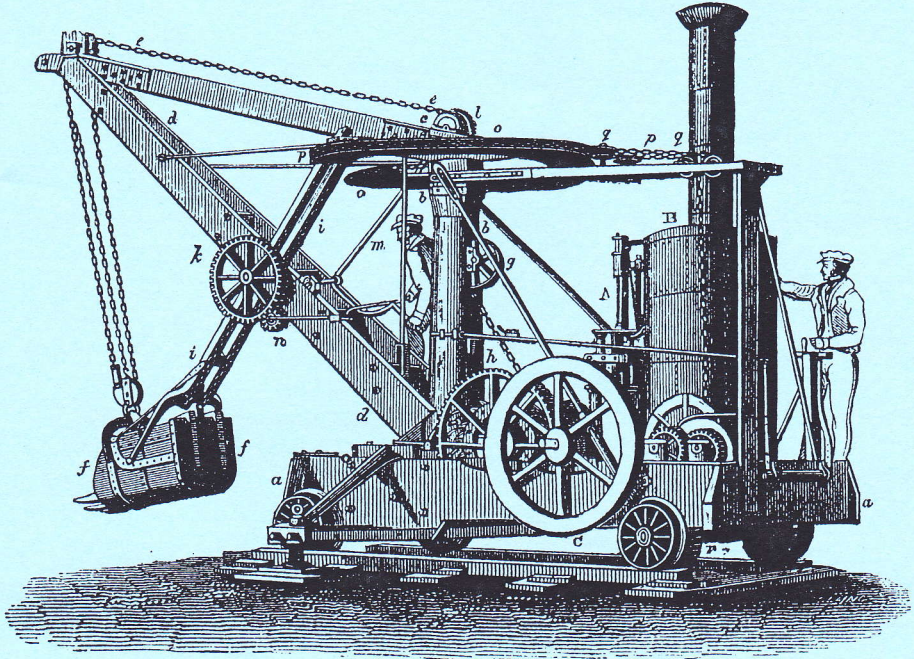


# T T T G



STEAM EXCAVATING MACHINE.

Newsletter 46.

April 1999.

The Traditional Tools Group Inc.

# TTTG Inc.

## THE TRADITIONAL TOOLS GROUP (Inc.)

**TTTG NEWSLETTER NO. 46.**  
**April 1999.**

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*1998-1999 Subscriptions are due*

**Cover:** **Steam Excavating Machine.**  
Reprinted from  
The Magazine of Science and School of Arts  
G Francis Editor United Kingdom 1844 Volume V p25

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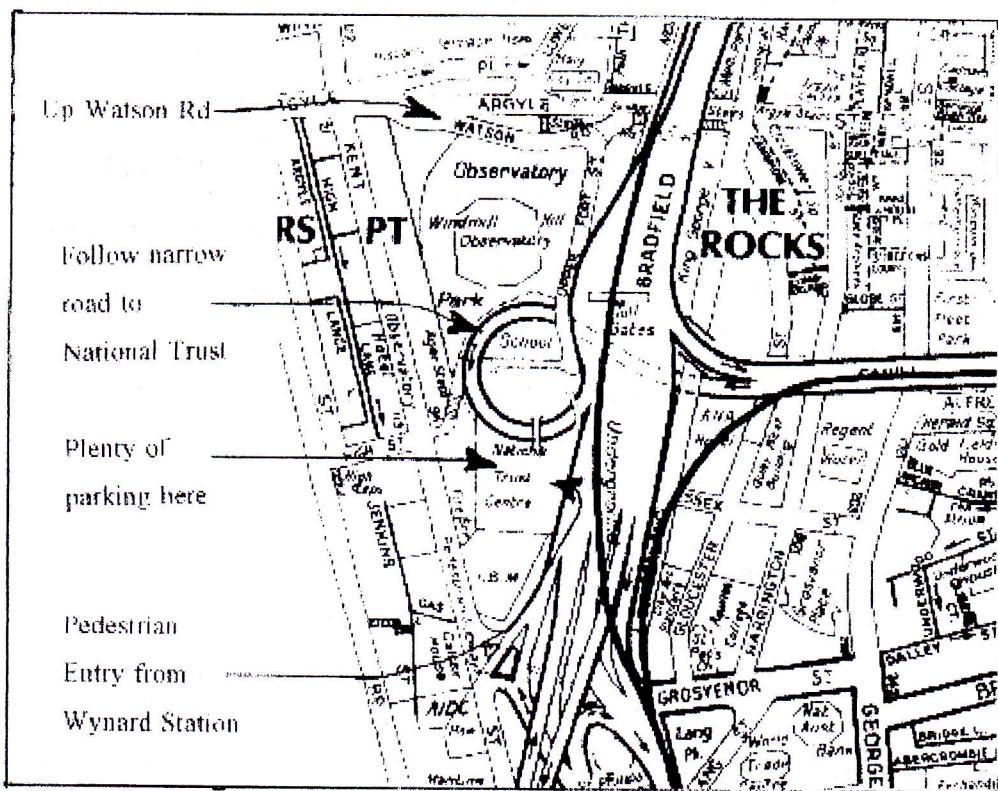
## Next Meeting

Tuesday 13th April 1999

National Trust Centre

Observatory Hill

Commencing at 7:00pm



## PROGRAMME

- 1. SAWS AND SHARPENING.** CHRIS KLEIN RUNS PENINSULA SAWS & SHARPENING SERVICES AND HE HAS KINDLY AGREED TO ADDRESS OUR MEETING ON THE TECHNIQUES AND TRICKS OF WHAT IS RAPIDLY BECOMING A DYING ART IN OUR THROWAWAY SOCIETY. EVEN IF YOU NEVER INTEND TO SHARPEN YOUR OWN SAW, THIS IS A FASCINATING EVENING WHICH SHOULD NOT BE MISSED.
- 2. SHOW AND TELL.** BRING ALONG YOUR MOST UNUSUAL SAW!
- 3. THE LIBRARY.** CHECK OUT OUR LATEST ACQUISITIONS.
- 4. SUPPER BY MARIO DATO**

## Editor's Notes

Bob Crosbie.

Does any member have any information on Block Making machinery? If you have never heard of Isambard Brunel or Maudslay and Field the article **Block Machinery** will put you in the picture. If you do have any special knowledge then John Smith of the Sydney Heritage Fleet wants to speak to you, see **Letters to the Editor**.

Henry Blacks recent Tool Sale was a big success and he has another sale planned. TTTG will let you know when the next sale is as soon as possible.

At the sale TTTG sold a number of copies of Trevor Semmens' AUSTRALIAN PLANEMAKERS Second edition.

Stocks of this book are getting low so why not secure your copy at the special TTTG discount price of \$12. Copies will be available at the next meeting. They would make a great present for that person who has everything.

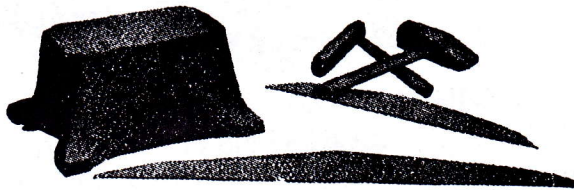
Terry Butcher has sent another letter from Tasmania. This time you can read about an interesting Bruny Island identity as well as absorbing a little of the ambience of the island.

Good reading and hope to see as many members as possible at the next meeting.

**T.M. Goodall & Co.<sup>LD</sup>**  
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---

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HAMMERS

---

COPIES OF TREVOR SEMMENS'  
AUSTRALIAN PLANEMAKERS Second edition

Will be available priced at \$12 each.

**This is a special discount price for TTTG members**

## Letters to the Editor

The Editor has received several interesting letters.

The Secretary TTTG,  
Dear Sir,

In the TTTG Newsletter no. 45 of February 1999 the article on Wheel Making by Steam Power reference was made to the machines manufactured to process sheave blocks in the British naval dockyards. We believe that a modern version of these machines is still operational in the museum at Portsmouth Dockyard.

Sydney Heritage Fleet is currently engaged in manufacturing by hand approximately 300 wooden blocks to be used in the restored barque *James Craig*.

However we have been contemplating for some time fabricating a block making machine for demonstration purposes.

If any members have plans or photographs of these machines which they would allow us to copy we should be most grateful. Could you please bring this to the attention of your members at the next meeting.

Thank you for your assistance .

Yours Sincerely,

John Smith

Chief Executive Officer Sydney Heritage Fleet

-The Editor has replied to John Smith enclosing a copy of the article **Block Machinery** (reproduced in this issue).

Do any members have additional information?

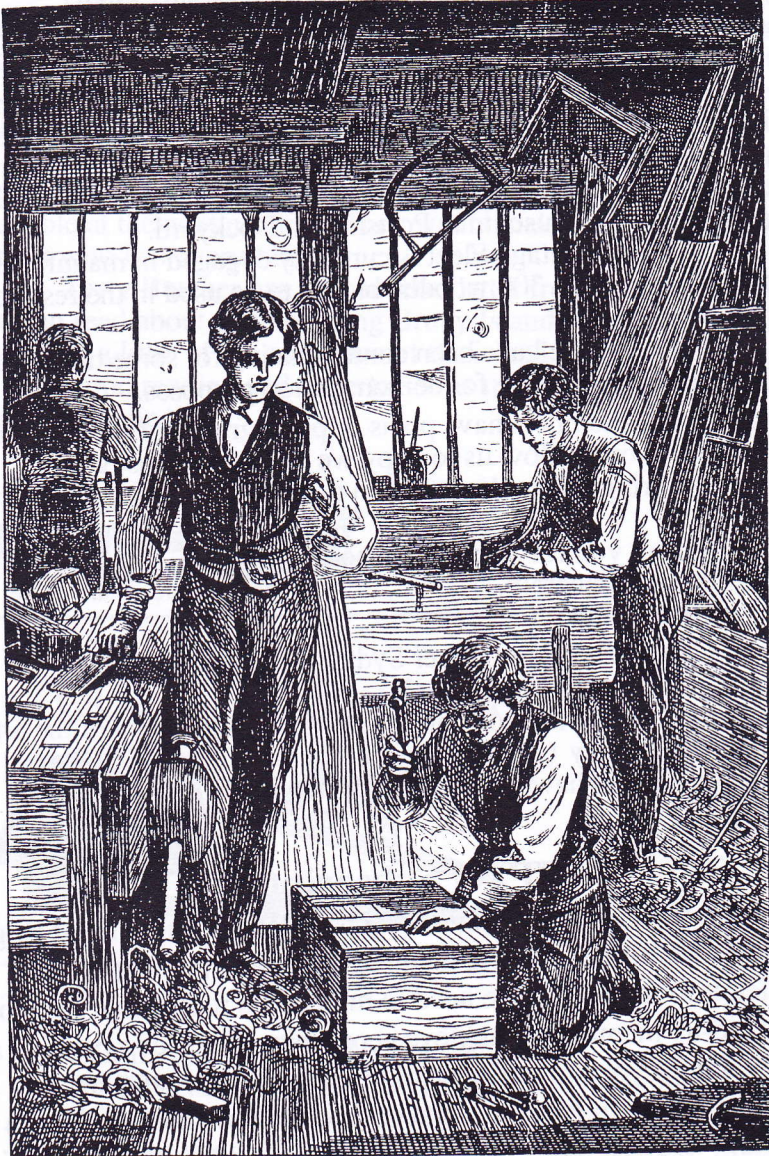
## **TTTG Subscriptions**

Are you enjoying reading this TTTG newsletter? The biggest single expense which TTTG has, is the production and posting of the newsletter to members. We need to maintain a reasonable level of fully paid-up members to achieve economies of scale in printing and distribution. If you are unfinancial, this is **definitely** the last newsletter you will receive. Send off your cheque now for \$30 to the Treasurer or better still, give it to him at our next meeting on 13th April.

## Letters to the Editor

John Daniel has sent this illustration. It is from *Carpentry & Joinery* by S T Aveling and published in 1871 by Frederick Warne & Co. Bedford Street, Covent Garden London

John observes that “although there is not a great number of tools illustrated, it is interesting to see the workmen’s dress and grooming.”



THE WORKSHOP.

## Tasmanian Correspondent's News Terry Butcher

On Bruny Island there is a population of around five hundred people and I'm sure there is a story to tell about every one of them.

Here is a story of one.

His name is John Shoobridge and he came to live here on the island about forty years ago. He spent his earlier years roaming and working among the sheep and cattle stations in the Kimberley district of Western Australia.

Then came time to settle down and so marriage and several children later took up property at Adventure Bay on Bruny Island and ran an orchard and vegetable farm.

Last week a couple from Melbourne that have also decided to buy a block of land and settle at Adventure Bay asked Marian and I to lunch when we arrived we found they had another luncheon guest, John Shoobridge.

I was delighted for I'd first heard of this man many years ago in Sydney. Somebody rang in and said there was a program on television on Bruny Island so we raced to our neighbours and begged to watch the program.

John was being interviewed by a young A B C reporter and was discussing life when the reporter asked John if it was true that he had made his own coffin. "Yes" said John looking straight at the camera "it would be damned difficult to make it when I'm dead".

It brought to myself how wonderful that there are people who think this way and can be found on Bruny.

We later learnt that he was a furniture maker, mainly garden seats both single and double, and when we saw our first examples-well they were dinki di Aussie bushman pieces and I was anxious to meet him and of course visit the factory where these amazing pieces originated.

So after lunch and we are into the Port and Coffee stage. John says why not come up to my place and see for yourself if you are so keen.

He lives alone-kids grown up and living on the mainland-his wife had passed away some time ago. He is a great fan of Banjo Paterson and showed us a book of his poems that Banjo had written a very nice tribute to John as he too wrote doggerel poetry and back in the 30s they had got along extremely well.

After another large Port we are at last invited to the factory. Best described as a tin shed with a window and door. Large stacks of Tee Tree some split expertly through the centre. Inside we saw several chairs and settees and a bird cage all made from Tee Tree.

His tool kit lay proudly on his bench; a small hatchet with a concave blade- easier to control he said-especially for trimming the ends and slicing out the notches where one piece lay across the other- one hammer, a farriers not original handle but this one had seen a lot of use- three saws- a panel- a rip and an old tenon. A brace with a half inch bit and a bright yellow handled Stanley inch and a half chisel.

Nothing else and I mean nothing. No vyce. no power tools. not a plane, no froe. I was amazed! These pieces he makes are exported all over Australia. I did not get to see the coffin but promised on the next occasion.

Apart from all this furniture making he drives a battered utility- goes fishing, keeps his house spotlessly clean, entertains and cares for his large garden and orchard, even has the odd dinner party.

John Shoobridge is eighty eight years young.

## **THE SWAGMAN'S REST**

We buried old Bob where the bloodwoods wave  
At the foot of the Eaglehawk;  
We fashioned a cross on the old man's grave  
For fear that his ghost might walk;  
We carved his name on a bloodwood tree  
With the date of his sad decease,  
And in place of "Died from effects of spree,"  
We wrote "May he rest in peace."

**A.B.Paterson**

## **Block Machinery**

Reprinted from

The Magazine of Science and School of Arts

G Francis Editor United Kingdom 1844 Volume V

Block Machinery pages 111 & 112

This very skilful and complete combination of mechanical powers, the invention of Mr, now Sir Isabard Brunel, has, of late, been frequently mentioned in connection with his great work, the Thames Tunnel, that the present may be a fit opportunity of describing the Block Machinery to our readers.

A block, as used on board of ships, is simply a pulley in the greater part of its modifications. One description of block, however, called "dead-eye", is not a pulley, being unprovided with sheaves. These dead-eyes are used for setting up and fastening the shrouds, and other standing rigging of the ship, while sheaved blocks are used for the running rigging. Blocks of both descriptions are usually of an oval spheroid form, flattened at opposite sides. Dead-eyes are made out of one piece of wood pierced with the requisite number of holes, through which the standing rigging is passed; and single-sheaved blocks are made up of three distinct parts, viz. the shell, the sheave, and the pin, which serves as an axis round which the sheave revolves. Some blocks are made with two, and other with three, and even four, sheaves, which all revolve on the same pin or axis, and are consequently parallel to each other, in separate chambers formed for that purpose in the shell of the block.

The vast number of blocks constantly required for the use of the English navy and the mercantile marine of this country, may be understood from the fact, that upwards of 1400 blocks of all sorts are needed for fitting one ship of 74 guns; while, for smaller vessels, although the sizes may be different, the number will not materially vary from what is here stated. It was, therefore, long a matter of considerable moment to devise means for simplifying the mode of manufacture, and thus diminishing the cost. In the year 1781, a large manufactory was established at Southampton by Mr Taylor, who patented an improved method of making sheaves, and who further adapted machinery for cutting the timber and shaping the shells of the blocks.

For some time, Mr Taylor supplied the blocks required for the use of the navy. A few years after the expiration of his patent, machinery was introduced into the Dock-yard at Portsmouth, and the Government undertook the manufacture for the navy, with the double object of economy as to the cost, and of being independent of any individual for the supply of an article of the first necessity for the equipment of ships.

About this time, 1801, Mr. Brunel succeeded in completing a perfect set of working models for constructing both the shells and sheaves of blocks. This model being submitted to the Lords of the Admiralty, the invention was at once adopted by the Government, and Mr. Brunel was engaged to superintend the construction of the requisite machinery upon a scale sufficiently large for making blocks to supply the whole naval service of the country. The completion of the machinery occupied nearly six years; it was constructed by Messrs. Maudslay and Field, and brought into full operation in September, 1808, since which time it has been found to work without requiring any alteration, and is attended only by workmen of ordinary description. The above models are now in the possession of the Navy Board, and were lent to Mr Faraday for the illustration of his lecture on block machinery, delivered a short time since, at the Royal Institution.

They consist of eight separate machines, which work in succession, so as to begin and finish off a two-sheaved block, four inches in length.

All foreigners of distinction visit the Dock-yard at Portsmouth, with the view chiefly of inspecting this block-making machinery. It is the invention of a Frenchman, and many of his countrymen, doubtless, regret, as M. Dupin has hinted, that Mr. Brunel "did not consecrate his talents to the defence and glory of his own country;" but Sir Isambard Brunel, we suspect, has little occasion to regret his coming to England instead of France.

As a coup-d'œil of the block machinery in the Portsmouth Dock-yard, it may be said to consist of a system of no less than sixteen different machines all put in motion and in work at the same moment by a steam engine of 32-horse power; the work performed by which, consists of various labourious processes, in addition to moving the block machinery. Seven of the machines are employed in finishing the shell, and nine in completing the sheave.

The **first** of them is the saw-mill, which squares the rough tree of ash or elm, generally the latter. The **second** is a circular saw, which cross-cuts it into the requisite lengths. The **third** is a boring machine, by means of which, while one bit pierces the centre to receive the pin on which the sheave turns, another bores a hole at right angles to it, to admit the first stroke of the chisel that scoops out the mortice in which the sheave turns. This is completed by the **forth**, which is the most ingenious piece of mechanism, and is particularly remarkable for the force, the rapidity, the workmanlike, we might almost say, the polished manner in which the shell is mortised out. The **fifth** is a circular saw, which takes off the four corners of the shell, and reduces it to the form of an octagon. It is then carried to the **sixth**, or shaping-machine, consisting two of equal and parallel wheels moving on the same axis, to which one of them is firmly fixed; while the other moves in the line of the axis, so that by sliding, the shells of blocks of any size may be admitted between their rims. Ten of these shells being fixed to the peripheries of the two wheels, the machine is whirled round with incredible velocity, and speedily reduces the outer surface of them, by the application of a cutting instrument, to a proper shape and curvature; after which, by reversing the motion of the wheels, the ten shells are simultaneously turned one-fourth part round, and a new surface presented which is cut and shaped as before. The two remaining sides are then treated in the same manner, when the whole ten shells are completely shaped and removed from the wheels. The **seventh** and last operation is the scoring of the shell, or scooping out a groove for the strap by which the block is to be suspended.

The sheaves are usually made of lignum-vitae, and the **first** operation is to cut the log into plates of the required thickness, by means of a circular saw. The **second** is to bore the central hole to receive the pin, and at the same time to take off the angles and reduce the piece to a perfect circle, which is accompanied by means of a crown saw. The sheave thus shaped is brought, in the **third** place, to the coaking machine, which is a piece of mechanism of singular ingenuity. A small cutter, transvering round the central hole of the sheaves, works out, to a certain depth below the surface, three semicircular grooves for the reception of the metal coak or bush: and both the grooves and the coaks are so uniformly true and fit each other so accurately, that a tap of a hammer is sufficient to fix the coak in its place. The **forth** operation is the casting of the metal coaks with grooves, or channels, in the inside of their tubes, for the reception of oil or grease, and the prevention of waste.

The **fifth** machine is a drill of peculiar construction, by which also the pins are inserted to fix the coaks to the sheave. The **sixth** is the riveting hammer; and the **seventh** a machine for broaching the central hole of the sheave by means of a steel drill or cutter. The **eighth** process is that of turning a groove or channel round the outer circumference of the sheave for the rope to work in; this is performed by a lathe so constructed, that while the groove is cutting, another part of the engine is occupied in smoothing the two surfaces of the sheave. The **ninth** or last operation is the making, polishing, and fixing the iron pins on which the sheave turns, and which completes the block for use.

The quantity of blocks used in the navy, together with their great expense under the old system, renders the present machinery of the utmost importance. Not only has a very considerable saving been effected by it, but an article provided of an infinitely better quality than was formerly made by hand. By means of the machinery, the shells and sheaves of the blocks are cut of all the requisite sizes, and finished with a degree of precision which is found in itself to be of great advantage; since the shell or the sheave of any one block, of a given size, will fit, and may be at once adapted to any other sheave or shell, of the same size, without requiring any adjustment.

It is found that with this machinery 10 men can perform the work that previously required 110 men for its accomplishment, and can easily finish, within the year 140,000 blocks of various sorts and sizes, the value of the work performed being not less than 50,000 pounds. The total cost of the machinery was 46,000 pound, and the saving per annum, in time of war, 25,000 pounds, after allowing interest for capital, and paying the expense of all repairs. As a reward for his ingenuity, and for services during six years, in superintending the construction of the machinery, Mr. Brunel received from government 20,000 pounds, a sum exceedingly moderate, when the annual saving by his invention is considered.

The great importance of this invention, in a national point of view, is such, that in order to guard against the consequences of any accident happening to the machinery at Portsmouth, during the time when the fitting of a fleet might be in progress, duplicate machinery has been constructed in the Dock-yard at Chatham, and is kept in constant readiness for action.



*He Preached in Egypt, Africa and Britain, and at length  
was Crucified*

An engraving of St. Simon from a bible of the late 17th century. The style of handsaw shown obviously derived from sword technology and is typical of medieval craftsmen. Certainly by 1690, this type of saw would have appeared antiquated to the ordinary reader. Its form would have been familiar to the artist through studies of wood blocks executed over a century before by Wierix who depicted such saws in many of his pictures.

## Previous Meeting

### Tuesday 9 February 1999

Primitive Tools was the theme and the Committee was a little apprehensive as to the success of this meeting.

When I walked into the Annie-Wyatt room my fears dissolved. The extent of the display of Oceania was impressive.

Most of the examples were from New Guinea and belong to Rick Mitchell. Rick has been a Committee member for several years but never mentioned his time in New Guinea.

After he got over his initial nervousness Rick's talk had the audience fully engaged.

If you missed the meeting you can look forward to the article I will try to encourage Rick to write for this newsletter.

## Next Meeting

### Tuesday 13th April 1999

Chris and Odette Klein run Peninsula Saws and Sharpening Services and Chris has kindly agreed to come along to our April meeting and address us on the subject of saws in particular and sharpening in general. Chris will range from handsaws to circular saws and cover the pitfalls in maintaining all edge tools. With the advent of "throwaway" hardpoint saws and the almost universal use on building sites of portable electric chop saws equipped with tungsten carbide teeth, the pride and skill in maintaining a fine panel or rip saw is rapidly vanishing. Chris's talk promises to be as informative as it is interesting and is an occasion not to be missed.

*I am but mad north-north-west;  
when the wind is southerly,  
I know a hawk from a handsaw.*

Hamlet

William Shakespeare

## Tool Sale and Swap

Despite the drizzle (which seems the norm in Sydney at the moment), the tool sale was well attended and lots of familiar faces were spotted looking for bargains or that rare find which has eluded the dedicated tool fossicker up to now. Those of our members who had the opportunity and didn't come along missed a great morning, lots of tools, lots of chat and lots of trading. There were several visitors from Queensland who had driven down specifically for the event and I am sure did not depart empty handed.

What is useful about the Tool Sale and Swap is the fact that everyone present is interested in buying, selling or swapping tools and the market value for any item is very rapidly established. Damaged wooden moulders of non-descript make were to be had for a few dollars whilst interesting eighteenth century shapes by legendary makers realized reasonable prices. Good saws and metal braces were very affordable and anyone putting together a basic user's tool kit would have been very pleased with what was on offer. As usual the Spiers and Norris planes commanded collector prices as did some of the rarer Stanley items. The usual Stanley Forty Fives and Fifty Fives were in evidence but apart from a few spare parts, not many seemed to be changing hands.

I spoke with Stuart Hirth who belongs to a craft tool group in Brisbane and had come down for the event. I have subsequently received an interesting email from him concerning his recycling of Sandvik power hacksaw blades into scrapers and scratchstock blades. TTTG will try and maintain regular dialogue with Stuart's group and exchange newsletters which may be borrowed from our library.

Don't miss the next Tool Sale and Swap!

Mike Williams

## **Library News: Donations**

Hans Bruner has donated the following:

Small Tools Machine Accessories and Engineers Supplies  
T M Goodall & Co Ltd 303-5 Kent Street Sydney  
1922.

## **Directory.**

The Traditional Tools Group Inc. TTTG  
P.O. Box 240 Grosvenor Place  
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Tools and Trades History Society. (TATHS.)  
The Administrator TATHS  
60 Swanley Lane,  
Swanley, Kent, BR8 7JG United Kingdom.

Hand Tool Preservation Association Australia. Inc. (HTPAA.)  
P.O. Box 1163 Carlton Victoria 3053

Hand Tool Preservation Society of Western Australia. (HTPSWA)  
8 Belham Street, Bayswater Western Australia 6053

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Or write to : P.O. Box 13 Duffy A.C.T. 2611.

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Record Lever Cap for Number 7 Try Plane

Will swap for Record SS Lever Cap for Number 7 Try Plane

Body for Record No 5 1/2 Plane

Set Blades for Record 050 Combination Plane

Condition and price to the editor TTTG.(or phone 0298697487)

---

Copy;

George Ellis

"Modern Practical Joinery" June 1902

Woodworker Annuals.

Condition and price to the editor TTTG.(or phone 0298697487)

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#### PLANE IRONS.

Parallel Irons by Mathieson, Spiers, Norris etc

Price and condition to Fred C/- The Editor TTTG

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Shoulder Plane by Spiers or Mathieson

Condition and price to the editor TTTG.(or phone 0298697487)

---

## Advertisement Request.

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TTTG Inc. P.O. Box 240  
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Tick type of Advertisement    { }For Sale    { }Wanted

Please place the following in the TTTG newsletter;

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Commercial advertisements;

50c per line,

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First advertisement is free.

(Non -commercial advertisements free.)

### Terms:

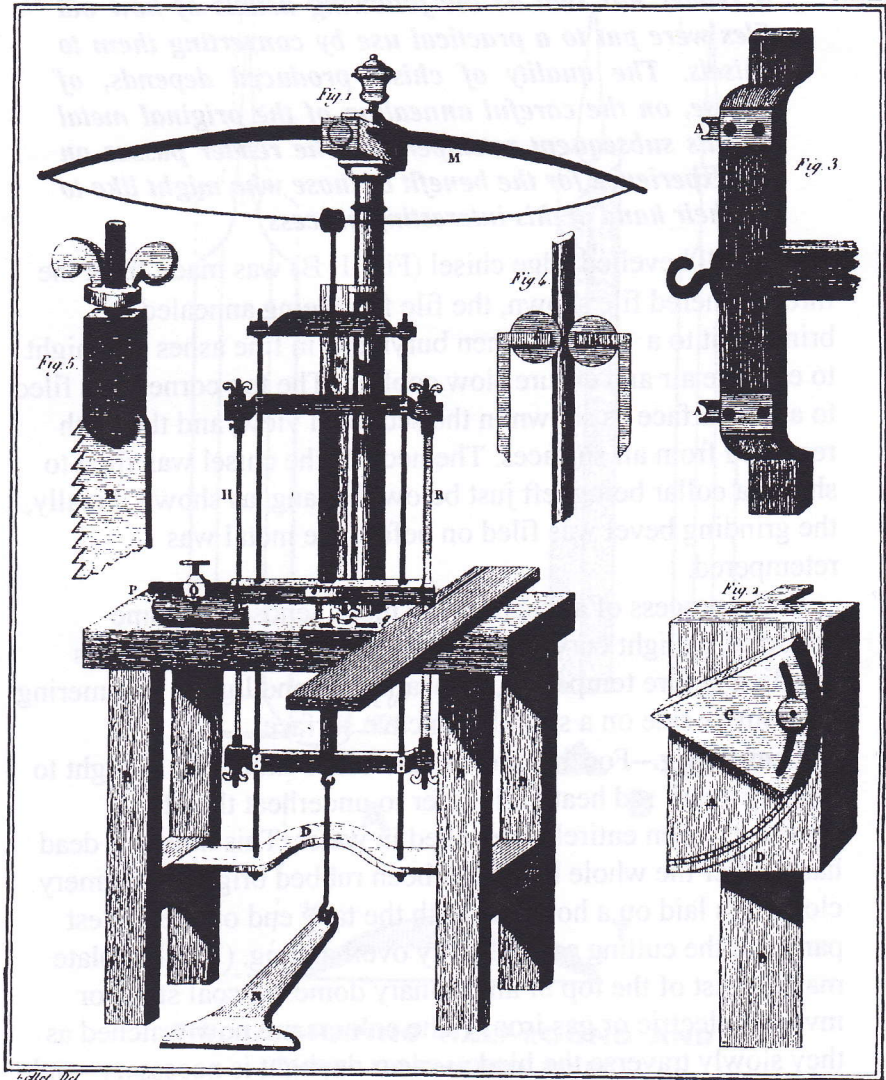
book three placements to receive first placement free.

Layout and artwork to be supplied by advertiser.

Advertisers will be invoiced after first placement.

Signature:

date:



Del.

Sculp.

A Double Bladed, Foot Operated Jigsaw of 1816

## CONVERTING OLD FILES TO CHISELS

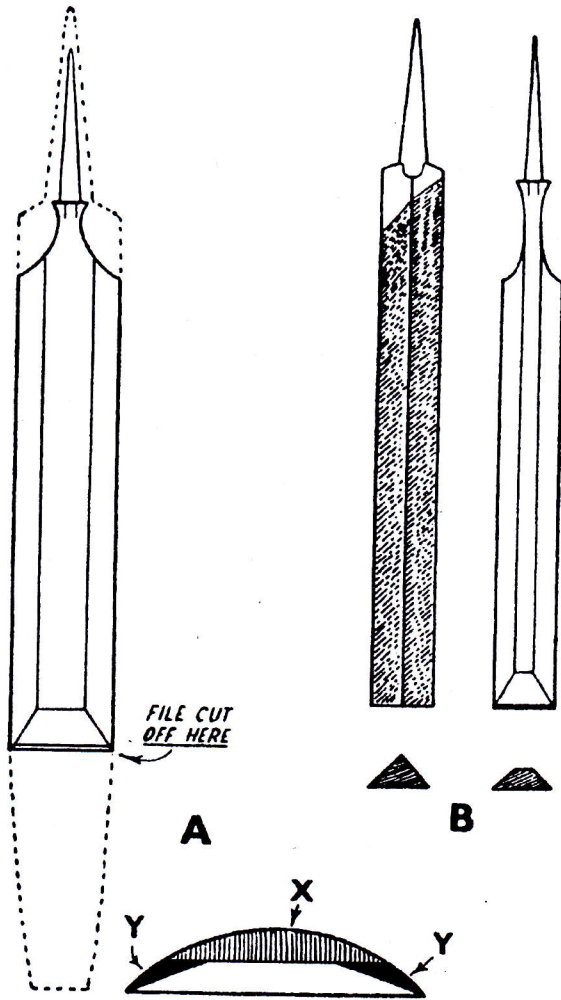
*A reader has sent us the following details of how old files were put to a practical use by converting them to chisels. The quality of chisel produced depends, of course, on the careful annealing of the original metal and its subsequent tempering. The reader passes on his experience for the benefit of those who might like to try their hand at this interesting process*

The small bevelled edge chisel (Fig. 1, B) was made from the three cornered file shown, the file first being annealed by bringing it to a red heat, then burying it in fine ashes overnight to exclude air and ensure slow cooling. The top corner was filed to a flat surface as shown in the sectional view, and the teeth removed from all surfaces. The neck of the chisel was filed to shape, a collar being left just below the tang, as shown. Finally, the grinding bevel was filed on before the metal was retempered.

In the process of annealing, the metal tends to become distorted, a slight curve developing along the length. This is rectified before tempering, by heating up and lightly hammering the convex side on a slightly concave surface.

**Tempering.**--For this process the blade should be brought to roughly a dull red heat {it is safer to underheat than to overheat}, then entirely quenched in water. This makes it dead hard. After the whole blade has been rubbed bright with emery cloth, it is laid on a hot plate with the tang end on the hottest part, and the cutting edge slightly overhanging. (The hot plate may consist of the top of an ordinary domestic coal stove or inverted electric or gas iron. ) The colours are now watched as they slowly traverse the blade---clear daylight is necessary--and as soon as the first colour, which is light straw, has deepened to brown on the area of the cutting edge the blade is quenched out by plunging it into cold water.

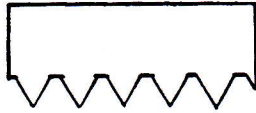
Files are, of necessity, made from the finest carbon steel and a chisel made from one will take a superb cutting edge. The degree of sharpness possible, however, is largely determined by the smoothness of the flat face of the chisel. The face should be honed down dead smooth and flat before the handle is fitted and the cutting edge finally set up.



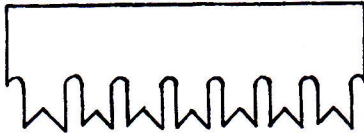
**FIG. 1. SHAPING HALF-ROUND AND THREE-CORNERED FILES**

The dotted line (A) indicates the outline of a half-round file, (X) and (Y) the areas to be removed. At (B) is shown how the triangular file is dealt with

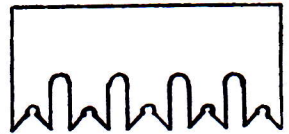
[Editor's note: This article appeared in a 1956 issue of WoodWorker. The emphasis for anyone who wants to try this is on *old* files. Modern files are made from sophisticated alloys which are not annealable by the techniques presented here.]



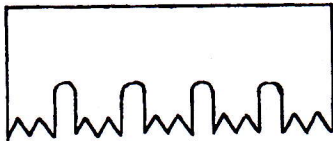
'PEG TOOTH'



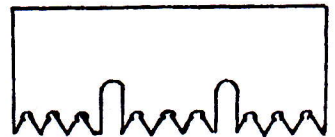
'M-TOOTH'



'TASMANIAN'



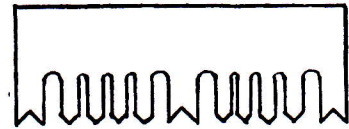
'GREAT AMERICAN TOOTH'



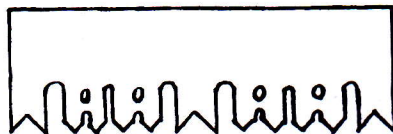
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\$10.00 Post free in Australia

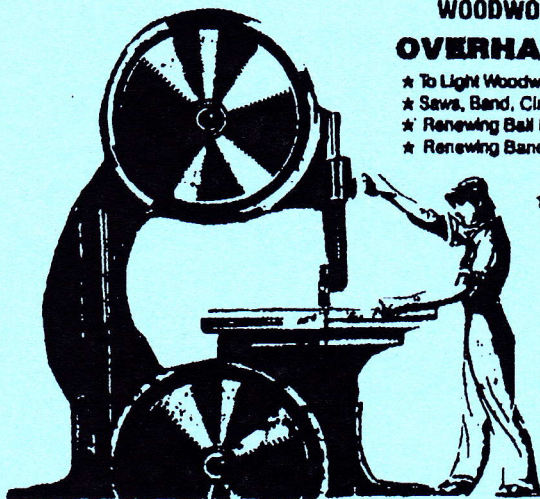
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## CHAS. E. SKINNER PTY. LTD.

**WOODWORKING MACHINERY**

### OVERHAULING & REPAIRS

- ★ To Light Woodworking Machinery,
- ★ Saws, Band, Circular, Dado, Chain Mortising Equipment
- ★ Renewing Ball Bearings
- ★ Renewing Bandsaw Rubbers, Respraying, Etc.



17 COOLAWIN ROAD,

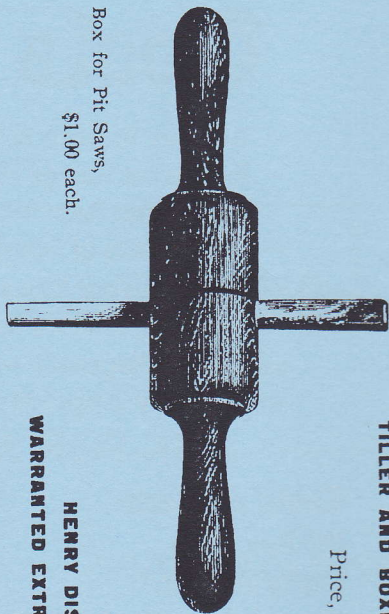
NORTHBRIDGE, 2063

(02) **9958 5170**



**TILLER AND BOXES FOR PIT SAWS**

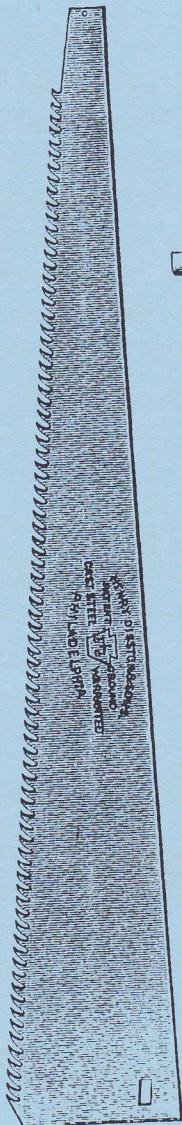
Price, \$2.25.



Tiller, . . . \$1.25 each.

Box for Pit Saws,  
\$1.00 each.

**HENRY DISSTON & SONS'**  
**WARRANTED EXTRA TEMPERED PIT SAW.**



Length, . . . 5 feet.  
Price, . . . \$5.00

5½ feet.  
5.50

6 feet.  
6.00

6½ feet.  
6.50

7 feet.  
7.00

7½ feet.  
7.50

8 feet.  
8.00 each.

**WHIP SAW.**



Length, . . . 5 feet.  
Price, . . . \$3.00

5½ feet.  
3.30

6 feet.  
3.60

6½ feet.  
3.90

7 feet.  
4.20

7½ feet.  
4.50 each.

**FUTOCK SAW.**



Futock Saws, assorted, from 1½ to 3½ inches wide, 8½ cents per inch in length.