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P. G. A. Names A. R. Gates Its Business Pilot

By HERB GRAFFIS

ON MARCH 17 signatures were affixed to a contract covering engagement of Albert R. Gates as business administrator and legal adviser of the Professional Golfers Association of America. President Alex Pirie and Jack Mackie, treasurer, were the pro officials handling this historic formality. The contract was signed at Mr. Gates' office in Chicago, following several conferences in New York and Chicago between the new pro administrator and the P. G. A. officials.

Engagement of Gates brings into the pro situation at an important time the services of an able organizer and administrator, who is one of the most prominent figures in amateur golf officialdom. The Chicagoan served as secretary of the Western Golf Association during 1906 and was elevated to its presidency in 1907. He also served as president of the Western in 1907 and in 1921 and 1922. During his presidency of the Western he earned the reputation of being an able and firm protagonist of the principles of his organization's cause, and though those hectic days saw some conflicts between the U. S. G. A. and the Western, the calm good judgment of the new pro regent had much to do with bringing about the unity and harmony now prevailing. Gates is highly regarded by the officials of all the amateur bodies and the pros who have had an opportunity to become acquainted with him during his twenty-five years' activity as a golf club and association official regard him as

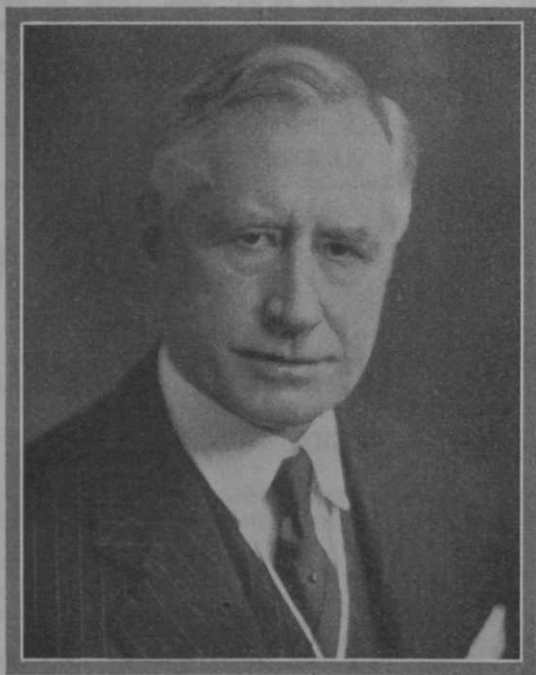
ideally qualified for the strenuous responsibilities he has undertaken.

Picked from Scores of Men

Signing the Chicago lawyer marked the conclusion of a still hunt that Pirie, the P. G. A. president, has carried on extensively since the engagement of a business administrator was authorized by the 1929 convention of the P. G. A. There were a number of applicants for the position, some of them well known in professional golf ranks, but it was the concensus of the P. G. A. convention that the man needed for the job was one whom the job would seek, rather than one who made a bid for the spot because of its rewards of money and glory. Gates, a successful corporation lawyer and a substantial business man, is very much in the prime of life and at the point where he is qualified by temperament and finance to give himself unreservedly to a cause in which he long has had a lively interest. The happy combination of circumstances seems, from every angle, to provide the pros with just the sort of a man they have been looking for ever since the idea of a pro golf business administrator was first suggested by GOLFDOM.

In the selection of Albert R. Gates, GOLFDOM shares with the pros hope and confidence that the pro organization now is in such shape that it can prosecute its many ambitions to a satisfying fruition. When the business administrator idea was

BUSINESS MANAGER FOR THE P. G. A.



ALBERT R. GATES, newly appointed business administrator of the Professional Golfers' Association of America, is of pioneer American stock, the first of the American branch of the Gates family, Steven, having settled at Hingham, Mass., in 1638. Mr. Gates was born in Illinois, Nov. 29, 1869. He is a graduate of Lake Forest university law school. He was admitted to the Illinois bar in 1895 and to Supreme Court of the U. S. in 1898. His office as corporation counsel has been in the Title and Trust Bldg., Chicago, for 37 years. The new pro administrator is a director of three banks in Chicago and vicinity.

Mr. Gates is a veteran in golf official circles, having been president of the Calumet C. C. (Chicago district) in 1905-6, secretary of the Western Golf Association in 1906 and its president in 1907-1908 and 1921-22. His administrations of the Western were featured by progressive policies. One of the occurrences of a Gates' administration was the first legalization of the steel shaft.

Skokie C. C. (Chicago district) is the home club of the new pro executive. He is an active golfer, a big game hunter and fisherman.

proposed in these columns the pro reception was lively and far-reaching. The elected officials of the P. G. A. who have devoted many valuable and tiresome hours to attending to the organization's detail work saw in the prospects of aid from an experienced, active and well-known figure, the logical chance of speeding their progress toward their aims. The rank and file of the members were prompt to see the possibilities of help from such an organization expansion, as attested by scores of articles prominent pro business men have written for this publication.

Big Job Ahead for Gates

The new pro administrator, whose five-year contract becomes effective May 1, 1930, has a man-sized task cut out for him and he knows it as well as the pros. In the first place, when the Atlanta convention raised the national P. G. A. dues to \$50 in order to finance the constructive work the organization hopes to do for its members individually and collectively, "histing of the ante" was bound to keep some of the boys out of the fold for the time being, at least. The pro officials state that the new discount agreement secured from the manufacturers by the committee appointed at Atlanta already has warranted the increase in P. G. A. dues, for the added income from the new discount scale will considerably more than pay the raised dues for any pro, even if he is doing the minimum amount of business at his club.

Since the Atlanta convention an arrangement has been made with a large insurance company which will give the boys more insurance and put the benevolent fund in stronger shape without increasing the "take" from the members.

Employment Work Planned

The P. G. A. already has started to take some concerted action on the matter of employment and is working on the platform that P. G. A. membership, under the performance of the business administrator's office, will be "sold" to club officials as such strong evidence of a pro's qualification for a job that it will be an essential for a man who is seeking employment at a good club. In this connection, the P. G. A. officials think the increase in dues to \$50 probably will complete the last few details of the job of house-cleaning that has been going on quietly and effectively during the last four years, and will result in a standard of membership that can be set forth as uniformly the highest of any profession in this country. These are

strong words, but the P. G. A. officials are willing to stand pat on them, and state that the work already done in this direction has resulted in making P. G. A. membership primary identification of a first-class man.

National headquarters of the P. G. A. will be moved to Chicago and Gates takes office the first of May, in order to be centrally located for service to the nation's pros.

To present the details of the P. G. A. policies and procedure in connection with the operation of the business administrator, President Pirie started on a series of visits to P. G. A. assemblies, beginning with a session at Pinehurst during the North and South Open.

In addition to closer correspondence contact with the pros, amateur governing bodies and club officials, the P. G. A. under the new deal with the business administrator proposes to have field men covering the territory, as more intimate and practical help for the P. G. A. members.

Cleveland Greenkeepers Stiffen Membership Qualifications

AT THE March 3 meeting of the Cleveland District Association of Greenkeepers, which was held at Hotel Hollenden, the matter of a change in the by-laws, requiring a more stringent examination and a longer term of apprenticeship or experience than that now required for membership in the local organization, was discussed. Further action on the matter was deferred until the next regular meeting, April 7th, so that all members could be notified of the proposed change.

After the business session, two very interesting papers were read. One by M. D. LaMoreaux, of Kirtland C. C., on the methods tried and used by him in the eradication of dandelions. The other was read by Chris Bain, president of the local organization, on plant life.

Chicago Managers Stage Merry Stag Party

SPRING Stag of the Chicago Club Managers' association was held at the Hamilton club March 25. There was a good turnout and a grand time h.b.a. The entertainment warranted the event's gay and unique advance bulletin, a questionnaire which was a gem of specialists' work.

"Balance Sheet" for Course Rates Results of Work

By PROF. LAWRENCE S. DICKINSON

With pardonable pride GOLFDOM announces the publication of a series of notable articles by Professor Dickinson of Massachusetts Agricultural College, on sound methods in modern greenkeeping. Professor Dickinson's qualifications as a scientist and his practical contributions to the advancement of greenkeepers and to the betterment of course maintenance methods identify him as an eminent authority.

Part of this series is intended for publication in Professor Dickinson's forthcoming book on golf course maintenance.

THE real balance sheet of a golf course has never been given proper consideration, if even thought about by many clubs. Such a fact is very unfortunate, for it has kept the greenkeeper at a much lower standard than is commensurate with the requirements of his position.

Too much stress is being placed upon the immediate cost outlay and how to lower it. Standardization of cost systems, the publishing of costs for the purpose of showing how little is spent, and comparing one greenkeeper's expenditures with another's is not only unwise but dangerous.

Cost systems should not be standardized because the items that make up the costs are not and cannot be standardized. Furthermore, no two committee-men or greenkeepers will interpret costs the same. A series of indefinites do not make a definite.

Publishing club expenditures cause unrest in the green-committees and unjust criticism of the greenkeeper because there is bound to be comparison of costs. The factors covering costs in golf course maintenance are very variable. Variables may be compared by interpretation, but by no other means. One not entirely familiar with all conditions cannot correctly interpret any variable.

Course Condition Is Base

The real balance sheet has been neglected because the real "factory" product of the golf course is overlooked. The nearest approach to getting to the real balance sheet are the statements that the

course is better or worse than last year. Such statements are made from memory of the course's condition last year and usually with no real study of the course. They express opinions but have no facts to substantiate them.

The factory product of a golf course is playing conditions that give pleasure and recreation to the golfers, and the general physical condition of the course determine the quality of the product.

As in the commercial world, each factory (golf course) has its own brand and standard of product. It has its cash receipts (dues and green-fees), its stockholders, and its factory (the golf course). Except in the case of municipal or "pay as you play" clubs the product of this factory is not money. There is obviously some sort of a product or there would not be more golf courses constructed each year. There is also obviously a profit for the investor in the game of golf (the player), otherwise there would not be the very large increase in the number of persons investing their time and money in the game. The profit to the investor is very well known and acknowledged: better health, exercise, enjoyment, etc.

The discussion thus far has been mainly on the output of the factory, but any business man realizes that both output and the quality of the product are dependent upon the personnel of the management and the physical condition of the plant. Also any business takes an inventory annually or semi-annually of the physical assets, and if the physical assets are in-

creasing the profits of the factory are usually also increasing. The greenkeeper is the manager of the factory and he should inventory his plant semi-annually.

Such an inventory should not be an inventory of equipment and materials on hand, but should be an inventory of the physical condition of the course. Inventories should be taken during the same calendar week each year, and probably the week of April 1 and the week of October 1 are the most practical weeks for each inventory. They should be taken by the greenkeeper himself.

Inventory Terse and True

Each inventory should be taken without reference to the preceding inventory to assure correctness. It should state the facts as observed, and should be as terse as possible. These two points in taking the inventory of the course should not be overlooked.

After an inventory has been taken it should be compared with the inventory of the last corresponding six months' period and a balance sheet struck off. It is not advisable to take an inventory more frequently than at six months' intervals because in turf work *real* results seldom take place in a shorter time, and if they should the inventory would find the effect anyway.

The greenkeeper's final balance sheet contains only a few items. They are comprehensive and therefore must be correct when recorded. Each item is only for the period since the last inventory, no item being cumulative.

The items are (1) cash expended, divided into maintenance and permanent improvement, (2) increase or decrease in playing membership, (3) increase or decrease in the number of rounds of golf played, (4) comments and contentment of the players, (5) permanent improvements, (6) comments of visiting players and the increase or decrease in number of visitors, (7) general physical condition of the course as compared with condition at time of previous corresponding inventory period.

The entries for items 1, 2 and 5 are easily correctly obtained. Item number 3 is known where a count of the players is made. It can be quite accurately estimated if average counts are made at frequent intervals. Items 4 and 6 to be of value should be an accumulation of comments made over the entire six months' period. Item number 7 is the final result of the inventory of the course.

Typical Balance Sheet

How a balance sheet might look:

Item	Debit	Credit
1. Cash expended—		
Maintenance ...		\$20,000.00
Improvements ..		1,000.00
2. Playing membership. (Increase).	20	
3. Number of rounds played. (Increase)	450	
4. Comments of players	70% favorable	30% unfavorable
5. Permanent improvements	\$1,000.00	
6. Comments of visitors	85% favorable	15% unfavorable
7. General physical condition of the course	\$20,000 and 8% +	
Balance,	Debit	Credit
1. Playing membership		20
2. Number of rounds.		450
3. Comments (both) ..		100%
4. Physical improvement		8%

The above can be considered as a most satisfactory balance. Items 1, 2 and 3 usually show favorably when item 4 is positive.

Item 4 is the greenkeeper's check on himself, but it must be remembered that the nearer the state of perfection a course is in the percentage of improvement will be lower. However, the maintenance standard is higher by each improvement and each per cent of improvement increases in value.

Inventory of the Course

The inventory of each hole should start at the tee and continue through the fairgreen, rough and putting green. The tees, fairgreen and putting green are best handled if divided into quarters, and the rough may be classified as foretee, right and left sides, and rear green. All hazards pertaining to the hole should be grouped under one item.

Do not forget that the object of the inventory is to obtain a complete record of the physical condition of the course as it really is. Records may be taken in any manner, but the items should not change with each inventory, for if they do very little value can be given to the compari-

son. The following items are offered as suggestions:

Inventory of Hole Number 1

Length..... Date.....

Tee Front

Grass	Grass
Weeds	Weeds
Surface	Surface
Edges and banks...	Edges and banks...

Same items for each quarter.

Rough

Front of tee. Grass

Weeds

Other growth.....

Same items for right side, left side and rear of grass.

Balance Sheet for the Hole

(After comparison with last inventory)

Item	Proportionate Value	Debit	Credit
Tee 10% better.	1.5 =	15 points	
Rough 20% worse	1.5 =		30 points
Fairgreen 8% better	2.5 =	20 points	
Hazards 20% worse5 =		10 points
Greens 5% better	4.0 =	20 points	
		55	40

The hole has improved 15 points.

How a balance sheet for a nine-hole course might look:

Physical Condition

Hole	Tee %	Rough %	Fairgreen %	Hazards %	Greens %
1.....	+10	+ 5	± 0	± 0	± 0
2.....	-20	+ 5	± 0	± 0	± 1
3.....	- 5	+ 5	- 5	± 0	- 5
4.....	+10	-10	- 5	± 0	+10
5.....	+ 5	-10	-10	- 5	- 2
6.....	+20	+20	± 0	+ 5	+ 5
7.....	- 5	- 5	- 5	- 5	- 5
8.....	+40	+ 5	+10	+ 5	+10
9.....	-15	-10	- 5	-10	-10
	+40	+ 5	-20	-10	+ 4
Valuation for importance of area.....	+50	+7.5	-50	- .5	+16 = +23

Hazards

Sand traps. Edges

Sand

Slopes

Same for grass traps and mounds.

Brooks and pools. Banks

Bottom

Obstructions

Surface

Putting Green

Rear

Grass. Varieties ...	Grass. Varieties ...
Health	Health
Texture	Texture
Weeds. Varieties ...	Weeds. Varieties ...
Quantity	Quantity
Surface	Surface
Physical condition..	Physical condition..
Disease marks.....	Disease marks.....

Same items for each quarter.

It can be arbitrarily stated that due to the great improvement in the tees and a slight improvement in the rough and greens the course is 23% better than at the time of the previous corresponding season's inventory.

GOLFDOM warmly welcomes letters from greenkeepers, professionals, managers and club officials on their problems and achievements.

If you are doing something to promote better operation of golf clubs pass the details along to **GOLFDOM'S** thoughtful readers.

Fit Right Manager to Job and Let Him Manage

By HENRY R. DUTTON

Secretary, Club Managers' Association of America

When reference is made from time to time that there exists a very great problem in the tremendous turn-over in the management of clubs as a whole, and of golf clubs or country clubs in particular, one is apt to decry the fact; perhaps feel sorrowful over it and say, "It's a pity"; but there are few, I believe, outside of the editor of *GOLFDOM* and others who deal with many managers all over the country month in and month out, who appreciate the real gravity of the situation.

That there is a tremendous turnover, and an abnormal one, has been brought home very forcibly to me since I became national secretary of the Club Managers' Association of America. The true indication of the numerous changes made each year, either by voluntary resignation on the part of the manager or through pressure brought to bear by his employers, comes through the address file of our association with the continual changing of addresses of managers in all types of clubs, but to the greatest degree in the country clubs. I was naturally interested in this condition; first, because of the great amount of work which is placed upon the secretary's shoulders in keeping his correspondence records in proper order, and then again by comments made by the editor of *GOLFDOM* Magazine in regard to this situation. In response to an inquiry on the part of Mr. Graffis to make some comment on the reason for this abnormal turn-over, I have taken the opportunities afforded me in my contacts with the large groups of managers in different sections of the country, of getting expressions of opinions from those who had made recent changes, as to their reason for so doing and, on the other side, I have talked to officials of clubs in whose hands rests the responsibility for engaging and discharging managers. It can be readily imagined by those who have had close contact with these conditions, that the story would be one of many volumes, but I do believe that it can be condensed sufficiently, merely

touching the high spots, so as to give some general idea as to the outstanding reasons for the condition which exists in this industry, and perhaps at the same time a solution may present itself.

Poor Picking Primary Fault

In the first place, we have to consider that although clubs range financially on a par with business enterprises, they are rarely considered as such by those who are financially responsible for their operation. I think this is the crux of the entire situation. No business man would think of having selected for his board of directors men who were picked merely from a popularity standpoint or because of their social standing. He would, rather, select men who were familiar with his business, or, if it were a technical line, perhaps original in itself for which men of experienced training could not be secured, he would select for his board men who at least were successful business executives. In a few clubs it is true that the members of governing boards or house committees are men who have had a broad business training which would fit them to see the club's true business aspect and thus be able to lend their support and intelligence to the manager.

In the cases where perhaps this ideal type of governing board may have been secured, you will of course find a very successful club, providing they have used their ability to the extent of selecting a man equally capable as themselves in a business sense, plus the technical training in club management, to handle the managerial functions of their operations.

There are cases also where this same ideal type of governing body may have been secured, but whose personal feelings or temperament may be such that they abandon their business judgment the minute they come into contact with a club problem and treat it as something entirely foreign to a business condition. This, of course, comes from the practices of the past when clubs were informal proposi-

tions, as far as the financial side was concerned, and were small enough and simple enough so that the problems involved were not important enough to be classified as 'business ventures.'

Elections Bring Upheavals

About 75 per cent of the managers whom I questioned had a similar story to tell. They were engaged to manage a club by a certain board of governors or house committee. This committee had ideas which, perhaps, were compatible with the manager's ideas based on his training and experience, and with this harmonious feeling existing and co-operation which resulted, the club had a successful administration. But, unlike any other business, the board changes the following year, or if it has the rotation system, at least a new house committee is appointed.

Now it may have happened that some of the members of the club elected to the new house committee were not favorable or friendly to the policies of the last one and so they take it out on the manager, either having made up their minds to get rid of him because they felt he was responsible to a great extent for those things which didn't please them, or, on the other hand, the things which they recommend for the administration during the coming year, are entirely opposed to good practice or sensible procedure from a technical viewpoint in club management. It naturally follows, therefore, that if, in the first place they are after the manager's scalp, they make it so uncomfortable for him that he gets out, or in the second place, if he has any pride in his profession and his reputation to make good, he will refuse to continue to operate a club in a manner which he knows is not what his training and experience has taught him to be the best method of management, and so he gets out.

The next problem involved is for the new committee to engage a new manager and in nine cases out of ten, I doubt that the committee is capable of selecting the right type of man for the job.

This is no reflection on the average house committee, but rather an unfortunate circumstance, is that the problems of management have not been sufficiently aired, discussed and advertised so that the average member might have a better knowledge of what is required for club management.

Where a new man comes on the job, in many cases inferior and unfitted for his position, through the errors that he makes or the policy which he follows of trying

to operate a club from "plans laid out by architects" who are not skilled in these highly technical problems, he not only brings discredit upon himself, and lasts but a short time on the job, but he brings difficulties to the club which make it increasingly hard for the new and capable man who may come to rectify those conditions and furthermore, the whole "kit and kaboodle" of club managers are condemned as inefficient. As I said, we could write volumes based on personal experiences of managers and committees, but I think that the main questions involved center upon the following points:

The Board's Guide-Posts

First—that the committee or board be thorough business men, willing to see business methods practiced in the club, up to the point, of course, where they do not exclude club spirit;

Secondly—that they attempt to learn something about the technical side of management, so that they will not force upon a manager policies and ideas which are not conducive to sane, sensible and efficient management;

Third—that a standard of management be set up whereby board members may apply a yardstick to the prospective manager, so that he can be properly measured for the job and be assured they are getting a capable man.

Fourth—that a thorough understanding exist between the employer and employee, namely, the board and manager before he takes over the administration concerning his responsibility, duties, his authority, and how far it extends, and also that the committee or board be clear in its mind as to its policies, and lay them down for the manager at the very beginning of his office.

"Who They Are" No Criterion

No doubt someone will ask how this standard of management referred to previously may be compiled for the use of those entrusted with the employment of managers. If there is sufficient interest, I would be glad to present for you, such a standard as a result of the deliberations and study of a group of the foremost managers in this country as to what they believe to be the proper qualifications for a club manager. As long as boards of directors, or governors are chosen because of who they are instead of what they know, you are going to have an increasing turnover of managers each year.

As long as proper judgment is not used in the selection of men to fill man-

agerial positions, you are going to have constant changes because it is no more true that every man who represents himself as being a club manager is a practical, successful manager, any more than every man who calls himself a golfer comes in that category—just because he says he is a golfer. The chances are, ten to one that he is just a dub.

Certainly a man with considerable money which he invested in a manufacturing business of which he knew absolutely nothing, as far as the details of the product were concerned, would attempt to dictate policies to those whom he employed to manage that business if he employed them because of their proven ability. He would only be "gumming up the works" and the pocketbook would be bound to suffer eventually.

I must be fair, so I do not say that the reason for this great turnover and the various problems that arise between manager and clubs is entirely the fault of boards and committees. I have a full realization of the shortcomings of managers and I will admit that we have many managers in this country who would be better off trying to do something else because they certainly have neither the ability or personality to be successful club managers.

The solution to the problem therefore means a more sensible selection of boards, a more careful selection of managers by these boards, as well as closer co-operation and greater understanding between the two.

Last, but not least, the sins of a board, or committee, should not be visited upon the manager, and when members will realize that the manager in most cases is hampered by lack of authority and must follow the dictates of those who are his superiors, they will be more lenient in their judgment, and the desire for revenge will not exist in their minds when eventually they emerge from the rank of membership and become officers of the club. Rather, will they understand the conditions under which the manager had to operate and attempt to make his task an easier one by greater understanding and co-operation, during their term of office.

When that time comes you will find the average manager eager to react to better treatment and we will have fewer changes in management, greater efficiency of operation and what is most important, better service and happier financial results.

What's Wrong with This Picture of House Cost?

C. R. OREMUS, secretary-manager director of the Erie Downs G. & C. C., at Bridgeburg, Ont. (near Buffalo), sends in his club's dining-room statement for the last two years, asking GOLFDOM to print it so he can get discussion or constructive criticism.

In explaining the statement, Mr. Oremus says:

"We have 300 members with no expensive clubhouse or equipment and crowded conditions, charging \$1.50 for steak and chicken dinners, also an a la carte menu. The employees' meals charged at 75c each, they eating same food as the members. The food costs are 33 per cent higher than same food in States because of duty and sales tax going into Canada.

"The ice and electricity were charged as house expense, and no doubt weren't any higher than years previous. I also might say that our dining-room opened May 1 and closed as of this report, considerable being lost in November because of weather conditions, which made poor patronage of a golf club." The statement:

November, 1929

Statement of Restaurant:	1929 Current Year	1928 Previous Year
Income and Expense		
Income:		
Sales	\$13,917.52	\$10,752.31
All employees' meals	3,798.25	3,190.87
	<hr/> \$17,715.77	<hr/> \$13,943.18
Expenses:		
Foods	\$11,022.51	\$10,285.50
Supplies	190.79	392.68
Employees—		
Wages	5,026.70	2,777.00
Meals	1,461.91	1,233.75
Electricity		227.44
Laundry	365.19	539.71
Ice		142.50
	<hr/> \$18,067.10	<hr/> \$15,598.58
Net income or loss*	\$ 351.33*	\$ 1,655.40*

*Loss in bold face.



Sea Island's No. 2 green is charmingly located in a semi-tropical setting. The course's pro-greenkeeper appears at the left of the picture.

How Famed Sea Island Links Was Made a Model

By HUGH MOORE

Sea Island's Pro-Greenkeeper

ONE reads so much these days about how to do this and that and possibly someone will say after they read this article, "Just some more apple sauce" but, believe me the facts contained in this story are real facts gained from past experience which put wrinkles in my face and grey hairs on my head.

This story is more to help the south in building and maintaining golf courses than any other section. I was once asked by a visitor, "How do you keep Bermuda greens in such wonderful shape?" My answer was, "You must know how and when to act, therefore experience is what a man must have before he can make a success at construction work or as a greenskeeper. There is entirely too much guess work being done on golf courses these days.

Every greenskeeper should play golf. It will help him in his work. He will find out many things of great help to make him a more useful greenskeeper, and he can look at his own work from a golfer's stand-

point. If a greenskeeper is too busy or other things interfere to keep him from playing he should at least try putting on his own greens occasionally. Personally I have found many points of help in making my course better just from playing golf.

Green Building Method.

Twenty-eight months ago I came to Sea Island Beach, Georgia, and I have built what many proclaim one of the best golf courses in the south. I have built four greens of my own design and one from the blue print of Colt and Allison. Each one of these greens I have had no trouble with turf, and why? Because the soil on which these greens were built was the best of good woods mold one foot thick used for top-soil with stable manure one year old, 200 pounds of Milorganite, 50 pounds of phosphate with 35 pounds of lead arsenate to keep out the Porto Rican cricket moles. The fertilizer and poison were thoroughly disc harrowed into the green. Bermuda stolons were used and