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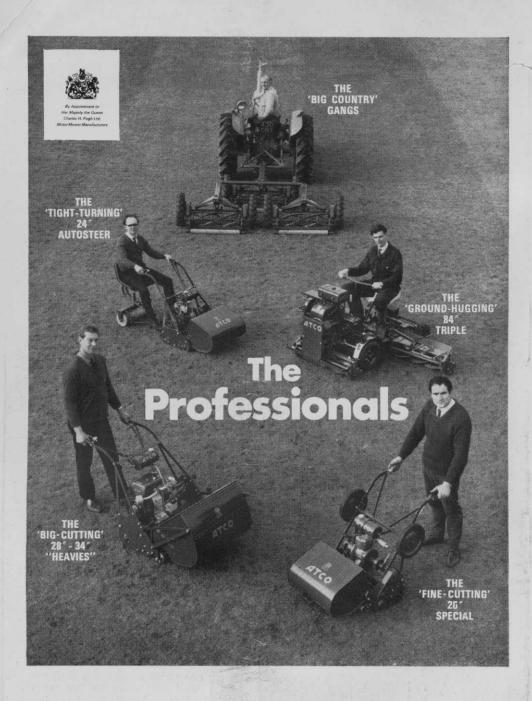
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HON. EDITOR: F. W. HAWTREE



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No. 288 New Series

APRIL 1969

APRIL

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EDITORIAL AND ADVERTISEMENT OFFICES: Addington Court Golf Club, Featherbed Lane, Addington, Croydon, Surrey. Telephone: 01-657 0281. SUBSCRIPTION RATE: 15/6 for 12 issues post paid. Published during the first week of each month. LATEST COPY DATE: 8th of month prior to insertion. All rights reserved. Reproduction of original articles and photographs in whole or in part is prohibited. This Magazine shall not, without the written consent of the publishers first given, be re-sold, lent, hired out, or otherwise disposed of. Contributions and photographs of interest are invited.

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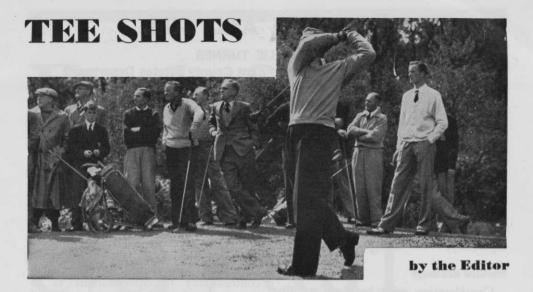
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Yelverton Golf Club on Dartmoor is puzzled by the trail of deep hoof marks appearing across their fairways and greens. The free-roaming Dartmoor ponies are not shod and do relatively little damage by comparison. At Tavistock, another moorland course, there was damage to fairways and greens recently but this was after a hunt meeting. Regular huntsmen were as annoyed as regular golfers that some of their followers should be so careless.

Mr Kenneth Male, Cheshire County Planning Officer, estimated that about 30 new golf clubs with about 500 members each will be needed in his county in the next 20 years. The problem for his department is the area which these courses will require which will make up a total of nearly five square miles. Cheshire had 22,000 golf club members last year and there are 8,000 more who do not belong to clubs. These figures could add up to nearly 45,000 by 1987.

Vigilante night patrols are being considered by the Teignmouth Golf Club because of damage on the course from tyre tracks. The course is on moorland with plenty of hares and nocturnal hunters catch them in their headlights prior to pulling the trigger.

Work on extending the Llanymynech Golf Club had to be stopped when a bulldozer uncovered part of earth works on the site of the ancient Blodwel Camp. Until the Ministry of Works is able to decide whether the involuntary excavations are of historical value the new 9 holes have to steer round this area.



DRAINAGE AND SOIL

by A. LESLIE TURNER

Principal Assistant (Landscape), Kent County Estates Department

PART 1

THE landscape designer is faced with two fairly distinct problems:

(i) those relating to surface drainage and

(ii) those relating to sub-surface, or subsoil, or under-drainage, of the interior of the soil.

E.

I propose to deal with these separately.

Surface drainage

Consideration must be given to this in so far as it is possible and necessary to prevent excess water from arriving at, or gathering on the land, and the means of removing it.

Here we must consider :

(a) water from higher ground arriving over the surface or below ground;

(b) means to prevent erosion and damage to new works — especially banks;

(c) means to prevent damage by discharge from the land, especially during works of construction;

(d) means of carrying away the outflow of springs; this may equally be a subsoil drainage problem;

(e) means of draining ponds, diverting ditches and water-courses, and draining off low spots.

Some useful recommendations as to these matters is readily available in British Standard Codes of Practice¹ especially 2003/1959 entitled "Earthworks" para 3.04 et seq. This deals with "drainage of cuttings, slopes and interception of surface water," and under para 4.03 "Drainage of embankments, piping of springs, and treatment of ponds."

Reference is also made by BS Code of Practice 2001/57 para 835^2 to ground water levels and the need for intercepting drains.

Methods of dealing with these problems are generally, in landscape work, very similar to those adopted by engineers and architects for earth works, and normal specification applies to the construction of open ditches and piped drains. Some special consideration, however, is often needed when it is required to have both at once in the form of a piped open ditch, called a "french drain", and these are more frequently used in landscape work to catch the run-off of large open areas, especially sports fields. There are often contradictory recommendations as to the pipes and filling — as it is essential to keep the whole structure open to receive water at any point along its length, it is necessary to ensure that the pipes, which act as sinks, have a sufficient rate of infiltration and capacity to deal with the whole catchment area. When agricultural tiles are used the gaps must be adequate, and the grade self cleansing at least 2.5 ft. per sec.; when porous or permeable wall pipes are used the rate of infiltration must be checked with the makers. Gravel envelopes are essential for french drains — some engineers have used well graded material with the result that packing ensues and blocking occurs and water does not get down to the drain. My experience indicates that gravel, pebble, broken stone of $2\frac{1}{2}$ in. to $1\frac{1}{2}$ in. size ensures long term porosity. Sizes of pipes must be calculated by formulae appropriate to surfacewater sewers.

Special problems in respect of surface drainage arise on lands which are extremely flat, that is from zero gradient to 1 in 1,000 or thereabouts, and where such land is underlain with impermeable soil strata. It is sometimes possible to improve such land by land forming techniques which are common in the Midlands for agricultural land where ridge and furrow drainage is practised. Land forming for this pur-(contd. on p. 6)

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5

(contd. from p. 4)

pose involves giving slopes to areas of the land towards an outlet or ditch.4 Such work must be done with precision there is an excellent description of the techniques in "Drainage of Agri-cultural Lands" by Luthin³ and in 'Soil and Water Conservation Engineering" by Frevett9 and others where it is described as "bedding." The use and relevance of these techniques to landscape work lies almost entirely in the realms of sports fields constructed on flat alluvial areas where it is sometimes practicable to creat a crowned field, that is to construct it to the shape of a low elipse across the field, and catch the run-off in shallow side ditches.

Sub-surface or subsoil drainage

Our second division under this main heading is in respect of drainage below the surface — subsoil or underdrainage, or sub-surface drainage. This is concerned with the removal of water from within the soil itself and will need detailed consideration by the landscape designer. Some of the problems are:

(a) reduction of water tables;

(b) special difficulties with silt soils;

(c) top-water in clays.

In the case of the first of these, water tables only occur and can be substantially influenced by drainage techniques, in soils which exhibit some degree of permeability. Code of Practice 2001² on page 119 says "from clay to gravel, permeability may vary a hundred thousand million times." "Techniques of Landscape Architecture "4 quotes a table which from "coarse sandy" soil type with a permeability of 18.7 in./ hour to "clay" with 0.006 in./hour a range of 3,000 times. Tables which are proposed for the new British Standard for Landscape Operations give ranges of 10,000 times, in in./hour. Obviously a solution for a soil with a permeability approaching the "excellent" class of 1.0 to 2.5 in./hour has little relevance to soils having a permeability below 0.01 in./hour which is considered too slow for artificial drainage to be effective.

It may be considered therefore that soils which exhibit features such as a permeability of 0.10 in./hour and lower must be considered in separate classes — such soils are silts and clays.

Clays in the range just mentioned for all practical purposes do not have a water table⁸ — only the vegetable soil is endowed with any degree of perme-- "the undisturbed subsoil ability plays no part in conducting water from the surface to the drain - rain penetrates the cultivated surface soil until it reaches the boundary between this and the subsoil, then flows along this boundary, down the direction of greatest slope, until it arrives at a position vertically above a drain where the drain trench" has an artificial degree of permeability many thousands of times better than the adjacent subsoil. Drainage then of such soils is concerned with, in effect, cutting intercepting drains across the contours, and trapping water as it travels along the boundary with the subsoil. Depth is not important in this context.

Where water tables do occur in soils of a sandy, or gravelly, or loamel char-(contd. on p. 10)



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I can find no good excuse for not finding the time to get winter greens in good playing order. There is a tremendous amount of work to do on any golf course especially when one is short staffed, but there is no good cause to neglect this important aspect, now that so much more golf is played during the winter months.

Quoting any head greenkeeper I dread to think what golf courses will be like in another ten years. There are so many lazy golfers today, hacking the course to bits. The people who do it are the very first to complain when the course is not as good as it should be.

I have watched many golfers take out a divot about eight inches long and walk away without putting it back. I see red.

Yours faithfully,

RON SIMMONDS.



7

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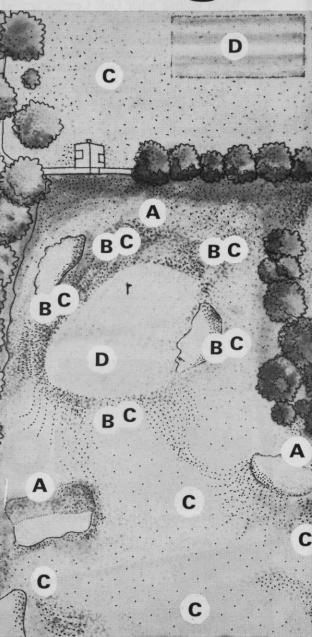


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С

(contd. from p. 6)

acter with higher levels of permeability it is of course possible to influence the level of the table where it exists by piped drainage and the depths at which such pipes are put *is* critical.

In many silts soils there are special problems and I shall devote much more later to a discussion of them.

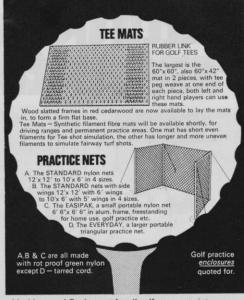
Drainage during construction works

It is necessary for me to make special reference to the considerations applicable to drainage works during periods of construction works, (and including in this the period immediately following up to 2 or 3 years) where special works are often essential to enable the work to be performed economically and to prevent damage to or by the works.

Periods of construction including the first few years of establishment in large landscape operations are periods when the works are particularly vulnerable. The radical disturbance of soil structure by compaction during earth movement. by cultivations and by moving materials and machinery about the job, generally much in excess of normal agricultural operations, cause a diminution of, and a very slow return to, optimum permeable soil conditions. Additionally in silts in particular which are water unstable, top crusts are formed by rainfall, which gives rise to damage by quick gully sheet run-off, causing erosion and damage to adjacent land and property. There is some interesting discussion in this in "Biology and Engineering"⁵ under the title "The effect of vegetation on Drainage and Floods.'

Remedial and preventative measures include ripping and subsoiling with special tines and great care as to soil conditions when machines operate, to prevent compaction.

Other measures are as mentioned above under "surface drainage" and include cut-off drains to protect, and catch run-off. The design of cut-off drains in these conditions must be considered on the basis of the engineering formulae already referred to above, than on normal field drainage principles, because the reduction in perme-



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ability may well prevent any soakage into the soil and cause a discharge more akin to hardened areas such as roads and roofs than to "natural" areas. I "french" have already mentioned drains in this connection and it may well be that a rainfall intensity of $1\frac{1}{2}$ in./hour may have to be used in design. Damage caused by intense storms can be considerable, and may give rise to claims from third parties when the direction and amount of runoff has been altered by levelling or other works.

The degree of vulnerability of construction works often diminishes considerably with time, being greatly influenced by the growth to maturity of ground vegetation and the return to optimum permeability of the soil aided by natural agents. However, this latter process may take many years and Crompton of Newcastle University, says⁶ that there are some soils which often radical disturbance take 50 years to return to optimum conditions — (contd. on p. 14)

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THOSE WHO SERVE

Brigadier C. W. Morton, M.C., editor of *Golf Course & Clubhouse Management*, journal of the Association of Golf Club Secretaries, pays a tribute to two senior greenkeepers whose service to golf adds up to nearly a 100 years.

SIDNEY STAINTON

SIDNEY STAINTON first started work in 1921 with James Carter & Company, Raynes Park, on golf course construction. He had been with them for $3\frac{1}{2}$ years when he was loaned to Malden Golf Club as a foreman on the construction of their course. When this had been completed, Sidney stayed on at the club as head greenkeeper. He remained at Malden Golf Club as head greenkeeper for 16 years, until 1941 when he was taken away and engaged in war work until 1945.



In 1945 he went to Royal Wimbledon Golf Club as head greenkeeper. He is still there after $23\frac{1}{2}$ years and still going strong, although he is now 70 years of age. Whilst undergoing a practical course on golf club secretary's work at Roval Wimbledon in 1951, I had the pleasure of being given my first instructional lessons in greenkeeping by Sidney Stainton. I thought he was most knowledgeable then and a very good lecturer. What he doesn't know now about greenkeeping isn't worth knowing. After all, he has had nearly 44 years at the job and is still as keen as ever. A fine record.



LEN HAKEN

Now aged 82, LEN HAKEN first began work as a gardener. During the First World War, he served in the 2nd Royal Highlanders (Black Watch) and was mentioned in dispatches in 1918. On his return home he joined the Sale Golf Club, Cheshire, as a greenkeeper. Last year, he completed 50 years' service at the Sale Golf Club, the last 34 of which he served as the head greenkeeper.

During his early days as a greenkeeper, he says that "it was very hard work with long hours and all work done by hand. There were no machines in those days." Although he never attended a course of instruction on greenkeeping, he used to go to all the lectures arranged by the Associations of Greenkeepers and Groundsmen. He finally retired in 1968 at the age of 81, and says that he is not enjoying his retirement one bit. He loved his work and the open air life. He is a Life Member of the British Golf Greenkeepers' Association, and also a Life Member and Vice-President of the National Association of Groundsmen. A fine record.

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(contd. from p. 10)

"optimum" being a condition of land which has been for many years covered with undisturbed grass.

Drainage effecting a permanent influence on soil water

There are two methods generally in use which effect a lasting influence upon the soil/water regime; these are piped drainage and mole drainage. In landscape works both have uses and are often combined, the former being regarded as a permanent capital investment and the latter as a form of tillage or cultivation to be repeated after a period of years dependent upon soil and weather.

The best descriptions and studies of mole ploughing have been made by H. H. Nicholson in Chapter X of "Principles of Field Drainage"⁴ and should be referred to by landscape designers who practice in areas where the right clays predominate. Normal agricultural mole drainers are adequate for use in construction work, but for maintenance cultivations special cable drawn implements are essential to avoid damage and to the best of my knowledge there is only one on the market⁷.

The recent publication "Techniques of Landscape Architecture"⁷ refers in this apart from the absence of guidance as connection to use in "pure clays" — quite to what is "pure," reference to Nicholson⁴ who lays down some rules for the type of suitable soil and describes them in a more accurate way by reference to the proportions of sand, silt and clay, and in my experience the only way to ensure reasonable results in the absence of positive identification is to have a mechanical analysis made of it.

As to piped drainage (or underdrainage or subsoil drainage), techniques of design are of the utmost importance to landscape architects and with costs in the order of 10s. per yard, that is hundreds of £s per acre, it is necessary to consider this separately. (to be continued)

Reference to textbooks and papers referred to in the text

¹ British Standard Code of Practice

CP 2003 (1959) published by the Council for Codes of Practice, 2 Park Street, London, W.C.1.

² British Standard Code of Practice CP 2001/1957 — "Site Investigations." Published by the Council for Codes of Practice, 2 Park Street, London, W.C.1.

³ "Drainage of Agricultural Lands," The American Society of Agronomy, Madison, Wis., U.S.A.

* "The Principles of Field Drainage," H. H. Nicholson, Cambridge Press.

⁵ "Biology and Civil Engineering," The ICE, Great George Street, London. 1949.

⁶ "Soil Structure," E. Crompton, University School of Agriculture, Newcastle on Tyne. H.M.S.O. Reprint from N.A.A.A. quarterly review No. 41.

⁷ "Techniques of Landscape Architecture." Edited by A. E. Weddle Heineman, London.

⁸ "Scientific Research in Soil Drainage," Journal of Agricultural Science, Vol. XXIV, Part 4—1934.

⁹ "Soil and Water Conservation Engineering" — Frevert and others. John Wiley, New York.

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It is with deep regret that we have to announce that Mr R. B. Dawson of 32 Oak Avenue, Bingley, passed away peacefully in the Keighley Victoria Hospital on Wednesday, 12th February.

He will always be remembered as the first Director of the Sports Turf Research Institute from its foundation in 1929 until he retired at the end of 1963. The success and reputation which the Institute enjoys today is due in large measure to the careful foundation which he laid and to his own resourceful character. He was awarded the Order of the British Empire in 1956 in recognition of his life's work and the Board of Management made him an Honorary Vice-President on his retirement.

Mr Dawson is survived by his widow (Mrs M. K. Dawson), his son and three married daughters.

The funeral was held at the Nab, Wood Crematorium, Bingley, on Tuesday, 18 February at 11 a.m. The B.G.G.A. and the Northern Section were represented by Mr G. Herrington (Chairman B.G.G.A.), Mr A. Robertshaw (Chairman Northern Section), Mr H. Herrington, Mr F. G. Smith and Mr J. Parker.

"PRACTICAL LAWNCRAFT"

The sixth edition of *Practical Lawncraft* was published in February by Crosby Lockwood only a few days before the death of its author, R. B. Dawson, O.B.E., M.Sc.

In some sense this book must epitomise his life's work and since that work encompassed the whole field of preparing and maintaining turf for sport and pleasure, it has become a standard work for guidance and reference. It is precise where precision is possible, it is reticent where to generalise would be imprudent. The thoughtful greenkeeper will learn as much from its broad approach to the problems discussed as from the specific advice given to counter and solve them.

There is probably no other volume which can be recommended to the practical man without some reservation. This alone is a tribute not only to the author's knowledge of his subject but of the people who would most benefit from it.

The price is 35s.

MESSING ABOUT WITH THE COURSE

by PATRICK SMARTT

MOST golfers are dissatisfied with their game. That should be sufficient. But there are always some who are dissatisfied with the course. Not its condition, but its layout. They suffer from an ineradicable urge to alter holes.

Protests are met with the accusation of being old fashioned, reactionary. This platitude betrays shallowness of thought.

No one with any knowledge of golf and in his right mind would quarrel with the removal of out-dated bunkers sited to punish the indifferent strikers. Their unnecessary presence adds to the cost of upkeep. Some defeat their purpose in serving as useful range-finders for the better players.

Let us get one thing clear. With the exception of those clubs which cater for the professional "circuit", the object of a committee is to keep the greatest number of members contented. That has been said hundreds of times; it is not always remembered.

It is reasonable to assume that a man joins a club because the course suits him. No matter how attractive the social side, it is the course, particularly if he is no longer young, that influences his decision. I know. I have been a secretary. Someone asks if he may have a look round: "Too hilly; too tough; can't stand lush grass for rough; too flat and dull," or he likes it. Having made up his mind and joined, it did not occur to him that someone was going to come along, bursting with ideas, and muck about with a layout that he has been subscribing to for years because he *liked* it. You can multiply "he" by a hundred.

What to the likes of him does a blind hole here and there matter. The odds against his getting closer to the hole when he can see the bottom of the pin are long. There was a time, many years ago, when in receipt of a stroke I could keep a scratch player on his toes. I remain sceptical that it makes all that difference to them. There is the added interest, even excitement, of wondering where the ball has finished as he walks forward. That statement is based on the archaic notion that golf is a game and not a mathematical exercise.

Furthermore, there come to mind two of the finest links in these islands that offer blind strokes.

One hears talk of a bad hole - whatever the definition of that may be. To me, only a dull hole comes within that category, and offers the only good reason for re-siting a green. A new fetish is raising its ugly head, that of lengthening holes, and this not on courses that entertain the tournament circuit". For some reason perfectly normal people become disturbed if under the Standard Scratch scheme their course is rated at 70 or less, a state of mind that is beyond my comprehension. I once heard talk of putting the tee back at a long and good 4 hole. It tested the good player, the long handicap man could not get up in two but he had his handicap to help him.

The expression used was "to make it a proper 5". What is a proper 5? The good player, if he cannot reach the green with his second will get down in a chip and a putt. He still gets his 4. The more 5s there are on a course the more the low handicap man likes it he is being offered birdies. The unfortunate remainder are faced with a longer third stroke, a longer walk and inevitably a tendency to press in the understandable desire to reduce the and thereby increase distance the accuracy of that third shot. This

(contd. on p. 20)



HON. SECRETARY'S NOTES

I have received a letter from J. Stobbs, who is now Head Greenkeeper at a course in France, belonging to Count D'Ormesson, asking if I know of anyone who would be interested in having Count D'Ormesson's nephew, a young man of 17, to stay with them to improve his English and play some golf. In return, the French family would be pleased to have a young man between 16 and 18 years stay with them for a month's holiday in Paris.

If anyone is interested would they please write to Mr J. Stobbs, 220 Ave.,

Oliver D'Ormesson, 94 Ormesson Sur Marne, France.

Acknowledgment

The President of the Estoril Golf Club wishes to acknowledge the many applications for the post of Head Greenkeeper and /or Assistant advertised recently in this Journal. He will be writing to three of those whom he thinks would be happiest in the post within the next two weeks with a view to arranging an interview when he is next in London. He would like to thank the others for the trouble they took in writing to him and will be returning original references in due course.

FOR SALE

Equipment for disposal:-

- 2 Gangmowers-Ransomes "Sportscutters '
 - 2 Ransomes "Auto-Certes" Mowing Machines Mk. 5A
 - 1 Ransomes "Overgreen" Tractor 1 "SISIS" Fertiliser Distributor
 - - Box, 6 ft. spread
 - 1 "Flymo" Mower

Available for inspection Sundridge Park Golf Club, Bromley, Kent.

Offers to the Secretary.



TRADE NEWS by G. R. Young NEW TURF CARE PRODUCTS BY FISONS LIMITED

Messrs Fisons Limited are now marketing two new light-weight, turf care products: —

"Greenkeeper 2" has been formulated for use on golf greens and fine turf by impregnating granular peat with high nutrient fertiliser. With a well balanced NP and K analysis of 14:4:4 it should be applied two or three times between April and August at 1 oz. to the square yard.

"Combined " for feeding and weeding in one operation contains the same organic, peat-based fertiliser as "Greenkeeper 2" plus a new combination of selective weedkiller: 2, 4-D and Dicamba (Banvel Dr). To be applied at 1 oz. to the square yard from April to September, when weeds and grass are growing strongly.

Both products are packed in heatsealed, white polythene bags weighing $62\frac{1}{2}$ lbs., which is enough to treat 1,000 square vards.

"Greenkeeper 2" and "Combined" have been developed as a result of the continuing research by Fisons Levington Research Station into fertiliser requirements for sports turf. The makers claim that the products show quick visible results, are easy and economical to handle and reduce scorch risks even in dry weather.

CROSS COUNTRY VEHICLE

The recently introduced GNAT Mark 2 light-weight, cross country vehicle manufactured by Aimers McLean Limited at Kelso, Roxburgh, exerts a ground pressure of only $2\frac{1}{2}$ lbs. per square inch from its three broad tyres, insufficient to damage the ground over which it is travelling.

The 400 lb. GNAT has a payload of 850 lbs. and can tow a further 950 lbs. Rugged and economical, it is able to cover parts of the course too soft or too steep for normal vehicles.

Powered by a 10 h.p. four-stroke engine the GNAT has disc brakes, a threespeed gear box plus reverse and a speed of up to 20 m.p.h. It is 7 ft. 6 in. long, and has maximum width of 5 ft. 1 in. Price £410.

"Exports up" report Sisis

SISIS export sales have risen for the third consecutive year; our despatches in 1968 show an increase of more than 50 per cent on those achieved in 1967.

Litamisas have been sold in Norway, Sweden, Holland, Germany, Belgium, France, Switzerland, Italy and South Africa.

For the second year we have received an order for a quantity of Aeromain outfits for delivery to the German Army which would seem to underline the acceptance of this equipment to the same extent as in Britain for the maintenance of Sports Grounds of up to six acres.

We have exhibited, either independently or in conjunction with our distributors, in Sweden, Denmark, Holland, Germany and France during 1968 and we aim to extend our exhibition programme to the other countries during the coming year.



NEW BOARD APPOINTMENT

A recent appointment at Ransomes Sims & Jeffries is that of Philip Lawrence Johnson, aged 42, who becomes marketing director, grass machinery and electric trucks. In 1967 he was appointed general manager, truck division, and in 1968 also took over control of the grass machinery division.

Mr Johnson, a Grimsby man, holds a Loughborough College Diploma and an Engineering Cadet Diploma; he is also a Chartered Engineer and a M.I.Mech.E. He secured a commission with the Royal Engineers and served in Germany in 1947-48.

GOLF COURSE CHARGES GO UP IN MAY

Golfers will have to pay more for their golf over the Troon municipal courses as a result of increased charges approved by the town council.

Daily tickets increase from 7s. 6d. to 9s. on weekdays and from 10s. to 12s. on Saturdays.

Single-round tickets increase from 5s. to 6s. on weekdays and from 7s. to 8s. on Saturdays.

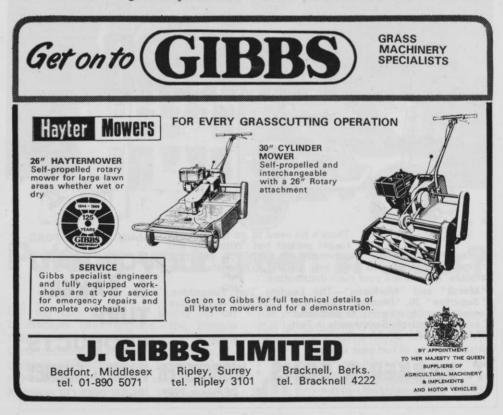
Sunday charges: Day tickets increase from 10s. to 12s. The charge for one round increases from 7s. to 8s. and all yearly ticket holders will pay 1s. a round on Sundays.

BACK TO THE OLD SET-UP

Bakewell, short of a pro-greenkeepersteward since Richard Bennett moved to Bradway Driving Range, have gone back to the old greenkeeper-steward set-up with W. H. Williamson, the first assistant greenkeeper at Hallamshire, filling the dual post and Mrs Williamson looking after catering. Williamson, who had been at Hallamshire since November 1967, was at one time on the Phoenix staff.

GOLF BUGGIES

Bad news from Leicestershire. A company at Market Harborough has started production of electric golf buggies to transport the weary or the aged along the fairways of Britain or perhaps in the rough alongside. There are seats for two or four people and four special baloon tyres are claimed to safeguard the course. The hire charge looks like being £2 to £3 a round, but an enthusiast could buy one for between £550 and £700. If they do half the damage the trolley produces it will still be too much.



(contd. from p. 16)

endeavour will lead to a series of wild lunges and a score of 7 or 8 and more.

The redesigning of a golf hole is an expensive business. Under no circumstances should it be attempted by an amateur. It does not follow that a good player is a good architect. I can think of one, an international amateur and a good friend of mine now dead, whose alterations were a failure.

When bitten by the alteration bug a club must seek the advice of a professional golf course architect (who need not be a professional golfer). This is not given free. Apart from experience in design and an "eye for country" — some courses have been planned in thick woods — he has a knowledge of soils, grasses, and most important — drainage. These the amateur lacks.

Then there is the cost of construction. If the local green staff are given the job the rest of the course will suffer. Even in winter there are storm drains to be cleared and machinery overhauled.

I have in journeys round the country seen courses, or holes that have been "improved" — some by experts. It would be an exaggeration to say that these have always met with the approval of the double-figure handicaps who, it cannot be emphasised too often, keep a club in being.

Once a thing is done it is done. It cannot be reversed without a further outlay of large sums. To amend Shakespeare:

"If it were done, it is well it were done slowly".

FOR HIRE

SISIS AUTOTURFMAN AERATOR, £25 per week—do it yourself. For contract prices telephone Burnell, Eaglescliffe 3647.





MARCH	5th	Southern Section Lecture—Stirling Castle.
	12th	Northern Section Lecture—Horsforth Golf Club.
	14th	Southern Section Annual Dinner—Finchley Golf Club.
	28th	Northern Section Annual Dinner.
APRIL	16th	Welsh Section Spring Meeting—Glamorganshire Golf Club.
	24th	Sheffield Section A.G.M.—Brunswick Hotel.
MAY	7th	Southern Section Spring Tournament—Beaconsfield Golf Club.
	7th	Midland Section Spring Tournament—Coventry Golf Club.
	13th	North-West Section Spring Tournament.
	14th	East Midland Section Spring Tournament—Kettering Golf Club.
	14th	Northern Section Spring Tournament.
JUNE	24th	Welsh Section A.G.M.—Royal Porthcawl Golf Club.
SEPT.	24th	Welsh Autumn Meeting—Carmarthenshire Golf Club



Putting your green in order?

Set the ball rolling by lining up on Landscape Maintenance – the people that lead the field in Sports Ground Construction, Maintenance and development of Recreational areas. Behind modern equipment and machinery are a team of experienced specialists... the power behind successful, economical landscaping. Putting your green in order? Then get in touch.



Grasscutting double More powerful engine

The 19" Contractor.

Powerful two-stroke engine. Economical because of direct fuel induction to cylinder barrel. New dual filtration system ensures cleaner fuel mixture and reduces frequency of filter cleaning. New style ABS rolled edge hood prevents "digging in" on uneven ground. The heavy duty handle gives greater strength and has rubber covering for operating comfort. **Recommended Retail Price 58 gns.** Undercarriage is available for this mower at 9 gns. extra.

new airborne mowers from Flymo – lower fuel consumption!

The 21" Contractor.

Exceptionally versatile. The 21" has been designed for day long working on jobs like verges and caravan sites. The built-in undercarriage is standard, with three handle positions to assist manoeuvrability on uneven ground and give easy transport from site to site. A much deeper hood makes for good grass clearance. **Recommended Retail Price 69 gns.** Mowing made easy on a cushion of air. The tough new Flymo Contractors.



SITUATIONS VACANT

- OWING TO COURSE EXTENSIONS and improvements Chelmsford Golf Club wish to engage an additional Experienced Greenkeeper. The position is permanent. Rent-free house, water and rates provided. Salary negotiable. Applications to the Secretary, Chelmsford Golf Club, Widford, Chelmsford.
- CAMBERLEY HEATH GOLF CLUB require experienced Greensman. Must have knowledge of course machinery and able to drive a tractor. Modernised, two-bedroomed cottage available. Basic wage £17 per week. Applications to the Secretary. Camberley 23258.
- HEAD GREENKEEPER REQUIRED owing to retirement. Wages by negotiation, but not less than £1,000 p.a. Allowance for accommodation provided, pending premises to be built. Write, giving details of age, experience, and names of two referees, to the Secretary, The Dore & Totley Golf Club Limited, Bradway, Sheffield.
- ASSISTANT GREENKEEPER required. Modern cottage. Apply in writing, giving full particulars, age, experience, family, references, to the Secretary, Ellesborough Golf Club, Butlers Cross, Nr. Aylesbury, Bucks.
- POTTERS BAR GOLF CLUB require Head Greenkeeper immediately. Salary £1,200 per year plus free accommodation. Three-bedroom flat. Only greenkeepers with first-class technical and mechanical knowledge with ability to organise need apply. Full details of experience to the Secretary, Potters Bar Golf Club, Darkes Lane, Potters Bar, Herts.
- FULLY EXPERIENCED WORKING HEAD GREENKEEPER will be required in September on retirement of present Greenkeeper. Salary by negotiation. Replies and details of experience to the Secretary, Ashburnham Golf Club, Pembrey, Carmarthenshire.

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a Golf Course which is nearing completion. They will work under a British Superintendent.

- 1. Applicants, preferably s i n g l e between 20-40, must have sound experience of Golf Course maintenance and be able to operate a wide range of machinery.
- 2. It is intended that one will ultimately be appointed assistant superintendent.
- 3. The initial contract is for three years, to be reviewed annually.
- 4. Commencing salary between £27 and £30 per week.
- 5. Successful applicants to commence as soon as practically possible.
- 6. Benefits: No income tax, Government insurance for hospitalisation.
- Round trip passages will be provided from London to Bermuda. One for a single man, and up to 4 for a married man with children.
- Accommodation for single men will be in one house on course grounds at nominal rental.
- 9. Accommodation for married men will be their own responsibility. Nominal rental allowance.
- 10. Applicants reply by air mail to: Secretary, Port Royal Golf Course, P.O. Box 465, H a milton, Bermuda. Include full details of past experience, qualifications and marital status. Must be received by the 24th April.
- 11. For information on Bermuda's climate, living conditions, etc., consult Bermuda Information Office, Sackville House, 40 Piccadilly, London, W.1.

Berk's answer to 4 Spring & Summer problems

Send the coupon now for full details

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Worms Another 'Berk first' in turf care, Supplex Chlordane worm-killer is still the market leader. It is formulated either as a liquid or as granules. Weeds Berk 'Super' weedkiller, already widely accepted, kills a wide range of undesirable weeds very economically.

Clover Where clover, pearlwort and yarrow are specific problems, use Berk Clover Killer.

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Berk House, 8 Baker Street, London, W1A 1BL. Tel: 01-486 6688 Please send me complete details on Berk products that solve Spring and Summer turf problems NAME	wo
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News



from the Sections



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

"THE USE, SELECTION AND application of chemicals in turf maintenance" was the heading of the nine-page leaflet handed out to all present at a talk given by Mr Gooding of Synechemicals Limited. This leaflet contains some very useful information and I am sure that members will find it a very helpful reference with the future use of chemicals. Mr Gooding talked briefly, but expertly, on each subject and finally answered as many questions as time allowed.

Closing the meeting, the chairman thanked Mr Gooding for a very excellent lecture and invited him to come again to the Southern Section. Forty-three members attended.

Beaconsfield

There are no entry forms for the Spring Tournament. Members wishing to enter should write to me stating in BLOCK LETTERS name, club, lowest handicap and whether requiring a late start.

New Members

The following new members will be warmly welcomed at our meetings: D. Appleyard (Wentworth); S. B. Battams (Henley); B. J. Newman (Reading); P. J. Stevens (Burnham Beeches).

New Appointments

Congratulations and best wishes to Pat Ainsworth in his new job as head greenkeeper at Hadley Wood, to David Kirkland who is now head man at Hampstead and to David Heaton who has taken over at Finchley.

In Hospital

Our thoughts go to Ernie Hall who is in the Central Middlesex Hospital with suspected jaundice, also to Ted Hammond who is also in the same hospital.

From the Midland Section

We welcome J. S. Danks who has taken over at Shirley Park Golf Club.



By J. Parker

Chairman: A. Robertshaw Hon. Secretary: 8 Goit Stock Terr., Harden, Bingley, Yorks.

Spring Tournament

THE ANNUAL SPRING TOURNAment of the Section will be played over the course of the Harrogate Golf Club, Starbeck on Wednesday, 14th May, by kind permission of the club committee.

Grand National Draw

Members are reminded that the closing date of the return of counterfoils and moneys for the Grand National Draw is Tuesday, 18th March.

January Lecture

This was held in the clubhouse of the Horsforth Golf Club on Wednesday, 16th January, 30 members attending. The speaker was Mr Horner of Hayter Ltd., who illustrated his talk with slides of their range of machinery.

Following sandwiches and drinks, for which we thank the firm, many questions were asked by members and ably answered by the speaker. A vote of thanks was proposed by our chairman, Mr Robertshaw, and heartily endorsed by the members.

Mrs F. G. Smith

It is with deep regret that I inform those members who do not already know of the death of Mrs Frank Smith, the wife of our former secretary and national chairman, well known to many members of the Association. I have written to Frank expressing deep sympathy to him which I am sure is the wish of all members.

MISCELLANEOUS

PROFESSIONALS AND GREENKEEPERS having stocks of used golf balls contact Sparkbrook Golf Ball Co., 295 Highgate Road, Stoney Lane, Birmingham, with a view to filling export orders.



Chairman: O. P. JONES (Bramhall G.C.) By H. M. Walsh Hon. Secretary: 78 Hadfield Street, Oldham, Lancs.

Lectures

OUR THANKS ARE DUE TO MR B. Metcalf of Joseph Metcalf Ltd. for a very unusual, but very interesting talk on some of the different kinds of crafts in which ingredients of fertilisers, that greenkeepers take for granted, such as gone, hoof and horn, etc., are used. Yes, very entertaining. Our next and last of this winter's series will be given by Mr Whyatt of H. Pattissons Ltd. on Tuesday, 18th March. Please make this attendance as good as the last one.

New Members

We welcome to the Section the following new members and hope their association with us will be a happy one.

- Mr K. Beck, Haydock Park Golf Club Ltd. Golborne Park, Newton-le-Willows, Lancashire.
- Mr H. Walker, Rochdale Golf Club, Norden, Rochdale, Lancashire.



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

Chairman: M. GEDDES (Royal Porthcawl)

Spring Meeting

OUR SPRING MEETING WILL BE held on Wednesday, 16th April 1961 with the kind permission of the Captain and Committee of the Glamorganshire Golf Club. I would like everyone intending to play to be there in good time as the Club have a competition on the same day and we do not want to hold them up in any way. So please make a note of that and help me out by COMING EARLY. Thank you.

Annual General Meeting

The Annual General Meeting will be held at the Royal Porthcawl Golf Club, in conjunction with the Secretary, on Tuesday, 24th June 1969. I would like to see every member attend this meeting.

Autumn Meeting

The Autumn Meeting will be held at the Carmarthenshire Golf Club on Wednesday,

24th September 1969. If you have never visited there this is a good chance for you; I can assure you that Arthur Price has a good course. The Committee is thinking of getting a bus starting at Cardiff and picking up everybody interested on the way (main roads) but I will need your entry early so that the transport can be arranged and I will let you know the outcome at the Spring Meeting on the 16th April at the Glamorganshire Golf Club.

Please make a note of these three dates— 16th April, 24th June and 24th September.

The Annual General Meeting of the Association this year is being held at Pyle & Kenfig Golf Club. I would like to see as many members enter for this meeting as possible. You will be receiving your entry forms in the journal later in the year, the dates for the competition are the 11th, 12th and 13th August so please make a special effort to be there.



Chairman: G. HERRINGTON (Lindrick) By H. Gillespie Hon. Secretary: 63 Langsett Avenue, Sheffield, S6 4AA.

Mr R. B. Dawson

ALL MEMBERS WERE DEEPLY shocked to learn of the death of Mr R. B. Dawson, Vice-President of the Sports Turf Research Institute, Bingley. Mr G. Herrington, Association Chairman and Mr H. Herrington, representing Sheffield Section, attended the funeral.

Lecture

The January Lecture on Trees and Shrubs by Mr A. L. Winning, Sheffield Parks Manager, was well attended and very interesting with some good colour slides to illustrate the points in question. An enjoyable evening made more so by Mr Winning's expert knowledge on the subject.

The atrocious February weather affected the attendance when Messrs J. L. Fearn (Agricultural) Limited gave a talk on tractor maintenance illustrated by film strip and accompanied by refreshments. We are once again indebted to Mr Fearn for his kind hospitality.

Annual General Meeting

April 24th is the Annual General Meeting at the Brunswick Hotel, 7.30 p.m. You are requested to make a special effort to attend.

Good Wishes

W. Williamson, first assistant at Hallamshire Golf Club, left at the end of January to join Bakewell Golf Club as Greenkeeper/ Steward. We wish him the best of luck in his new position.

Mrs Greenkeeper's



Own Corner

with Ann Mawson

Mackerel is a fish that has fat distributed throughout the fibres and therefore has a high food value. No fish spoils more rapidly so it should be eaten as soon as possible after catching. It should be very brilliant in colour. If the colours are faded, the flavour will have deteriorated.

Pickled Mackerel

6 small mackerel, 4 bay leaves, 4 cloves, salt, pepper, 1 teaspoonful pepper corns, 1 pint brown vinegar, thyme, fennel, parsley.

Fillet the mackerel, wash and dry, sprinkle with fennel, thyme and parsley, (minced). Salt and pepper, put into a dish with a little butter, and bake. Boil the vinegar with the bay leaves and cloves for ten minutes; when cold strain over the fish (also cold), allow to stand for 4 hours. Garnish with parsley.

Potted Mackerel

Prepare and cook the mackerel in just the same way as you would for the

R. C. CRAIG AND CO. LTD. SPECIALISTS IN THE REPAIR AND MAINTENANCE OF ALL TYPES OF MOWERS * Agents for : RANSOMES SIMS & JEFFERIES Ltd * LLOYDS & Co. Ltd. WEBBS LAWN MOWERS * Distributors : DENNIS BROS Ltd. * GANG MOWERS FOR HIRE pickled mackerel. After standing for two hours remove the skin and chop and pound the flesh, mix with sufficient of the liquid to bind the mixture. Pack into small jars and cover with melted butter. This paste must be kept in a refrigerator to keep fresh.

Mackerel with onions

2 large mackerel or four small ones, 12 small onions, pinch of sugar, $\frac{1}{4}$ lb. butter, $\frac{1}{2}$ pint stock, $\frac{1}{2}$ oz. cornflour, salt, pepper, 1 glass of white wine.

Put I oz. butter into a pan, add the onions and sugar, fry until brown, add the stock and simmer slowly until three parts cooked, then remove onions.

Clean and dress the mackerel, divide each fish in half, fry in 2 oz. butter, season them, pour over the wine and stock, boil until the mackerel are cooked. Lift out, add to the sauce the onions and a piece of butter and the flour, work together, cook for 5 minutes. Serve the fish, garnish with the onions, and pour over the sauce.

-Until May . . .

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Standard Model £564. H.P.U. Model £648. Optional extras as current Price List.

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- ★ Lightweight to avoid compaction or damage to turf.
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