sential functions, such as: reproduction, protein formation, fat synthesis, carbohydrate or sugar utilization and metabolic processes. All living cells require phosphates, therefore there is intensive competition between plants and the lower forms of life for the phosphate of soils. Under ideal conditions, plants obtain a fair share of the soil phosphate unless the soils are so run-down that the phosphates are made unavailable by a chemical process called phosphate fixation.

When grasses are established on highly fertile soil, the soil particles which contain the phosphate in chemical combination are held in place by the network of roots. Old roots die and along with the clippings are attacked by soil bacteria, fungi, and other low forms of life. The minerals, including phosphate, which the dead materials contained, are made available to other plants or lower forms of life.

A resulting residue of organic matter is produced which is dark colored and which serves many useful purposes in the soil. This important organic matter called humus, serves as a physical conditioner of soils by holding the soil particles in desirable aggregates and thus contributes materially to the physical condition of the soil. This humus makes the soil hold more water and at the same time allows more air to get into the soil. Since both air and water within the root zone are desirable for good plant growth, grass keeps improving the soil and in turn grass keeps improving because of the more desirable conditions it creates itself.

All these fine features of grass are based upon the presence of a desirable level of nutrients for establishing a good sod when the grass is planted. Rundown soils with little organic matter or available phosphate make the problem of establishing grass a difficult one. It is therefore necessary in establishing grass to prepare a good seedbed to which has been added sufficient phosphatic fertilizer to create conditions desirable for good grass growth before this soil building effect of grass can become operative.

Within the soil are some vulture substances that have great phosphate consuming power. These substances, compounds of iron and aluminum, combine chemically with phosphate and "fix" it in a condition which is extremely difficult for the plant to obtain. Keeping the phosphate from coming into contact with these elements, iron and aluminum, will increase the effectiveness of added phosphates. This is achieved by banding of the fertilizer or by pelleting the fertilizer so that large concentrations will be localized in the soil.

Once the grass has been established,

"So light... so easy to carry!"



THERE IS NOTHING LIKE IT

PATENT NO: 2364223

It is the one and only full size (15 club) golf bag that is both LIGHTWEIGHT and BALANCED for easy carrying.

A CART IS UNNECESSARY

It is your bag and your players who use them play more golf—and that's good. It is reasonably priced and an outstanding value. You can sell it as low as \$5.00 and still make 40 percent gross profit.

YOUR NEW COST IS \$3.00 -

Standard Model, white or tan, f.o.b. Chicago. (Orders for less than six, 10 cents extra per bag, for packing.)

MORE POPULAR EACH YEAR

Send us your order today.

BALANCED GOLF BAG, INC. North and Noble Streets CHICAGO 22, ILLINOIS



Country Club

BELL TYPE CONSOLE

Golf Ball Machine

Furniture
Styled
for use in
Pro Shop,
Bar Room,
Locker Room,
Lounge, and
Veranda.



WRITE, PHONE OR WIRE FOR COMPLETE
DETAILS AND DESCRIPTIVE LITERATURE

Club equipment and supply co.

29 W. KINZIE ST., CHICAGO 10, ILL. Phone SUperior 7-6900 nature has provided a means for keeping the phosphate available. Around the roots of grasses and other plants is a zone called the rhizosphere which is literally teeming with bacteria. When properly nourished these active minute living cells produce organic substances for which the iron and aluminum have a greater affinity than they have for phosphate. Thus phosphate which has been "fixed" by iron and aluminum is freed and made available for plant use. The cycle goes on and on with little loss of phosphate; however, most soils in the East and South are so low in native phosphates that periodic additions of phosphates are necessary to get the level of soil phosphates high enough to get this grass-phosphate system into its highest effectiveness.

Phosphate is necessary for good grass and good grass makes the use of phosphates produce better grass.

(NGSA convention paper)

Jaycees Add Course Building To Tournament Promotion

Continuing to expand their golf activities throughout the country the United States Junior Chamber of Commerce released early in December a 15 minute, 16 mm sound, color film "Golf for Youth." The production was jointly produced by the USJCC and the National Golf Foundation.

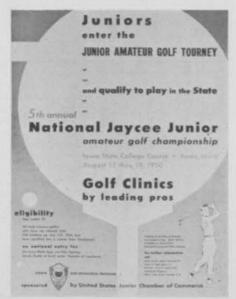
Hugh Egan, Jr., Jaycee sports and recreation director, reports the film has been enthusiastically received by junior chambers, golf associations and country club groups in various parts of the nation and pointed out that the film is available from his office at no cost.

In addition to bringing to the screen a complete history of the growth of the National Jaycee Junior golf program the film also includes shots from Jaycee-sponsored PGA tourneys. "However," Egan said, "one of the most important messages in the film is the need for increased golf facilities across the nation. We have found Jaycee groups coming to the front in this field and accordingly have filmed actual work at Zanesville, Ohio and Springfield, Illinois where municipal installations are now underway sparked by the local Junior Chamber of Commerce."

Another portion of the film alerts the nation's junior golfers to the 5th Annual National Jaycee Junior championship which will be played on the Iowa State College course August 13 to 19th. Over a short span of five years the Jaycee Junior has risen to the largest organized golf program in the nation. Working through a systematized series of playoffs on a local, state and national layout the Jaycee junior golf program last year en-

compassed some 15,000 young golfers.

Egan said the Jaycees this year are pointing towards 500 local tourneys and expect all 48 state organizations to be represented by junior golfers in the starting field at Ames, Iowa. Two days of qualifying play will reduce the field to



This three-purpose poster for the local, state and national junior events has been mailed to all professionals and Jaycee organizations in the United States.

128 with 18 hole match play to be followed through the finals.

Some of the nation's top pros will be on hand at the 5th Jaycee Junior conducting clinics for the youthful golfers during the first three days of the tourney.

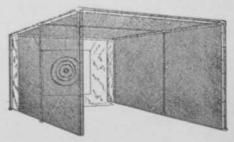
Pointing to the high degree of cooperation that the Jaycees have received from the Professional Golfers' Association and the National Golf Foundation during the past years Egan said that at this early date some 28 state events had been set after spirited bidding from local junior chambers desiring to act as hosts in their respective states. Bids have also been forwarded to some 1900 Jaycee organizations for the 6th Jaycee Junior with a return deadline of April 15th. "We will name the host city for the 1951 event sometime in June," Egan said. "Following this pattern, the local club awarded the 1951 event can send a task force of local Jaycees to Ames, Iowa as observers for this year's tourney. This will insure a successful event the following year and will be in keeping with our national policy of continuing to expand the junior golf program from year to year."

The right start for your players means a strong season for your club...

EDERER GOLF NETS

are now giving players at hundreds of clubs an ever ready opportunity to warm-up before the round, to take lessons and get in needed practice.

THE EDERER "INVINCIBLE"



"Invincible" — the full size Ederer golf net is the standard throughout golfdom for outdoor or indoor instruction and practice. Hundreds of clubs and pros have found the "Invincible" one of their most popular and profitable features in developing better and happier players.

THE EDERER "PORTABLE"



Sturdy, compact, lightweight—handles the full range of iron and wood shots. Ideal for limited space practice, indoor or outdoor. Folds into a compact unit 3 ft. x 6½ ft. x 5 in. Weighs 23 lbs. with backdrop.

Write for tolder and price list.

R. J. EDERER COMPANY

Invincible Sports Nets
HOME OFFICE: 540 ORLEANS ST. • CHICAGO



HANDEE TOOL OF 1001 USES

house. Initial clubs-smooth nicks out of irons and faces of wood clubs and for refinishing operations.

power to grind, drill, polish, rout, engrave, cut, carve, sand, etc. Handee does all these operations on all kinds of material, metal, alloy, plastic, wood, etc.

Get a Handee, first tool of its kind — today's finest, and be sure of ruggedness, dependability, long life and cool running. AC or DC 25,000 r.p.m. Weighs only 12 ozs. Easy to carry and use. Balanced for perfect per-



NEW LOW PRICES Handee only, with 7 accessories, \$19.95. Complete Handee Kit with 51 accessories, \$24.95. Order To-day. Sent postpaid. Satisfaction Guaranteed!

CHICAGO WHEEL & MFG. CO. 1101 W. Monroe St., Dept. G. CHICAGO 7, ILL.

FOOD COST CONTROLS

(Continued from page 46)

say you want the restaurant to break even; so do I. If you want my restaurant to break even you must give me a chance to make it break even. If you want to subsidize the restaurant that is all right, but you will have to raise your dues in this club because the dues in this club don't pay the cost of overhead."

That answers another question that I heard. Somebody said, "Can you set up a budget to cover your overhead?" Of course you can. The overhead is there and the dues should cover it and nothing else - but, they should cover the overhead. When they don't cover the overhead you either have to raise your restaurant prices and bring prices to the point where they will return you a profit or else raise the dues.

Feature cheaper dishes on your menus. Feature some as specials to take away the stigma of the lower prices. "Today's Special" will sometimes sell a fellow at the big tables who otherwise wouldn't order such an item because of "keeping up with the Jones's." I think you know what I mean.

Inventory turnover, that feature of all well-run establishments, too, can be ac-





Don't let spikes ruin your clubhouse floors. Install PNEU-MAT RUN-NERS in locker rooms. corridors, pro-shop over any flooring being "chewed up" by spikes.



- The choice of leading golf clubs
- Spike-resistant, tough
- · Provide soft cushion under foot
- Save valuable flooring from destruction Write TODAY for complete details!

SUPERIOR RUBBER MFG. CO.,Inc. 122 EAST 25th ST. NEW YORK, N.Y.

> Boston Chicago

complished with the help of feature items, "Today's Special" boxes on the menu, clipons, and so forth. Once in a while you will have to disregard your indicated selling prices and feature items below your regular price. Sometimes House Committee policy will compel this, but in the long run if those sort of feature items increase your volume of business, and your menus feature your low-cost profitable items too, you will come out all right on your over-all food cost.

Along with your food cost control go the statistics as to meals served, portions, and so forth, all of which will help you with your buying, help you keep your inventory down, help your cooks in knowing quantities needed for preparation, tell you the items that sell, those that don't, and so forth.

I have always felt our big job was to intelligently present our case to the House Committee and Board with figures they can not brush aside. The fallacy that club dues call for club restaurants to sell food at lower prices than competition still persists in the minds of some club members, while nothing is further from the truth in most cases. Put them on the Boards of clubs and on the House Committee and I think every one of you know that the minute they get in a Board meeting or House



Dealer Inquiries Invited

Exciting NEW INSOLE



D' Scholl's AIR-PILLO INSOLES

Advertised in LIFE, SATURDAY EVENING POST, LADIES' HOME JOURNAL, AMERICAN WEEKLY

A new red-hot seller with the fastest turn-over you've seen in a long, long time. Instantly converts any golfer's shoes into air-ventilated, aircushioned shoes. Such walking ease never before known. Every user tells others about them!

Dr. Scholl's AIR-PILLO INSOLES are beautifully cellophane packaged . . . have strong eye and feel appeal. Come packed in sturdy wire display container, holding 3 dozen pairs, in as-

sorted sizes, Men's 7, 8, 9, 10, 11, 12 and Women's sizes, 5, 6, 7, 8, 9. Complete, only \$14.40.

WHOLESALE \$4.80 DOZEN

Get In On This Sales Bonanza, Mail us your order NOW!

MFG. CO., Inc.

213 West Schiller St., Chicago 10 62 West 14th Street, New York 11





CHAMPIONS

DURABLE mats are CHAMPI-ONS for use in lobbies, hallways, pro shops, locker rooms, shower rooms, and kitchens. They're always safe and dependable and give longer life.

DURABLE Tee-Mats are CHAM-PIONS for use on any tee—driving range or golf course. They're tough. They last for years and years even under the roughest use.

Let Matty tell you about the "Finest Mats Made". Mail the coupon today.

DURABLE

MAT COMPANY

75 N. Pleasant St. NORWALK, OHIO 2926 16th Ave., S.W. SEATTLE 4, WASH.



Dear Matty:-

Please send us informa-

tion on mats for.....

Committee meeting they lose all the business sense they ever had.

Now, you take this food cost control and these statistics so you can know your prices and know what you are talking about. Go into the meeting and just resolutely tell them, "These are the facts of life, gentlemen. You can't dispute this." You will get along a lot better if you have some fellow tell you in there that he don't see why you with your possibly \$200 a day business can't sell something as cheap as the hotel that has \$1000 a day business.

Know your food costs, have your prices set to break even or return a small profit, for in most clubs you will find your dues are not carrying the overhead expenses they are supposed to cover. Give some thought, too, to the combining of food and liquor results. Most hotels today do this, although separate schedules of each department's revenues and expenses are also kept for management information.

I remember a few years ago we got out a form of standard account for city clubs and you have also had one for country clubs. We did a separate accounting in the restaurant and bar, like country clubs always did but we have one sheet that combines the two together and why not? The successful restaurants in your town sell food and liquor, they hire chefs, cooks, waiters, cashiers and everything and when they make up their results at the end of the month they take the cash register tapes, that is their receipt, and they make a profit and they put you fellows at a disadvantage because somebody on your board says, "Joe's Restaurant down here makes a profit, why didn't you?'

If you could say to him, "All right, throw into my restaurant department also the receipts from the bar and then let's see what we are doing." The one good excuse for you to do that, and the logical excuse and the necessity for doing it is: how much of the liquor do you serve in your club by your waiters? In our club the largest amount of our liquor sales goes through our banquet department and, therefore, if we were following out the old system in its entirety the service of all that liquor would be credited to the bartender, the head bartender's department and no part of it to our restaurant, but our restaurant is paying the wages of serving 60 per cent of the liquor business that is being done in it, including everything. That is the reason why one should keep that schedule and have the club used to getting the figures that way so they will know what is being done.

Remember, there are just three ways you can better your operating results:

First: Increase prices Second: Increase volume Third: Decrease costs



Clubs can seldom increase volume because patronage is limited by membership privileges being limited. There is little opportunity for you to decrease expenses, although sometimes there is a possibility here, but in the matter of prices, there is much you can do if you know your costs. Have the figures to back you up and the courage to show your House Committee and your Board what your costs are and why your selling prices should be increased, when such increases are indicated.

To my mind the club is not in the merchandising or propaganda business. You run a club for a certain specific number of members, you offer your wares to that member, not to the public. There is no need for you to try to go out and snare other business or try to induce a man who pays his dues to come down to the club when he doesn't want to.

SPECIAL for MINIATURE COURSES

Miniature golf balls, colored or striped \$2.40 per dos. Miniature golf balls, plain white \$2.20 per dos.

Pencils Gross—\$1.25
WITTEK GOLF RANGE SUPPLY CO.
5128 W. North Ave., Chicago 39, III.

IDEAL SPORT GIFT or PRIZE!

Perpetual Calendar
Any athletic Sun-Ray
figure on beautiful walnut base. 5½ high.
Suitable engraving space.
G-2144 Ea. (no tax) \$6
Write for New Catalog
Edwin W. Lane Co.
32 W. Randolph. Chicago





For Players Who Demand
The VERY FINEST . . .

King's Custom made WOODS

Master Craftsmanship, Superb Designing and the non-chip, no-crack, everlasting (varnish) finish . . . plus the fact that they are handmade to the player's personal requirements, make these America's finest Golf Woods.

We offer GOLF PRIDE "rubber and cork" grips on your new "Kings" or to replace your old grips. Delivery 48 hourrs.

Irving King

P. O. Box 3252 SHREVEPORT, LOUISIANA

CHLORDANE CONTROLS

(Continued from page 54)

In a preliminary laboratory test it was found that the oriental beetle Anomala orientalis Waterhouse, the Asiatic garden beetle, Autoserica castanea (Arrow), and the Japanese beetle, Popillia japonica Newman, were about equally susceptible, but a native white grub, Cyclocephala borealis Arrow, was slightly more resistant to the action of the chemical.

Control of these species was studied also in the field. A treatment at the rate of 10 pounds per acre, applied in April near Bridgeton, N.J., reduced the 1947-48 brood of Anomala by 98.6 percent in 4 weeks and eliminated it in 7 weeks. The 1948-49 brood was eliminated by mid-

September.

Turf infested with Popillia and Autoserica at Moorestown, N.J., was treated with chlordane at the rate of 10 pounds per acre in March, before the larvae became active. The treatment had little effect on either species during the following 4 weeks but after 9 weeks there was a reduction of 87 percent in the Popillia and 68 percent in the Autoserica and after 13 weeks a reduction of 98 percent of both species.

In another test, turf at Philadelphia infested with Popillia, Autoserica and Cyclo-

FRED EATON GOLF CO. - Presents -





7he New PAR-WAY GOLF CART

LIGHT - SIMPLE

COMPACT - DURABLE

One-Year Warranty

POPULARLY PRICED

Patents Applied For

Frank Johnston Hand-Made Putters Eddy Nunn's Pro-Zon Axaline Putters

FRED EATON GOLF CO.

P. O. BOX 129 CLAREMONT, CALIF.
Exclusive Distributor

Locker Trouser Hangers
Panama Gloves
Kinghorn Grips
from Scotland

cephala was treated in May with chlordane at the rate of 10 pounds per acre. Three weeks later there was a reduction of 66 percent in the Popillia and 70 percent in the Cyclocephala. The effect on the Autoserica could not be evaluated because of the light population. By mid-September this treatment had eliminated the 1948-49 broods of Popillia and Autoserica and caused a reduction of 99.5 percent in the Cyclocephala.

Effect on Grass

In preliminary tests chlordane applied to established grass at the rate of 25 pounds per acre, 2.5 times the amount used in control of larvae, had no effect on the color, general appearance, or growth of the following grasses: Redtop, Colonial bentgrass, Astoria bentgrass, Bermuda grass, Orchard grass, meadow fescue, Chewings fescue, perennial ryegrass, Canada bluegrass, Kentucky bluegrass, and rough stalk bluegrass.

No injury with chlordane at the rate of 10 pounds per acre was observed on lawns and golf courses of mixed grasses at Blairstown or Moorestown, N.J., Orange or New London, Conn., Deerfield or Northampton, Mass., or Philadelphia, Pa. Twenty pounds of chlordane per acre had no effect on a lawn of mixed grasses at Moorestown. Forty pounds per acre had no effect on a lawn of mixed grasses at Rye, N.Y., but



KOSAR BRIVING TEE

EASIER

FASTER

CLEANER

The ONLY TEE for Driving Tee Mats

Increases range income by speeding up play 25% to 40%

★ Easy convenience adds to player enjoyment ★ Helps keep Driving Ranges cleaner ★ 50% savings over wooden tees.

Made of the finest natural black gum rubber—there are no screws, springs or special attachments for installation. Just cut a hole in mat and slip the tee through from beneath. Can be replaced in ten seconds.

Send for Free Sample. Used by better ranges everywhere.

2 sizes: Regular 11/2" Longer 13/4"

KOSAR

DRIVING RANGE SCOOP

This scoop is a MUST for all driving ranges. Even with an automatic retriever it is still a necessity to pick up the balls in the rough spots; close to trees, fences, etc.

Specially designed and HAND MADE for long wear and light weight, this scoop will hold from one to six balls at a time. LEFT OR RIGHT HANDED. Comes equipped with Steel Shaft and Golf Pride Grip.

Also — DISTRIBUTORS FOR Flexi-Grip — GOLF PRIDE AND KUSHLITE GRIPS.

KOSAR'S GOLF DEVELOPMENT LAB.

P. O. Box 231

CUYAHOGA FALLS, O.







 One shower accident may cost many times more than Powers

shower mixers. They are really safe and non scald. Temperature of Powers regulated showers remains constant wherever set regardless of pressure or temperature changes in water supply lines. Failure of cold water supply instantly and completely shuts off the delivery. Bathers can really relax and enjoy the best showers they ever had.

MAY WE SEND CIRCULAR H48?

D Please send Circular H4	8 and prices
☐ Have an engineer call	
Name	
	TITLE
Club	

caused a slight yellowing of the bent grasses on a green at Philadelphia. The discoloring was more pronounced when chlordane was used at the rate of 80 pounds per acre. However, this discoloration disappeared in a month.

-- Presented at the meeting of the Philadelphia Association of Golf Course Superintendents.

U. of MINN. DRIVING RANGE

(Continued from page 61)

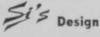
aid during the evening after he has left. Having learned this, Ryman made it a point to have someone with golf teaching experience (not necessarily a professional) on hand at this time. He found several individuals who were glad to take the assignment at no cost to the University, but rather on the stipulation that they collect and keep fees from lessons.

Of the 42 tees in operation at the Minnesota range, only 18 are automatic. These are rented at a cost of 50 cents daily. The remainder are of the door-mat type in which it is necessary to use wooden tees. Ryman believes that the automatic tees are vastly superior, however, for the turnover on them during the periods of heavy play is much greater. "And," he says, "the more completely automatic the tees, the better. Be sure to get the kind requiring



way to increase sales. Pure virgin worsted wool jersey fabric, form-fitting, action-back. 12 colors.

Write for samples, colors, prices



2621 N. E. Broadway

Portland, Oregon