

The new production centre, which will concentrate on heavy-duty commercial and institutional grass cutting equipment, is on an Industrial Estate at St. Helens, Bishop Auckland.

The new facilities come into production this month (January).

The move marks the second major project announced in the past 12 months in expanding production facilities. In July last year plans for a 38,000 sq. ft. extension to the main factory at Aycliffe were approved by the Department of Trade and Industry. This extension will consist of additional manufacturing space, loading bays and Research and Development Laboratories.

The latest move is in line with a planned expansion programme for production facilities to match increasing demands from the United Kingdom market, as well as exports to more than 770 countries.

The Bishop Auckland plant will include assembly lines, testing facilities and metal-working shops.

Main control and supervision will continue from the Aycliffe centre which has been involved in a continuous expansion programme since the Flymo hover mower made its world debut 10 years ago,

Golf Date Fixed

Ransomes E.A.P.C.A. Match Play Tournament 1974 will take place on Tuesday and Wednesday October 1 and 2 at Warren Golf Club, Woodham Walter, near Maldon, Essex.

It is appropriate that the East Anglian professionals' tournament should be held at the club where the late father of Mr. John Durham, the present owner, did so much in the interests of professional golf in Essex,

So why not use an ATCO VARI-GANG MK.II and have two professionals on the job!

When you have cast your professional eye over it we believe you will agree with us that the latest Atco Vari-Gang Mk. II is professionally made for professional users like yourself. And here are a few reasons why —

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Is the keynote — both of ganging and maintenance. Cutter change for example is but a moments work with a choice of 5 or 8 bladed heavy duty cutting cylinders.

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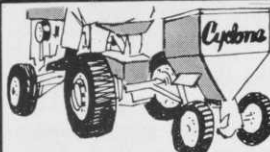
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- (6) The sprinkler shall have an acceptably long range and stroke.

Considering these aspects in more depth:

- (1) Reliability means that the sprinkler must operate for the correct period of time, which is of course a function of control and hence from the sprinkler aspect it must have a strong driving action; thus ensuring that it is not susceptible to sticking or erratic movement. In the case of segment or part circle sprinklers it must have a reliable changeover mechanism which ensures that it does not dwell or stick at the end of each segment.

- (2) Even coverage is a function of reliable operation, as a sprinkler that has a fragmented or erratic movement will apply more water during its period of dwell than it will during periods of movement.

- (3) A sprinkler which is to be buried in the ground will be subjected to outside forces and must therefore be of sufficient strength and design to stand the occasional knock and pressure when passed over by machinery and golfers. Due to the ingress of sand in top dressing and bunkers, pop-up sprinklers are known to remain in the operating position after operation and thus may be struck by a mowing machine. If manufactured from low impact strength materials the sprinkler will more often than not sustain damage to such an extent that it has to be replaced. Similarly, sprinklers walked over by a golfer wearing spiked shoes must have tops of a material which will not be punctured or broken. As far as the body design is concerned there should be sufficient bearing surfaces to prevent the sprinkler from being pressed into the ground when run over by machinery. Immediately after instal-

lation and for the first two years or so, no sprinkler should be subjected to heavy downward forces as the ground will not have had time to settle and consolidate after excavation.

- (4) To some extent water and soil contain corrosive elements and thus sprinkler equipment should be manufactured from materials which are resistant to corrosive and galvanic action. For instance, the sprinkler manufactured in mild steel would in some soil, and when handling some waters, have a life expectancy of a week or even less. This is why sprinklers are in the main manufactured from bronze which has a high corrosion resistance factor. There are of course many different grades of bronze and it is important that the manufacturer is aware of this. A leaded bronze, i.e. bronze with a high lead content, is more susceptible to corrosion than a lead free bronze; the latter is often known as phosphor bronze or gunmetal. In addition to bronze, other materials are used in the construction of sprinkler heads. These must again be carefully selected to ensure that the presence of dissimilar materials does not set up a galvanic or electrolytic action whereby particles of material from one component are deposited on to another resulting in weakening of the former leading to failure. In general stainless steel should be employed as the other metallic material, as bronze and stainless steel are immune to this type of attack. Bearings, etc., are usually a form of nylon or similar material which is well known for its resistance to attack and has a hard, low friction working surface. Sprinklers are available in a variety of different casing materials ranging from plastic at the bottom end of the scale to bronze at the top end of the scale. The alternatives in common use are cast iron or aluminium, both of which normally have a heavy pro-

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For full details of Gold-N, contact:
England & Wales - Chipman Chemical Co., Horsham, Sussex EH6 7EN.
Tel: Horsham 60341

Scotland - SAI Horticulture Ltd., Hortus House, 3 John's Place, Edinburgh. Tel: 031 554 5451/6

N. Ireland - Richardsons (Ulster) Ltd., 1 Short Strand, Belfast BT5 4BS.
Tel: Belfast 57424/5/6

Eire - ICI (Ireland) Ltd., 5/9 South Frederick Street, Dublin 2.
Tel: Dublin 771831



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tective coating of vinyl or galvanised steel, are used for the sprinkler casing. The plastic has the advantage of being cheap to manufacture whilst the bronze has the advantage of excellent corrosion resistance properties and high impact strength. The others represent a happy medium in so far as they are not too expensive to manufacture but at the same time the protective coating ensures a good resistance to corrosion whilst the material offers a high impact strength. If care is exercised in the handling of the coated variety their life will be as long as those in the expensive bronze.

(5) Very few greens are uniform in shape and thus in order to ensure that sprinklers are set so that they water just that part of the area that is necessary a sprinkler should have a fully adjustable arc. A number of sprinklers are available with a preset arc and whilst in many cases this can be adjusted after installation, it is often necessary to dismantle the sprinkler beforehand. From the operator's point of view it must inevitably be more convenient if adjustments can be made whilst the unit is in operation as this will ensure that the correct setting is achieved. In certain instances a need arises to water the surrounds as well as the green itself and if this can be effected easily it must be to the advantage of the Greenkeeper.

(6) Whilst the range and stroke of the sprinkler are not critical, a relatively long range of say 50 to 60 feet or more will be seen later to be an advantage,* whilst the stroke, which is usually about $2\frac{1}{2}$ " , must be sufficient to ensure that when in operation the surrounding grass does not interfere with the nozzles or the operating mechanism.

In general two forms of sprinkler are available for golf course water-

ing installation. The first is the impact operation type, whilst the second has a gear train which is driven by a turbine. The impact operated type obtains its movement by the action of the jet of water striking a spoon which, pivoted about the centre, swings out tightening a coil spring and then returns as the spring unwinds knocking the sprinkler round. Both full circle and part circle sprinklers of this type rely on this action but for the part circle unit the return is achieved by a changeover mechanism which limits the amount by which the spoon can be swung out. It is therefore driven back by the force of the jet of water being emitted from the nozzle.

The second type has a gear train that imparts a steady, powerful rotation to the nozzle. Water enters the base of the head through a diffuser that converts the stream into high velocity jets, which are then impinged against a turbine-like rotor spinning at about 3000 rpm. Gear reductions in the order of 5000 to 1 cause the nozzle to make one revolution every 2 or 3 minutes at torques ranging upward of 35" pounds. The part circle models incorporate a reciprocating gear mechanism that oscillates the nozzle back and forth over a predetermined arc. While the geared heads are usually more expensive, because of the greater number of parts and precision manufacturing, they do give a steady drive ensuring even precipitation. However, in view of the problems associated with altering the arc they are not often as favourable as the impact operation type, the arc of which is set by altering two spring clips.

* see appendix.

to be concluded in next issue.

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Hon. Sec. Mr. J. Wesley Evans,
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Department of Recreation
HEAD GREENKEEPER
Salary £1,641 to 1,773 p.a. Incl.

The Council are currently constructing a 9 hole Golf Course at Fulwell Park, Hampton Hill, and applications are invited from suitably qualified people for the above post. It is anticipated that the course will be ready for play in October 1974, but an appointment will be made as soon as possible.

The successful candidate will be fully responsible for maintenance and control of staff.

Form from: The Manager of Recreation, Langholm Lodge, 146 Petersham Road, Richmond, SURREY. (01-940 8351) returnable by: 18th February 1974.

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A job specification, including further details and application forms, are obtainable from the Establishment Officer, Civic Offices, Euclid Street, Swindon, SN1 2JH, to whom completed applications should be submitted by 18th March 1974 (Tel: Swindon 0793 26161, Ext. 274).



Special Occasions

1974

- Feb. 6 Southern Section Lecture.
 7 Sheffield Section Lecture
 SISIS Abbeydale G.C.
 20 Midland Lecture.
 Mar. 6 Southern Lecture.
 15 Midland Annual Dinner/
 Dance Sutton Park, Sutton
 Coldfield 6.45 — 12.30
 Tickets £2.
 19 East Midland Section Film
 Show.
 22 Southern Section Annual
 Dinner/Dance.
 May 15 East Midland Spring Tour-
 nament — Longcliffe G.C.
 15 Southern Section Spring
 Tournament.

North West Section

Chairman:
 O. P. JONES,
 Bramhall Golf Club

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

Congratulations

I am sure all members of the North West Section will be delighted to join me and the majority of members of the B.G.G.A. in wishing our friend and colleague, W. Summer our most

sincere congratulations on his completion of 50 years' service as greenkeeper at the Grange Park Golf Club. Fifty years Walter !! Well, I can only say that's a lifetime and not many people can boast of being at one club for all their working life, and he the tokens of esteem that were expressed by the Captain and Council of Grange Park at the dinner they gave in your honour, and I had the privilege of being a guest, they were truly appreciative and I am sure all the members of the B.G.G.A. who also remember you when you were the Chairman of the B.G.G.A., will be pleased to be associated with this tribute to a Gentlemen Greenkeeper; Well done Walter.

Lecture

Our thanks to Mr. J. Cogan, of Flymo for the very interesting talk and slides which he gave to about 20 members on a very nasty evening weather-wise, also the refreshments provided. Our thanks also to Mr. Mitchell of Cheshire Light Tractors for his assistance to Mr. Cogan. The next talk will be given by a representative of Sisis on the 13th January, and the February talk will be given by Mr. P. Wyatt of Pattissons on February 18th. Please make a note of these dates and help to make them successful.

Annual Trip

Our sincere thanks to the directors of "Sisis" Macclesfield for their kindness and courtesy when our members made a tour of their factory recently, also for the refreshments provided. Thank you once again.

Spring Tournament

Due to the kindness of the Captain and Council of Dean Wood Golf Club, we will be playing our Spring Tournament over their course on May 16th 1974, details nearer the time.

New Members

We welcome to the Section the following new members:—

N. G. A. Gray, Heald Green, Cheshire. Hon. Member.

L. Basger, Ringley Road, Whitefield, Lancs. Hon. Member.

and hope their association with the Section will be a happy one.

Midland Section

Chairman:
G. HART
(Gay Hill)

Hon. Secretary:
R. GOODWIN
2 Greenkeepers Cottage,
Ashridge Golf Club,
Ashridge Park,
Berkhampstead, Herts.

December Lecture

The December Lecture at Handsworth Golf Club was well supported and it is to Ransomes that we say "thank you" for a most interesting afternoon.

Their film "This Ancient Game" was followed by a most interesting experiment with a talk on Tape by Mr. Tom Mascaro and colour slides to illustrate his comments.

We are indebted to Mr. Bill Payne of Ransomes for making the arrangements and also to Handsworth Golf Club for allowing us the Clubhouse for this Lecture.

Annual Dinner

There are still a few tickets left for the Annual Dinner Dance to be held at the Park House Restaurant, Sutton Park, Sutton Coldfield on Friday evening, 15th March. Tickets can be obtained from me or our Treasurer, Mr. Cashmore, at £2 each.

East-Midland Section

Chairman:
J. CARRICK

Hon. Secretary:
S. FRETTER
4 Queens Drive,
Leicester Forest East,
Leicester.

Knock Out Cup

We are again holding the competition for the Knock Out Cup, this will run the same as last year. Would you please forward your entrance fee of 25p as soon as possible as we would like to start this competition earlier than last year. Closing date for this competition will be 31st March 1974.

Film Show

A film show will be held at Birstall Golf Club on March 19th 1974 at 7.30 p.m. This will be given by Ransomes. We would like to see a very good attendance.

Southern Section

Chairman:
F. W. FORD
(South Herts)

Hon. Secretary:
F. W. FORD
68 Salcombe Gardens,
Mill Hill,
London, NW7.

November Lecture

The talk to be given by Synchemicals being cancelled owing to the non-appearance of the speaker, a Quiz took place with yours truly in the chair and a panel of three. Gerald Brooks (Huxleys Garden Machinery), John Field (Maxwell Hart), and to keep with the greenkeeping questions, a very well-known Scotsman, Jock Rennie of the Wanstead Golf Club.

To these three gentlemen I extend my sincere thanks for stepping in at such short notice and also to everyone at the meeting for the way in which the situation was accepted.

The "Derek Gould" monthly raffle in aid of the Section Benevolent Fund resulted in £8.35p., largely due to the donation of 200 cigarettes by Jack Stobbs. Thank you Jack.

This doesn't seem to be my year for lectures and I almost feel reluctant to announce the following meetings at The George. However, with crossed fingers here goes:—

Mr. R. C. Jenning of Chipmans Chemicals Co., has assured me that Mr. Colin Head will present a very interesting paper at 6.30 p.m. on Wednesday 6th February and to conclude the season of lectures, we shall have a visit from Flymo Ltd. Details in later magazine.

Annual Dinner

By this time Members should know if they intend attending the above and how many guests they will be bringing. As stated in previous journals, tickets are £3, each, there is no limit on guests and the bar will remain open after the Dinner. It will help me a great deal if Members will let me know if they intend playing in the afternoon Stableford.

New Members

To the following new Members who have joined our ranks during the past month, let me extend a very warm welcome:—

L. A. ADAMS (Berkhamsted) J. DONALD (transferred from the Scottish and new at Wanstead) and J. HAMILTON STUTT (Golf Architect).

Christmas Gifts

Christmas greetings with money gifts from the Section Benevolent Fund have again been sent to all life members and Widows within the Section.

Northern Section

<i>Chairman:</i>	<i>Hon. Secretary:</i>
J. SCOTT	WALTER HEELES
Wetherby Golf Club	7 Tentergate Close, Knaresborough, Yorks HG5 9BJ

38 Members attended the November Lecture at the Moor Allerton Golf Club on Thursday the 29th. Our thanks are due to Mr. P. Horner of Hayters Ltd., for talking to us and showing us many slides of the various machines, also the many slides he showed us on his visits to the many

foreign Agricultural shows which he attends. Once again Peter, many thanks for the refreshments both liquid and solid.

Once again we are indebted to the Moor Allerton Golf Club for the use of their Club House on these occasions.

The Annual Dinner of the Section was held at the Scarcroft Golf Club on Friday the 7th December and a good time was had by all. The Guests of the evening included the Captain and Vice Captain of Scarcroft Golf Club, Mr. W. Ferguson, Professional Ilkley Golf Club, who replied to the toast of our Guests and gave us a talk on his visit to the U.S.A.

Mr. F. G. Smith proposed the toast to the Association and talked on the Formation of the various Sections of the Association.

Mr. J. Mawson acted as Toast Master for the evening.

Once again the retired Members of the Section were invited as Guests.

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