



Part of a fleet of 250 cars now
in use at Innisbrook, one of North
America's finest golf resorts.

E-Z-GO **TEXTRON**

Polaris E-Z-GO Division of Textron Inc.
P.O. Box 388, Augusta, Georgia 30903

Write 128 on reader service card

Tees from page 28

improved with the addition of attractive steps, split rail fencing and colorful flower beds.

The raised planting beds were created by the use of 6" x 6" pressure-treated timbers, which not only create areas for colorful flowers, but control traffic on and off the tee.

There is no denying that this work would cost a few dollars. But as each year passes it becomes obvious to all concerned that it was a very wise in-

vestment indeed.

Maintenance

Since it is very close to being a formal design, the size and shape are permanent. All of the planting beds are edged with redwood boards or 6" x 6" timbers. This means minimum maintenance is required in order for the design to hold its shape.

The clipped hedges serve two purposes. One side will be kept at 5 feet in height. This will protect the annual

year for spring flowering bulbs and fall blooming Mums.

Of course, in the warmer climates the display of flowers could be a continuous "spectacular" as the TV people might put it.

It goes without any argument that the final design for any such tee landscape must be appropriate not only to the geographic area of the country but to the local scene as well. As one example, we might picture a clubhouse of colonial architecture with a pro shop done in modern modular design as is often the case today. In this instance, a landscaped waiting area or 1st tee area can act as a buffer between the two different kinds of architecture as well as providing a pleasant outlook for the golfer.

Angles

If the tee planting is informal and uncomplicated, a most important fact to keep in mind is ease of mowing the grass. Should planting beds be a part of it, try to design their outlines in such a manner as to allow a free continuous movement of the mowing machines. If geometric angles are involved, keep them at least 90 degrees. Anything less will mean too much hard trimming to keep it maintained easily.

Slopes

Avoid open planting beds on sloped land. This invites soil erosion problems. Build retaining walls in order to have flat beds.

Hedges or Screen Plantings

There are times when clipped hedges can be used to great advantage at certain tees. They can act as a windbreak on the one hand and also as a safety barrier for flying golf balls in a tight area on the course.

Hedges can also solve the visual problem when a tee and a green are so close to each other that there is no space for tree plantings. Care must be taken in selecting the type of plant for these hedges. Some, such as the California Privet (*Ligustrum ovalifolium*) have such vigorous root systems so as to create a health hazard to the fine turf on the tee. In such instances a shield to act as a barrier to the roots will be in order. This would be placed at the tee side of the planting ditch.

Care should also be taken to place the hedge informally (staggered) so that it does not look too rigid in an otherwise natural scene.

Continues on page 34



In the photograph above, a screen planting of hemlocks blocks a view into a dusty service road and acts as a windbreak. Below, retaining walls mean a higher cost per tee, but the beauty is worth it.



flowers from the persistent west winds, and at the same time screen out an entire parking lot. No cars will be visible. The remainder of the hedge will be kept at about 3 feet high for design purposes only.

The personnel in the pro shop can see right through the "garden" out to the very active (and landscaped) usual first tee and up the 1st fairway.

The major work required to keep this beautiful tee in fine condition is to prepare the annual flower bed areas,

planting the annuals and keeping the bed clean cultivated after each major rainfall.

This takes care of weeding and eliminates the need for a mulch. The Japanese Yew hedge needs only an annual shearing in early July. Naturally, the fine turf (bentgrass) has to be cared for as usual.

This keeps annual cost and maintenance to a minimum. If you cared to extend the blooming season, it might cost you a small amount more each

Introducing the Front Line.TM The first mower built tough enough to be a Cushman.

There's a good reason why Cushman has been around for such a long time: We build equipment that lasts a long time.

And that's never been more obvious than with our new Front Line rotary mower.

Built for keeps.

The Front Line's 72" mower deck is made of 12-gauge carbon steel, reinforced and arc welded. It has a multi-disc PTO clutch, direct drive to the deck gear box with a sealed and lubricated shaft drive. The hydrostatic transmission is driven by two continuously engaged "A" section belts with self-adjusting tension.

There's no need to worry about overloading the Front Line's engine. The combination of our high torque engine and specially designed mower deck allows you to mow tall weeds and fine grass.

Superior performance.

The Front Line's cut in fine grass is so smooth, you won't believe it was made with three separate blades. That's because the blades overlap 1½" to reach every inch of grass in the full 72" swath. Also, the cutting height is adjustable to eight positions, from 1" to 4½" in half-inch increments.

Operating the Front Line couldn't be easier. With individual front wheel brakes, and wheel-type steering controlling a single rear wheel, you get tight maneuverability and better control on varying terrain.

The Front Line's mower deck makes your job easier, too. It extends more than a foot to

one side, so you can trim right up to fences or trees. And it lifts hydraulically for transport over curbs. What's more, a large capacity fuel tank lets you work up to 6 hours between refills.

100% Cushman.

Most rotary mowers use engines built by outside suppliers. Not the Front Line. Its 18-hp, air-cooled engine is all-Cushman. So is the differential. And the PTO drive. Which means all parts and service are provided by your Cushman dealer.

Send us this coupon today, and we'll tell you more about the new Front Line: The only mower built Cushman-tough.

80-CUT-5



YES, I want more information on the new Front LineTM rotary mower. Prove to me that it really is tough enough to be a Cushman.

Name _____

Title _____

Address _____

City _____ State _____

Zip _____ Telephone _____

CUSHMAN[®]

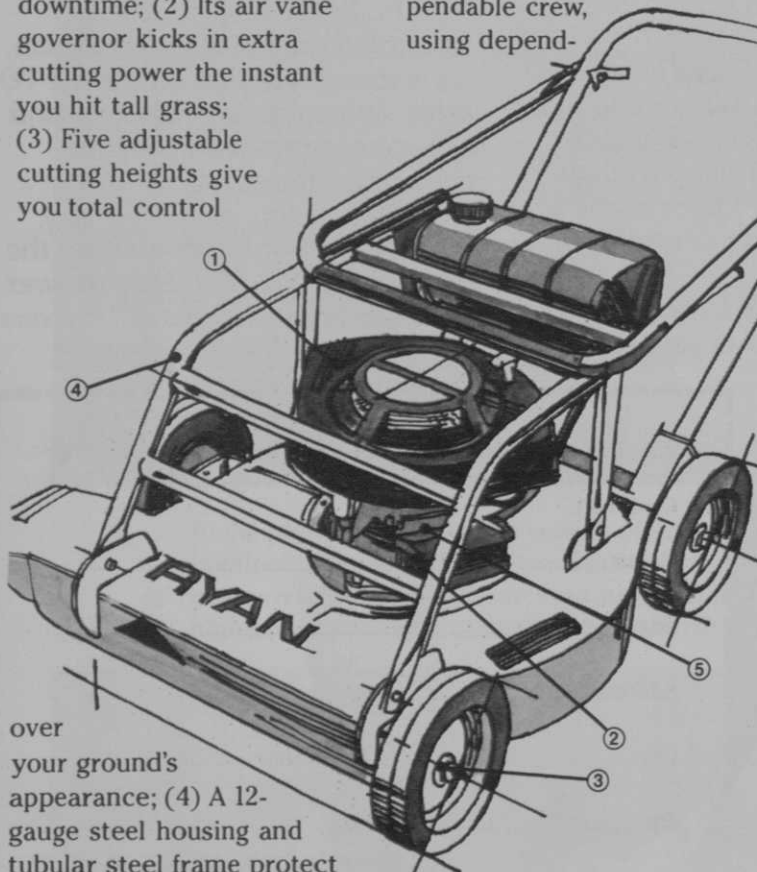
2054 Cushman, P.O. Box 82409, Lincoln, NE 68501
402-435-7208

The Front Line.
Tough enough to be a Cushman.

There just isn't another mower built like Ryan's.

After just a year in the field, the Ryan Commercial Mower has attracted a lot of attention. It just may be the toughest high-performance mower you've ever seen. Here's why.

- (1) Its simple 2-cycle engine has fewer moving parts, so you get a longer life cycle of power with less downtime;
- (2) Its air vane governor kicks in extra cutting power the instant you hit tall grass;
- (3) Five adjustable cutting heights give you total control



over your ground's appearance; (4) A 12-gauge steel housing and tubular steel frame protect the engine as you cut around shrubs and fence; (5) There's a fuel-efficient fixed-jet carburetor.

And Ryan's modular parts replacement system helps

you save on repairs. Instead of rebuilding the engine parts you can replace the entire component. Economically. And fast.

With operating costs getting higher all the time, you need to get the most out of every hour's wage you pay. That takes a dependable crew, using depend-

able equipment. Like the Ryan Commercial Mower.

Ask your Ryan dealer for a demonstration, and see for yourself how we build a mower. 80-CUR-3



The Commercial Mower

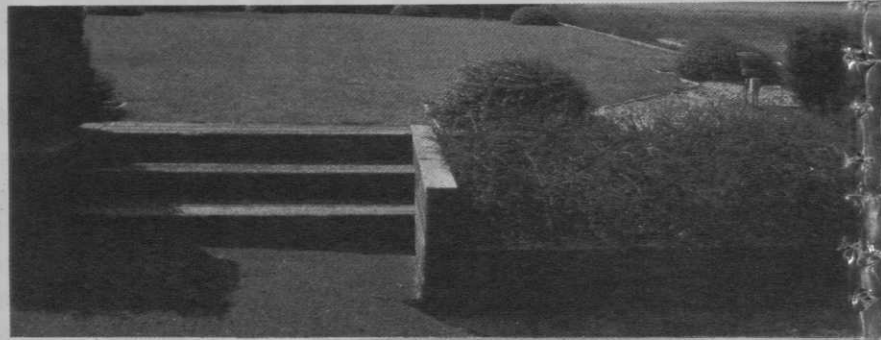
RYAN
TURF-CARE
EQUIPMENT

Day-In, Day-Out Performance.

3004 Cushman
P.O. Box 82409
Lincoln, NE 68501
402-435-7208

Write 107 on reader service card

Tees from page 32



Top, if steps are not of the right design proportions, golfers will not use them and a worn area will develop to either side. Bottom, this is another view of the tee at Faragote from the practice green.

FOR OVERSEEDING DERBY IS THE BEST OF THE LOT ... BY A LOT

Derby is the leader in a new generation of turf-type ryegrasses because it performs so well in an endless variety of situations. And it's clearly superior when used to overseed dormant native grass on greens, tees and fairways.

Tough enough for the turf at the Rose Bowl and Super Bowls XIII and XIV, it is fully capable of producing a dense, even putting surface that will hold its color and quality when cut consistently to 3/16 inch.

A dark green grass, it germinates in a matter of days, is drought-resistant, responds rapidly to fertilization, mows beautifully and holds its color even when chill, drying winds knock the bents off balance.

Derby Turf-type Perennial Ryegrass

- Germinates in less than a week under ideal conditions
- Produces a handsome, dense, dark-green surface that will putt true
- Thrives during chilly weather when consistently cut to 3/16 inch on putting greens or at 1 inch or 1½ inches on tees and fairways
- Tolerates a wide range of soil types from heavy clay to sandy
- Persists in heavy, compacted, poorly drained area where traffic is not intense

Derby is registered with the Plant Variety Protection Office, P.V.P.A. No. 7500009

A Product of **INTERNATIONAL SEEDS, INC.**

Distributed By

Bingham  **SEED COMPANY**
Booth No.: 312
P.O. Box 1166, Jacksonville, FL 32201 (904) 768-1503

Double tees

Ocasionally, we come upon a double tee serving two different holes. Try to make these tees wide enough to support a divider planting of small trees and shrubs. Flowers could be used in the planting bed spaces to add even more interest.

Avoid large trees when planting to divide double tees serving two holes.

Avoid large trees in these plantings because of their large root systems. Such plantings also add to the safety factor. Beginners can easily "heel" a tee shot at almost right angles to the intended line of flight. Golfers on double tees, separated by plantings, would be much safer from such accidental shots.

Golfers will be safer from accidental 'heel' shots by divider plantings on double tees.

Shade on or near tees

When the sun is high in the sky a bit of shade on or near a tee is truly a welcomed gift. If you have the space to spare, a large shade tree can be strategically located so that even though the tree trunk is a good distance from the tee, the shade will be on it. This is the ideal way to have your cake and eat it too.

If such space is not available on your course then you resort to a smaller tree and place a bench under it. It can be a distance from the tee if need be. In case of a back-up of players, they can wait their turn in the cool shade of such a tree. These smaller trees can very often be flowering types to add a seasonal touch of color to that area.

Elevated tees

In hilly country, many of the tees must be surrounded on one or more sides with retaining walls or large sloped grassed areas. This change in elevations means higher costs per tee, but they also lend themselves to some really attractive solutions.

In New England and other locations where rocks and boulders abound in every direction, we have seen some really beautiful rock retaining walls holding up the tees. Very often natural wild flowers and vines will manage to grow on their own in such "dry walls".

If the height is much over 4 feet then two or more walls should be designed with a level planting bed between them. Flowers in these "planters" could really make spectacular summer scenes around the course.

If over four feet, two walls should be designed with a level planting bed between.

Pressure treated timbers (real railroad ties are hard to find anymore) are also very useful for this work. Be certain **not** to try to save money by using "dipped" timbers. In rainy country these "bargains" will decay in a very few years. Costs of rebuilding such walls will be high. Better not to do it if it can't be done right in the first place.

Steps

If steps are required to approach or leave the elevated tee, then heed these words. If steps are not of the correct design proportions, the golfers will not use them except for the first couple of times.

Poor design results in steps that are out of proportion. A good rule to follow is that the sum total of inches of both the tread and the riser shall equal between 18 and 22 inches.

Comfortable steps should have risers (vertical height) of five to six inches. The tread (horizontal) would then be from 12 to 16 inches deep.

Not only do these figures conform to most human body movements but it will also allow a person with a hand-drawn bag cart to pull it up and allow it to precede him on the way down.

If there are more than eight steps required, then a landing should be designed into them to give a "breather" on the way up. These landings very frequently should also be a turning point for the change in the direction of the steps that will follow.

If you have tee steps on your course

and the golfers have worn a path on either side of them, check the design measurements of riser and tread. Often you will be surprised to find risers that are eight or more inches high and treads that are from 2 to 3 feet deep. These steps simply will never be used as they were intended.

High tees

If your tee surface is supported by retaining walls then there is the ever-present danger of a golfer falling over the edge. This is another sound reason to have fences, hedges or flower beds along the edges of such areas. If you are a golfer yourself you know how easy it would be to step off during a period of intense concentration.

While we are on the subject of tees, all too often we see tees that are not aligned correctly with the center of the fairway. If you intend to dress up such a tee you might also consider a realignment job of the front line of the tee as a part of the new design.

We hope you don't get the impression that we are suggesting you landscape every tee on your course. Rarely will that be the case. However, each course can stand some improvement or at least the 1st and 10th tee. Just which tees should be so treated can be decided by a grounds committee. Also in some instances, we know of Superintendents who have the expertise and the interest who might decide to take the lead themselves in suggesting such innovative ideas for the improvement of the course.

The safest way for good design would be to hire a landscape designer or landscape architect. Design is their business and they know the plant material that will flourish in your area.

If the club can afford it, a landscape contractor can execute the job. If you, as a Superintendent, feel that your own labor force could plant it in a professional manner, than go ahead. The drawback to such an approach is the fact that these jobs come during your most busy work season.

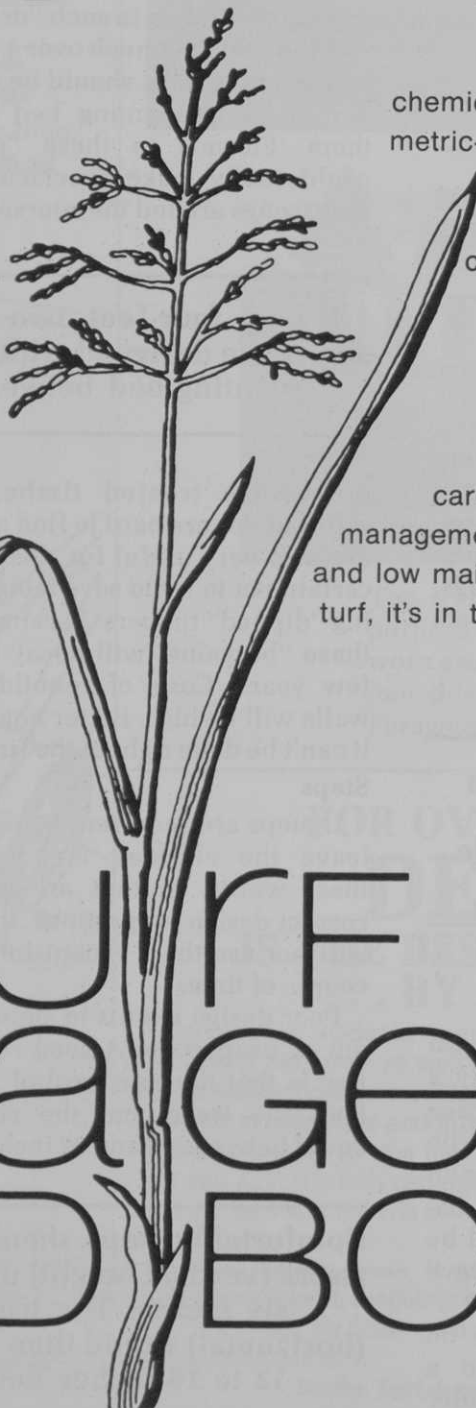
If money is a factor, you can do the work in stages or start with very small plants. Also, it is suggested that you delegate special people on your labor force the responsibility for the careful maintenance of such landscaped areas.

This is one work effort that will give spectacular results (and long-lasting too) for a relatively small investment. Why don't you try it? **GB**

Finally, An Aid For Teaching Turfgrass

Superintendents, Contractors, Lawn Care Managers, New, On-the-Job Reference. The Turf Managers' Handbook is a comprehensive, organized approach to turfgrass science and care. It has been designed and written by leading turf specialists from Purdue, Dr. William Daniel and Dr. Ray Freeborg, for on-the-job reference and as a text for students.

The book contains 150 illustrations and 96 color photographs. Data includes 240 tables and forms. Included are specifications for rootzones, employment, calculations for



chemical applications, and extensive metric-imperial conversion. Business and technical aspects of turfgrass management are covered in this 424-page book. Planning, purchasing, hiring, construction, and plant selection are put together for easy on-the-job reference. Markets covered include lawn care, sod production, golf course management, cemeteries, athletic fields, and low maintenance areas. If it concerns turf, it's in the Turf Managers' Handbook.

TURF managers' Handbook

Ordering Information

Please send _____ copies of the hardback (\$18.95 ea.)
_____ copies of the paperback (\$14.95 ea.)

A shipping charge of \$1.25 per book must be added.

A check or money order for _____ is enclosed.

Please charge to my VISA or MASTER CHARGE (circle one)
account no. _____, expiration date _____

I understand that delivery may take six to eight weeks.
Quantity and bookstore rates available upon request.

Signature _____

Name (Print) _____

Address _____

City _____ State _____ Zip _____

Send to:
Books Department
Business Publications Division
Harvest Publishing Company
9800 Detroit Ave.
Cleveland, OH 44102



**This is quality
Sulphur Coated Urea
from C-I-L.
It is the prime
ingredient in
outstanding blended
fertilizers from
major manufacturers
from coast-to-coast.**

You can recognize it
by how it looks
and how it grows grass.

**Try it
and let your grass be the judge.**

Quality S.C.U. (32-0-0) from C-I-L
is a proven source of
slow release nitrogen, formulated
to feed turf the way it should
be fed...daily.

For Information, Sales and Service

Contact: P. Buckley
C-I-L Inc., P.O. Box 5201
London, Ontario
N6A 4L6
Telephone 519-672-9220



Professional Turf Products
A division of C-I-L CHEMICALS, INC.



INTERNATIONAL HARVESTER

NEW POWER. NEW PULL. NEW PERFORMANCE. INTRODUCING THE INTERNATIONAL 284 DIESEL.

The new International 284 Diesel has everything you've wanted in a compact tractor.

Smooth, reliable power from its 30-hp, 3 cylinder diesel engine. A 2-speed rear PTO that delivers 27-hp*. And an easy-shifting transmission, with 8 forward speeds and 2 reverse.

The 284 diesel can also deliver more pull in its optional 4-wheel drive configuration. On all types of terrain, the 4-wheel drive delivers added lugging power and extra mobility.

Performance is assured by a long list of standard attachments: hydraulic brakes; position controlled Category-I 3-point hitch; differential lock; full instrumentation. And a wide range of attachments are available for the 284, including the International 60" rotary mower, sickle bar mower, loaders, 3-point hitch post hole digger, dozer blade and many more.

Every compact tractor in the International line is built for years of dependable service. Because like every International tractor, it's the product of over 75 years of tractor engineering experience, with parts and service backup only International Harvester dealers can deliver. IH Credit Corporation financing and 12-month factory warranty protection make International the right decision in compact tractors.

The International 284 Diesel. Newest in the growing line of professional compact tractors.

See it at your International Harvester dealer now.



The International tractor line: 982 Cub Cadet (19.9-hp), 184 Lo-Boy (18.5-hp, 284 Compact Tractor (28-hp gas), 284 Compact Tractor (30-hp diesel with 4-wheel drive).

*Manufacturer's estimate.

Write 130 on reader service card

The New 1810...

Ditch Witch meets you halfway.

Looking for a trencher that's a bit more than a handlebar machine, but not quite as much as our 2200 riding unit? Now you can stop searching...the Ditch Witch 1810 meets you halfway.



This little 18-HP-class trencher has a unique design which locks all four wheels into equal drive at the push of a pedal. Ground drive is hydrostatic... same as our big R100 model. A pedal-engaged master clutch permits quick cold-engine starts and will disengage all functions.

The 1810's all-in-one, single gear box design houses the differential, hydraulic pump drive and transmission. It's also the hydraulic reservoir... a one-location time saver when it comes to routine hydraulic checks and regular maintenance.

Pre-set and self-adjusting belt tension, speed feathering control, hefty 20,000-pound-test digging chain... all these features and more. And in a cost versus payback challenge, the 1810 offers the labor and time-saving returns of many larger, higher-priced machines.

Contact your Ditch Witch dealer for a free demonstration. Call Toll Free (800) 654-6481 or write for more details.

Sounds like a big little trencher ...
tell me more!

8-80/CB

Check one or both:

- Please send me information on the 1810.
- Arrange for a free, no-obligation demonstration.

Name: _____

Company: _____

Address: _____ Phone
A/C: _____

City: _____ State: _____ Zip: _____

CLIP AND MAIL TO:


Charles Machine Works, Inc.

P.O. Box 66

Perry, Oklahoma 73077



DITCH WITCH IS THE ANSWER!

Ditch Witch and  are registered trademarks of the Charles Machine Works, Inc.

Write 120 on reader service card