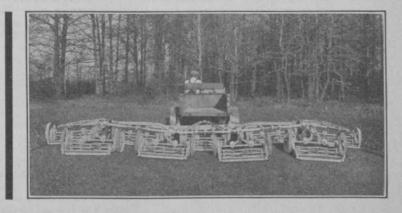
MARCH, 1934

THE GREATEST CUTTER ON EARTH

Batteries of 3, 5, 7 or 9 with Units 30 or 36 inch cut, 6-blades



ENNSYLVANIA GIANT FAIRWAY 36" UNITS

SAVE \$80.00 a foot per cutting width by buying a PENNSYLVANIA GIANT QUINT.

It cuts fourteen feet six inches, only two feet less than the 7-Gang 30" Units, and costs \$160.00 less. Just think of it. The upkeep of five Units is considerably less than seven Units.

Pennsylvania Units are constructed of malleable iron and steel, guaranteed against breakage under severest mowing conditions. They will outwear and outlast by many years, the oldfashioned cast iron mowers, the kind we used to build for horse pulling.

Write for catalog, picturing and describing the full PENN-SYLVANIA line of mowers for greens, tees and fairways, with prices.

PENNSYLVANIA LAWN MOWER WORKS PRIMOS, DEL. CO., PENNA. for longer feeding. Water soluble organic nitrogen is almost immediately available, hence, so far as growth effects are concerned, such materials should be classed with ammonium sulphate.

True organics are less apt to burn than water soluble fertilizers, but even the organics vary in this respect. Those which contain small amounts of soluble material and break down slowly are least apt to burn.

Organics are without appreciable effect on soil reaction, although bone, because of the lime it contains, has a slight tendency to reduce acidity.

The ammonia containing nitrogen fertilizers include sulphate of ammonia and the various ammonium phosphates. They are water soluble, hence quick acting, but effects are seldom long lasting. Because the ammonia is temporarily held by the silt and clay particles they do not leach as rapidly as materials containing nitrate nitrogen.

All tend to increase soil acidity. The effect is most pronounced with ammonium sulphate. If used continuously, they tend to lose their effectiveness, but this can be restored by the moderate use of lime.

Due to complete solubility all tend to burn the turf, so slight rates of application are the rule.

The third group of nitrogen containing materials-includes all those in which the nitrogen occurs as nitrates. Sodium nitrate, or Chile Salt-Peter, and Calcium nitrate are the principal fertilizers in this group. Both are water soluble and hence apt to burn the grass. They leach readily, tend to reduce soil acidity. Since they do not suppress weeds and favor growth of the coarser grasses, they are not generally used on golf turf.

Sources of Phosphorus

Sources of phosphorus are limited. The chief organic form is bone meal, although with the exception of blood, all other organics contain varying amounts of phosphoric acid. While the phosphorus of bone is insoluble, solution takes place in the soil. Steamed bone is more readily available than raw bone and contains somewhat more phosphorus.

Superphosphates are the most important commercial source of phosphorus. Materials containing from 16 to 45 per cent phosphoric acid are on the market. They are produced by treating raw phosphate rock with sulphuric acid to convert the insoluble phosphoric acid into soluble compounds.

Superphosphates seldom burn turf badly. They have but little effect in soil reaction. When applied to the soil they are converted into insoluble calcium or iron phosphate, depending upon soil reaction, but resolution takes place.

The various ammonium phosphates comprise a third class. Materials containing 20 and 45-48 per cent phosphoric acid, with 11-16 and 20 per cent nitrogen are available. They are water soluble and are apt to burn the turf. Their tendency is to increase soil acidity. These materials are admirable sources of phosphoric acid where some quick acting nitrogen is also needed.

Muriate of potash is the outstanding source of potassium. The imported material contains 48-50 per cent potash, whereas the American product, produced in California, contains 60-62 per cent. Potash fertilizers are water soluble, hence apt to burn. When used on acid soils the initial tendency is to increase soluble acidity. The potash is taken up by the silt and clay so leaching loss is negligible.

In any program of fertilization inherent differences between fairways and greens must be recognized. Besides higher state of maintenance, clippings are removed from greens, so this accentuates loss of phosphorous and potassium. There is also a fundamental difference between established fairways and new fairway seedings.

On established fairways the same nutrient requirements govern improvement of thin turf as are required to maintain good grass. The difference is simply one of amount of fertilizer needed and frequency of application. More generous applications at more frequent intervals is important where grass is thin.

The principles underlying a fairway program are comparatively simple. It should be built around nitrogen feeding, with phosphoric acid and potash playing minor roles.

Nitrogen, besides encouraging turf to spread and form dense sod, is the element responsible for clover control. Generous nitrogen is essential on poor fairways; on good turf rates can be reduced so as to barely satisfy the need for this element. Actual rates depend upon the kind of nitrogen material selected. With water soluble fertilizers individual applications should not exceed several hundred pounds per acre of pure nitrogen fertilizer

"Putting Green" Turf for your fairways!

Roseman Construction Features:

(Our patents give us the exclusive right to all ganging of Roller Type Mowers) Timken Tapered Roller Bearings on Cutter. Hy att British Tank Roller Bearings on Rear Axle.

Alemite Forced Feed Lubricators.

Guaranteed Non-Breakable Malleable Iron Side Frames, Gear Cover, Bed Knife Shoes and Caster Wheel Forks.

Drop Forged Machine Cut Gears.

Roseman Tractor Attachment

To get the highest degree of service from mowers use the Roseman Tractor Attachment. This equipment fits on Chevrolet or Ford chassis of this year's or other recent models. Includes a powerful reduction unit, with silent gears running in oil bath, spudded steel wheels or air wheels, and a convenient dump body if desired, all at a very modest price. Makes an ideal light tractor for all-purpose work. A LMOST over night, the golf field turned to the roller type mower for cutting putting greens . . . why? Because roller type mowers cut cleaner, closer and more uniformly—and the turf itself became firmer, more abundant and healthier . . . and they never went back to the sidewheel mower.

Greenkeepers know that frequent light rolling helps turf more than anything else. Rolling stimulates growth, seals heat cracks and retains moisture in soil. It pushes down loose surface runners so they re-root themselves and multiply. It presses down loose top turf into firmer contact with nourishing sub-soil.

So—why not roll your fairways at the same time you cut the grass, without extra cost! Roseman Mowers with their light roller drive will not only keep fairways cleanly and closely clipped but their rollers will improve turf!

Write today for further details and prices. We would also like to let you know, through their own testimonials, the experiences of green-chairmen, pros and greenkeepers with Roseman Mowers-- and the low annual cost of moving with the highly dependable Roseman equipment.

ROSEMAN TRACTOR MOWER CO. 800 Davis St., Evanston, III. 11 West 42nd Street . . New York City



53

GOLFDOM

A \$90 INVESTMENT THAT PAYS 500% plus player satisfaction

54

The records of golf clubs using Jacobsen Power Putting Green Mowers show that the additional investment required to operate a "Jacobsen" mower—including depreciation, repairs, fuel and interest is only \$90.00 a year—and that the average saving in cost of green upkeep exceeds \$450.00 for each mower used. Added to this is the intangible value derived from better satisfied players — which means more members and bigger green fees.

"Turf More Resilient"

Jacobsen Power Putting Green Mowers not only save money—they keep your greens in better condition. This fact has been proved over a period of years. Fred Federspiel, Greenkeeper, Clark County C. C., Vancouver, Wash., says:

"After using a Jacobsen Power Mower on our greens for six years, we find the turf firmer, yet more resilient than ever. We have some of the best greens in the Northwest."

Send for Cost Chart

We have prepared a chart showing the average cost of operating a Jacobsen Power Putting Green Mower and the saving effected by its use. A copy of this chart will be sent on request.

JACOBSEN MANUFACTURING CO. 734 Washington Ave. Racine, Wis.





or 500 to 600 pounds of mixed fertilizer to avoid burning. With organics much higher rates are permissible. When the two are used in combination 100 to 200 pounds soluble nitrogen fertilizer can be safely used with organics at 700 to 1,500 pounds per acre.

Need for phosphorus can be judged by using one of the soil phosphorus test kits now on the market, provided lead arsenate has not been used. In most cases phosphate applications need not be repeated short of 2 to 4 year periods.

Amount of available soil phosphorus, texture of soil and kind of grass determine rate of phosphate applications. By the Truog method sandy soils containing 50 pounds or more and heavy soils containing more than 75 pounds available phosphorus per acre rarely need additional phosphate. Less phosphate is needed on the sandy soils than on heavy soils to produce equal results. Bents and fescue require less phosphate than Kentucky bluegrass.

On very acid soils where lime is needed, it is best to lime several months in advance of phosphate applications for this tends to increase phosphate efficiency.

Potash may be ignored with the possible exception of fairways on sands, mucks and peats. On these soils 100 to 200 pounds per acre of 50 per cent potash every two to four years should suffice.

Where complete fertilizers are preferred those high in nitrogen with moderate phosphoric acid and potash content should be selected.

When to Fertilize

Spring and fall are the logical seasons for fairway fertilization, especially if rainfall is the sole source of moisture. Besides being the seasons of greatest rainfall, air temperatures are most favorable for growth. Spring applications should be made before active growth begins, and fall fertilization should be in early September if results are desired before winter. If soluble materials are included, applications should not be made during hot weather. Burning may occur even though the grass is dry.

Obviously care should be taken to insure uniform distribution. This is obtained by using one of the modern two-wheel hopper type distributors. Operators should be cautioned to overlap, and when the machine is stopped on fairways the outlet spouts should be closed to avoid burning from localized fertilizer.

Danny Williams Made Honorary Life Member by Shackamaxon

DAN WILLIAMS, veteran professional of the Shackamaxon C. C. at Westfield, N. J. was honored by his club recently with the election to honorary life membership. Williams is now starting his 11th year as professional of the famous Westfield club.

He started as caddie-master in 1917 under Cyril Walker, was elevated to assistant professional under Pete O'Hara and also served in that capacity under Bobby Cruickshank at the same club. When Cruickshank left in 1923, Williams was made professional and has served continuously.

Williams is well known both as a tournament golfer and as a teacher but of late has taken over the role of "home pro." He was runner-up for the New Jersey State Open title on three occasions, tieing for the title in 1926 with Clarence Hackney but losing in the playoff. He holds the Shackamaxon course record of 65 and has played the par 36 first nine there in 30 shots.

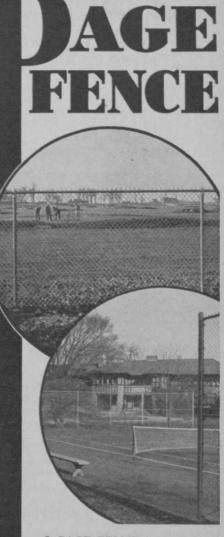
The genial Westfield pro brought out one of the country's brightest young women golfers, Charlotte Glutting, former New Jersey women's champion, and also is instructor for Bob Lester, runner-up for the New Jersey Amateur crown and winner of the Sweetser Cup as well as Gail Wild, metropolitan girls champion.

Miss Wild came to Williams for instruction a year back, after the death of Eddie Wild, one of New Jersey's amateur stars. It was one of Wild's expressed wishes that his daughter be sent to Williams for golf instruction.

Williams is also active in the PGA ranks, having been one of the leaders in the organization of the New Jersey section and has held various offices. At present he is a member of the Board of Directors. A special celebration is planned at Shackamaxon this spring as official presentation of his award by the club.

John MacGregor Named to USGA Advisory Board

JOHN MacGREGOR, superintendent at Chicago G. C., and president of National Greenkeepers Assn. in 1932, has been made a member of the Green Section Advisory committee by the USGA.



• PAGE FENCE is more than a product. It is a service. Located throughout the United States are eighty-two Page Service Plants. They distribute and erect Page Chain Link and Wrought Iron Fence. To see that you get the proper fence, properly erected and responsibly guaranteed, look under "Fence" in your classified telephone directory. Find "PAGE" and call that number. Or, write us.

PAGE FENCE ASSOCIATION Bridgeport, Connecticut

District offices in NEW YORK, PITTSBURGH, ATLANTA CHICAGO, SAN FRANCISCO America's first wire fence—since 1883



Amherst Conference to Launch Golf's "New Deal" Campaign

ATIONAL INTEREST in the recreation-conservation conference to be held at the Massachusetts State College, Amherst, Mass., March 16, 17 and 18, is expected to account for the attendance of several thousand practical men responsible for the operation of golf and other athletic plants, and game conservation enterprises.

The golf course conferences and exhibitions at Amherst in previous years have averaged 400 visitors. Attendance of Massachusetts State Amherst students has been around 1,800. There will be a number of exhibits this year. Exhibit space is free. Marston Burnett is exhibit manager for the college.

The Massachusetts State College affair is the first conference to be scheduled for the practical men who have the problem of providing facilities for the enjoyment of "the new leisure," but have not been provided with funds adequate to care for the increased responsibilities. Private and public golf work will divide the time devoted to golf by the conference, with many of the subjects being of equal interest to all sections of the golf field.

Undoubtedly one of the major developments of the conference will be a crystallization of plans to conduct more energetic selling of public golf facilities, a job which has been generally neglected.

There is no charge for admission to the conference sessions.

The golf section of the program follows:

Friday, March 16, 1934

General exhibition 9:00 A. M. to 10:30 P. M.

Golf Course Maintenance Division

9:00 A.M.-12 M. Inspect exhibits.

- 10:30 A.M. Municipal golf courses from a park superintendent's viewpoint. C. A. Hollister, Park Dept., Hartford, Conn. 1:30 P.M. Testing soils for nutrient de-
- ficiencies. Dr. A. B. Beaumont, Agron-omy Dept., M. S. C.
- 2:00 P.M. Greenkeepers and the increase in leisure time. Guy C. Greenkeepers Club of N. E. West, Pres.
- 2:30 P.M. Peats and Mucks in golf construction and maintenance. Dr. Dach-noski-Stokes, U. S. Dept. Agric.

- 3:30 P.M. Experiments in the control of brown patch disease. Prof. North, R. I. State College.
- 4:00 P.M. Maximum maintenance capacity and maximum playing capacity of golf courses. Casper McCullough, C. P. R. Golf Courses, Banff Springs.

Club Managers' Division

- 9:00-11:00 Inspect exhibits.
- 11:00 A.M. Fundamental facts about meats. R. C. Foley, Animal Husbandry Dept., M. S. C.
- 3:00 P.M. How to know safe canned foods. C. R. Fellers, Hort. Mfg. Dept., M. S. C.

Special programs are being arranged for Park Supts., and by the Professional Golfers' Association.

Evening Program for Combined Sections Chairman, Mr. C. Adrian Sawyer.

Massachusetts Golf Association

- 7:30 P.M. George R. Jacobus, Pres. Prof. Golfers' Assoc. of America. 8:15 P.M. S. A. York, Commissioner of
- Conservation.
- 9:00 P.M. Harris A. Reynolds, Sec. Mass. Forest and Park Association.

Saturday, March 16, 1934

- General exhibition 8:30 A.M. to 10:30 P.M.
- Golf Course Maintenance Division

8:30-10:00 A.M. Inspect exhibits.

- 10:30 A.M. Influence of more leisure time on golf course design and construction. Walter B. Hatch, Golf Architect, Donald Ross Associates.
- 11:00 A.M. The use of golf courses as practice slopes. Kenneth D. Cuddebeck, Springfield Ski Club.
- 11:15 A.M. The desirability of winter sports at golf clubs. Dr. Ernest Her-mann, Director of Sargent School.
- 11:45 A.M. Winter sports and the grounds crew. Paul Wanberg, Western G. C.

Inspection Exhibition

- 1:30 P.M. Meeting Alumni winter school for greenkeepers.
- 2:30 P.M. Turf maintenance and appropriations vs. appropriations and turf maintenance. L. S. Dickinson, Agronomy Dept., M. S. C.
- 3:00 P.M. Figuring golf costs. Herb. Graffis, Editor GOLFDOM.
- 4:00 P.M. Sports turf requirements. Wil-liam Perkins, Supt. Yale. Univ. Athletic Fields.
- 4:30 P.M. Fly casting as a club sport. William Edson, N. E. Champion.



TORO Tractors and Mowers are Preferred by Prominent Users

A ROUND Miami and the great winter resort section of Florida, the Gulf Stream Golf Club ranks as an outstanding example of a finely-maintained golf course.

With a thick, healthy turf of native grass, the Superintendent, Mr. W. L. DeParlier, doubted whether any seven-unit mowing outfit would have the power to do the cutting.

But he did have a lot of confidence in TORO machinery and purchased a Master Tractor and Seven Trojan mowers strictly on our recommendation that they would do the work.

The Master Tractor and Trojan mowers pictured above are now going into their third year with excellent results. Upkeep expense has been negligible and there has never been a moment's delay for breakage or repairs on either Tractor or mowers.

That is the kind of service you want and can get when you purchase Toro Machinery.

Write for 1934 Catalog.



Seeds of Exceptional Quality

BENTS AND FESCUES OVER 99% PURE

Samples recleaned to conform to our high standards pay for themselves in lower weeding costs.



Seaside Bent and Triple A Bent packed in 50 lb. tin canisters, enclosed in strong wooden boxes for protection, preservation, identification.

Grass Seed Over 99% Pure

Seaside Bent (Coos Co. strain) Triple A Bent Rhode Island Bent Colonial Bent Superfine Red Top Chewing's N. Z. Fescue Rye Grasses Bermuda

We are able to refine other varieties almost to this wonderful standard of quality.

Also South German Mixed Bent over 94% purity.

Kentucky Blue over 98% purity and Putting Green and Fairway Formulas of maximum purity and germination. Such tested seed will reduce labor cost for weeding.

Your Private Lawn-Write us for expert advice and prices of Staigreen – the modern mixture for luxuriant lawns.

Write now for prices.

IMDD G WAU

132-138 CHURCH STREET (Corner Warren Street) NEW YORK Club Managers' Division

8:30-11:00 A.M. Inspect exhibits.

- 11:00 A.M. Winter use of the clubhouse. Thomas P. Jones, Pres. Mass. Chapter Club Mgrs. Ass. of America.
- 3:30 P.M. Clubhouse foods enhanced by correct use of wines. C. A. Ballou, S. S. Pierce Co., Boston.
- 4:30 P.M. More leisure time. The club manager's opportunity. S. G. Sleeper, Mgr., The Country Club, Brookline.

Saturday Evening Program

- 7:30 P.M. Herbert Jaques, Pres. U. S. Golf Association.
- 8:00 P.M. James T. Hammond, Commission of Conservation, Conn.
- 8:30 P.M. R. C. Kenney, Mass. Director of Fish and Game; N. E. Representative of Isaak Walton League.
- 9:00 P.M. Winter sports talk.
- 9:30 P.M. Movies.

Sunday, March 18

General Exhibition opens 9:30 A.M.

Special program for women in Memorial Hall.

- 11:00 A.M. About fairway watering, L.S. Dickinson, Agronomy Department, M. S.C.
- 11:30 A.M. Two 15-minute papers by members of the greenkeepers class. Subjects to be announced.
- 12:00 M. A discussion of American-grown bents.

Afternoon General Conference Program President Hugh P. Baker, Chairman

- 1:15-1:45 P.M. Music.
- 1:45 P.M. His Excellency Governor Ely of Massachusetts.
- 2:00 P.M. Charles H. Cross, President, Mass. Golf Association, and Francis. Ouimet, past American and British open champion and captain U. S. Walker Cup team.
- 2:45 P.M. Paul Reddington, Chief, Bureau of the Biological Survey, Washington.
- 3:30 P.M. President Baker—a summary of conference.

Melvin Traylor, Former USGA President, Dies

MELVIN A. TRAYLOR, president of the USGA in 1928 and long active as a national and sectional association official, and a golf club president, died at Chicago, Feb. 14, of pneumonia, following a 35-day illness.

Traylor was one of the most popular men in golf, and deservedly so. He was a genial, smart straight-shooter; tough when the occasion demanded and a great comrade. He was prominently mentioned for the Democratic presidential nomination in 1932, and was one of our foremost bankers.

DETROIT WEATHERS STORM

Figures on Tough Year Show Private Clubs Cut Costs— Improvement Expected

A REDUCTION of \$60,000 in maintenance expense for 1933 as compared with 1932 on the 14 private clubs reporting to the Detroit District GA, and of an average 30% reduction in play at public courses in the district, were highlights of annual statements recently made by Jos. Mack, Green Section chairman of the DDGA and Eugene W. Lewis, chairman of Club and Public Links Relations of the association.

Figures are especially interesting because the Detroit District probably has been hardest hit of all golf territories during the past two years. Greenkeepers and their chairmen have performed astonishing feats of budget reduction, which in many cases they hesitate to label economies because of the ultimate costs of restoring courses to the standards enjoyed prior to the cuts. The 14 private clubs reporting in full had a maintenance bill of \$194,154 in 1932. This figure was cut to \$135,224 the past season. One club, Pine Lake, had a 1932 maintenance cost of \$14,463, and its bill in 1933 was only \$6,568, a reduction of \$7,895.

A comparative table:

	Saving		
1933	over 1932	ł	
6 821	ę		

Barton Hills	\$ 6,831	\$
Birch Hill	6,740	2,603
Birmingham	7,702	4,273
Bloomfield Hills	13,135	6,548
Brooklands	4,665	2,498
Country Club	13,422	4,797
Detroit Golf Club (36)	22,759	5,848
Flint C. C	4,064	
*Forest Lake	4,217	410
Grosse Ile	7,819	5,770
Knollwood	6,630	
Lochmoor	8,844	748
Meadowbrook	8,277	3,729
Orchard Lake	8,950	2,481
Oakland Hills (36)	12,916	6,250
Pine Lake	6,568	7,895
Plum Hollow	9,238	5,052
Port Huron	3,984	

*Power cost not included.



ATLANTA BALTINON BOSTON BUFFAID CHARLOTTE CHICAGO CLIVELAND ODIVITE KANSAS CITY-IOS ANDELES MININEAROLIS MONTEZUNA (GA.) PREADELINA NITIBURGH PROVIDENCE SAN PRANCISCO SEATUR ST. LOUIS

Most of the private clubs held play fairly well. In contrast, fee and municipal courses all reported play about 30 per cent off.

Fee Income Off

In addition, fee courses reported a reduction in revenue of nearly 50 per cent. This was credited to two causes: First, the general reduction in green-fees; secondly, the influx of a share of the semipublic courses' best customers to private clubs because of low rates and playing memberships.

Referring to figures on the play at 12 representative clubs, Chairman Lewis reported Detroit Golf Club led in the standpoint of play for 1933 with an average of 133 players per day from April 1 to Nov. 1, a total of 28,462, and an increase over 1932. Of this number, 20 of every 133 were guests. Forest Lake had the biggest guest play, comparatively speaking, among the 12 clubs reporting, 18 of every 40 (the daily average of players for the season), being guests.

Figures for the 12 clubs:

	Daily Av.	Total
*Detroit Golf Club	133	28,462
†Oakland Hills	75	16,050
Plum Hollow	88	18,832
Grosse Ile	62	13,268
Forest Lake	40	8,560
Pine Lake	25	5,350
Western	52	11,128
Meadowbrook		16,050
Orchard Lake	75	16,050
Birmingham	100	21,400
Lochmoor	75	16,050
Country Club	72	15,408

*Thirty-six holes.

†Figures for south course.

Country Club's play averaged 20 daily under 1932 but was enjoyed by the player at a cost of \$195 in yearly dues as compared to \$250 the previous year. Reductions as great as 40 per cent in the dues from 1932 were reported. At Plum Hollow, which had dues of \$10 monthly this year, a 50 per cent cut is in store for 1934, a monthly rate of \$5 having been announced.

Rate Cut Mystifies

As for municipal golf, with the exception of Rackham which showed a 19 per cent increase in play, the municipal courses experienced an average of 30 per cent less play, as the following figures, supplied Chairman Lewis by Commissioner Henry W. Busch show:

	1933	Decr.	Pct.	
Belle Isle	28,436	14,851	34	
Palmer Park (18)	39,926	19,489	33	
Palmer (9 hole rds.).	42,569	18,958	30	
Rackham	33,694	*5,350	*19	
River Rouge	15,912	9,279	37	
Chandler Park (18)	49,102	14,097	22	
Chandler (9 hole rds.)	43,143	9,549	18	

*Increase.

Nine-hole rounds at Palmer Park and Chandler Park indicate, Chairman Lewis said, that part of the public couldn't afford the 18-hole rate and gravitated to the ninehole round since the latter showed less decrease. While a cut in the rates evidently had something to do with the increase in play at Rackham, a similar move at the River Rouge course evidently had no effect.

Depression Brought Some Good to Golf Clubs

THE TRYING times of the past few seasons have not been without their benefits to golf clubs. For one thing, conditions forced the clubs to eliminate the "whoopee" era of extravagance that was so much in evidence.

In particular, many a club was unknowingly burdened by a payroll much too large for their needs. In fact, it was the rule rather than the exception for a club to have so many employes on its staff that few of them needed to perform anything like a full day's work, week-ends excepted.

Here is a good example of payroll savings brought about by the depression. One of the Middle West's multiple course clubs built up quite a reputation in pre-slump years for the luxurious service it rendered in its locker-room. There was a boy available for every thirty-odd lockers and since it was only on rare occasions when more than five or six locker occupants happened to be in the aisles at a time, these boys stood around doing nothing most of the day and were immediately available for the members' slightest order. The boys received board and lodging at the club, salaries of \$25 a week, plus their tips.

Other locker-room help included washroom boys, shower-room attendants, two