



Mill Memories

The Magazine of the Mills Archive Trust

Issue 36

8

The Wright Records: Our
Millwrighting Collections

12

In Search of Watermills
with Gardner and Stoyel

16

The Iconography of
Mills and Milling

26

The Millwright's
Books



Caring for an **ICON**

Caring for an ICON

Preserving the Legacy of Mills



Scaffolding round Kibworth
Harcourt Mill. Photograph
courtesy of Dorothea Restorations

Elizabeth Bartram

This issue of *Mill Memories* is particularly close to our heart and gets back to our roots. Embedded within these pages are the motivations of our founders who came together and in 2002 established the world's first educational charity caring for an archive and library dedicated to the history of mills and milling.

Our Vision: Mills are more than historic structures — they are living symbols of our shared cultural and technological heritage. Engaging with them enriches lives, connecting past innovations with future possibilities. The preservation of both tangible and intangible heritage is vital, as they are deeply interwoven.

Our Unique Role: We are the custodians of history, safeguarding the stories, skills, and traditions that mills embody. Our expertise allows us to protect, interpret, and open access to this rich history. Mills shaped the foundations of the modern world, and we ensure their legacy continues to inspire.

Engaging Audiences: As an educational charity, we create opportunities for people to connect with the history of milling, making the past relevant to the present and future. By returning to our roots, we can deepen engagement with:

- Mills as centres of technological innovation.
- The preservation of traditional crafts, including millwrighting.
- The artistic and literary significance of mills.

Our work has only been possible thanks to the committed and generous support of many donors, including our Friends, appeal supporters, Heritage Partners and Archive Patrons. This issue is dedicated to you, and to the millwrights and others who have gone above and beyond to care for mills, past and present.

The 'Caring for an Icon' Appeal

Nathan Trill

Mill icons and the communities built around them will disappear if we do not protect traditional skills. The Mills Archive Trust, the largest archive and library dedicated to milling history, safeguards the knowledge to save them. We need your help to share it with craftsmen and millers.

If mills are the pillars of modern food and energy production, traditional skills are their foundation. Volunteers at mills are under pressure to keep these traditional skills alive. There are only 20 active millwrights to guide them — too few to preserve the trade and train the next generation without help.

With your support, we will preserve the records which constantly flow into our archive. A handful of mill drawings can save restorations thousands of pounds in planning fees. With thousands of repair logs, drawings and

photographs to catalogue, you can help us preserve mills across the UK and beyond.

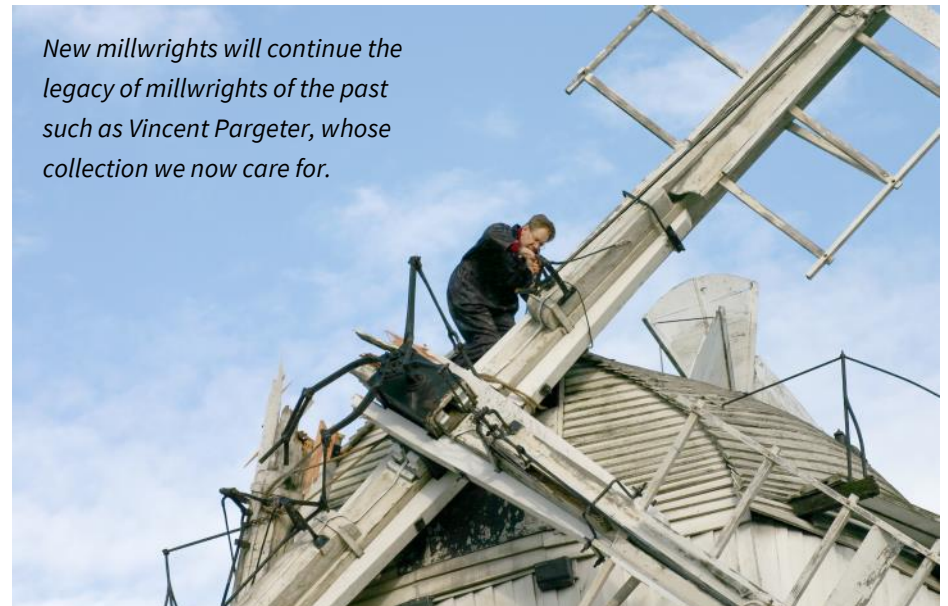
By supporting us in digitising these records, you are helping to cultivate these skills. From aiding basic maintenance to supporting the journeys of aspiring millwrights and millers, our records need to be accessible to preserve traditional crafts.

With your help, we will turn our website into a hub where experts can share their knowledge with the next generation. We must promote volunteer opportunities and the funding needs of mills. To do this, we need your help to raise awareness and contact communities directly.

The Mills Archive is working with millwrights and millers to assess the need nationally. Experts have pointed us in the direction of new collections we must save for the craftsmen of the future. Your support can make the knowledge they need accessible. Please support our mission at millsarchive.org/icon/.



Above: Trustee Ashok cataloguing the mill drawings of the John Reynolds (left), one of the collections we now care for, much like the drawings in Rex Wailes Collection (centre). We must provide resources to the next generation, including SPAB Millwrighting fellow James (right, viewing our mill drawings).



Welcome to our two new trustees

Elizabeth Bartram

Since Covid our workload has soared, and our scope expanded to include electricity generation and the role of the modern milling industry. As we look forward to the next five years, we see increasing challenges for our Trustee Body and we are pleased to announce the appointment of two new trustees.



Amanda Knight joined us in 2021 as a volunteer and catalogued the David Nicholls collection among others, including Rex Wailes's French windmills, while she was studying to become a qualified archivist. Currently working with the Reading Room and Archives team at the University of Reading's

Museums and Special Collections Service, we are delighted she agreed to join our Governing Body last November. She combines a detailed knowledge of the Trust and how we work with experience in previous careers as a solicitor (corporate and charity law) and in trusts and foundations fundraising.

Mike Cookson, the son of Ron and Mildred, is based in Amsterdam and was elected to the Board in February. He brings a love of mills from when he used to help Mildred run Mapledurham Watermill almost 40 years ago, together with three decades of expertise in strategic communications spanning global brands, media, and entrepreneurship. Having held senior leadership positions at international advertising and media agencies, he then spent a decade on the European Marketing Board of Nike before leaving to set up his own company based in London and Amsterdam.



This brings our complement to ten, which leaves two vacancies. If you are interested in mills, concerned about their future and fancy an enjoyable challenge, why not consider becoming a trustee? To set up an initial chat just email Ron at chairman@millsarchive.org



The Wright Records

Our Millwrighting Collections

Nathanael Hodge

The millwright has a unique set of skills. A profession on the edge of extinction, millwrighting is tradition inherited from centuries past, a combination of carpentry and structural and mechanical expertise, which today must be combined with a sensitivity to historical accuracy. We are doing what we can to help ensure the survival of this craft, and for us at the Mills Archive this centres on caring for and providing access to millwrighting records in our collections.

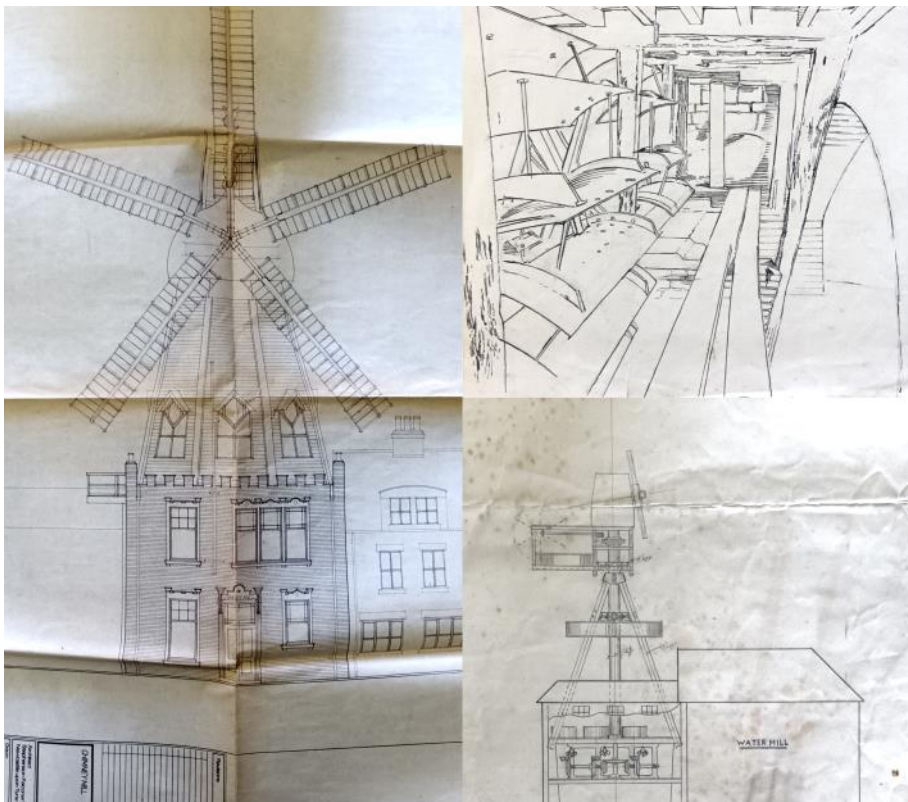
The historical and cultural significance of these collections is directly connected to the ongoing significance of mills themselves. Each mill is a hybrid of building and machinery which cannot be considered separately, and each mill was different – regional characteristics varied depending on local expertise, materials and traditions, and every mill had its own unique

arrangement of machinery developed to solve specific problems. For mills that have disappeared, the records we hold may now provide the only evidence of the intricate craftsmanship that went into their construction. But for those that remain, our records have the more direct practical value of ensuring authentic, historically accurate repairs.

From over 40 collections and small donations relating to millwrighting, including 5,400 technical drawings, we have identified those which still need significant work. Rex Wailes (1901-1986) was the pioneering figure in mill preservation from the 1920s onward, an engineer with wide interests in the history of technology, gaining an OBE for his work. His collection has already been the focus of detailed cataloguing; however around 1,000 large millwrighting drawings

Right: Rex Wailes with millwright Alfred James Thrower (1881-1962) at Herringfleet smock mill, Suffolk, September 1945.





still remain untouched. These were gathered by Rex during his extensive travels in the UK and overseas, and reflect a wide variety of ages and dates. Cataloguing these will fill an important gap in our knowledge of his collection.

Another very significant millwrighting collection is that of Vincent Pargeter (1943-2015). Vincent worked as Essex County Council millwright and at other mills throughout the country, gaining a reputation as the most skilled millwright of his day – upon his sudden passing in 2015, windmills across the UK honoured his memory by turning their sails to the traditional mourning position. We have catalogued and digitised most of Vincent's technical drawings, but the notes, correspondence, diaries and cuttings still need work. Cataloguing these will enable us to better

understand the life and work of one of the country's most significant millwrights.

Complementing the collections of these two giants of the milling world are two collections from important contemporary practitioners. Owlsworth IJP are building conservationists who continue to carry out millwrighting work today, as well as having inherited the records of earlier millwrighting firms. Finally, Luke Bonwick is a respected contemporary millwrighting consultant, whose work ensures that the craft continues into the present day.

All of these collections will need care and attention to arrange, repackage and catalogue, and we are currently exploring funding opportunities to tackle this work. Once listed and preserved, these collections will serve as a teaching resource, a knowledge base of millwrighting solutions for mill custodians and contractors. We hope that our commitment to rescuing, preserving and making these millwrighting records freely available will encourage a revival of this traditional skill.

Opposite: Drawings from the Rex Wailes Collection.

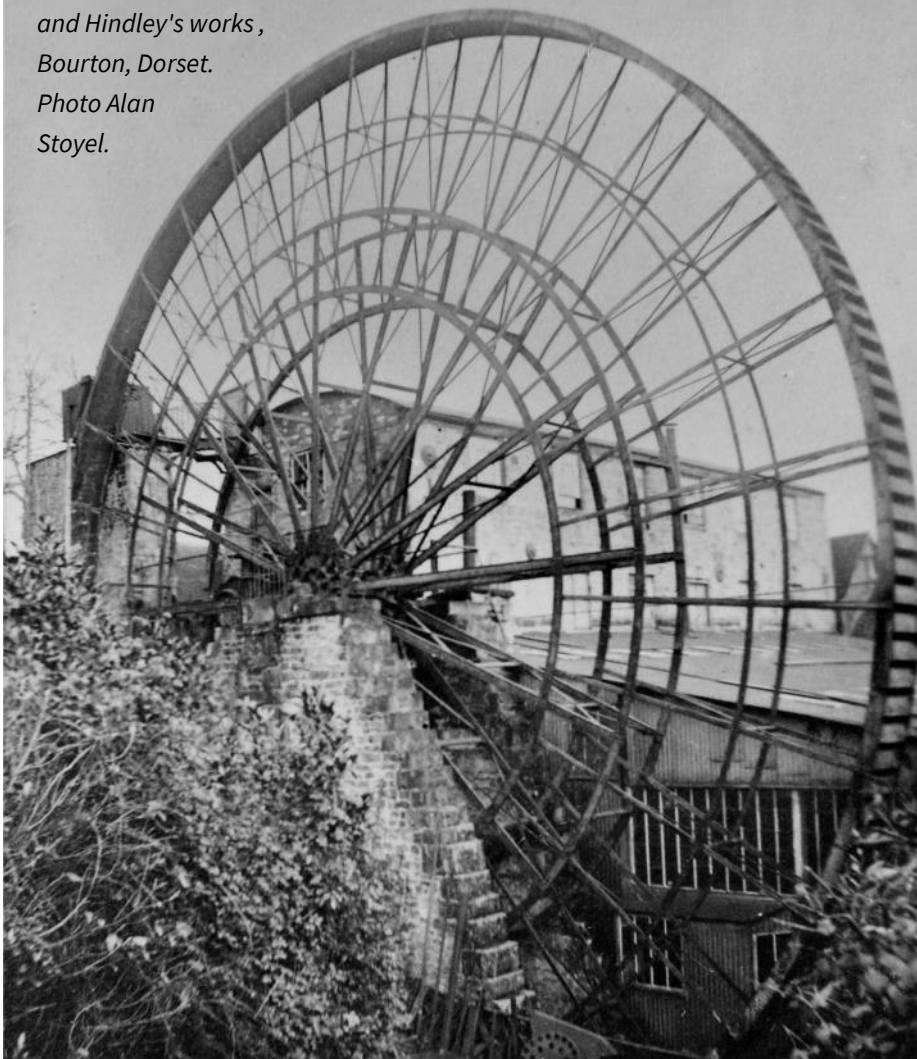
Right: Vincent Pargeter replacing storm-damaged sail and stock at Upminster smock mill, Essex, 2008. Image copyright the Friends of Upminster Windmill.



In search of watermills with Gardner & Stoyel

*The 60-foot waterwheel at Maggs
and Hindley's works,
Bourton, Dorset.
Photo Alan
Stoyel.*

Mildred Cookson



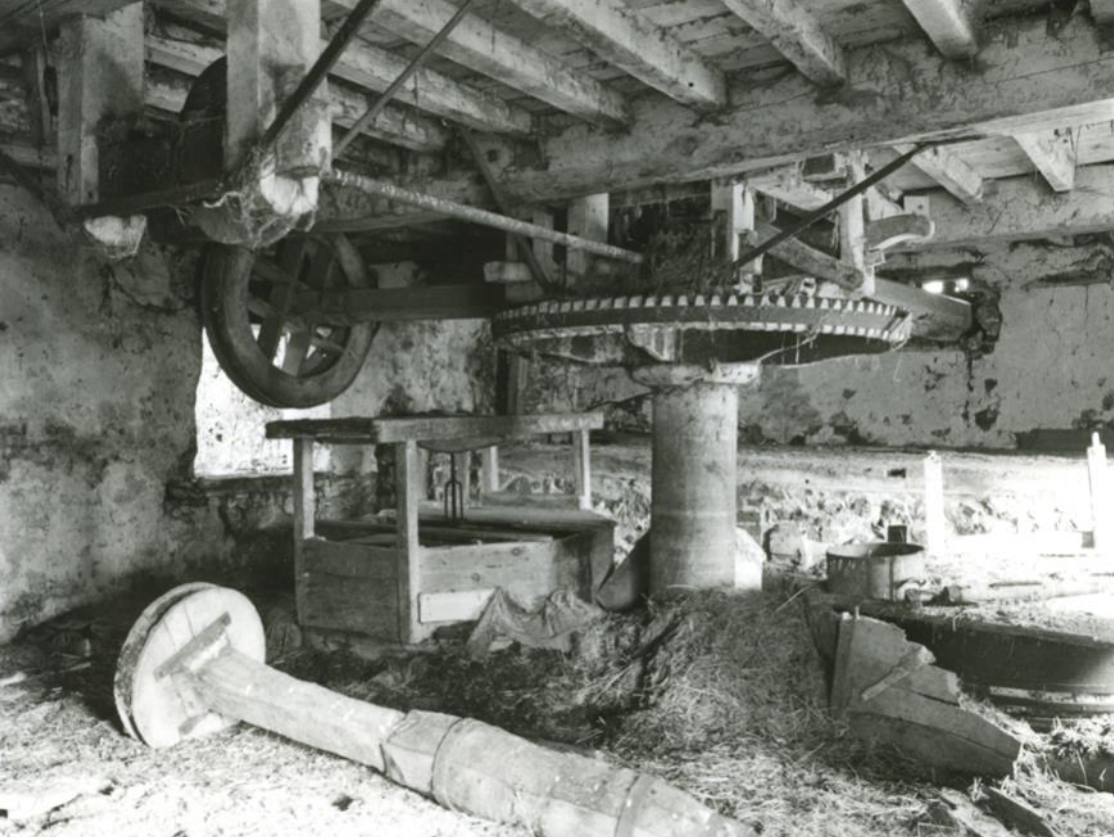
The romantic windmill has often gained the lion's share of attention from mill lovers, with watermills sometimes being overlooked. This article discusses two researchers who went the extra mile in watermill recording, and whose collections form the backbone of our data on watermills in England and Wales.

E. M. Gardner

Academically gifted, Miss Gardner (as she was known) won a scholarship to Newnham College, Cambridge, to study history. There she became a committed suffragist and joined the National Union of Women's Suffrage Societies. She was instrumental in the SPAB Windmills Section becoming the Wind and Watermill Section whilst serving on the mills committee, and wrote three small booklets for the SPAB, part of a series on tide mills.



Unidentified mill in Merioneth, Wales, E M Gardner Collection.



Pontysgawrhdyd Mill, Meifod, Wales, 1950.

E M Gardner's collection was given to the Mills Archive by the SPAB in 2004. Miss Gardner photographed watermills over a wide area from Cumbria down to the south of England, recording the buildings, their locations, inventories, condition, and whenever possible the millers who ran them. Watermills were her passion, but windmills also feature. Alongside the photographs and slides are the many index cards and files of notes, each containing detailed information on every mill visited.

E M Gardner pioneered watermill research and without her our archives would be considerably poorer. Her photographs have been catalogued and are available to view on our website.

Alan Stoyel

Alan was known to many people, in the milling world and across many other organisations. He will be particularly remembered for the meticulous records he kept, documenting watermills across the UK. A geologist by profession, he had a particular interest in the use of water power in mines, writing a book on the tin mines of Cornwall. As well as recording mills throughout the country, he bought his own mill, Venn Mill in Oxfordshire, for which he built a new waterwheel. He carried out similar work at mills throughout the county, and on moving to Herefordshire persuaded many mills to open their doors to the public for the first time.



Alan at work tightening wedges in a waterwheel, Court of Noke Mill, Pembridge.

Alan's collection came to us in over 200 boxes and its contents range from photos and notes to ephemera, casework, correspondence, over 100 wooden patterns, a quern and a small millstone. There is still much work to be done, but the collection is already proving invaluable in helping us answer the many watermill enquiries we receive.



he word 'icon' is derived from the Greek εἰκών – *eikōn*, referring to the image or likeness of a thing, a reflection in a mirror, a pattern or an archetype. From *eikōn* comes *eikonographia* – 'iconography' – the study of artwork and imagery. In Byzantine Christianity the word also came to have a more

technical sense, referring to the religious images painted on wooden panels. These meanings were carried over into the medieval Latin word *icon*. In modern English the word has gained additional senses: it describes the graphics that enable us to navigate our computers and phones, and in a more extended, metaphorical sense, something unique, exceptional, or worthy of imitation – a model, an exemplar, a classic.

This issue of *Mill Memories* is devoted to exploring the iconic status of mills in this latter sense, but the centrality of mills throughout human history also left its mark on the artwork and symbolism of many cultures down the ages, even playing a role in religious imagery.



The oldest medieval representation of two men working at a mill is an allegorical image. It dates from c 1120 and is found on the capital of a pillar in the abbey church of Vézelay in France. The two men are thought to represent Moses and St Paul, and the image is understood to represent the practice of deriving spiritual truths – the flour – from the ancient scriptures – the grain.

Above: The Vézelay capital. Photo by Jean-Pol GRANDMONT, CC BY-SA 3.0, via Wikimedia Commons. Opposite, top: Donkey and watermill from a twelfth century bestiary. Bottom: Egyptian tomb models c 1980 BC depicting milling on the saddle quern and baking, image from The Met.



The Iconography of Mills and Milling



Nathanael Hodge



A milling image found in Hindu temples depicts the revered poet Sant Janabai, who spent her days as a maidservant and composed over 300 hymns to the god Vitthal. The god, who she called her 'fellow serving maid,' would appear to her and assist her with her daily tasks. They are usually shown grinding together at the handmill.



There are more ancient artistic representations than these. Perhaps the earliest are the models found in Egyptian tombs, such as those shown on p. 14, depicting the oldest form of handmill, the saddle quern. Roman art also depicts milling - the mill known as the 'hourglass' mill from its shape, or the 'Pompeian' mill, from the many examples found at Pompeii.

Over the centuries mills continued to feature in artwork, imagery and symbolism, as the following pages show.

Top: Janabai and Vitthal grinding at the mill, source unknown.

Below: Relief from third century Roman sarcophagus showing horse-powered hourglass mill. Vatican Museums, CC BY 3.0, via Wikimedia Commons.



'Each one goes with his sack to the mill' - allegorical image in which people from every walk of life, including a merchant, a doctor, an astrologer, a pope, a king, a gentlewoman, a monk and a priest, head towards a mill overseen by figures representing Time, Death and Justice. "Achille Bertarelli" Collection, Comune di Milano.



Habit de Meusnier

G. Velez Ex

Cum Privilegio

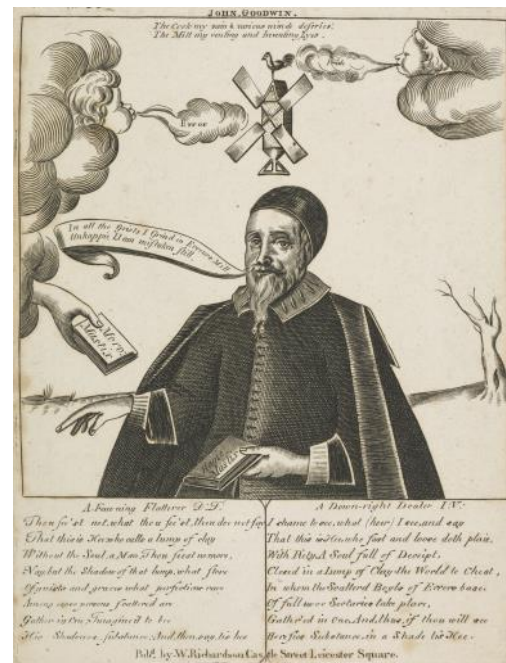
This and following page: an assortment of 'mill people.'

Above: the 'Habit de Meusnier' (costume of a miller) – part of a series of "Costumes Grotesques" by printmaker Nicolas de Larmessin II, 1691.



Genere satirique de Lagniet (1637).

Clockwise from top left: detail from 'The seven deadly sins - gluttony', Pieter Bruegel the Elder (c 1525-1569). A windmill depicted above a person's head indicated insanity, as in these images of controversial Puritan preachers John Goodwin and Hugh Peters. Satirical image by Jacques Lagniet (1620–1672) of 'a man like a windmill', possibly the Ottoman Sultan Mustafa I.



Hugh Peters.

Finally, I could hardly end this article on the artistic representation of mills without mentioning two very special artworks, both inspired by our own collections and featured on the covers of this issue.

The image below, by artist Anthony Greentree, depicts the derelict Common Mill at Baxterley in Warwickshire, based on a photograph taken by H. E. S. Simmons in June 1934. In turn Anthony's drawing inspired the poem shown here, written by Charlotte Morwenna.



Baxterley post mill

stripped to its ribs / a trellis-less sail / raised
like a finger to lips / listen / the wind
whittles the bones / sings /
of the love and
the labour

that raised this strange ship / land locked / laden
with invisible dreams / to hoist / hand
shape / calibrate into windshaft /
tail beam / brake
wheel / crown

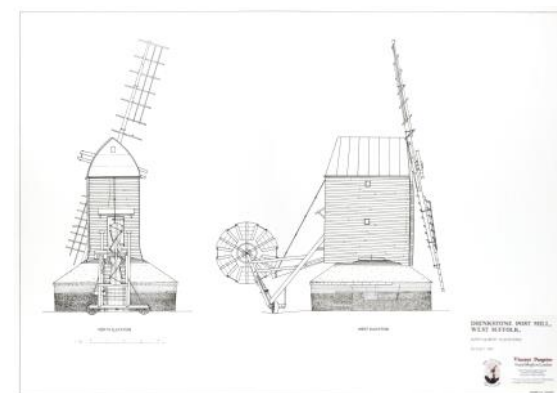
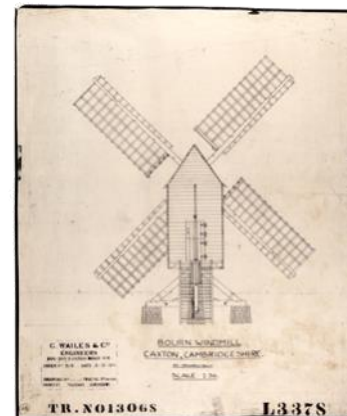
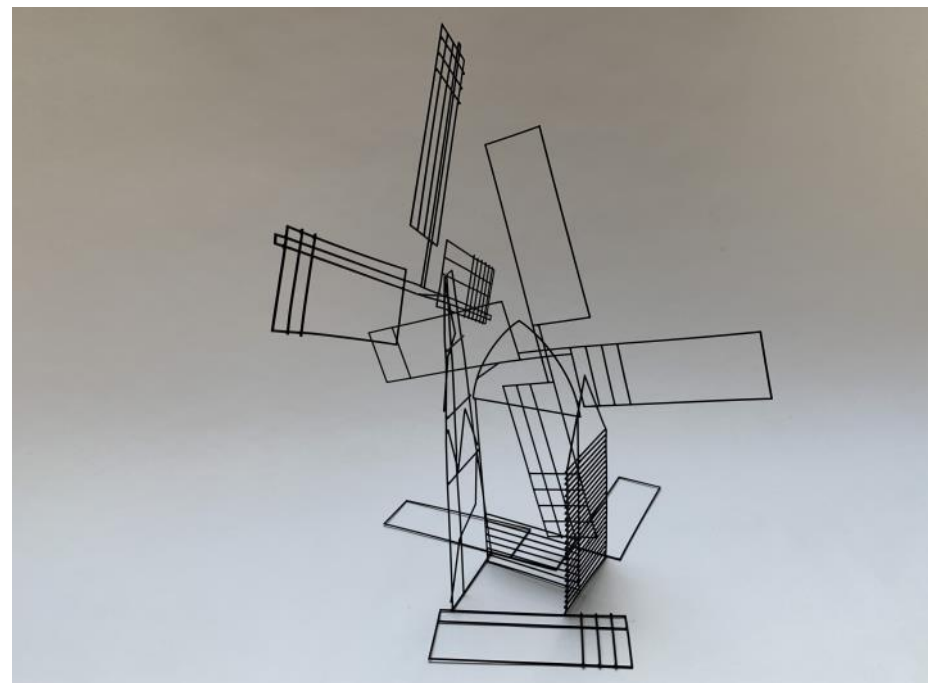
tree / the millwrights are raw skinned and rope
sore / heart wild and eye sure / scent stung
with linseed and sawdust / winch
into being this small
god / miracle

tilted skywards / arms to the wind / to catch
(to be caught) / in the slow / tumble
of cartwheel / after
cartwheel / after
cartwheel -

rise and fall / pivot / sunflower-faced / follow
each change in the weather / weather
the weather / move stones / grow
old / remember /
imagine -

stripped to its ribs / a trellis-less sail / raised
like a finger to lips / listen / the wind
whittles the bones / sings /
of the love and
the labour

Charlotte Morwenna



The sculpture depicted above, entitled "EmPOWERed", was created for us last year by artist-in-residence Jacky Oliver. Jacky studied millwrighting drawings like those from the Rex Wailes and Vincent Pargeter collections shown here (see further, p. 8) before creating her own interpretation. These images show the potential mills still have to inspire creativity today.

A Grant to Safeguard Endangered Skills

Nathan Trill

The Swire Charitable Trust has supported us with £25,000 to help preserve traditional craft skills. To start, we asked the experts, Dr Dave Pearce at Wicken Windmill in Cambridgeshire and Tim Whiting of Suffolk Millwright, what needed to be done. Four key points arose:

Many mills are already preserving their history... we just need to make it accessible.

The Wicken Windmill Partnership's record-keeping has been meticulous. Repair logs and plans from restoration work, dating back to their founding in 1987, could be used to construct a second Wicken. Where millwrights and mill groups are preserving the craft, we must work with them to safely house and make it accessible for future millwrights. You can learn more in our research publication, *The Restoration of Wicken Mill* (see p. 32).

Other mills must start to record restorations.

Not every mill is as far along as Wicken. What works for East Anglia may also not work for Sussex. Each region and each mill has its particular design. We must help mills to record this knowledge. Otherwise, these intricacies will be gradually lost in each restoration.

Not all records are or should be at the Mills Archive.

It is not always best to move a collection that is already safely stored. Instead, collections across the country should be easy to find for craftsmen. For this reason, we must make our website a hub to discover millwrighting collections held by other heritage organisations.



We must raise awareness.

We must expand our network beyond repositories, mills and craftsmen to include everyone. Mills need their communities to get involved, support them, buy their produce and spread the word. We are uniquely placed to promote traditional crafts online and in print.

Are you a mill custodian or a volunteer who would like to get involved? Do you have records of your mill or want to know where to begin? Contact us at friends@millsarchive.org.

Top: Dr Dave Pearce with a millstone at Wicken Windmill. Below: A volunteer packaging flour at Wicken.



THE MILLWRIGHT'S BOOKS



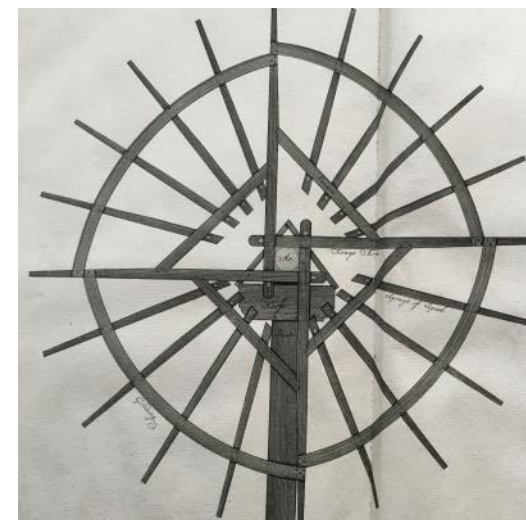
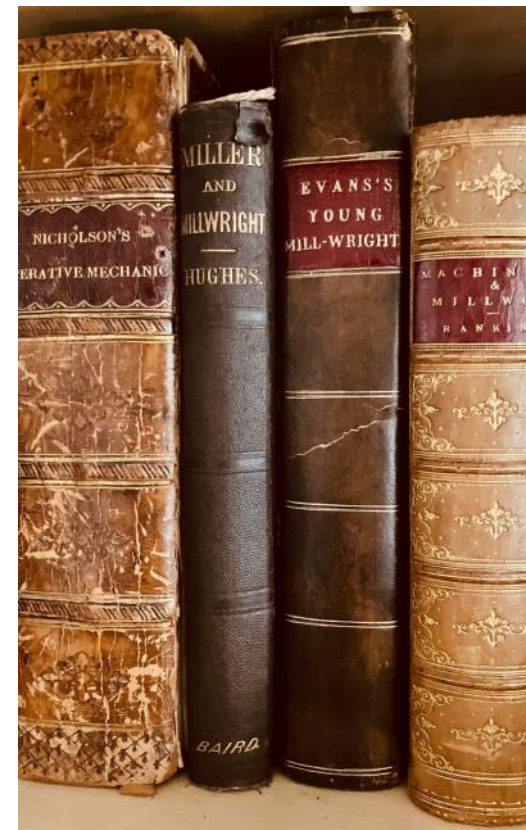
By Mildred Cookson

MMXXV

The Mills Archive contains a wealth of knowledge on millwrighting, particularly in our library. The millwrighting books in our collection showcase the many varied aspects of the craft and date from the early 1700s up to the present.

In his 1878 book *Treatise on Mills and Millwork*, Sir William Fairbairn described the character and skills of the traditional millwright:

The millwright of former days was to a great extent the sole representative of mechanical art and was looked upon as the authority in all the applications of wind and water, under whatever conditions they were to be used, as a motive power for the purposes of manufacture. He was the engineer of the district in which he lived, a kind of jack of all trades, who could with equal facility work at the lathe, anvil or carpenters' bench. In country districts, far removed from



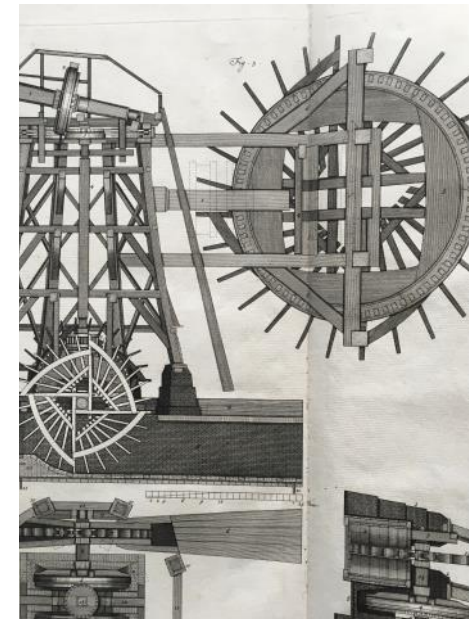
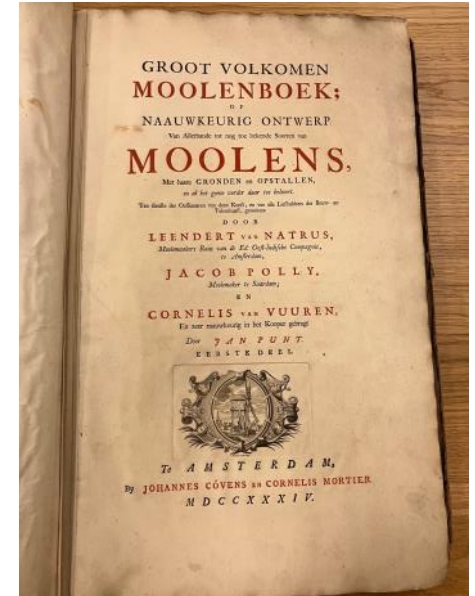
towns, he had to exercise all these professions, and he thus gained the character of an ingenious, roving, rollicking blade, able to turn his hand to anything, and like the wandering tribes in days of old, went about the country from mill to mill with the old song of 'kettles to mend.'

Thus, the millwright was an itinerant engineer and mechanic of high reputation, who could handle the axe, the hammer, and the plane with equal skill and precision. By the time Fairbairn wrote these words, this traditional breed of millwright was already disappearing. The development of new technologies led to a changing role for the millwright, evolving over the course of the nineteenth century into that of the engineer. But many of the same skills were still important. In 1909 James F. Hobart described the requirements for contemporary millwrights in his book *Millwrighting*:

The millwright must be a worker. There is no room for drones in this branch of mechanical industry. The millwright must also be a student. He has much to learn and no longer has to acquire it all by word of mouth. He should be able to calculate strains and strengths of materials and the resultant of forces. As a draftsman to make and read drawings, understand the work in wood and metal, be a first-class carpenter.

The many craft skills required of a millwright would traditionally have been learned over the course of his apprenticeship. As Hobart indicates, millwrighting books in time became an additional invaluable resource.

The earliest millwrighting books in our collection are large Dutch mill books from the early 1700s which are full of drawings of Dutch windmills. The *Theatrum Machinarum Universale of Groot Algemeen Moolen-Boek*, which translates as the 'Universal Theatre of Machines or Great General Mill Book' was produced by Johannis van Zyl and Jan Schenk in 1734 (republished 1761). It features drawings of drainage and saw mills as well as modder, or mud, mills, used to de-sludge ditches and ponds.

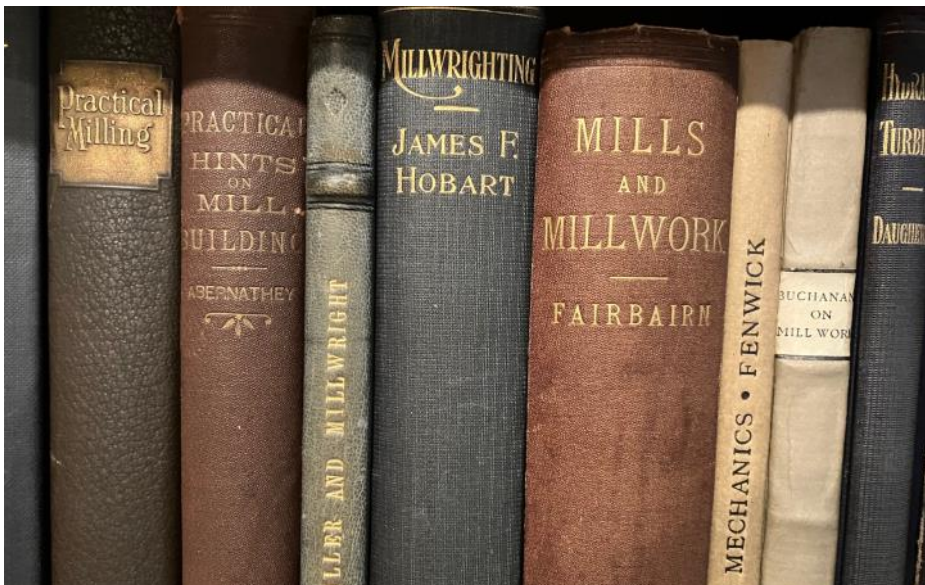


Clockwise from top left: Mildred with one of the Dutch millwrighting books; title page of the Groot Volkomen Moolenboek; detail from drawing in one of the moolenboeks; large and small millwright's books.

In the same year another similar text appeared on the market, the *Groot Volkomen Moolenboek*, which translates to the ‘Great Complete Mill Book’. This was produced by Leendert van Natrus, Jacob Polly and Cornelius van Vuuren, and featured diagrams of oil, tobacco and fulling mills. The drawings in these works were based on real mills that the authors had measured or in some cases helped rebuild (e.g. one of the sawmills in Van Zyl’s volume) and include all the details a millwright would need in order to build a working mill.

Where these volumes concentrate on windmills, our UK and American volumes cover both wind and watermills, dealing with topics such as gearing and millstone dressing. Later works tackle the new developments in roller flour milling. One of the most popular was the 1889 work by Voller, who was persuaded to write up his lectures by his students.

Today’s millwrights have the advantage of newer tools along with cranes and scaffolding, but knowledge and expertise are just as necessary as ever. By preserving these books in our library the history and traditions of this craft are safeguarded for the future.

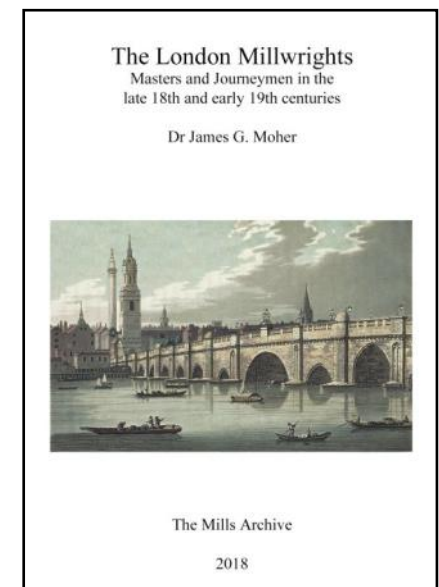
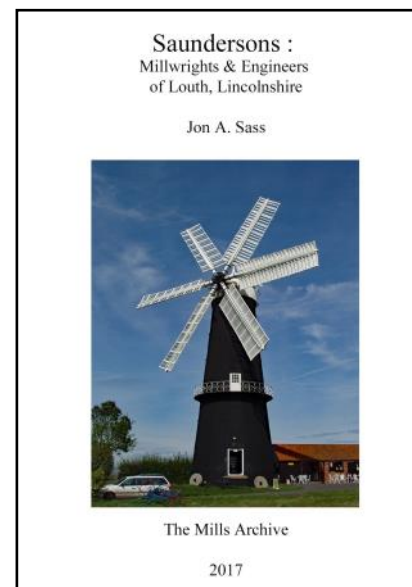


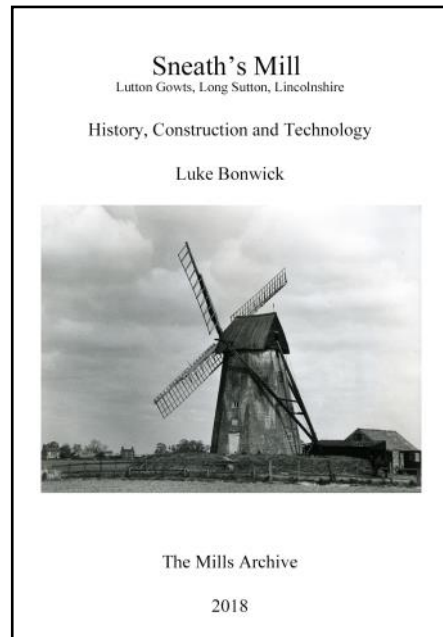
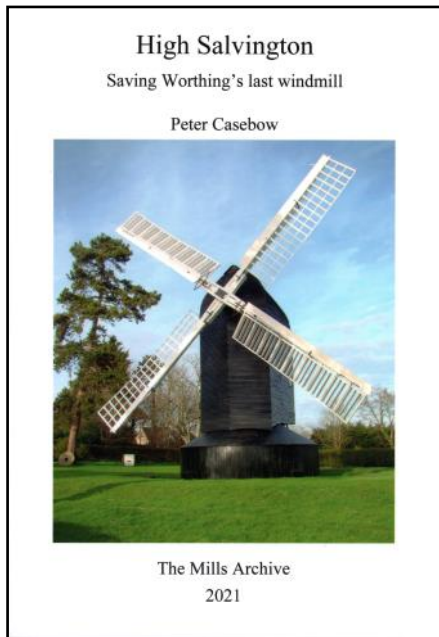
Where would we be without millwrights?

Ron Cookson

Reading through milling history of the twentieth century, it is remarkable that there are any millwrights left. When Saundersons of Lincolnshire opened their doors in 1812, they had no idea that the firm would be bankrupt 100 years later. They were credited with erecting some of the finest tower windmills in England, including the huge eight-sailed windmill at Haddenham, Hertfordshire in 1892/3.

By that time, they were struggling with the increasing dominance of roller mills and had neither the fresh ideas nor capital to survive for very long. Jon Sass cites this as an example of “clogs to riches to clogs in three generations”. Problems for millwrights had arisen much earlier. Jim Moher points out that in the 1700s James Watt, John Rennie and William Fairbairn all locked horns with traditional millwrights.





They were the master millwrights of the time and envisaged large engineering concerns employing apprentice fitters, turners and machinists rather than all-round millwrights. This triumph of engineers over the traditional craft was inevitable following the Industrial Revolution; roller mills only dealt the final blow.

Fast forward to the latter half of the twentieth century and a variety of mill rescue operations would require millwrights, but their numbers had dwindled remarkably, and ownership of deteriorating mills had become an issue. Windmills at Lutton Gowts, High Salvington and Wicken illustrate the issues and opportunities faced with relatively few professional millwrights on whom to call.

Sneath's Mill, Lutton Gowts, Lincolnshire was built in the late 1700s. It stopped work in the 1930s and rapidly deteriorated. In 1985 things were so bad that the Long Sutton Civic Trust mounted a rescue operation retrieving and covering the machinery and putting a lid on the mill. By the

early 1990s this had failed, and a group of local volunteers formed the Sneath's Mill Trust to preserve a fascinating Grade I windmill that Luke Bonwick points out has remained largely unimproved for most of its 150-year working life—an eighteenth century millwrighting time capsule.

With a dearth of millwrighting professionals and wealthy sponsors, volunteers played and still play a vital part in preserving our traditional milling heritage. Peter Casebow gives a detailed account of the way in 1976 that a small group of local residents worked with the council to take over and save Worthing's last windmill at High Salvington. They agreed a clear philosophy of repair and kept a careful photographic record of the work. Initially it was felt that the mill would never work again, but as they progressed the volunteers considered it could be repaired to produce flour, and in April 1991 they ground their first batch.

In 1987, Dave Pearce and a small group of fellow mill enthusiasts set up the Wicken Windmill Partnership to buy and restore Wicken Windmill in Cambridgeshire. It cost £15,000 for the mill, outbuildings and yard. Restoration entirely by volunteers was completed by 2001 and Dave estimated the cost at £50,000, not considering the free labour from countless hours of work by so many. His account is full of millwrighting information and hints and repays any time spent consulting it.



All these books and downloadable PDFs are available from our bookshop: millsarchive.org/books/



Become a Friend – help save our shared heritage

Passionate about history? Your local community? Our millions of records and thousands of publications reveal the milling past that has shaped everything from the food we eat to the energy we use. People like you ensure that we can preserve this history and, equally importantly, make it accessible.

Our Friends ensure that traditional craftsmen have access to the plans and repair notes they need to preserve the UK's mills. They ensure that aspiring craftsmen can find the knowledge to hone their skills. If you are interested in joining the Friends of the Mills Archive Trust to defend our heritage, visit millsarchive.org/friends to find out more.



For more fascinating articles and updates about our work, you can join our newsletter at millsarchive.org/newsletter or scan the QR code.

If you would like to keep receiving *Mill Memories*, let us know at friends@millsarchive.org.

Mill expert Syd Simmons cycling in his native Sussex.



Send us your mill memories

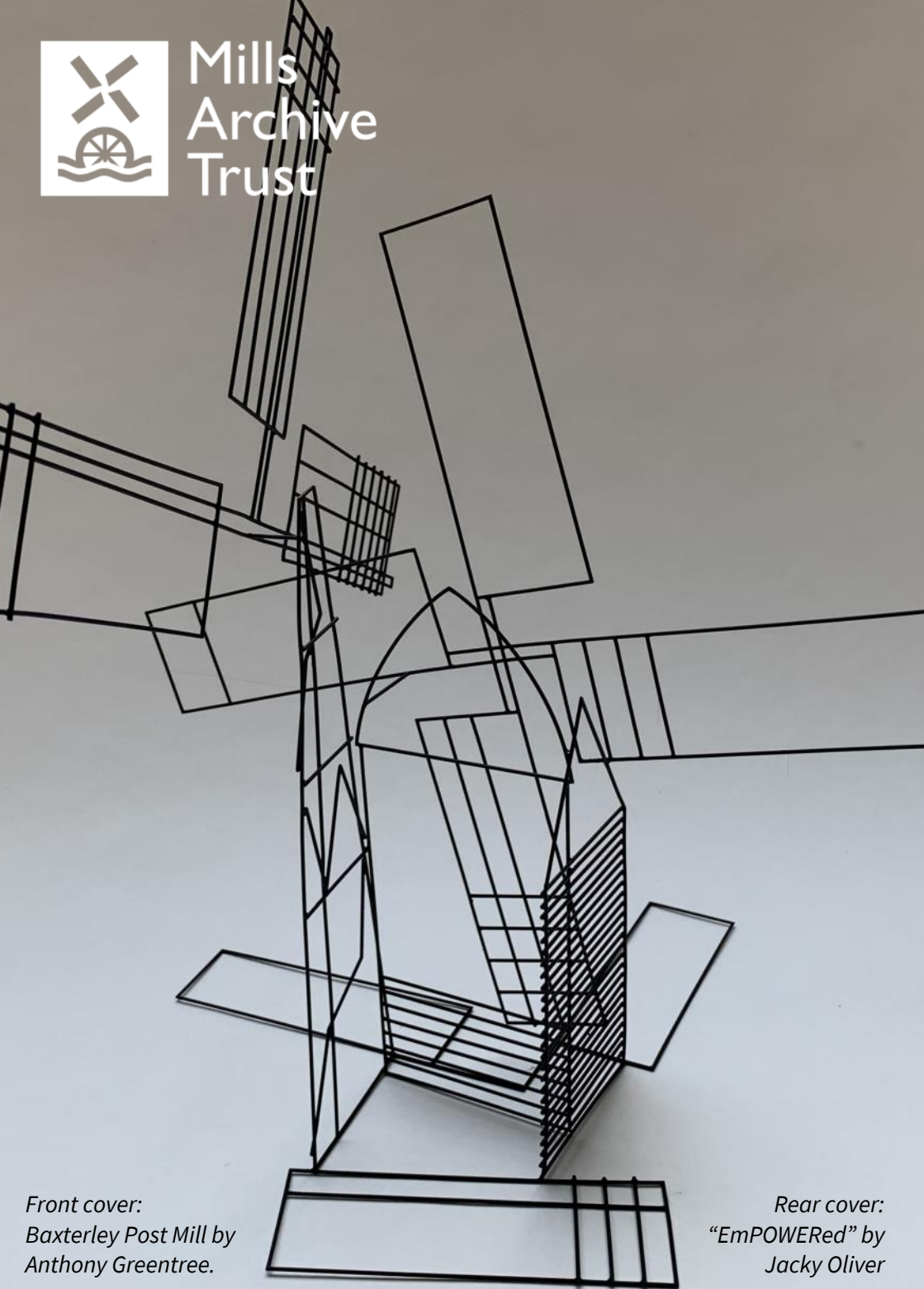
Many mill experts and millwrights were inspired from an early age. Life-long passions originated in rambles and cycles in the countryside amongst these marvellous machines. If you would like to share your memories of mills, we would love to hear them. Send them to us at friends@millsarchive.org and we will feature them in our newsletter.

Feature your organisation in the next issue

Are you a part of a mill group or heritage institution? Do you work in the modern industry, baking or the renewable energy sector? The impact of milling ties its history to organisations and businesses across the UK and the world. If you are ready to spread the word about your organisation's work or upcoming events, there is now the opportunity to feature in the next edition of *Mill Memories* or our weekly e-newsletter. To find out how you can reach our growing audience, contact us at friends@millsarchive.org and we will provide you with more information. We look forward to hearing from you.



Mills
Archive
Trust



*Front cover:
Baxterley Post Mill by
Anthony Greentree.*

*Rear cover:
“EmPOWERed” by
Jacky Oliver*