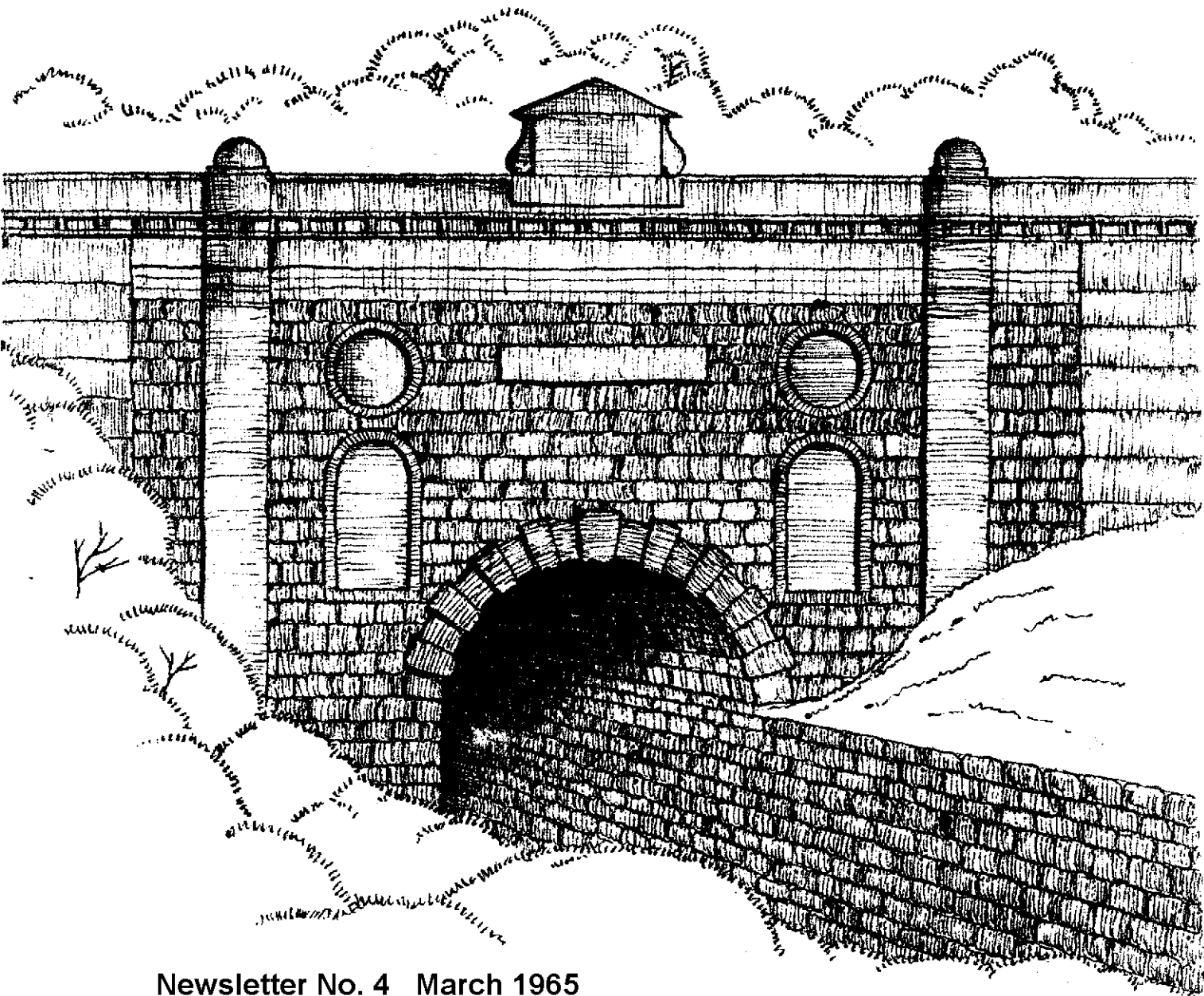


THE NEWSLETTER OF
THE GLOUCESTERSHIRE
SOCIETY FOR
INDUSTRIAL ARCHAEOLOGY



Newsletter No. 4 March 1965

NEWSLETTER

Number 4

GLOUCESTERSHIRE SOCIETY FOR INDUSTRIAL ARCHAEOLOGY

President	Mr. Noel P. Newman, C.B.E., J.P.
Chairman	Mr. W.G.H Robins
Secretary	Mr. Warren Marsh c/o 19 College Green, Gloucester
Treasurer	Mr. R.H Pullan Greenacres, Painswick Road, Brockworth, Gloucester.
Newsletter Editor	Mr. G.N. Crawford
Committee	Mr. J M. Strange Mr. W.R. Taylor Mr. L.F.J. Walrond Mr. C.H.A. Townley Rodborough House, Rodborough, Stroud.

CONTENTS

PAGE

1	Editorial
3	Turnpike Houses Round Stroud
9	Society Excursion to Chepstow, Lydney & Littledean
12	Dross Building Blocks
13	Notes on the Capper Pass Family
14	Museums
16	Spring Lecture Programme Field Work
18	Summer Excursions
19	Bibliography of Industrial Archaeology
20	Book Reviews
21	Last Shipment of Forest Coal
22	Canals
24	The Woollen Industry of Stroud
26	Membership List

COVER - See Page 21

Contributions and letters for future issues will be welcome and should be sent to the Editor, Mr. G.N. Crawford, c/o County Architect's Department, Shire Hall, Gloucester.

EDITORIAL

Some members will have read the article by Michael Rix called "A Proposal to Establish National Parks of Industrial Archaeology" in the third number of "The Journal of Industrial Archaeology". Others will remember his lecture in December last year when this subject was also mentioned as a possible future development.

In "The Journal" Mr. Rix describes the Ironbridge Gorge, a region of numerous industrial monuments where he has carried out much research, and he presents this as his first choice for a National Park.

Second on his list is the Stroud valley - though I should prefer 'valleys' - and I should like to examine this proposal in a little more detail as few questions were asked at the lecture, presumably because members had not then had time to realise the implications.

The word 'Park' would be a little unfortunate in the Stroud district as one associates the word with areas where practically no building is allowed and this could not occur in the Stroud valleys without stultifying economic growth. Perhaps a 'National Centre' would be preferable. New building would be allowed but all applications would have to be very strictly vetted by the County Planning Officer and his ideas for tidying up the valleys would also fit in well with the proposals of Michael Rix.

No doubt many members will be full of suggestions for implementing this far-reaching scheme. Already exciting ideas have been put forward. One proposal is to preserve part of the Thames & Severn Canal, fill it with water and display one or two narrow boats adjacent to a small museum. A building such as this already exists at Chalford round house, where one of our creative members has collected many examples of bygone crafts and industries. Further suggestions are to preserve a railway halt and use it to exhibit relics of the famous railcar service, and to mount a display of historical material associated with the Cotswold woollen industry in a small watermill.

But the greatest attraction of all and the one most likely to remain in the memory of visitors would be seeing actual machinery working, like the waterwheels operating the millstones at Egypt Mill near Nailsworth or cloth making in one of the other historic mills. In such a case some method of compensation for the mill owner might have to be arranged if inconvenience were caused.

One of the most important parts of the scheme would be good signposting and labelling together with car parks at strategic places, as I anticipate most people would come by car or coach. Mr. Rix mentions that a pamphlet should be available which would include a map marked with all the sites and a short account of each.

Naturally, one asks "Where is the money to come from for all this ?" Considering that it is for the benefit of everyone I consider that there should be a Central Government grant and perhaps some local support using the ratepayers' money. Industrial firms would get a free advertisement and the local trades, particularly cafes and restaurants, would benefit, so that they, too, could contribute. Looking at it optimistically, usually if you have a worthy cause, you can get the money somehow !

THE INDUSTRIAL PAST and the INDUSTRIAL PRESENT

A Residential Course at Rodney Lodge, Bristol - May 4th - 7th 1965

The University of Bristol is organising an important four day course on Industrial Archaeology which promises to include nine interesting lectures and two visits, and anyone with the time and money to spare is strongly recommended to join.

The lecturers are Kenneth Hudson, Rex Wailes, G.H.L. Andrew, Kenneth Ponting, Professor Sidney Pollard of Sheffield, Dr. R.A. Buchanan, N.R. Collins, N. Cossons, A.E. Owen of Messrs. Pilkington's Museum and E.G. Sterland of the Bristol Aeroplane Technical College. The inclusive cost of the course is £16. 0. 0.

A Note on the Preservation & Restoration of Milestones.

The County Surveyor has informed me that he will try to replace the plates which are missing from milestones. This seems a welcome and positive step towards the preservation of our local milestones.

C. Cox.

TURNPIKE HOUSES ROUND STROUD

In a pamphlet published in 1847 called "Rebecca at Stroud", David Ricardo Jnr. of Gatcombe complained bitterly of excessive toll-taking on road users in the Stroud District. Nowadays motorists complain as strongly about the taxes which, some say, are not being applied to the repair and re-building of roads. It is not a new problem.

During the 18th century, increasing traffic and the use of roads the whole year, not just seasonally, had made many roads almost unusable. Samuel Rudder in a "New History of Gloucestershire" (1779) writes that in 1776 he saw a chaise mired half a mile from the Swan Inn on the Bristol-Gloucester road, and it is usual for Turnpike Acts to start with the statement that the public road is "very bad and ruinous, and many Parts thereof almost impassable in the Winter Season, and in divers Places so narrow, that it is dangerous for Persons to travel through the same ..." (12 Geo.I. CXXIV)

Under the turnpike system, an Act of Parliament gave powers to a local group of Commissioners either to repair an old road or to build an entirely new alignment. The initial cost would be raised by a subscription for shares, but it was soon found out that a road needs continual repair, and to recoup the subscribers and pay for the necessary works, toll-bars, popularly called turnpikes, were placed across the new road at convenient points to collect money from the road users. To house the toll-collector, special houses were often built, though on occasions a convenient existing cottage seems to have been used.

Such toll-houses, standing close to the verge of the narrow roads, are usually the first buildings to go when a road has to be widened, the more especially as the turnpike system gradually went out of use during the second half of the 19th century. In some few cases, however, they have survived, and a number are still to be seen and recognised in the Stroud-water district. The following short account divides these into two groups: those with a distinctive architectural feature and those which appear to have been built as ordinary cottages. In addition there is a very large number of sites where no building now remains, but these sites will not be discussed here.

The "typical" toll-house shape has a 3-sided frontage, with windows in each face. This seems to have been so that the pike-keeper could see down the road for oncoming traffic, and thus for example have the gate open for non-stop coaches (which

of course did not pay at every gate). The doorway would normally be at the rear of the house, to prevent an 18th century smash-and-grab. By the 19th century, toll-houses were supposed to have not only a board of toll charges but a lamp lit at night.

The writer has identified three surviving 3-sided toll-houses. One is Stancombe Pike near Bisley (SO 897069), another is Butter Row Gate (SO 846045) and the third is half-way between Nailsworth and Horsley (ST 843985).

Stancombe Pike House stands on an ancient cross-roads about a mile west of Bisley, and the site must have seen the passage of the army of Charles I on the way to besiege Gloucester in 1643. The toll-house however dates from the turnpiking of the Stroud-Bisley road by 4 Geo.IV c. 14 of 1823. This must have been a difficult route over several hundred years, as would appear in a deed of Endowment of 1304 "That whereas there is no manner of doubt that between the chapel itself of Strode, and its mother church of Bysselye, so great and so dangerous a distance exists that in the baptizing of young children and the administration of the other sacraments of the church it is not unlikely that grievous peril of souls may happen ..." (Notes & Recollections of Stroud by P.H. Fisher). St.Clair Baddeley said in notes on the Lypiatt Cross (B. & G. no 51 1929) that the roadside pits by the wall of Lypiatt Park represented the old road used for building the new, but these have now been filled in. The pike house itself has been enlarged, but is still substantially the same as when it was first built.

The Horsley Road pike house also has been added to: most of these houses seem to have been very cramped, with one room down and one up. The back was built into the steep bank, and therefore the original door was at the front. The door-lintel may still be seen, as also the shape of the arch above which formerly held the list of charges. This arch has unfortunately been filled in. This road was a "new" road to shorten the distance between Nailsworth and Horsley, cut out of the steep valley hillside; the Act is 39/40 Geo.III C.75 of 1800.

Butter Row Gate is perhaps the most picturesque of the local pike-houses. The road Act is 6 Geo.IV C.23 of 1825, and like that for the last pike house this was a "new" road cut into the hillside to shorten the route from Stroud to the Bear Inn. At Butterrow however it crossed the old hill-track from Rodborough to Bagpath. The house, again built into the steep bank behind, has its door at the front, and has a 3-sided frontage. The interesting architectural feature is the early sign of Gothic revival in the ogee-shaped arch to door and windows, and similarly the heads to the window lights. Its unique feature is

the survival of the charges board over the door, restored (with one or two errors!) in 1952.

A pike-house which has only recently lost its distinctive 3-sided frontage is that at Avening. Here the frontage was asymmetrical but recognisably of a pike-nature; but the building was altered in 1964 and the front taken back several feet and squared, only the original footings being left to show the former typical pike-house shape. The later extensions to the original pike-house are revealed by the lack of bonding in the east wall. The relevant Act is 3 Geo. IV C.61 of 1822 .

On the corner of Cainscross stands a building which, while not 3-fronted, shows by its architectural feature that it is related to the Butterrow Pike House. While this is a very ancient cross-roads, and there was a toll-bar here by the 1730s, the present house seems to have been built as part of the new Cainscross road of 1825. A comparison with a water-colour of the same site in the Stroud Museum by Paul Smith dated 1903 shows that slight alterations have since taken place: for example to the top of the bow front, and the replacement of a window by a door. The recess over the centre shows where the charge board formerly was fixed.

This recess also serves to identify a building otherwise without distinctive pike features. This is a cottage near the junction of the Shortwood and an upper road to Horsley in Nailsworth. The building is square-fronted, but the recess is of the same shape and size as that for the Horsley Road pike some distance further towards Horsley. It seems possible that this may have been intended to catch those trying to avoid the turnpike road, though the building itself is not quite on the road junction. (ST 847993)

Not exactly in the Stroud District, but probably connected with the roads out of Stroud is a surviving toll-house, No. 105 Tredworth High Street, Gloucester. This was pointed out to the writer by Miss G. Davies of Gloucester. While no documentary evidence has yet been found, the evidence of architecture and of local tradition seems quite conclusive.

On the road to the Severn Passage beyond Arlingham are two further pike-houses. These do not show any typically "pike" features, but are distinctive in style, apparently early 19th century. One is along the Perryway near Nastfield, the other at the junction of the Saul road with the Arlingham road, just across the Frampton Canal bridge. (SO 763061 & ST 745085 Both are marked on the 1st edition of Ordnance Survey. The Frampton Pike was occupied at the time of the Fretherne tithe map by Mary Hall.)

The buildings listed below are not of a distinctive shape or pattern, but were identified as former pike houses by a variety of ways: in one case by the deed, in others by local information, but all by map identification, the most useful being the Tithe Maps of the 1840s. One or two seem to show pike-like features. The location, map reference (6"), relevant Act and any noticeable feature are given below.

Cypress Inn, Lightpill. SO 840041. 39/40 Geo.III. c.43 of 1801. Rodborough Tithe No. 345. It is marked as a TP on 1" Ordn. 1st edition, but no separate toll house is discernible.

Shop opposite the Clothiers Arms, Bath Rd., Stroud.
SO 844049 same road. Gate shown on the Rodborough Tithe map. Confirmed by occupant.

Rodborough. Small cottage opposite the Prince Albert Inn, in grounds of "Pike House". SO 846045. Act 25 Geo.II c.13 of 1752 - piking of ancient road. The preliminary drawings for the Ordnance survey show two bars, Bryant gives TB, and the Rodborough Tithe No. 305 gives the owner as Lawrence Samuel, the occupier as Thomas Wynn, calls it a cottage and garden but has a gate drawn on the map. It has of course been altered, but there appears to have been a window in the front behind the present signpost.

Pike Lane, Frampton Mansell. On the Cirencester road, at the junction with Pike Lane, are two cottages. SO 925018. Bryant marks TB, but no buildings are given on the 1" Ordnance 1st edition. I was told by an occupant that on her first living there she received a letter to the previous occupant addressed to "Pike Cottage". This was about 40 years ago.

Tiltups End. ST 845973. Act 20/21 Geo.III c.84 of 1780: the Nailsworth Turnpike, and the first "new" road in the district. The 2" preliminary Ordnance drawings show two bars; Bryant marks it TB ("Tiltups Inn"). The pike house is now empty, awaiting demolition for road improvements. By the door fronting the road is a small hatch, presumably the "ticket window". This building was verified by Mr. Kimsbrey, a relative of the last pike-keeper, who got, for her pains, 2/6 a week "and lamp oil".

Frocester Court. Just south of the barn is a building consisting of two conjoined cottages, the older being the former pike house. It is given both on Bryant and

the 1" Ordnance 1st edition, and Frocester Tithe No. 380 gives the owners as the Commissioners of Frampton Turnpike Roads, the occupier as Martha Perrett, and calls it "Turnpike House and garden." The exterior has been much altered, but the inside shows a typical cottage one-down, one-up arrangement.

Frocester Hill Cottages. SO 793019. On a level stretch, just where the old alignment turned left up Frocester Hill. On the Ordnance 1st edition it is called "Old TP". The alignment was altered probably in the 1780s and there was a toll site at the top of the hill, so possibly this building was not of great importance.

Junction of Selsley-Uley with Nympsfield road. SO 795014. Bryant and Ordnance 1st edition mark this site, as do several late 18th century Acts e.g. 19 Geo. III c.118 - "House lately used as a Toll Gate stands at the Top of Frocester Hill." The building is indicated on the Frocester Tithe Map and also (less usefully) on the Nympsfield Tithe Map. What remains of it today is used as a hay store, but inside are relics of its use as a dwelling, including the recesses for windows and door, a stairway and an open-hearth fire with an oven. The outside has been altered. The route is part of the ancient, pre-Roman, way from the Forest of Dean to the top of the Cotswold plateau.

Upper Hyde, near Minchinhampton. At Burnt Ash, just off the main Cirencester Road, at the turning to Chalford via Hyde. SO 886012. Isaac Taylor marks turnpike for the Burnt Ash site across the road, but those cottages have gone. This cottage is marked by Bryant and the Ordnance 1st edition, and on the Minchinhampton Tithe No. 1372 is a close "owned by James Clutterbuck, occupied by James Ralph, by Hyde Gate". The cottage has been added to and altered, but on the wall facing the Hyde road may be seen the built-up outline of the former door and window; and a pile of stones over the opposite hedge is all that remains of the gate post. This stood on the old Tetbury-Bisley-Cheltenham cross-route.

Holloway, Bisley. SO 906054. A building is shown in this position on the preliminary drawings to the Ordnance map; Bryant gives TB, and it is marked on the Bisley Tithe. There are in fact 3 cottages

in echelon. The one furthest south is probably the original pike house, as a bar is shown at this point on the Tithe map, while the preliminary drawings of 1811 do not show the middle cottage. The route is an old one, but I do not know whether Act 31 Geo II. c.65 of 1758 (Tetbury roads) extended so far north; but the Chalford-Bisley turnpike is mentioned in 54 Geo III c.80 of 1814. Four, possibly five, routes met at this point.

Near the Round Tower, Cirencester Park. SO 998026. This end cottage of an empty row near the Ewe Pens is mentioned in 54 Geo. III c.80 of 1814 as "The Toll gate near the Round Tower on the present road from Cirencester to Stroud," and was probably put up under 25 Geo. II c.13 of 1752. The preliminary drawings for the Ordnance map (c.1816) gives TP at this site, but by 58 Geo. III c.23 this part of the old main road to Stroud was officially withdrawn from public use, and instead was used a new stretch south of Cirencester Park built by Lord Bathurst to shorten the eastern end of the Minchinhampton-Cirencester road. On the road frontage may be seen the original length of the cottage (by the lack of bonding, as well as by an angle in the plane of the wall) and a blocked door and hatch. It is empty and presumably ready for demolition.

Walls Quarry, Brimscombe. SO 866021. Given by Bryant and marked on the Minchinhampton Tithe as No. 1249, "Walls Quarry Turnpike House". This stands at a road junction by the entrance to Brimscombe Church on a level stretch. To it has been added a later building, formerly a bakery. The deed conveying the pike house to private ownership in 1877 is still in existence; it was part of the Stroud-Chalford group, 54 Geo. III c.80 of 1814.

Park Stile, Woodchester. At the corner of Southfields Road is "Pike Cottage", pointed out to me by Mr. Gegg of Woodchester. The house and two bars are given on the preliminary Ordnance drawings, and this is part of the Nailsworth Turnpike Group. It has a general resemblance to the Tiltups End House, with the appropriate hatch-openings, though the former door is now blocked, and a doorway has been put where there originally was a bigger window.

A number of sites remain to be sought or verified, e.g. near St. Chloe, Balls Green, Well Hill near Forwood and so on. A larger

number are "sites" only, and the former building has gone, often only in recent years. These sites, largely of archaeological interest, may be listed in a later article.

Feb. 1965

Christopher Cox.

SOCIETY EXCURSION TO CHEPSTOW, LYDNEY AND LITTLEDEAN,
12th December 1964.

In spite of the damp weather Messrs. Crawford, Davis, Marsh, Parsons, Robins, Western and two children spent a most instructive day on the other side of the River Severn.

At Chepstow we were taken on a tour of inspection of The Fairfield Shipbuilding & Engineering Works by Mr. Goat, a plater employed in the shops.

We saw many electrically welded structures being fabricated from the steel supplied by Richard Thomas & Baldwin of Llanwern and other mills. On the jigs were 24-ton towers for Aberthaw Power Station, a 62'0" gantry girder for Manchester and many of the sections for the new Wye motorway bridge. Many of these units are welded together with an overall tolerance of only $1/32$ ". After fabrication the bridge sections are shot-blasted, galvanised with a zinc spray, primed with zinc chromate and finally coated with red lead or grey metallic paint.

The present buildings date from World War I but the Works date from 1852 when Edward Finch of Finch & Willey, Liverpool, took over the site to fabricate the steelwork for Brunel's famous tubular railway bridge over the Wye.

The Works were acquired by the Standard Shipbuilding Co. during the 1914 - 18 war and became an important national shipyard building ships up to 10,000 tons. In 1925 the present firm took over and the site now covers 34 acres.

On the slipways and moored down river we saw several of the ninety 160-ton Severn Road Bridge deck sections. The components are delivered from Scotland by road to the Fairfield yard by the Arrol-Cleveland-Dorman Long consortium and the welding together of these sections to make up the decking units is carried out on the slipways by Fairfields under sub-contract. The seventy-eight Wye bridge sections are entirely made up in the Chepstow Works under sub-contract to the Cleveland Bridge Co. Ltd., who are the main contractors for the smaller bridge.

We were told that the Severn bridge sections are floated into position, raised by cables stretching from the twin towers and later the sections are welded to one another in-situ.

Before leaving this fascinating yard we caught a glimpse of two American Ingersoll-Rand stationary engines installed in 1900 and still giving good service. The horsepower of these is not known.

After lunch we motored to Lydney where we were met by Mr. Jack Bell a local historian who provided much useful information on the old railway, harbour and tinsplate works.

In the church we saw the memorial to Richard Beaumont Thomas (1860 - 1917), the eldest son of the first Richard Thomas who founded the company now called Richard Thomas & Baldwins. Down the road adjacent to the new paper mill is the structure of the early nineteenth century tinsplate works built by Richard Thomas & Co. This works ceased production about 1956. On the opposite side of the road are the empty engine sheds built in 1865 for the Severn and Wye Railway.

Just beyond the level crossing over the main South Wales line the road to the docks runs past a long steep-roofed and many gabled building which looks curiously out of place; it reminds one of the Victorian hotels seen at seaside resorts. It was apparently built in 1859 as housing for the employees of the Severn and Wye Railway and later was converted to shipping and customs offices. Now it has mainly reverted to residential usage and the centre portion displays the notice "Lydney Railway Hotel". On the old canal wharf opposite is the crumbling ruin of William Jones' shipping office dated 1813. At one time 250 ton boats could negotiate the canal up to this point.

From the station we continued down the road to the canal entrance where at one time 100 ton to 130 ton boats were constructed. Recently the docks railway line has been lifted and only the old warehouses, lock-keeper's and harbour master's houses remain. Mr. Bell informed us that the last time a boat loaded coal at Lydney was in 1961. Now the only commercial craft seen in this small dock are boats up to 700 tons which bring West African logs from Avonmouth ships to the nearby plywood mill.

It was too cold to stand for long on the exposed jetty with its magnificent wrought iron revolving navigation light and soon we were back in our cars and heading for the Forest.

From Lydney we drove past Foundry Wood to Littledean. The old prison here is the last of four identical Houses of Correction built in the county and remains practically unchanged since its opening in 1791.

It was probably designed by a London architect named Blackburn at the request of Sir George Onesiphorus Paul of Woodchester, a prosperous clothier who became High Sheriff of the county. It was last used as a prison in 1865.* The cells are at present used to store County Records Office plans, the old keepers quarters are a police station and the court room is still used by the Petty Sessional Court. We are indebted to Sergeant Willett who kindly showed us round the rooms and the outbuildings.

The walls are constructed of the local pinkish Forest stone and throughout the building there is evidence of the considerable care taken in the layout and detailed design of the fittings. In particular the iron adjustable louvres, cell signalling flaps and centre-pivoted barred doors are remarkable for their beauty and practicability.

It is appropriate to quote Arne Jacobsen, the world-famous Danish designer, who says "Economy plus function equals style" for the prison is an excellent example of this maxim. One of the architects in our party said he thought these buildings at Littledean were some of the best examples of the functional tradition that he had ever seen in the county. We sincerely hope that this fact will be more widely acknowledged and we hope this last House of Correction will long remain intact.

Warren Marsh.

- * Further details of the prison and its inmates are given in the University of Bristol's "Studies in Dean History" published 1963.

THE LINCOLNSHIRE LOCAL HISTORY SOCIETY

A circular from the society mentions a Summer Course being held in Norwich from the 23rd - 31st July, one subject being "The East Anglian Cloth Industry". As most members know, East Anglia was at one time one of the main areas of cloth production.

Also noted in this circular are some of the publications of the Standing Conference for Local History, including a booklet on "Crafts, Trades and Industries" (price 2/6) and the quarterly "The Amateur Historian". This journal includes articles on industrial archaeology.

DROSS BUILDING BLOCKS

CORRECTING an error which appeared in an article on Newnham in a Bristol Evening newspaper, I mentioned that the only tangible relics of the Seventeenth century "Glasshouse" at Newnham were to be found in blocks of black building material embedded in several walls in the lower part of the town which are reputed to be moulded from the dross or scum arising from the glass in the process of manufacture.

I added that there were similar moulded blocks and capstones to be found in a part of Redbrook-on-Wye, but here the dross was that of copper which was worked at what later became the Redbrook tin-plate works.

I mentioned that there was a local report that many blocks of this copper dross had been exported to Bristol to be used for building purposes.

As a result I received two letters informing me of similar blocks in the Bristol district which had been used for the same purpose although a local origin was attributed to them.

These blocks were noticed in wall building at and around Crew's Hole, Conham and were said to originate from copper smelting at factories by the side of the Avon, and that similar blocks were used to build the fantastic Arno's Castle by the road from Bristol to Brislington which is now under threat of demolition.

Another correspondent pointed out that the high wall around the Ashton Court Estate, Long Ashton (recently acquired by the Bristol Corporation) was "capped" along its seven mile length by similar black blocks, some moulded in half round shape and some rectangular.

The precise nature of the blocks was not known to my correspondent who had always considered them to be waste from the smelting works of Capper Pass of Bedminster, although since the Ashton Court estate is very near to Nailsea he thought it might be possible that they emanated from the old glass works there.

There may be other examples of the use of such by-products and these should provide an interesting study.

Rev. R.J. Mansfield
(Hon. Sec. Forest of Dean Local
History Society).

NOTES ON THE CAPPER PASS FAMILY

The family has its background in Walsall, Staffs., but by 1820 one Capper Pass was resident in Bristol. The name appears in the Bristol directories from 1836 onwards as a 'metal refiner and dealer, near gas works, Avon Street'. At this time the business was carried on only on a small scale.

In 1837 a second Capper Pass 'metal refiner' married Hannah Coole, born in Bristol but then of Long Ashton. It was their son, Alfred Capper Pass, born at Avon Street, who succeeded in expanding the business and making it a prosperous concern.

His father moved to Bedminster in 1840, and there the smelting works were established. At the beginning of this century two further plots of land were bought with a view to overcoming lack of space, one on the Ashton Court estate and the other adjacent to it, the site of now defunct Malago Vale Brickworks.

In 1928 the firm, which had since 1894 been changed into a limited company, sought a new and larger site as the only way of keeping pace with business. Their choice was Melton, at North Ferriby on the northern side of the Humber, a few miles above Hull. The Bedminster branch is still in business.

As for the demolition of Arno's Castle, I have no reason to doubt but that this is an unfounded rumour. I know that the land in front of the gate has been advertised for sale, but to the best of my knowledge Arno's Castle has never been in danger of destruction.

(Miss) E. Ralph,
City Archivist, Bristol.

(The Bedminster branch has now closed following the final stage of the transfer of the business to Melton - W. Marsh)

TAPE RECORDER

If any member has a tape recorder which he would be willing to loan for short periods, with or without owner-operator, for the purpose of recording the factual comments of some of our older local inhabitants with knowledge of past industries, would he please contact the Secretary.

MUSEUMS WHICH HAVE MATERIAL RELATING TO THE STUDY
OF INDUSTRIAL ARCHAEOLOGY

The following list does not pretend to be exhaustive, but is intended to suggest some Museums where a conscious effort has been made to assemble material relevant to industries carried on in the locality, or in some cases over a wider area. It does not include Museums in London, amongst which, of course, The Science Museum is of prime importance.

BARNARD CASTLE (Bowes Museum)	Proposed Museum of Industry
BARROW-IN-FURNESS	Vickers-Armstrong material
BATLEY (Bagshaw Museum)	Local Textile Industry
BEAULIEU (Buckler's Hard Museum)	Local Shipbuilding
BELFAST (Ulster Museum)	Northern Ireland Industrial material
" (Transport Museum)	Transport in Ireland
" (Ulster Folk Museum)	Crafts and Rural Industries in Northern Ireland
BIRKENHEAD	Shipbuilding and MÉRSEY ferry.
BIRMINGHAM (Museum of Science and Industry)	Industries of the Birmingham region
BOLTON (Hall i' the Wood Museum)	Crompton material
" (Tonge Moor Museum)	Textile machinery
BRISTOL (City Museum)	Local Industries and Shipping
" (Blaise Castle)	Water Mill
BRIXHAM	Brixham Shipping
CARDIFF (National Museum of Wales)	Welsh Industry and Technology
COVENTRY	Local Industries, particularly Cars and Cycles.
DERBY	Midland Railway & Local Industries
DUNDEE (Barrack Street Museum)	Shipping and Industries
ECCLES (Monk's Hall Museum)	Nasmyth machine tools
EDINBURGH (Royal Scottish Museum)	Very extensive technological collection
GLASGOW (Kelvingrove Museum)	Scottish technology

cont ...

GLASGOW (Museum of Transport)	Transport in Scotland
GLOUCESTER (Folk Museum)	Local Industries
HALIFAX (Bankfield Museum)	Yorkshire Textile Industry
HUDDERSFIELD (Tolson Memorial Museum)	Industries of Huddersfield
HULL	Museum of Transport and Shipping
KETTERING (Westfield Museum)	Boot and Shoe Industry
LEEDS (Abbey House Museum)	Local Crafts and Industries
LEICESTER (Newarke Houses Museum)	Hosiery Industry
LIVERPOOL (City Museum)	Departments of Shipping and Technology
NEWCASTLE-UPON-TYNE	Museum of Science and Engineering
NORTHAMPTON (Central Museum)	Local Footwear Industry
NORWICH	Bridewell Museum of Local Industries
PLYMOUTH	Ships and Local Dockyards
ST. ALBAN'S (City Museum)	Hertfordshire Crafts and Industries
ST. FAGAN'S (Welsh Folk Museum)	Welsh rural Industries
SCUNTHORPE (Borough Museum)	Local Industries
STROUD (Cowle Museum)	Industries of the Stroud Valley
SUNDERLAND	Local Shipping
WHITBY	Shipping Collection
YORK (Castle Museum)	Yorkshire Crafts and Industries

R.D. Abbott
January, 1965

CONWAY BRIDGE

I am sure every member must have been horrified to hear at the end of last month that the Conway Borough Council, backed by a local ballot, proposed to demolish Telford's Suspension Bridge. Although this bridge is now partially hidden by the modern one built in 1958, it is still of great beauty and interest and I feel that everything possible should be done to avert the threatened disaster, which would be a national loss.

G.N.C.

SPRING LECTURE PROGRAMME

This is part II of a course arranged in conjunction with the Extra-Mural Studies Department of the University of Bristol.

<u>Date</u>	<u>Lecturer</u>	<u>Subject</u>
29th January	C. Cox	Stroudwater Road Systems
5th February	J.H. Marshall	The History of Marling & Evans
12th February	K.G. Ponting	Industrial Architecture of the West of England
19th February	C.H.A. Townley	The Development of Horsesdrawn Plateways
26th February	R. Bowen	Industrial Archaeology of South Wales
5th March	Sir Arthur Elton	Industrial Archaeology and the Film
12th March	L.F.J. Walrond	The Stone Industry of the South Cotswolds.
19th March	M. Rix	Industrial Archaeology and the Church
26th March	Dr. B.W.G. Alford	The Industrial Revolution
2nd April	Members	Progress in the Society's Field Work

All lectures are held at 7.30 p.m. at the Stroud & District Technical College.

F I E L D W O R K

A good start has been made on two projects - a survey of structures (bridges, locks etc.) on the Thames and Severn Canal between Stroud and the West entrance of the tunnel, and a survey of the machinery at Egypt Mill near Nailsworth. The tunnels and other workings of the stone mines at Balls Green and Nailsworth are also being charted.

In addition to these long term projects, a number of emergency surveys have been made of buildings under immediate threat of demolition; for instance the recent surveys of Bruton's forge, Nailsworth and railway stations at Haresfield, Stonehouse (Bristol Road) and Berkeley Road.

Up to date information on the progress of the fieldwork will be given at the end of the Friday lectures and further work is planned as follows :-

Canal - 13th February, 13th March, 3rd April

Egypt Mill - 20th & 27th February, 27th March.

Anyone who does not attend the Friday lectures and wishes to take part in the field work should telephone Mr. John Strange (Stroud 254) or Mr. Harry Townley (Stroud 389) a few days beforehand, for information concerning time and meeting place.

C.H.A. Townley

FUTURE FIELD WORK

The following subjects were suggested for study :

Little Avon River Mills
Gossington Ordnance Factory
Parkend furnace
Whitecliffe furnace, Coleford
Stonehouse brickworks
Stroud factory chimneys
Uley Brewery
Hereford - Gloucester canal

Please contact any member of your Committee if you particularly wish to join survey parties on the above work or if you have any further suggestions.

S U M M E R E X C U R S I O N S

The following provisional arrangements have been made for whole day outings by coach this summer :-

8 MAY Visit to Bristol to view items collected by the Curator of Technology for the new Bristol Museum.
This will be followed by an afternoon in the once intensely industrialised Nettlebridge Valley in the Mendips conducted by Mr. Robin Atthill. The following sites will be visited, weather and time permitting :-

Old Down Inn (posting house at intersection of two arterial turnpike roads)

Old Down turnpike house c.1835

Moorewood Sidings, S & D.J.R. serving Emborough Quarries, with the site of aerial ropeway and mineral railway, both abandoned.

Mineral railway from Moorewood Colliery (1909-1930)

New Rock Colliery

Foss Way and turnpike road (with site of toll house, and milepost) crossing Nettlebridge valley

Stoke Bottom - ruined industrial hamlet c.1800, with ruins of paper mill, logwood mill and iron works.

Terminal basin of Dorset & Somerset canal 1796-1803

Edford Colliery 1862-1915 (incorporated in works of Bristol Stone & Concrete Co. Ltd)

Holcombe Brewery 1800-1930

Mells Church (a symbol of the woollen trade)

19 JUNE A tour of industrial sites in the Ironbridge area led by Mr. Michael Rix. The outing will take in the old furnace site and the works museum at Coalbrookdale, Coalport bridge and the inclined plane together with the well known iron bridge.

? JULY One day excursion to the Kennett and Avon Canal in Wiltshire.

25 - 26 A two day visit to Glamorganshire led by Mr. Ray
SEPTEMBER Bowen of Dinas Powis. Details will be published in the next Newsletter.

In addition to the above we hope to arrange several half day trips to places like Newnham-on-Severn docks, Marling & Evans Mill, residential Cotswold mill privately restored etc. Circulars will be sent to all members in due course.

Bibliography of INDUSTRIAL ARCHAEOLOGY

compiled by Michael Rix. 1964

- Kenneth Hudson: Industrial Archaeology. Full bibliography.
- Derry & Williams: Short History of Technology. OUP.
- Chaloner & Musson: Industry & Technology.
- L.T.C. Rolt: Biographies of Telford, Brunel, the Stephensons, Newcomen, Trevithick etc.
- J.M. Richards: The Functional Tradition of English Architecture.
- Charles Hadfield: Four fine books on Canals including 'British Canals' and 'Canals of S. Wales'.
- L.T.C. Rolt: The Inland Waterways of England.
- Jack Simmonds: The Railways of Britain.
- T.W. Wilkinson: From Track to Bye-Pass.
- Gloag & Bridgwater: A history of Cast Iron in Architecture.
- R. Lister: Cast Ironwork in Great Britain.
- J. Warburg: The Industrial Muse.
- F.D. Klingender: Art and the Industrial Revolution.
- R.T. Clough: The Lead Smelting Mills of the Yorkshire Dales.
- A. Raistrick: Dynasty of Ironfounders.
- E.R.R. Green: The Industrial Archaeology of County Down. (HMSO)
- W.H.B. Court: The Rise of Midland Industries.
- A.H. Dodd: The Industrial Revolution in North Wales.
- A.H. John: The Industrial Development of South Wales.
- W.H. Dickinson: Lives of Boulton, Watt and Wilkinson.
- S. Smiles: Lives of the Engineers.
- Transactions of the Newcomen Society: 1921-date. Index recently published.

BOOK REVIEWS

ENGINEERS. INVENTORS AND WORKERS. A CLASS BOOK FOR SOCIAL STUDIES. P.W. Kingsford. Pub. Edward Arnold London 1964 272 pp. 8 photos.

The book title is accurate and the contents as follows indicate the actual field covered : The Ironmakers; The Steam Engine; Road and Bridge Builders; The Toolmakers; The Early Days of Trade Unions, 1825 - 1850; The Railway Engineers; The Machine Tool Makers; The Growth of Trade Unionism, 1850 - 1890; The Steelmakers; The Trade Union Movement 1898 - 1918; Motive Power Inventors and Trade Unions 1918 - 1955. A usual summary of the human element in the industrial development of this country only. It should be read in conjunction with Kenneth Hudson's book on Industrial Archaeology, but it should be emphasised that there is little detailed information of existing structures on the ground and for those wishing to research into Telford's works, say, they would be better advised to go direct to more detailed biographies.

Ian Parsons.

THE HAYTOR GRANITE TRAMWAY AND STOVER CANAL by M.C. Ewans.
Pub. David & Charles 1964. 12/6d.

Very few publishers have produced books to date with special appeal to industrial archaeologists. We are therefore indebted to Messrs. David & Charles for their initiative (and one might say courage) in specialising in publishing books which relate to this subject in general, and to the West Country in particular.

One of the latest books to come under their imprint illustrates how detailed local studies of the area around the Teign Valley in South Devon can be written so well that it is of great value not only locally, but also to the general reader.

This is an attractively produced 63 pp. booklet, with 25 photo illustrations, some of which are taken from old prints and early twentieth century postcards. There are also sketch maps, useful notes on each chapter, a short bibliography, but no index. Mr. Ewans explains how it was necessary in the early years of the nineteenth century to improve the transport in the Teign Valley in order to carry the valuable granite from nearby Haytor for shipment to London; and the Bovey clays to be carried to the Potteries. The Stover Canal, the first to be cut in Devon apart from the Exeter Canal, was built in 1792 by James Templar, whose son built the Haytor Tramway to join the canal at Ventiford about 1820. The Navigation of the Teign was improved under an Act of Parliament in 1836. The cheaper Cornish granite and Cornish clay gradually brought about a decline in the trade from the Teign Valley. The

tramway was already disused in 1858, but the Stover Canal was used until 1931. Mr. Ewans covers the story of the Canal and the Tramway in great detail, giving the dimensions of locks, types of craft used, tonnage carried, and also includes information about the port which served the valley - Teignmouth.

F.J. Tucker

LAST SHIPMENT OF FOREST COAL

History was made on Tuesday, 9th February, when for the last time coal from the Forest of Dean was shipped from Sharpness to Cadbury's factory at Frampton-on-Severn. For nearly 50 years coal has been delivered from the Princess Royal Colliery in the Forest of Dean to Frampton-on-Severn.

In years past the coal was shipped to Sharpness and journeyed up the Sharpness-Gloucester canal by the Severn "trow" - a sailing barge - Reliance. Engine took over from sail when the Severn Collier came on the scene to carry 100 tons of coal up the canal on regular deliveries.

When the Severn railway bridge was closed by a shipping accident in October 1960, consignments for Frampton-on-Severn were delivered to Sharpness by rail via Gloucester.

At Sharpness an ancient and novel tipping mechanism operated by counter-balances, unloaded the coal trucks into canal hoppers. It is one of the last survivors of its type.

On Tuesday the last consignment of 112 tons of Forest of Dean coal made its ponderous way up the canal. In recent years deliveries have been in the order of 200 - 250 tons a week.

Future coal deliveries to Cadburys will be made by lorry.

From the "Stroud News & Journal"
Friday, Feb. 12th 1965.

C O V E R

The photograph on the cover of the Newsletter is reproduced by courtesy of the County Records Office, Gloucester.

SOME ASPECTS OF INDUSTRIAL ARCHAEOLOGY. PART I.

This work was done by the Senior girls of Upfield Preparatory School, Paganhill, Stroud, entirely in their own time and not as part of their ordinary school work. Advice and encouragement was given as required.

This article, in note form, is based upon their original essays, but incorporates useful facts obtained by them from published and original sources.

C A N A L S .

by Margaret Payne

I. THE THAMES AND SEVERN CANAL.

(Notes from "The Engineer" May 8th. 1896, and Gloucestershire Countryside Oct. - Nov. 1963)

"From Wallbridge Wharf, thro' rock, a new canal was cut,
That Stroud in commerce might excel."

Position of Canal:

It commences by a junction with the Thames at Inglesham, near Lechlade and proceeds $8\frac{3}{4}$ miles with a rise of 5 locks to Latton Junction where it is joined by the Wiltshire and Berkshire Canal. From here a distance of $4\frac{3}{4}$ miles and eleven locks take it to the summit ground at Siddington and a 1 mile branch to Cirencester; $3\frac{1}{2}$ miles on it reaches the Thames Head pumping engine which together with a feeder from the River Churn at Cirencester supplies the summit level with water. (Pumping engine 376' above sea level, installed 1852, pumps from a well 63' deep, about 120,000 gallons per hour). Two miles on it reaches Sapperton Tunnel, 3808 yards long of which 2372 yards are lined with brick and the remaining 1436 yards in rock, minimum height 12' above water, minimum width 11' 6", no towing path. Canal proceeds $\frac{1}{4}$ mile from west end of tunnel to the end of the summit at Daneway, then descends by 28 locks passing Chalford and Brimscombe to Wallbridge to join the Stroudwater Navigation. Total Distance 30 miles with 44 locks, rising 130' 6" from Inglesham to the summit and falling 241 ft from the summit to Wallbridge.

Dimensions of locks :

Between Inglesham and Siddington from 91 ft. to 93 ft. by 13 ft.
Between Siddington and Brimscombe from 90 ft. to 91ft. by 12'9".
Between Brimscombe and Wallbridge 68 ft. by 16 ft.

History of Canal:

First Act obtained in 1780 and work started under R. Whitworth. Canal opened 1789; by 1841 it reached the height of its prosperity. In 1871 the accounts show a loss on the year's working. The Great Western Railway acquired about four-fifths of the shares in 1883 but the decline continued. In 1893 came the closing of the canal between Bell and Chapel locks near Chalford to Inglesham, thus leaving 4½ miles open. In 1895 a number of canal companies in the district obtained an act of Parliament to take over the canal from the old company. The work of restoration was being continued at the time of writing the article in 'The Engineer' in 1896.

Construction :

For 6 years navvies dug the canal. They worked in gangs of seven - 3 diggers, 3 waggon fillers and 1 emptier. Tow paths constructed solely from soil evicted in this way. Each gang, toiling day and night (including Sundays), advanced 20 yds. a week, paid at the rate of £5 a yard. Reliefs came to the men at 8 hour intervals.

Sapperton Tunnel - begun simultaneously from each end. Supporting bricks baked on the site. Two cottages built to house the bricklayers; from these have grown the Daneway Inn and Tunnel House.

Upkeep of the canal was abandoned during the Great War, after 100 years' use.

II. STROUDWATER NAVIGATION

Position:

Descends from Wallbridge, Stroud to the Severn at Framilode - 8 miles long - 13 locks, has a depth of water of 5 ft. 6 ins. and can pass barges with cargoes of 75 tons.

History of Canal:

First Act of Parliament passed in 1730 but not carried out owing to opposition from mill owners afraid of losing their water.

A second Act passed in 1759, contained an undertaking to complete the navigation without locks thus appeasing the mill owners. The intention was to shift the cargoes into boxes, and at every mill to remove them by means of cranes into other boats - this laborious undertaking could not succeed. The Commissioners of the present canal first met 29th December 1774, obtained two Acts of Parliament and had a part in working order opened for traffic and the first tolls received on April 3rd 1777, though it was not fully opened until 1779.

Traffic on the canal diminished in the present century almost entirely to coal barges going to Stroud Gas Works. In May 1941 the last barge went through with coal for the gas works.

III. THE UPPER THAMES

From Oxford to Inglesham the route above Newbridge was for some years prior to 1896 impassable to any craft larger than a rowing boat. In 1892 a new lock was built at Radcot, another at Northmoor in 1895 and work on further locks at Grafton and Duxford formed part of a scheme by the Thames Conservancy to make the upper Thames navigable for vessels of 4 ft draught.

THE WOOLLEN INDUSTRY OF STROUD

Denise Smith.

For 500 years woollen fabrics have been woven in this region fostered by the perfect pasture lands for the sheep, and fast running streams to provide power to the mills to make the cloth. The wealth gained by the clothiers resulted among other things in the building of cathedrals at Bristol and Gloucester and many lovely churches where tombstones and memorials still bear witness to them.

A century ago nearly all the production of the West Country mills was centred around woollen as opposed to worsted cloth. Livery cloth, cloth for Naval and Army uniforms, cloth for riding breeches and hunting coats, covert coatings and flannels are still the back-bone of the West of England trade, but some mills also specialise in the manufacture of fine worsted cloths.

A large variety of non-apparel cloths are manufactured in the West, a few of which are heavily felted, cloths for tennis balls, for newspaper printing and piano action, also scarves, blankets and rugs and above all billiard cloths - a descendant of the ancient broadcloth - whose quality is unrivalled throughout the world.

Local mills and their products today :

1. HOWARD AND POWELL. Wallbridge, Stroud. (ceased manufacturing c.1958)

Billiard cloth	Flannels
Blazer "	Meltons
Breeches "	Naval overcoatings
Cavalries	Venetians

2. HUNT AND WINTERBOTHAM. Cam Mills, Cam.

Bedford cords	Coatings (fine	Naval coatings
Billiard cloth	dress & ladies)	Saxonies
Blazer "	Doeskin	Superfines
Box "	Flannels	Suitings
Breeches "	Faced cloth	Tropical cloth
Cavalries	Livery "	Uniform
Checks	Meltons	Venetians
Covert coatings	Mechanical cloths	Whipcords
Costume cloth	Motor linings	Worsted

3. MARLING AND EVANS LTD. Stanley Mills, Stroud

Checks	Homespun	Twills
Cap cloth	Overcoating	Tweeds
Cheviot coatings	Overchecks	
Costume cloth	Prunella	
Dressing gown	Rainproof	
cloth	Saxonies	
Flannels	Suitings	
Fleeces	Tropical cloth	

4. WM. PLAYNE & CO. LTD. Minchinhampton, Glos.

Blazer cloth	Livery	Saxonies
Checks	Meltons	Superfines
Cap cloth	Mechanical cloth	Suitings
Coatings (fine,	Motor Linings	Tennis ball
dresses &	Naval overcoating	cloth
ladies worsted)	Overchecks	Tweeds
Doeskin	Prunella	Uniform
Flannels	Rainproof	Venetians
Faced cloth	Serges	Whipcords
		Worsted

5. STRACHAN & CO. LTD. Lodgemore, Stroud

Billiard cloth	Doeskin	Naval cloth
Blazer "	Flannels ^c	Serges
Breeches "	Fleeces	Saxonies
Cavalries	Faced cloth	Superfine cloth
Checks	Livery "	Uniform "
Costume cloth	Meltons	Venetians

6. GEO. A. CALVERLEY. Ebley Mills, Stroud

Worsted spinners

7. T. BOND WORTH & CO. LTD., Ham Mills, Thrupp.

Woollen yarn spinners.