

channels. Another major handicap is that while 97 per cent of professionals' business volume is done by club pros and the remaining 3 per cent represents national and sectional tournament prize and TV money, the publicity division operates inversely by giving little attention to the club pros whose interests need expert publicity aid.

It has even been said that PGA publicity had become political to the degree that constructive criticism not only was smothered but deemed treasonable.

No Malice Apparent

Somewhat to the amazement of delegates and others at and around the rim of the PGA's annual meeting, the controversies and questioning were without rancorous overtones. Regardless of inability to learn what the situation was regarding the Palm Beach Gardens PGA Setup, anybody knowing anything about the PGA realized that Lou Strong had given more to the PGA of his personal effort and money than should be expected of any individual. Strong, a very competent professional, lost pro jobs at Tam o' Shanter in the Chicago district and at Oak Hill in Rochester, N.Y., because he gave too much time to his unpaid PGA job. Wally Mund for years has been a PGA workhorse, doing onerous jobs of value to all professionals. But all this brought the veteran pro of St. Paul's Midland Hills CC no money and only fleeting flashes in the spotlight.

Strong now is professional and managing director of the new Palm Beach Gardens clubhouse and courses. The East course was in play during the annual meeting. Early in December there was a lot of fast work to be done in getting the clubhouse finished, equipment in place, clubhouse grounds cleaned up and the courses in finished condition for the home pro invasion this month.

Strong's new job is on a month-to-month basis at present. There were no other qualified applicants for the task.

Considering that other clubs in the south Florida area have been losing plenty of money in their short season operations, and that the PGA's clubhouse operating experience with the lunch counter and bar at Dunedin was nothing to cheer about, Strong needs the fullest and smartest cooperation of fellow pros. He will get that from the Cantrell administration which realizes it is sharply challenged in inheriting many complex problems. If it can solve these in a way that demon-



One of the last pictures taken of the late Horton Smith was snapped by Photographer Bill Mark at the Ryder Cup Victory Dinner. Horton is seen with Mr. and Mrs. Tony Lema. Horton suffered from Hodgkins disease, collapsed at the Ryder Cup matches in Atlanta, and died shortly after returning to his home in Detroit. He was a past president of the PGA, one of the pro circuit's leading players in the '30s and a winner of two early Masters tournaments.

strates the capacity of pro business management to convert headaches into money it will advance, tremendously, the pro's case for taking a leading role in club business operation.

The PGA "Secrets"

After delegates and others looked at the Palm Beach Gardens PGA layout, they wondered why there was need for keeping the details a secret. The contrast between the PGA's failure to give out information on the status of its new location and the bales of detailed information supplied by the USGA when it was planning and in financing Golf House, and the Western Golf Assn. when it was building its headquarters at Golf, Ill., confused professionals, among them members of the PGA executive committee. The confusion was compounded when announcement was made more than a year ago that the Palm Beach Gardens setup would be ready for the Senior's tournament early in 1963. That was a serious error of optimism.

A PGA vice president admitted at Palm Beach: "Members weren't told the status of the deal at Palm Beach Gardens not because there was anything to hide, but because nobody knew exactly what it was. The guesses at budgets were unrealistic. We knew that. We know the golf club business and what it costs to build courses and operate them. We probably are in

(Continued on page 94)

GRAU'S ANSWERS TO TURF QUESTIONS

BY FRED V. GRAU



Love That Lime!

Many supts. have reason to hold hydrated lime in considerable regard since their experiences last summer. They either had not heard about the value of mid-summer use of hydrated lime or they had forgotten about it. The whole chain of events was triggered by trouble on greens in the Omaha-Lincoln (Neb.) area. The diagnosis made by Dean Peterson, formerly of Omaha CC, was that a leaf-spot complex (*Helminthosporium* and *Curvularia*) was running rampant, apparently unchecked by varied treatments and the best of cultural care. Temperatures of 95 degs. F for weeks or more, plus high humidity in the micro-climate due to "cooling" with water, created conditions favorable to the "melting or wearing out" of the turf. One complaint was that "the grass won't grow".

My suggestion was: "½ to 1 lb. hydrated lime plus two lbs. of powdered insoluble nitrogen material to 1,000 sq. ft." Sprayers went into action at once and results were dramatic. Even with continued ugly heat the disease complex stopped and grass started to grow. To date there has been nothing but sighs of relief that wholesale destruction of grass was averted. No unfavorable results have been reported except where the lime dosage exceeded the recommended rate.

Golfdom's Q & A department has referred previously to the beneficial effects of hydrated lime during unfavorable weather when fungi and algae are having a "field day". At no time has it been referred to as a "fungicide". At best, it

creates conditions in which any good fungicide can be more effective.

Water — Too Much and Not Enough

As the population increases cities expand, industry grows, and fresh water is in ever greater demand. There is a growing problem of providing adequate water for irrigating golf courses. The situation will become more and more troublesome.

In the face of low rainfall and dwindling water supplies it is distressing to see course turf over-irrigated to the point of severe damage to turf. Not only is precious water being wasted but future heavy repair costs are being incurred. Already many courses have faced replanting of greens and fairways which, if the truth were known, suffered severe losses partly because the turf was predisposed to damage by overwatering.

Putting greens of hybrid Bermudagrasses certainly do not need to be watered every night. Bermudagrass fairways can provide excellent playable turf with far less water than many of them receive. Water is used profusely in the effort to keep grass green. It is often forgotten that sturdy grasses such as Bermuda and Zoysia can remain green for weeks with no irrigation if they are adequately supplied with nitrogen. Bluegrass comes in this same category. Often it is said that "we can't afford to fertilize" but there seems to be no limit on the amount of water used.

Water with inadequate nitrogen tends to increase weed population. We have seen many fairways that should be solid bluegrass. With more than enough water and less than enough nitrogen the "turf" is made up of knotweed, poa and clover for the most part.

Potash for Healthier Turf

Regular periodic applications of sulfate of potash are becoming the rule on the

This is the second of two annual roundup articles by Fred V. Grau. The first appeared in October Golfdom (page 72).

DOGGETT FISON PRODUCT

NEWS



**BENT GRASS UNHARMED
BROAD-LEAF WEEDS CONTROLLED**



FIONS MCPP

FIONS MCPP SELECTIVE WEED KILLER DEVELOPED IN ENGLAND — TESTED AND APPROVED IN AMERICA . . . NOW AVAILABLE FOR THE FIRST TIME.

SPRINGFIELD, NEW JERSEY: An amazing British-developed, selective weed killer, called MCPP, exerts rigid control of surface creeping broad-leaf weeds on golf course turf.

Fisons MCPP is an effective control for broad-leaf weeds, chickweed, mouse ear chickweed, red and white clover, and ground ivy . . . MCPP has undergone many tests in the United States to insure its effectiveness.

Known the world around for its fine Turf Products, Fisons Horticulture Ltd. joined with its American affiliate, Doggett Fison Company, Springfield, N. J., 44 year old U. S. Manufacturing Chemists, to bring American golf course superintendents the combined experience and knowledge of British-American groundskeeping.

DISTRIBUTORS NOTE:

Additional representation for the marketing of FIONS MCPP and other DOGGETT FISON products available for U. S. distributors.

DOGGETT FISON COMPANY

SPRINGFIELD, NEW JERSEY

BOOTHS 95-96

Representatives on hand to discuss in detail, all of our outstanding groundskeeping products.

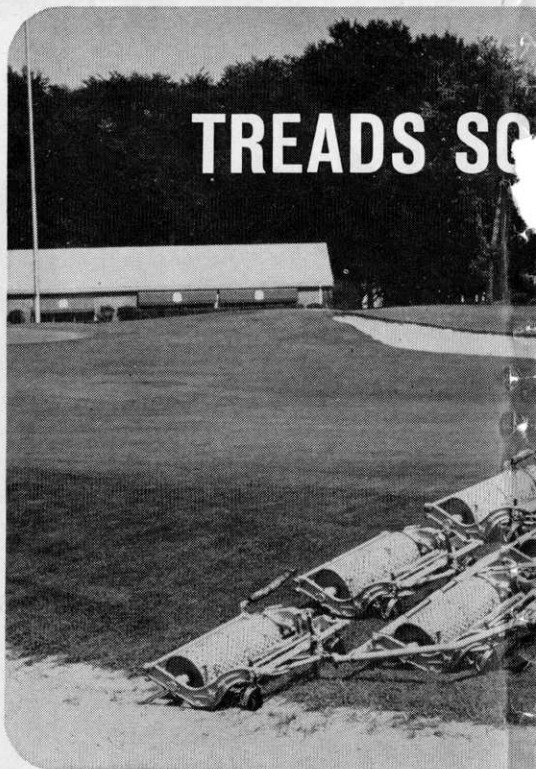




Ford flail mower clean-mows turf grasses as close as one inch; roughs as high as five inches; cuts and pulverizes coarser growths in wooded and undeveloped areas to keep your grounds neat and trim. Tractor-mounted easily and quickly by 3-point hitch for power take-off operation. Available in 5, 6, and 7-foot mowing widths.



Quick on-and-off loader. In 10 minutes or less the low-cost Ford 722 single-boom loader is easily attached to your Ford 2000, 4000 or earlier series tractor. Provides 1,000 pounds lift capacity to 10-foot, 6-inch height with 11 cu. ft. all-purpose or 15 cu. ft. snow and light materials bucket. A manhour saver for every golf course!



FORD 2000 Turf-matched

Mow rainsoaked or watered fairways with greater protection to softened turf than ever before! Ford LCG tractors are now available with optional 18.4-inch low-pressure, high flotation tires. Carrying only six to 10 pounds of air pressure, these broad-base tires exert so little ground pressure that even lush or wet grass springs up behind the tires for smoother, more streakless mowing.

The broad, flat tread eliminates rutting under almost all conditions—no ridges to invite scalping. Tendency to slide sideways on steep slopes is lessened—the wider tread further adds to the stability of Ford Low Center of Gravity design.

These low-pressure "jumbos" can be specified as optional equipment on low-


LIGHTLY!



LCG Tractor with tire equipment

cost, light treading Ford 2000 or the more powerful Ford 4000 LCG series. Ford LCG tractors are available with gasoline or diesel engines, 4- or 5-speed constant mesh transmissions, or exclusive Ford 10-speed, power shift Select-O-Speed. With Select-O-Speed, the operator can power shift, *non-stop*, to any forward gear without interrupting power flow to the drive wheels.

More than ever, Ford is first in value for turf mowing and maintenance. See your Ford Tractor Dealer soon!

PRODUCTS OF  MOTOR COMPANY

FORD

Ford 2000 LCG tractor, above, equipped with 18.4-inch low-pressure, high-flotation tires. In addition to low turf pressure, the broad tread provides superior traction to minimize possibility of wheel spin when starting heavy loads on soft footing.



THREE TIRE OPTIONS

18.4 x 16A 6-
ply low pres-
sure tire.

Dual 8.3 x 24,
4-ply tires.

Single 8.3 x
24, 4-ply
tire.

putting greens of many courses. The trend is toward the fine, white, soluble powder that can be used perfectly with other nutrients suspended in water or dissolved in the spray tank. Convenience of application of the powdered form of potash through the spray tank, alone or in combination with nitrogen or sulfate of iron (powdered, if you please), tends to rule out the crystalline form which dissolves slowly and often clogs the sprayer.

Some ask, "Why sulfate or potash? What's wrong with muriate?" The answer is, "Nothing, but the sulfate form provides sulfur(s) which is another nutrient for bacteria and for plants". In the modern concept of nutrition of turfgrasses, we are committed to providing the best balance possible.

To some it may seem that there is undue emphasis on nitrogen and potash. The reason is that there has been unwarranted use of phosphates to the point where the high levels of P in turf soils only add to the difficulties of producing high-quality turf. Excess P encourages coarse stemmy growth and heavy seed-head formation. Excess P precipitates iron in the transporting vessels inside the plant. Clogged tubes are unable to move nutrients properly from leaf to root and vice versa. Potash, in balance with nitrogen, helps to unclog the tubes and let the nutrients flow as they should. Potash further aids in producing stiffer stems and blades which can take traffic better. Plants supplied adequately with potash have greater disease resistance.

A reasonable balance over a wide area seems to be about 3 N or 4 N to 1 K. For each 3 or 4 pounds of actual N used, one pound of actual potash (equivalent to 2 pounds sulfate of potash) provides an excellent balance. If soil tests show P to be medium to high there seems to be no need for additional phosphorus.

Practical Mathematics for Maintenance Men

The first order of importance in golf maintenance work is that of accurate measurements. Many reliable recommendations have fallen flat simply because turfgrass areas were not known accurately. Most rate recommendations are given for 1,000 sq. ft. (written as M²) or for an acre. It would be extremely helpful if every supt. would mark off with an edger an area 20x50 feet or 25x40 feet for every man on his staff to study and remember.



The 18th green and clubhouse of the new Prestwick CC, located 20 miles southwest of Chicago's loop, is shown in this sketch. Lawrence Packard designed the 6,500 yard course and Bertram A. Weber was the clubhouse designer.

If a green contains 7,000 M² it should be treated for precisely this area. There really is no excuse for not knowing exactly the size of every green and every tee.

We were impressed recently when we were discussing a program with a green chairman and a supt. In answer to the question, "How many acres do you have in mowed fairways?" we immediately got the reply, "41 acres". How refreshing it was, and how simple it was to state exact quantities needed.

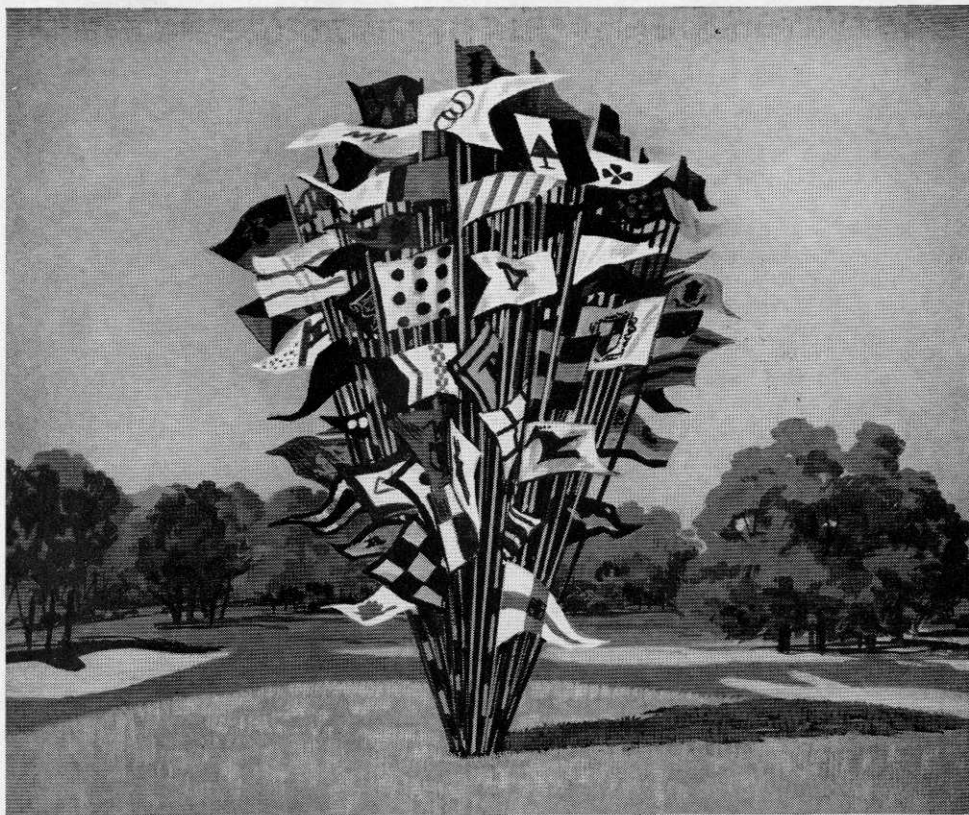
Another point of practical mathematics is the simple problem of calculating the season's nutrient requirements. For the sake of simplicity in the example we will set up nitrogen requirements only although other nutrients can be figured just as easily.

An 18-hole course usually has the equivalent of 20 greens which includes the nursery and practice green. If greens average 6500 sq. ft. there will be a total of 130,000 sq. ft. If the greens are bentgrass and require 9 pounds of N/M² for the season, the total for greens will be 130 x 9 = 1170 pounds N. This figure will be higher for Bermuda greens.

Tees may be somewhat smaller than greens. For example, we will say a total of 100,000 sq. ft. which require 6 pounds N/M² for the season or 100x6 = 600 lbs. N.

Fairways may be bent, Bermuda or bluegrass. Just as an example we will take a low figure of 4 pounds N/M² for the season and assume that there will be 45 acres. There are 43,560 square feet in an acre. 43.56x4 = 174.24 or, in round figures, 175 lbs. N/A. For 45 acres we need 45 x 175 = 7875 lbs. N for the season.

We have figured nothing for lawns, roughs or other areas. These can be calculated the same way.



What do 847 golf courses have in common?

Golf courses are like fingerprints—no two are alike. But there is one characteristic common to 847 of them...Johns-Manville pipe products.

Why have so many of America's golf courses chosen these products? Two words sum it up...economy, efficiency. Take J-M Transite* Irrigation Pipe, for example. Made of asbestos and cement, it can't rust and resists rot and corrosion. It is easy to install and virtually eliminates maintenance problems. And, its permanently smooth interior keeps pumping costs low ... saves power and equipment.

Then there's J-M Plastic Pipe. Used for laterals, this product, too, does its job day in and day out, without fail.

Get the full story on why 847 golf courses in this country use J-M pipe products. Write Johns-Manville, Box 362, GO-1, New York 16, New York. Cable address: Johnmanvil.



*TRANSITE IS JOHNS-MANVILLE'S REGISTERED TRADEMARK FOR ITS BRAND OF ASBESTOS-CEMENT PIPE AND OTHER PRODUCTS.

JOHNS-MANVILLE  **PIPE DIVISION**

To figure our total requirements we add

1170
600
7875

9,645 lbs. of N

needed for greens, tees and fairways for one season.

The next step in our practical mathematics is to convert pounds of N to tons of fertilizer before we can go to the chairman with a program.

A fertilizer that contains 5 percent N will carry 100 lbs. of N in one ton.

$$2000 \times .05 = 100$$

a 10 percent product carries 200 lbs. of N in a ton

$$2000 \times .10 = 200$$

a 20 percent product carries 400 lbs. of N in a ton

$$2000 \times .20 = 400$$

a 38 percent product carries 760 lbs. of N in a ton

$$2000 \times .38 = 760$$

a 45 percent product carries 900 lbs. of N in a ton

$$2000 \times .45 = 900$$

Let's now see how many tons of each product are required to yield the 9,645 pounds of N we need on our 18-hole course. By simple division:

5 percent product:

$$9645 \div 100 = 96.45 \text{ tons}$$

10 percent product:

$$9645 \div 200 = 48.22 \text{ tons}$$

20 percent product:

$$9645 \div 400 = 24.11 \text{ tons}$$

38 percent product:

$$9645 \div 760 = 12.7 \text{ tons}$$

45 percent product:

$$9645 \div 900 = 10.7 \text{ tons}$$

Now we know exactly the number of tons of the material of our choice that we must buy to get the N we need for the results we want. Next, all that needs to be done is to multiply tons x cost per ton and we get the figure we must match against the budget allowance.

The Art of Composting

There seems to be a general increase of interest in topdressing. The folly of mechanically mixing sand, soil and organic matter was dramatically demonstrated at a recent Penn State field day. Freshly-mixed materials, not composted, which were applied as topdressing failed dismally. The organic material floated, the soil entered the turf, and the sand was left on top as a layer.

Composting seems to be a lost art. Time



Harold Reed (r) played the season's 50,000th round in mid-November on Royal Oak (Mich.) GC. He is shown with Don Soper, PGA pro who built the 9-hole munny course in 1961-62 and operates it on a 20-year lease arrangement.

was when alternate layers of sod, lime, soil and organic materials were stacked high and allowed to "ripen" for a year. Cutting down the face and turning the pile mixed the materials. Another year in the pile, with more turnings, developed a homogeneous top-dressing or compost which was a soil and not just a mechanical mixture of ingredients.

Here is a worthwhile suggestion for modern-day composting in an open bed with minimum labor and maximum soil-building and aggregation of particles. In an open outdoor bed blend thoroughly 12 inches or more of a preferred topdressing mixture of sand, soil and organic materials. Lime to pH 7.0 and incorporate adequate P and K (25 lbs./M² of 0-20-20 or 0-25-25 is suggested as a starter) to full depth. Now plant Penngift crownvetch seed, freshly inoculated, at one pound to 1,000 sq. ft. (no more!). Allow the crownvetch (a deep-rooted, perennial legume) to grow unmolested for at least two years. One or two clippings the first year is permissible if weeds are heavy. Allow the cut weeds to lie on the ground. An occasional deep irrigating is permissible if needed.

This method of open-bed composting saves labor and achieves maximum soil-building through the great root system and the nitrogen gathering ability of the crownvetch. When compost is needed simply plow and screen for well-aggregated topdressing that is full of life.



E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
WILMINGTON 98, DELAWARE
INDUSTRIAL AND BIOCHEMICALS DEPARTMENT

December 16, 1963

Friends:

We'd like to extend you a most hearty welcome to the Du Pont exhibit at the 1964 Turf-Grass Show in Philadelphia. This year we're featuring computerized turf disease control; our do-it-yourself "electronic computer" will be fun to operate and will also provide some useful information. Stop at Booth 18. We'll be there ... and most happy to see you!

And don't forget our anecdote contest! Many of you have already received our letters on this. For those of you who haven't, we're collecting stories of unusual and interesting incidents which happened on a golf course. We're giving cash prizes for these, and a special cash bonus for all interesting enough to publish. So keep this in mind because the anecdotes may be turned in at the Turf-Grass Show if your Du Pont distributor salesman hasn't already collected your favorite story.

Best wishes for a very Happy New Year.
We look forward to seeing you at the Convention.

Sincerely,

Robert T. Miller

BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY

Jury Denied Right to Decide If Ball Retriever Is A Business Visitor

By WILLIAM JABINE

A highly debatable custom of long standing and common to many golf clubs throughout the country becomes even more debatable in the light of a decision handed down recently by the third district Court of Appeal of California. It involves the practice of allowing boys who have found lost golf balls to sell them at the pro shop for a nominal sum.

This custom was an important factor in the trial of an action against the Stockton G&CC, brought on behalf of a nine-year-old boy who was struck by a hooked drive while hunting for golf balls close to the boundary of the club's course.

The suit was brought against both the club and the golfer who had driven the ball. The jury brought in a verdict in favor of the golfer but against the club. The club appealed to the Court of Appeal, contending that the trial judge had charged the jury that because of the above mentioned custom the boy was a business visitor or invitee, and that the question of the boy's status on the club's property was a question of fact that should have been left to the jury.

The Court of Appeal agreed with this contention and reversed the judgment against the club, leaving the way open for a new trial. In so doing, the Court of Appeal indulged in a nine-page discussion of the facts of the case and the legal principles that should be applied thereto.

Summary of The Facts

Here is a greatly condensed summary of the facts:

Only portions of the boundaries of the club's property were fenced although there was a three-strand wire fence about 3 feet in height at the point where the boy was hit. There also were "Private Property—No Trespassing" signs. Members had been asked orally to drive off boys found on club property.

The custom of buying balls turned in at the caddie house had been in existence for some 30 years. Balls were bought for five or ten cents each according to their condition and sold to members for 35 cents; balls marked with members' names

were redeemable at prices paid to the boys.

Had Been Warned

The boy who was hit had been warned to stay off the course by his mother and by his schoolteacher and immediately before the accident had been warned off by the golfer who hit him. When the golfer discovered he had hit the boy (his ball had bounced back into the fairway), he put the youngster in a golf car and took him to his home nearby.

The club's pro testified that when buying balls from boys he occasionally inquired as to where the balls had been found, but the assistant pro, who bought about twice as many balls as the pro, said he never asked that question. The club's directors had discussed putting up more fences, but a former president of the club testified that he had visited many golf clubs in California and Canada and that he knew of only one course (in California) that was completely fenced. The club did not post watchmen at its gates.

Was He Invited?

The trial judge's charge to the jury, which the Court of Appeal found improper, was worded as follows: "If you should find from the evidence that the plaintiff child's presence on the country club property at the time of the accident was occasioned by the fact that plaintiff had gone upon the property for the purpose of finding and selling golf balls to the professional, or his agent or agents, then you are instructed that the plaintiff was a business visitor and an invitee . . . and each of the defendants owed to him the duty of exercising ordinary care for his safety . . . and failure to exercise such ordinary care would constitute negligence."

In further discussion of the charge by the trial judge, the Court of Appeal pointed out that it effectually took away from the jury the determination of the fact whether or not the boy was an invitee. The charge undoubtedly put undue emphasis on the custom of purchasing golf balls from boys at the expense of the other evidence. Whether or not a new trial results in a victory for the club, a debatable question remains: Will the small profit per golf ball accumulated over a period of 30 years balance the lawyers' fees that the club will have to pay? (*Clawson v. Stockton Golf and Country Club*, 34 Cal. Repr 184.)