# NEWSLETTER 20
## WINTER 1988

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NOTICES
FROM THE SECRETARY

The 1988 AGM will be held on April 9th at the National Maritime Museum, Greenwich commencing at 2.00pm. This is your opportunity to come along, have your say and help shape the future of our Society, so please make an effort to attend. The venue is a fascinating one and many members will want to arrive early enough to view the marvellous items on display. Arrangements have been made with the Museum's catering manager for a TATHS lunch at a cost of £3.00 per head. However, he will need to know approximately how many will attend for lunch in order to offer this advantageous price. So, if you would like a good lunch in the company of your fellow members, please send £3.00, payable to 'TATHS', to the Secretary as soon as possible.

I am sorry to say that the appeal for new blood for the Committee has met with a very poor response. Whilst some new candidates have come forward there are insufficient to fill all the posts. We need a full complement in order to do our best for you so please consider giving up a small amount of your time for the Society and offer your services as an officer or committee member. Preferably write to me or at least stand on the day and we can have a ballot.

*SEE INSERT*

AUDITOR

The Society's auditor for the past 5 years has been Eric Baker and we all owe a vote of thanks to him for his sterling work. Eric would now like a rest from the role and so a new volunteer is being sought. A name is needed for this AGM otherwise we will be obliged to appoint a professional and incur their fees. The auditor does not need to be a qualified accountant although some experience in checking account books is desirable. If you feel you could help in auditing the year end accounts please contact the secretary as soon as possible.
WANT TO EARN SOME MONEY?

Whilst the officers and committee members fill honorary posts, the post of Administration Officer is a paid one. For almost 4 years now this has been undertaken by my wife, Ann, who has proved invaluable to me in my role as Secretary. However, Ann has recently taken on a demanding full time job and the TATHS workload on top of this is proving rather difficult. We are therefore looking for someone, with office skills, willing to take over what is, in effect, a part time job entailing some 12-15 hours per week. Office equipment could be provided if necessary. However, due to the nature of my job, which keeps me out of the country occasionally, I do not feel that I could carry on as Secretary if Ann were replaced. Also, if efficiency and cost effectiveness are not to suffer, then ideally the Secretary and Administration Officer should be under the same roof or at least live close to each other. So what we are really looking for is a husband/wife, father/daughter or similar team who would be prepared to take over both posts. If you are interested or would like further information please get in touch (Tel. 0380 850530).

If replacements for both posts are not found I feel the next best thing would be to employ someone local to us to use Ann's office and take over the bulk of her workload. I would not want that situation to continue ad infinitum however, and would expect that by the 1989 AGM a more satisfactory solution could be found.
The Winter Meeting was arranged for 2nd January at the Geffrye Museum in Shoreditch to enable members to visit the exhibition being staged by the Museum to celebrate 150 years of the East End furniture trade, and to hear something of the history of that trade. As a bonus there was also a demonstration of marquetry cutting and a tool quiz.

The meeting opened with Sally MacDonald of the Geffrye giving a potted history of the Museum itself and a preview of the exhibition. We heard of the development of the cheap furniture trade which grew up in the East End with many of the workers being self-employed, and with their premises in attics leading to them being known as "Garret Masters". These masters would employ on average between one and seven others, perhaps members of their own family or Jewish immigrants known as "greeners" or young boys, who were known as "learners" and paid next to nothing.

The main thoroughfare of the area was Curtain Road and at the beginning of this century of 135 establishments in the whole street 102 of them were involved in furniture making. Most of these small firms stuck to just a few tasks so that cheap unskilled labour could be used and expertise quickly gained. One man made only drawers for chests of drawers, another produced just wooden tassles for curtain ties, and one firm made rims for coffee tables. Production was organised by middlemen who sub-contracted work to the Garret Masters but the massive number of small firms meant that there was fierce competition and the advantage taken of this by the middlemen led to them being known as "Slaughterhousemen".

It was interesting to hear of this furniture eventually reaching a worldwide market and to discover that knocked down furniture was in vogue even before the First World War with items such as sideboards being exported in ten inch high packages.
Eventually the industry virtually disappeared and the museum has been striving hard to gather together information, equipment and reminiscences of the trade that had its roots in the area and the exhibition was a part of that effort.

The exhibition was called "Furnishing the World" and the displays included rooms settings from the 1930s and the 1940s which, if nothing else, made one realise how much tastes and fashions had changed since those periods. There were also examples of individual items of furniture, including a cocktail cabinet started about 40 years ago but never finished, dressing tables and sideboards. These and the workbooks, order forms and invoices all helped to complete the picture of a vast trade that has now all but vanished.

After the tour of the museum and exhibition it was time for lunch and the rest of the day's proceedings.

As a variation on the "What'sit" competition we had a tool quiz in which we were asked to say true or false on statements made about items on display. With questions such as "This is a stocking knitter's blind bodkin?" it is not perhaps too surprising that not everyone had all the answers. In fact no-one had them all but Ken Chamberlain did very well to get all but one correct solution, and he was the worthy winner of a copy of "Catalogue of Exhibition of Cottage and Farmhouse Furniture in East Anglia" kindly presented by Dr "Bill" Cotton of the Regional Furniture Society.

We had also been asked to comment on what we considered to be the most interesting item of a display which included several planes, an elaborate webbing stretcher, a mitre shooting trap, a very fine 18c paring shovel and many more. The favourite turned out to be a Cabinet Makers Book of Prices dated 1803 exhibited by Mark Rees.

The afternoon was completed by a talk and display of marquetry cutting given by Ian King, and while Ian was
talking the cutting was continued by Ian's son, Barnaby. This too was interesting as we learned something of techniques such as sand burning and poker work, and heard the pros and cons of electric cutting versus manual work. Ian was using his own cutting donkey and had been a little disappointed at the standard of the museum donkey when he gave a display of its performance.

As the day drew to a close Ken Major thanked the Geffrye Museum on behalf of the 60 attendees and suddenly another excellent TATHS meeting was over and thoughts were beginning to turn to the summer and the pleasure of the next "get together".
A MESSAGE FROM THE EDITOR

Having a thriving business and a young family, it is with some regret that I have come to the decision to relinquish the post of Newsletter Editor and allow someone with fresh ideas an opportunity of carrying out this fulfilling role. I might mention that I have been Newsletter Editor for two years now and I feel that is as long as anyone should be allowed to serve in a voluntary position no matter how pleasurable.

Many of you will recall that at last year's AGM a motion was passed that amended the constitution - the time limitation on officers of the committee was removed.

This clause was included at the Society's beginning to ensure that fresh ideas would always be available on the committee. However, ignoring those willing to serve has never been a trait of our Society - instead the problem has been in encouraging members to take part in the running of the Society, and it was thought that to remove this limitation would ensure continuity in the committee.

However, your Editor is of the opinion that, without the time limitation, those willing to serve may well be deterred by the thought of continuing "ad infinitum". I would like therefore to make an appeal for the introduction of a two year limitation clause to the Constitution. It is my opinion that the regular succession of members into leading roles will provide a reservoir of experience which will ensure a thriving and democratic society.

Boxwood Rule marked Boat Builders Bevil

-7-
Exhibitions are in themselves an art form. They stimulate the senses of the organisers and visitors alike, and are probably one of the most effective means we have of conveying the ambience of past times. However, they are ephemeral, and it must be a sad occasion for the organisers when the exhibits are dismantled and packed away.

There is often, of course, an exhibition catalogue to remind the visitor of the artifacts which were displayed. Some of these catalogues are very well illustrated, but even the best cannot impart the special aura of the whole experience.

This must have been the concern of the staff at the Geffrye Museum when they planned 'Furnishing the World' - their major 1987 exhibition - because they also envisaged a more permanent record in the form of a book of the same name. Published to coincide with the exhibition, it does more - much more - than any catalogue could do. It is complete in its own right, and yet it complemented the exhibition admirably.

There are four sections. The first part of the book charts the development of East London furniture making from the 1830s to the present day. It is a fascinating story and the first adequate description of the local peculiarities of the
East London trade. It is a tale of little masters, numerous specialisations and a system which involved trundling work from one garret to another in an attempt to produce cheap yet saleable furniture.

It is also a tale of abject poverty. The week's work had to be sold by Saturday to pay the assistants, to buy enough timber for the coming week and to buy food. Sometimes it was necessary to sell at a loss to achieve these essentials.

There is also a detailed account of the distribution and marketing system which grew up around the trade and this is an integral part of the story. The practices of the retailing houses had much influence upon the lives and works of the makers.

Another aspect of the social history of furniture making which is considered in the book is the growth of trade unionism. The struggles of women workers to achieve recognition and also those of the Jewish immigrant population are prominently featured.

A selection of reminiscences about the East London furniture industry completes the book. This change to the oral testimony of skilled men and women is a fine touch. It provides an insight into the complex workings of the industry and it tells us so much about the daily life and work of the furniture makers. Significantly, it gives the whole book, and perhaps the exhibition, a reality which could be achieved in no other way.

The exhibition, like the traditional industry it portrayed, is now just a memory; this excellent book, the words of Alfred Alexander, Sissy Lewis, Jock Shanley, Nathan Rosenberg and the others, remain.

The authors, together with the Geffrye Museum and the aptly named Journeyman Press, are to be congratulated.
The organisers again kindly donated a stand to TATHS at this year's Woodworker Show and Max Ott and Mark Rees mounted another very impressive display.

The theme this year was "A Plane for Every Purpose" and although the definition of 'The Purpose of a Plane'* was disputed by one member who manned the stand, the display of planes for a large range of purposes was unquestionably excellent. The only problem that the designers of the stand were faced with was how to choose which planes to display. About four times as many planes as could fit on the stand were taken to Alexandra Palace, but there was only space to display a small part of the enormous range of planes for special purposes that exist.

The Society ran a "What's it?" competition (in the form of multi-choice questions) which attracted about 80 entries. The items are shown in the photograph (the answers are on page 48) and although there were no entries with all six items correct, there were 7 entries with 5 correct answers. The winning entry, drawn from these was from Mr David Harwood of Hemel Hempstead.

Our congratulations must also be extended to the youngest TATHS member. Barnaby King won the award for the Junior Woodworker of the Year, with a beautiful turned wooden bowl. It was a superb piece of work that many members a lot older than Barnaby would have been proud to have made.

We would also like to extend our thanks to all the hardworking members who manned the stand. It was very nice to have so many offers of help and hope that the newcomers to the job will have enjoyed it sufficiently to want to come again next year!

* "-is to produce a finished surface" - Please discuss - Ed.
ARTICLES

THE CARPENTER'S RULE

Richard Knight

Probably invented in the 16th century, the carpenter's rule was a device to help a man who could not multiply to find the area or the volume of his wood. In its original form, it gave at a glance either the length to make a square foot of a board of given width, or the length to make a cubic foot of a piece of square (or equivalent square) cross-section. Writing in 1651 of "carpenters and other artificers", Thomas Stirrup tells us that "... few of them can write and of them few that can write not one in ten hath arithmetic". So the need for such devices was very real.

Fig. 1 is an abstraction from an early rule showing a line of board measure and a line of timber measure running inversely alongside a line of inches. The board line is so divided that the product of any number upon it by the adjacent number on the line of inches is everywhere 144, the number of square inches in a square foot. Then, against the width of the board line is the length to make a square foot on the line of inches. Similarly, the timber line is divided so that the square of any number upon it, when multiplied by the adjacent number on the line of inches, gives 1728, the number of cubic inches in a cubic foot. For example, if the timber is 11" square in section, the cross-sectional area is 121 sq" and the length to make a cubic foot 1728/121 or approximately 14.3", a result seen at a glance on the rule.

The first written account of such a rule is probably that of Leonard Digges in 1556, but whether he invented the principle of it is open to question. He says that "... the ruler of tymber measure which the most part of them hath is not made by right arte...", hinting that some such rule was already in existence. However, the rule he describes is based on the tables of his own calculation which were uniquely reliable in his day. Of his timber table he says:
"This table of tymber measure standeth in the place of a good rule, well decked with true measures. By this ye may make or correct rulers at pleasure".

Digges recommended a rule 2' long, 2" wide and 1/4" thick; there is no mention of a joint and the board and timber lines were drawn along the edges. The thickness suggests that he had wood in mind for its construction and there was a small surveyor's quadrant on the back - hence the width. A fine brass rule for surveyors with board and timber line on the face, made by Humphrey Cole in 1574, is now in the Whipple Museum, Cambridge, and is illustrated by J A Bennett in "The Divided Circle".

A weakness of these board and timber lines is that they cannot deal with board less than 6" wide or timber less than about 9" square - i.e with problems to which the answer is greater than their full length of two feet. Digges gave the missing information in a pair of tables marked down the middle of the rule as shown in Fig.2, which is a sketch of the first few inches of Humphrey Cole's rule. Above each number in the line of inches, in the column headed T, is the length of a cubic foot of timber with that side of square cross-section. For example, for a side of 5" the length is 6'9 1/8" (1728/25 = 69.12). Likewise, the column headed B gives the length of a square foot of 5" board as 2'4 4/5" (144/5 = 28.8).

A rule which evolved from the early pattern of Digges was usually wooden, jointed in the middle and much narrower. A typical 17th century example is shown in Figs.3 and 4. The board and timber lines appear together on one face (Fig.3), the other face being shared by the line of inches and some other line of the maker's choice. The tables for narrow material were now concentrated, each at the start of its own line and numbered in sequence with it. Inevitably the board and timber lines had to start from opposite ends of the rule, with loss, not only of their juxtaposition with the line of inches, but the neat inverse relationship of both of them with it as well.
fig 4
This dual loss might at first be thought to be serious, but in fact it is not. It is extremely doubtful whether a carpenter ever used the rule to take actual readings of the length to make a square foot or a cubic foot, because such a figure would have been quite useless to him if he was incapable of dividing it into the length of his timber by arithmetic. Edmund Stone, a formidable 18th century authority, has confused the issue by giving the impression that lengths were read off the line of inches, from zero when using the board line (which by tradition was the one to retain its place) and from 24" when using the timber line. This is so untidy and liable to error that it is unlikely ever to have been standard practice in a typical workshop. Stone, a good mathematician, evidently did not appreciate how tidy and free from arithmetic the workshop practice had to be.

Though the printed sources do not say so explicitly, a carpenter probably set his compasses on the timber line, for example, from its upper end down to the number of inches his timber was square, and stepped this setting out along the timber, counting the number of steps, which was also the number of cubic feet. With the board line used in the same way, the two processes would have been neatly identical, independent of the line of inches and free from all arithmetic.

The fourth line on the 17th century rule I have been describing (Fig.4) is a rarity of unknown purpose. It works like the board line, though to a constant product of 108 sq". 3/4 sq' or the area of a foot run of 9" board. Perhaps there was already a standard 9" width softwood, later known as a "deal".

Carpenter's rules have not survived in large numbers and those that have are almost all 2' long. Fig.5. however, shows an unusual one only 18" in length. The tables for small dimensions are those for a 2' rule, with the bizarre result that the board line cannot be used between 6" and 9" nor the timber line between 8" and 11". Whether this rule
was the work of an uncomprehending maker or designed for use in some peculiar circumstances is not at present clear.

Sincere thanks are due to Dr J A Bennett for a rewarding welcome to the Whipple Museum, to Mr Stephen Johnston of the Science Museum, London, for specially helpful correspondence and to Mr George Nicolle for the photographs.

References:

Bennett, J A  The Divided Circle  (Phaidon-Christie 1987)

Digges, Leonard  Tectonicon  (London 1556)

Stirrup, Thomas  The Artificer's plain Scale or ye Carpenter's new Rule  (London 1651)

Stone, Edmund  translation of Bion's Mathematical Instruments of 1758, with addenda on English instruments (Holland Press 1972)
A GROUP OF BAKERS IN ABERAERON NORTH WALES CIRCA 1913

The photograph opposite shows a group of bakers posed in the entrance of what we are told is a large baker's oven. With most photographs of this sort that is usually as much as we would be able to tell you. In this case however we are fortunate in that this photograph comes to us from the daughter of one of the bakers portrayed. We are grateful to Mrs. Megan Jones for the loan of this photograph and the information below.

Mrs Jones father, John William Davies, is the tall young man standing second from the left. He was born in Aberystwyth in 1892 and was apprenticed as a baker at the Hygienic Bakery, Portland Road, Aberystwyth in 1908. At about the age of twenty, he went for two years as an improver to the Talbot Bakery, North Road, Aberaeron and it was during this period the photograph was taken. After war service in Egypt with the Welsh Fusilleers, he worked from 1918 as a baker at the Wicklow Cafe, Bangor, North Wales.

In 1931 he set up his own bakery - the Hygenic Bakery, Ambrose Street, Bangor, named after the bakery where he had served his time. He started by renting a shop for ten shillings a week and borrowing the money to buy a Dorman Long oven. Mrs Jones remembers that two men came to install the oven and stayed with them till the job was done. At first he delivered the bread from a basket over his arm, before graduating to a hand cart; eventually having a delivery van and a staff of four. One particular memory Mrs Jones has, is of the oven being fired on Christmas Eve and everyone bringing their birds to be cooked on Christmas morning, their range ovens being too small. Likewise, in those days, Hot Cross Buns were only made for Good Friday and the night before would be a busy one. Mr Davies retired in 1947 and died in Bangor in 1981.
Groups of haymakers or harvesters were popular subjects for photographs in the late 19th and early 20th centuries.

In this example, there are nine men (mostly with scythes or pitch-forks); nine women or girls, many with hand rakes for gathering swathes into ridges; two boys, probably employed for leading the horses between handcocks and the stack (my favourite job as a boy at harvest time).

There are two farm horses, one yoked to a farm-cart with ladder extension fitted for the harvest; one to a tedding-machine for spreading the swathes for drying (instead of tossing the grass by hand fork); and a horse ridden by the owner of the farm or his bailiff. In the foreground is a can of cold tea and a basket for "bever". When I used to help with the harvest, this snack always consisted of cold tea (in a bottle to avoid needing a mug), white bread with cheese, and a raw onion. I never saw butter used, nor was beer drunk at "bever time". (According to the O.E.D the word "bever" means a small repast between meals and derives from Old French beivre or boivre.)

As RAS has written "In no other human activity as agriculture has life so completely altered". Ed.
THE USE OF DIORAMAS BY THE COLLECTOR

Michael Field

Whilst reading David and John's article on the visit members made to the National Maritime Museum in Cardiff on the Friday of the Summer Conference I was struck by the comment made at the end of the first paragraph (page 4, Newsletter 19). The words were that the workshop building could not be described as exquisite and fascinating - nor could it be expected to be.

For me these words highlighted one aspect of the way in which our museums display their artifacts which I feel has been, for far too long, neglected, and remember I am speaking from personal experience having been a Curator of a Rural Life Museum for several years.

There are museums and museums, some of them are simply in a room set aside in the local library or Town Hall where in a series of showcases are displayed pieces of pottery unearthed during excavations for a new supermarket, some old documents and perhaps an ancient charter granted to the town. Others consist of a converted building in a town where there are a series of rooms, here the curator is given more scope in which to display his exhibits, each room perhaps being devoted to a specific subject, but it is still only an enlargement on the first format.

And then there are the rural and industrial types of museum, here often an old factory devoted in its heyday to the manufacture of cloth has been preserved as monument to the past glories of the Industrial Revolution with the looms still in the position they were when the factory was working. And with the rural museum we have a similar approach, displays of agricultural equipment from a bygone era together with the allied trades and crafts, the Smith, Wheelwright and Harnessmaker.

Note the difference between the two types of museum, with the first there are constraints placed upon them due to lack of space available to enable the artifacts to be displayed
to their full advantage whereas with the others the extra space they have enables the curator to display his material to greater advantage, or should do, but hardly ever does in my opinion.

Although he may not realise it each member of TATHS is, in his own way, the curator of a museum, his own collection, be it large or small, and with this in mind he must now look at what he has with fresh eyes before he next shows anyone round, and this is where I feel that, where appropriate, certain members should seriously consider making use of the diorama to show off his tools, provided he has the space.

Diorama: to the layman this has come to mean the recreation of a subject, perhaps a woodland glade filled with various stuffed animals, the cabin of an old fishing boat or a Victorian parlour; we have all seen them and generally they are good at recreating a period BUT NOT at recreating the authentic atmosphere, and this is what I meant in my second paragraph.

When I became curator of a Rural Life Museum I used dioramas to bring to life for the visitor various aspects of the rural scene, the farming year, the stable, sawpit, poacher, wheelwright and many others so that a visitor looking through the open doorway of, say, the blacksmith's shop would think he had just slipped out for a pint and would be back in a few minutes whilst next door the carpenter was seen to be hard at work repairing a bier. But how was it that the carpenter could actually be seen at work? Simply by the use of tailor's dummies appropriately dressed and positioned.

Provided a member has sufficient space, and many have, especially our American colleagues, and provided also that he has a sufficiently comprehensive range of tools of a particular craft, there is nothing to stop him recreating an authentic workshop, one which will stop visitors dead in their tracks and which will, on occasions, actually cause them to speak to the dummy under the mistaken impression that it is a craftsman actually at work. This has actually occurred on several occasions with the dioramas I created.
How. you may ask. do I find a tailor's dummy? Simple; go along to your nearest multiple meanswear firm and explain to the manager what you want one for. As they are always in the process of updating their window dummies, he should be able to find one branch which has some of the 'traditional looking' dummies stashed away in some back room and for a very moderate price would be delighted to let you have one.

The type of dummy you want to get is of the foam covered variety with articulated arms (ones with wires that you can bend to the angle you want) and if you intend having you model in a sitting position, or leaning over (as I did with my wheelwright who was using a 'traveller' to measure a wheel), then all you need to do, prior to dressing him, is to cut wedges of foam out of the top of the thigh and the back of the knee and then to bend the leg to the required angle, making sure that it is anatomically possible for him to be that way. (Try the position first yourself to see).

Seeing that authenticity and 'atmosphere' is what you are aiming for then, having created your diorama, invite an old craftsman of that particular trade or craft to come and look it over to see if he can find any faults and once he has approved it then you can be 'sneaky' and slip in a deliberate mistake without telling anyone and wait for the 'self-styled expert' to discover it.

As I say. provided you have the space, the creation of a diorama is an ideal way of putting your tools in a setting which makes sense to the visitor and which brings a feeling of 'life' to your collection, and in addition to this you will have spent many hours of 'sheer pleasure' in actually 'creating something' for yourself instead of just collecting the tools involved, and when I move in the next month or two and create my own museum this is exactly what I intend doing.

The author tells us he will be delighted to help anyone who wishes to set up a diorama. - Ed.
With reference to my letters in TATHS 17, the second letter was a copy of my reply to Mr Croft of Somerset County Council about the site of Fussells Ironworks, Mells. There were several misprints due to my poor handwriting - The Finch Foundry Museum is in Sticklepath, Devon (well worth a visit); Tyzack and Bristol Industrial Archeological Society.

Latest news on the Mells site is that the owners want to turn the remaining buildings into luxury accommodation and presumably level the site to produce gardens. At the moment their efforts are being thwarted by a colony of bats nesting in the roof and by nuisances such as myself who recognise the intrinsic value of the site. Any other nuisances please write to Mr Ladd, Planning Department Mendip District Council. Kannards Grave Road, Shepton Mallet, Somerset, BA4 5BT.

I enclose a list of the different makers of billhooks in my collection; presumably most of these made other edge tools as well. Of the 300 old hooks I have, only a few patterns by the same makers are duplicated and often these differ in some detail. Some of the listed makers are obviously different imprints of the same firm. Where known, I have given the place of origin or in the case of obvious well known manufacturers, left it out. I would however appreciate any information on dates of working and photocopies of catalogue pages to help with identification. Many thanks to Ken Hawley of Sheffield for help given so far in this respect and in answer to my previous query.

Regarding the origin of the billhook, there are authenticated examples from the Somerset lake villages near Glastonbury. In all eight were found in the 1890's ranging from 8 1/2" to 11" in length. Two were found with wooden handles, one of which was quite complete. These date from the 1st century AD and were made of iron believed to have been smelted on the site (remains of a small blast furnace, tuyeres and slag were also found). I have not yet contacted Somerset County Museum Services to find out what has been found since.
Fig. 2 Tools from the Somerset Lake Village. Top: Reaping Hook. Centre: Two Adzes and Spear Point. Bottom: Billhook.

Fig. 3 More tools from the Lake Village. Billhooks shown at nos 2, 8, 16.
Fussells of Mells: for a complete history I would refer readers to Robin Atthill's book "Old Mendip", published by David and Charles in 1964 and recently reprinted in paperback. He devotes a complete chapter to the family and is well worth reading. However, for the lazy ones amongst you, I'll attempt to summarise it:

James Fussell III (1710-1775) established the Mells Ironworks in 1744. His forefathers were from Stoke Lane where as late as 1871 there was another firm of edge-tool makers, Fussell and Wise, who were independent of the Mells concern. Other branches of the family were into papermaking and brewing. Legend has it that he was trained by the Moss family of Hampshire but there is no evidence for this. He was succeeded by his son Austin Fussell (1737-1794), an "eminent edge-tool maker", whose son, John Fussell II (1766-1810), and grandson, John Fussell IV (1799-1868), carried on the business at Mells. Austin's brother, John Fussell I (1740-1821), started the ironworks at Nunney which was taken over by his nephew, Isaac Fussell (1738-1831), and subsequently known as Isaac Fussell. Nunney. It is Austin's other brother, James Fussell IV (1748-1832), who became one of the "most important and interesting members of the family". His son, James Fussell V (1774-1845), built the Chantry, a house at Little Elm, where by 1828 another branch of the ironworks was established. James V's heir was to be his nephew, James Fussell VI (1813-1883), but he had other ideas and joined the clergy, possibly leading to the eventual decline of the firm as there became less and less of the family involved in it.
In all there were six centres of operation: Upper Works, Mells; Lower Works, Mells; Great Elm; Railford; Chantry; and Nunney. There must have been a lot of interchange in work and business over the years as eventually the last catalogue carries the imprint: James, Isaac and John Fussell of Mells and Nunney, John Fussell IV’s son, John Hounsell Fussell V (1828-1910), eventually took over the Nunney business and in 1882 sold the business to a company, or at least his half-share, as they already had the other half. The company finally went bankrupt in 1894 and the goodwill was bought by Isaac Nash of Oldbury. Both Nash and Fussell trademarks are still in current use by Spear and Jackson Ltd.

Fussells were in operation for 250 years and it is still possible to pick up tools made by the original companies. Tools bearing their name and trademarks but made by Nash and their successors are much more common, but still reflect well on the firm of Mendip Ironmasters.
Fig. 5 A page from Fussell's Pattern book
In the archives of Hampshire Museum Services at Winchester are some of the pattern books from Fussell's works. These were taken to Nash's works but eventually were donated to the Curtis Museum at Alton. There are three volumes of patterns of the outwork, i.e special work to customer's requirements. The volumes cover different areas, although there is some overlap. These are blades for chaff cutters etc as supplied either to manufacturers or as replacement blades to the consumer, i.e the farmer or stable owner; special patterns of hooks for different trades, e.g a wide range of regional thatcher's trimming hooks and a book of miscellaneous patterns of billhooks, scythes, hayknives, etc. The patterns vary in quality. some are neatly drawn in ink, others are cut-outs from newsprint or brown paper glued or pinned in with a scribbled note. In one book are the scythers and grinders marks for 1884. These consist of groups of dots or lines on various parts of the blades, presumably punched or ground in.

Fussells obviously made tools for other manufacturers and retailers. For example, I have a hoe stamped "Bowsher, Devizes"; in the pattern books are drawings of billhooks and a peculiar "Thatcher's or Eaves Knife" for A Bowsher, Devizes. Did Fussells also make my hoe or was that made in Devizes or somewhere else? The customers vary from Thos Hughes, Kilkenny who wanted a double-edged slashing hook to Noakes Bros of Maidstone who required all bright copies of Gilpin billhooks weighing 1lb 8oz with 1 1/8" oval handles.
Fig. 6 Scythers and Grinders Marks.
Fixx? ~A nastedqin note -canpiainipg ib01-It,-h8¥kl$¥§'I 1 Q: ' '~ , _ ~_ '  fnb=` V . ` , `_ 1 _ , ,

Fig. 7. A pasted-in note complaining about hayknives.

For my order for 4 knives Oct 20th 1880
These were made right only they were ordered 15 inch blade.
I have photographed these pattern books both in colour and black-and-white but due to the poor contrast the majority of these are not suitable for reproduction. Perhaps at some future date TATHS could arrange for someone better qualified to make copies for the future library and museum. Presumably there are many more of this type of pattern book from the other makers of edge tools. Hopefully some of these are being cared for but I wonder how many are still lying around in workshops or disused storerooms.

I was recently told of the existence of the plywood patterns for the axe handles used on a local forestry estate. These were seen by an ex-worker a few months ago, hanging up in the workshop. A letter to the estate manager quickly followed and the reply that they bought their handles ready-made and that he had no knowledge of any patterns or of anyone who made, or had made, handles. Query: what to do next? I could write the incident off but in case the patterns still exist unknown to the estate manager, it's back to my original informant. Hopefully a short trip in the car will determine the truth. How much knowledge and how many tools have been lost because of lack of current information? In my particular case, identification of billhook shapes causes me headaches. I like to be as accurate as possible when presenting a display, but often for many reasons this is not possible. Unknown makers, special orders and the ravages of time produce some unusual shapes. Even the catalogues are not always 100% reliable unless pattern numbers are stamped on the blade. Occasionally even this goes wrong: I have a Brushing Hook by A F Parkes Co, No 194. This is not listed in their catalogue, although there is a similar shaped hook, No 1494. Is this the same tool, incorrectly stamped, or a variant or something completely different? Billhook shapes are different, or are they? In many cases the difference between patterns is only in the thickness or weight of the blade, the shape or type of the handle and in the method of sharpening, i.e single or double bevel. It is essential that we all obtain as much information as we can, while it is still available, and record and preserve it for
posterity. TATHS has an essential role to play in this, and as members we must do what we can to help.

Finally, if any members residing in or around Wiltshire would like to have a get-together one Sunday please contact me. I cannot get to the Summer or Winter meetings due to other commitments, but I would like to meet some of my fellow members.

Makers of Billhooks

Bidstone, Kingsbridge
Bowden Co, Sheffield
Brades Co (see WHS)
Buck Hickman
Buckland, (Netheravon, Wilts)
COB
Coombs
Digby, H-t-sbu-r-? (Heytesbury, Wilts)
J Down, Mere (Wilts)
DPM
DS, Dronfield
English Tools Ltd
Elwell
Essanco, Sheffield
Finch Bros, (Sticklepath, Devon)
Isaac Fussell, Nunney (Somt)
John Fussell, Mells (Somt)
Jas (James) Fussell, Mells
Fussell
Fussells Improved
Fussells, Mells, Improved
W Gilpin
Gilpin Whitehouse
Isaac Greaves
Wm, GReaves, Sheaf Works
J Haines

Martindale
Moss
A Moss
? Moss
Morris, Dunsford (Devon)
Isaac Nash Sone
Nash
Nash Sons
W C Padfield
A F Parkes Co, Birmingham
Parkes Biped
Parkin Marshall
Perks
Alfred Ridge Sons

John Riley Sons
John Riley, Sheffield
Serjent, Reading
C T Skelton Co, Sheffield
Skinner Johnson, Ranskill
Robt. Sorby
Spear Jackson, Sheffield
Thos. Staniforth
T Staniforth Severquick
Staniforth Severquick
W Swift
W Tanner
Hale Bros
Skinner)
HSL (Harding Sons Ltd)
J Harrison
J Harrison Ltd
James Howarth
D Huggett, Hailsham
WHS (William Hunt Sons)
Jackson, Cirencester
Jobford?
T Joiner, Maker, Knavesbeech
A J Kitchen Ltd
Elliott Knapman
Knapman Sons, (Hill Mill nr Totnes)
RJ Linaore? Linacre??
Lockwood Bros, Sheffield
Loder

Tanner Johnson?? (see
TBC
Treliving Smith??
L Vickary
Walters Sons, Hull
Ward Payne
Webb
Websters, Axminster
Cornelium Whitehouse
Whitehouse Bros
A W Wills Sons Ltd
J Yates Co

? indicates that the name stamp is not legible and a guess has been made in order to fill in the blank spaces etc.

Wood-Handled Kent Block Bill.
I was very gratified by the letters that you received in support of my letter on the survival of woodworking skills. There are two further points that I should like to raise.

The first is whether TATHS would consider keeping a register of craftsmen who were prepared to teach their specialist skills to the uninitiated. I realise that one cannot learn the use of a specialist tool in a few days when a craftsman has taken a lifetime to acquire such a skill. However, I believe that the principles behind the use of a tool of the carrying out of a particular technique can be passed on over a short period of time. It is then the responsibility of the recipient of this knowledge to develop the skills that he has acquired.

The second point concerns the finding of specialist tools, or even common tools that are well produced. I suspect that there are still small firms producing such tools. If TATHS members who either know of such firms, or have had dealings with them, could pass their names to the Society. other members could benefit from this information and firms still prepared to produce good quality woodworking tools would be helped with their struggle for survival. A corollary to this would be to invite members seeking a particular tool to write to the Newsletter. Anyone who knew whether such a tool could be obtained would then write to the enquirer.

C A J Brightman, Hampton Wick
MACHINE TOOLS

At the first AGM that I attended I spoke to the members of my interest in one aspect of Tools that I find seems to lack any interest in any society - what we know today as the Machine Tool, which as we know probably originated from the common lathe.

We know from artefacts that have been found that the use of the lathe dates back to Roman times, not only for woodworking, but also for metalworking, and it is very surprising to find that hardly anyone seems to have an interest in these devices, although we probably have more to thank these artefacts for than probably any other tool that has been ever considered, or studied.

During the last two centuries England has been the forerunner of the development and production of machine tools of many types, all in some way developed as a result of Maudsley's work in the early part of the last century.

Today, the machine tool industry in England, and in America, is in decline, and the leaders in this field are unquestionably the Japanese. At the same time a great many of those unique machines that were developed during the last two wars are rapidly disappearing.

Is there anyone who may be interested in pursuing studies of this most important range of tools?

Some of you may be aware that I have a connection with the American Precision Museum in Windsor, Vermont, which unquestionably has the most comprehensive collection of machine tools in America. There are, of course, collections in the Science Museum. London, and in the Museum of Technology in Birmingham, also in Prague.

If anyone is interest in this form of tool I would be pleased to hear from him/her.

Arthur D Dunn P.Eng, Ottawa, Ontario, CANADA
HAMMERHEADED PINS

I apologise for the delay in answering the letter which was printed in TATHS Newsletter 15 some twelve months ago where I referred to hammer-headed pins.

The hammer-headed draw pins referred to are used to join and secure the joint between two curved members, such as to be found on a circular headed door, or window frame. The single hammer-headed pins perform a similar function at the joint between straight and curved members, as would be found where a curved door head meets a straight stile.

George Brereton. Bebington, Wirral

See also "Woodwork Joints" published by Evan Bros 1920 (page 65) and "The Art of Japanese Joinery" by Kiyosi Seike published by Weatherhill/Tankosha 1977 (page 103) - Ed.
NICKERS

A question asked at the Woodworker Show this year: Why is a nicker iron provided on a sash fillister which is always used along the grain? The consensus is that it provides a clean edge on the inside face. Presumably the moulding should be stuck with the grain and consequently the rebate would have to be cut against the grain in most circumstances.

Does anyone possess any contrary ideas?

Brian Prior. Teddington. Middlesex

BANGER BODGERS

Is there any interest in old motor car repair tools? I have several old one and some knowledge of their use.

G P L Mansfield. Kirkcudbrightshire

COMB MAKERS

I have written to Arne Emil Christensen regarding the "double saws" he describes.

In brief. I have enquired whether or not one of the blades could have been normal and the other "blade" toothless. Once the first cut had been made, the toothless blade would run in that slot, without damage. while the toothed blade made the second cut. Moving across in this manner. identical spacing would be achieved with little skill or effort. By varying the spacing between the blades, teeth could be cut to suit different sizes and thicknesses of comb.

Bob Wearing

Could I, in modesty. refer you to ref. 17 of the article quoted - Ed.
DISHING IN THE CONSTRUCTION OF WOODEN WHEELS

I have been very interested to read about this subject in TATHS journal, especially the comments of two correspondents in Newsletter No 17. I can claim no special knowledge of the subject, but have always assumed that R A Salaman is right when he states on page 506 of his Dictionary of Woodworking Tools that an advantage of 'dish' is the added resistance to lateral thrusts. This makes sense because, confined by the tyre, the cone-shaped circle of the spokes behaves like an arch and resists the sideways forces which occur when transporting heavy loads over rough or rutted surfaces.

Paul Le Rougetel, Chester

Readers are reminded that in Newsletter No 10 (1985 p32) R.A. Salaman discusses the question of "dish". He seeks to prove that the process of dish does not add much to the strength of a wheel, but provides certain other advantages.

This subject seems to have got into a bit of rut, would anyone mind if I called a halt to the wagon train for a season or two? Ed.
"A PRAECURSIONE AD ULTIMUM"

I am currently researching into the metallic framed brace or "Ultimatum", with a view to publication, and would be grateful for any help from the membership.

The principal areas of interest are unusual types of framed braces, especially the Mathieson "Patent Spring Lock Brace" (one was sold at Tyrone R Roberts auctions in Cambridge, 1978), and any Simms types. Braces with engraved dates and pad mechanism other than the usual ring or lever catch. Any assistance will be gratefully acknowledged.

Reg Eaton, 35 High Street, King's Lynn, Norfolk, PE31 7DB

THE ETYMOLOGY OF ZIMMER

In his review of Das Werkzeug des Zimmermanns, Ken Major rightly pointed out that `Zimmer'—Mann can be translated as 'room'—man. To this I would like to add that Zimmer is the same word as timber, having lost the 'b'. and the 't' changed to 'z' in the process of the consonant shifting. According to Kluge/Mitzka: Etymologisches Worterbuch der Deutschen Sprache. Berlin 1967 the meaning of `Zimmer' originally was 'timber' and gradually expanded to 'timber structure', 'dwelling' and finally to 'room'. Since the trade of 'Zimmermann' goes back to antiquity I would like to offer the literal translation 'timber man' as an alternative to Ken Major's 'room man'.

G Heine, West Germany
AN EARLY SCREWDRIVER

With reference to Norman Plastow's turnscrew (Newsletter 19 page 36) there are descriptions of similar ones in Richard Timmin's undated, but C1800-1810 catalogue which shows on page 37 as follows, 'Black Turnscrew all steel No 261 4/0d' (3" Blade), 'No 262 4/6d' (4" Blade). These prices would be per dozen so the equivalent in today's currency is about 2p each retail, less probably 35% to the ironmonger. Only 3 sizes are shown twisted, larger sizes are the usual straight-bladed pattern in this particular range. A comparison with other turnscrews in the same list shows the best ones to be 7/- per dozen Black (as forged) or 9/- per dozen Bright (ground).

The twist blade turnscrew is obviously a 'common' made down to a price, probably from rolled blister steel bar of thin section and to increase its strength and stop it twisting in use, the clever use of twisting the blade was adopted; this would be cheaper than forging but was only applicable to short blades.

The 1892 Timmin's list shows them at the same price but the discounts were probably shorter; by 1901 they had disappeared from Timmin's List. I have only seen this pattern shown by this firm and no other.

Ken Hawley. Sheffield
A SAW POINT

In the interests of accuracy may I comment on Richard Groves' quotation - one saw is missing. Here is a copy of the original.

Ken Hawley. Sheffield
CONVERSATION PIECE

I have just had a quick look through the Autumn Newsletter which arrived this morning and I must say that I very much enjoyed doing even I found no reference to any named plane maker! I somehow gained the impression, more vividly than of late, that many pens are poised to contribute and that all augurs well for the Society both now and in the future. Long may it prosper!

Mr Syson on Page 34 wishes us to be more concerned with personalities and I agree. In fact, I have handed over my initial enquiries into the Griffiths Norwich family to Philip West and he has since spent a good deal of time and money on his researches. I believe he is almost ready to publish although the result is too big for consideration for our Journal and will have to be dealt with separately in booklet form. The trouble is, I understand, that a minimum of £1300 or so has to be found to produce 1000 copies.

Many of you know that John Griffiths was baptised at Fetcham, Leatherhead, Surrey on the 17th March 1765. We think he eventually set himself up in London as a journeyman at Gabriels (1770-1815). He married and had 3 children in London and probably used to take Gabriel's tools up into East Anglia where he doubtless found a ready market. So much so that he and his family moved to Norwich in 1803 in order to form the Griffiths firm, many of the personalities of which can be traced up to almost the middle of this century. Fascinating stuff!

Another of the many highlights to me is the article on Page 17 by Canon J Griffin as I was fortunate enough to be at those meetings and shall never forget the experience. One of the planes exquisitely remade 'to fit the owner's hand' was a Chris Dowden (1720-1760). Nevertheless it looked so good and was one of Susannah's favourites.

How delightful it is to read Canon Griffin's presentation of the visits.

Reg Fowle, Norfolk.
Answers to "What's it?" competition:

1. Scratch stock
2. Timber scribe
3. Carpet stretcher
4. Repousse hammer
5. Coachmakers bevel
6. Welt rubber