

Surrey  
Industrial  
History  
Group  
Newsletter



### Online Meetings

Since the last Newsletter was printed, the SIHG Committee has decided that SIHG will not hold face-to-face lectures in Spring 2021.

We are holding virtual lectures using **Zoom** during this period.

Those members who regularly attended our lectures in either Guildford or Leatherhead should already have received a number of emails from me on this subject.

Members who have not heard from me but may be interested in attending these (free) virtual lectures should let me have their email address and phone number so that I can ensure they are kept up-to-date with our programme.

Bob Bryson [meetings@sihg.org.uk](mailto:meetings@sihg.org.uk)

**Next SIHG Newslettter:**  
**2020/2021 ANNIVERSARIES**  
Celebrating happenings of industrial,  
historical interest from  
1,000, 500, 250, 200, 150, 100, 50,  
25, 20, 10 or 5 years ago!

## SIHG Newsletter No 229 May 2021

*Programme Co-ordinator Bob Bryson: 01483 577809, meetings@sihg.org.uk.*

### SIHG Zoom Talks scheduled for Autumn 2021

**Over 80 members have already registered for these talks;  
if you have not done so, and would like to attend,  
please contact me at *meetings@sihg.org.uk***

- 7 Oct 2021** Three Victorian Bridges - From disaster to excellence  
the Dee, the Tay, and the Forth Rail Bridge  
*Douglas Irvine*
- 21 Oct 2021** The Railway Passenger 1830-63  
*Stuart Dennison*
- 4 Nov 2021** Lucy Houston: the Lady Who Saved a Nation  
*Colin van Geffen*
- 18 Nov 2021** The 1914 Royal Naval Air Service bombing raids  
against the Zeppelin sheds in Germany  
*Ian Castle*
- 2 Dec 2021** The Suez Canal: The building and the conflicts: 2,000BC to 2,000AD  
*David Williams*
- 16 Dec 2021** The Great Trans-Atlantic Air Race 1919  
*David Hassard*

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Weald and Downland Open Air Museum - Map

### Important Message from the Chairman from Robert Bryson

You may have noticed that the 229 edition of the SIHG Newsletter is being published in May and that no February edition has been circulated. This is sadly due to the failing health of Jan Spencer our Newsletter and Website Editor. Jan took over running our website 14 years ago and has edited the last 70 issues of the Newsletter, since taking over from David Evans in September 2007. Jan and Hugh Anscombe, the Group's Secretary, are both standing down from their roles which need to be filled. I am sure you will join with me to thank them both for their hard work and contribution to the group over many years.

If SIHG is to survive in anything like its current form we urgently need new people to come forward and take on these roles. In addition to a Newsletter Editors the group is looking for a new Secretary and a Website coordinator. We also have spaces on the

Committee for those who would like to take an active role in managing the group.

The Newsletter is a vital link with our members and although I have recently taken to emailing as many of you as I can, not all our member have email. If you have not had an email from me recently can you please contact me by phone or email so that I can update you on the group's activities. As you will read elsewhere in the Newsletter we are planning to hold live events in the future as we come out of lockdown but at present the only dates we can fix are those for the autumn Zoom meetings.

SIHG has been going for around 50 years and, whilst I was not there at the start, a number of us have been with the group for many years and are getting older. The group really needs some fresh input. If you are willing to support the group in any way can you please contact me to discuss what help you may be able to give.

### Welcome to our New Members by Pam Taylor, Membership Secretary

We have received a pleasing number of new members recently, due mainly to our initiative in offering free **Zoom** talks. These talks have been of high quality, and they have attracted a wider audience than is possible at our usual face-to-face meetings. We therefore welcome the new members who have joined us, and hope that you will find your membership interesting.

As well as our **Zoom** talks next Autumn and Winter we are hoping to arrange two visits to the recipients of our **2020 and 2021 Conservation Awards;**  
**Gatwick Aviation Museum and**  
**Weald and Downland Living Museum.**

Details of these will be circulated as soon as they are available, and we hope that you will take advantage of these visits.

We also propose to arrange a **get-together** at a venue near Leatherhead, where we can meet physically, and get to know your interests.

Part of our aims as a society is to stimulate, and to help fund, research into all areas of industrial history. It would be good to hear of any projects or research that people are interested in, so that we can help that along with funds and/or man- or woman-power, so please contact any member of the committee to get that underway. We also need new blood in the committee, so please consider whether you can help there.

We very much hope that things will get more back to normal soon, and that we can take advantage of this.

### Please support SIHG

*Please renew your Membership promptly  
(if you have not already done so).*

Please send a contribution for the Newsletter

Even if you have not been able to travel to exciting places recently, you may have **explored ideas** or **made your own interesting discoveries** - either through **reading** or by **making models** (for example).

## Societies + Museums Worth Visiting

I have not compiled a comprehensive list of Societies in this edition of the Newsletter. Instead, I have given details of a baker's-half-dozen of Societies or Museums which are well worth joining or visiting. In some cases, I have presented extensive extracts from old editions of journals, to give a flavour of the group's achievements.

JS

## Other (free!) Online Lectures

Numbers of other organisations currently offer free **Zoom** lectures and you may wish to try **Surrey History Meetup** which holds talks many of you may find interesting, <https://www.meetup.com/Surrey-History-Meetup/>  
You do however need a computer connected to the Web, ideally with a camera and microphone. You then need to download Zoom, <https://zoom.us/download>, join the group, and then register for each talk you wish to attend.

## Wealden Iron Research Group [WIRG]

[www.wealdeniron.org.uk/](http://www.wealdeniron.org.uk/)

WIRG has a large, active membership. It maintains a comprehensive database with details of each iron-working site in the Weald, dates and details of site sales, and of the personnel involved. Maps are also provided. There are regular meetings - talks, field walking, and excavations. An experimental furnace at Pippingford Park, 3 miles N of Nutley holds smelts several times a year. Occasional visits are arranged around the UK and abroad.

## Wandle Industrial Museum

[www.wandle.org/](http://www.wandle.org/)  
tel: 020 8648 0127

The Wandle Industrial Museum, the Vestry Hall Annex, London Road, Mitcham, Surrey CR4 3UD.

The River Wandle used to be one of the most industrialised stretches of water in the country.

► **The Museum has a unique collection of artifacts connected with the area** ◀

Open: Wednesdays 13:00-16:00 from 6 June 2021  
Sunday 14:0-17:00

Services offered by the museum:  
[www.youtube.com/watch?v=4wXUR\\_4Y3Ug](https://www.youtube.com/watch?v=4wXUR_4Y3Ug)  
(The Museum is closed Bank Holiday weekends)

## Wey & Arun Canal Trust

<https://weyandrun.org.uk/>

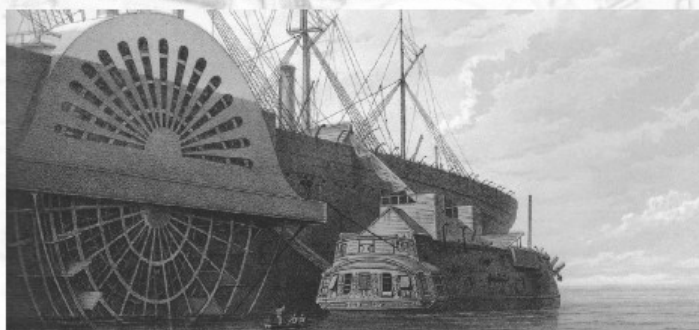
If you wish to be on the mailing list, please notify [membership@weyandrun.co.uk](mailto:membership@weyandrun.co.uk).

Contact:

Julian Morgan Northern Office  
Bridge End Shalford  
Guildford GU4 8EQ,  
[jm@weyandrun.co.uk](mailto:jm@weyandrun.co.uk),

The Wey & Arun Canal Trust has over 3,000 members, engaged in working parties, surveying, planning, bridge building, and maintenance.

## Free lectures on Greenwich's unrivalled role in our industrial and technological history



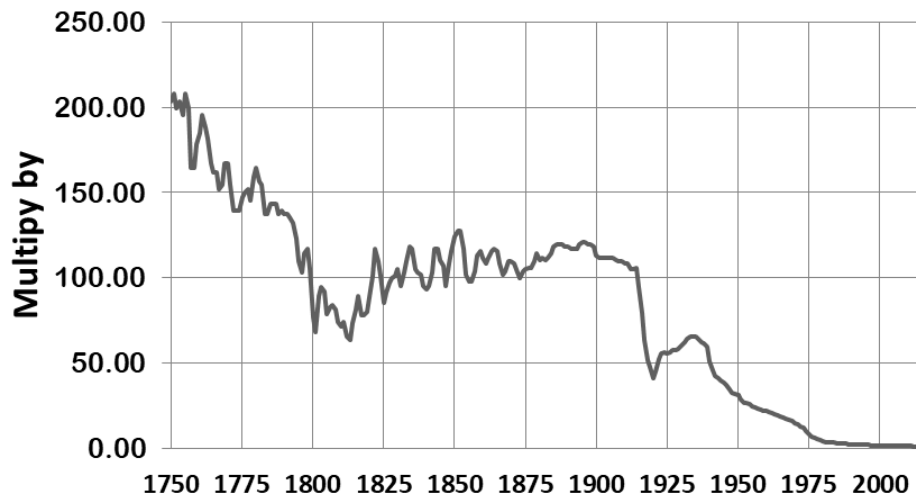
**GREENWICH INDUSTRIAL HISTORY SOCIETY**  
Monthly lectures live online, starting at 19:30, then available afterwards as recordings, AND ALL FREE OF CHARGE

**HOW TO FIND US:** All details of free online lectures, both live and recorded, on our Facebook page at <https://tinyurl.com/GIHSoc> or see our blog at <http://greenwichindustrialhistory.blogspot.com/>



Blogger

## The Value of Money by Robert Bryson



In 2003 I wrote an article for the Newsletter on the historic value of money. Fifteen years on you get even less for your pound, so I thought it would be a good idea to update it.

Often when reading an article on industrial history, or even a Victorian novel, one encounters a reference to the cost of an item. Whether it was the expenditure of 3d on candles and 10d on soap in 1874, or a contract for £14,800 to supply of a massive 100" Cornish pumping engine and four boilers for the Grand Junction Waterworks at Kew in 1869; the relationship to today's prices is not immediately obvious.

While a cost of living index has been maintained since 1914 it is not easy to track inflation even from then, as the retail price index was rebased in 1974 and again in 1987. Obviously the basket of goods in 1750 would have included candles but not cars and today's salaries are higher in real terms (after allowing for inflation). It was only after 1870 that real wages rose decisively above the medieval level of around £6000 to £7000 pa per family at today's values. Between 1860 and 1914 real wages doubled, greatly increasing the purchasing power of the family and contributing to an increase in the life expectancy and average height of the population. Since then average household income has further increased to approximately £30,000 pa. This figure is some four thousand pounds (15%) higher than the figure of £26,000 pa I originally quoted in 2003; however the cost of living has gone up by more than 50%. (RPI index Oct 2002- Oct 2017)

It is interesting to note however that the cost of goods has not always increased, as has been the post war experience. In fact over most of the

19<sup>th</sup> century prices actually fell as the cost of manufacturing and transporting goods declined. Prices at the start of WWI (1914) were only roughly double those of 1750. During WWI prices doubled again but fell between the wars so that prices in 1939 were actually below those of 1919. Since WWII (1939) prices have risen just less than sixty fold. The most aggressive period was 1974-1981 when inflation was rarely less than 10% and prices tripled. Even with lower inflation prices have risen by 275% since 1987.

Using figures from a House of Commons Research Paper I have plotted the value of the pound back to 1750. The graph assumes the value of the pound as of August 2017 is equal to one. In order to determine the present value of any sum of money you need to project upwards from the date in question and multiply the sum of money by the figure indicated.

Obviously you may need to recall that there were 20 shillings in a pound and 12 pence (d) in a shilling but many of you will remember that. Thus 2d around 1896 is worth a pound today, just as six pence (6d) was in 1944 and a shilling in 1963.

For example, a 12 hp Rover car ordered in 1915 cost £350; the price being held for the 1915 season despite rising costs. This figure has to be multiplied by a factor of about one hundred, which brings the sum to £35,000 in today's money (similar to the current price of a Jaguar XE or an Audi A4). But then one has to remember that the value of family income was only about 40% of what it is now, which accounts for why the Rover was such a luxury at the time.

**As we all know, houses are considerable more expensive in real terms than they were some years ago. Take a typical pre-war three bedroom semi in Brook Ave Edgware. Such a property was sold in April 1938 for £835, which using the graph equates to a value of £51,500 in today's money. Unfortunately for potential buyers houses on the street now cost more than half a million pounds, ten time this amount. The Value of Money**

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## Formula E joins Grand Prix exhibition

Brooklands Museum is excited to announce a new addition to their "Grand Prix story" exhibition featuring the Mercedes-Benz EQ Formula E car.

From this November, a full-size replica of the Mercedes-Benz EQ Silver Arrow 01 will be

showcased alongside the historic racing cars in the Brooklands Museum Grand Prix exhibition; *Where it all began*, demonstrating the evolution of motorsport in the UK.

The display of race cars including a 1926 Delage 15-S8 Grand Prix and 1960 Cooper Climax T51, provides a timeline of racing progression from 1926,



when the very first British Grand Prix was held at Brooklands to the modern development of racing into the 21st century.

Launched in 2014, Formula E is an all-electric, single-seater motorsport championship race series.

It challenges conventional racing in a bid for sustainable, electric mobility and is rapidly

growing in popularity.

Brooklands Museum, Weybridge is open to visitors Thursday to Sunday, 10:00-16:00 and has received the 'Good to Go' COVID-19 industry standard and consumer mark.

Visitors must wear a face covering when indoors and visiting the Grand Prix exhibition. □

From the Mills Archive

## Saint Anthony's Fire and Brimstone: Daily Bread or Daily Dread? by Lucy Noble

(only the key paragraphs are reproduced here)

Millers today spend considerable money, time and effort in making sure that the flour we're supplied with is safe to eat. In times past, public health was less well understood and harder to maintain.

Lucy Noble left the Mills Archive in March this year. She kindly wrote this intriguing article that we would like to share with you.

During the 16th and 17th centuries, Europe and America were swept by the witch craze: a plague of accusations of witchcraft, leading to thousands of grizzly deaths of innocent people; mostly poor, single women over the age of fifty. Probably the most infamous of all the witch hunts were those in the small Puritan village of Salem, Massachusetts, from 1692 to 1693.

As immortalised in Arthur Miller's play *The Crucible*, the trials start in 1692 when the young girls Betty Parris and Abigail Williams fall into a coma and begin exhibiting strange symptoms, including convulsions, delusions and incessant screaming.

Hysteria abounds and the townspeople decide to hunt down and execute all the witches of Salem – and by May 1692, nineteen people had been hanged, one had been crushed by stones and four had died in prison.

Linnda Caporael became intrigued by the case, as many before her had done, and started to look into the possible causes. By 1976 Linnda, who was now a behavioural psychologist at New York's Rensselaer Polytechnic Institute, made a ground breaking discovery: the symptoms presented by the Salem 'witches' were very similar to those found in people who have taken the hallucinogenic drug LSD.

The house where witchcraft started, now Danvers, Mass.



**Surrey Industrial History Group  
Chairman's Report for the year ending 31 March 2021  
by Bob Bryson**

I usually start my report by giving details of the South East Region Industrial Archaeology Conference, which was due to be held in London in the spring of 2020. Because of COVID, this and nearly all our normal activities, were cancelled. It was planned to hold the SERIAC conference over until 2021, but unfortunately this too was cancelled.

The only line in this report that can follow on as normal is: 'This is my sixteenth annual report as Chairman of the Surrey Industrial History Group!'

Our AGM was due to be held on 18 July at Gatwick Aviation Museum, when we planned to present the 2020 Conservation Award for work carried out to extend the museum with the addition of a class room, etc. To date the plaque still has not been handed over, however a cheque for £250, which was to accompany the award, has been posted to the museum.

We had planned a lecture programme, but did not even get round to printing details of what would have been **The 45th series of Industrial Archaeology Lectures** to be held in Guildford. Similarly the series of winter lectures which usually took place weekly on Thursday mornings at **The Institute in Leatherhead** were also cancelled.

Concern over this lack of activity and a desire to keep the group together led to our lecture programmes being replaced by a series of fortnightly **Zoom** meetings.

It was also decided that, in order to promote the group, we would not charge for these meetings and we would publicise them via Surrey Meetup

([www.meetup.com/Surrey-History-Meetup](http://www.meetup.com/Surrey-History-Meetup)),

which is a local group which promotes Zoom meetings with a Historical theme.

The first of these six lectures, by Doug Irvine 'The Thames Barrier - History and Construction' was given on 1 October 2021 and the last one before Christmas was presented by David Williams, 'Mulberry Harbours and Pluto pipelines' on 10 December 2021.

The plan was to hold a similar series of six talks after Christmas, but as it became clear that we would still be in lockdown by the final meeting on 18 March two additional talks were added to the programme on 1 & 15 April.

Attendance at these Zoom talks can grow to near the limit of 100 set by our Zoom licence. In an attempt to capitalise on the number of non-members attending we launched a campaign to encourage people to join our group, or at least make a donation if they attend regularly. This activity has so far generated donations worth £200, and 22 new members. Unfortunately, none of these new members appear to be of a younger generation, for which Industrial History seems to have little appeal.

Paid up membership of the group at the last count was 83, made up of 66 ordinary members, 7 Associate, 7 Institutional and 3 honorary adherents, ten down on last year.

Jan Spencer has continued to publish our quarterly Newsletter throughout the crisis. This and our website [www.sihg.org.uk](http://www.sihg.org.uk) are the best sources of information on the activities of SIHG. I would also like to thank other committee members, who have supported the work of the group throughout this difficult year.

**SIHG Group Objectives**

*When looking through some old papers our Secretary came across this list of objectives for the Group, written some 50 years ago. While COVID has limited our activity recently it would be nice to get back to managing these tasks*

The objects of the Group shall be to encourage and promote the study and practice of industrial archaeology and history in conjunction with any other committee etc. of the Society as appropriate. These objects shall be pursued by :-

- a. Bringing together all those interested in the industrial past of Surrey;
- b. Acting as a forum for the exchange of views;
- c. Holding meetings, lectures, exhibitions and other activities;
- d. Excavating and recording industrial sites and conducting relevant documentary research;
- e. Helping to preserve industrial sites, machinery and other physical objects;
- f. Encouraging the display of industrial features and items to the general public;
- g. Publishing material in written, visual, oral or other forms;
- h. Seeking the support of appropriate individuals or bodies;
- i. Maintaining liaison with bodies having similar objects.



SURREY INDUSTRIAL HISTORY GROUP  
A Group of the Surrey Archaeological Society  
Registered Charity No. 272098

**Income and Expenditure Account for the year**

**1 April 2020 to 31 March 2021**

2019/20	Income	2020/21 (+/-)
£ 990	Members' Subscriptions	£ 887 £ 103
£ 167	Gift aid	£ 289 £ 122 *
£2,430	Income from Leatherhead lectures	£ - -£2,430
£1,050	Income from Guildford Lectures	£ - -£1,050
£ 928	COIF Fixed Interest Fund Dividends	£ 928 £ -
£ 121	COIF Investment gain in value	£ - -£ 121
£ -	Donation	£ 219 £ 219
£5,686	TOTAL Income	£2,323 -£3,363
£ 89	Books	£ 177 -£ 12
		£2,500
2019/20	Expenditure	
£1,268	Newsletter- Printing and Distribution	£ 692 -£ 576
£ -	Other costs- Stationery, Postage etc.	£ 30 £ 30
£ -	COIF Investment loss in value	£ 389 £ 389
£ 45	Subscriptions to other Societies	£ 45 £ -
£2,395	Lecture expenses Leatherhead	£ 72 £ 2,323
£1,073	Lecture expenses Zoom	£ 725 £ 348
£ 80	Room Hire for Committee Meetings	£ - £ 80
£ -	Donation	£ - £ -
£ 50	AGM Expenses	£ 250 £ - **
£ -	Miscellaneous	£ -
£5,111	TOTAL Expenditure	£2,203 £ 2,908
£ 575	Surplus to Accumulated Fund	£ 120
£ 764	( including books)	£ 297

Notes: \* Two years gift aid payments

\*\* Award to Gatwick Aviation Museum

SURREY INDUSTRIAL HISTORY GROUP  
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**Balance Sheet as at 31 March 2021**

2019/20	2020/21	change on year
£ 23,006	Accumulated Fund at end of Financial Year	£23,581 £575
£ 575	Excess (-Deficit) of income over Expenditure	-£ 120 -£455
£ 23,581	Value Excluding Publications	£23,701 £120
£ 16,525	Publications Fund at end of Financial Year	£16,702 £ 77
£ 40,106	TOTAL VALUE OF GROUP	£40,403 £297
Represented by:		
<u>Current Assets</u>		
£ 6	Petty Cash	£ 6 £ -
£ 11,835	Bank Current Account	£12,280 £445
£ 28,571	COIF Fixed Interest Investment Account	£28,182 -£389
£ 40,412	Total Current Assets	£40,468 £ 56
<u>Current Creditors</u>		
£ -	<u>Receivable gift aid from HMRC</u>	£ 27 £127
<u>Current Liabilities</u>		
£ -	Pre paid subscriptions	£ 92 £156
£ 36	Pre paid lecture fees	£ - -£270
£ 270	Total Current Liabilities	£ 192 -£114
£ 306		
£ 40,106	TOTAL VALUE OF GROUP	£40,403 £297

# SIHG AGM

SIHG - A Group of the Surrey Archaeological Society		2019/20	2020/21	2020/21	2020/21
<b>Publications Balance Sheet 31 March 2021</b>					
£16,525	Balance at start of Financial Year		£ 9,214		£16,525
£ 9,214	Surpluses on out of Print Publications			£ 1,725	
£ 1,725	Accumulated Interest				
	Net Surpluses on Current Publications		£ 460		
	<i>Abinger Observatory</i>		£1,266		
	<i>Chilworth Guide</i>		£1,533		
	<i>Damnabable Inventions</i>		£ 731		
	<i>Epsom &amp; Ewell</i>		£1,541		
	<i>Mole Valley</i>		£ 179		
	<i>Reigate &amp; Banstead</i>		£ 780		
	<i>Spelthorne</i>		£ 427		
	<i>Surrey &amp; the Motor</i>		£1,966		
	<i>Surrey IA</i>		£ 258		
	<i>Surrey Roads</i>		£ 675		
	<i>Tandridge</i>		£ 414		
	<i>Waverly 2nd Ed</i>		£ 114		
	<i>Woking</i>		£ 6		
	<i>Misc</i>				
£10,270	<b>TOTAL SURPLUSES</b>		£10,360		£ 90
	Net Deficits on Current Publications				
	<i>Premier Cooler</i>		£ 5		
	<i>25 years of Conservation Awards</i>		£2,973		
	<i>Elmbridge</i>		£ 25		
	<i>Raby Papers</i>		£ 134		
	<i>Simmons Diaries</i>		£ 635		
	<i>Surrey Heath</i>		£ 714		
	<i>Thames Ditton Statue Foundry</i>		£ 52		
	<i>Wey Navigations</i>		£ 27		
£ 4,652	<b>TOTAL DEFICITS</b>		£ 4,565		£ 87
	<i>Postage charged/cost</i>		£ -		
£ 32	<i>Printing cost</i>		£ -		£ -
	Gain for year				£ 177
£16,525	<b>BALANCE AT END OF FINANCIAL YEAR</b>		£16,702		£ 6,702

Surrey Industrial History Group -			
Registered Charity No. 272098			
<b>Publications Fund - Income &amp; Expenditure</b>			
Income from Sales of Books published in Previous Years for the year 1 Apr 2020 to 31 Mar 2021			
25 Years of Conservation Awards			
	<i>Abinger Observatory</i>	£ 5	
	<i>Chilworth Guide 4th Ed</i>	£ 4	
	<i>Damnabable Inventions</i>	£ 29	
	<i>Elmbridge</i>	£ 25	
	<i>Epsom &amp; Ewell</i>	£ 5	
	<i>Mole Valley</i>	£ -	
	<i>Premier Cooler</i>	£ 10	
	<i>Raby Papers</i>	£ 10	
	<i>Reigate &amp; Banstead</i>	£ 6	
	<i>Simmons Diaries</i>	£ 39	
	<i>Spelthorne</i>	£ -	
	<i>Surrey &amp; the Motor</i>	£ 12	
	<i>Surrey Heath</i>	£ -	
	<i>Surrey IA</i>	£ -	
	<i>Surrey Roads</i>	£ 20	
	<i>Tandridge</i>	£ -	
	<i>Thame Ditton Statue Foundry</i>	£ 3	
	<i>Waverly 2nd Ed</i>	£ 9	
	<i>Wey Navigations</i>	£ -	
	<i>Woking</i>	£ -	
	<i>Misc</i>	£ -	
	<b>TOTAL</b>	£ 177	
	New Publications		
	<b>INCOME FOR YEAR</b>		
	General Expenditure relating to sales	£ -	
	Printing	£ -	
	<b>EXPENDITURE FOR YEAR</b>		
	Gain for year	£ 177	



**Summer Puzzle**  
 Can you identify this object?  
 What is it?  
 Where was it installed?  
 What was it used for?



[www.gatwick-aviation-museum.co.uk](http://www.gatwick-aviation-museum.co.uk)

**REOPENING  
SUMMER 2021  
WELCOME BACK**

[gamc.org.uk](http://gamc.org.uk)

From Gatwick Aviation Museum:

"Founded in 1987, Gatwick Aviation Museum is a Charity that funds and supports the education of British aviation, engineering and English Heritage. The Museum acts as a valuable educational resource, that provides vital support to a number of schools, youth associations, families, children and young people within our community. It is our aim to ignite and inspire passion, learning, development and enjoyment. We provide crucial skills, experience and relevant information, through our collections, engineering projects, fundraising initiatives and educational events and workshops, in order to provide more opportunities that will support those who aspire to join the industry that exists today."



**Hunting Percival Sea Prince T.1 WP308**  
[www.airshows-present.com/](http://www.airshows-present.com/)

The Sea Prince T.1 (WF118) first flew on 28 June 1951 and fulfilled the need the Royal Navy had for a flying classroom. The aircraft was used as a radio and radar trainer for observers to teach techniques in navigation and anti-submarine warfare. A total of forty two T.1s were built and were finally retired in 1979 when the Handley Page Jetstream came into service.

## Milling around the World at the Mills Archive - No 1 by Mildred Cookson

See <https://new.millsarchive.org/> for more details. {I hope you are encouraged to join. JS}  
 The Mills Archive Trust, Watlington House, 44 Watlington Street, Reading, RG1 4RJ.

The Mills Archive is an lively and active source of material for anyone interested in mills, their machinery, their history and their personnel. Membership brings privileges such as permission to use images within your own publications.

This is an updated extract from the series of articles that were published in *Milling and Grain* some years ago.

You can read their most recent issue at

<https://millingandgrain.com/magazine/>. The articles have varied content and focus on a different aspect of our holdings from the milling journals of the past.

{This article has been edited to shorten it. JS}

### Ancient Milling in China

The history of milling in the world's second-largest country is documented in many ways at the Mills Archive. Not only do we have documents and photographs as well as various journal articles from Victorian times and later, our library also holds the pioneering publications by Needham, underlining how the development of technology in China often predated similar developments in the West.

As with many poor rural societies, the first milling technologies were muscle-powered and some are still in use today in many parts of the world.

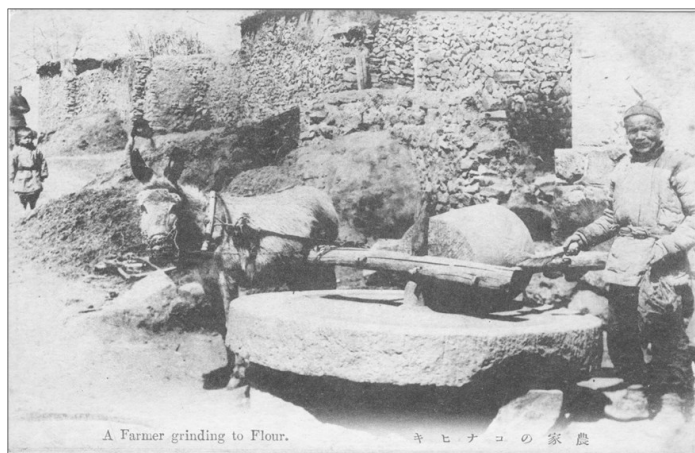
Several of the illustrations here, taken from postcards from the early 1900s, show mules or oxen rotating an "edge-runner" stone on top of a flat bedstone.



*Mule-driven mill*



The flour was removed from the lower stone by the farmer walking round using a brush to clear the flour.



*The brush and the bowl technique in action*

This brush and bowl technique was lampooned on the rear of one of the cards by an advertiser 100 years ago, presumably ignorant of the mechanical engineering efficiency of most of the Chinese milling industry even then!

An 1888 article in *The Implement and Machinery Review*, held at the Mills Archive provides more detail of these early muscle-dependent processes, and describes a more modern arrangement of millstones, as shown in this edited transcript:

"The wheat is pulled up usually by the root, bundled in sheaves, and carted to the mien chong, a smoothed and hardened space of ground near the home of the farmer. The tops of the sheaves are then clipped off by a hand-machine.

#### *Separating grain from the stalk*

The wheat is left in the *mien chong* to dry, while the headless sheaves are piled in a heap for fuel or for thatching. When the wheat is thoroughly dry it is beaten under a great stone roller, pulled by horses.





*Threshing wheat in China*

The beaten stalks and straw are then taken out by an ingenious manipulation of pitchforks, and the chaff is removed by a systematic tossing of the grain in the air, until the wind blows every particle of chaff or dust out of the wheat. Every part of the chaff is carefully treasured by the Chinese, to be used as fuel or for other purposes. After the wheat has been allowed to dry for a few hours in the burning sun, it is stowed away in airy bamboo bins.

The milling process is a very ancient one. Two round, large bluestone wheels, with grooves neatly cut in the faces on one side, and with a solid wooden plug in the centre of the lower wheel are used. The process of making flour by this machinery is

called *mob mien*. Usually a horse or mule is employed. The poor, having no animals, grind the grain themselves. Three distinct grades of flour are thus produced. The *shon mien*, or A grade, is the first siftings; the *nee mien*, or second grade, is the grindings of the rough leavings from the first siftings, which is a darker reddish colour than the first grade; the last grade, or *mo D*, is the finely ground last siftings of all the grades. When bread is made from this grade it resembles rough ginger-bread. The bread of the Chinese is usually fermented and then steamed. Only a very small quantity is baked in ovens." □



*Ox-driven mill at Hankou*

## Chesterfield & its Museums and Sights

Stephenson Memorial Hall and Builders Wheel are among the highlights of the borough with the Crooked Spire.

See [www.chesterfield.gov.uk/](http://www.chesterfield.gov.uk/)

### ***Museum > Highlights > Stephenson Memorial Hall***

George Stephenson spent last 10 years of his life living in Chesterfield at Tapton House. He also pursued his hobby of gardening and growing exotic plants and vegetables. To grow straight cucumbers he had glass cucumber straighteners made at one of his factories.

### ***Museum > Highlights > Builders Wheel***

Heavy building materials were attached to a rope wound round the axle of the windlass, and then lifted by a person getting inside and treading the wheel around. The wheel was installed as high up on the building as possible and would be dismantled and moved up again as construction progressed. The medieval carpenters marked each piece of timber so they could easily take it apart and put it back together again.

Very few of these machines have survived to the present day, and our wheel is unusual in being easily accessible in the museum rather than still high up in the tower of its church. It was removed in 1947 and rebuilt in 1994, and has remained in the museum ever since. □



The medieval builders' wheel, was used over 600 years ago in the building of the famous Crooked Spire church.

## Eastwick Park Ornamental Dairy by *Michael Herbert*

Leatherhead & District Countryside Protection Society, [www.landdps.com](http://www.landdps.com) & SIHG

SIHG has awarded the Weald and Downland Living Museum for its 2021 Conservation Plaque for the expert restoration of the Eastwick Park Ornamental Dairy.

Built in 1806, the dairy stood close to Eastwick Park manor house in Great Bookham (demolished 1958).

It is an example of the type of decorative dairy buildings that became popular with the larger landowning classes of the late 18th and early 19th centuries. The larger building is the ornamental dairy where cream and butter were produced, joined by a short covered walkway to the smaller scalding house, which provided the heat needed as part of the cheese-making process. It was situated in a dell in order to gather heavier, colder air around the dairy. Turville Kille (1898-1997) described how as a boy before the First World War he would 'go down steps into the dairy where on a hot summer's day the difference of temperature was unbelievable. The right hand side of the room was tiled with blue and white tiles and there was also a solid angular slab on which stood bowls of cream, jugs of milk and joints of meat for the Manor House'.

After the First World War and the breaking up of the estate, dairy farming ceased and the dairy became redundant. By 1976 it was dilapidated and placed on the English Heritage list of buildings at risk, then Listed Grade II in 1990. Further deterioration occurred over the next 20 years until the Leatherhead &



District Countryside Protection Society started actively seeking measures to secure its future, appointing conservation architects to prepare plans and liaise with the Council and English Heritage with a view to restoring the buildings. Eventually, it was agreed in 2011 that the owners of the property within whose garden the dairy had survived would donate it to the Weald and Downland Living Museum.

The Society then made a significant grant towards the cost of its dismantling and transport to the Museum, where it has now been skilfully conserved and rebuilt as it would have been when new.

During the conservation process at the Museum, evidence was found that the buildings were originally thatched. Tiles later replaced the thatch, the additional weight causing damage to the roof structure. The dairy and scalding house had slightly domed, lime plastered ceilings. The walls were also plastered and showed evidence for shelving and some tiling, as well as a copper and flue in the scalding house.. □

### References:

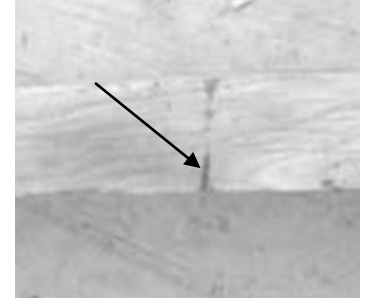
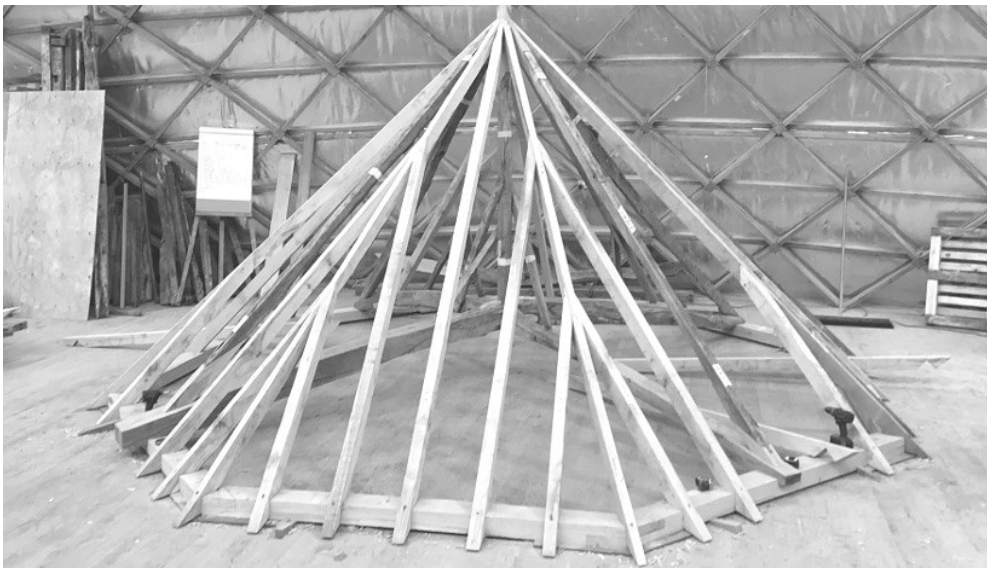
Terence J. Staff, 'Eastwick Park Dairy', Leatherhead & District Local History Society Newsletter, August 2012: <https://leatherheadhistoryarchive.org>  
[https://leatherheadhistoryarchive.org/wp-content/uploads/FelthamAlbum4\\_pp1-20.pdf](https://leatherheadhistoryarchive.org/wp-content/uploads/FelthamAlbum4_pp1-20.pdf)

Joe Thompson (the Museum's Carpenter-in-Residence), 'Conserving the ornamental dairy from Eastwick Park, Great Bookham, Surrey', 9th March 2018, Weald and Downland Living Museum: [www.wealddown.co.uk](http://www.wealddown.co.uk).



Eastwick Model Dairy restored and conserved at the Weald and Downland Living Museum..

## Eastwick Park Ornamental Dairy Restored *by Jan Spencer*



One of the tarred twine marks - evidence of thatching

### Eastwick Model Dairy

The seriously dilapidated building was listed Grade II in 1990. Further deterioration occurred over the next 20 years.

Photo LDLHS

(This report is copied from the previous issue of the SIHG Newsletter, so that the evidence is all in one place.)



I had caught glimpses of this building, round the corner from where I lived in Great Bookham, as it decayed over the years, so I was pleased to hear that plans had finally been made for its preservation.

In April 2011 the LDHS reported that permission had been granted for the dismantling of the derelict dairy and its transfer to the Weald and Downland Museum Open Air Museum at Singleton, ref 1.

On a recent, September 2020, visit to Singleton I was thrilled to be confronted by the startlingly gleaming white apparition in front of me. Thatch had replaced the tiled roof and the brickwork had been coated with white paint. This is an example of 'polite' architecture, a place where the lady of the house could enjoy being a 'milk maid'.

The museum's carpenters, led by Joe Thompson, had restored and reconstructed the roofing, using original timbers where possible and new timbers made using the same techniques where necessary. Old records mentioned thatching, but physical evidence remained elusive until

some marks of tarred twine were found on rafters after months of searching, ref 2.

See the photos on the previous page by Jan Spencer at the Weald and Downland Living Museum.. □

### References

- 1 Leatherhead & District Local History Society report, which also has a plan of the building  
<https://leatherheadhistoryarchive.org/?s=eastwick+model+dairy>
- 2 Weald and Downland Museum Living Museum (as the museum is now rebranded); illustrated account of the re-assembly of the dairy  
[www.wealddown.co.uk/conserving-the-ornamental-dairy-from-eastwick-park-great-bookham-surrey/](http://www.wealddown.co.uk/conserving-the-ornamental-dairy-from-eastwick-park-great-bookham-surrey/)
- 3 [www.wealddown.co.uk/buildings/eastwick-park-dairy/](http://www.wealddown.co.uk/buildings/eastwick-park-dairy/)
- 4 <https://leatherheadhistoryarchive.org/?s=eastwick+model+dairy>

## They Said it Couldn't be Done - Invention Humour by *Jenny Arata, Metrolight*

21 <sup>st</sup> Century	
2004	'You want to have consistent and uniform muscle development across all of your muscles? It can't be done. It's just a fact of life. You just have to accept inconsistent muscle development as an unalterable condition of weight training.' - Response to Arthur Jones, who solved the "unsolvable" problem by inventing Nautilus.

20 <sup>th</sup> Century	
1981	'640K ought to be enough for anybody.' - Bill Gates.
1980	'If I had thought about it, I wouldn't have done the experiment. The literature was full of examples that said you can't do this.' - Spencer Silver on the work that led to the unique adhesives for 3-M 'Post-It' Notepads.
1977	'There is no reason anyone would want a computer in their home.' - Ken Olson, president, chairman and founder of Digital Equipment Corp.
1977	'A cookie store is a bad idea. Besides, the market research reports say America likes crispy cookies, not soft and chewy cookies like you make.' - Response to Debbi Fields' idea of starting Mrs. Fields' Cookies.
1976	'So we went to Atari and said, 'Hey, we've got this amazing thing, even built with some of your parts, and what do you think about funding us? Or we'll give it to you. We just want to do it. Pay our salary, we'll come work for you.' And they said, "No". So then we went to Hewlett-Packard, and they said, 'Hey, we don't need you. You haven't got through college yet.' - Apple Computer Inc. founder Steve Jobs on attempts to get Atari and H-P interested in his and Steve Wozniak's personal computer.
1971	'The concept is interesting and well-formed, but in order to earn better than a "C", the idea must be feasible.' A Yale University management professor in response to Fred Smith's paper proposing reliable overnight delivery service. (Smith went on to found Federal Express Corp.)
1968	'But what ... is it good for?' - Engineer at the Advanced Computing Systems Division of IBM, 1968, commenting on the microchip.
1962	'We don't like their sound, and guitar music is on the way out.' - Decca Recording Co. rejecting the Beatles.
1957	'I have traveled the length and breadth of this country and talked with the best people, and I can assure you that data processing is a fad that won't last out the year.' - The editor in charge of business books for Prentice Hall.

20 <sup>th</sup> Century (continued)	
1949	'Computers in the future may weigh no more than 1.5 tons.' - Popular Mechanics, forecasting the relentless march of science.
1943	'I think there is a world market for maybe five computers.' - Thomas Watson, chairman IBM,
1939	'I'm just glad it will be Clark Gable who's falling on his face and not Gary Cooper.' - Gary Cooper on his decision not to take the leading role in 'Gone With The Wind.'
1929	'Stocks have reached what looks like a permanently high plateau.' - Irving Fisher, Professor of Economics, Yale University.
1927	'Who the hell wants to hear actors talk?' - H.M. Warner, Warner Brothers.
1921	'Professor Goddard does not know the relation between action and reaction and the need to have something better than a vacuum against which to react. He seems to lack the basic knowledge ladled out daily in high schools.' - New York Times editorial about Robert Goddard's revolutionary rocket work.
1920	'The wireless music box has no imaginable commercial value. Who would pay for a message sent to nobody in particular?' - David Sarnoff's associates in response to his urgings for investment in the radio in the 1920s.
1911	'Airplanes are interesting toys but of no military value.' - Marechal Ferdinand Foch, Professor of Strategy, École Supérieure de Guerre.

19 <sup>th</sup> Century	
1899	'Everything that can be invented has been invented.' - Charles H. Duell, Commissioner, U.S. Office of Patents.
1895	'Heavier-than-air flying machines are impossible.' - Lord Kelvin, president, Royal Society.
1876	'This "telephone" has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us.' - Western Union internal memo.
1873	'The abdomen, the chest, and the brain will forever be shut from the intrusion of the wise and humane surgeon.' - Sir John Eric Ericksen, British surgeon, appointed Surgeon-Extraordinary to Queen Victoria.
1872	'Louis Pasteur's theory of germs is ridiculous fiction.' - Pierre Pachet, Professor of Physiology at Toulouse.
1859	'Drill for oil? You mean drill into the ground to try and find oil? You're Crazy.' - Drillers who Edwin L. Drake tried to enlist to his project to drill for oil.





Photo: Alan Wilson from Stilton, Peterborough, Cambs  
**Supermarine S.6B 'S1595', CC BY-SA 2.0,**  
<https://commons.wikimedia.org/w/index.php?curid=49752665>

Talk by Colin van Geffen  
 'Lucy Houston:  
 the Lady Who Saved a Nation'



**Dame  
 Fanny Lucy  
 Houston**  
 (née Radmall)

photogravure,  
 published 1909



Weald and Downland Open Air Museum,  
 This **pretty ornamental dairy** was originally situated in the Eastwick Park estate,  
 near the village of Great Bookham in Surrey, on the A246 to the west  
 of Leatherhead. [www.wealddown.co.uk/](http://www.wealddown.co.uk/)

The deadline for **submitting copy** for the next Newsletter is  
**20 July 2021**  
*Submissions are accepted by email to [news@sihg.org.uk](mailto:news@sihg.org.uk), on a memory stick or even in typescript.*  
**Anything related to IA will be considered.**  
*Please note that our Web address will be upgraded in the near future to be recognized as secure:*  
<https://www.sihg.org.uk>

The SIHG Newsletter is now issued quarterly, covering:

<i>February</i>	<i>May</i>	<i>August</i>	<i>November</i>
<i>March</i>	<i>June</i>	<i>September</i>	<i>December</i>
<i>April</i>	<i>July</i>	<i>October</i>	<i>January</i>

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