

A presentation on the tools in the TTTG Tool Collection  
Rare Tools were on display

The speaker raised these issues;  
*What to keep?*  
*How to conserve?*  
*What tools to use?*

The audience was fully engaged in the discussion. The extent of the Tool Collection and Library was communicated. The challenge is to find a permanent home!

**Tuesday 13 February 2018**

### **Wooden Planes**

Bob Crosbie

A presentation on wood bodied wood working planes illustrated with common and rare planes from the TTTG Tool Collection.

*Which Planes are useful?*  
*Which Planes are common?*  
*How much are they worth?*

The audience was fully engaged in the presentation. The utility of the essential wooden planes was stressed. The speaker tailored the talk to users of hand planes and encouraged potential buyers not to "throw money at it".

***More successful meetings***  
***Members ' Meeting entry fee***  
***remains at \$5***

## **WHAT FUTURE FOR TTTG?**

TTTG promotes and preserves traditional technology and skills.

*TTTG is interested in all types of old hand and machine tools.*

To achieve these aims TTTG offers:

- Regular Members' Meetings
- Skills based classes
- A quarterly magazine, *NEWS*
- An online newsletter
- "Pick and Pay" Tool Sales
- Annual Tool Sales

TTTG also has a Tool Collection & Library.

### **But TTTG suffers from:**

- 1) Lack of suitable Workshop venue and
- 2) Lack of participation by Members

*Forster Hall is ideal for Members' Meetings, but not convenient for workshops.*

Having to set up work benches immediately before each workshop and remove the benches after each workshop is a logistical nightmare.

### **TTTG NEEDS YOU!**

***Get involved TTTG's needs volunteers!***

## ***Just a Sec***

John Bates  
TTTG Secretary

### ***TTTG SYDNEY TOOL SALE***

Well the annual TTTG Sydney Tool Sale is now fast approaching – Sunday 25 February 2018 is the big day. Here is hoping for some good weather and another bumper crowd. Hope to see you there!

A big round of thanks to all the people who make the Tool Sale happen every year.

Any seller or other inquiries please email me at [secretary@tttg.org.au](mailto:secretary@tttg.org.au).

### ***MEMBERS' MEETINGS 2018***

The TTTG Management Committee has decided to hold all Members' Meetings during 2018 at Forster Hall in the grounds of Brush Farm House at Eastwood. While this may be an inconvenience for some members it has just become too difficult and expensive to continue with Members' Meetings at the National Trust Centre at Observatory Hill.

Members' Meetings will continue to feature the usual 'pick-and-pay' tool sale. We also hope to be able to bring you a speaker or two during the year. But this relies upon getting some volunteers to step up and give a talk. So, if you want to be a TTTG presenter then please contact me or Bob Crosbie [president@tttg.org.au](mailto:president@tttg.org.au). We would be very glad to hear from you.

### ***TOOLS AND MACHINERY SALES***

TTTG has now moved all its tool and machinery holdings out of the storage facility we rented at Harris Park. Everything is in our storage shed at Brush Farm House. So, if you are interested in any of the items on offer just contact me or Bob Crosbie and we can arrange a viewing either before the Members' Meetings or at some other mutually convenient time.

TTTG currently has a quality Drummond lathe for sale on consignment. This machine is in as new condition with loads of factory and user-made tooling. Even has the box it was shipped in.

### ***VALE JIM BRADMAN***

Sadly, James "Jim" Bradman, a long-time member of TTTG, passed away on 2nd January 2018. Jim was an active member and freely contributed his energy, time and knowledge to our Group.

In consultation with his family TTTG has organised the use of Brush Farm House, 19 Lawson Street, Eastwood as the venue for **Jim's Memorial Service on Saturday 17th February 2018.**

Andrew O'Connor has set up a Jim Bradman page on Facebook.

Proceedings will commence from 10.00 am and conclude around 3.00pm. The formal service will commence at 12.00pm.

During the formal memorial service Jim's family will play a slide show of photos of Jim. His brother Paul is co-ordinating the images so if you have images to contribute please email them to [jimbradman71@gmail.com](mailto:jimbradman71@gmail.com) so that Paul can put together a file for display.

We hope to see TTTG Members and many of Jim's friends at the memorial service.

### **2018 Sydney Tool Sale Forms**

If you require a booking form or have any questions about the 2018 TTTG Sydney Tool Sale, please contact me via email: [secretary@tttg.org.au](mailto:secretary@tttg.org.au) or my mobile: 0418 488 210.

### **Search for TTTG Premises**

Lastly, the topic of finding a permanent home for TTTG has been on the Committee's agenda for several years.

A permanent home will allow TTTG to hold a greater number and range of Hands-On Skills based Workshops, give better access to the growing Library we hold, and provide a home for the Group's extensive tool collection.

### **Expression of Interest**

In late 2017 TTTG lodged an expression of interest in a prospective property with the owner, Ryde City Council.

All going well the EOI may have been determined by the time you are reading NEWS 155!

## **DATES TO REMEMBER 2018**

### **Members' Meetings:**

**Tuesday 13 February 2018**

Brush Farm House – 7.00pm

**Tuesday 12 April 2018**

Brush Farm House – 7.00pm

**Tuesday June 2018**

Brush farm House – 7.00pm

### **2018 TTTG Sydney Tool Sale**

Sunday 25 February 2018

9.00am to 1.00pm

Brickpit Sports Stadium

1A Dartford Road THORNLEIGH

### **“Real Skills” Workshop:**

**Sunday 11 March 2018**

Brush Farm House – 9.00am

### **Woodworking by Hand**

“Hands-On” TTTG Workshop

Jim Davey & Bob Crosbie

### **Selling Your Tools?**

### **TTTG can help you!**

- By “Selling on Consignment”

*TTTG sells tools for a 20% commission*

- Sell at 2 TTTG Tool Sales per year

*Only TTTG members can sell*

- Online TTTG Tool Adverts

*Offer your tools on the TTTG website*

## **TTTG “Real Skills” Classes**

There is strong demand for the TTTG “Real Skills” workshops.

There are two constraints on the workshops TTTG can offer:

- 1) Lack of a suitable venue.
- 2) Assistance from members.

Forster Hall is ideal for meetings but not adequate for workshops.

Having to set up work benches immediately before each workshop and remove the benches after each workshop is a logistical nightmare.

## **TTTG Workshops**

The TTTG Committee has submitted an *Expression of Interest* (EOI) for a Ryde City Council property which would offer a viable workshop space.

When TTTG secures a suitable venue the number and content of the TTTG “Real Skills” Workshops will be reassessed.

## **WHAT IS TTTG?**

**TTTG promotes and preserves traditional technology and skills.**

***TTTG is interested in all types of old hand and machine tools.***

TTTG offers “hands on” skills-based workshops.

TTTG has a Tool Collection and Library.

TTTG has regular Members’ Meetings and tool sales.

TTTG sells tools and has two Tool Sales annually.

TTTG publishes a quarterly journal *NEWS*.

## **WHAT TTTG IS NOT**

People who only use hand tools.

People who only use old tools.

**TTTG is interested in all types of tools and all skills.**

**TTTG promotes the use of all tools, both old and new.**

**TTTG is interested in machinery and emerging technology.**

## **TTTG CITRIC ACID**

Sold in an easy to store plastic jar  
(approximately 600 grams per jar)

**\$5 a jar**

*Use TTG Citric Acid to:*

Remove Rust    Clean Stainless Steel  
Sharpen Files and Rasps

How do I use it?

Fill a plastic container with hot water  
Add a couple of soup spoons per litre  
Add the rusty object

After a couple of hours remove, wash in soapy water and dry  
Leave rasps, files and “heavily rusted objects” to soak overnight

**FOR SALE AT ALL TTTG MEETINGS**

**ONLY \$5 EACH**

## **TTTG PLANE HANDLES**

For Stanley, Record, Turner, Pope/Falcon Planes

3, 4, 4<sup>1/2</sup>, 5, 5<sup>1/2</sup>, 6, and 7

These handles are ready to fit and sand

Variety of quality hardwoods including

New Guinea Rosewood, Blackwood, Silky Oak, Camphor Laurel

*Available only at TTTG Meetings and Tool Sales*

**BARGAIN PRICE AT TTTG MEETINGS**

**ONLY \$5 EACH**

# Jim Davey



CREDIT CARD FACILITIES:



VISA



**Jim Davey**

Ph 02 4447 8822(W) 4447 8790(AH) PO Box 967 Nowra NSW 2541  
JDAVEY@bigpond.com www.jimdavey-planes-sharpening.com

## FOR SALE

***TTTG is selling the following machines:***

### **BARNES**

#### **Back Geared Screw Cutting Lathe**

The lathe is in excellent condition, on the original stand.  
Back gears are complete and full range of original tooling.  
The lathe has been converted to power.

### **MATHIESON**

#### **Hand Operated Mortising Machine**

STAR Mortising machine.

***plus, old machine tooling including***

#### **Mortice Chisels**

For Hand Operated Mortising Machines

John Bates - [johnbates@tttg.org.au](mailto:johnbates@tttg.org.au)  
mobile 0418 488 210

## ***Selling & Buying Tools***

The Traditional Tools Group offers opportunities for members and the public to buy and sell old tools.

### ***TTTG Tool Sales***

TTTG organises two tool sales.

#### ***Members' Tool Sale***

This sale is at Brush Farm House on Sunday 2 December 2018.

Members get one table free and pay \$50 for each additional table.

Anyone can attend this sale but only members can sell tools.

***Entry fee is \$10***

#### ***Annual TTTG Sydney Tool Sale***

This year the sale is on 25 February 2018 in the Brickpit Sports Stadium, Thornleigh.

Anyone can attend.

Only members can sell tools and tables are \$50 each

***Entry fee \$10***

#### ***“Pick and Pay” Meetings***

TTTG Members' Meetings  
Brush Farm House, Eastwood

The TTTG Committee sells tools at these meetings. There is also a “Free Tools” table.

#### ***TTTG Auctions***

There will be a TTTG Auction at the next General Meeting in Forster Hall at Brush Farm House.

### ***Donating Tools***

TTTG accepts donations of old tools, materials and machinery.

TTTG reserves the right to dispose of any tools donated to TTTG.

### ***Selling on Consignment***

TTTG sells tools on consignment. The consignment fee is 20%.

### ***Selling Tools to TTTG***

TTTG occasionally buys tools.

### ***No Valuations***

TTTG does NOT offer formal valuations of old tools.

### ***TTTG Tools Wanted List***

TTTG is planning to install a Tools Wanted List on the TTTG website: [www.tttg.org.au](http://www.tttg.org.au)

### ***Contact***

John Bates - [johnbates@tttg.org.au](mailto:johnbates@tttg.org.au)  
mobile 0418 488 210

#### ***Selling old tools***

The best options are to sell through TTTG or to put the tools into a Hans Brunner auction.

#### ***Buying New Tools***

For quality, price and service it is hard to do better than buying from Jim Davey Tools.

## Correspondence

### Sydney Harbour Bridge

*My name is Rebecca Cohen and I am working on a rather large Westpac commercial in Sydney. I am trying to track down to hire or purchase some tools that would have been used on the build of the Harbour Bridge.*

*I am already making the old Riveter tool but would really like some of the old hand tools that they would have used in tightening the rivets and lines. Large shifters. crowbars, wrenches.*

*I have attached an image below of the section of the bridge that we are going to build just so you can see the section.*

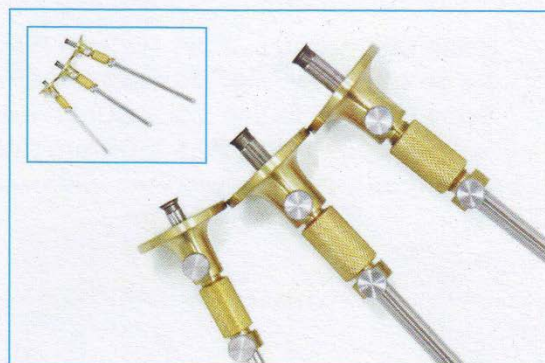
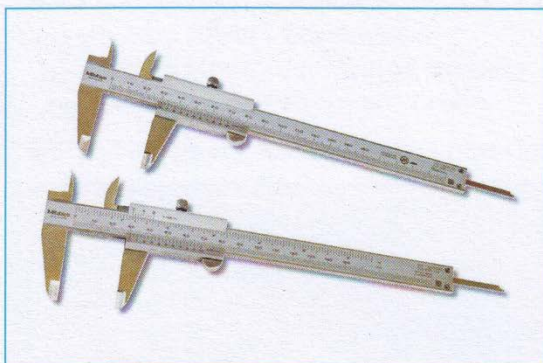
*We are currently looking to build this at Fox studios in Sydney and shoot it on the 31st of January. If you know of anyone that may be able to help me with this that would be wonderful.*

### TTTG response

After exchanging a few emails, the NEWS editor suggested Committee members Hugh and Andrew had the knowledge and the tools.

*Hugh and I aren't in a position to fulfil the 'props' requirements, for the time being. I was actually in my storage container Wednesday night, dropping off steel, and it would take me many hours to find the podger spanner I had in mind. Hugh is in the same boat.*

*We suggest contacting the restoration manager at Sydney Heritage Fleet (Rozelle), Tim Drinkwater, ph. 0403 388 365. They have been hot-riveting restoration projects for some 30 years. Another possibility is the blacksmithing business run out of the old railway workshops 'Eveleigh Works' Lots of old gear there, that may be for hire.*



**Vesper Tools** 9A Leah Grove, Carrum Downs, VIC, 3201  
**Ph: 0400 062 656** ABN: 74 138 293 374

## Supercraft

### **Information Wanted**

TTTG has received a request from  
James Lomax  
Merchandise Manager  
AMES Australasia

*Warren Hewertson from HTPAA has provided your name as a potential source of information regarding the origins and history of the Supercraft brand.*

*Our company, AMES, is the current owner of the Supercraft brand, which we believe traces back to 1936. We are very interested in learning more about the how the brand started, by whom and hopefully to confirm, when? HTPAA has directed us to Nock & Kirby's as being merchants for the range and we perhaps wondered if the brand started life there.*

*Should you have any insights or knowledge that could assist with these questions, I'd greatly appreciate the opportunity to speak with you.*

**If you know anything about the history of Supercraft contact the NEWS editor.**

## Citric Acid

### **The Wonder Powder**

#### **Another use for citric acid?**

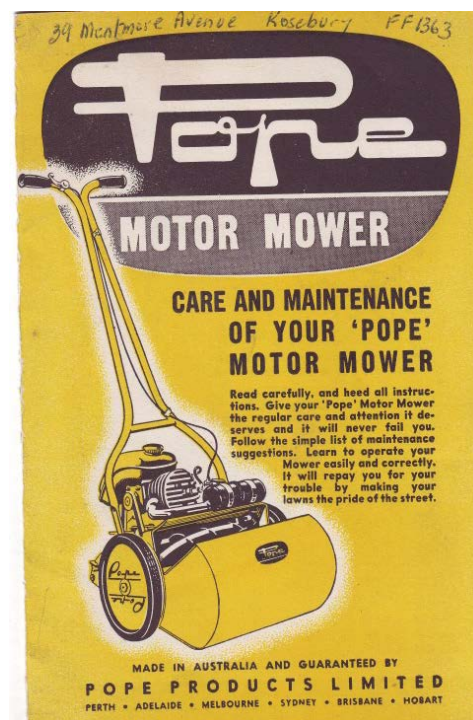
One of our members Craig Bench called re his membership.

Anyway, he told me the story of his overheating 1960s Valiant – put 2 lots of citric into the coolant ran for a few hours left it 3 days – lots of black gunk came out but the overheating problem is fixed.

## Pope

Pope made spanners, planes, lawn mowers and washing machines.

#### **What else did Pope make?**



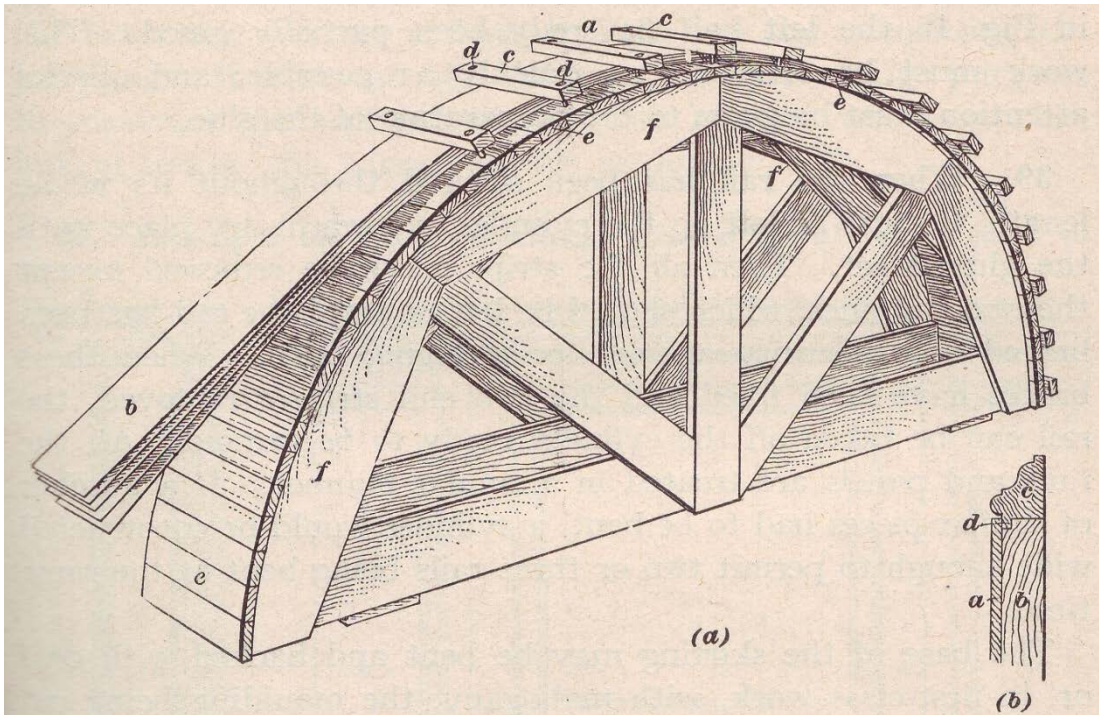
***Want to make a semi-circular table rim?***

***Want to veneer a semi-circular table rim?***

Don't panic and assume you will need expensive equipment and a veneer bag with compressor.

***The solutions are in the next two pages.***

## The Drum



Windows  
ICS page 61

## Staving

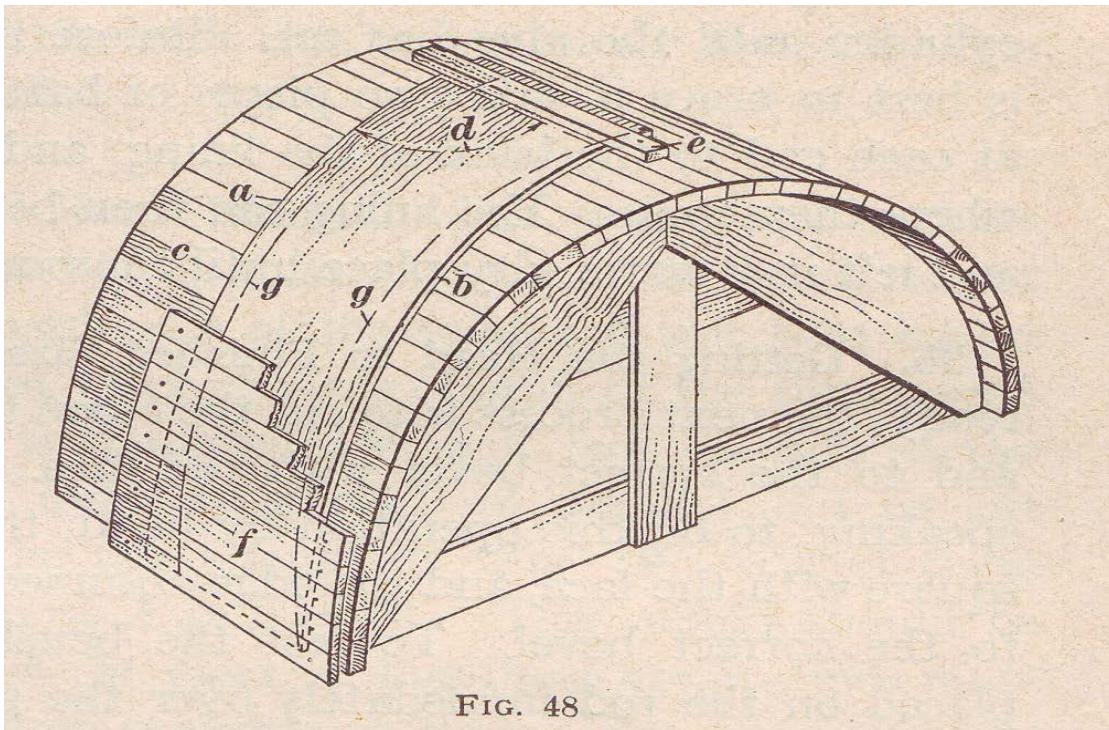


FIG. 48

Finishings and Fittings  
ICS page 25

## **Traditional Joinery**

### ***Utilising old solutions***

The *NEWS* editor enjoys making shaped furniture. My favourites include circular and semi-circular tables. The challenge is to find a stress-free method to make the rails (rims) for these tables.

Do a bit of research into modern books and magazines and you may get the impression that you need to spend lots of money to make shaped furniture. If you intend to mass produce these tables that would be the case. But for one offs or even small production runs traditional ways offer cheaper and easier solutions.

The two examples discussed use old methods that can be applied to other woodworking problems.

### ***Circular Table***

The *NEWS* editor recently made a continuous rim table. I could have made four quarter circle rims and joined these into four legs, but I had a quantity of “shorts” just perfect for cutting into “bricks” so I decided to make a “brick” rim. The reader can look up any old text book for details on this method.

As this was a circular rim I was able to use an electric router to shape the inside and outside of the rim. The router was pivoted off a radius board attached to the router’s base. *I used one of my 1960s vintage Black and Deckers.*

The bricks were assembled on a particle board base. As each layer was glued up the router was used to trim the inside and outside of the rim. The rim was 100mm wide, so I needed to glue up five layers of 20mm thick bricks. The only hard work was setting out the geometry.

The continuous rim was veneered with thick saw cut veneer. This meant I had to use a caul to apply pressure while the glue set. The veneer was applied in four pieces as I intended the table to have four legs. Making the caul was simple as I used the table rim as a drum. A length of thin ply was stretched around a quarter of the table rim’s circumference and lengths of pine 20mm x 12mm rub glued across the ply. When the glue was set this became a flexible caul. F-Cramps were used to apply pressure to the caul which then pressed the veneer against the rim. ***See Staving***

### ***Semi-Circular Table***

The semi-circular rim of a demi-lune table can be made by brick construction or the rim can be laminated. A superior rim can be made from six layers of quality thin ply (3mm or less in thickness). The layers of ply can be assembled around ***the drum.***

A drum can be made from off cuts of particle board or plywood. Making the top cross members longer than the drum is wide allows screws to be used to secure the cross battens.

## Repairing a Starrett No.98 Precision Level

John Bates

The Starrett No.98 precision level features:

- an involute groove running the full length of the base giving a reliable seat for round work
- a cross-test vial
- an adjustable level vial with a friction-fit closing cover to insure against breakage
- a main level vial graduated 0.005" per foot (0.42mm per metre)

The Starrett 98 level is quite straight forward to repair and to adjust. The level in this article is the 12-inch model.

### ***What to do first***

Commence with disassembling the vial housing from the base. **Figure 1** shows the level base without the vial carrier assembly and shows the fixed (screwed) and adjustable (nuts) ends.

### ***Take notes and make sketches***

Be sure to take note of the mounting holes and washers at each end of the vial carrier assembly. There are differences end to end and top to bottom and you should ensure that they go back in the same orientation. Make a quick sketch.

Next remove the plugs from each end of the housing.

**Figure 2** shows the first plug being removed using a roughly configured jig. Each plug is a firm friction-fit in the housing.

Once the first plug is removed you can slide the protective friction-cover from the vial carrier. BUT do this with the assembly inside a plastic bag so you don't lose the two spring-plates. These are quite small and can be seen in **Figure 3** (covering the '0' on the 150-mark on the rule). Also shown is one of the two milled slots in the carrier tube that each must fit into.

*Put the spring-plates into a small plastic bag for safe keeping.*

After cleaning out any residue of glass and plaster that may remain in the carrier, the second plug can be removed using a suitable drift and hammer. Hold the carrier firmly in your gloved-hand NOT in a vice. **Figure 4**

Give each plug a good clean and a light coat of G-15 (available from Jim Davey) on the mating surfaces to ease re-assembly.

Next clean the vial carrier thoroughly, removing ALL old plaster residue.

Once the vial carrier is clean you can begin to install the new vial. I suggest checking the fit of the vial inside the carrier by simply sliding the vial through the carrier.

The vial should slide freely and not 'hang up' in any place, but at the same time it should only be a wee bit smaller, say 1mm in diameter, than the carrier ID. **Figures 5 & 6**

### ***Buying replacement vials***

Ground glass replacement vials are not easy to get, but I found a UK source which makes a vial that will fit the Starrett No.98. The vial is 15mm in diameter and 96mm long with sensitivity per division of 0.1mm per metre which equates to about 0.001 inch in 10 inches. Starrett only fits a 0.5mm per metre (or 0.005 inch per 10 inches) vial in the No.98 so the new vial is really an 'upgrade'.

The company is called Level Developments Ltd and claims to be a leading worldwide manufacturer in the specialised field of precision ground glass level vials and opto-electronic level sensor. I can't vouch for that, but I can say they make a nice level vial. For more details see the company website <https://www.leveldevelopments.com>.

The Model 98 carrier is nickel or chrome plated, not painted. Hence, the carrier ID does not provide a good background to read the position of the vial bubble.

You are free to choose how you want to create a better background -- which is traditionally done with a matt white paper although a very pale green or yellow background is sometimes seen. Indeed, any very pale coloured paper would work

nicely. Some simply paint the inside of the carrier. **Figure 7**

My preference is to use a slip of bond paper to create the background. An archival-quality cotton-rag bond paper is grand and will keep its sparking white colour for decades, if kept dry.

Fit the paper liner to the carrier by simply slipping a rolled-up piece of paper into the carrier and marking the size of the carrier's opening onto the paper. Then cut-and-try the liner IN WIDTH ONLY until the paper is just narrow enough to not extend into the carrier's cut-outs.

Next, fit the vial into the liner paper and slide the vial and paper into the carrier; adjust until the vial is centred both lengthwise and rotationally in the carrier's cut-outs and the liner paper extends past the cut-out but not quite to the radius between the vial's cylindrical body and its end. The vial and paper liner should be only a bit loose in the carrier; if necessary another layer or two of paper can be added to shim the vial. Once I'm satisfied with the fit, I slide the vial and liner out of the carrier, trim the liner to length, and then reinstall the vial and liner, centring them carefully.

If the vial is quite loose but there is no better-fitting vial available, toothpicks or whittled-to-a-long-taper bamboo barbecue skewers can be used to GENTLY wedge the vial into the tube on one end only.

*The vial can be pulled against the carrier's opening with cellophane tape.*

Once you're satisfied with the vial's position in the carrier tube, you can think about bedding the vial. Plaster bedding is traditional, fast and I like the result. Mostly I use Plaster of Paris, which is available in small bags and has a reasonable working life. Mix it to a soft paste consistency and push enough into the carrier to form a plug of plaster that is just deep enough to cover the end of the vial. Now, check the vial to be sure that it is still centered in the carrier opening and the liner is properly in place. You can tweak the vial's position before the plaster starts to harden.

### **Figure 8**

Inspect your work, and if you want you can hand-smear plaster into the carrier opening to fill any gap between the carrier and vial.

Remember that you need to put the vial carrier end plugs back in place so don't let the bedding block the end plugs. It is also a good idea to drill a small hole through the plaster to let air escape as you replace the end plugs.

Install one of the vial carrier end plugs, being sure that the plane of the mounting tab is oriented correctly relative to the carrier opening.

Now install the cover spring on the end of the vial carrier away from

the installed end plug, slide the cover over the spring and down to the other spring pocket, install the other spring, and slide the cover on all the way.

Only now is it time to install the other end plug, and here you want to be sure that the mounting flat is oriented correctly and that both mounting flats are parallel to each other. Don't rely on "eyeballing" the parallelism of the mounting flats, set the assembled carrier on a set of machinist parallels or 1-2-3 blocks on a surface plate.

Install the vial assembly on the level's body, leaving the adjustment nuts finger tight. (I presume that you've already checked the iron base and know that it is not warped or burred.)

### **Figure 9**

You can adjust the vial assembly relative to the iron body by "reversion", essentially checking the vial against itself. To do this, you need a stable surface plate that is nearly level. How level? Ball-bearing-or-glass-marble-won't-roll-off level is plenty close enough. **Figure 10**

Within reasonable limits, temperature is not important, but temperature stability is very important. You cannot successfully adjust (or use) a precision level if it is in a beam of sunlight, near a blower vent, or if you've had your fingers on the vial recently. Got that?

Now, set your level instrument on the surface table and adjust the vial housing until the bubble is centred in the vial. Finger tight on the adjustment screws is good.

### **Figure 11**

Next, mark the location of the level body on the surface table using a pencil or build a set of fence rails that will provide a nest for the level body. Go get yourself a cup of coffee or a cold soda, giving the level and surface table a half hour or so to come to temperature equilibrium.

Again, examine the position of the bubble in the vial; adjust the vial assembly to nearly centre the bubble if necessary. Give the bubble a few moments to settle, and then carefully note the position of the bubble in the vial. Some people note the bubble position in room co-ordinates ("a quarter division toward the west wall") while others use instrument coordinates ("a quarter division toward the adjusting screw"); pick a method and call the bubble position in the vial the Initial position.

Now pick up the whole level and turn it 180 degrees. Set it down on the surface table and either nest it against the fences or adjust it to be within the pencil outline. Give the bubble a few moments to settle in the tube. Now examine the bubble to see where it is in the tube, which we'll call the Rotated position.

If the bubble is in the same place relative to the room ("a quarter division toward the west wall" OR in the "opposite" place relative to the instrument body ("a quarter division away from the adjusting screw")), the vial-to-base adjustment is correct. In this fortunate circumstance, all you need to do is snug the vial adjustment screws without moving the bubble.

If, more probably, the bubble is not in the right place, you'll need to adjust the vial housing. Use the adjustment screws to move the bubble all the way to its "should be" position, which is midway between the Initial and Rotated positions, finger snug the adjustment screws, and go through the whole test-and-adjust cycle again. Keep at it, and you'll get it right.

For what it's worth, more sensitive level instruments usually have a side-to-side vial adjustment in addition to the up-and-down adjustment. This adjustment allows you to rotate the vial so that its lengthwise axis is parallel to the long edge of the instrument's body. Why? Well, if the vial is not parallel to the long edge of the body the bubble will change its lengthwise position in the vial with small fore-and-aft tilts of the instrument.

<p>This is the first of a series of articles written by John on how to repair and adjust engineering measuring tools.</p>
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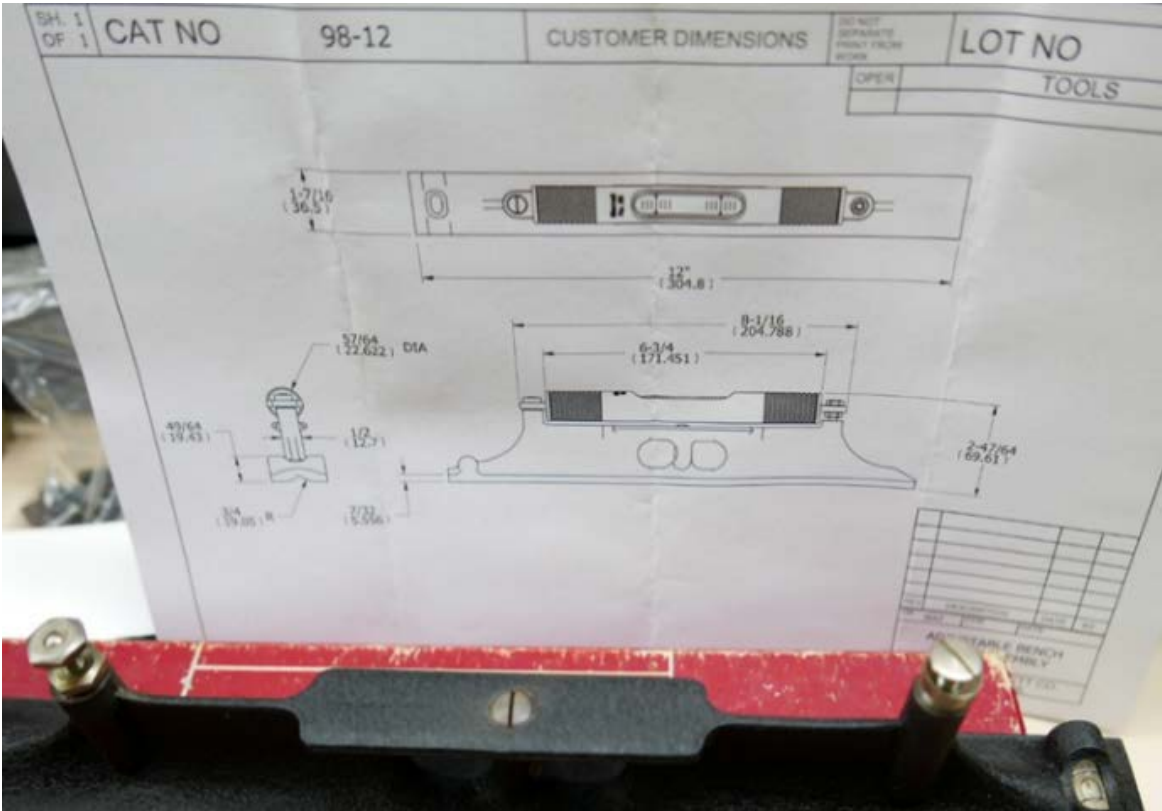


Figure 1 - Starrett 98  
Vial assembly removed

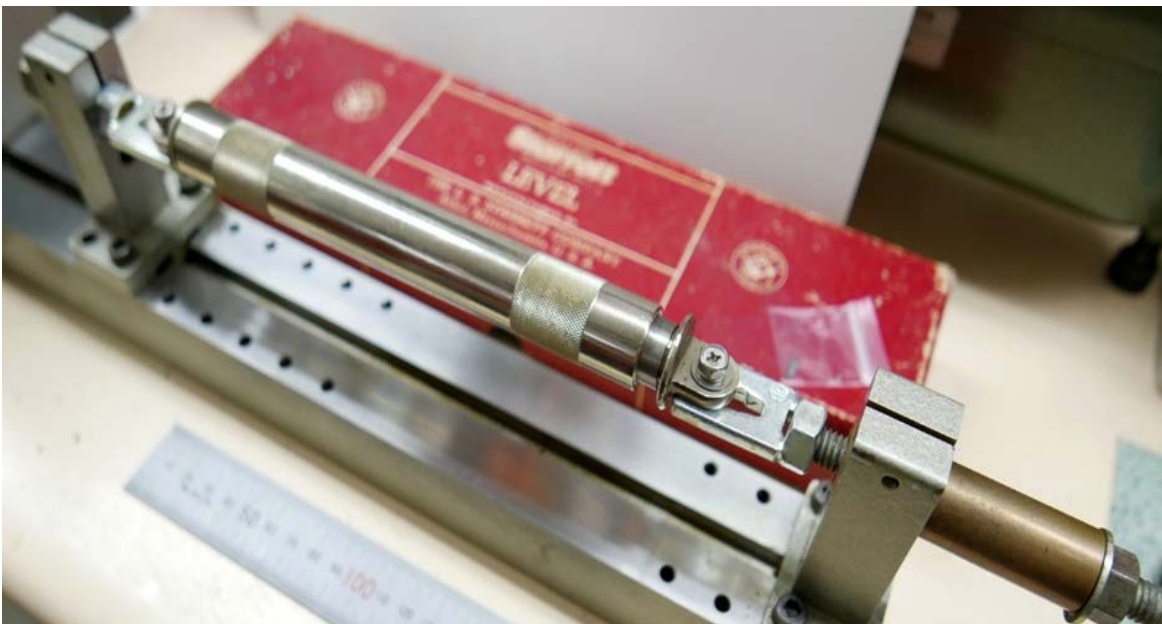


Figure 2 - Starrett 98  
First End Plug removed



Figure 3 - Starrett 98  
*Friction Plates*



Figure 4 - Starrett 98  
*End Plug after removal*

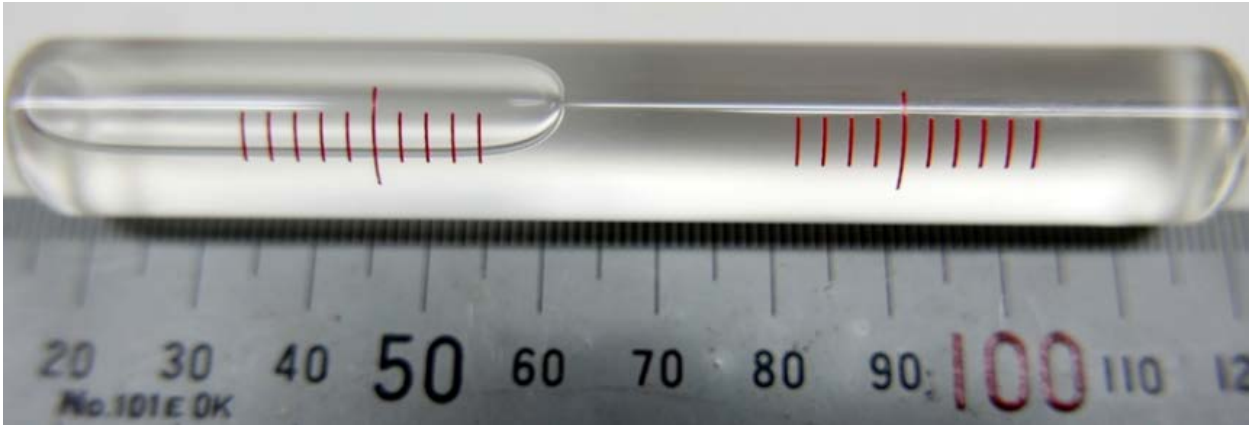


Figure 5 - Starrett 98  
*New level vial before installation*



Figure 6 - Starrett 98  
*New Level Vial Test Fit*

Figure 7 Right - Starrett 98  
*Lining Paper in vial carrier*



Figure 8 Right - Starrett 98  
Air hole drilled through plaster  
plug



Figure 9 Below - Starrett 98  
Re-assembled Carrier and Cover

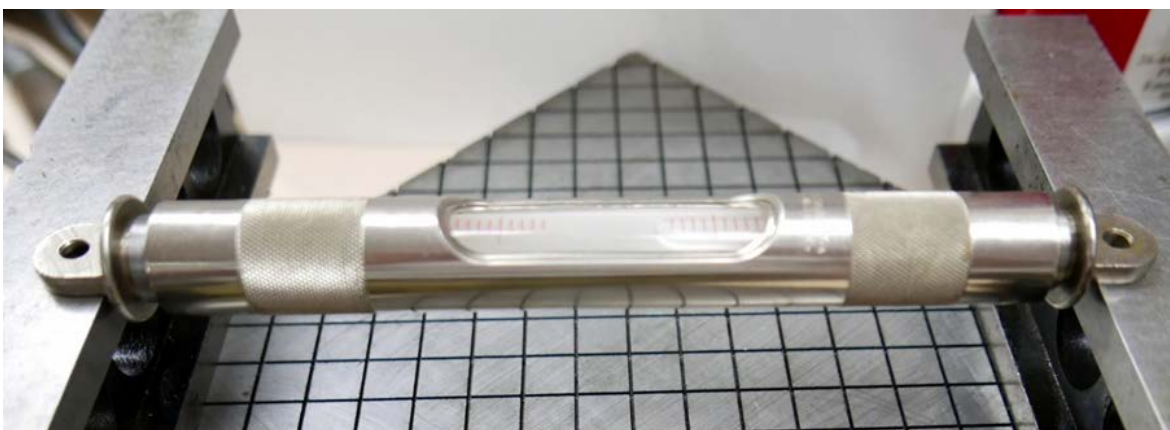
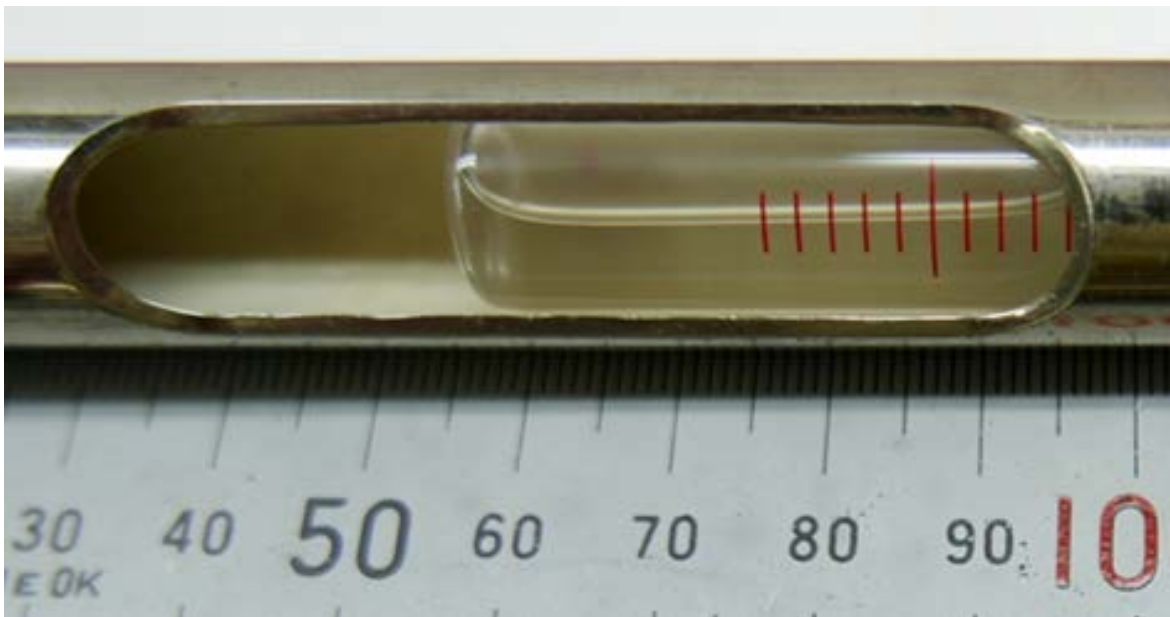


Figure 10 - Starrett 98  
Setting the end plugs horizontal  
before final assembly



Figure 11 - Starrett 98  
 Repaired, calibrated and ready for use

**NOCK & KIRBY LTD.**  
*Sydney's Specialty Hardware Stores*  
 POSTAL ADDRESS BOX 4250Y G.P.O. SYDNEY

## ENGINEERS' TOOLS



CT.355—Starrett's Micrometers, No. 231. 0in. to 1in. in 10,000ths with standard. Price **£5/10/-**



CT.356—Starrett's Micrometers, No. 230. 0in. to 1in. with lock nut & ratchet. Reading in 1,000 thousands. Price **102/-**



CT.357—Starrett's Micrometers, No. 2. 1in. to 2in. in 1000ths. Price **93/6**



CT.358—Starrett's Micrometers, No. 2A. 0in. to 2in. in 1000ths. Price **85/5/-**



CT.360—Inside Micrometer, No. 120B. from 2in. to 12in. Price **63/9**



CT.359—Starrett's Micrometers, No. 224AA. 0in. to 4in. in 1000ths with standards. Price **176/-**

**British Micrometers**  
 High grade precision tools made to the finest degree of accuracy.



CT.364—No. 961. 0in. to 1in. 1000ths. with lock nut and ratchet, supplied in leather covered steel case. Price **67/6**



CT.365 — No. 961B, but reading in 10,000ths. Price **77/6**



CT.366—No. 965, reading 1000ths, with black enamelled frame. Price **47/6**



CT.451 — Starrett Inspector's Gauge, No. 31. Price **35/6**



CT.370 — British Precision Squares.

Inches	2	3	4	5
Price	3/9	4/6	4/9	5/3
Inches	6	8	10	12
Price	5/6	7/9	7/9	11/6



CT.371—Starrett's Steel Squares, with hardened head and blade, No. 13.

Sizes, ins.	4	6	9
Prices	10/9	14/6	21/-

**6/3**



CT.600—Centre Head. For Starrett Combination Square. No. 11

Cast	6/3
No. 33 Hardened	15/6



CT.601 — Stock for Starrett Combination Square. No. 11

Cast	12/3
No. 33 Hardened	25/6

**Starrett's Students Tool Set**



CT.452—Starrett's Set of Tools in folding leather case, for students and apprentices. Set contains 1 pair Spring Dividers, 1 set Spring Calipers each inside and outside, 1 Centre Gauge, 1 6-inch Flexible Steel Rule, 1 pair 1enny, 1 Centre Punch, 1 6-in. Combination Square. Price **70/-**

**'Phone M 2407**

PAGE 23

A selection of Starrett Tools

Starrett tools were distributed across the globe.

This page is from a Nock & Kirby catalogue. The next page features half a page of Starrett Combination squares.

The Nock & Kirby catalogue in the TTTG Library has a 1938 Meccano list tucked inside.

Probable date of the Nock & Kirby catalogue is 1939.

**JD's**

**GREGSTEEL Dovetail Saw**

John Daniel



Last week I was given an old tool box half full of cabinet making tools, maybe it was just the usual assortment of a few late nineteenth century wooden moulding planes, a couple of spirit levels, wooden jack and a coffin shaped smoother, a chamfer plane, a few chisels, and so on. Additions such as a Hunt (Sydney) spirit level, steel tape measure, tin snips, saw sets etc., almost forgot, a small dovetail saw, the inspiration for this article.

The dovetail saw had been over stamped and roughly engraved, then over-cleaned in the past (no doubt to remove the damage), however with a careful re-clean a partial name became evident, "GR.....EL" and "Aust." stamped underneath, the remnant of the stamp of GREGSTEEL, the maker of WOODSTOCK planes and spokeshaves.



## **Gregsteel Saws**

I hadn't come across GREGSTEEL saws before and had only associated the name with planes and other "WOODSTOCK" marked tools that I had come across such as a spokeshave in my possession.

It is little wonder that Mr. Jim Gregory, a Saw Doctor, the founder of Gregory Steel Products Pty Ltd. at No. 25 Johnson Street, Collingwood, Victoria would manufacture saws as well as planes blades, spanners and other steel goods in his obviously well-equipped factory.

Trevor D, Semmens, Author of Australian Woodworking Planemakers, states that, "Steel used was silchrome steel purchased from B.H.P. and was rolled to Gregory's specification".

Now back to the saw: -The 7-inch blade has 12 points to the inch, is heavily backed and is fitted with a Coachwood handle. The heavy back gives a controlled feel when in use and after sympathetic attention the saw cuts smoothly and will be ideal for fine dovetailing and joint cutting.

*This Gregsteel saw was indeed a nice inclusion in the old tool box.*

## **Acknowledgement**

For many years I'd been looking for information on Australian tools, and when in Melbourne back in the mid 1990's, I happened to come across Trevor D. Semmens' publication, Australian Planemakers, then acquired his second edition several years later, and as luck would have it, was given his latest publication, Australian Woodworking Planemakers, in which I used to assist in writing this article.

Thank you Trevor for your constant search for knowledge and putting it in a form that's accessible to all collectors and historians.

## **Editor' Comment**

The NEWS editor has seen one of these 7" Greg Steel back-saws. Gregsteel knives are also known. *The question is:*

**Did Gregsteel make other saws?**

## **"Real Skills" Workshop**

**Sunday 11<sup>th</sup> of March 2018**

Brush Farm House, 19 Lawson Street, Eastwood

### **Woodworking by Hand**

Old tools from TTTG

**Marking and Measuring, Saws, Chisels, Planes: Bench, Block & Specialty**

**How to sharpen planes and chisels**

### **Tools and using tools**

New tools from Jim Davey

## 93 Shoulder Plane

*I need some help Identifying a shoulder plane I acquired It looks like a Stanley No.93 with some differences. It's all brass and the adjusting screw is different. Can you help me on this matter? I am a member and cannot attend meetings as I live on the Gold Coast.*

Mark Cherry sent this email with these photos.

### **Editor's Verdict**

All brass, Stanley name and number. What you have is a plane made by a pattern maker using a workmates' 93 as a pattern for the sand moulder and getting look alike screws from the fitter's shop. Depending on how good a job, it could be a reasonable user.

My guess is the plane was cast immediate post World War Two.





## **Brass Planes**

Non Ferrous hand planes were made but they were never very common. Brass isn't an ideal material for planes though it is better than aluminium. The preferred metals for planes are:

- Wrought Iron
- Mild Steel
- Cast Iron

One exception is cast brass shoulder planes with steel soles.

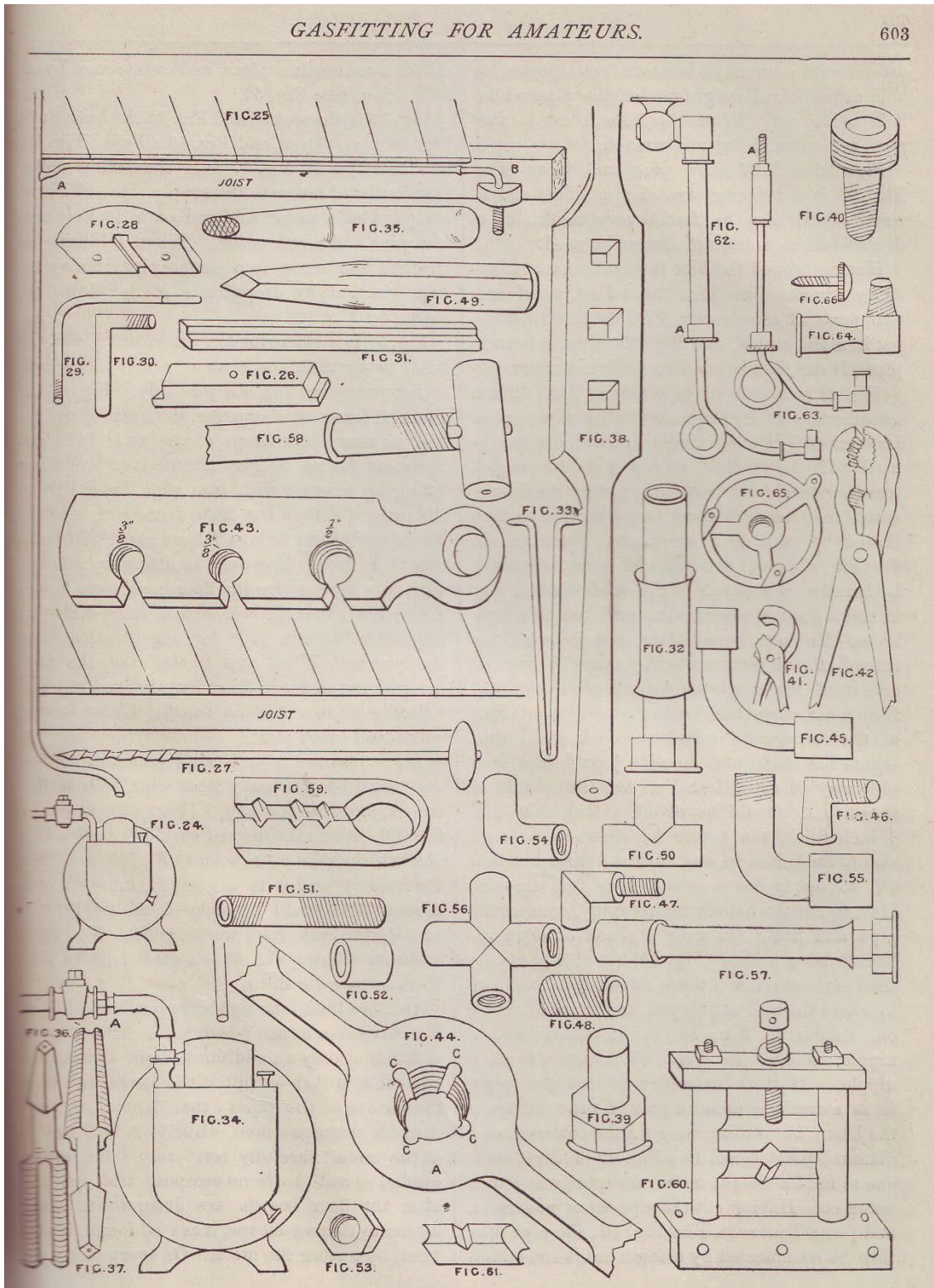
## **Pattern Maker's copies**

Brass planes like this #93 do surface.

Brass "Stanley Scrapers" and Spokeshaves have been seen.

The story often told is, these were made by foundry pattern makers. Unlike many old tales this one makes sense and is probably correct.

# Gas Fitting Tools 1890




Amateur Work Illustrated  
 Ward, Lock, Bowden & Co.  
 London. Undated. 1890?

**How many of these tools are  
 still used by Plumbers?**

## Wolf "Burn Proof" Drills

LOOK FOR  
THIS LABEL

IT MEANS  
POSITIVE  
PROTECTION  
AGAINST  
OVERLOAD  
BURNOUT!



This tool  
incorporates

(ML) BURN  
PROOF  
WINDINGS

The Burn-proof Windings of Wolf KOIMUL tools will withstand temperatures of 400° F. for 20,000 hours or short bursts of heat up to 1,000° F. Windings are spot-welded (not soldered) to commutators.

### Wolf BERETTA BURN-PROOF DRILLS

Unequaled in power penetration and efficiency. Built to meet the widest possible requirements at a price to suit you.

### SPECIFICATIONS

	1/4" Beretta	3/8" Beretta	3/8" 2-speed Beretta	1/2" Beretta
Drilling capacity in steel	1/4"	3/8"	3/8"	1/2"
Drilling capacity in hardwood	1/2"	5/8"	3/4"	1"
Spindle speed running light	2,800 r.p.m.	850 r.p.m.	High—2,900 r.p.m. Low—900 r.p.m.	650 r.p.m.
Spindle speed on full load	1,600 r.p.m.	550 r.p.m.	High—1,700 r.p.m. Low—650 r.p.m.	380 r.p.m.
Watts input on full load	260 watts	260 watts	260 watts	260 watts
Overall length	8 1/8"	8 5/8"	8 15/16"	9 5/16"
Net weight	3 lb. 13 oz.	4 lb. 6 oz.	4 lb. 10 oz.	4 lb. 14 oz.
PRICE	£19/-/-	£21/15/-	£24/5/-	£24/-/-
	\$38.00	\$43.50	\$48.50	\$48.00

WOLF ELECTRIC TOOLS (AUSTRALIA) PTY. LTD.

Above is one side of a flyer for Wolf Electric Drills. It is undated, but everything shouts 1950s/1960s.

*Koimul Fire Spirit*  
The logo may be considered offensive to indigenous readers.

# Primus 1929?

## General Hints.

**THE NIPPLE "E"** should always be cleaned with the cleaning needle before each lighting, and also if the lamp burns with an uneven or smoky flame, or if the flame does not increase on pumping. Pins or similar objects that can injure the opening of the nipple, should not be used for this cleaning process. **The effectivity of the apparatus depends on the size of the opening of the nipple.** When the nipple is cleaned while the flame is burning, a lighted match should always be kept in readiness close to the air openings of the flame tube "F", to light the gas if it should go out.

*The nipple "E" of type 2 is cleaned automatically when the valve "O" is closed, the point of the valve spindle being provided with a cleaning needle.*

**THE WICK "N".** Be sure the tank always contains benzoline before the neck of the apparatus is preheated, otherwise the wick might become charred.

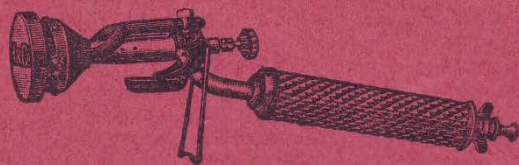
The wick "N" by which impurities in the benzoline are retained is to be pulled out and cleaned by rinsing if the apparatus does not burn satisfactorily.

**PUMP:** If the necessary air pressure in the tank of the apparatus cannot be obtained by pumping, there must be some fault with the pump piston. Pull the pump rod out, smear the leather packing with oil and press it out or exchange it for a new one. The pump rod can be taken out when the lamp is burning. When the pump rod is again inserted, care must be taken that the leather packing does not get turned backwards.

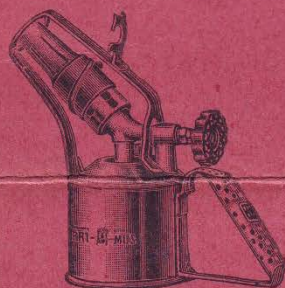
**PUMP VALVE:** If pump valve is untight, in which case the pump rod is automatically pressed out again after having been pressed down, this is generally caused by some dirt adhering to the packing of the pump valve. In most cases it can be removed if the pump rod is taken out and benzoline is poured into the pump cylinder. The benzoline is then pressed through the valve by means of the pump piston. If this is ineffective, the pump valve is taken out and the packing must be cleaned or exchanged for a new one.

**TANK LID.** Be sure the packing in lid "A" is clean and in good condition.

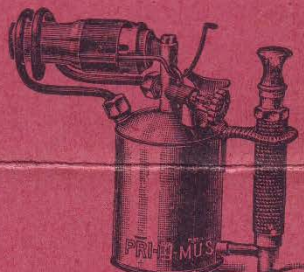
Only Original Primus spare parts ought to be used, otherwise the effectivity and durability will be diminished.



Branding apparatus Primus No. 874.



Blow lamp Primus No. 854.

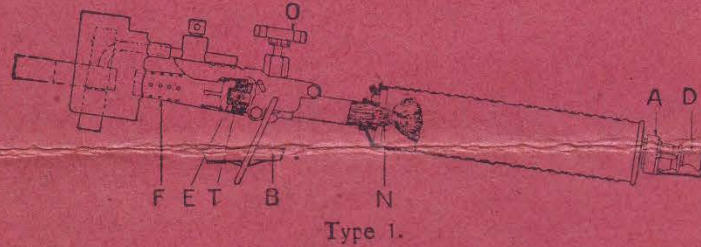


Brazing lamp Primus No. 861.

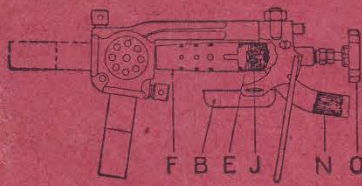
A/B B. A. HJORTH & Co. STOCKHOLM  
SWEDEN

# ORIGINAL "PRIMUS" SOLDERING IRONS

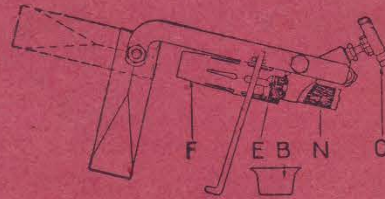
For Benzoline (Petrol, Gasoline)



Type 1.



Type 2.



Type 3.

Every apparatus is tested by an actual burning trial before leaving the factory.

**Working principle:** The benzoline becomes gasified during its circulation through the previously heated burner, issues through the small brass nipple "E", mixes with air, and burns with an intensely hot atmospheric flame.

## DIRECTIONS FOR USE.

**FILLING:** Close the valve "O". Unscrew lid "A" and fill tank **not more than** three quarters full with benzoline. Screw on lid "A" air tight.

*The filling should not take place near an open fire:*

**PREHEATING:** Fill the cup "B" under burner with benzoline or spirit and light by applying match. Avoid draught.

*The burner of the apparatus should be heated in the same manner, even if it is warm after a preceding lighting.*

### To be observed for Soldering irons without pump.

When the apparatus is cold and is to be re-lit without being filled again, the lid "A" should be loosened so as to admit air into the tank, this facilitating the ignition.

### To be observed for Soldering irons with pump.

Pump a few strokes with the pump-rod "D", before the contents of the cup "B" are lit.

**LIGHTING:** When the contents of the cup "B" are almost consumed, but not before, the valve "O" should be opened by slowly turning the wheel a little to the left, after which the gas issues through the nipple "E" and is lit.

Should the contents of the cup "B" burn out before the gas is lit, light by applying match to one of the air openings of the flame tube "F" and open the valve "O" slowly.

*The heating and lighting of the apparatus should always be done in exact accordance with the directions for use, otherwise the lamp will not work satisfactorily.*

**REGULATING THE FLAME:** If a larger flame is desired, the valve "O" should be turned to the left. If the flame is to be decreased, the same valve is turned to the right.

If the apparatus is provided with a pump, the flame is further increased by pumping.

**EXTINGUISHING:** Close valve "O", and leave it closed.

**Over!**

Use nothing but ordinary Benzoline (Petrol, Gasoline).

## What's it?



Woodworking Newsletter  
Issue 12 Volume 2 November 2017

Lee Valley and Veritas make excellent tools and also publish this regular online newsletter.

You have to read the newsletter to find out what this tool does. Interesting story and worth the effort of clicking on to [www.leevalley.com/us/newsletters/Woodworking/2644/whatisit.htm](http://www.leevalley.com/us/newsletters/Woodworking/2644/whatisit.htm)

## What's new?

Veritas is producing a miniature plow plane. The plane is a nice addition to the Veritas miniature tools collection.

*Our miniature tools are available in sets. The complete set includes all our miniature tools. The regular total price of all the tools when purchased individually is \$369.50.*

Certain to appeal to tool collectors.





**Veritas**  
**Miniature Tools**



## Review

### **Popular Woodworking**

November 2017 #235

#### ***Band Saw Pattern Cutting***

page 12

A useful idea that could be made simpler with some lateral thinking.

#### **Veritas Combination Plane**

page 14

A fair review but the plane is assessed against a 45 plane. A second hand 050 can be brought for far less and is more useful.

#### **Make a Traditional double-iron coffin smoothing plane**

pages 46-60

Comprehension description supported by excellent photos. A good introduction to making wood planes. Whether you need the special tools is an open question.

### **Popular Woodworking**

December 2017 #236

#### ***Seth Gould: Explorer in Metal***

pages 22-24

Read about Seth's quality forged hand tools.

#### ***Recreating Studley***

pages 34-38

How Jim Moon created a replica of the Studley Tool Chest. The collectors will be salivating over the photos. An Inspirational article for tool users and collectors.

### **Furniture & Cabinetmaking**

October 2017 #262

#### ***Buy the Saw you want***

***(but first, get the saws you need)***

pages 32-35

Bad Axe makes some of the best current saws. This article talks the reader through saw selection while providing evidence of the quality of Bad Axe saws.

#### **Veritas Combination Plane**

pages 42-45

A fair and comprehensive review.

### ***Old Tools Journals***

The editor would like to include reviews of articles published by other old technology groups.

The reality is the editor has to make hard decisions. By reviewing the magazines on the news-stands *NEWS* is more likely to catch the interest of people interested in using traditional hand tools.

If you disagree do something by writing a review for *NEWS*.

### ***Submissions Wanted***

The Editor encourages readers to submit draft articles or reviews.

Don't worry about style or format. Get some words down on paper or on screen and sent a draft.

## Review

### **Furniture & Cabinetmaking**

November 2017 #263

#### ***Quangsheng Mitre Plane***

pages 62-64

In the NEWS editor's opinion this modern mitre plane suffers from cost cutting compromises. That said read this review and decide whether you need or can afford it.

### **Furniture & Cabinetmaking**

December 2017 #264

#### ***In Profile-Tom Fidgen and the Unplugged Woodshop***

Interesting reading and great photos. Read the review and then go online to check out Tom Fidgen.

#### ***The Ultimatum brace: a feat of engineering***

This article is essential reading for tool collectors. The quality colour photos compliment the text. These braces are an example of a tool that reached the design limits of wood and brass and was then made redundant by forged iron.

## **The Tool Chest:**

### **Journal of the Hand Tool Preservation Association of Australia**

November 2017 #126

#### ***A Barnes Scroll Saw Restored***

pages 2-6

#### ***An Introduction to Post Drills***

pages 7-10

#### ***What makes a Bed Rock?***

pages 19-22

This issue reminded the NEWS editor to pay his HTPAA fees. Every TTTG member should also join HTPAA

## **Mortise & Tenon Magazine**

### **Issue 3**

This magazine is essential reading for anyone interested in traditional woodworking. Every article is well researched, and the contents have been tested at the work bench.

The magazine can be purchased from Chris Vesper or by going to [www.mortiseandtenonmag.com](http://www.mortiseandtenonmag.com)

## **Reviews Wanted**

NEWS does not routinely review every similar interest publication.

The editor selects a few books and magazine articles he thinks will appeal.

Reviews from readers are encouraged and welcomed.

## **Articles Wanted**

Why not write something for NEWS or the Website?

## Review

### **Brown & Sharpe and the Measure of American Industry:**

Making the precision machine tools that enabled manufacturing, 1833-2001.

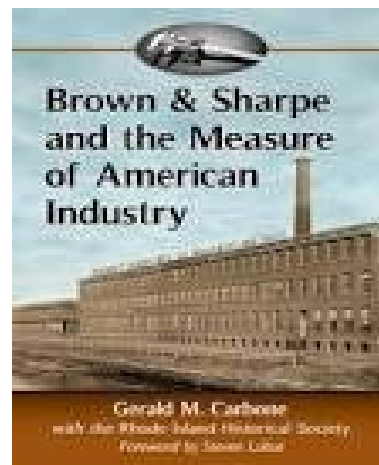
McFarland, Jefferson, NC, 2017

*Reviewed by John Bates*

This book is a very important addition to the industrial history of the world. Few people probably know of Brown & Sharpe but the products it produced and innovations and improvements it introduced to manufacturing played a part in shaping the 20th century.

Too much is often lost to us especially in recent decades with takeovers and mergers and closures. I take my hat off to Mr Carbone for a job very well done. Credit is also due to the family of Mr Sharpe for commissioning the book and allowing the chips to fall where they may.

In its 275 pages are the answers to some questions I had about the whole Darling, Brown & Sharpe period and what happened to Mr Darling. It was also amazing to read that L S Starrett fronted up at Brown & Sharpe one day with his prototype combination set in the hope that the company would manufacture it, but the company turned him down in and did so in



rather unflattering terms. The rest, as they say, is history.

Those two pieces of information alone were worth the purchase price. Plus, you get a fascinating tale about the part sewing machines played in the company's survival and ultimate success.

The author has managed to inject humanity and interest to the story which overall is quite detailed, but still compelling reading. Easy to forget the contribution made by outstanding individuals and their families over the generations.

Unfortunately, the landed price in Australia is, I think at \$73.50, a bit steep for a soft cover. Perhaps your local library will buy it if you ask nicely. What a pity B&S didn't get into the publishing business.

**Two Sizes** — measuring 2" to 8" and 2" to 12" by thousandths of an inch.

**BROWN & SHARPE  
Nos. 266 and 267  
Inside Micrometers**

**No. 266**

Range, 2" to 8" by thousandths of an inch  
Has 6 Measuring Rods

Price, \$7.25 Case, \$1.75

Price includes complete set of Measuring Rods and Spacing Collar.

**No. 267**

Range, 2" to 12" by thousandths of an inch  
Has 10 Measuring Rods

Price, \$8.50 Case, \$2.75

Price includes complete set of Measuring Rods and Spacing Collar.

See these new Inside Micrometers at your local dealer's. If he cannot supply you write direct, but, by all means, insist on the Brown & Sharpe accuracy and reliability which they bring when you need tools for inside measurements. Brown & Sharpe Mfg. Co., Providence, R. I., U. S. A.

W. R. SHORT  
HARDWARE STORE  
108 YARRARA ROAD, PENNANT HILLS  
PHONE EPP. 1752

Brown & Sharpe Mfg. Co.,  
Providence, R. I., U. S. A.

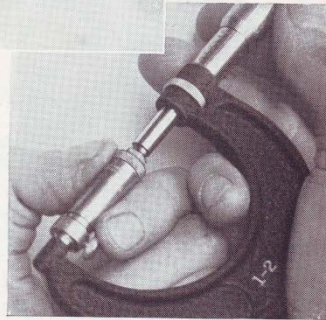
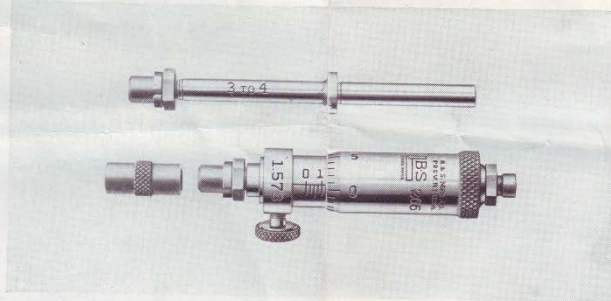
Printed in U. S. A.  
3-37-25

**ACCURATE  
MODERATELY PRICED  
SIMPLIFIED ADJUSTMENTS  
RELIABLE**



*The New*

**BROWN & SHARPE  
Nos. 266 and 267  
INSIDE MICROMETERS**



**New Features -- Moderately Priced**

Handy, compact, moderately priced and reliable. Two sizes: one measures from 2" to 8" by thousandths of an inch; the other from 2" to 12".

Note the adjusting point and lock nut on the thimble — an exclusive Brown & Sharpe advantage. If wear should occur, simply adjust this one point — it is not necessary to change all the rods.

When rod is in position with shoulder against head, first half of inch can be measured (example, 2" to 2½"). When spacing collar is in place, last half of inch can be measured (example, 2½" to 3"). Ends of rods are hardened and, also, adjustable for wear.

Here are inside micrometers many have been waiting for — Brown & Sharpe accuracy, moderately priced. Brown & Sharpe Mfg. Co., Providence, R. I., U. S. A.

The measuring point on the thimble end gets many times the use of one of the individual rods. Should wear take place simply adjust the over-all length, from shoulder to end of measuring point, to 1.573". It is not necessary to adjust all the individual rods — an exclusive Brown & Sharpe advantage.

(Listings on Back)

**Brown & Sharpe  
Inside Micrometers Nos. 266 and 267**

## **TRADITIONAL TOOLS GROUP**

### **COMING EVENTS**

#### **Members' Meetings held at**

Forster Hall, Brush Farm House, 19 Lawson Street, Eastwood

**Doors open: 7pm**

**Entry Fee: \$5**

#### **Tuesday 13 February 2018**

##### **Wooden Planes**

The essential wooden bodied planes for serious woodworkers

#### **Tuesday 12 April 2018**

##### ***TTTG's Future***

The TTTG Committee will field audience questions.

#### **"Real Skills" Workshop**

**Sunday 11 March 2018**

Forster Hall, Brush Farm House, Eastwood

**Start Time: 9am**

**Workshop Fee: \$25**

#### **Woodworking by Hand: *Tools and using tools***

Jim Davey and Bob Crosbie

Enrol on the day

#### **2018 TTTG Sydney Tool Sale**

**Sunday 25 February 2018**

The Brickpit Sports Stadium, 1A Dartford Road, Thornleigh, NSW

**Tables \$50 each**

***Big Demand for tables***

***Don't miss out***

***Doors open 9am***

***\$10 entry***



## **TTTG Sydney Tool Sale**

**Sunday 25 February 2018**

*Looking for old and new tools?  
Don't miss Sydney's biggest tool sale*

Brickpit Sports Stadium  
1A Dartford Road, Thornleigh

***Entry \$10      9am to 1pm***

Check it out at [www.tttg.org.au](http://www.tttg.org.au)

Or contact John Bates

0418 488 210

[secretary@tttg.org.au](mailto:secretary@tttg.org.au)