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NEWS ITEMS...

The Horticultural Department of The Cannock Agricultural Co., Limited announce that their Mr Colin S. Murphy will now cover the south western counties of England in addition to his existing South Wales area.

* * *

Mr F. G. Catchpole, General Sales Manager for Ransomes grass machinery division, has just returned from a successful ten day tour of South Africa where he has been attending demonstrations of the machinery and having discussions with distributors.

* * *

The revolutionary Flymo 15 in. Electric air-cushion lawnmower — the only machine of its type in the world — has received a "Blue Ribbon" Award at the Daily Mail's 1970 Ideal Home Exhibition.

The award was made to the Flymo 15 in. Electric as being one of the best new products exhibited at the exhibition for the first time. (March 3-30).

With the exception of the electric motor, entire manufacture of the new mower is undertaken at the Flymo factory.

The Flymo 15 in. Electric is the latest air-cushion mower in the "Flymo Family of Five" manufactured in Darlington, Co. Durham. Other mowers in the Flymo range are the Flymo 19 in. Domestic and Professional models, and the Flymo 19 in. and 21 in. Contractors. All of them are included in the Design Index.

Sea Views Trap the Golfer in Bermuda

Golf balls can go astray in a number of ways at the Mid-Ocean Club in Bermuda. Cyril Wainwright, the club's burly caddy-master, recalls a memorable drive made by an English admiral. The ball flew through the window of a cottage on a hill above the fairway.

A minute later, the wife of Mid-Ocean's greenkeeper appeared at the entrance to the cottage brandishing a frying-pan in which the ball was resting comfortably atop her husband's breakfast bacon.

(continued from p. 8)

the morning. They ask for a call at 5.00 a.m. Another short night.

Returning to the airfield after breakfast, you find without surprise that the 5.00 a.m. party is still waiting. At 11.00 a.m. you leave them and walk up a ramp into the nose of a flying cathedral containing mailbags, films, crates, one 5-ton truck, two tractors and, in the organ loft, a crew who take it all up in the air. Two hours later they put it all down again at Ankara. They go right round the world doing this and call themselves MATS.

Your reserved room has been taken but you get in at another hotel. The Base Civil Engineer will be round to see you at once. He arrives at 6.00 p.m. and rushes you through traffic which is progressing by a series of U-turns. As you reach the site, night falls.

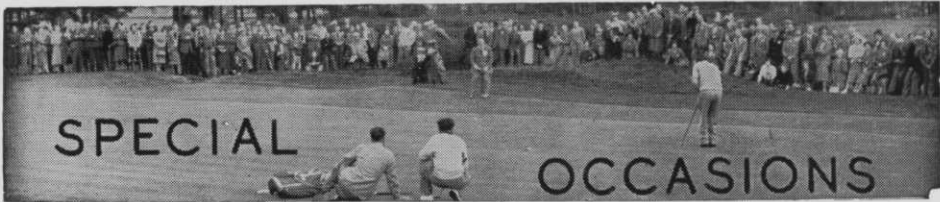
Robert Lynd said, "It is impossible to remember what a tragic place the world is when playing golf". He was no doubt thinking of the chap who planned the course.

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- MAR.** 17th North-West Section Lecture.
 20th Southern Section Annual Dinner—Shirley Park G.C.
 26th Sheffield Section Lecture.
- APR.** 5th Southern Section Spring Tournament—Walton Heath G.C.
 8th East Midland Section Committee Meeting.
 15th Sheffield Section—Visit to Ransomes.
 22nd Welsh Section Spring Tournament—Wenvoe G.C.
 30th Sheffield Section A.G.M.
- MAY** 6th Midland Section Tournament—Oswestry G.C.
 13th East Midland Spring Tournament—Stanton on the Wold G.C.
 13th North-East Section—Visit to S.T.R.I.

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CLAY SOILS: A CRISIS AHEAD?

By FRANK SYKES

MEETING some friends who farmed clay soils, I found them all muttering about soil structure, which is to do with grains of soil and how they behave when wet or dry. It is something we have taken for granted for too long, perhaps, and it is of vital importance.

If one kneads a lump of wet clay, it becomes like an uncooked dumpling and, in that condition, the hair root of a plant can neither penetrate nor obtain from it the elements for growth. Present anxiety stems from the 1968 wet harvest and a prolonged period of rain that followed. The use of heavy machinery and high horsepower tractors in wet weather leaves a trail of damage which worries the men who use them on heavy soils, and yet it is the bigger machines which help to reduce costs.

Soil types vary widely, from a pure sand which has no structure and which can grow crops only by hydroponics, to the richer loams which may be treated roughly by the farmer. These soils have a natural structure that soon re-establishes itself after maltreatment. The grains of soil separate, air recirculates round them, roots can penetrate, and as the surface moisture evaporates it is replaced from the subsoil by capillarity. Capillarity is the force often demonstrated by the action of blotting paper when it comes into contact with a liquid. At the other end of the scale are impossible soil types, such as where gault clay and the lower greensand meet. This area usually grows timber, and its incidence is one of the reasons why Sussex is well wooded. When dry, this soil set like concrete and when wet, it is like butter, and woe betide those who try to cultivate it.

In some parts of the eastern counties the average rainfall is as low as 19 in. per annum, compared with five times that amount in the Lake District. Where the soil is suitable and contours not so steep, cereals are grown widely in the 30-35 in.

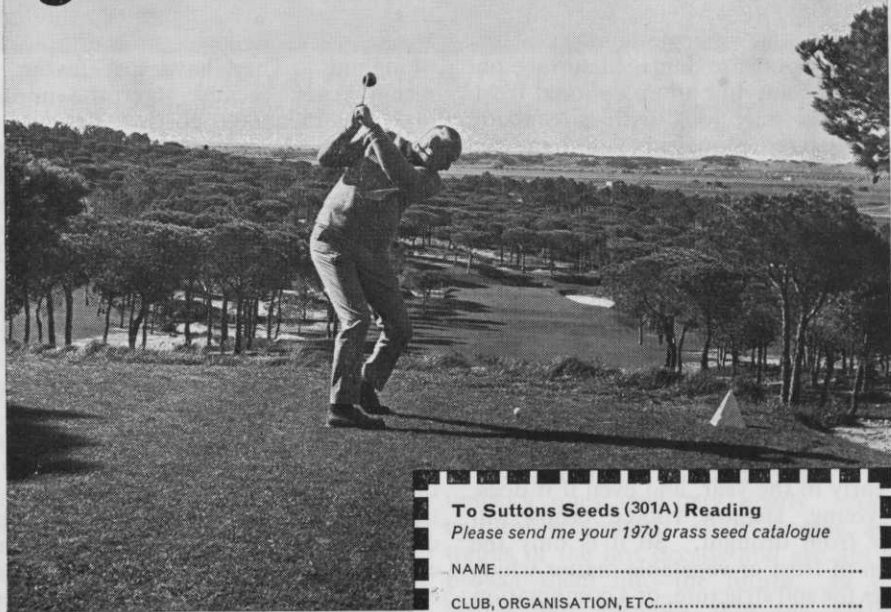
rainfall belt. This includes a large area of chalkland in the south, the Cotswolds in the south-west and a narrower band of sandy soils stretching north through Herefordshire and Shropshire. For the most part these are lighter soils which favour cheap cereal production, despite a comparatively high rainfall and provided the chances of a difficult harvest period are taken into account. Under long cereal rotations, they present many problems but they are spared this one. Further east and north over a large part of the midlands, rainfall is lower but the soil is a heavy clay. Traditionally these areas were under grass, and incidentally included the best of the fox-hunting shires. Previously they felt the plough only at times of national emergency, after the Crimean War and after the two World Wars. Now, however, they remain ploughed, mainly because grazing beef cattle and growing fat lambs have become steadily less profitable. For some years now the only really profitable branch of grass farming has been milk production. So long as a substantial proportion of the farm remained under grass rotation as a break from cereals, or when the remains of old grass sward stayed undecomposed in the soil, all went well. Continuing economic pressure enticed farmers to grow more cereals and less grass until the effects of a harvest much wetter than usual drew attention to the dangers which must have been building up unrecognised for a number of years.

Some of the midlands clays can become nearly sterile if they are not sufficiently supplied with decaying vegetable matter. This is an extreme case and covers a relatively small area, but it appears possible that a much larger area of very fertile clay, which has been farmed productively for hundreds of years using horses as a source of power and maintaining a high level of humus con-

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tent by folding sheep on forage crops, by sowing grass breaks and by winter feeding cattle to gain the dung they produced, is in danger of a dramatic fall infertility.

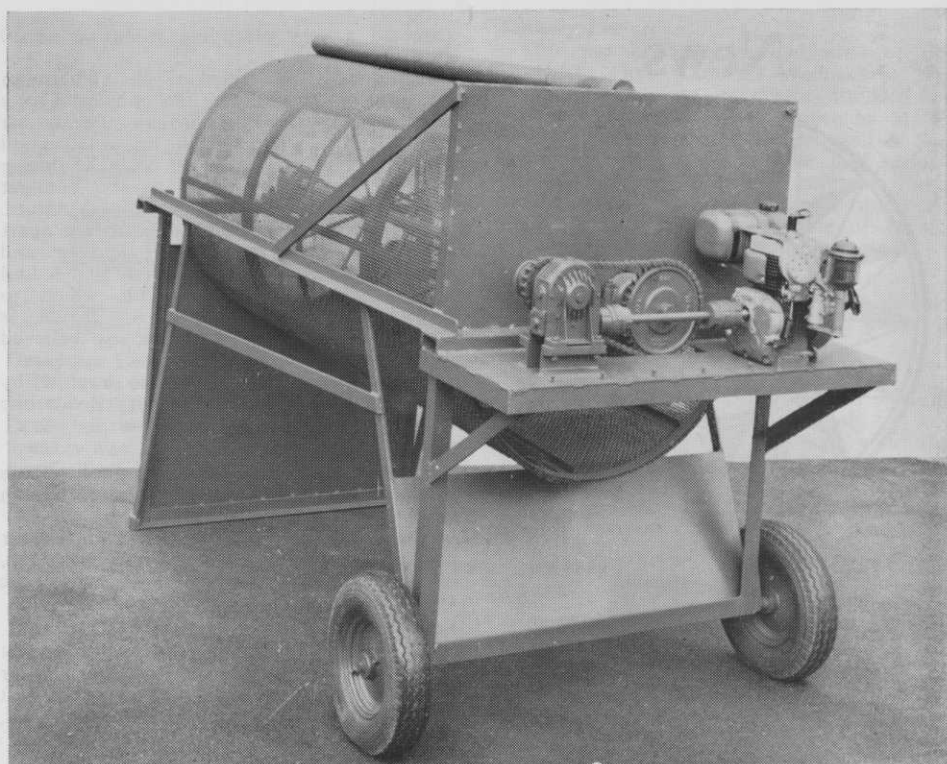
The damage is done in two ways. Firstly, there is the sheer weight of the machines and vehicles used on farms these days. Admittedly, wide tyres are designed to spread the load as far as possible, but there is an economic limit to the size of tyres with which a combine or trailer may be equipped. Further, when the land comes to be ploughed, two tractor wheels run in the furrow. The weight so imposed combined with even a small amount of wheel slip puddles the clay at a depth below the surface where frost cannot reach it in the average winter. The plough slide has much the same effect, although to a lesser degree. The other two wheels of the ploughing tractor puddle further areas of soil, in addition to that already damaged by the combine and corn trailer. Where sugar beet and potatoes are grown, more damage can follow when wet fields are harvested late in the season if the soil has become sodden. After a wet year the normal practice is to plough deeply, and hence to invert the damaged surface out of reach of any but an exceptional frost. The farmer may look with satisfaction at his neatly ploughed field: in due course, there is enough cold weather to pulverise the surface and the following year he sows his crop in a good seed bed. Below the plant, however, the layer of puddled soil which prevents root penetration and insulates the sub soil moisture from the surface, remains. Dry weather shrinks the clay, making it crack and this helps to put the soil right again. In a dry season the cracks will be several feet deep, hence deep enough to deal with the buried trouble, but the soil seldom dries out early in the year, and even if it does, the young, shallow rooted crops will suffer from drought. So it is only the action of frost or vegetable matter which makes for soil structure, or a combination of both, which can maintain a tolerable condition in these soils. Scientists warn us that the weight of machinery used these days damages the soil deeper than we think.

So far as we know for certain, only the grass ley of at least three years' duration can provide the complete remedy.

Under favourable conditions grass roots penetrate to 6ft. below the surface, and after the ley is ploughed, the benefit of decayed vegetable matter will continue to be felt in the soil for four years or more, provided there is no excessive damage by machinery. Unfortunately this solution is unacceptable on economic grounds. I have mentioned already the difficulties of converting grass into cash with profit, but even if it were profitable to introduce, stock farming would create many difficulties. This is because the soils under discussion are farmed very intensively with cereals, sugar beet, potatoes and vegetable crops involving considerable labour and much mechanisation. Cattle and sheep would need housing in winter and fencing in summer, all of which would require fresh capital. The stockmen would be hard to find, and worse still, other employees and machinery would be under-employed on the reduced arable acreage. Indeed many farmers would sooner sell out than adopt this drastic remedy.

Are there alternatives? Crawler tractors tread more lightly on the land, and do less damage at the time of ploughing. They have lost favour in recent years, because their use implies high maintenance costs. Besides, it would be far too expensive to equip combines and trailers with tracks. To produce dung deliberately was a feature of the old four course rotation, and each farm was equipped with its cattle yards. But with narrower margins today, there can be no place for a project which does not pay its way directly. At some future date, chemicals may come to our aid. Already it is possible to improve soil structure chemically, but so far this is practical only on a minute scale. If one needs to deal with topsoil a foot deep, three square yards of a field represent a ton of material to be treated, so this is an unlikely line of immediate progress. One can imagine soil structure being induced electronically, but here again the problem would be the sheer weight of soil to be treated. It has been suggested seriously that machines should be confined to running on concrete strips, but again the cost would be prohibitive.

The most likely way of ameliorating the damage may be by using surface cultivation instead of the plough. At



THE PATTISSON ROTARY SIFTER
(The driving gear is covered in, but exposed for illustration)

H. Patisson & Co., Ltd. are reinstating a machine which was very popular with golf clubs and councils until they stopped making it a few years ago. It is the Patisson Rotary Sifter, for screening compost, ashes, etc., which has been a popular item for at least 30 years.

Having improved the design for economical production, they reckon to have them available for sale commencing in April this year.

For further details write to Messrs H. Patisson & Co., Ltd., Stanmore, Middlesex.

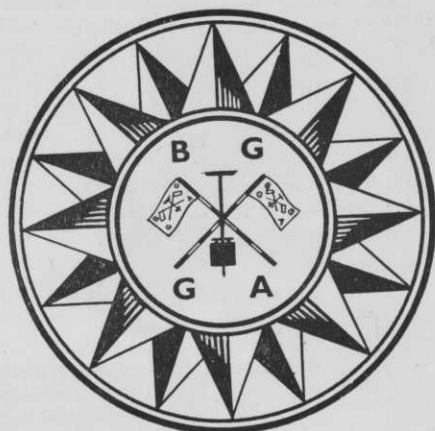
least the cultivator leaves the soil it damages on the surface for winter frosts to put right, and chemicals may be used to kill weeds previously checked by deep ploughing. This treatment can provide some sort of answer, except in the exceptional season when ruts cut deep in the soil.

Slow moving trends in farming are very difficult to discern. A series of dry harvests and autumns can sweep the problem under the carpet until the next crisis when it may be found that the situation has deteriorated even further. Monoculture of cereals in Britain is nothing new. Two generations ago Farmer and Bayliss made their fortunes

growing barley exclusively, but they chose their soils and their crops were under-sown with trefoil. New methods must be tried, but in the meantime some of the unlucky ones may pay dearly. Agricultural economists study graphs and trends of the last decade and are apt to project them into the future. In the sixties new varieties kept the graphs rising steeply: in the seventies, the incidence of plant disease together with the problems concerning soil structure, could balance out the increased yields we have come to expect.

Reprinted from *Country Life*.
 1st January 1970.

News



from the Sections

NORTH-EAST

Chairman:
J. SIMPSON

By G. Jeffries
Hon. Secretary:
55 Brackenfield Road,
Framwell Gate Moor, Durham.

Lecture

At our January lecture held in the Duke of Wellington Hotel, Newcastle, on 12th January, our Chairman introduced us to Mr Ian Forbes, director of Stewart & Co. of Edinburgh, who, with the aid of slides, gave a very interesting talk on trees and shrubs.

Refreshments were served after the lecture and a number of interesting discussions took place. I reckon a good evening was had by all. Mr Simpson then thanked Mr Forbes for coming along and giving so much of his valuable time. Jack also thanked our members for their good turnout, as the weather was not too good.

Visit to S.T.R.I.

We hope to visit Bingley on Wednesday, 13th May. I would like all names of members who are interested in going to let me know in good time. I am not sure of the cost of the coach fare but will let you know at a later date.

SOUTHERN

Chairman:
J. K. GLASS
(Thorpe Hall)

By F. W. Ford
Hon. Secretary:
68 Salcombe Gardens
Mill Hill, N.W.7
Tel: 01-959 2847

February Lecture

As was to be expected, the visit to the Southern Section by Mr R. L. Morris, of the Levington Research Station, Ipswich,

attracted a very gratifying gathering of 50 plus.

Introducing the speaker, the Chairman also welcomed back to the Stirling Castle after a long absence through illness, Mr Stan Dennis. Stan was in his usual good form and had several points to make during question time. His advice to the younger greenkeeper was to always work with nature.

To deal with the problem of thatch apart from the usual methods of spiking and scarifying etc., Mr Morris agreed that a tool or machine was needed with which to severely prune the roots. As thatch is aggravated by top dressings he also believed in small amounts at a time.

The meeting was brought to a close by the chairman thanking Bob Morris for one of the best lectures we have had.

Spring Tournament

The date of the Spring Tournament is Wednesday, 15th April, at Walton Heath Golf Club, Tadworth, Surrey.

Members are again reminded that their entries, stating name, club and handicap, must be received by me on or before the closing date, Monday, 30th March.

Subscriptions

Subscriptions are due and payable on 1st May and I shall be glad to receive your cheques or postal orders at your earliest convenience. No cash through the post, please.

New Members

A very warm welcome to the following new members: D. Manning, of Mitcham, and I. G. Bunting, of Orsett.

SHEFFIELD

Chairman:
G. HERRINGTON
(Lindrick)

By H. Gillespie
Hon. Secretary:
63 Langsett Avenue
Sheffield, S6 4AA

Lectures

The lecture on 29th January by Messrs Norton Villiers Ltd. was very popular with the 34 members present.

The final lecture of this winter session is on 26th March at 7.30 p.m., with a visit by Messrs Rentokil Laboratories Ltd., and the subject will be Pest Control on Golf Courses.

The Annual General Meeting is on 30th April at 7.30 p.m.

Outing

A visit has been arranged to Messrs Ransomes Sims & Jefferies Ltd., at Ipswich, on Wednesday, 15th April 1970. The arrangements are to leave Sheffield at midday on Tuesday, 14th April, travel to Ipswich, staying overnight and, after touring the works on Wednesday, return home in time to catch late buses. The cost is not known at the time of writing, but we are to thank Mr J. J. Fearn, of Fearnco Ltd., for very generously providing the transport for us. If you wish to go please contact me, but I must inform you that the list is pretty well full already.

Retirement

We wish a long and happy retirement to "Jock" Marshall, Head Greenkeeper at Hallamshire Golf Club, who retired at the end of February. "Jock" has returned to his native Scotland and he will be missed at our monthly meetings. Good luck Mr and Mrs Jock Marshall.

NORTHERN

Chairman:
A. ROBERTSHAW

By J. Parker
Hon. Secretary:
8 Goit Stock Terr., Harden,
Bingley, Yorks.

December Lecture

This was held in the clubhouse of the Horsforth Golf Club on Wednesday, 10th December, when 35 members attended. The Speaker was Mr R. C. D. Evans, B.Sc. of the Sports Turf Research Institute who took for his subject "Worms and Insects". Illustrating the talk with slides, members found this a most interesting session. After a series of questions, the speaker was thanked by our Chairman, Mr A. Robertshaw.

Christmas Social

The Annual Christmas Social was also held in the clubhouse of the Horsforth Golf Club on Tuesday, 16th December. This event gains popularity each year and forty-six members sat down for supper. As usual, our friend Ron Hartley was able to give his most satisfying of meals. Absent friends were not forgotten and the President and Chairman took the opportunity of extending Seasonal Greetings to all members.

Mr Alfred Routledge

It was with deep regret that members attending our last lecture heard of the death of Alf Routledge, of Ogden Golf Club. Before starting the meeting members stood in silence to pay their respects. Alf, by his cheery and friendly spirit, was most popular with everyone who knew him and will be sadly missed at our functions. He served for several years on the Committee. Mr A. Robertshaw (Chairman), S. Bailes, G. Mason and myself represented the Section at the funeral service.

January Lecture

This was held in the clubhouse of the Horsforth Golf Club on Wednesday, 21st January. Thirty-five members attended to hear a most interesting talk given by Mr P. Wyatt, representative of H. Pattison & Son Ltd. The speaker dealt with the various products made by his company and answered the many and varied questions posed by the members. A vote of thanks by our Chairman was heartily endorsed.

Grand National Sweep

Members are reminded that the closing date for counterfoils and monies for the sweep is Monday, 23rd March.

Mr A. Cox

Mr Allen Cox, formerly Head Greenkeeper to the Gotts Park Golf Club, has left to take up a similar position with the Worcestershire Golf Club at Malvern. I am sure we all wish him well in his new position. *N.B.—We regret any inconvenience caused by the omission of Northern Section notes in last month's issue.*

WELSH

Chairman:
M. GEDDES,
23 Fenton Place,
Porthcawl, Glamorgan.

By S. A. Tucker
Hon. Sec. and Treasurer:
36 Clase Road, Morriston,
Swansea, Glamorgan.

Meetings in 1970

I am pleased to announce that I have fixed the venues for our three meetings for the coming season. The Spring Meeting will be held at Wenvoe Castle Golf Club on Wednesday, 22nd April; the Annual General Meeting at Southerndown Golf Club on Tuesday, 30th June. This meeting will, as usual, be with the Secretaries. The Autumn Meeting will take place at the Longland Bay Golf Club on Wednesday, 23rd September. There will be a special prize at the end of the season for the best aggregate score (net), so do not miss a meeting as you have to play in all three to be eligible for the prize.

Subscriptions

I understand from my Chairman and Treasurer that there are still a few sub-

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scriptions not paid. I wish you guilty members will please take notice this time and send yours on to Mr Geddes, 23 Fenton Place, Porthcawl, Glam., as soon as possible. Thank you.

NORTH-WEST

Chairman:
T. BRENNAN.

By H. M. Walsh
Hon. Secretary:
Horrobin Cottage,
Old Links Golf Club,
Montserrat, Bolton, Lancs.

Lectures

Our thanks are due to the following gentlemen for their very interesting talks given to our members on the dates of our January and February meetings. The January talk was given by Mr Unwin, of Joseph Metcalf Ltd. of Accrington, his subject being one of great interest to most greenkeepers, "Trees for the Golf Course"—their care and maintenance from planting to adult life.

The February talk was given by Mr Wyatt of H. Pattisson & Co., of Middlesex, who showed us some of the latest equipment made in fibre glass, its advantages and adaptability for the golf course. Thank you once again, gentlemen, and for the generous refreshments provided.

The March talk will be given by G. Vaughan of Ransomes Ltd., at the Brunswick Hotel, on March 17th at 7.30 p.m.

Spring Tournament

Due to the kindness of the Captain and Council of Ormskirk Golf Club. our Spring meeting will be held on their course on Tuesday, 5th May, and will be followed by the A.G.M. in the evening. Please let me have your entries as soon as possible.

MIDLAND

Chairman:
G. HART
(Gay Hill)

By R. Goodwin
Hon. Secretary:
4 Burton Old Road,
Streethay, Lichfield,
Staffs.

President's Match

The Annual Match against the President's Team will take place on Thursday, 25th June, at the Handsworth Golf Club. Further details will be issued in a later journal.

New Members

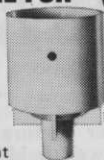
We welcome to the Section the following new members: E. V. Thomas, Assistant Greenkeeper at Boldmere Golf Club, and B. Wilkes, Assistant Greenkeeper at the Bloxwich Golf Club.

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Hon. Secretary:
4 Queens Drive,
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Leicester.

Chairman:
P. MCCARRON

Knock-out Golf Competition

At the committee meeting held at the Anchor Inn, Hathern, on 4th February 1970, it was decided to introduce to the section a new knock-out competition to run during the summer months for all members, vice-presidents and presidents. A letter regarding this competition will be forwarded to all members.

Committee Meeting

The next committee meeting will be held at the Anchor Inn, Hathern, on 8th April 1970 at 7.30 p.m. Vice-presidents are invited to attend.

Annual Spring Golf Tournament

The Annual Spring Golf Tournament will be held at Stanton on the Wold Golf Club on Wednesday, 13th May 1970. First Tee 12.45 p.m. Will all members wishing to play and requiring a meal please notify me by 1st May 1970.