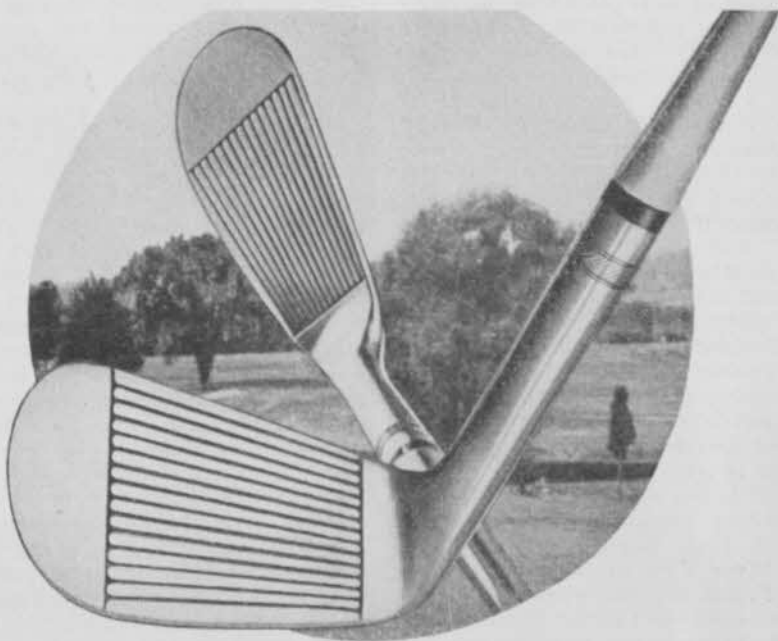


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Our new **OFFSET IRONS** add another powerful selling point to the long list of features which make golfers prefer **KROYDONS**.

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## Big Turnout for Annual Banquet of N. E. Greenkeepers' Club

**M**ORE than 100 greenkeepers, chairmen and others interested in course maintenance attended the annual banquet of the Greenkeepers' Club of New England held at the Charles River CC, Newton Center, Mass., Jan. 11, following the club's annual meeting and election of officers.

Officers of the organization were re-elected. The administration which will continue a highly successful record of progress, consists of: Robert A. Mitchell, Pres.; John L. Counsell, 1st V.-Pres.; Homer C. Darling, 2nd V.-Pres.; Arthur Anderson, 3rd V.-Pres.; Philip I. Cassidy, Sec.; Frank H. Wilson, Treas.; George Rommell and Paul Wanberg, Trustees. Samuel H. Mitchell is chairman of the entertainment committee and Lloyd Scott of the golf committee.

New England has a lower annual turnover of green-chairmen and greenkeepers than any other major section of the country; consequently the common problems of these men are tackled with more cooperation than is usual in course maintenance.

A tip-off to the attitude prevailing generally in New England was given by the tribute of Pres. Hartley Rowe, of the Charles River club, to the club's greenkeeper, Frank Wilson, when Rowe officially welcomed the Charles River guests.

Harold Pierce, green-chairman of The Country Club, Brookline, and V.-Pres. of the USGA, took the meeting behind the scenes in the selection of the Walker Cup team. He outlined the problems of the USGA concerning effective operation of the Green Section and detailed some problems with which the national association and Monteith must contend.

Adrian Sawyer, Brae Burn chairman, spoke of the perplexing maintenance problems New England experienced in 1937 and reviewed the valuable work greenkeepers have done in handling adverse conditions. Dr. Fred Sievers, director of the Mass. Experimental station, and Prof. L. S. Dickinson remarked on the progress of research in New England greenkeeping and assured the association of support for the turf research extension bill the Greenkeepers' club is trying to get through the state legislature.

Harry Hayes, Supt. of the Metropolitan District park commission, spoke on the value of greenkeepers' cooperation to park operations. Carlton Treat, an honorary member of the organization, briefly

commented on the Club's aggressive program for the good of golf in New England.

Herb Graffis, GOLFDOM's editor, addressed the meeting on "What's Ahead in Greenkeeping." Graffis expressed his conviction that greenkeeping had developed technically faster, sounder and farther than any other phase of golf business operation, and named the greenkeeper-state college-Green section educational activities as responsible for the development in greenkeeping.

He pointed out that greenkeepers' pay had not kept pace with the technical improvement they had brought to course maintenance. Greenkeepers share with green-chairmen, this failure to advance in the esteem and pay-off of club members and officials, according to Graffis' observation. He said that if green-chairmen were paid by their clubs for their services at the rate the chairmen were paid for work in their own business, many clubs would be broke. However, the green-chairmen rarely receive even mild verbal appreciation for their club work.

Neglect of club members to rate work of the greenkeeper and chairman at proper high value is due to the failure of the course maintenance department to publicize itself energetically and properly, so Graffis said. He advocated lively use of club bulletin boards and all other publicity media by the course maintenance department.

Labor management and relations together with educational publicity, Graffis declared, were the two major factors requiring spotlighting during the next stage of greenkeeping development.

**T**HE Insecticide and Fungicide assn. and the Manufacturing Chemists' assn. have agreed hereafter to color arsenate of lead and calcium arsenate pink as a safety measure for identification.

A bulletin issued by the Insecticide and Fungicide assn. reads: "In the interests of public health and for the protection of users of agricultural arsenical insecticides, this Industry has, by voluntary agreement, adopted and will use a pink coloring in all white arsenical products.

"The use of a proper discoloring agent has no deleterious effect whatever on the insecticide and only a very slight trace of the discoloring agent is used, with the result that the label requirements of the material are not affected."



Construction view at Tilden Park. Workmen are seeding the 4th green in the background, while others nearer the camera are spreading topsoil for the fairway.

## MACHINES SAVED COSTS HERE

**TILDEN** Park Golf course (Oakland, Calif.) is of championship 18-hole length. It was designed and constructed by William Bell, California's noted golf course architect, and was opened for play last November 11 under ideal weather conditions, to be immediately acclaimed one of the best constructed and ideally located courses in California. This 6,364-yard course is set in rolling wooded terrain. Greens are of generous area, cleverly designed and trapped to conform with a background of wild and rugged hills that protect this restful valley from the wind and fog that surrounds them.

Dick Walpole, one of Bell's assistants in his numerous golf course construction activities on the coast, has, after superintending all the construction work at Tilden

Park, been appointed manager of the layout and will be responsible for the care of the course during its most critical period of development, when constant care is essential if permanent injury to the new greens and fairways is to be avoided.

Indicative of how far golf course construction has advanced in the past few



An idea of how much clearing was needed is given in this view of the practice fairway.



Tractors proved indispensable in grading and shaping both fairways and greens.

years, it is interesting to note that large equipment was used all the way in constructing Tilden golf course. Tractors were used from the day tree clearing began and continued to be used right down to the building of traps and shaping of greens. Horses and fresnos, which once were a

main part in the construction of a golf course, were dispensed with all together.

A few construction facts are of interest. There were more than 30,000 trees, mainly eucalyptus, laurel and live oak, removed from the course areas. 40,000 cu. yds. of dirt was removed. The watering



Tractors are seen here filling ditch before 13th and 18th greens.

system required 16 miles of pipe. Topsoil hauled in for greens and fairways amounted to better than 8,000 yds., while a total of some 30 tons of fertilizers were used. The course is completely watered by means of 850 Buckner pop-up sprinklers.

In the matter of seed, 10,000 lbs. of bluegrass went on the fairways together with 4,000 lbs. of redtop. The greens were planted with a total of 600 lbs. of Cocoos bent.

In spite of the money spent to make the course a success, it is said that the total construction cost was lower than any other course of comparable quality in the Oakland area.

### Editorial Praises Operation of New York City Park Courses

**T**HERE is a growing recognition of the valuable work for public health being done by municipal golf departments, according to newspaper items received by GOLFDOM at the close of 1937.

Few appreciate the tremendous handicaps of political pressure, heavy play, public demands, and sharp restricted improvement budgets under which many municipal golf departments must operate. Fortunately for the future of public parks golf, the experienced, able administrators of this work are philosophically resigned to uniformed criticism and have a fraternal bond that enables them to share the pleasure any of their comrades receives for his work.

Municipal course operating officials can readily imagine the satisfaction of John Van Kleek, operating head of the New

York City park courses, in reading the following in the New York Tribune:

"The ten municipal golf courses, which in the season just closed were rolled, seeded and tended until they reached the best standards of playability in their history, had a patronage which showed public appreciation beyond doubt. Under direction of Park Commissioner Moses, bald fairways were patched, better control of starting times and play through the green was established, and golf-house accommodations were improved. That "unattached" golfers were aware of better conditions is shown by the fact that the number of rounds played, up to November 13, reached the remarkable total of 485,100. Clearview—a former club course—in Queens, scored 75,047 rounds, and Dyker Heights in Brooklyn, 70,323. Next in popularity were Mosholu, Pelham, Forest Park, Kissena, Van Cortlandt, Split Rock, Silver Lake and La Tourette.

"The expansion of public links golf, with its enormous contribution to public health and recreation, shows the wisdom of a parks policy which recognizes an obligation to the public and tries to meet it to the full."

### Bell, Tillinghast Combine Talents; to Headquarter on Coast

**T**WO top-flight golf architects, A. W. Tillinghast and William P. Bell, have formed a partnership and will hereafter concentrate their activities on the Pacific Coast.

A. W. (Tilly) Tillinghast has perhaps designed more golf courses than any living man and at least twenty of his layouts have been the scene of national championships, which is an indication of the architectural job he does. For the past few seasons, Tilly was employed by the PGA as golf course consultant, visiting from course to course over the country and advising club pros and their officials on how existing courses could be remodelled for improvement in playing demands and maintenance economy.

William P. Bell earned his reputation mainly on the Pacific Coast where such layouts as Riviera, Ojai, Sunset Fields, Bel-Air and Castlewood have been built under his skilled direction.

Now that the Tillinghast-Bell team has been formed, the Coast is all hepped up over the possibility of a few super-super layouts to attract bigger and better tournaments to the West Coast.

# YOUR TURF PROBLEMS

... and their solution

Is lack of phosphoric acid the sole cause of shallow roots on greens? We are advised to use phosphate in quantity to induce deeper root formation.

## QUESTION:

## ANSWER:

No; phosphoric acid deficiency is not the sole or even the major cause of shallow roots. Undue emphasis results from its startling effect on initial root formation from seed because of small size. All grass seed contains very little stored food, so immediately after germination seedlings must forage for needed food. Hence a high level of soil fertility (particularly phosphoric acid) is the secret of quick turf development from seed. But on established turf the effect is less striking because a more extensive root system enables plants to forage for needed food.

In the order named, root depth depends upon (1) soil texture, (2) type of grass and character of growth, (3) watering practices, (4) soil reaction, and (5) available soil nutrients.

(1) Usually soil is too heavy and compact, so of necessity roots stay near the surface to obtain needed oxygen. A medium sandy loam, containing an adequate quantity of organic matter is best. It should extend to a depth of 4 to 8 inches, or more. This type soil can be made from appropriate quantities of good loam, sharp sand, and organic matter (either manure compost, leaf mold, or peat humus).

To improve soil on established greens, either lift existing turf and modify underlying soil, or build suitable soil by frequent light top-dressings. Straight dressings of sand or humus do not modify compact soil. Both materials form distinct layers and thus further restrict root development.

(2) Type of grass and character of growth are important also. Under close cutting, poa annua develops shallower roots than many bents. Even the latter differ in rooting habits. When turf is allowed to develop a thick, dense surface mat, roots become shallow because penetration of applied water is impeded. Removal

of surplus grass by alternate raking and mowing is the obvious solution. This is best done in early spring or early fall, but should not be attempted during hot weather.

(3) Over-watering always encourages shallow root development. Water, beyond the quantity needed to produce capillary films, displaces soil air. This reduces oxygen supply, so only surface roots survive.

Superficial sprinkling also restricts roots, by depriving deeper roots of needed moisture. These roots disappear as soil becomes depleted of moisture. Uniform soil moisture content throughout the area of root development is an absolute necessity.

With a deep root system, favorable soil texture, and satisfactory drainage, thorough watering at appropriate intervals is best practice.

Nevertheless, failure to recognize exceptions to this general axiom has resulted in serious turf loss. Even under ideal conditions, roots are shallower in summer than in spring or fall. Prolonged down-pouring rains may further restrict roots sometimes, confining them to the surface inch of soil. Then daily hand-syringing becomes necessary to maintain the surface moisture supply. On hot windy days, wilting may occur by mid-afternoon, even though greens received water during the previous night. Unless surface moisture is restored promptly, turf loss may occur.

(4) Extreme soil acidity favors shallow root development. Where soil tests medium to strongly acid, the moderate use of lime is justified.

(5) When the factors enumerated are favorable, soil nutrient substances become important. Although phosphoric acid is needed, an adequate quantity of nitrogen and other essential elements is equally important.

Root systems can be improved only by eliminating all unfavorable factors.

Service Bureau

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# TEST FOR GREEN-CHAIRMEN

By A. A. HOLMES

Green-Chairman, Wykagyl Country Club, New Rochelle, N. Y.

**G**OLF clubs generally have appointed as green-chairman men from the fields of business, law, engineering or medicine, or fellow members who have retired from active careers. Seldom is there a man of any practical experience in agronomy appointed to the hazardous and complex job of assuming responsibility to the members for the condition of the course.

The members don't know it, but they insist on maintenance of a turf condition that is unnaturally delicate and difficult to achieve and preserve. They want fairways on which the ball always has a good lie and greens soft enough to hold a pitch and so true that putts always will drop.

What often happens is that the members stampede the chairman and the chairman rough-rides the greenkeeper. In a year like 1937, when weather conditions were particularly bad in many territories, the panic of ignorance may become serious. In desperation the greenkeeper will make a wild try, using some weird effort at a cure-all when, in his private and experienced judgment, he may suspect that clogged drainage, compacted water-logged soil, or some other fundamental feature is the source of the trouble.

This hurry-up demand for magic entails a penalty that golf maintenance must pay for ignorance each year. Because virtually none of the members knows anything about grass it is impossible to explain why a course cannot be maintained in ideal condition year after year. The best courses have their off-years. But the highest possible standard is maintained—and for the thriftiest expenditure of cash—if the green-chairman knows enough about growing and maintaining turf to handle his assignment soundly.

Take stock, Mr. Chairman, of what you know about the turf of your course. Here are some questions that will help you take inventory of your greenkeeping knowledge:

## DO YOU KNOW . . .

- . . . anything about soils?
- . . . the meaning of different soils such as clay, clay loam, loam, sandy loam and sandy soil?
- . . . what is meant by an alkaline soil or an acid soil?
- . . . what the pH of a soil is?

- . . . what topsoil is?
- . . . what topsoil is used for and how it acts?
- . . . the characteristics of the different grasses and where they can be used to the best advantage on the golf course?
- . . . how deep the roots of bluegrass, poa annua, redbtop, fescue, german bent, metropolitan bent, Washington bent, velvet bent, penetrate the soil?
- . . . whether the greatest quantity of roots of the above grasses are in the first, second, third, fourth, fifth or sixth inch of the soil?
- . . . how the roots of the above grasses propagate?
- . . . when to sow grass seed so that the weeds won't choke the grass?
- . . . what effect the height grass is cut has on grass?
- . . . how much water is transpired by the leaves of grass in a year?
- . . . the role moisture (rain, dew, snow and watering) plays in growing grass?
- . . . what is meant by fertilization?
- . . . what role nitrogen, phosphoric acid and potash play in growing grass?
- . . . what the difference is between organic and inorganic nitrogen? What is the effect of each on grass?
- . . . the value and effect of other fertilizer materials?
- . . . when to apply various kinds of fertilizer?
- . . . how many diseases attack grass?
- . . . how to control these diseases?
- . . . what *Rhizoctonia solani* is?
- . . . what dollar-patch is?
- . . . what *Fusarium nivale* is?
- . . . what scald is?
- . . . how to treat each of the above diseases?
- . . . the difference between a Japanese beetle and a grub worm?
- . . . the habits of the above worms and how to treat them?
- . . . how to kill ants?
- . . . how to get rid of earthworms?
- . . . what webworms are, what damage they do and how to control them?

That list of questions gives you a scant outline of the technical problems with which the greenkeeper must contend. If you can answer any 15 of those 31 questions you are beyond most chairmen in technical knowledge of greenkeeping. But the greenkeeper has to know the answers to all of them . . . and to many more.

It is certain that the green-chairman, if a businessman, would hire a lawyer to defend himself against a law suit, but too often the same businessman as a green-chairman will over-rule the professional status of the competent greenkeeper, and insist on being boss of the case.

Consider the performances of the most successful green-chairmen. They are frank to admit that their policy is to make sure that they have engaged the most competent and dependable greenkeeper they can find and have allowed this qualified man to conduct operations with the minimum of interference and the maximum of co-operation.

The average greenkeeper has to fight:

1. A green-chairman who generally has no real knowledge of greenkeeping but thinks he does. There are exceptions.
2. The criticisms of the club members and these are numerous.
3. The elements.
4. Turf diseases.
5. Insects.
6. Poor soil conditions.
7. Many other problems of a smaller nature.

You can see that the greenkeeper has his hands full. He must be a diplomat, an agronomist, a soil expert, an entomologist, a good handler of men, the possessor of a good quantity of horse-sense, and a sense of humor. Quite a lot of qualifications for one man, don't you think?

If you have a good greenkeeper, advise and back him up; but as he knows his business, let him run the greenkeeping department as you would allow a department manager to run his department.

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## HOW GOLF RETURNED TO BEDFORD

By DOUG. SMILEY

**B**ACK in early spring of 1935, when around town, those who were in radical would have to be done quick was to continue to enjoy such a thing as a golf course. The Bedford CC, long the mecca for those who could afford a \$200 membership fee, as well as \$66 per year dues, was already in the hands of a receiver, and Hillcrest, a privately owned public course could not open in the face of the ever-remaining depression.

A few of the dyed-in-the-wools had managed to stage a membership campaign, at \$15 per person, to keep the Country club open under receivership during the '34 season. A similar campaign was staged in 1935, but there were no prospects for 1936, because everyone knew the Country club property would have to be sold in the fall of '35.

We had taken up the game in 1931, not to become a great golfer, but merely as a pastime. During that period between 1931 and 1935 we did a column "In Par" for our paper and we started an annual

the "golf bug" started biting the boys the "know" realized that something if the "Home Of Indiana Limestone"

city tournament. We hated to see golf leave Bedford. On days when we had nothing else to write about we jumped on the city for not purchasing the Country Club property and making a municipal golf course out of it. But all our writing was in vain, as far as the city was concerned, because the City Dads had the idea that those who played golf were sissies.

"It would make a beautiful city park," we wrote from day to day. And while we wrote about it we started dreaming what a wonderful playground it would make for the eastsiders, better known as "Dutchtowners" around Bedford.

Finally we appealed to Fred B. Otis, editor and owner of the Daily Mail and painted a vivid word picture of the place. "I'm not interested in going into the golf business," he flatly told us. But we continued to persist and one Sunday afternoon convinced him that he should see the



Since Bedford is the "Stone City," the attractive entrance pillars to Otis Park are appropriate of native limestone.

place. One look and he was satisfied. It would make a wonderful city park, and it would be something to leave to those old neighbors in "Dutchtown." Within three days the deal was completed and the city became the owner of a new park—Otis Park.

The property, consisting of approximately 145 acres, is located one mile east of Bedford on United States Highway No. 50. A fine nine-hole golf course lay around the old colonial mansion and above the mansion was a dandy \$15,000 swimming pool. City officials were elated over the gift. They would make many improvements.

Mayor Henry S. Murray, Indiana's youngest mayor, lost no time in applying for a Federal grant. To his surprise and satisfaction, Uncle Sam placed an okay on the project and sent along the staggering sum of \$179,000.

Things look promising this spring. Nine new holes have been added to the Otis Park CC, making it one of the finest eighteen-hole layouts in the Hoosierland. Already over 200 are members. The layout will be run by Bedford's Golf Board, which is composed of Arch O. Carter, Chairman, Fred Wampler, Arch C. Voris, John A. Rowe and the writer. A new clubhouse for golfers has been erected out of fieldstone, the swimming pool has been enlarged and a fine bent grass nursery installed. Modern maintenance machinery has been pur-

chased and golfers are looking forward to one of the greatest seasons in the history of the Stone City.

Aside from the golf improvements, the city, thanks to the WPA, has remodeled the old mansion and plans to make a museum out of it. A beautiful rock garden has been constructed; a lookout tower has been built on the highest part of the hill property; and a fine \$25,000 band shell is under construction near the park entrance.

One of these days, unless the WPA cashes stops, Bedford is going to have one of the finest parks and one of the finest golf courses in the middle west. If you happen to be passing through, Pro Lester Smith will be glad to show you around, and if you can't find him, just give us a ring and we'll take the day off and show you the new Otis Park.

**O**FFICIAL PGA sanction has been given dates and prizes of the Greenbrier \$3,000 Open to be held November 8-10 at the Greenbrier Hotel Golf Club, White Sulphur Springs, W. Va. Much interest has been displayed locally in the idea of a Greenbrier Open because the sponsoring club is the home of Slamming Sam Snead.

It is, of course, too early to have received entries, but with Snead acting as official host, it is expected a large and representative group of pros will be on hand for the 72-hole medal event.





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# NEWS OF GREENS SHORT COURSES

**H**ERE'S an up-to-date schedule of greenkeepers' short courses and conferences to be held at state colleges this spring. Why not make certain your greenkeeper attends at least one of the valuable, informative sessions? They're inexpensive, and they'll pay your club big dividends in educating your superintendent to the latest greenkeeping methods.

Iowa State College Short Course, March 1 and 2. Write Dr. S. W. Edgecombe, Extension Horticulturist, Ames, Ia.

University of Minnesota Course for Greenkeepers, March 7th to 11th. Write Prof. C. O. Rost, University Farm, St. Paul, Minn., for particulars.

Pennsylvania State College Short Course, February 1 to 25, and Fine Turf Conference, February 22-25. For further details write Prof. H. B. Musser, Dept. of Agronomy, State College, Pa.

Rutgers University Short Course, February 7 to 12. Address F. G. Helyar, Director of Resident Instruction, College of Agriculture, New Brunswick, N. J. University of Wisconsin Greenkeepers' Short Course, March 7 to 9. Full in-

formation may be secured by writing Prof. James G. Moore, Horticultural Dept., College of Agriculture, Madison, Wis.

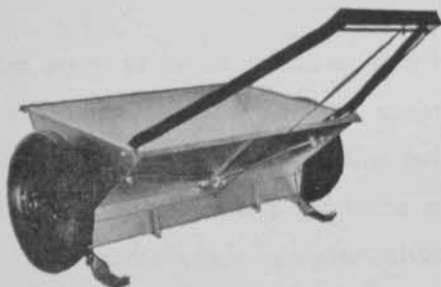
**P**ROGRAM for the short course for greenkeepers to be given by the University of Wisconsin Dept. of Horticulture, March 7, 8 and 9, has been announced by Prof. James G. Moore, chairman. Sessions will get under way Monday afternoon, March 7, in the Soils Bldg., with Emil Truog of the soils' department, leading the discussion, in connection with a laboratory demonstration. O. J. Noer, Milwaukee Sewerage Commission, will speak on rapid soil tests, discussing their advantages and disadvantages.

Tuesday's morning and afternoon sessions will be held in the Horticultural Bldg., and will include among the papers and speakers to be heard: "Bacteria in the Soil," by Perry Wilson; "Arsenicals," by T. C. Allen; "Latest Developments in Control of Turf Diseases," and "Special Grasses for Use on Golf Courses," by John Monteith; "Pertinent Observations and Comments on Turf Problems of 1937," by O. J. Noer; and "How Can Officials and Players be Educated as to the Best Greenkeeping Practices," by Herb Graffis, editor of GOLFDOM. A round table discussion on proper cut of greens for best play and maintenance will conclude the day's sessions. A greenkeepers' dinner, scheduled for that evening, will be held in the Wisconsin Union Bldg.

A full program Wednesday morning, March 9, will bring the course to a close. Monteith will get things under way at 8:00 a.m. with a discussion of watering systems, and Noer will speak on seepage problems. Other papers are "How to Locate and Lay Tile," by C. R. Zeasman; "My Experience with Poling," by Harold Clemens; "Golf Course Mowers and Their Maintenance," by M. P. Christensen, Jacobsen Mfg. Co.; and "Dandelions,

## GOLF CLUB FOR SALE

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