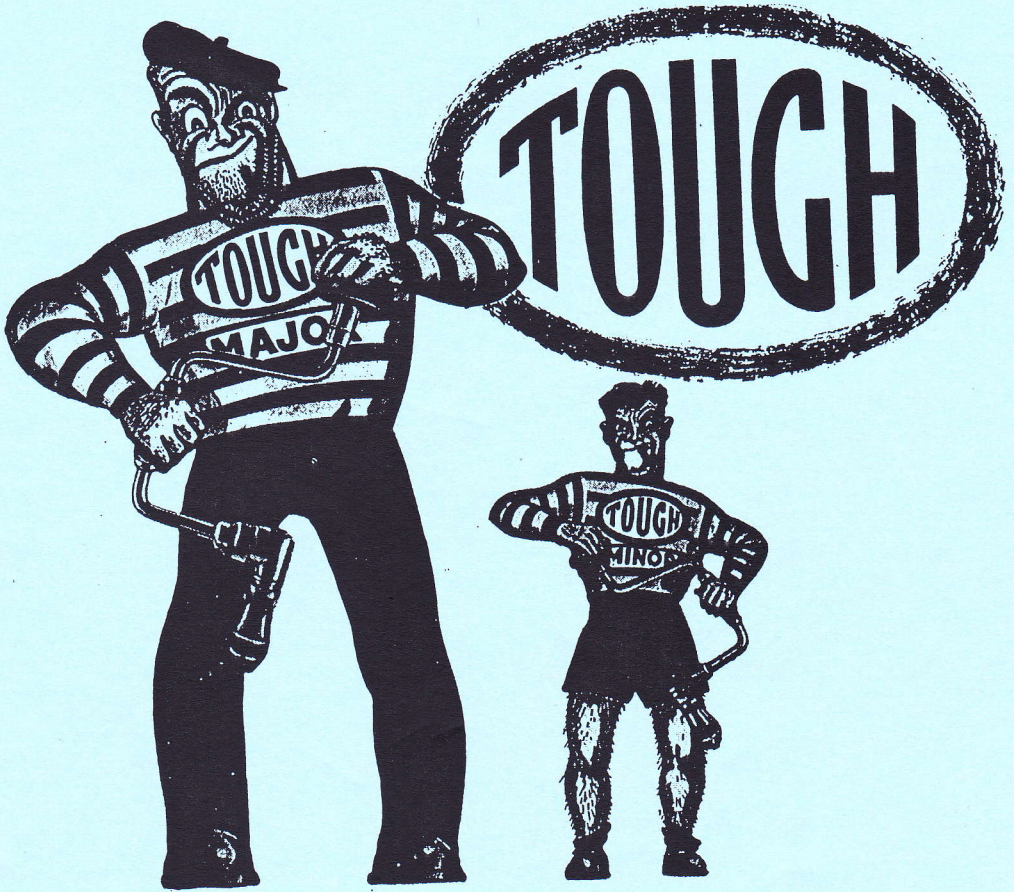


T T T G



Newsletter 43.
October 1998.

The Traditional Tools Group Inc.

TTTG Inc.

THE TRADITIONAL TOOLS GROUP (Inc.)

**TTTG NEWSLETTER NO. 43
OCTOBER 1998**

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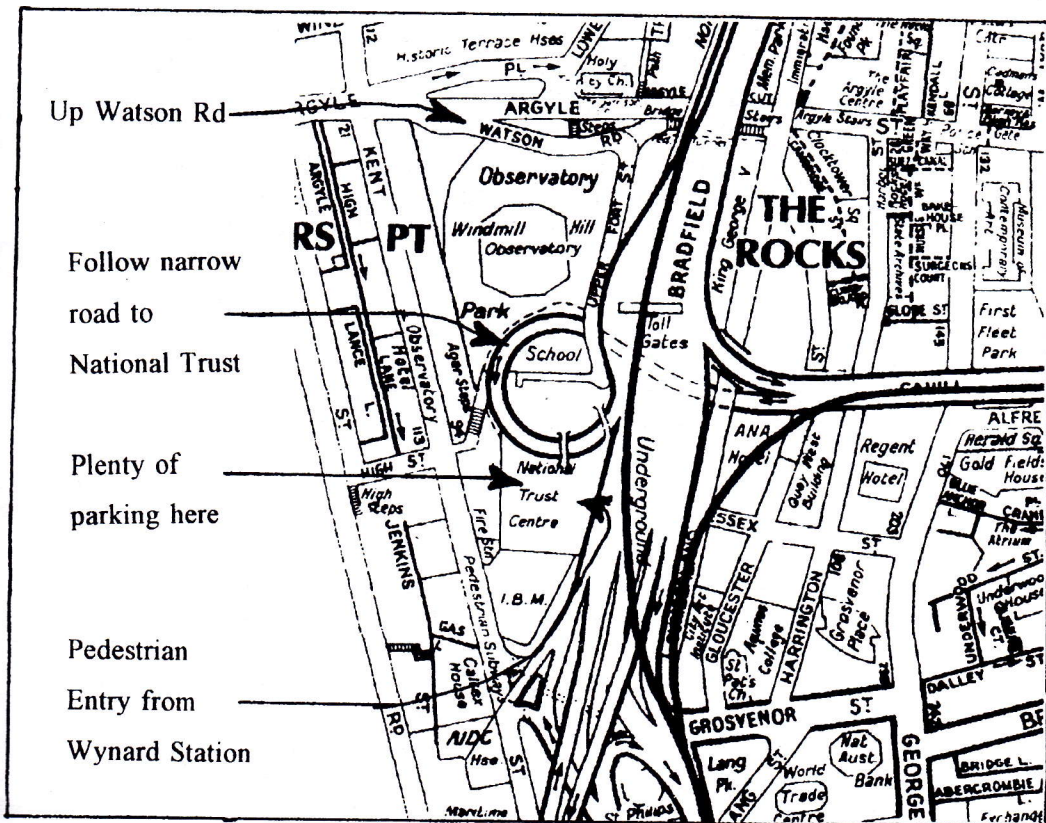
Cover : Advertisement from 1948 Hardware Year Book

Postal Address
The Traditional Tools Group Inc. (TTTG)
P. O. Box 240
Grosvenor Place
Sydney 1200

NEXT MEETING

Tuesday October 13.

National Trust Centre
Observatory Hill
Commencing at 7.00 PM.



PROGRAMME

1. HARPSICORDS. HUGH JONES, ONE OF AUSTRALIA'S LEADING HARPSICORD MAKERS WILL TALK TO US ABOUT THE INTRACIES AND LORE INVOLVED IN THE MANUFACTURE OF THIS ANCIENT INSTRUMENT WHICH HAS STAGED A SPECTACULAR REVIVAL OF INTEREST IN THE LAST FEW YEARS. THIS IS YOUR CHANCE TO TALK TO A REAL EXPERT ON THE SUBJECT. TURN TO THE CENTRE PAGE FOR A QUICK PRIMER ON HARPSICORDS.
2. SHOW AND TELL. DOES ANYONE HAVE ANY HARPSICORD TOOLS?
3. WE HAVE NEW DONATIONS TO THE LIBRARY. COME AND BROWSE.
4. SUPPER BY MARIO DATO.

Editor's Notes

Bob Crosbie.

What was available in the way of new Australian tools fifty years ago? In this issue we have a 1948 theme. The number of manufacturers and the range of products may surprise some readers.

If your appetite for classic Australian tools has been whetted you may wish to do some additional reading. Where better to start than Trevor Semmens' Australian Planemakers. Second edition.

Copies of this book will be available at the next meeting at the special discounted price of \$14 each.

There was a lot happening as Newsletter 42 was produced. This is not an excuse but a confession. Editorial apologies for the typographical errors.

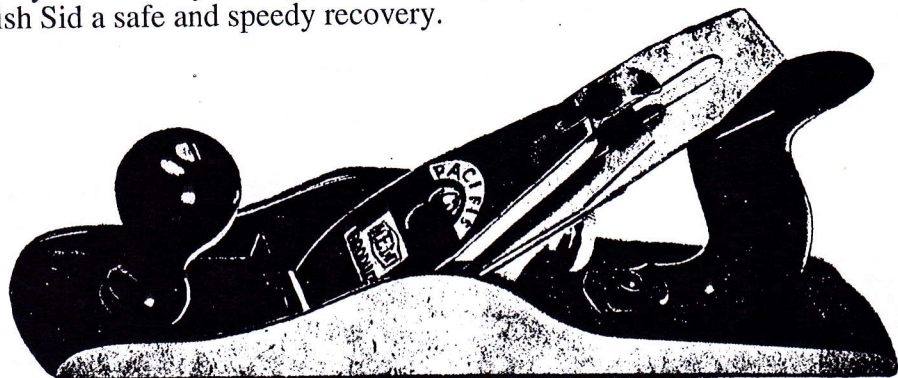
There was a rumour that the editor white-anted 42 in the hope of being sacked. This accusation is vigorously denied. Guess who got re-elected as Editor ?

The presentation by David McBeath at the last meeting was enjoyed by all. The visit to Everleigh is an event all members should try to attend.

Ray Gurney has down loaded some additional information on rust removal. He has almost convinced the Editor that vinegar is not state of the art technology.

The TTTG Election results are published in this issue. From time to time the proceedings of the committee are recounted. The thumb-nail sketch of the last Committee Meeting may appeal

On a personal note the editor has heard that TTTG member Sid Carey has recently undergone minor surgery. I am sure all members wish Sid a safe and speedy recovery.



Previous Meeting

David McBeath gave a lively account of the Everleigh Railway site. As he spoke the audience learnt a great detail about both Dave's and Everleigh's history.

The photographs and the stories relating to this industrial complex engaged the imagination of all participants.

So great was the interest in Everleigh that the audience requested a visit to the Technology Park.

David has generously agreed to a special visit to the Everleigh Railway workshops by TTTG members. For details see **Special Event**.

Next Meeting

Hugh Jones

Harps & Harpsichords

Tuesday October 13.

National Trust Centre

Observatory Hill

Commencing at 7.00 PM

Special Event

Visit to the Everleigh Railway Workshops

Sunday November 18 10am-12 noon

Meet at the Site at 10 am

Tour conducted by David McBeath

More on Rust Removal

Ray Gurney

HOW IT WORKS

The Electrochemistry of Rust Removal By Electrolysis

Purely in the interest of safety, I'd like to explore electrolysis in a little more detail...for the benefit of those who may not be aware of what really happens when they turn on the power.

Pure water is a very poor electrolyte, having only 1 hydrogen ion (H^+) for every 556 million molecules of water...the same applies for the hydroxide ion (OH^-). Let's see what happens when sodium carbonate is used as the electrolytic salt.

Sodium carbonate dissolves easily in water, into sodium ions (Na^+) and carbonate ions (CO_3^{2-}). There are 2 sodium ions for every carbonate ion. Let's say you decide to use a piece of iron (steel) as the anode (positive terminal), and the rusted tool at the negative terminal...and be certain that one doesn't touch the other...otherwise...the low resistance will allow a tremendous amount of current to flow through the circuit and burn up your power supply...blow a fuse or breaker...etc.

When the power is turned on...electrons begin moving from the anode (iron/steel)...through the external circuit (power supply) and toward the cathode (rusted tool). This leaves the anode electron poor...and the cathode electron rich. The anode is then, left with a net positive (+) charge, and the cathode with a net negative (-) charge.

Think of electrical (+/-) charges as you would the north/south poles of a magnet. Unlike poles attract...therefore the positively charged anode attracts the negatively charged carbonate ions...while the cathode attracts positively charged sodium ions. There begins therefore, a slow migration of each ion species towards it's oppositely charged terminal.

When the carbonate ions (CO_3^{2-}) reach the anode...one of at least two things are possible. Either the iron(steel) will accept 2 electrons from the carbonate ion and form iron carbonate...or the hydroxide ions (OH^-) from discharged water molecules will donate electrons...in which case iron hydroxide (ferric hydroxide) will be formed. Because it is easier for the hydroxide ions to donate electrons and experience a greater reduction in energy than the carbonate ions...ferric hydroxide is formed. Ferric hydroxide $Fe(OH)_3$ decomposes rapidly into ferric oxide (Fe_2O_3) and water. The ferric oxide is the reddish precipitate you see forming on the surface of your electrolytic solution.

More on Rust Removal

Don't be fooled into thinking that precipitate came directly from your rusted tool. It came from the chemical reaction that occurred when water molecules discharged and the resulting hydroxide ions reacted with the iron ions in the anode. The unchanged carbonate ions simply remain in solution.

What happens at the cathode...? Remember, the cathode is negatively charged...and therefore attracts both sodium ions (Na^+) and hydrogen ions (H^+). It is easier for the hydrogen ion to accept an electron than it is for the sodium ion. Therefore...the hydrogen ions are "reduced" to hydrogen atoms...which immediately combine with other hydrogen atoms to form hydrogen molecules (H_2) and bubble to the surface. A secondary reaction has the positively charged sodium ions reacting with the negatively charged oxygen ions in the rusted tool, to produce sodium oxide. This is actually where the "rust removal" takes place.

****Caution**** Hydrogen gas reacts explosively with oxygen (in the presence of heat) to produce water vapor. Take Michael Sullivan's advise seriously about shutting down the power before adjusting/removing the electrodes.

If you are using electrolysis to remove rust...and have a considerable broth of bubbles...be very cautious. That broth is not the place to discard a glowing cigarette ember, lit match...or any other spark. Be warned...!!

What if you're using sodium chloride as the electrolytic salt.

Nothing much changes at the cathode...but at the anode, chlorine is oxidized...that is, each chlorine ion donates an electron to the iron...thereby becoming a chlorine atom. Chlorine atoms combine to form chlorine gas (Cl_2).

****Caution**** Chlorine gas...in addition to being poisonous...facilitates combustion...just like oxygen. If you must use sodium chloride...use precautions. Make certain you have plenty of air circulation in a large environment. Don't take chances...it's far better to be safe...than sorry.

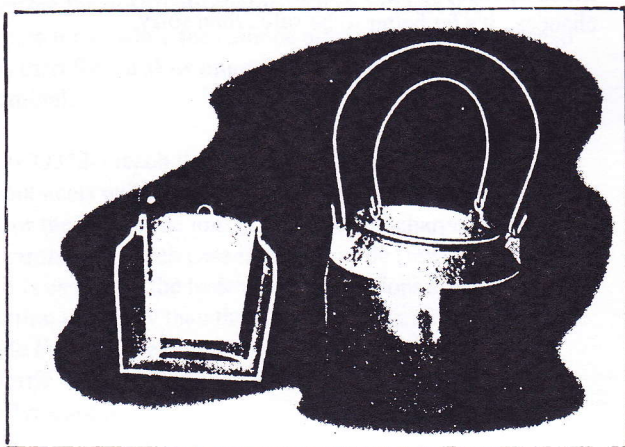
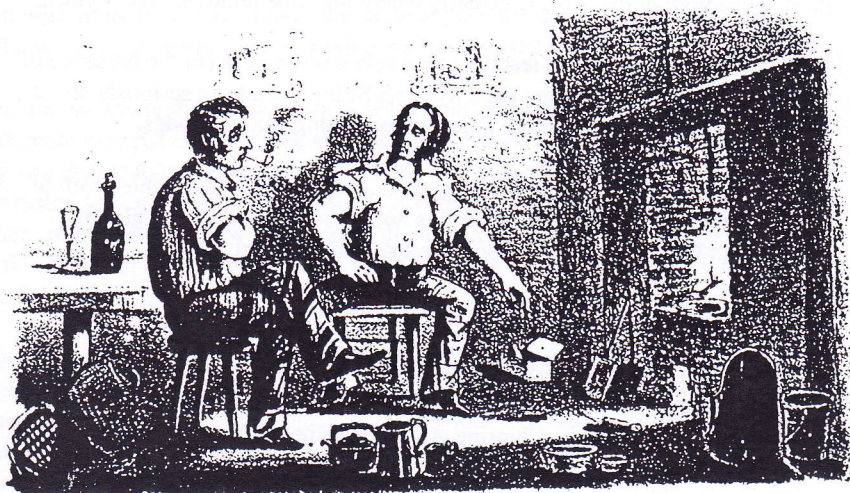
Larry Holland
estuary@willapabay.org

Committee Meeting

The Committee is aware of the need to be frugal with TTTG monies. Recently the cost of hiring the room for our Committee Meetings rose. Rather than out lay more revenue on an elaborate Committee venue it was decided to seek out a cost effective alternative.

To find out the location of the Committee meetings you only need to volunteer to join the Committee.

The illustration below conveys some notion of the extent of TTTG's economy measures



TTTG Library News

Recent Donations

1948
HARDWARE
YEAR BOOK

Incorporating
"HARDWARE & MACHINERY" DIARY



Fixed Knife Planing

extract from T Hesp Principles of Woodcutting Machinists' Work
Longmans, Green and Co 1951

FIXED KNIFE PLANING

The fixed knife pares a fine single shaving off the surface of the material and leaves a theoretically true planed surface. This may be highly commendable in theory, but in practice it has many limitations and is found to have a very restricted field of usefulness. It will not reduce material to a definite size due to it being only capable of paring off one fine shaving at a time, and the fact that it does not operate too successfully against the grain usually limits its function to planing one side of the board only.

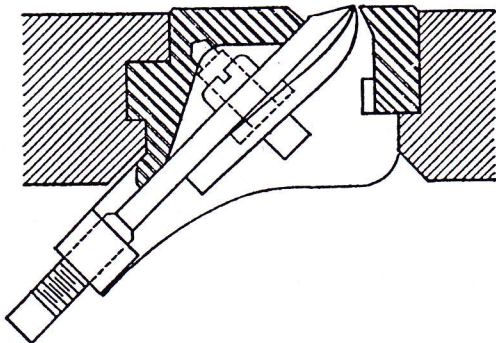
The most efficient application of this type of planing is in the high-speed matching and planing machine in which fixed knives are used in conjunction with rotary cutters. Their use here is confined almost exclusively to the bottom side, though they are used in some machines to plane edges. The material first passes over a rotary cutter-block which removes the inevitable dirty surface and grosser irregularities, leaving the fixed knife or knives to slice a very fine shaving off the already rotary planed surface. By this method a very fine planed finish is obtained which is not adversely affected by a high feed speed; indeed it is safe to say that with the fixed knife the higher the feed speed the better the finish; the reverse is the case with the rotary knife.

The employment of fixed knives in conjunction with the rotary cutters in the high-speed matching and planing machine enables such work as tongued and grooved floor-boards to be produced at a very high feed speed with an excellently finished face or top side. As the top side of a floor-board is all that is seen when nailed in position, this side is run through the machine on the bottom and planed first by a rotary block and then by one or more fixed knives to produce a splendid finish. The other flat side is planed by rotary cutters as it has to be reduced to a correct thickness, and the edges are tongued and grooved also by rotary cutters of varying types which at a high feed speed leave a very indifferent finish. As long as the tongue and groove are a correct fit the indifferent finish is of little consequence as when the board is laid the back side and edges are out of sight.

Probably the only other machine in which this method of planing is generally used is in the "lightning planer" in which the boards previously sawn to thickness are fed by a large-diameter rubber roller over a fixed knife set in the table of the machine.

To give a shearing cut the knife is set diagonally across the table. In these machines very high feed speeds are obtained, often in the region of 700 to 800 f.p.m. They are used chiefly for short box boards and kindred work; their purpose, as already stated, is only to give a smooth planed surface to the board; they are unable to reduce it to a common thickness.

FIXED KNIFE PLANING



Section through fixed knife assembly.



Keesteele Claw Hammers

"K.O." super quality carpenters' hammer with oval eye and rubber fitted handle." Full polish finish.

"KING HIT". A high grade hammer. Bright finish.

"SERVICE" quality with black finish.

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KENT ROAD, MASCOT, N.S.W.

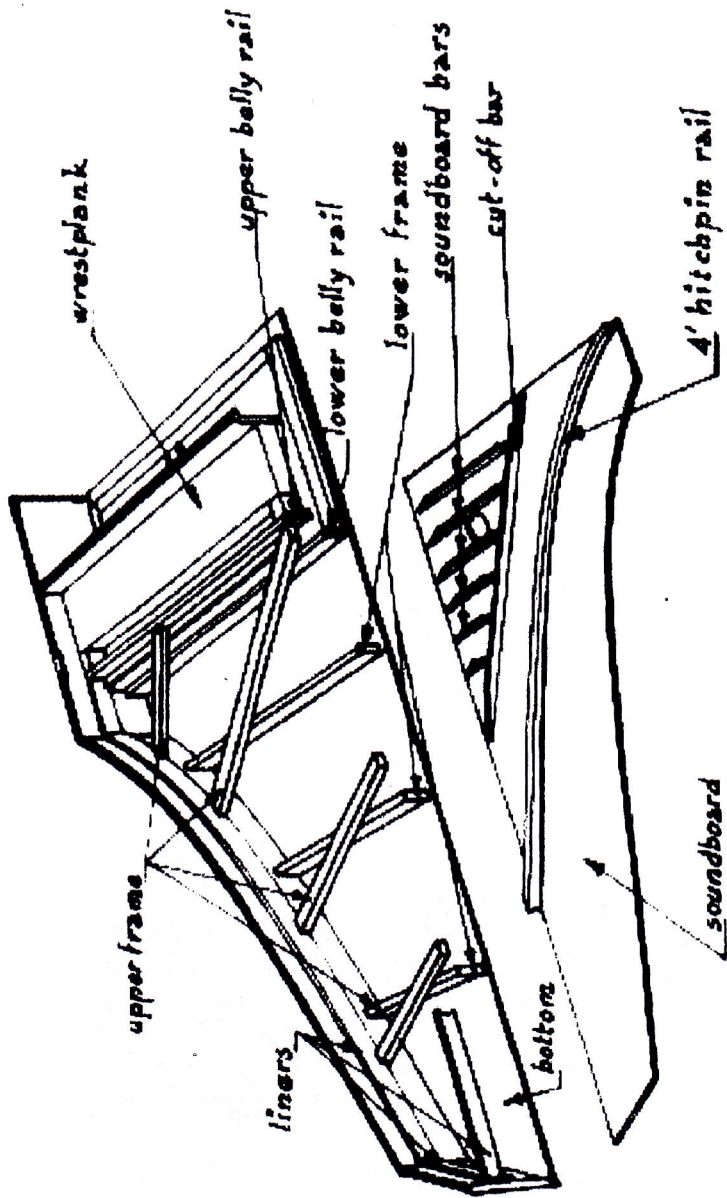
HITCHPINS, JACKS & HARPSICHORDS

A fine harpsichord is a work of art as well as a musical instrument. As well as inspiring great musicians, from Francois Couperin to Handel, they were amazingly embellished inside and out with exquisite painted designs (a curiosity brought about by the fact that the Antwerp harpsichord makers from 1580 onwards had to belong to the Guild of St Luke, controlling the activity of painters).

The skill required in making the instruments may be dauntingly precise, and the pieces and workings of the harpsichord strangely unfamiliar. But a quick overview of the main construction may dispel initial fears.

The harpsichord is a plucked instrument, and at the heart of the instrument is the **jack**, a vertical slip of wood which carries the **plectrum** (originally a ravens quill). **Strings** are stretched over the **soundboard** and attached to each end of the frame (to the **hitchpin rail** at the edge and **tuning pins** or wrest pins at the front). When a key on the harpsichord is depressed, its end rises lifting the jack past the string so as to pluck at it with the quill. **Registers** or guides hold the jacks in plucking position and can be moved to different set positions. Most harpsichords have two or more jacks per note which can be brought into play by shifting the register sideways by means of a lever or **stop** protruding from the right side or **cheek** of the instrument. Jacks are prevented from rising too high by a **jackrail** mounted above them. The crosspiece which holds up the front of the soundboard is called the **bellyrail**, the **nameboard** sits above the keyboard and covers the front of the **wrestplank** (into which are drilled the tuning pins). Further detail of the **frame**, **liners** and **rails** inside the case of the harpsichord are shown in the diagram opposite.

Harpsichord revival has reached the stage where audiences, players and makers alike can rediscover a treasurehouse of early music and unique craftsmanship which once lead the great Couperin to remark:
" the Harpsichord has in its way a brilliance that one scarcely finds in other instruments."



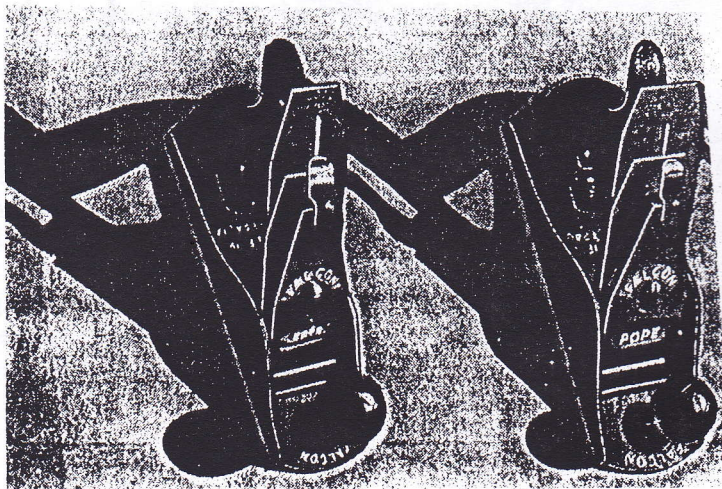
AUSSIE TOOLS 1948

Extracts from the 1948 Hardware Journal

CHOICE OF THE CRAFTSMAN

"Falcon" quality hand tools, although one of the most recent additions to Pope's extensive range, have already achieved a place of distinction in hardware circles. They have quickly earned respect for their quality of workmanship and appearance, both of which compare favorably with previously accepted standards—today there is no better known, or favorably regarded tool than the "Falcon" brand. Although "Falcon" tools cost no more than other brands, they are built to the highest possible standard of quality, and have become the tradesman's choice. Every article is constructed from only specified materials of highest quality, and is subjected to rigid control during the process of manufacture. Each is closely inspected before shipment, ensuring reliability and dependability during the services for which it was designed.

Illustrated at top right are three examples of the "Falcon" plane series. Participate in the benefits of the customer goodwill which "Falcon" tools create.



Subscriptions

Members are reminded that annual subscriptions are now due.

Those of you who are able to attend next week's meeting may pay the treasurer directly.

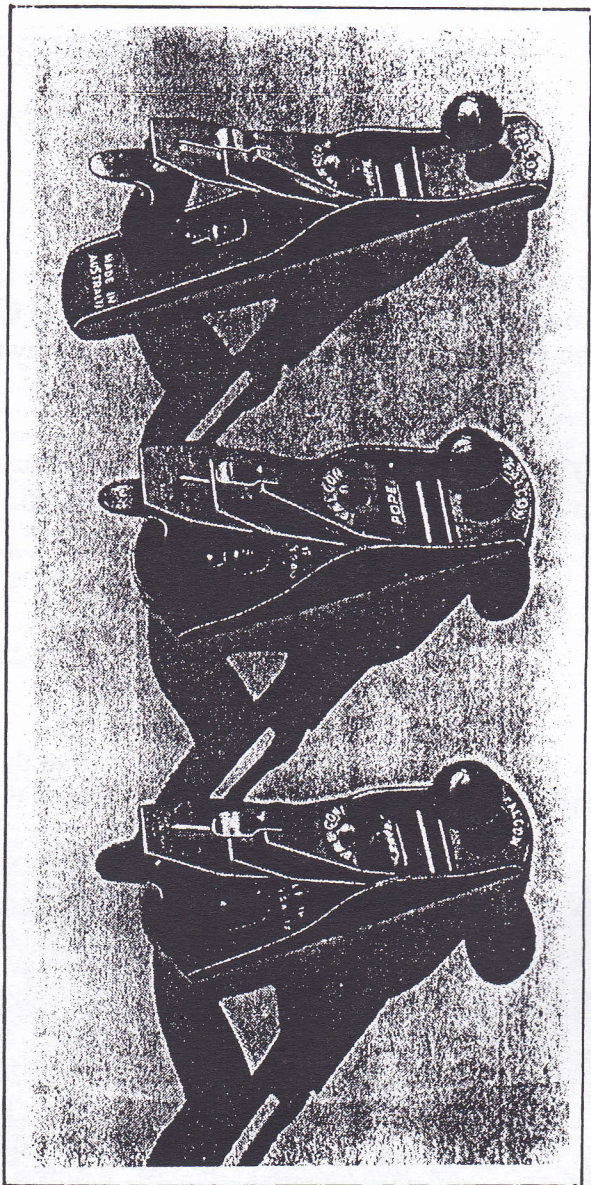
Interstate, country and any other members unable to attend next week's meeting are requested to post their cheque for \$30 to:

The Treasurer TTTG
PO Box 240
Grosvenor Place
Sydney NSW 1220

If those paying by cheque could cut their address label from this issue's envelope and include it with their payment it would greatly help the Treasurer's and Circulation Editor's tasks.

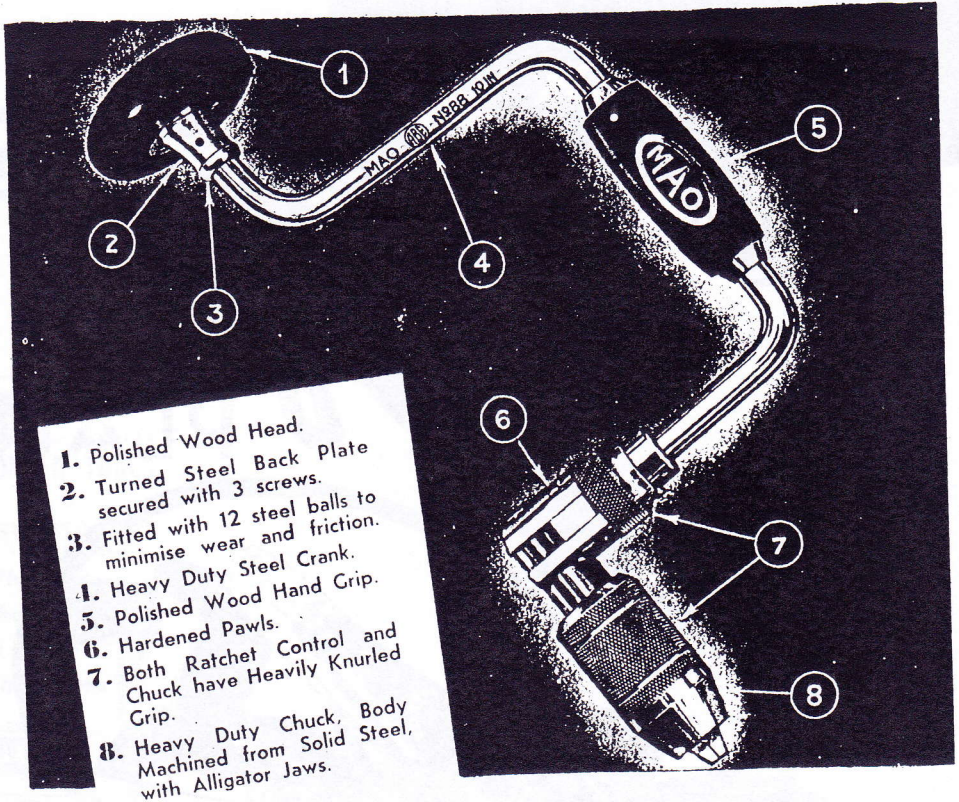
Thank you

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This is a special discount price for TTTG members



AUSSIE TOOLS 1948

Extracts from the 1948 Hardware Journal



1. Polished Wood Head.
2. Turned Steel Back Plate secured with 3 screws.
3. Fitted with 12 steel balls to minimise wear and friction.
4. Heavy Duty Steel Crank.
5. Polished Wood Hand Grip.
6. Hardened Pawls.
7. Both Ratchet Control and Chuck have Heavily Knurled Grip.
8. Heavy Duty Chuck, Body Machined from Solid Steel, with Alligator Jaws.

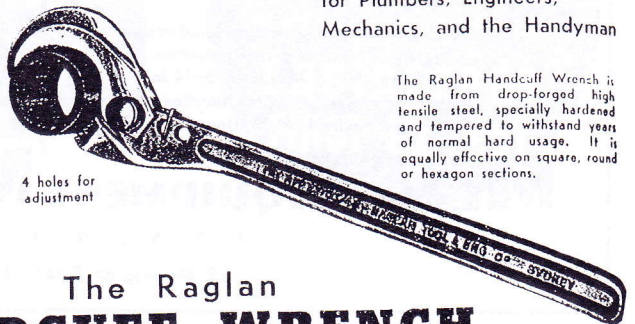
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This excellent light pattern one-hand tool is designed on the self-wrapping principle, and provides maximum contact. It adjusts itself to the shape to be held, and is self-releasing.

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4 holes for adjustment

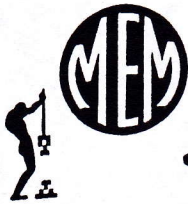
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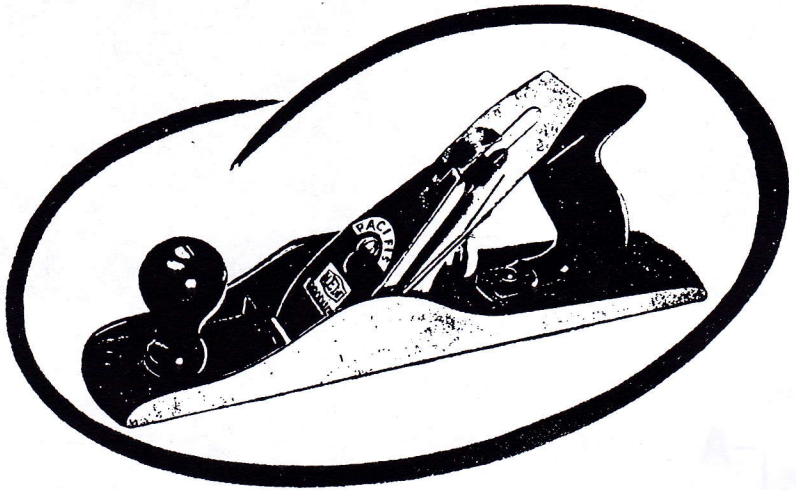
The Raglan HANDCUFF WRENCH

TTTG 1998-99 Annual General Election Results

The previous Committee was returned.



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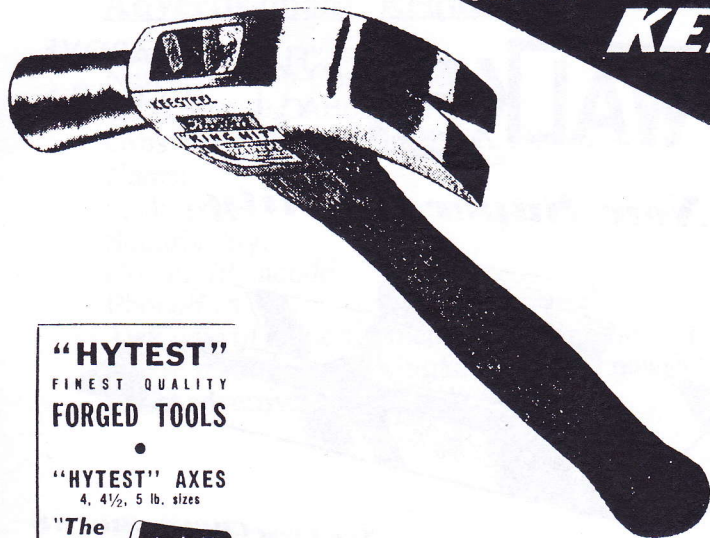
Extracts from the 1948 Hardware Journal

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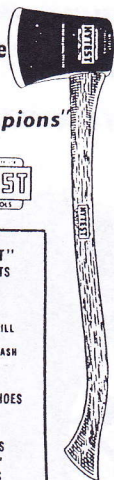
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AUSSIE TOOLS 1948

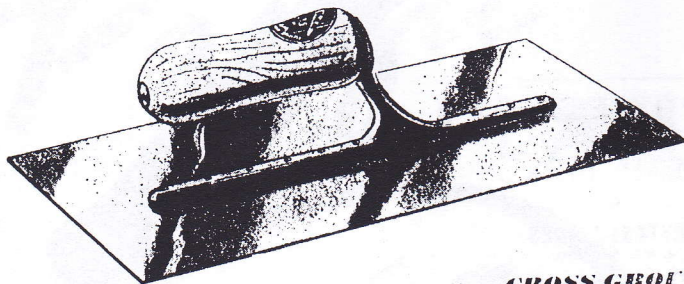
Extracts from the 1948 Hardware Journal



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11" x 4 $\frac{3}{8}$ " x 20G.

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Tick type of Advertisement { } For Sale { } Wanted

Please place the following in the TTTG newsletter;
(Print advertisement below)

RATES:

Commercial advertisements;

50c per line,

Quarter page \$10, Half page \$15, Full page \$20

First advertisement is free.

(Non -commercial advertisements free.)

Terms:

book three placements to receive first placement free.

Layout and artwork to be supplied by advertiser.

Advertisers will be invoiced after first placement.

Signature:

date:

Henry Blacks' 1998 Tool Sale.

Henry's tool sale was judged a success by t both sellers and buyers. As usual there were great bargains to be found. Next year's sale will be at the same location. The proposed date is

The First Sunday in March 1999

CLASSIFIED ADVERTISEMENTS.

WANTED.

Any unusual tools or ephemera relating to Alex. Mathieson and Sons of Glasgow and Edinburgh. Also Needlework tools, especially unusual scissors. Contact: John McDonald 02 62886142 Or write to : P.O. Box 13 Duffy A.C.T. 2611.

Copy;
George Ellis
"Modern Practical Joinery"
June 1902
Woodworker Annuals.
Condition and price to the editor TTTG.
(or phone 0298697487)

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THE TRADITIONAL TOOLS GROUP Inc. (TTTG)

The Secretary

TTTG Inc.

P.O. Box 240

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The Administrator TATHS

60 Swanley Lane,

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P.O.Box 1163

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