List Prices
T14 Regular Brackets — "A" 14 in. Wire Spoke Wheels ... $33.95
T14PO Pipe Organ Type — "B" 14 in. Wire Spoke Wheels 33.95
T11 Regular Brackets — "C" 11 in. Disc Wheels ............ 29.95
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Regular Pro and Club Discounts.
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Completely Automatic
Drop The Handle — It Folds
Lift Handle — It Opens

All steel, automatic ball bearing. The handle does the work. Long handle, no adjustment necessary. Universal balance. Stands erect either closed or open. Flexible body torsion and retractable wheels. No wing nuts, no sliding arms, no push buttons, ratchets or complicated mechanism.

Chamberlin Metal Products
1466 W. Madison St., Chicago 7, Ill.
Please ship _______Kolapsi Karts, Type.
Please send complete information about the Automatic Kolapsi Kart for (resale) (my private use).

Name
Address
City State
Club Position

May, 1952
ing is accomplished by the opening of the contact or breaker points which interrupts the flow of current in the primary winding which induces high voltage in the secondary winding causing a spark across the electrodes of the spark plug which fires the combustible mixture of air and fuel in the engine. The condenser serves to reduce burning at the contact points and intensify the induced voltage in the secondary circuit.

Preservation of the component parts of ignition consists of protection of these parts from dirt, oil and moisture.

Restoration to factory standards involves cleaning and adjustment of moving parts to factory specification. I make no attempt to advise you except that you should consult your operating manuals for specifications and be accurate.

Periodic cleaning of ignition parts, cleaning and adjusting of contact points, checking of the air gap between the magnet and coil core, and cleaning and adjusting of the spark plug is like a shot of vitamins to your engine and cheap insurance for your blood pressure and disposition. Badly burned contact points, suspected condensers or coils should be replaced. These latter parts can be tested at your local garage or service station.

Spark plugs when unduly fouled or burned should be replaced with plugs of the same heat range as supplied by the manufacturer except that in some conditions of excessive operating temperatures a colder plug may be indicated while in some conditions of light loads and much idling a hotter plug may improve operation. Experiment cautiously when you suspect either of these extremes may dictate a change of heat range of the plug.

Second Factors — Cooling, Exhaust

Secondary factors of engine production include: the cooling system and the exhaust system.

On water cooled engines fan belts must be maintained and radiators periodically cleaned of grass clippings and dirt on the outside as well as rust and sediment on the inside.

On air cooled engines periodically remove grass clippings from fans, blower housings and fins or overheating and damage will result.

Exhaust systems are quite simple but do accumulate rust and carbon resulting in back pressure and loss of power.

On two cycle engines, cleaning of the ports and muffler are recommended at 100 hr. intervals by the manufacturers.

Locating the Trouble

Should your engine stop or fail to start why not diagnose the trouble instead of sweating over a starter rope and turning the air blue?

To test compression grasp the starter pulley or shaft and twist rapidly. On two cycle engines a compression point should occur every revolution. On four cycle engines every other revolution.

To test ignition remove the spark plug and hold the spark plug wire ¼" from the cylinder head. Spin the crankshaft by hand or with the rope. The spark should jump this gap regularly and if it does the ignition is adequate.

To test carburetion pour ½ teaspoon full of gasoline in the spark plug hole, clean and replace the plug, attempt to start the engine. If it fires once or twice and stops, carburetion is the sickness.

Should these tests of these three factors indicate that one or more is faulty, immediate and thorough restoration of this factor is essential.

Your engines are, for economic reasons, not unlimited in power but are usually adequate for the job to which they are applied. Avoid overloading by proper maintenance of the tool whether lawn mower, sprayer, pump or other. Work these tools at the rate for which they are designed. Overloading causes over-straining, and overheating, and shortens the life of your engine out of all proportion to the time saved.

Prior to the war, when suitable fuel was available our engines ran on test at full load with full throttle for 2000 hrs. with only minor adjustments and were still within factory tolerance for wear. Today, however, lead and gum adversely affect valve life and combustion chamber deposits necessitating valve overhauls at from 400 to 600 hr. intervals.

Dirty air or oil can ruin your engine in 120 hours.

I get the impression as I travel the country that operators think engine engineers are dumb. I am constantly asked "why don't they build them this way", or "I had to change this piece or part so it would work". It may be there are some dumb people in a large manufacturing organization, but believe me their work never gets out to the operator except by chance inspection failure.

If these operators would read and study their operating manuals instead of redesigning their engines in accordance with their limited and often incorrect experience, they would profit more. Make sure your operators are supplied with operation and parts manuals and your mechanics with complete repairman's handbooks available at our service outlets. We want you to get what we are endeavoring to build! Horse power hours per dollar.

Use GOLFDOM'S BUYERS' SERVICE

(See page 93)
Rugged! Durable, rust-proof, high-strength aluminum stands up through years of service.

Light! Featherlite... in and out of the car... over the fairways. Saves the player and saves the greens.

A pleasure to use! Caddy Master has everything to increase the golfer's sport. "Finger-Touch" folding... wheels drop down automatically, or close to compact 14-in. width for storage... at a slight pull on convenient knobs. Rolls as easy as a ball on 12-in. wheels with oilite bearings and semi-pneumatic tires. Completely adjustable to user's height and to size of bag.

Sold nationwide at a maintained price...

$29.95

MODEL CM-88 (Illustrated)
Deluxe Model CM-880 with high luster, lifetime finish—slightly higher.

Folds to compact 14" width.

Over 30 years manufacturing leadership
NATIONAL DIE CASTING COMPANY
3653 West Touhy Avenue
Chicago 45, Illinois
Superintendent’s Program
Sets Year-Around Duties

The old saying about men’s work being from sun to sun doesn’t apply to the golf course superintendent. But what many don’t clearly realize is that the superintendent’s work, in addition to being long hours, goes through the year.

O. W. Young, supt., Moraine CC, Dayton, O., compiled a work program guide that other superintendents, chairmen and other club officials will find of practical interest. The schedule will vary, of course, with localities, weather conditions, specific problems and the type of golf course, but generally Young’s program applies.

SPRING WORK
1. Clean-up winter debris, fallen trees, etc.
2. Spring seeding on honeycombed soil.
3. Haul sand to bunkers on frozen ground, to be scattered at an opportune time.
4. Removal of broken limbs, etc., and pruning.
5. Soil testing for lime and fertilizer requirements.
6. Fertilizer program — greens, tees, fairways (providing poa annua is no problem). It is better to use fertilizer after poa annua has slowed from its early spring splurge.
7. Rolling of all turfed areas after seeding.
8. Dormant oil spray on trees and shrubbery for scab, scale, etc.
9. Get water system, pumps, etc., tried out and ready to go.
10. Clean out and cultivate shrubbery.
13. Assemble gang mowers, etc.
14. Put out benches, markers, ball washers, etc. (clean course).

Don't put off until spring any work that could be done in the winter time, because the spring is always a very busy season and unexpected jobs have to be done.

SUMMER WORK — ROUTINE
1. Mowing.
2. Watering.
3. Comb or pole greens.
4. Aeration and spike discing.
5. Spraying program for diseases, insects and weed control.
6. Bunker work — bank mowing, sand raking, edging, etc.
7. Topdressing.
8. Cup changing.
9. Ball washer, marker, and flag pole maintenance.
10. A kill-all weed program based on pre-determined control values, etc. so the program can be applied readily in emergencies.
11. Summer fertilizer program.
12. Rotary hoe, fairways and tees.
Superintendent should occasionally check with pro on special play and tournament dates.

SUMMER WORK ON BAD DAYS OR WHEN PLAY IS TOO HEAVY TO WORK ON COURSE
1. Service all equipment —
   (a) Lubricate and sharpen mowers, etc.
   (b) Clean barns, pump house, etc.
   (c) Clean shop and tools.
2. Haul away trash, etc.
3. Grind and screen compost.
4. Turn compost piles, etc.
5. Check and repair hose and watering equipment, etc.
6. Mix and store dry chemicals with carriers, for applications on single greens or herbicide use, also if spray equipment fails dry applications are ready to go.

FALL WORK
1. Seeding and fertilization program.
2. Nursery work — planting, etc.
3. Construction, if any, on bunkers, greens, tees, mounds, etc., or sodding jobs.
4. Tiling or cleaning out drains and creeks.
5. Leaf removal to compost piles.
6. Build and turn compost piles, and haul in to be ground.
7. Cover tennis courts for winter.
8. Landscaping, prune trees, and plant shrubbery.
10. Store all benches, markers, ball washers, flag poles, etc., where they can be repaired and painted during the winter months.
11. Any plumbing changes, and repairs. Late fall is an ideal time to check equipment and parts department for needed parts.

(Continued on page 76)
UNCONDITIONALLY GUARANTEED

Tested and Endorsed by your Golf Professional and amateurs all over the country.

The only golf shoe with these important features.
1. No breaking in
2. Extreme lightness
3. The new look in golf shoes.

For Men

No. 1603
Genuine fine white buck with turftan calf trim. With Spikes.

1606 - Genuine White Buck underlined with turftan calf.

1601 All Cedar Tan Veal Calf.

1607 White buck trimmed with Navy.

No. 1603
Genuine fine white buck with turftan calf trim. With Spikes.

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1606 - Genuine White Buck underlined with turftan calf.

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1607 White buck trimmed with Navy.

IN-STOCK SERVICE
— write for catalog —

Designed and Distributed by

THE TED BISHOP CO. INC.
101 TREMONT STREET • BOSTON 8, MASSACHUSETTS
Jim Hamner, Memphis (Tenn.) CC supt. was elected pres., Southern Turf Assn., at the association's annual meeting held at Colonial CC, Memphis, April 8. Reg Perry of Choctaw, Inc., sponsors of the meeting, was elected sec.-treas. Vice-presidents elected: Bill Davis, Gadsden, Ala.; Charles Danner, Nashville, Tenn.; Ed Mattson, Hopkinsville, Ky.; Charles Brown, Chickasaw, Memphis; Fred Knight, Little Rock, Ark., and John Cochran, Greenville, Miss. Bill Perry, supt. of Cherokee CC, Memphis, conducted demonstrations of his aerating equipment and staged field demonstrations of other equipment. On the lecture program were Dr. Glenn Burton of Tifton, Tom Mascaro of West Point, Prof. H. B. Musser of Penn State and J. L. Marzak of Mallinckrodt. The organization was formed in 1947 and now has 125 members. It got going strong after Reg Perry of Choctaw, Inc. attended one of its meetings four years ago at the University of Tennessee. Reg got his company to sponsor following meetings at which leading turf authorities have been on the programs. The association works closely with the Tifton (Ga.) Experiment Station and contributes financially to the Tifton research.

WINTER WORK

1. Check tools needed for complete equipment repairs — stock bolts, greases, and all supplies needed for shop work.
2. Get paint and all repair parts stocked so the machinery repairing can be done with a minimum of time.
3. Snow clearing and road repairs.
4. Haul manure and organics to fairways to be scattered when convenient.
5. Interior painting, etc.
6. All machinery, tractors, mowers, tools, flag poles, benches, markers, etc., should be thoroughly cleaned, repaired, and painted if needed.
7. Water pumps, sprinklers, etc., should be checked and necessary repairs made.

Superintendent should attend Turf Conferences and catch up on back reading of bulletins, etc.


Golf Psychology in Landscaping

The average superintendent concentrates so much on his greens and fairways that he is firmly convinced there is nothing else on the golf course.

There are many clubs where only 50% of the members play golf, and to those who only play a little tennis or swim, there is nothing more relaxing than well landscaped grounds around the clubhouse, and regardless of what your landscape architect recommends, there is nothing more relaxing than color.

A careful selection of trees and other shrubs can provide color the whole season, and for an investment of $100 to $200 and the care of one acre of land, enough rooted material can be planted to eventually take care of the whole course. By planting tight and thinning out as required, a minimum of space and maintenance makes it possible for even the most understaffed course to take care of part of this work.

Most of the shrubs can stand reasonable shade — in fact some prefer it, and the initial planting is the thing that
HARPER FEATURES

Chandler Harper, former National P. G. A. Champion, is now Vice-President and Sales Manager of Professional Golf Company of America.

In 1950 Harper won the National P. G. A. Championship and the Tucson Arizona Open and tied for 3rd in the World's Championship at Tam O'Shanter, amassing a total of 233 Ryder Cup points in the short space of seven months.

Successful operation of a Pro Shop for 17 years, plus his many years of successful playing and teaching experience, have given Harper a real understanding of the problems of a working Pro. He has definitely proved that the Pro's greatest sales advantage is to capitalize on his professional ability in featuring Personalized clubs. The right clubs will lower the golfer's score, build the Pro's reputation and increase his shop sales and profits.

Common sense will tell you that when all the clubs in a set feel the same and are made to fit the individual, he will play a better game. This always makes a satisfied customer for the Pro.

Harper proved these facts from his own experience over a long period of years. His knowledge and enthusiasm over the success of First Flight Personalized clubs led to his present association.

Pros! Write for the free Fitting Charts and confidential price list on FIRST FLIGHT Personalized Clubs. SOLD ONLY THROUGH THE PRO, on the specifications of the Pro.

Chandler Harper displays his new 1952 FIRST FLIGHT Woods and Irons.

PROFESSIONAL GOLF COMPANY of AMERICA, Inc.
CHATTANOOGA, TENNESSEE

WEST COAST SALES REPRESENTATIVE:
E. R. FREDERICKS CO., 416 STATE ST., SANTA BARBARA, CALIF.

May, 1952
Tightly woven of long-wearing virgin flax, scuff-proof, beautiful in any room. Reversible, spike-resisting, moth-proof, practically burn-proof, and easy to clean. Adds distinction to any interior. For address of nearest dealer write:

KLEARFLAX CARPETING
AND RUGS, DEPARTMENT G.,
DULUTH 7, MINNESOTA

Tightly woven of long-wearing virgin flax, scuff-proof, beautiful in any room. Reversible, spike-resisting, moth-proof, practically burn-proof, and easy to clean. Adds distinction to any interior. For address of nearest dealer write:

KLEARFLAX CARPETING
AND RUGS, DEPARTMENT G.,
DULUTH 7, MINNESOTA

GREEN CHMN. & SUPT.
(Continued from page 35)

lary action and the heat causes some wilt, we have found that a great deal of dam-
age results from play. When these cir-
cumstances arise we close the course.

After consulting with the superintend-
et I personally assume the responsibility of the actual closing. Those who have planned their games for the day start their fussing, although I have found that the vast majority are always behind the Green chairman in his decisions. And even the objectors, although indulging in some Durocher lippiness, have come to realize that their objections fall on deaf but ever-patient and friendly ears.

We find the same objections with refer-
tence to the cut of both the fairways and greens. We have had a hard time getting the high handicap players accustomed to slick greens. We cut them about 3/16ths of an inch in the spring, while in midsum-
mer we go to 4/16ths. We have always developed a good thick turf and have to a great extent avoided attacks of algae in spite of the low cut. Here is another place where I endeavor to take the res-
ponsibility off of the superintendent. I find that it pays to let the membership know that the Green chairman is the one responsible for these various practices so

counts. Late fall and early spring suits both the superintendent and the plants, and with the exception of azaleas, bugs are not a problem. When grouped heavily azaleas can be sprayed in a short time, and two sprayings each summer is all that is required.

Just why privet should be always se-
lected to hide the garbage cans has al-
ways puzzled me when there are a dozen flowering shrubs that would do a better job with less care. Where you have a fence exposed to the fairway tie a piece of chicken wire on it and let the honey-
suckle climb. When this is sheared as you would a hedge, you have one of the prettiest pictures on the course, as treated in this way it will flower right through the summer on the hard wood.

Crepe Myrtle in all the colors from white to red cannot be overplanted. In July and August when the greens are begin-
ing to look a little sad, a good planting of this southern shrub, preferably facing east or south, will send the average golfer back to the clubhouse talking about the beautiful color at No. 6 instead of the first thought that came into his head when he saw the green.

Superintendents, to my mind, should be no less psychological than the game they sponsor. — Hugh McRae at Mid-Atlantic Assn. of Golf Course Supts. meeting.

Golfdom
that the superintendent is not subjected to 300 bosses and is not interfered with by the membership. The result has not been perfect. The superintendent still comes in for some ribbing, but I am sure the policy has tended to reduce it.

**Long-run Responsibility**

A conscientious chairman must be mindful of the fact that he and the superintendent must exert every effort to provide the best possible course for the pleasure and pride of the membership. But he has learned from experience that most members are somewhat myopic. He is interested primarily only in the immediate. He finds it difficult to understand, for example, why we should spoil a beautiful green and his game in the early spring by brushing and topdressing. Naturally he knows nothing of the consequence of matting and therefore it means nothing to him. He is thinking in terms of today’s play and not the tomorrows.

The Green chairman therefore must support the superintendent in his programs when known to be beneficial even though they risk the displeasure of members. Like the surgeon who may amputate a leg to save the patient, the Green chairman and superintendent must be willing, however reluctantly, to displease and be criticized and spoil a few days play rather than multiply the bad days of the future.

For the superintendent and chairman to do a good job therefore and succeed in giving the most pleasure to the members they must not be appeasers in order to postpone criticism. They must not be thin-skinned and permit the jibes and taunts of a few or even many of the members to get under their skins and tempt them to entertain the idea of throwing in the towel.

Acting from a genuine motive—to do everything to build better turf for the members’ enjoyment—the superintendent and Green chairman must pursue their efforts willing rather to be replaced than to let possible criticism induce them to avoid a necessary, if annoying, practice.

It must not be inferred from the above observation that constructive criticism and suggestions should not be welcomed. Indeed they should be invited. In our interest and absorption in our work we often neglect many details of grooming the course, or some detail or convenience, when a suggestion or criticism of a member may be a welcome reminder. I have profited by many constructive suggestions over the years.

The Midwest Turf Foundation is providing valuable assistance to the Course Supts. Assn. in St. Louis, organized about eight years ago, which has resulted in greatly increased efficiency in course maintenance, and a marked reduction in the complaints from the locker room.

---

**Rutledge CADDY SAVER**

Today’s Best Golf Cart

Sells for only $28.95

Here’s a good money maker for pros and golf shops—a cart that sells on sight!

1. Accommodates any style bag.
2. Opens and closes in a jiffy.
3. Light weight.
4. Rolls easily on silent, ball-bearing wheels when open or closed.
5. Strong. Precision built for long service.
6. Priced right.

**Beckley-Ralston CHIPPER**

It’s the biggest selling “extra” club made and one of the famous square-grip short iron Stroke Savers. This Chipper is made specifically for pitch, run and chip shots within 50 yards of the green. It’s 33” long and has practically no sole, permitting the club face to extend far under the ball. Gives golfers directional accuracy not possible with any other club.

**LARGE REPLACEMENT MARKET**

Beckley-Ralston is one of the oldest and most honored names in golf. Over 1,000,000 of their Stroke Savers are in use—wearing out. Display the Chipper, Putter and Approach Club—then watch them sell! Nationally advertised $9.95 each.

RUTLEDGE PUTTER, the perfect pendulum type with square grip $9.95.

WALLOPER, the iron driver for players who have difficulty using woods, $12.50.

TRAP SHOOTER, $10.95.

Send for literature and discounts

THE RUTLEDGE CO.
3337 Belmont Ave., Chicago 18, Ill.
THE NEW MORAINE LOCUST
(Continued from page 48)

"Thanks to the selective breeding work of an Ohio nurseryman, a new honey locust called the Moraine Locust can be used to replace the American elm. Since it is propagated from male trees only, it goes the American elm one better and eliminates the seeding nuisance which makes the latter tree undesirable at one season of the year. Clean and free from disease, the Moraine Locust promises to give us a tree that will be as near-perfect as we have any right to expect."

Professor F. L. O'Rourke, of the Dept. of Horticulture, Michigan State College, said: "At the present time this selection (the Moraine Locust) approaches closely to the ideal of the perfect shade and lawn tree. In addition to being thornless and seedless, it has excellent structure and form."

The Moraine Locust has won an award by National Jury of Horticulturists in New Plant Selections for 1950.

The tree was developed, patented and introduced at Siebenthaler's Moraine Nurseries in Dayton, hence the name "Moraine." A number of nursery firms across the country have been licensed by Siebenthalers to propagate and help in the distribution of the new tree.

---

PLAY GOLF FOR CEREBRAL PALSY VICTIMS
YOUR CLUB IS INVITED TO JOIN HUNDREDS OF OTHER CLUBS IN THE UNITED STATES HOLDING WEATHERVANE ONE DAY CLUB TOURNAMENTS FOR CEREBRAL PALSY.

**Weathervane Trophy**

To be presented to the winner in each of the first 500 clubs holding a Weathervane tournament for Cerebral Palsy.

This silver trophy is a replica of the Weathervane trophy which goes to the winner of the Weathervane Women's Open championship in 1952.

Expenses of Operation of Weathervane One Day tournaments are paid by Alvin Handmacher so that all receipts from tournament entries go to help victims of cerebral palsy.

Ask your club tournament chairman to include a Weathervane Cerebral Palsy tournament on your club schedule.

*For Information Write to Bob Harlow, Pinehurst, N. C. National Manager for Weathervane Club tournaments for Cerebral Palsy.*