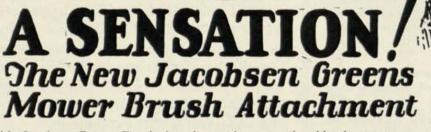
A P. Johnson Corporation Course March 23, 1928. s and Greens are ely by Jacob are

Glendale Golf and Country

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This Jacobsen Greens Brush Attachment is unquestionably the most important accessory offered the greenkeeper in many years. It has won the enthusiastic and unqualified endorsement of every greenkeeper who has seen it.

The picture shows you how this wire brush attachment rides ahead of the mower. When not in use, it swings back against the handle. It has several important uses.

### HERE IS WHAT THE GREEN BRUSH WILL DO FOR YOU

- (1) It prevents the Bent from running and brushes up the matted grass so that the mower can cut it. The ball wil! travel uniformly fast and free in any direction on any part of the green.
- (2) It brushes in top dressing more thoroughly and quickly than it can be raked in-gets it right down into the roots of the grass. You can top dress in the morning and have a perfect playing green in the afternoon.
- (3) It prevents Bent from going to seed and thus gives it a hardier, stronger growth.
- (4) The Brush acts as a preventa-tive of Brown Patch and other Fungi by thoroughly aerating the turf and letting the sun and air to the soil.
- (5) It is only necessary to brush a green occasionally to keep it from creeping. Consequently the brush has been made easily attachable to Jacobsen Greens Mowers.

#### Demonstrations Without Obligation

Write for literature on Jacobsen Mowers and accessories, and arrange for a demonstration on your own green.

### Jacobsen Leadership In **Putting Green Mowers**

Year after year Jacobsen su-premacy in the field of power putting green mowers continues. Year after year, the problems presented by changing ideas in putting greens have been adequately met by refinements and improvements in Jacobsen Mowers.

Both the 24-inch and 19-inch models have triumphed in every test and have won expressions of keenest praise from the best authorities. Jacobsen Power Putting Green Mowers produce a finer cut than any push-type mower, do it with less time and labor.

JACOBSEN MFG. CO. Dept. A-2 RACINE, WIS., U.S.A.

### Some Recent Additions to the Jacobsen Roll Call

- Olympia Fields, Matteson, Ill. South Shore Country Club, Chi-cago, Ill. Lido Country Club, Long Beach. L. I. New York Wilshire Country Club, Los An-geles, Calif. Shaker Heights Country Club, An-Shaker Heights, Ohie Interlachen Country Club, Minne-apolis, Minn. Tripoli Country Club, Milwaukee, Wis.

- Wis. Evansville Country Club, Milwaukee, Wile, Ind, Country Club of Detroit, D. tr.it, Mich.

#### Say you saw the ad in The National Greenkeeper



Every season's play on a golf course removes a certain percentage of the elements essential to plant growth. Thus it becomes necessary to replace such elements if satisfactory turf is to be expected the following year.

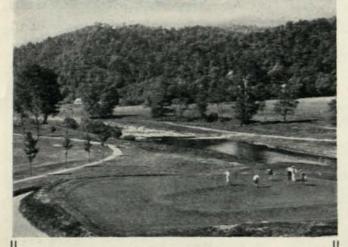
One of the easiest and surest ways of replenishment is to use Bestivall, Nature's Own Fertilizer.

This is a product of quick assimilation, making it an economical and effective means of fostering plant growth.

It is a finely pulverized fertilizer, and all organic. Its analysis shows 7% ammonia, 3% phos. acid and 1% potash.

One of America's foremost chemists pronounces the advantages of Bestivall equal to those of Peruvian Guano, which is generally recognized as the peer of all natural guanos.

THE Bestivall Manufacturing Company 1900 So. Delaware Ave. Philadelphia



BESTIVALL MAKES A HARDY TURF FOR PUTTING GREENS, GIVING A DEEP, RICH, VELVETY, GREEN COLOR.

Unexcelled for fertilizing new seedings

open to ventilation on four sides. This disproves the theory that brown patch attacks only greens in low and congested air pockets at Fenimore.

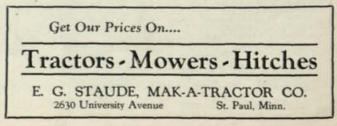
### Grubs in The Fairway

NOTING small brown spots in the fairways but giving them no attention due to the fact that I was busy with the brown patch on the greens. I later discovered that these same spots had grown considerably larger and was not characteristic to brown patch. After a close observation I found the Japanese Beetle Grub. Pulling up a piece of turf about eight inches in diameter I counted as many as 25 to 30 grubs. Knowing that in a short time considerable damage would be done I immediately referred to notes I had taken down during Mr. B. R. Leach's talks that I had the pleasure of listening to at meetings in the New York district. Arsenate of Lead was purchased and soon we were fighting the grubs, brown patch, and unnatural weather conditions.

We used 250 pounds of arsenate of lead to the acre mixing thoroughly with about 800 pounds of sand applying it with the ordinary lime spreader and a batter board on the bottom to distribute the mixture evenly. Bags were used around the lime spreader to prevent the dust from blowing about.

Following this application a chain harrow was drawn over to work it thoroughly into the ground. Within a week's time the grubs were disappearing. I might state that the places attacked the most were the approaches and the parts of the fairways nearest the greens. At this time I was shaking hands with myself for having grub-proofed the greens in the spring thus saving them from this treacherous little pest.

In my estimation the blackest nightmare a greenkeeper could have is brown patch and grubs in his greens at one time, but to have club members and his chairman stand with him at such a time is the biggest asset a greenkeeper could have.



## **ROBERT DUGUID**

Greenskeeper Evanston Golf Club, Evanston, Ill.

Formerly in charge of courses at Cruden Bay, Scotland Fyvie Castle, Scotland Columbian Valley, Invermere, B. C.

# says of NU-GREEN:

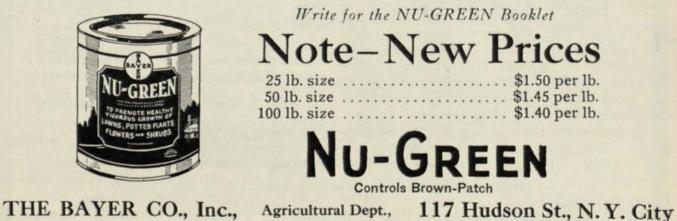
"N U-GREEN was used on this course (Evanston Golf Club) last year with very commendable results. Nu-Green is positive in results and may be recommended without qualification."

A greenskeeper of international experience, floriculturist and landscape gardener, Mr. Duguid is not unfamiliar with fungi diseases.

For the past two years Mr. Duguid has solved his Brown-Patch problem at Evanston through constant observation of his greens and immediate application of Nu-Green when the faintest suggestion of the plague appeared.

Brown-Patch need no longer disfigure your greens for by regular inspection of greens and the aid of Nu-Green you can obtain the same results as Mr. Duguid who says, "So far as the average player on this course can tell—Brown-Patch is non-existent." Dr. J. J. Monteith, Jr., in the December, 1927, issue of the Bulletin of the U. S. Golf Assn., Green Section, says of NU-GREEN:

"The areas treated with Nu-Green soon developed a luxuriant, dark, healthy green color, which stood out in sharp contrast to the untreated portion, where the turf retained the pale yellowish cast so common on many greens. In cases, these plots were so striking that they became a source of wonder and amazement to greenskeepers, professionals, club officials, and players."



## Bringing the New Course Along

Greenkeeper has complicated problem and must be first class man Mistakes made after construction can seldom be rectified

By EDNARD B. DEARIE, JR.



Edward B. Dearie, Jr.

ONDITIONING a new golf course is a complicated problem and the greenkeeper responsible for the result is shouldered with no light responsibility. Unless he is a first class man, backed with considerable and diversified experience. and has a sound workable plan for efficient and economical operation, he will fail. But properly qualified greenkeeper working

in conjunction with a qualified golf architect will be able to develop a course with the utmost economy and attractiveness. He will be able to provide a course with which his club may be justly proud.

Standards of greenkeeping are being raised each season and qualifications of greenkeepers are being raised also. Secure a greenkeeper who knows the fundamentals of golf course maintenance. Such a man should know turf, grasses, drainage and irrigation. He should have a knowledge of elementary chemistry and landscaping. He must know golf both in theory and practice so that his judgment will be recognized by his chairman.

### Greenkeeper is Specialist

T HEREFORE, the greenkeeper who has mastered his business is somewhat of a combination of engineer, chemist, artist, agriculturist and mechanician. He is truly a versatile specialist of high order, a master of the complicated factors of greenkeeping.

An extremely close relationship exists between construction and maintenance. This fact is often overlooked. Also there is a tendency to hire the greenkeeper **after** the architect has completed his work. This is manifestly unfair. The greenkeeper should be called upon to express his opinion and judgment regarding the cost of maintaining the course before the work is started.

There can be no first class golf course unless the turf is of the right quality. The quality of the turf depends upon the quality of the soil. There can be no great satisfaction in courses —no matter how well designed—where the fairways, tees and greens have a poor stand of grass impossible to condition.

### Engage Greenkeeper Early

IF THE greenkeeper is engaged in the early stages of the construction and can see the course developed from the start, he will be better able to determine the methods of conditioning the course for play. In the past he has had to accept what the architect and construction engineer have turned over to him, starting where the others left off. This was most unfair to the greenkeeper and did not give him a chance to prove his worth.

It is in the initial work that the greenkeeper can prove his ability even more than in routine maintenance. He then has a full knowledge of the soil, drainage system and water supply. He may even make special arrangements to supervise the grading of the greens, tees and fairway before seeding. What has been done before the greenkeeper was engaged is invariably never corrected. He starts off with a handicap which in most cases it is impossible for him to overcome.

Experience teaches us that greenkeepers must understand the elements of nature and the greatest difficulty which presents itself to most of them is the varying condition of soil, climate, rainfall and duration of seasons. All have a direct bearing on what results are to be obtained in bringing a new course along.

Local Conditions Should Be Studied SUCH knowledge is invaluable to any greenkeeper. He should acquaint himself with local conditions. Also, he should accustom himself to profit by his experience. What might be right in one place might be the contrary in another. It is a foregone conclusion that the soils of Florida and California, where the climates



"Beautiful Turf from Tee to Green"

For Your Fall Work, whether in connection with renovating or new construction, late summer or early fall (Aug. 15th to Oct. 1st) is by all odds the best time to sow seed.

Because of the extreme fineness and beauty of turf produced from **Bent Seed**, we recommend the use of a certain percentage of Bent in all mixtures for *Fairways* and *Lawns*. Its superiority for use on golf courses, especially the putting greens, has long been recognized.

For Early Fall Sowing, We Offer

# Grass Seed of Known Quality

### TESTED for PURITY and GERMINATION

South German Bent Colonial Bent Rhode Island Bent (Washington Grown) Bent Stolons

Prices on the above, or any other turf producing grasses, such as Fancy Red Top, Kentucky Blue, Chewing's N. Z. Fescue, Sheep's Fescue, Poa Bulbosa, Bermuda Grass, etc., upon request.

**COCCOOS BENT** We are now convinced, after several years of trials in the different sections nized as the outstanding Putting Green Grass, of the fine turf producing qualities of this Creeping Bent. Use Cocoos Bent Seed for your new greens or work it into existing greens, or wherever a fine and enduring turf is desired.

Per Ib. \$2.50, per 10 lbs. \$22.50, per 100 lbs. \$200.00

 Special formulas for Tees, Rough, Bunkers, Polo Fields, Airports, Club or Private Lawns, furnished upon request

**Remember:**—All our seeds are of the highest quality, obtained direct from the most reliable sources of supply and are botanically true to name. All seeds are new and are cleaned and recleaned until they are brought up to the highest possible state of purity and germination, special care being given to the elimination of weed seeds.

Without obligation, we shall be pleased to send a representative who, from long experience, is qualified to advise regarding grasses and furnish such other information as is necessary for the best results



Specialists in Golf Grass Seeds and Equipment30 and 32 Barclay StreetNew York City

permit year-round play and perpetual growth on greens and fairways, must be organically different from soils in northern and eastern states where the turf is dormant for a considerable portion of the year.

It is not to be expected that the geologic conditions of all parts of such an immense country would be the same. Thus, we find abundant reasons for diversity in soils, temperatures, quantity of humidity, quantity of rainfall and duration of seasons. These all offer exceptional opportunities for study. A knowledge of these elements, therefore, is essential to a proper understanding of the principal factors involved in this work of bringing a new course along to a playable condition.

HUBBARD NURSERIES CREEPING BENT STOLONS Washington and Metropolitan Strains Pure, free of weeds, and of one season's growth

DR. AMOS F. HUBBARD, Ashtabula, O.



Give New Life To Fairways This Year. The grass will spread and thicken if properly fed.

### V-C Fairway Fertilizer

supplies just the kind and proportion of plant food needed. A ton of V-C Fairway Fertilizer contains fifteen times as much plant food as a ton of manure—requires less handling.

Does not interfere with playing. Does not bring in worms, grubs or weed seeds. Approved by leading golf specialists. May we send you our booklet "Better Fairways"?

### VIRGINIA · CAROLINA CHEMICAL CORP. Lawn and Garden Dept. RICHMOND, VA.



THE SECOND AT CYPRESS POINT This 18-hole course is the newest addition to the Monterey Peninsula group. It is located on the California coast near Del Monte. Joseph Benoit is the greenkeeper



Clubhouse Gardens

By W. D. CHINERY, Greenkeeper York Downs Country Club, Eglinton, Ontario, Canada

Illustrations Furnished by The Templin Bradley Co., C'eveland, Ohio

WHEN writing on the subject of clubhouse gardens it would be well to state more clearly which particular branch of gardening is under discussion, as the term gardens include flower gardens, fruit garden, and kitchen or vegetable gar-

WEIZELIA ROSEA

den, all of which might be included in our title. It is of the flower gardens that L would rather confine my remarks as probably being the more appealing and popular from a golfing point of view. Where golf club officials have had trees, shrubs and flowering plants planted then I think we should consider this a step in the right direction. By observations I have made and from what I hear, there is much activity going on in the way of beautifying the club grounds of many golf courses by these means, and providing things are not carried to the extreme they cannot help improving the prestige of any club. I have in previous issues of the NATIONAL GREENKEEPER, attempted to cover a certain amount of ground on this subject, and in so doing I hope I have not given anyone the impression that I am advocating putting such gardens on a par, say with a city, park or some private establishment. Though the work is identical, the conditions governing the same are vastly different. In the two latter cases there is generally space available for such formations and a flower garden is one of the first considerations, whereas with the average golf club the flower garden must always be a secondary item.

### Indigenous Trees and Shrubs

WHEN it is deemed desirable to plant indigenous trees or shrubs around the grounds for various purposes, it would be well to bear in mind that such subjects have been in most cases seeded and grown in a natural way and on that account will not stand the transplanting with the same measure of success as those obtained from a nurseryman. In all cases it would be policy to choose those plants that are more

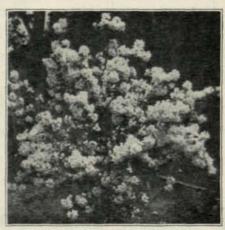


HYDRANGEA, Paniculata Grandilfora



GEUM, Mrs. Bradshaw





MOCK ORANGE, Philadelphus Virginalis

DEUTZIA, Pride of Rochester



### Unexcelled for FALL Fairway Fertilization

MILORGANITE is the ideal Fall Fertilizer

- 1. Produces denser heavier turf before winter.
- 2. Is not lost by leaching during winter and spring, so benefits extend into following season.
- Supplies available nitrogen early next spring thus promoting early growth.
- 4. Easily and quickly applied.
- 5. Absolutely free from weed seeds.

Increasing numbers of golf clubs realize the benefits accruing from fairway fertilization. They find it easier and cheaper to improve thin turf with fertilizer than with seed alone.

Let our Soil Technologists help solve your problems. Their assistance can be obtained by addressing

### The Sewerage Commission 508 Market St. Milwaukee, Wis.

Begin fairway improvement this fall by applying MILORGANITE in time to take advantage of favorable weather and early rains. or less isolated as then one would be reasonably assured of securing more roots attached to that particular specimen. When such a plan is decided on and its specimens selected, a good stunt is to open up a trench round such tree or shrub and by doing so you will be able to sever the main roots, always taking care such roots are clean cut.

In some cases it may be desirable to underpin part of soil so as to sever the tap root, if any. If any pruning is desired this can be done at the same time, also some mark put on so as to be sure of the specimen later on. The trench should be filled in after operating. If this work is performed in the spring it will enable such plants to produce a certain amount of fibrous roots during the season and allow of their removal with a better measure of success in the fall or following spring. This method has been adopted with success, and well repaid the slight trouble involved.

During my training as a young man, I was frequently taught the necessity of looking after the little things and that the big ones would look after themselves. Figuratively speaking this is correct. Probably most of us have seen the effect at times of letting the little things slide, the little things we see today and will put right tomorrow, and tomorrow never comes. The little things we see and which appear so insignificant at the time, that we forget or ignore them, and some little things we never see, consequently the mole heap of today is a mountain tomorrow, and the sequel is regret and oftentimes laborious work.

When a large quantity of shrubs are to be planted, be reasonably assured that you are thoroughly prepared, also have a proper understanding with your nurseryman. When a consignment of shrubs, etc., are received steps should be taken immediately to prepare for eventualities, you may not be able to plant as per arrangements. A large trench should be ready to receive such plants as near to the scene of operations as possible. A good plan is to open up your bundles and check up your plants as to proper quantity and bed them in firmly, so as to exclude air and so keep the roots from drying out. Too frequently have I seen where plants have gone astray through inattention, the roots being covered in a half hearted manner, a little light litter used, or canvas bags thrown over, neither of which will exclude the air or keep the roots in a moist condition. A little observation and a little precaution will often prevent your big job from ending in failure.

### Perennials

NOW with regard to the selecting, grouping, and planting of perennials. This question might be asked—what is a perennial border and a concise answer to that question would be a collection of hardy flowering plants, (these plants, by the by, are mostly soft wooded). But what is more frequently met with is a mixture of these plants in conjunction with shrubs, annuals and half hardy or greenhouse plants.

Experience gained by experimenting and observation, extending over a number of years by first class growers, have proved this plan unsatisfactory in the long run and certainly not one to be recommended. The reasons are various, such as robbing the permanent ripening of the foliage hence weakness and deterioration

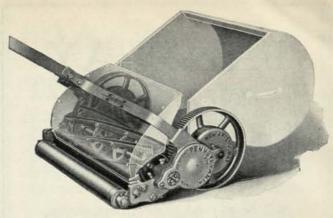


DELPHINIUM

set in and eventually the plants are lost. How often I have heard this remark from different persons in speaking on perennials, I used to have such and such a plant, but I don't know what became of it.

It must not be taken for granted that all such plants have been lost by the means stated, as for instance, extremes of weather are responsible for a number of losses, also the ravages of mice are to be reckoned with in this respect. One can readily sympathize with those who are desirous of keeping their borders gay with flowers throughout the season by introducing annuals, etc., for that purpose, therefore, it is not the annual as a flowering plant one should criticize, but rather the method of planting the perennials by the grower.

If I were asked what I considered to be the correct method of planning out a perennial bor-



## Easier-pushing, Smoother-cutting Than Ever!

Greenkeepers in all parts of the world who have, for years, been using the famous easypushing ARISTOCRAT or PENNSYL-VANIA GOLF high-wheel greens mower will be quick to respond to our recent announcement of the NEW ARISTOCRAT, an improved model which is still easier-running and smoother-cutting.

Higher gearing and other refinements are responsible for the improved efficiency of this NEW ARISTOCRAT, which is especially adapted to the close-cropping of the modern creeping bent greens.

The NEW ARISTOCRAT has a 7-blade, high-speed cylinder,  $5\frac{1}{2}$ " in diameter, and a train of three cut gears on each side, with six pawls to prevent lost motion. Cylinder is equipped with the new Braun Self-aligning Ball Bearings—the wheels and intermediate gears with roller bearings. Made in one size only—19-inch. Net weight, only 58 lbs. Shipping weight, 85 lbs. Price, without grass box, \$40, at Philadelphia; extra for grass box, \$8.

Without obligation to you, we will be glad to arrange for a thorough demonstration on your own greens. Write for full details and for attractive folder describing our "NEW" FAIRWAY MOWERS.

PENNSYLVANIA LAWN MOWER WORKS 1645 North 23rd Street Philadelphia, Pa.



## FAIR WAY WATER HOSE

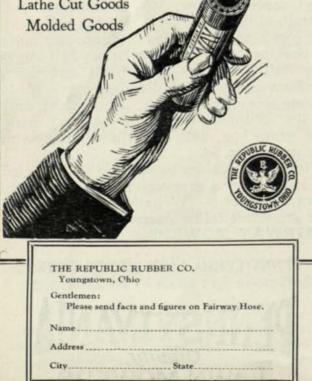
will be as good as new, next season. Life has been built into Fairway.

Fairway will endure much hard work and abuse before losing its usefulness.

Fairway was constructed for long efficient and pleasing service and has won its reputation because of its ability to serve and because of its fine appearance.

> If you want to see a sample of a really good water carrier, use the coupon.

### THE REPUBLIC RUBBER CO. Youngstown, Ohio Belting Hose Packing Lathe Cut Goods



der or anything pertaining to landscape gardening I should unhesitatingly say to follow and adopt the teaching of the greatest of all landscape gardeners—"Mother Nature." Anyone can obtain great assistance from book lore, but that after all, is only the teaching of experts or past masters at the game whose knowledge has been acquired in the main by the assiduous study of nature.

### Flower Borders

THERE have been many plans submitted to the general public for establishing flower borders, but to go into details respecting their different merits would take up too much time and perhaps answer no good purpose. In any case it would be better to decide upon some definite plan when laying out a flower garden or



SPIREA VAN HOUTTE or BRIDAL WREATH

border. Such a plan I would like to submit to you as being one that has been adopted for years and has given great satisfaction wherever it has been carried out.

This plan can be accomplished by setting out each variety in groups or masses, thereby forming a color scheme. The number of plants used should be determined by the height, form and eventual size of the plant as near as possible. For example—three delphiniums, three phlox, of the decussate type, six phlox amoena, five heucheras, pyrethrums, aquilegias, and if the dwarf alpines are used seven or more as desired, and so on.

It is not wise to put all your tall flowering subjects at the extreme back of the border as is frequently the case, and to continue with varied heights to the very front of the border, but to have them distributed more or less through the central part of the border. This will tend to give more uniformity of flowering towards the end of the season and will give a more natural appearance.