

TATHS NEWSLETTER

13



TOOL AND TRADES HISTORY SOCIETY

NEWSLETTER 13

SPRING 1986

ANNUAL CONFERENCE....SEE INSERT..

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EDITOR: G. Gardiner, 73 Magdalen Road, London SW1S 3NE
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NOTICES

THE 1986 ANNUAL GENERAL MEETING

The Annual General Meeting was held on Saturday 12th April at the Geffrye Museum, Kingsland Road, London E2 at the kind invitation of the Museum Director.

Following the apologies for absence the Secretary informed the meeting that our *President*, Bill Goodman was in good health and, though unable to attend he sends his best wishes.

The Chairman thanked the Treasurer and the retiring Committee Members for their work over the past year and extended his thanks to all those members who had given valuable time to help the Society, often at considerable expense to themselves.

After submitting the accounts, which were unanimously approved, the Treasurer said that growth had been maintained although some costs had increased e.g. an increase in the administrator's fees to £2,500 and some reimbursement of telephone costs incurred by officers on TATHS matters. No refund of tax on covenanted subscriptions had as yet been received. Our first claim had been rejected on a technicality and this had now reached the appeal stage.

The Secretary informed the meeting of a steady increase in membership numbers and gave a total for 1985 of 653 (including 50 family members). Renewals were coming in steadily and were some 30 % up on last years figures at this stage.

The following officers and committee members were elected unopposed: —

Chairman — David Kendall—Carpenter

Treasurer	–	Christopher Ramon		
Secretary		Arthur Kingdon		
Committee	–	John Brown	John Clark	Roger Davies
		John Haywood	Kenneth Major	Max Ott
		Jane Rees	David Walsh	

Eric Baker once again offered his services as Auditor and this was gratefully accepted.

The Chairman raised the matter of tenure of office but after some discussion it was agreed that as this was not a constitutional matter it could be left to the Committee to sort out.

The idea of TATHS eventually having its own premises incorporating a museum, library etc. was the subject of lively discussion, and while this is only a dream at the moment, it could become reality if positive steps were taken.

The proposal to advertise in TATHS publications met with a mixed reaction. Some present were very much in favour of advertising but several strong opposing views were also put forward. It was decided that this is a matter which will require a good deal of further discussion by the Committee.

With local groups becoming more popular, some sort of co-ordination will be desirable. Kenneth Major offered to act as the Committee Member for local groups and outlined a number of proposals.

Philip Walker pointed out that paragraph 1 of page 1 of Newsletter 12 had led some members to believe that he had resigned as Editor which was not so. The Chairman fully endorsed this, re-iterating the paragraph mentioned. When

Philip stated that he would continue to act as editor of the Journal, the Chairman declared “I can think of no one more fitted, competent or capable than Philip to edit the Journal, nor a more fitting conclusion to this Meeting”.

There was just sufficient time to partake of light refreshment and to renew old acquaintances, but members could still be seen in the grounds, talking tools and trades almost an hour after the meeting closed!

SECRETARYS REPORT

Over the last couple of months most of my, and the committee’s, time has been occupied with arrangements for the AGM - see report in this Newsletter.

TATHS has now been registered as a computer user under the terms of the Data Protection Act and I am currently poring over the mass of regulations surrounding this Act. Until I clarify a few points no address lists of members will be published in the Newsletter. In the meantime I would appreciate hearing from anyone who objects to their membership details being held on computer and if we have any DPA experts in our ranks I would like to hear from them.

I have given details of membership figures in the AGM report and although it may appear that our membership is falling this is only to be expected at this time of year. The renewals, particularly from overseas, take some time to be returned and last year were still arriving 11 months late Both renewal and enrolment figures are well up on last years pre-AGM figures.

I recently visited our President, Bill Goodman he sends his regards to all members old and new, and wishes them to know that he is always pleased to correspond on all matters of Tool and Trades History. His address is:- Anchor House, Eaton Crescent, Clifton, Bristol 8

Arthur Kingdon, Honorary Secretary

TREASURER'S REPORT

As is the correct procedure with societies this years accounts were presented to the AGM for approval and are herewith presented in the Newsletter. As columns of figures make less than riveting reading for most of us, some reflections on the years achievements might be of interest to members

This year has been a year of consolidation and streamlining of our procedures to make the most effective use of our income. Banking at Chippenham has enabled all the incoming monies to be handled by our administrator Ann Kingdon whose efficiency I must applaud. This has left me free to manage the funds and as a result our income from interest alone has nearly doubled over the year simply by keeping our current account as low as practicable and our investment account regularly topped up.

The Summer meeting returned a fair profit and as a result the Committee have decided to use some of this balance to fund next years meeting,

The society's costs continue to rise in the areas of editing, writing and administration but despite this the society is over £3000 better off at the end of this financial year, a very healthy position, We still await our first return from the covenanting of subscriptions, as our first application was turned down on a technicality, We are now subject to appeal and hope to hear the result of this soon. The matter is being handled by an expert accountant who specialises in working for charitable societies. If any UK member has not covenanted their subscription please do so, it is quite painless, and should give the society a significant income.



OFFICERS AND COMMITTEE MEMBERS OF THE TOOL AND TRADES HISTORY SOCIETY FRESH FROM THE TRIUMPH OF THEIR ELECTION AT THE GEFFRYE MUSEUM

left to right, Roger Davies, David Kendall—Carpenter, Kenneth Major, Jane Rees, John Haywood, Richard Knight, Christopher Ramon, Max Ott, David Walsh, Arthur Kingdon.

Roger Davies is a gunsmith and turner, specialising in restoration. David Kendall-Carpenter is retired, currently fossicking. Kenneth Major is an architect, with a keen interest in mills and milling. Jane Rees is an architect, and is interested in all types of moulds and their use and manufacture. John Haywood is the former librarian of Shoreditch College and has a wide knowledge of Tool and Trades bibliography. Richard Knight is a former professor, specialising in keeping busy. Christopher Ramon is “in electronics” and a keen amateur woodworker. Max Ott is a Master Cabinet Maker, interested in the tools of, and books about, his trade. David Walsh is a Market Research Consultant, interested in furniture restoration and the

function of tools. Arthur Kingdon is RAF flight crew, an experienced skin diver and furniture restorer, though not usually at the same time (but always with his eyes open)

Not in photograph, John Brown, BR retired, researcher into York planemakers. John Clark, Senior Assistant Keeper, Museum of London, interested in medieval craftsmen, their tools and techniques.

OBITUARY

We are very sorry to announce the death of Jeffery Daniels, director of the Geffrye Museum and a good friend to the Tool and Trades History Society,

Under his directorship the Geffrye Museum became a founder member of our society and was always willing to accommodate our meetings. The welcome we received there was warmly appreciated by us all.

Jeffery Daniels was born and brought up in Milford Haven, he went on from the Grammar School there, to Balliol, where he read modern history. Later he wrote art criticism for several journals and will be remembered for his work on Sebastiano Ricci

He had a varied and interesting career before joining the Geffrye in 1969. During his time there he made it into what is, without doubt, one of the finest small museums in the Country. At our recent AGM, held at the Geffrye Museum, a bunch of cheery cockney kids saw our society's name on the notice board and spying one word with which they were familiar, cried " "History, that's what we like". For a historian, there could be no finer memorial.

BLAKE'S LOCK MUSEUM

The Blake's Lock Museum in Reading is celebrating its 1st Birthday on June 28th with an exhibition entitled "Milling on Thames and Kennet" the exhibition will run for 6 months.

Blake's Lock Museum is a small museum illustrating the trades and crafts of Reading.

THIRD INTERNATIONAL SYMPOSIUM FOR HANDICRAFT HISTORY

The working group for Handicraft History of the Veszprem Academy Commission of the Hungarian Academy of Sciences is to hold a third international symposium to follow those of 1978 and 1982. It will be held at Veszprem from the 18th to the 24th October 1986.

Enquiries to, Mr Istvan En, Kozponti Museumi Igazgatosag, H—1476 Budapest 100Pf.54, Hungary.

HISTORIC FARM BUILDINGS GROUP 1986 CONFERENCE

The 1986 conference of the group will be held at Norwich from Friday the 3rd to Sunday the 5th October. Special reference will be made to East Anglia and the farmsteads of the Holkham Estate.

The group was founded on 12 October 1985, its objects are the advancement of the study of the history of farm buildings in the British Isles, including their related equipment and the agrarian and economic systems of which they formed part, and the promotion, where appropriate, of their conservation.

WOODWORKING WEEKEND

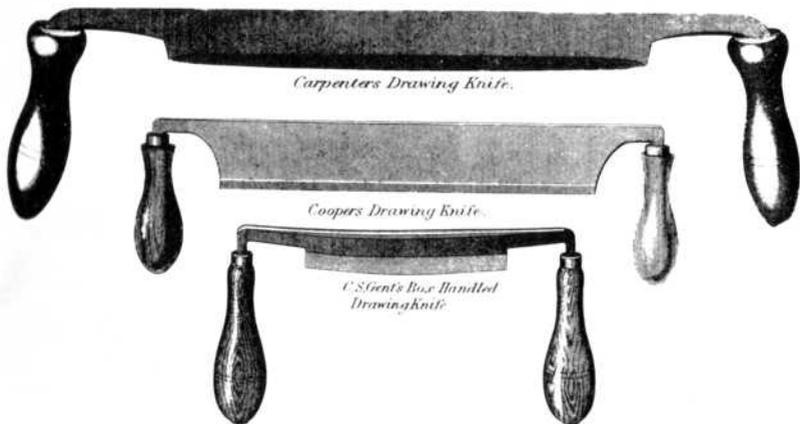
This year the Amberley Chalk Pits Museum is holding a “Wood Working Weekend” on 20/21 September 1986.

We are inviting craftsmen, tradesmen, amateur and professional, to demonstrate many of the various skills, uses and applications of “Wood Working”.

During the Saturday there will be a seminar, we wish to invite speakers who can give a slide illustrated talk about subjects connected with wood. The duration of the lecture would be about 45 minutes, a practical demonstration would be most welcome.

Would any TATHS members who could fill some of these lecture places please forward their addresses and subjects to the address below.

John Land, Assistant Director, Technical, Amberley Chalk Pits Museum, Houghton Bridge Amberley, Arundel, West Sussex, BN18 9LT



THE BROOKING COLLECTION

For those TATHS members interested in the History of the Building Trade, there can be few collections to rival that of Charles Brooking. Started by Charles Brooking while still a child, it now comprises some 15—20,000 building components, ranging from door numbers through sash pulleys to balconies, and dating from 1660 to 1939. It forms a unique reference facility for architects and historians.

It has not yet, however, found a permanent home, and so, a public exhibition of the evolution of window design, illustrated with items from the collection, would be one, not to be missed. However, news of the exhibition only reached us on the day of opening, thanks to the efforts of TATHS member David Konrath. Please accept our apologies for not being able to let TATHS members know in time. We shall be in direct contact with Charles Brooking and hope to keep our readers informed of any future exhibitions.

“The History of the Window” was at the Building Centre Gallery, 26 Store Street, London WC1, 16 April—1 May.



LOCAL GROUPS LOCAL GROUPS AND TATHS

TATHS welcomes the formation of local groups for several reasons. Clearly, TATHS can only produce a limited programme each year because of its resources of manpower as well as money. Local groups are important, where they exist, because they enable members to meet more frequently, to have a fuller programme of lectures and visits, and to discuss tools, and trade, and hear about various aspects of tool and trade history. Many TATHS members may not wish to travel long distances, and meeting locally will be an advantage. Regrettably, many national societies have become London, or at least South East, orientated, if for no more than population statistical reasons. The practise of trades their use of tools as well as their manufacture took place in the other parts of Britain. Local groups will do much to help us to maintain contact with these historically- important production areas.

A local group can range from a handful of people meeting regularly in each others houses to a large body needing the facilities of, say, a museum with a lecture theatre of some size. Some groups interested in tool and trades history may, in fact, have preceded the formation of TATHS, but that should not prevent them from becoming, or regarding themselves as, local groups within TATHS.

Local groups would, of course, wish to have a voice in the running of TATHS. It is proposed that this is met by a special TATHS-Group Committee. This would be held once or twice a year and would contain a representative from each group and representatives from the main committee. The latter would report back to the main committee. The TATHS-Group Committee could be chaired in rotation by the group representatives and minuted by one of the main committee representatives.

As those of you who were at the AGM will know, the main

committee have asked me to carry this proposition forward, would be grateful, therefore, if the chairman of each local group would tell me of his group's views and also provide the names and addresses of the groups officers, so that can co-ordinate their fuller relationship with TATHS,

J. Kenneth Major, 2 Eldon Road, Reading, RG1 4DH

SUFFOLK

Preliminary Notice of Meeting to be held on 31st May 1986 at Oulton Broad, Lowestoft, Suffolk

Date: 31st May 1986

Venue: Marine Training and Development Ltd, Harbour Road, Oulton Broad, Lowestoft, Suffolk

10.45 a.m.	Assemble and Coffee
11.00 a.m.	Talk on Traditional Boat Construction by Master Boat Builder John Parker. Tour of Boat Yard.
12.30 p.m.	Lunch and TATHS business.
2.00 p.m.	Visit to Maritime Museumç Sparrows Nest, North Denes, Lowestoft.

If you have not already indicated that you would like to be notified of locall TATHS meetings in Norfolk and Suffolk and you would like further details of this meeting please contact: —

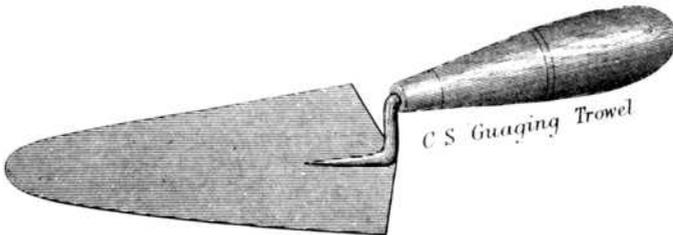
H W Runnacles

80a Garrison Lane
Felixstowe, Suffolk
Tel. Felixstowe (0394) 284759

NORFOLK

A visit is being organised to the Works of Mr J Golden, an iron founder and builder of Northrepps, near Cromer. There is much of interest at the works, as they are mostly dating back more than a hundred years. Meet at the Northrepps Cottage Restaurant at 12.30 p.m. on Saturday 21st June for a ploughman's style lunch (cost approx. £2.50). Contact Philip Clarke, Manor House, Hockering, Norfolk NR20 3AJ.

Tel. Norwich 880118.



ARTICLES

COLLECTORS CORNERED

Michael Taylor

Although a tool user since leaving school some 25 years ago it is only four years since I caught the tool collecting bug. In that short time a great deal has happened! One of my first purchases was our President's British Planemakers (2nd Ed.) and after reading it several times from cover to cover I sallied forth armed with the information therein and "hunt the plane" was on. Through antique shops, junk shops car boot sales and eventually local advertising, moulding planes came from everywhere and I soon had nearly a thousand.

Among the five hundred or so I still own are two by Phillipson, a No 16 hollow, 10" long with very rounded chamfers and the small ogee shown in Plate 1 which has flat chamfers and is only 9 3/8" long. There is no evidence that this plane has been shot and the many differences of style between the two confirm the growing realisation that particular styles are not necessarily characteristic of individual makers nor of the times in which they worked.

Other early planes include several by John Rogers and William Madox, among them a plough, a dado plane and the panel raiser shown in Plate 2; two by Moodey, a 10" long ogee by Jennion and a nice side rebate plane by Lovage almost complete the list. To my taste, however, the collection is crowned by the one inch rebate plane 11 1/2" long by Owen shown at the bottom of Plate 3. This plane, which is in excellent condition and has a clear stamp, closely resembles the one mentioned on p.31 of British Planemakers and owned at that time by Philip Walker. It is remarkable in having had three (only two now remain) strips of some dark hardwood (ebony?) dovetailed transversely across the sole, presumably to protect the softer beech from undue wear. This form of protection is unique in my experience and it raises interesting speculation as to

PLATE 1

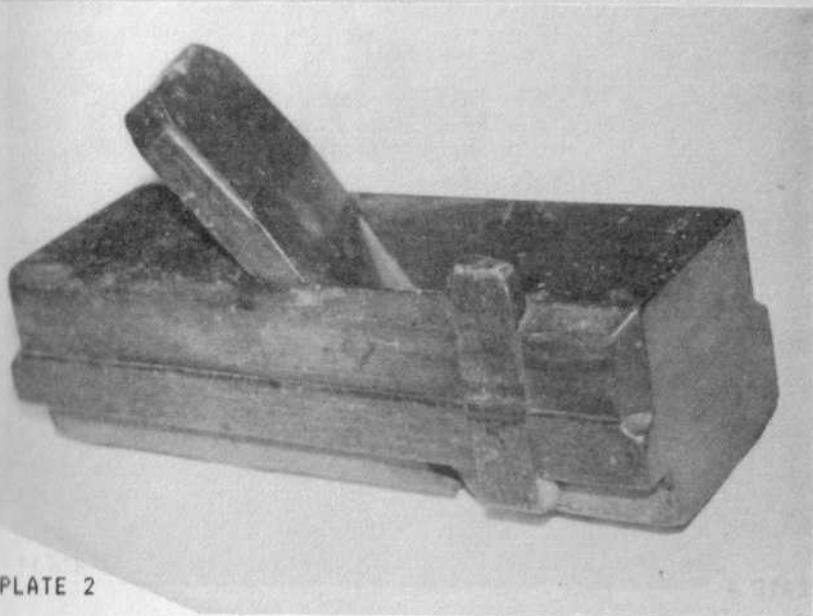
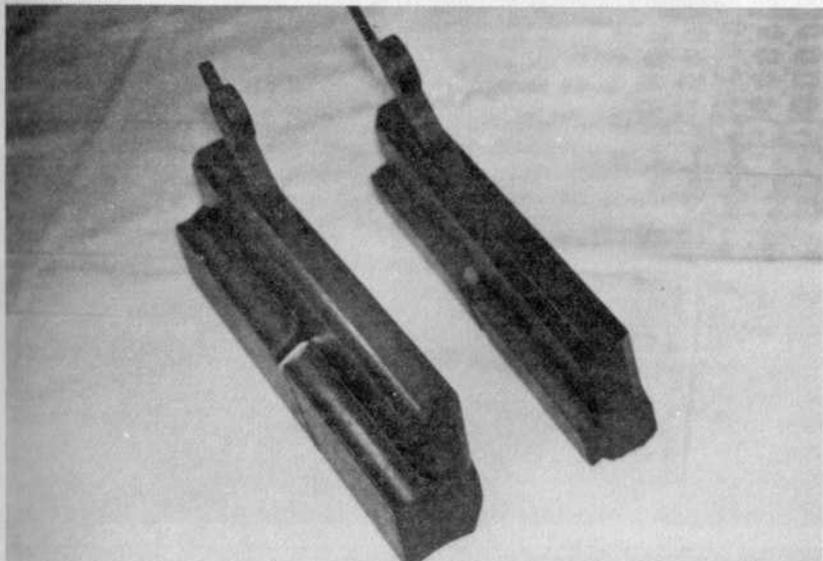


PLATE 2

PLATE 3

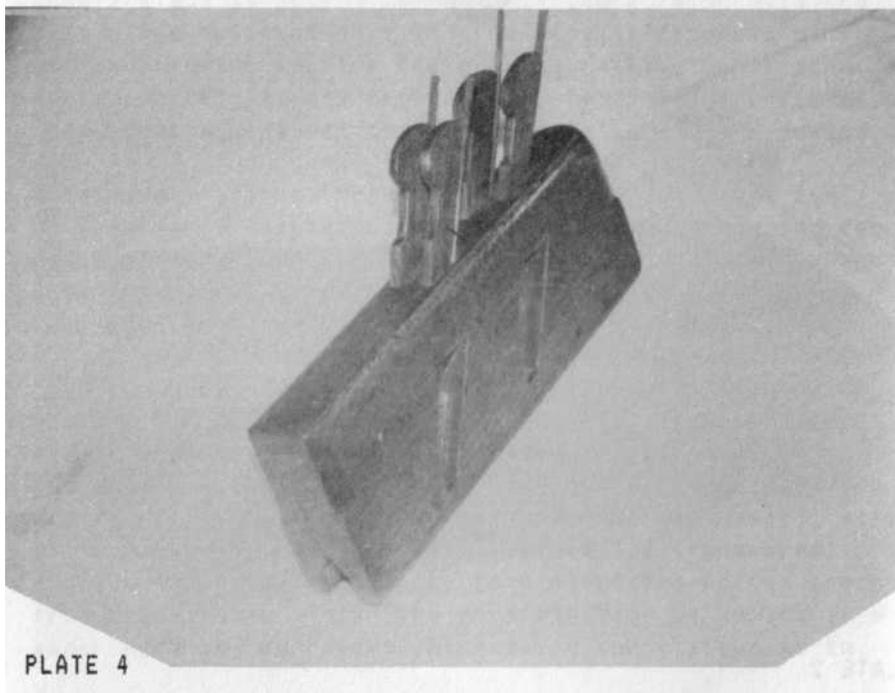
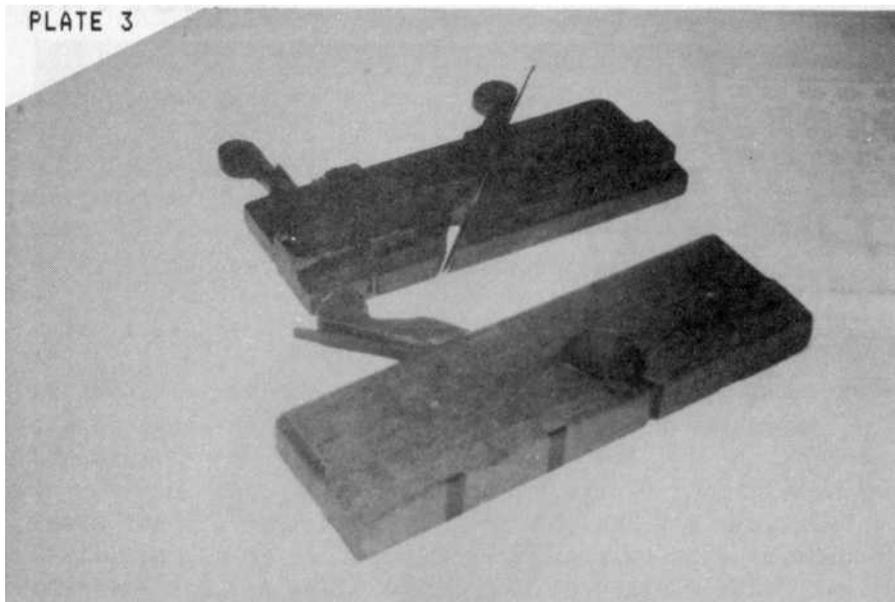


PLATE 4

PLATE 5

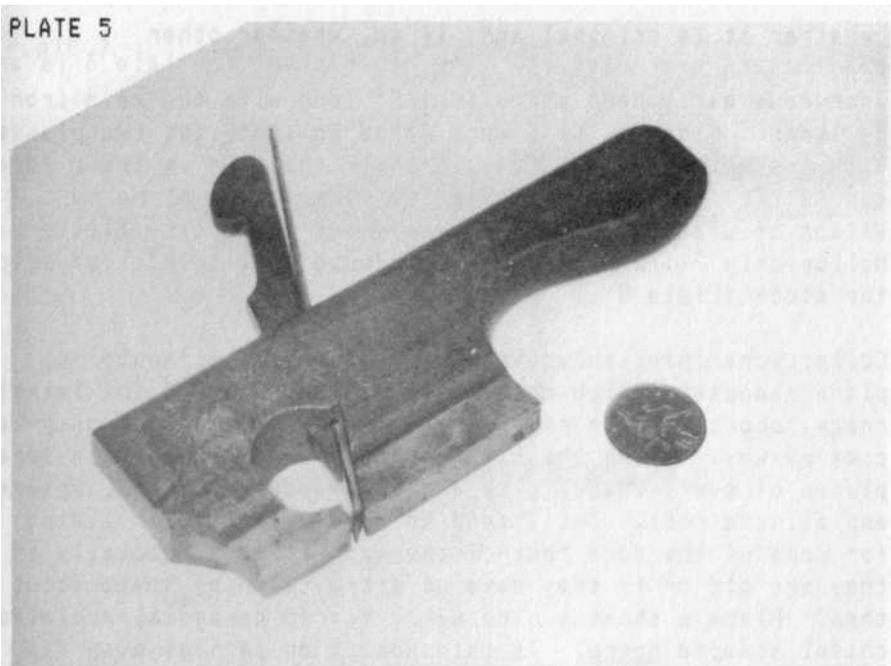
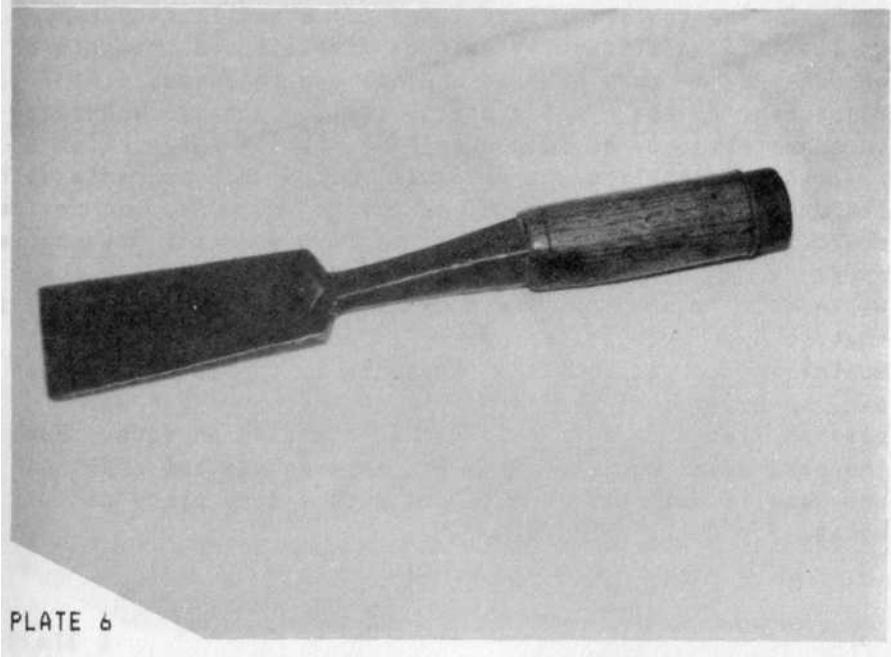


PLATE 6



whether it is original and, if so, whether other planemakers ever used it. The other plane in Plate 3 is an anonymous early dado plane 10 1/8" long with the main iron by Inman. Finally, if I were asked to spotlight two planes with the main interest less in their age than in their form and function, I should choose the rare 4-iron plane by Wilson of Glasgow shown in Plate 4 and the pretty little hollow only 7 1/2" long with a boxwood sole dovetailed into the stock (Plate 5).

Collections inevitably evolve and between the moulding plane madness, which most of us go through, and the latest craze, shortly to be revealed, many interesting things have come my way. Among these, of course, are innumerable metal planes of every shape, size and substance by Norris, Spiers and all the rest. But I tend to have a particular liking for some of the more "out-of-the-way" items, especially if they are old or if they have an extra touch of style about them. Plate shows a nice early flared hexagonal-socketed chisel stamped Moore. Is this Robert or perhaps even his father? The tools in Plate 7 are (i) a small brass hand drill, (ii) an attractive pair of steel-tipped trammels on a mahogany bar they have an unusual and ingenious fine adjustment device and a pretty little Lancashire hacksaw in gunmetal, only 9" long overall. Plate B illustrates a remarkable dowelling jig of early Victorian appearance with the base of crotch mahogany and the boxwood clamping device dovetailed into it. How this clamp, in exerting reasonable pressure on the workpiece, was supposed to withstand the weakness of short grain is not at all clear, but the fact is that it has survived for nearly a century and a half. It would be nice to think that this jig is for dowelling sash bar, an example of the rare type on which the bar was clamped flat side down rather than standing on edge. But the base seems much too wide for this unless the craftsman who made it was reluctant to cut such a nice piece of mahogany

PLATE 7

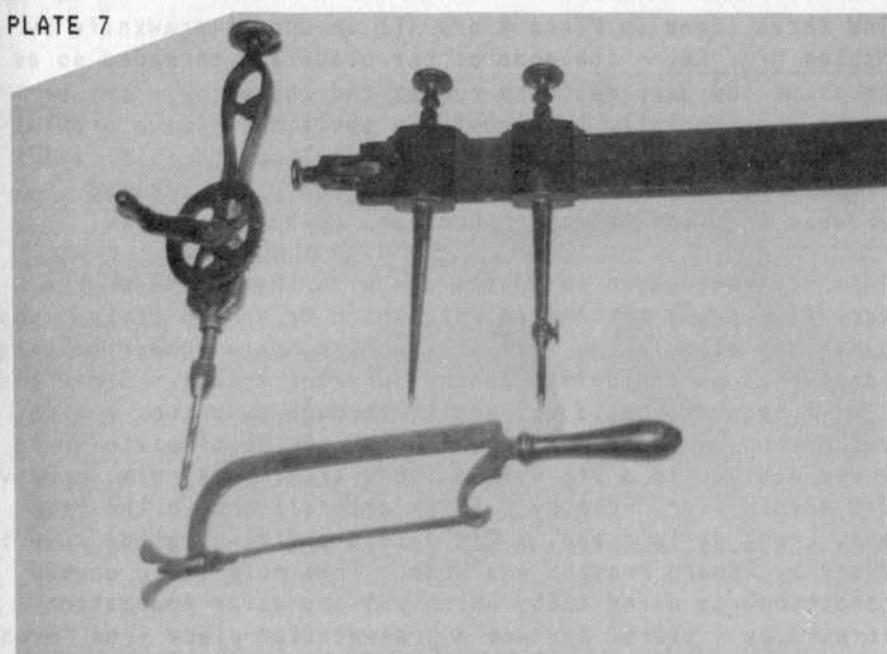
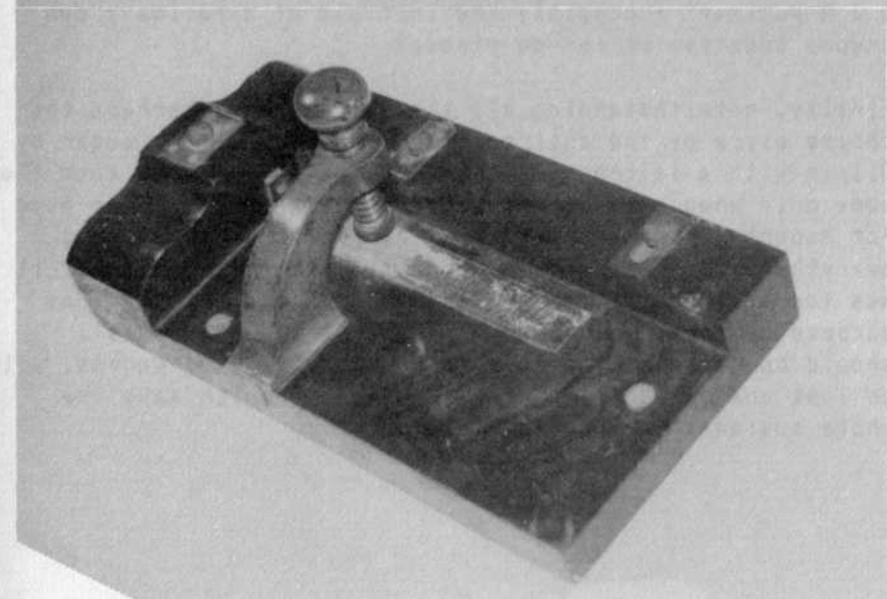


PLATE 8



The three items in Plate 9 are (i) an unusual drawknife by Nobles Mfg. Co. the ends of the blade are threaded so as to allow the handles to be turned and locked by a set of teeth independently in almost any position, (ii) a drawknife by James Cam with a blade only 4 1/2" long and (iii) a 12" Braille rule by Edward Preston and Sons - fascinating example from the latest enthusiasm, collecting rules!

This interest began 18 months ago with the purchase of a very fine heavy 4ft 4-fold rule which Mr Norman Styles (who gave that stimulating talk at the Birmingham Summer Meeting) identified as a mid-19th century surveyor's rule. Since then I have begun to build up, mostly through swapping, a nice collection of ivory and other rules. Pride of place among these must go to a 2ft 4-fold ivory architects rule, a heavy 2ft 4-fold ivory rule by F B Cox with sliders in two legs and, creme de la creme a 2ft 4-fold engineers slide rule in ivory by Edward Preston and Sons. This rule is in unused condition, is dated 1885, which put the given foundation forward by 4 years, and was a presentation piece from "S and D J R Workmen" — possibly the initials of a railway; can anyone identify it for me please?

Finally, notwithstanding all these treasures, perhaps the choice piece of the entire collection is a 1 1/4" auger by Gilpin with a left-handed twist — i.e, it advances into the work only when rotated anticlockwise. Whether it was made for export to the antipodes in the mistaken belief that everything down there goes round the other way, whether it was forged on April 1st or whether it had a more serious purpose may never be known. If anyone has any ideas I should be glad to hear from them. But then, of course, will be lost one of those wonderful mysteries which make the whole business so very fascinating.



FIRST SCREW

Geoff Jenkinson

In reply to Dr O'Donovan's request for information on the first screw and the first screw driver, I can appreciate his problem. The last year of my research has been trying to solve this very short question and as yet no absolute definitive answer has appeared. The first point to make is that the screw was not invented, it was adapted from nature. We have all kicked the fore-runner to the screw to one side, intentionally or not on a stroll along the beach, yes the common twisted sea shell, it; correct title is of little importance but its basic form is constant through many types.

Who adapted it to man's advantage will never be known, and many books give the honour to Archimedes 250BC. This I doubt, he speaks of it in too knowing terms to have started the ball rolling, especially his use of same to launch a ship.

Some give the honor to the Egyptians, but at what stage of their civilization? Certainly not the days of the Pharaohs, as they did not use the spiral staircase, which is in itself a screw. Possibly the Babylonians, who after all taught the Greeks the science of maths, as well as giving us the calendar, and the means of calculating time (counting to the base 60).

All this is leading to a time slot at about the time of Alexander the Great or slightly earlier 400BC, can the Dr remember the date of the Hippocratic oath.

This is then the start of man using an inclined plane wrapped around a conical or later I assume; parallel shaft, producing either a screw, or a spiral staircase, both employing the same principal. The form of thread used is of no consequence at this time, as the NUT as we know it was 250 years hence, but a nut was used, in essence a collar with dowels poked through to suit the thread form, crude but effective.

We have now to thank the Greek Heron for the nut, in 150 BC in Alexandria. Is this where the story of the Egyptian screw came from? Even so at that time Alexandria was the greatest seat of learning in the world, but it was Greek! admittedly under Roman rule.

Up to this time and for some time to come the screws were of wood, the technology of working in iron would not have been advanced enough to enable iron screws to have been made, thus the turning devices (of the thread) would have been primitive spanners, or the shaft through the head of the screw, or in some cases a type of windlass handle on a square.

This then obviates the need for a screw driver, it is not until the metal screws were produced that there was any need for a screw driver, and that was a 100 years or more away. I do not know why a round head, or any other screw driver is singled out, other than the turning motion of the human hand to operate it, if this is the reason, the other tool that should be looked at is the ancient Gimlet, which went by many names back to the days of Troy I400BC (one has been found in the ruins of that city), they were used in that time to make holes for spikes etc. and must have been used with a twisting motion similar to a screw driver, the plate of same that I have seen naturally had no handle, but was tanged in a rough form to take one. The wood screw is traceable to the days of the Romans (Empire) and 250AD is as close a figure as I can get at the moment, this however was not a wood screw in the form that we know it, rather in the form of a screw eye found in the digs of Saalsburg, obviously hand filed, and the top section wrought.

I have not completed my research in this section, mainly due to my lack of knowledge of German and French, most references in this field are in one or the other of these languages and I expect to be able to predate the above, in the area of wood screws.

To return to the screw driver, it obviously came with the first slotted screw, which to the best of my knowledge would have been a metal thread, as used in the 1404 armour; there may have been earlier instances of the slotted metal thread, but I have yet to sight any reference to same. Regardless to the date it would have been associated with weapons of war, guns, armour, etc. The number of screws of any type used as fixing devices would have been minimal before the above date, because there just was no means of economically producing same. I do not use the term economically in the sense that we use it today, as even up till 1470 or so there was no method to mechanically ‘lay out’ the thread on the shaft regardless of the shape of the same.

The screws were still filed even after the advent of the Merz lathe in 1471. By Agricola’s time c 155k the wood screw was obviously relatively common, and thus a screw driver would have been a common tool.

The shape of the handle I have not as yet been able to ascertain, as I have not seen a plate with one shown.

One can for the sake of the exercise make some assumptions, on referring to the shape of the wood screw and the other tools available at that time and the fact that the only means of tightening the wood screw was via the head of the wood screw. Metal thread screws in most cases would have had nuts of a type, which could be tightened with a spanner, whilst the head was held. As we all know the force on the driver in the preceding case is somewhat less than if all the force has to be applied via the driver.

To return to the Agricola wood screw, it was most likely hand filed and consequently of poor form and irregular pitch, added to which it was conical over its length, all of which would make it difficult to screw in place, so that it would hold (over tightening, or an excessive twisting motion without sufficient pressure) would cause the screw to strip, and being conical the least amount of incorrect seating would cause the screw to have little holding power and

eventually work its way out.

From this we can assume that the screw driver would have a rounded handle; to spread the downward pressure over the bulk of the face of the hand and it would have been a reasonable diameter to facilitate a greater turning movement. Remember the most likely drilling device was a gimlet, and although the threaded type were in existence at the time, they were of poor construction, thus producing a poor hole into which the wood screw had to be forced.

The earliest screw turners that I have plates of are in John Wyke's catalogue of c 1770, but as these are for watch makers the pressure required would have been much less, it is to be noted that the 'graver handle' and the 'Joint pusher' handle are much rounder than the screw turner. I have not as yet delved into the tools used on the Continent,

It is strange that the first metal screws that (I know of) came from the ruins of Pompeii, and they are 3 medical instruments of bronze, with filed threads and thumb screw type adjusting ends ca. 67 AD, at present residing in the Naples museum. One would think that many more have yet to be found of the years up to ca. 1400, unless the craft and the makers were buried when Pompeii was inundated.

BEVEL-UPPERMOST PLANES AND THE "LOW— ANGLE" MYTHOLOGY

Alan Beardmore

It is an accepted fact that a low effective pitch or cutting angle will produce the best result when planing across the end of a board. Try to sharpen a pencil with the knife blade square to the shaft, then notice the difference when the blade is lowered.

In its simplest form, the lowest achievable cutting angle would be a chisel pared in the line of a cut, but this would be difficult to control over a large work area. The nearest equivalent of a chisel is the common wooden spokeshave where the underside of the cutting iron is parallel to the sole and where an effective pitch of 25 degrees to 30 degrees is possible, dependent only on the minimum practical honing angle.

Planes of this type first appeared in England in the last half of the 18th century. They had cutting irons with the honing bevel uppermost and usually had a bed angle between 20 degrees and 30 degrees. As far as I can establish, these planes were not referred to as “mitre planes” until about a century later. The advantages of the bevel-uppermost system are:

Longer bed ensures more secure fixing of cutting iron and lower average stress. Iron is supported almost to the tip of the cutting edge. Total mouth opening can be reduced to minimum: no gap behind iron. Top or back iron unnecessary. Gentler precision adjustment possible with lower bed angle (varies with $\sin L$). Lower centre of gravity for greater stability in use. Honing angle can be reduced to 25 degrees because of “stiffness” of assembly. Effective mouth always constant even with tapered iron. Wider escapement for shavings hence less likelihood of choking.

Looking at the next illustration, two systems for planes are shown that have identical cutting actions. It is evident

Illustration 1

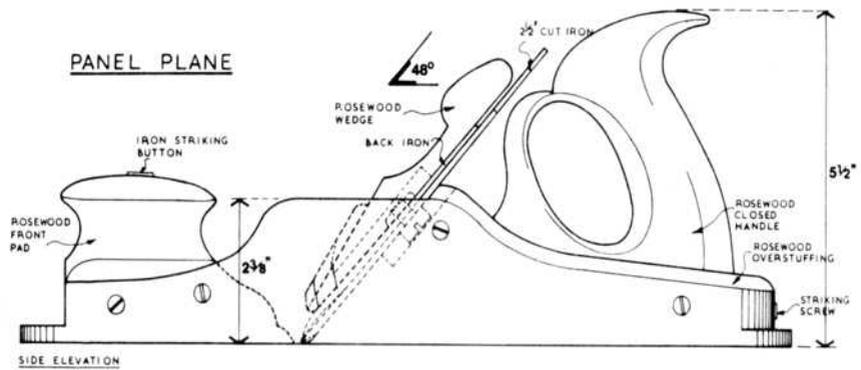
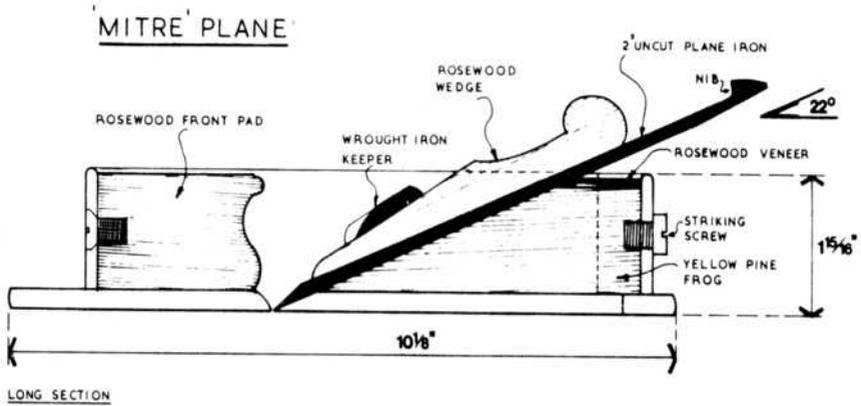


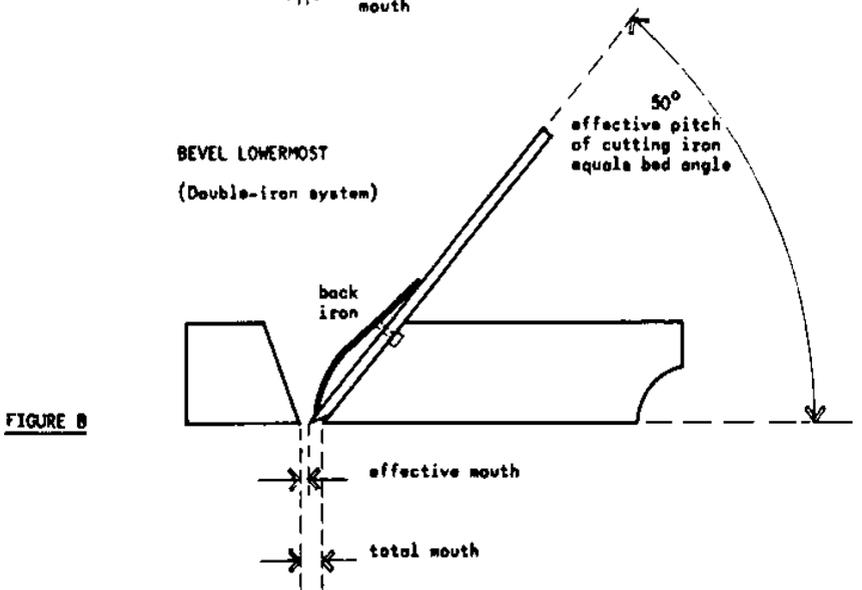
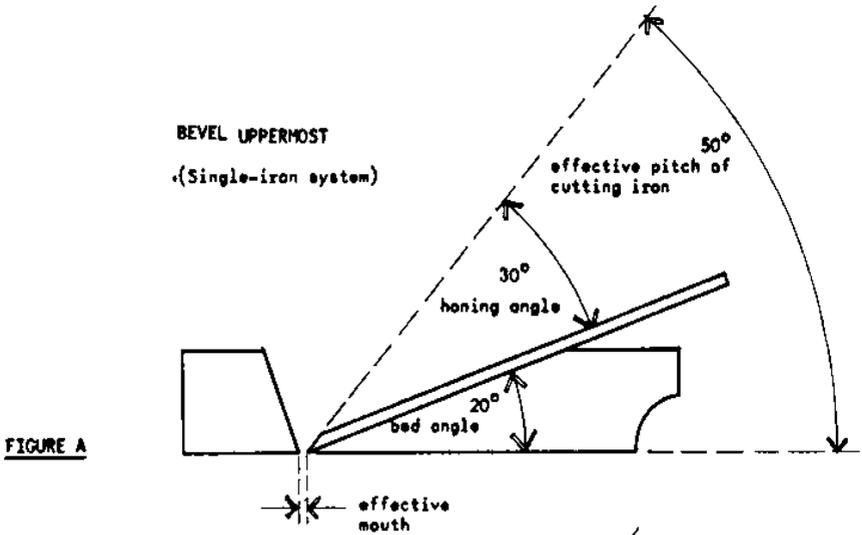
Illustration 2

that the bevel-uppermost system is not 'low-angle' from a cutting point of view; either plane would operate well as a smoother for 'with-the-grain' work where a scraping action was needed. To achieve an effective pitch low enough for improved performance on end grain work, the bed angle of the bevel-uppermost system would need to be reduced to 10 degrees or 12 degrees. There are practical difficulties with a very low bed angle because of "springing" of the slender edge of the sole with the securing of the iron.

Referring back to the first illustration, this plane has an effective pitch of 52 degrees when honed at 30 degrees, whereas the panel plane in illustration 2 which would generally be thought unsuitable for end grain work has, at 48 degrees, a lower effective pitch than the so-called "mitre plane".

I would put the proposition that the "mitre plane" be renamed as a 'block smoothing plane'.

Illustration 3



DOWELS OR PINS FOR DRAWBORED JOINTS Alan Ferguson

Although most text books on Carpentry and Joinery mention steel draw-bore pins, I can find little mention as to how the joints should be marked and fitted to enable the steel pins to hold the structure together temporarily. Nor have I seen any instruction or procedure for making the wooden pins which hold the joints together permanently.

I suppose that as quality text books were written for those actively engaged in the trade, it was considered as unnecessary to describe the making and using of such permanent fixings, as indeed, it would have been to describe the driving of a nail or the turning in of a screw. However, now that most joints in joinery framing are fixed with aluminium star dowels coupled with the disappearance of the old apprenticeship system the making and using pins which was once commonplace in a Joiners Shop, is now a thing of the past.

The mortice and tenon joints on large structural framing need to be skillfully fitted and permanently fixed, as do window frames, door frames, shop fronts, gates and such interior work as securing the newell posts and handrails of staircases.

When preparing the framing members, the holes for the pins are bored once the mortices have been cut. When tenons, shoulders and moulding scribes have been fitted and numbered, if necessary, and the job checked for “wind”, the tenons are marked for boring. The bit is entered through the previously bored hole and the point of the bit is marked onto the side of the tenon. The tenon is then withdrawn and the hole bored through in such a way that the steel pin can draw the joint together temporarily and be finally held tight with a permanent wooden pin. If the tenon is an internal member of framing such as a mullion, then the centre of the hole is marked nearer to the shoulder (fig.1). If it is on a jamb or an outside member, then the centre is

FIG 1

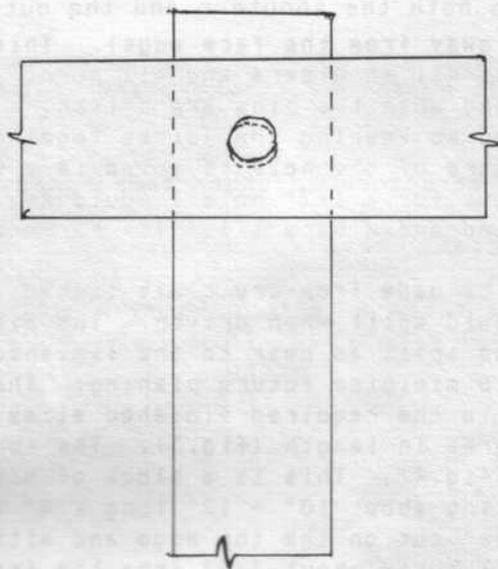
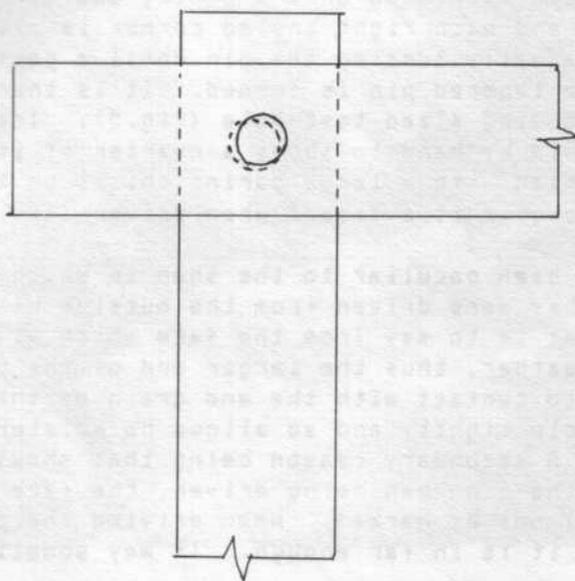


FIG 2



marked rearer to both the shoulder and the outside edge (fig.2) (that is away from the face edge). This drawbore procedure enables all shoulders and all corner members to be drawn together and when the pins are driven, a continual strain is exerted so keeping the joints together. The distance the centre of the hole is moved is a matter of eye and experience but for a 1/2" hole I would say about a full 1/16" for softwood and a bare 1/16" for hardwood.

The pins should be made from dry cleft timber as cross grained stuff would split when driven. The pieces should be about 9" long and split as near to the finished size as possible so as to minimise future planing. The cleft pieces are then planed to the required finished sizes, square in section but tapered in length (fig.3). The rounding is done on a pin-block (fig.4). This is a block of wood (usually hardwood) measuring about 10" - 12" long x 4" x 2", with a right angled "Vee" cut on the top edge and with a countersunk steel screw about 3/4" from the front end to act as a stop. It has a series of different size holes on its side which act as test-holes for the finished pins. The squared up pin is placed on the block, smaller end to the screw stop, and each right angled corner is planed to a quadrant gradually turning the pin until a perfectly circular and tapered pin is formed. It is then pushed into the corresponding sized test-hole (fig.5). Ideally, the pin should push in by hand to about a quarter of its length. It is then pointed with a large paring chisel on the end of the pin block to give it a "lead" when driven (fig.6).

It may have been peculiar to the shop in which I did my time, but they were driven from the outside of the framing (fig.7), that is to say from the face which will eventually be to the weather, thus the larger end of the pin which does not come into contact with the end grain of the tenon always fills the hole tightly and so allows no moisture to enter the joint. A secondary reason being that should the hammer glance off the pin when being driven, the face or inside of the job will not be marked. When driving the pins one can "feel" when it is in far enough. It may sometimes happen

FIG 3



FIG 4

FIG 5



FIG 6

that the leading half of pin having been driven past the end grain of the tenon has been slightly compressed and does not completely fill the hole. This can be overcome by sawing off the pointed end an inch or so from the face of the work and cutting a wedge in the pin projection at right angles to the grain of the framing, so as not to cause it to split. The wedge is then driven back down into the pin so completely filling the hole (fig.8). The projections are then cut off and the job cleaned up with a smoothing plane and glasspaper.

The above description is as clear as I can explain what is in fact a job calling for considerable skills. I would think the general principle for pin making would be the same regardless of locality. In our particular shop a wooden jack plane was always used to make them and twelve to fourteen pins an hour, depending on size, was reckoned to be a good rate. The usual size used was 1/2" but sizes from 1/4" up to 1" were made depending on the job in hand. When driving hardwood pins into hardwood they were often waxed beforehand. When the pin projections were cut off a panel saw was used. The free hand holding the pin while the saw which lay flat on the framing in line with the grain never left any teeth marks on the work. The pin off-cuts were thrown into the shavings under the bench, never in the bench-walk as this would have been dangerous underfoot. Before final pinning up, joints in softwood would be painted and in hardwood coated with boiled linseed oil. This was to weatherproof the joint and to be an aid to holding, it was acknowledged that wedges could be used as well as pins to hold the joint tight, although these were considered unnecessary with good joints.

Before concluding, I feel I must state my preference for using pins rather than dowels and attempt to clarify and qualify the confusing terms of both dowel and pin which appears time and again in print, but with no attempt to describe or differentiate between the two, i.e. a dowel being parallel in its length whereas a pin is tapered. The terms used seem confusing wherever I look and nowhere can I

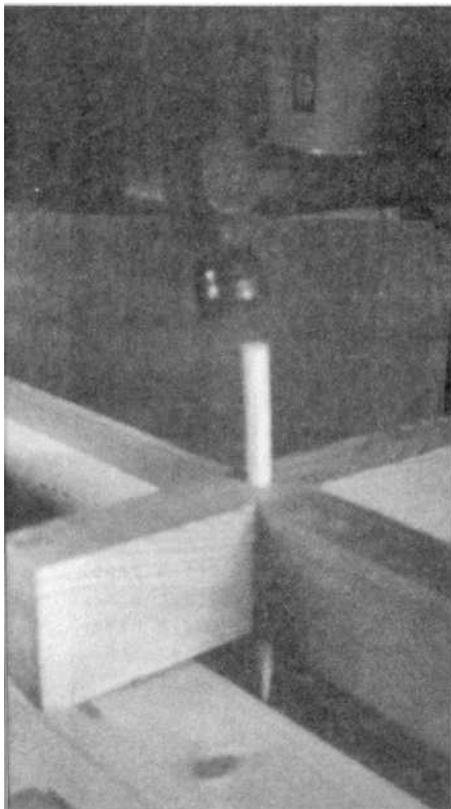


FIG 7

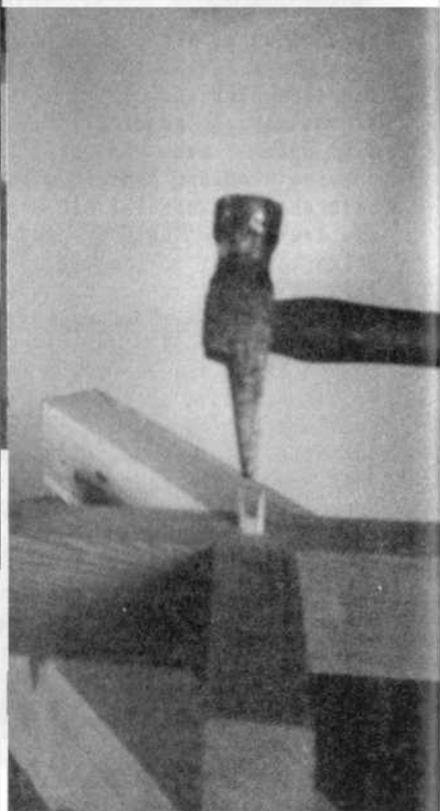


FIG 8

find any reason for or against using either. Salaman mentions a dowel and a dowel pin. Corkhill mentions a pin, McKay mentions a dowel. Ellis in his volume on joinery states, “the pin is better left with a number of sharp arrises than shaped in a dowel plate”, which is surely a contradiction of ideas.

Newlands in his *Carpenter and Joiners Assistant* states that a steel draw bore pin is, “used to enlarge the pin holes which are to secure a mortice and tenon”, and continues, “the hole is then filled in with a wooden peg”. In the latest book on purpose-made joinery I have seen by Frank Hilton, the phrase used for fixing the joint is, “dowelled by draw boring”. Could the confusing use of differing terms and methods be the result of historical progression? Presumably the first fixings would have been roughly hewn trenails which were followed by dowels and then by tapered pins which had the advantage of tightening themselves in the hole when driven. The introduction of pins, although technically superior, would have been more costly and more difficult to make (as indeed they still are), and so both terms and methods continued an interlocked course. Certainly all the tradesmen I have worked with always used pins and on asking those I now know, all have stated their preference for pins over dowels, although some said that, “dowels are now often used as a substitute for pins”. After having used dowels myself on a number of test pieces, I found that the dowel often did not fill the hole on one or both sides and did not seem to draw the joint together as well as a pin. Neither did they seem to hold in the holes as tightly but were rather held in place by the draw bore pressure. In comparison, a properly made pin always draws the joint together well by the gradual increase of pressure as it is driven and always completely fills the upper hole and usually both.

LETTERS

SUMMER MEETINGS

We seem to see, basically the same group at all Meetings, about 60 of us, a ‘hard core’ of enthusiasts. I suppose that this is inevitable, but it may be that those who have not so far ‘dipped their toe in the water’ do not realise what a joy these meetings are.

I have been to all three Summer Meetings so far arranged, and they form for me a highlight of the year. Not only are the lecturettes and visits of the greatest interest and so wide ranging that even if one were to be bored by half the other half must stimulate, but the general sociable ambience is really fun. I can truly say that every meal has been a good one, and though there is no stint of wine nobody has ever got more than slightly euphoric, never an unpleasant incident nor even to my observation an argument, other than those pleasant debates on the merits of Stanley versus Norris ad infinitum which form part of our *raison d'etre*.

If readers think this is an unashamed advertisement of the Summer Meetings they are right. But one, unusually, devised by the satisfied customer rather than the seller!

I belong to seven societies, but TATHS is the only one which has such a function in such a jolly form. Long may it continue.

Roger Davies, Coulsdon, Surrey

..SEE INSERT..1986 ANNUAL CONFERENCE..SEE INSERT..

W J ARMOUR

Your comment (Newsletter 11) that W J Armour of Plane Making was not served well by his editor is well taken. I was particularly offended by figures 13 and 14 which show Pith enclosed in a plane body. Enclosed pith inevitably results in serious checking along the ray planes of the stock and was and is avoided.

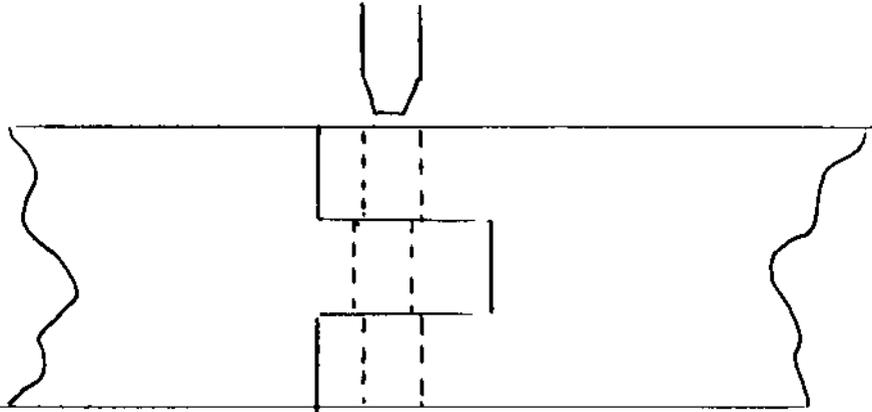
Armour states that the jack plane stock should be cut from a centre plank of beech as near to the bark as can be. He then goes on to indicate that the part closest to the bark should be the sole of the plane. This accurately describes the better practice — not shown in the illustrations. When one cuts from the centre plank and makes the sole of the stock from the part closest to the bark, the ray planes of the wood are perpendicular to the sole. The growth rings are cupped upward into the stock with the pith of the tree originally located above the stock. I would appreciate hearing responses to Armour's statement that moulding planes are not required "to have the grain of the wood so straight as in the flat plane". If by this Armour means that the ray plane need not be perpendicular to the sole, I question this. The majority of moulding planes that I have examined which are worked on the spring have the ray plane parallel to the angle of the spring. Once again, the growth rings of the plain stock are tangent to the plane of the operating sole of the plane.

I would appreciate comments regarding this practice.

John D Alexander Jr, Baltimore, Maryland, USA

DRAW BORE PINS

I read with interest Alan Ferguson's letter about draw bore pins in Newsletter 12 and whilst I agree with him as to their uses, I must disagree as to the final assembly which he said would be used. All the joiners and cabinet makers would use wedges as a for strong permanent joints in hardwood or softwood, and the use of screws into end grain is a definite non starter. The dowel method used widely in the 1920's and 1930's was by an offset drilling method which pulled the joints together (see sketch).



I recently removed a door frame from my 1930's build house and this was easily achieved by knocking out the dowels with a steel rod, as all the joints although primed prior to assembly were dry. The reason was because for external work the scotch glue would not have been any good, as it breaks down in moist conditions.

Bill Barker, Tolworth, Surrey

A REAL WHEELWRIGHT WRITES

As a new member of TATHS and a working wheelwright. I would like to answer the letter by Barre Funnell in Newsletter 12.

The reason why wheels are dished has nothing to do with load capacity. It is done for strength only, as a flat (non-dished) spoked wheel would soon fall to bits.

Any member who wishes to take this further, phone or drop me a line.

I would like to take this opportunity to invite any members or friends to pay me a visit at my forge and wheel shop,

Edward H Fox
The Forge
Sonning Eye
Reading
Twyford 342532



From Mr Fox's Letterhead

FLOORING RAGLET

I am rather intrigued by the question of how the flooring raglet would have been used. It has been suggested that this tool, almost always of Scottish origin, was used for rebating the ends of flooring which fitted up to wainscoting. I have put in a few feet of wainscoting myself and I fail to understand this particular theory. I would appreciate any light that members may be able to throw on this.

Rupert S Hill, Ormand Beach, Florida, USA

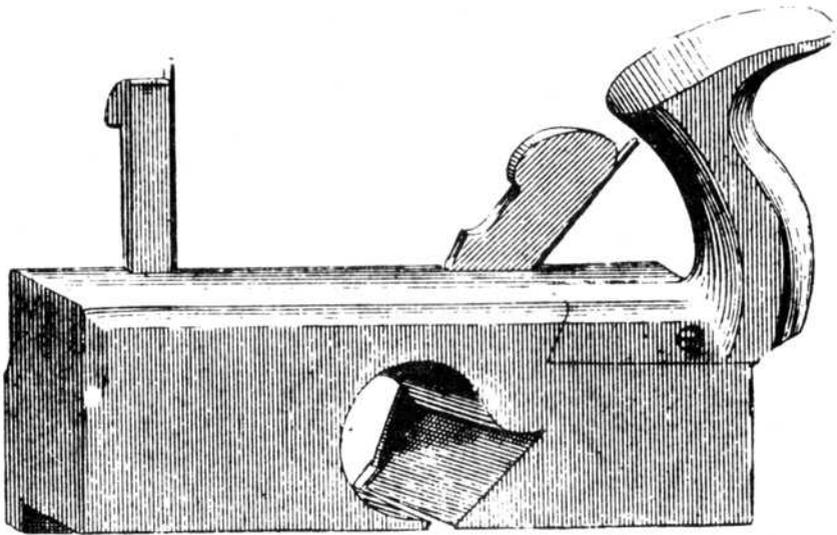
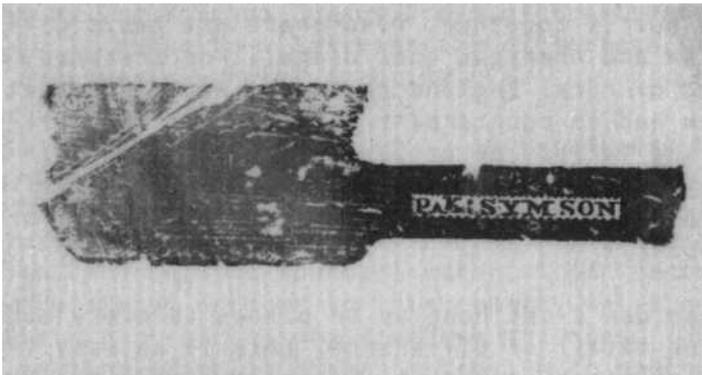


ILLUSTRATION OF FLOORING RAGLET

SYMILARITY

If I may add confusion to Christopher Pollard's begatment of Sym/Syme/Sims (Newsletter 11), where does my Patrick (?) SYM-SON fit in? I attach a "Kingdon-print" of the mark which is on a 9 11/16" No 2 sash moulding plane with the blade set at 45 degrees.

David Kendall-Carpenter, Tregony, Truro



COMMENTS

Your Editor asked for comments, so here goes:—

- 1) Obviously I am restricted on active participation by distance (and money). So your Newsletter is my main link with your group.
- 2) Because of this I would encourage expansion and improvement in its print quality etc (maybe slick paper?) as well as more of it.
- 3) I enjoy the Newsletter and appreciate the effort it takes to put it together. Also there are basic differences in English and American tool usage. For instance, the word craftsmen of rural England that made wood fences etc so far as I know had no counterpart in America. The bill—hook with its amazing variety of styles is a case in point:- the bill—hook is a scarce/rare tool in America. I dont think we ever used the brush type fences etc. So I enjoy broadening my viewpoint.*
- 4) Please don't get hung up on planes in every minute nuance and detail of difference, this is an easy trap and American groups also seem to be infatuated with planes far beyond their proper place in tool perspective.
- 5) Please do explore other trades than wood, such as silversmith, goldsmith, clock work, instrument making, armourer, blacksmith, tin-smith, cooper, rule maker etc. etc. Also early welding tools (this would be around 1900 or so) are overlooked, also machinist tools (a special interest of mine).
- 6) You had a much envied trip to Chesterman Rabone rule manufacturers and I would love to have gone. But there was no detailed article to share the experience with those who could not be there. I would be very interested in how rules are made and graduated. How are metal rules marked?
Etching? One hit die? Roll-die? Scratched with a tool?

It would make (to me) a fine article. (Any volunteers...Ed.)

Well, you get the idea, I hope, so I won*t belabor it. Suffice to say, I like all tools and would like to see a broader coverage, rather than predominantly woodworking.

Hunter M Pilkinton, Waverly,
USA

*For those readers who are as incredulous as I was on learning that they don*t have bilihooks in America, the following extract from *Fences, Gates and Bridges* by George A Martin, first published in 1887 in New York and lately reprinted by The Stephen Greene Press of Brattleboro, Vermont, will serve to illustrate the difference between English and American rural practise..Ed.

The first emigrants from England to the American shores brought with them memories of green hedge—rows, like those which still adorn the motherland. But they found the country wither they had come covered with a dense growth of timber, which furnished abundant material for fences. Hedges were almost unknown in this country until after civilization had reached the treeless prairies. Then, the want of fencing material turned attention to hedges, and they became so popular that many miles of them were planted, not only in the prairie region, but in the more eastern States, where cheaper fencing material was plenty. Now the invention of barbed wire supplies a material so cheap and easily put in place, that hedges have ceased to be regarded as economical for general farm purposes.*

The hedging tools Mr Martin recommends are the scythe, corn knife, shears, axe and mowing machine!

BILL HOOKS

I refer to the comments on bill hook patterns which you published in Newsletter 12. Both John Clark and Raph Salaman kindly wrote to me separately on their observations, and would offer the following comments.

John Clark's interpretation of the published archaeological data is more critical than my own, and I believe, more accurate! He goes on to suggest that the origins of current patterns are medieval (or even later). This would indicate a period between 1066 and 1536.

The pioneering work of Dr Oliver Rackham on traditional woodland management has shown that woodmanship was a major and fully-fledged craft by the first quarter of this period. Extracts from the Beaulieu Abbey account book of 1269 reveal products and methods that would have required an effective 'bill hook type tool. Thus I think bill hook development started in the early medieval period, when crafts that gave much substance to their form, were evolving.

Referring to Raph Salamans point in attempting to reduce bill hook patterns to a very small manageable group. I included the Herts hook under the "Suffolk" type i.e. convex cutting edge, socketed handle, one bevel, short — in fact no — nose. This group included Herts, Cambridgeshire, Rutland, Block, Bedfordshire, Norfolk, Watford, Ofley, and Hempstead. My reason was based on their similarity of performance for similar jobs : they are long, powerful cutting bills, able to cut low to the ground, all my good for cutting rods on a block (hence block bill), and all with either a back hook or a tight nose hook that enable rods to be picked up. To be strictly accurate, the first 4 listed all have a back hook and no nose hook, so Raph may be right in suggesting they should be considered separately. I must say though many countrymen in East Anglia and Kent use a Suffolk bill for chopping their kindling.

Ray Tabor, Sudbury, Suffolk

WHAT IS IT?

“CHAMPAGNE CORK REMOVER”

David Kendall - Carpenter in the Newsletter 12 asked if the little gadget in FIG 4 could be identified.

I think he, and the ‘old boys at the reunion’ and many of us who collect tools often forget the many little gadgets used in the kitchen.

His is not a grindler’s Witchett but a champagne cork remover and combined ice—pick

Bill Barker, Tolworth, Surrey

“SURGICAL CLAMPS”

I would like to comment on the photograph on the lower third of page 47 in Newsletter 11, having noted similar items over the years I would strongly suggest that the item is a pair of surgical clamps probably for clamping arteries. The nickel plating is correct, the clip on the handle vital to prevent blood spurting and keep a firm pressure and the slightly separated jaws prevent total crushing of the vessel while the tothing prevents the whole device slipping off what is essentially a rather slippery site.

Graham M Thompson, Christchurch, New Zealand

“AUTOMOTIVE BATTERY POST CABLE LUG REMOVER”

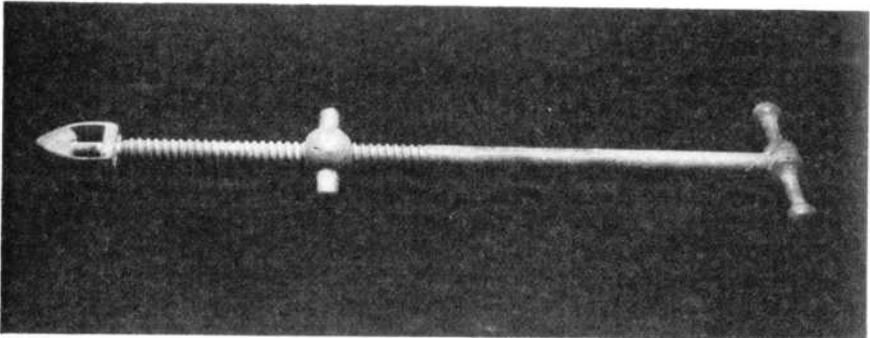
On page 47 of Newsletter 11 you show 2 whasit tools — the top tool with a finger operating into a “U” shape is an automotive tool used to remove a cable lug from a battery post — the “U” goes under the clamp and the finger on top of the post, forcing the clamp up. The lower one I’m guessing at, as an “eel skinner” plier.

Hunter M Pilkington, Waverly, USA

“SNOW HAMMER”

Regarding the mysterious hammer in NL11, we frequently run across a hammer called a “snow knocker” for removing the build up of snow Dfl horses hooves, these are usually blacksmith made and not as elaborate as the illustration, the brass in the foot could have been used because of easier working.

Stan Bunker, Ontario, Canada



Can anyone identify the item in the photograph — 14” long with thread, 7/16” diameter.

Peter Taylor, Billingshurst, W Sussex

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