

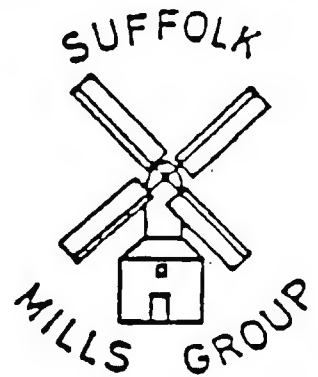
SUFFOLK MILLS GROUP

Newsletter

No. 45

AUGUST 1989

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A number of visits and mill open days have passed off successfully since the March Newsletter. Most memorable was the A.G.M. at Wiston Mill on June 4th which was very well attended and was followed by a tour of Alston Court in the afternoon. There are now very few complete mills which we haven't visited in our 12 years, but I'm sure our new members will appreciate those we visit again!

This is the first summer that there has not been a Suffolk Mills Group work-in. Our founder members will recall the sequence since the mid 1970's: Ramsey '74-'78; Bardwell and Stanton '79; Thelnetham '80-'86; Stanton '86-'87; Thelnetham '88. Many of our small band of active volunteers are now engaged in the work at Wicken mill in Cambridgeshire, which commenced in 1987. As well as this, there are other 'live' projects in the county, notably at Stanton and Drinkstone, as well as opportunities to help working mills such as Herringfleet and Thelnetham. The Wicken work is by any reckoning a major project on a par with Thelnetham, and I hope any member interested in lending a hand will go along to the second work-in from August 19th-28th.

I would like to thank those of you who have provided material for this issue and made my task of preparation that much easier.

Mark Barnard

CUBITT'S PATENT SAIL

Following on from the last Newsletter, when we reproduced Edmund Lee's 1745 patent for a 'Self-regulating Wind Machine', we now turn the spotlight on Thomas Cubitt's 'Method of Equalizing the Motion of the Sails of Windmills', granted in 1807. Cubitt was one of the most famous civil engineers of the period and was later knighted. A Norfolk man, his address in the patent is given as Bacton Wood Mills, North Walsham. According to Rex Wailes' 'The English Windmill', the first mill to be fitted with Cubitt's patent sails was a smock mill at nearby Stalham which belonged to his father-in-law. More locally, Cubitt was engineer to Ransomes from 1812 to 1826 (during which time he designed a new bridge over the Orwell in Ipswich) and also engineer to the Ipswich Gas Light Co. when it was founded in 1821.

The patent is reproduced below. In a follow-up article, Chris Hullcoop wonders whether this widely-adopted sail has not become something of a liability now that virtually no windmill works commercially and comparatively few seem to be judiciously maintained.

Cubitt's Method of Equalizing the Motion of the Sails of Windmills

My Invention consists in applying to windmills an apparatus or contrivance, which shall call the vanes, constructed or formed in a new and peculiar manner to regulate themselves, so as to preserve an uniform velocity under those circumstances in which the wind would otherwise irregularly impel them, as is the case with sails or vanes of mills of the present construction. I accomplish this object by forming the vanes (for the sake of lightness) with fewer cross bars or shrouds than in the common method, and filling up the remaining open spaces with small flat surfaces formed either of boards or sheet iron, painted, or any other fit substance, though I prefer and recommend them to be made of a framing of wood covered over with canvass. I hang or suspend the same on their ends by gudgeons, pivots, centres, or any other convenient method, so as to open and shut like valves (for which reason I shall hereafter so call them), preferring always to have the centre of motion as near the upper longitudinal edge of the valve as possible, as shewn in the Drawing b,b, Fig.1, which exhibits a valve detached. I apply these valves to vanes of the present construction by suspending them to the cross bars or shrouds of the vane by their longitudinal edges, fastened thereto by joints or otherwise as may be preferred. These vanes, constructed of valves as above described, and which are represented in the Drawing, Fig.2, present a greater or less surface to the wind according as it acts with more or less force on them; and if the wind be very strong or high, the valves, by its impulse, would turn their edges to it, and their surfaces parallel to the direction of the wind. The vanes would consequently remain stationary, or at least have but little motion; but to obviate this circumstance taking place, I apply an apparatus which shall cause the valves always to present their flat surfaces to the wind, or such portion of their surfaces as may be desirable.

The apparatus which I have usually applied is exhibited in the Drawings, Figures 3 and 4, which last Figure shews two modes of performing this object, though it must be evident that various other means may be applied to produce the same effect on the valves, and I therefore do not mean to confine myself to those precise modes of effecting it, but consider it unnecessary here to detail others, as the examples exhibited in the Drawings fully ascertain the sort of apparatus requisite.

DESCRIPTION OF THE DRAWINGS

Figure 2 represents a set of vanes, in which A,A, shew the valves turned to the wind, and their surfaces all exposed at right angles with the direction of the wind; B,B, exhibit the vanes as close reefed, or the valves with their edges to the wind, so that it can have no effect upon them except on their edges, which must be trifling.

In the Drawing the vanes are exhibited as having the whip down the middle,

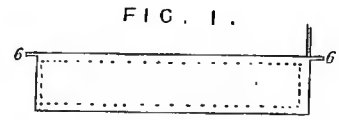


FIG. 2.

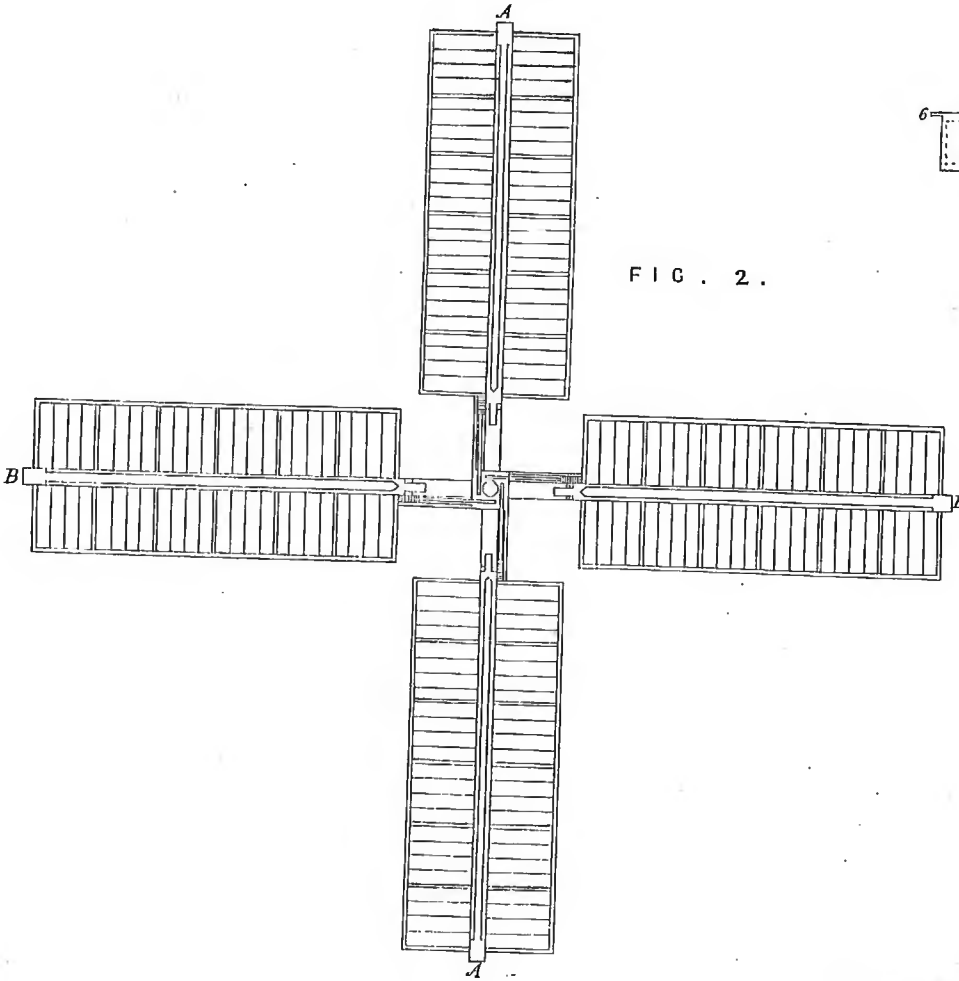


FIG. 6.

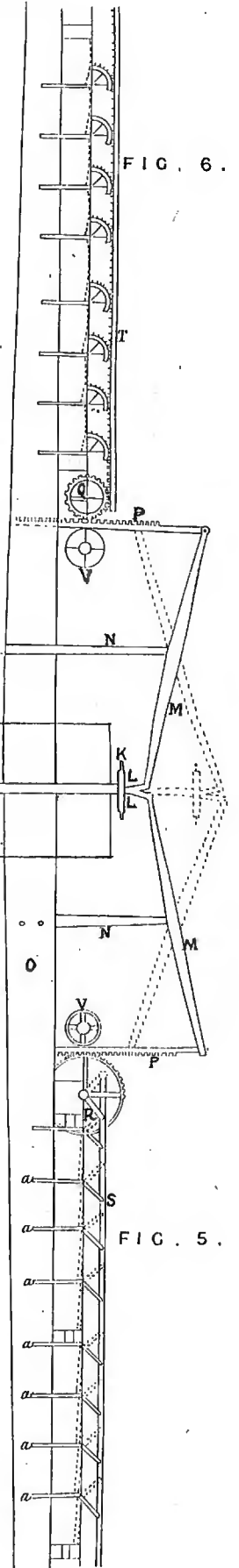


FIG. 4.

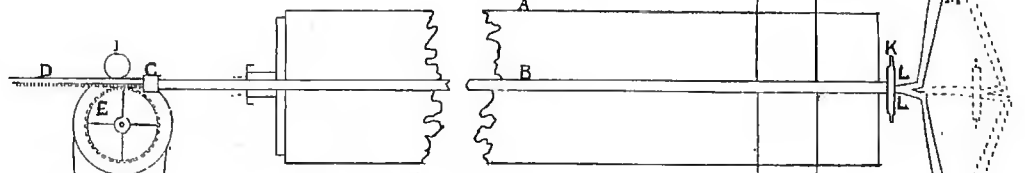


FIG. 3.

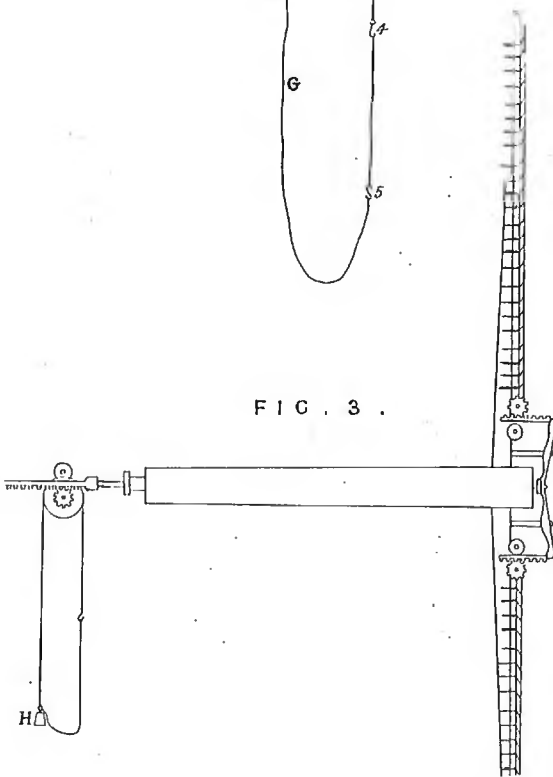
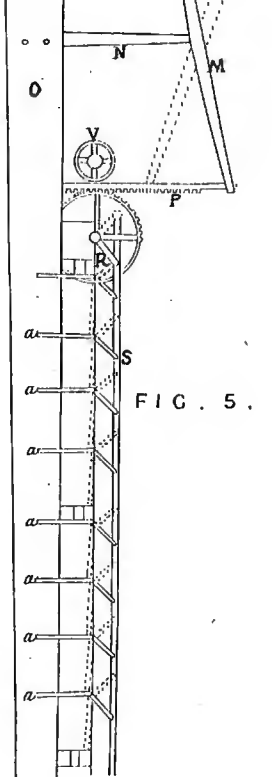


FIG. 5.



with valves on both sides, but it is evident that the vanes may be constructed with the whip placed in the usual way, and have valves on one side only, which is the method I usually adopt in applying them to vanes of the present form.

Figure 3 represents a side view of the apparatus for regulating the valves; and Figure 4 is a section of the same, exhibiting two methods of performing this operation. A represents the shaft, which is bored through its centre to admit an iron rod B to pass freely through it; one end of this rod is made to turn in a box C, which is fastened to a toothed rack D, whose teeth take into those of a pinion E, upon the axis of which is a sheave F, with a groove on its circumference to receive a rope G, to which is hung a weight shewn at H, Fig.3, and which must be sufficient to regulate the force of the wind upon the valves, though no precise quantity of weight can be herein specified, as the same must be adjusted by experiment, or by the quantity of work to be performed by the mill. On top of the rack D is a roller I, which serves to keep the rack and pinion in the proper depth of gear. The end of the rod B, which turns in the box C, has a knob or onion on it, by which it can be moved endwise while it is turning in the box C; on the other end of the rod is fixed a boss or plate of iron K, with a gudgeon projecting from each side, on which are the bridles or leaders L,L, which permit the levers M,M, to describe a curve with their ends while the iron rod B moves in a straight line. N,N, are two studs or props fixed to the stock O of the sail, on the ends of which props the levers M,M, move, and communicate their motion to the racks P,P, the teeth of which take into the pinions Q,Q, on the axis of which, according to one method herein exhibited, Fig.5, is fixed a strong iron stud R, which is attached to a rack or slider S. Iron studs or levers are fixed at one end in this slider S by a pin or gudgeon, and at the other made fast to the valves a, which move on gudgeons as before described. The other method of regulating the valves is shewn at Figure 6, where, instead of the studs or levers, the valves may be moved by having pinions fixed to them, and working with teeth in a rack or slider, as at T. V,V, are rollers to keep the racks P in their gear.

The operation of this apparatus will be clearly comprehended by imagining that if the hook 4 on the rope G be pulled down to 5, the sheave F with the pinion E will turn at the same time, putting into motion the rack D with the rod B, which will bring the levers M,M, into the position represented by the dotted lines. The racks P will have turned the pinions Q till the sliders S and T, with the studs, or levers, or racks (according to whichever method may be used) are brought with the valves into the position of the dotted lines, in which position they are represented as having all their surfaces to the wind; therefore, if a sufficient weight to be hung to the hook 4, the weight will descend to 5, and keep the valves in the situation of the dotted

lines; and supposing the wind to blow upon them with too much force in this state, they will turn on their gudgeons and raise the weight, so that the superfluous wind will pass through or between them, without exerting an irregular force upon the vanes so as to produce an unequal velocity.

OF MILLS AND MEN (4) CHRIS HULLCOOP

SUNSET OF SAILS

Did the patent sail ruin the English windmill or give it a new lease of life? Probably a bit of both. Looking recently at working examples of English patents and Dutch common sails I thought how much better the Dutch sails suited windmills today.

The role of the windmill now is like that of old castles, mines, locomotives, aircraft, ships and cars: none of them now essential for our survival or transport but kept so that we may enjoy the picturesque artefacts of a way of life that was hard and is now gone for ever. For the visitor they combine relaxation with a little gentle learning, for the enthusiast a challenge that gives satisfaction in craftsmanship and display that is sadly lacking in most jobs today. Most of our occasionally working windmills are run by amateurs, fair weather or part-time millers, call them what you will. They usually operate at weekends which means the mill is shut down for long periods, often all through the winter. Very few windmills are lucky enough to have a custodian who can keep an eye on it 24 hours a day and it is inevitably at a time when there is nobody there that a gale or mechanical failure strikes.

With a common sail the cloths can be furled and tied, present no surface to the wind. If out of action for a long time the cloths can be removed and stored in the mill. If the sails are braked and the brakewheel tied and wedged all is safe and there is no danger of tail-winding. The area and sheer weight presented by 200 or so shutters in a patent sail can't be removed. With shutters open and the mill into wind the drag is still considerable and if the mill should fail to turn to wind and the shutters blow closed there can be very serious trouble. For the mill that is unattended for long periods, and that's most of them, the common sail is far safer. Contrasting Dutch common sails with English patents of similar size, the Dutch sails are lighter, easier and cheaper to make, safer and much much longer lasting.

The problems are not just in the design. Modern materials have favoured and improved Dutch sails while at the same time have worked against the patent sail. In the 19th century good quality pitch pine was readily available for sail construction. Tough and resinous, it had like oak its own built-in preservative. This was combined with local small foundries to make patterns for and cast the numerous iron parts of patent sails and blacksmiths who could make almost anything in corrosion-resistant wrought iron. All this was brought together by a local millwright and sustained by good maintenance which only a business on a

sound footing can provide. These sails gave many years of efficient and safe service. Things have deteriorated ever since. Available pitch pine has been of poor quality and other rot-prone timbers have been substituted with disastrous results. Small but important details of construction have been neglected such as painting joints before assembly and using threaded rod or bolts threaded for their whole length. Mild steel has replaced wrought iron in places where exposure to weather is total and rapid rusting inevitable. Maintenance has been poor, cosmetic only, or non-existent.

The English patent sail design is vulnerable in a way that Dutch common sails are not because of the all-too-numerous water traps. There is end grain penetration from run-off water into the four inner ends of the whips and the eight ends of the clamps. Other problems are the 'soggy sandwich' effect between stock and clamps and stock and whips, the notorious canister water trap, the 36 or so sail bar mortices and water behind leading boards. Rot in all or some of these places can soon make patent sails unsafe to turn. Contrast this with Dutch sails. While English patents have ten major beams, i.e. two stocks, four clamps, four whips, Dutch sails have just two stocks. These are tapered hollow steel tubes with sail bars passing through every foot or so. There is no rot point where bars pass through the stock as it is open at both ends so well drained and ventilated. The wooden bars are usually hardwood or pressure-treated softwood and maintenance can be by a penetrative preservative rather than paint. The Dutch have used iron and steel for stocks for over 100 years with modern materials and technology improving them - for example, they were originally rivitted together, today they are welded.

In Lincolnshire some of the snags of the patent sail were overcome. The cross replaced the rot-inducing canister or poll-end and instead of ten major beams the sails consist of four beams or sail backs, but still with bars morticed through them.

Now it would be quite wrong to fit Dutch common or even Lincolnshire patents (except in Lincolnshire) to English windmills. National and regional variations in sail design are a vital part of the character and tradition in windmills. We have to look carefully though at our patent sails and ask ourselves a question or two. Local authorities, English Heritage, preservation trusts and individual owners can't afford to replace sails every few years. In Suffolk Holton's sails are off again after just six years and the front pair at Thorpeness are off after about 12 years. It's just not good enough.

It is now impossible to obtain long lengths of good quality pitch pine for stocks. Alternatives are laminated timber, steel or fibreglass. Lamination has many advantages. The planks can be pressure treated with preservative, and no special skills or costly equipment is needed in construction. In recent years laminated stocks have been fitted at Thelnetham mill and at Buttrum's Mill,

Woodbridge, with both bearing up well so far. Steel stocks are more expensive and special equipment and skills are needed in construction. There have been failures in this country but the lessons have been learned and several are now turning. In Holland there are examples which have been working for most of this century. There are just one or two mills fitted with fibreglass stocks but not carrying shutters, cloths or turning. Calculations show that a properly designed and constructed fibreglass stock could be very strong and bear working sails. It needs a brave soul to make and fit them to a working mill.

It's no good though having a sound stock but with rot in the clamps and whips. Both whips and clamps can be stood off on plates, avoiding the dangerous end grain rot and 'soggy sandwich' water trap. Sometimes this is done but usually it is not. At Buttrum's Mill whips were stood off but not clamps. At Framsdén I fitted clamps of rather poor timber stood off and whips of good timber fitted flush. After 20 years or so the clamps are in good condition but the whips have rotted badly. This is not a working mill though and how well would stood-off whips and clamps fare on a regularly hard-worked mill? It needs to be tried. The mortices in the whips for the sail bars are very vulnerable and must always be painted before assembly. At Herringfleet a neat seal of non-setting putty has been put around each bar where it leaves the whip and after several years these seals are still intact.

There are lots of small but important details which if attended to will help prevent rot. Water running down the front of the stock and into the exposed end grain of a striking rod hole will soon cause rot. Fitting a tube or flange will enable the water to run around the edge of the hole and out again on the other side of the canister. Shoulders on stocks or notches in clamps even if painted initially will soon present exposed end grain to run-off water. If a stop is needed this is best provided by a piece of timber or iron coach-screwed onto the surface. Small unobtrusive drip guides can be fitted to direct run-off water from vulnerable places.

So often we face the dilemma of using traditional materials which due to poor quality can be short-lived and expensive to maintain and are tempted to use modern substitutes. The proper restoration of the antique, whether it is building, machine or transport, has always been a subject of lively, often angry, debate as William Morris showed. On the one hand are the purists who insist on everything being completely traditional and on the other those who would alter and 'improve' so much that the original is lost and it all becomes meaningless. When applied to windmills both attitudes show lack of judgement through practical experience of restoration and maintenance. A windmill is not like an antique clock or musical box. Structural or mechanical failure of a Tompion clock in a National Trust house would cause dismay but not danger. The consequences of a Spitfire breaking a wing at an air display, a boiler explosion at a traction engine rally or a

sail falling from a working windmill on an open day are horrendous.

English patent sails have lost some of their most important traditions, i.e. good quality pitch pine, local millwrights and sufficient money to maintain them through a long and busy life. However, we can't put the clock back, and while these old machines are a joy to us, the way most people lived in the heyday of the English windmill would not please us at all. We have to seek ways of ensuring long life and safety in patent sails without destroying their design, beauty and regional variations. We must not seek to improve their efficiency by removing or transplanting features from one region or period to another. It is pointless sacrificing historical regional traditions to improve working efficiency in a machine preserved for nostalgia. Who would wish to see beautiful but inefficient waterwheels replaced by vastly more efficient turbines? What is urgently needed are ways to give patent sails a long and safe life. There are no firm rules to follow, only good judgement based on a thorough understanding of philosophy of repair, traditional construction and all of the practical problems of safety, maintenance and finance. Only this will keep our patents turning.

Editor's Note Do you think English mills would have kept at work longer with cloth sails? Or that the complexity of patent sails is the reason so few English windmills now work? Let's have your thoughts for the next issue!

CROWFIELD MILL PETER DOLMAN

Not a bygone mill, but one of our few remaining smock mills, standing at Grid Ref. 151571. It was not shown on the 1837 O.S. map, and the first reference to it is an advert in the Suffolk Chronicle on 21st January 1843. Mr. Mayhew, the miller, wanted an assistant (presumably to help in the new mill). A further notice appeared in the Suffolk Chronicle on 14th February 1846 - William Mayhew had become bankrupt and sold his household effects for the benefit of his creditors. The mill was auctioned by its owner, Henry Collins, the millwright from Melton, on 27th March 1846 but probably wasn't sold, but leased to a new miller. It was described thus: 'A new substantial Messuage ... And also, a newly-erected TOWER WIND-MILL, ... with Patent Sails, and driving two pairs of stones, in the occupation of Mr. William Mayhew'. A further attempt to sell was made on 11th April 1846.

When Henry Collins died in 1849, his estate was auctioned, including several windmills which he owned (and had built). The Suffolk Chronicle for 3rd February 1849 advertised the auction on 22nd February 1849 when the 'Mill, house, and Premises, at Crowfield, occupied by Mr. Jay' was one of the lots.

It was apparently bought by Thomas Rudkin who also fell upon hard times, selling his effects in 1853, when he was described as 'Miller and Farmer'. He also advertised the mill: 'To Let - A capital Brick-built Messuage, Tower Wind-Mill, driving 2 pair of stones ... now in the occupation of Mr. Rudkin'.



CROWFIELD SMOCK MILL

Above, left: in working order, early this century

Above, right: as restored by the owners in 1983

Right: the main wind and engine drives in the base of the tower



William Mayhew had apparently recovered his fortunes enough to take over the mill again and he is listed in various trades directories from 1858 until 1883, when he was described as using 'wind and steam'. In 1885 Mrs. Annie Mayhew is listed, presumably his widow, and in 1892 and 1896 Henry Lilley is listed. Mrs. F.E. Day was listed in 1908 and 1916, steam alone being used by this date.

No miller is listed after 1916 although the mill continued to work until the early 1950's, owned by the Gibbons family. It was latterly driven by a Fordson tractor after the oil engine cracked one of its flywheels.

It is a very small smock mill, only 14ft 6in diameter internally at ground level, 6ft 6in at the curb and 34 ft high, and is said to have been converted from a drainage mill near Great Yarmouth. The boat-shaped cap was tiny and carried four patent sails of about 50-60 feet span. A fantail kept the cap pointing into the wind. The mill was tail-winded in 1916 during a gale, when the entire cap, sails and fantail were blown off and wrecked. It was then roofed over and continued to work, driven by a steam engine and latterly an oil engine.

There were two pairs of French stones, an oat crusher and fine iron machinery. There would probably have been a flour dressing machine originally. After falling into dereliction it was repaired by its owners, who run a local building company, in 1983. The tower is now relatively weatherproof and what remains of the machinery has been stored in the base. Only the upright shaft and some of the gearing is in position. At the top of the tower, part of the curb remains, together with the original grain bins.

A.G.M. REPORT

The 1989 Annual General Meeting was held on June 4th at Wiston Mill, Nayland, by kind permission of Mr and Mrs Cohen.

The meeting commenced at 11.15. Several late arrivals swelled the final attendance to 38. Apologies were received from June Baker, Ed Goatcher, Max Hoather, Mr. Richman, Chris Seago and Paul & Norma Smith. The minutes of the 1987 A.G.M. were read out by Peter Dolman, who proposed their adoption. This was seconded by Chris Wilson. There were no matters arising.

Treasurer Brian Flint distributed copies of the year's accounts. Subscription income was down £200 but this was not a reflection of membership changes. Total receipts in 1987-8 were higher because of the repayment of a loan to Stanton mill. Bank charges for the previous two quarters have been refunded by the Royal Bank of Scotland and will be waived in future. The total balance stood at about £2500, of which £2250 was in the Cheltenham & Gloucester building society's Gold account, available on demand and earning about 9% interest. The item for truck rental was for transport of S.M.G. equipment from Royston to Wicken, where it will be on loan to the Wicken Mill Trust. Chairman Chris Hullcoop congratulated Brian Flint for finding such a high rate of interest

for money available on demand, and thanked him for completing his tenth year as treasurer.

Editor Mark Barnard reported that three Newsletters had been issued since the last A.G.M., and outlined some of the contents. Copying charges had increased slightly but were still good value. Photographs will now usually be done separately on a different machine, as in Newsletter 42. An attempt would be made to include news from neighbouring counties, as in the Friends of Norfolk Windmills newsletter.

Secretary Peter Dolman said that paid-up membership currently stood at 136, of which only one was a Junior member. 21 members who had not paid for some time had recently been removed from the circulation list. Newsletters are also sent to other mills groups, S.P.A.B., S.P.S. and St. Edmundsbury Borough Council. A copy should also be sent to the Suffolk Record Office. It might be useful to forge closer links with the Suffolk Industrial Archaeology Society.

Several new members were joining, using the printed form at the back of the free publicity leaflet. Roy Berry said it would be useful to have an up-to-date list of members.

John Snowdon held the following membership information on his computer: name, address, telephone number and renewal date; if telephone numbers were deleted, he would be exempt from the Data Protection Act. Peter Dolman said he held the main membership record which is now a manual system.

Chris Hullcoop thanked Peter Dolman and John Snowdon for their work.

The officers and other Committee members all agreed to serve another year and so Richard Duke proposed their re-election; this was seconded by Quentin Garlic.

The prize crossword draw then took place. Both winners were present: Len Ball (first prize) and Alan Wallis (Runner-up).

In the Chairman's report, Chris Hullcoop said that S.M.G. work had changed from a few years ago: there was no current major project but various members were active and would welcome support. Much of S.M.G.'s very limited manpower was going into Wicken, a major project. A number of Suffolk mills were awaiting repair - this served as a reminder that a working windmill should be cherished as it may not always be there. Hardly any mills pay their way and most rely on public money.

Mills mentioned included Buttrum's Mill, Woodbridge; Thelnetham; Alton Mill, Stowmarket; Holton; Drinkstone; Exning; Thorington Street; Syleham; Kersey; Copdock. Slides were also shown of the trip to France in July 1988.

The meeting finished at 13.07.

In the afternoon many came along to Alston Court, in the centre of Nayland, for a short guided tour by John Bloomfield.

VIEWPOINT CLAUDE ALDRIDGE

I was very interested to read the article by David Barton in the March issue (No.44) of the Newsletter. I take it that David has never worked a windmill, cloth sail or otherwise, whereas I have, for several years, and I hope the following

account will give our readers a little insight into the benefits or otherwise of cloth v. patent-sailed windmills.

In 1852-3 my grandfather Walter Aldridge went as an improver to South Elmham St. Michael post mill and lived in the house with the then miller, a Mr. John Le Grice. Mr. Le Grice would never grind on Sunday but if the wind was blowing Sunday night he would call grandfather (who was about 15 years old at that time) from his bed to have the mill going at midnight.

At this time the mill had cloth sails and no wind tackle and I have been told many times that if it was a wet and windy night by the time he had the mill into the wind and sails spread he was sodden wet to the skin from being full in the driving rain and the water running down the sail cloths. He would then work the mill 'till midnight the following night and his clothes would dry out while he worked.

In 1921 I went to that same mill, by that time fitted with fly and wind tackle and patent sails. I lived with my uncle Fred Aldridge and worked the mill until 1930. We had a very good trade and up until September 1922 had a steam engine to drive a pair of stones in the roundhouse when there was no wind. In 1922 we put in a 15 h.p. Clayton semi-diesel oil engine in place of steam but we always worked the windmill when there was enough wind to drive it. I can say in my opinion it was a much better proposition to get up at 6 am. Monday morning (not midnight Sunday) if it was wet and windy to find the mill full in the wind and to run up the steps, lift the gripe and pull down the power chain, hang on weights and be grinding away (and in dry clothes) before my poor old grandfather would have had the mill in the wind and one sail spread. I was quite happy to keep the windmill grinding until midnight Monday or later if we were busy and I have done it very many times and I loved it too.

I am now 84 years of age and am the last of a long line of family windmillers to have worked a windmill commercially. We ground anything the farmers sent us to grind, wheat, barley, maize, peas, beans, tares, rye and oats and I have also ground linseed and that I can say will sort out the men from the boys!

I have never worked a cloth sail mill nor have I ever particularly wanted to but I have worked on several patent sailed mills and been in many others when they have been working. The last one I was in when it was working was Saxtead Green in 1946 when I called to see Mr. Aldred the last miller. There was a good south-west wind and she was running well. I went all over the mill, he was grinding mixed oats and beans for cattle and making a real good job of it. There's nothing a miller likes better than to put his hand under the meal spout and feel a good stream of meal going into the sack and listen to the grind of the millstones above; he can tell at once if they are in good trim and they were that day.

Yes, in my opinion Edmund Lee's fly and self winding tackle and William

Cubitt's patent automatic sails prolonged the working life of windmills by at least 100 years.

As a postscript, I would add that it's much better in a stormy, choppy wind to take off, or add, a weight to the striking chain than to have to stop the mill and move her four times to re-set cloth sails, especially if it's raining or snowing.

Another interesting thing is the difference in winds from each quarter. South, south-west or west winds are often stormy and choppy, and north winds very erratic, one minute nearly blowing the mill down and half an hour later hardly a breath. An east wind is very steady and regular, in fact the St. Michael's mill was only about 15 miles direct from the east coast and I have worked her for hours on end in an east wind with the balls of the stone regulators wide open almost as steady as with the engine.

NEWS

FRANK FARROW

Some two months ago we heard of the death of Frank Farrow of Dalham mill, who was in his eighties. Sadly in his last years he had become embittered as his dream of working a windmill in his retirement was never accomplished. Both Suffolk County Council and the Department of the Environment wished to restore Dalham mill, then listed Grade I, to full working order. Unfortunately agreement could never be reached regarding millwrights and although much work was done the project was never completed.

I have happy memories of him prior to his purchase of Dalham mill when he was a keen member of S.P.A.B., joining the tours and attending the meetings in London. He was a good photographer and copier of old prints and had a fine collection of mill photos. Stanley Freese, Brian Flint and I spent a happy day in his company looking at his old family mill at West Wrattling and others nearby. I took a photograph of him and Stan examining the remains of the demolished Balsham smock mill. That was nearly a quarter of a century ago. (Chris Hullcoop)

BUTTRUM'S MILL WARDEN

A warden for Buttrum's Mill, Woodbridge has now been appointed by Suffolk County Council. Stephen Miles started work in mid June, and will open the mill on Saturdays, Sundays and Bank Holiday Mondays, 2 - 6pm., until October 1st. Groups can be shown round at other times by prior arrangement. A six-board display covering the history and workings of the mill, the millwright and other Woodbridge mills, is nearing completion.

Two sections of the original elegant cast iron gallery around the cap have recently been unearthed by Martin Whitworth, the owner, buried under the hedge between the mill and the playingfield. This was incomplete when the mill was first restored in the early 1950's, and was unfortunately scrapped. Perhaps, now that we have first-hand evidence of its appearance, it might one day be reinstated.

Nearby Burgh, another John Whitmore tower mill, had an identical iron gallery.

CROSSWORD RESULT

The prize crossword in the last Newsletter attracted 16 entries of which all but one were correct. The draw was made at our A.G.M. and first prize (£15 book token) went to Len Ball. The runner-up (£5 book token) was Alan Wallis.

The solution is given below.

Across 1.Debenham 5.Hopper 8.Semolina 9.Vat 10.Tenter 11.Eel 12.Runner
15.Benham 17.Arkley 20.Alton Mill 22.Shaft 24.Lowfield 26.Tun
27.Wire 28.Smithdales 30.Petit

Down 1.Denver 2.Boston 3.Hooper 4.Meikle 5.Heath 6.Pointing 7.Essex
13.Upright 14.Elevator 16.Machines 18.Punnetts 19.Pied 21.Little
23.Flint 25.West 29.De

SPROUGHTON MILL

A major application has recently been submitted for Sproughton watermill and adjacent mill house, both listed Grade II. The applicant, Whitbread & Co., who are prospective purchasers of the property, wish to convert it into a 100-cover restaurant, part of their 'Beefeater' chain. A new extension is proposed to link the mill and house (at present detached), while the appearance of the mill itself would be considerably changed as all the blind window openings (the two outer bays on the four-bay brick facade, front and rear) would be opened out. A large car park is proposed on the opposite bank of the river, reached by a new footbridge.

S.M.G. has voiced its concern to Babergh District Council, not just about the treatment of the mill, but the overall scale of what is proposed for this idyllic spot on the Gipping. The mill interior is largely empty, save for the sluice which directed water onto the former wheel, and minor remains of the hoist in the roof. The arrangement of the first floor main beams at the house end, adjacent to the site of the waterwheel, suggest changes in the layout, possibly at a fairly late date. This may be contemporary with the two Whitmore & Binyon sluices, still in excellent condition, on the mill pond. (M.B.)

CORTON CONVERSION?

The brick tower of Corton mill, near Lowestoft, is to be the subject of a planning appeal on August 23rd following the refusal of Waveney District Council to grant planning permission for a house-conversion scheme. The principle of residential conversion has been accepted, but the submitted design was too much for the District Council to swallow. It shows several feet of brickwork lopped off the top of the tower, to be replaced by a large, angular 'cap' with 360° glazing, a metal gallery mid way up the tower (linking to a spiral fire escape) and a circular lean-to addition enclosing much of the ground floor. S.M.G. will be making appropriate noises to the DoE!

PROGRESS AT BARDWELL

After frustrating delays while insurance claims were sorted out, repairs have

now commenced to Bardwell windmill, badly damaged in the 1987 'hurricane'. Timber for the new sails has been in hand for some time but the biggest single item of progress has been the making of the new windshaft (right), probably the first full-size windshaft to have been cast in East Anglia since just before the First World War (not 104 years as stated by the local Press). This



was cast at Thurton foundry, between Norwich and Beccles, and weighs about two tons. The bolt-on tail from the old shaft is being re-used and both journals were machined by Edgar Burrell and Sons of Great Yarmouth, who normally work on oil rig machinery. The shaft is now at Bardwell and has the raised inscription 'Thurton Foundry Ltd. 1989'. The cap will be taken off by crane later this year to allow the curb to be repaired (three new track sections are required) and to allow the shaft to be installed and the new fantail assembled in relative comfort. The eight new blades have been made by the owner, Geoff Wheeler, to replace the old ones which contributed to the disaster of two years ago by disintegrating at the crucial moment. Once the cap is sorted out and back in place Geoff will begin work on the new sails, a pair at a time. He won't be committed to a timescale for returning to working order, preferring to take things steady and to get things right. To this end much help is being given in technical matters by Chris Wilson from Over windmill, Cambs., and John Lawn, the Norfolk millwright, acting as advisor. (Peter Dolman, from interview with Geoff Wheeler)

THORPENESS LOSES TWO SAILS

In May the outer two sails of Thorpeness post mill had to be removed for safety reasons owing to severe rot in the centre of the stock, which is unclamped. A number of the shutters in the remaining two sails have also been removed for repair or replacement.

CAVENHAM MILL CHANGES HANDS

The county's smallest watermill, at Cavenham (between Bury St. Edmunds and Mildenhall) has been bought by a young couple who wish to conserve it and perhaps restore it eventually. S.M.G. has offered advice on this unusual mill, which is a late Victorian rebuild incorporating the hursting of a much older, possibly

seventeenth century mill of tiny size (about the size of a post mill buck!).

WICKEN WORK-INS

Work at Wicken smock mill in Cambridgeshire is under way again this year with the first work-in completed and also a work-in by the apprentices of Eastern Electricity. As well as doing lots of useful work around the site the apprentices hired a crane and lifted off the cap (July 17th), placing it on a specially made support. This was needed as the petticoat and brakewheel extended well below the underside of the frame.

A second work-in is planned for 19th-28th August with work to smock, curb and cap. The facilities are good, with village shops for groceries and a pub serving meals within walking distance. Volunteers are needed. For further details please contact Cliff Lovett on Clacton 422495.

EVENTS

WICKEN WORK-IN : SATURDAY AUGUST 19th - BANK HOLIDAY MONDAY AUGUST 28th

See above News item for details.

VISIT TO DRINKSTONE POST MILL : SUNDAY OCTOBER 8th, 2.30-4.30pm.

Drinkstone is Suffolk's oldest windmill, bearing the inscription 'SS 1689'. S.M.G. has arranged this visit specially to commemorate its 300th birthday, and we hope to have an appropriate cake to hand! Much volunteer effort has been expended by S.M.G. on the Drinkstone mills over the last 12 years to try to ensure their survival. Work has included repairs to the cap and tower of the smock mill (1978-9), patching and painting of the post mill buck (1980-3), repairs to the roof of the roundhouse (1984-5) and winding gear (1986). The 1860's railway carriage has also been conserved. Despite its great age Drinkstone post mill has not suffered a major C20 restoration (or even a minor one!), and the C17 oak frame survives remarkably intact.

We hope to see a good number of members at this special event.

S.M.G. SOCIAL EVENING : SATURDAY DECEMBER 2nd; EDUCATION CENTRE, MUSEUM OF EAST ANGLIAN LIFE, STOWMARKET

Please note the date and provisional venue for this event. Further details in the next Newsletter.
