THREE VIEWS FROM THE FAR WEST



Within scenery like this, Midwick's architect made no mistake locating the imposing structure where he did.

The Spanish motif is admirably followed inside the Oak Knoll clubhouse, as this Lounge view shows.





Members of Flintridge, near Pasadena, find this pool behind the clubhouse most welcome after a warm day on the course.

Pros Contemplate Starting Co-op Buying Bureau

I T IS evident that the last annual meeting of the Professional Golfers' association of America dug into the merchandising aspects of the pro's job in a manner that may have far reaching consequences. Now Willie Ogg, chairman of the committee appointed at the Cleveland meeting to investigate the pro buying situation, has made the first announcement of the activity to the general public.

Ogg's statement concerning the plan was made to W. E. Mullins of the Boston Herald. The part of the interview that is authoritative, according to Ogg's confirmation to GOLFDOM, says of the P. G. A. buying investigation:

"At the annual meeting of the Professional Golfers Association of America in Cleveland some weeks ago the subject was discussed in detail and the outcome was the appointing of a committee charged with the duty of forming a buying syndicate of national scope which will restore the professionals to a position in which they will be more firmly entrenched than they ever have been.

"The new scheme will hit the golfers in their most tender spots, their pocketbooks, because if it succeeds the price of balls and clubs will undergo a huge reduction and if the professionals can prove to the millions of golfers in the country that they can reduce the cost of golf, they will emerge from the struggle for supremacy with victory perching on their banners.

"Willie Ogg of the Worcester Country Club has been designated as chairman of the newly formed committee, and therefore the shrewd Scot from Carnoustie is in the best position to explain the new venture. Here is what he has to say about it:

"'If we succeed in our endeavor to give the golfers cheaper golf the professionals will become valuable adjuncts to the club. We intend to organize a buying syndicate. Thus, we will be in a position to meet any competition and undersell it because no one can buy as cheaply as we can and, having less overhead and no thoughts of a middleman's profit, we can pass the savings along to the players.

" 'The cost of selling products to the professionals as individuals is enormous and far out of proportion to the price of the products. The manufacturing concerns with which I have discussed the venture have given it their approval because they will make more profit than they do now, even with giving us a higher discount, because risk will be eliminated and the selling expenses greatly reduced.

"There are 1,800 members of the P. G. A. with an estimated buying power of \$7,000 a year for each member. Although that figures up to more than \$12,000,000 it really is a conservative estimate.

Seek the Support of Players

"'We want the moral support of the golfers, the clubs and the governing bodies, and I predict that we will have it because the members will benefit from it. The professional will not need a salary with all his members trading in his shop, because he will be amply repaid by the increased volume of business and his position with the clubs will be made more secure.

"'We have not yet canvassed all the manufacturers and we have not yet discussed the subject with the United States Golf Association, but after we have explained to both we do not anticipate any objection.'"

Still in Embryo

The P. G. A. enterprise is still very much in the formative stage, although some sections of the national body, notably the Mid-West P. G. A., have been doing some collective buying successfully.

In the Herald's story reference is made to the operation of the various service bureaus in buying for the greenkeeping department of the golf business, and the inference is made that this buying threatens the merchandising future of the pros on an independent and co-operative basis. There's nothing to this angle of it, states Ogg, for the sale of golf goods as a club proposition, having had its test, is a prac-

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tically dead issue, selling generally having returned to the supplying of golf goods to the players by competent pro merchandisers.

Collective buying as a practical proposition has its limitations and its disappointments, as has been demonstrated by Russia on a grand scale and on a lesser scale in innumerable cases. But there is no denying that in certain instances, and under expert management, it has simplified and saved in the golf field. To just what extent the P. G. A. can profitably and properly go is still a matter engaging the studious attention of Ogg and his committee associates. No matter how successfully the quantity buying works out, we doubt that it will bring the day when "the profess'onal will not need a salary with all his members trading in his shop." This part of the interview we question as a correct transcript or interpretation of Willie's remark. The facts, as indicated at the vast majority of clubs where P. G. A. members are located as professionals, won't justify the statement and for that reason the canny Ogg, who knows the situation from the ground up, undoubtedly wouldn't make such a far reach for the millenium.

The Mid-West Plan

Young "Chick" Trout, who is pro at Topeka, (Kan.), and president of the Mid-West P. G. A., is one of the bright youngsters who are progressive pro business men. He says, of the Mid-West idea of pooling purchases:

"We have organized a purchasing department, which pools our purchases and we pay cash upon arrival of the goods. We have a capable business man of Kansas City who does all the ordering and pays the manufacturer.

"Then when he delivers to us we pay him. We are able to get a nice discount because our combined order goes in at once. The manufacturer only has one account instead of say 30 or 40.

"We feel that this will help the pro with his credit. Instead of him having a great quantity of goods come in at one time, he will have smaller shipments, be able to take his discount and reorder.

"He will soon find himself a better buyer, that is he will be buying goods that he feels he can sell because he knows it is his, because he pays for it upon arrival and because he must get his money out."

Where Makers Stand

Just what the reaction of the manufac-

turers is to the proposed plan will continue to be a matter of conjecture until definite details of P. G. A. tentative buying pool ideas are available. A reduction of manufacturers' selling expense and credit losses together with big volume business is something that ordinarily justifies price concessions made out of savings, but there are so many slips between the cup of theory and the lip of practice that the pros and manufacturers both have a lot to consider before they can declare dividends out of the hoped-for new profits. In any event, the slightest discouragement of expert individual action in the selection of pro shop merchandise, is to be avoided, and the tiniest element of "racketeering" coercion would be fatal. In the hands of the Ogg committee the manufacturers may be assured that full and fair consideration will be given the makers' interests in order that the entire enterprise, if found feasible, may be worked out for the common good.

U. S. Construction Methods Adopted in England

MESSRS. FRANK HARRIS BROS., builders of more than 200 English golf courses, among them the Eden course at St. Andrews and the Royal Wimbledon, have been making extensive use of American methods and equipment in their operations, according to J. W. Collis, managing director, Tractor Traders, Ltd. At present they are working on some 300 acres of Windsor Great Forest, once the hunting ground of the kings of England.

Two 18-hole golf courses are being constructed with a large clubhouse for the accommodation of the members of both courses.

Between 3,000 and 4,000 acres are available for building, but the immediate scheme is to be confined to 1,200 acres, exclusive of the 300 required for the golf courses. Given good weather, it is hoped to have the courses ready for play by the first of the playing season.

There are 100 acres of tree roots to be removed, and this work is being done shortly by the two-ton and five-ton "Caterpillar" tractors.

These tools have now been at work long enough to demonstrate the great saving to be effected as against the method of horses and slip scrapers as before employed.

GOLFDOM

Close-Up on Compost Costs Is Illuminating

By EDWARD B. DEARIE Greenkeeper Ridgemoor C. C. (Chicago)

A SATISFACTORY compost cost record is one of the details of modern golf course maintenance to which too little attention has been devoted by the average greenkeeper. A knowledge of the exact cost of compost is desirable in order that it may be compared with the cost of commercial fertilizers. Too often several of the factors involved in the cost of compost are overlooked and the actual cost of compost is underestimated.

Ordinary compost consists mainly of barnyard manure, top loam or peat, sand or clay. The exact composition of the mixture will depend upon what is available. There are no definite rules as to what will make compost, but a mixture without manure lacks the organic humus necessary to create the physical reaction so important to grass growth. It is doubtful if natural compost can be satisfactorily made with any other humus supplying material except manure.

There are a number of satisfactory methods of constructing compost piles. Some greenkeepers plow up various locations in the rough adjacent to a plentiful supply of sand or clay. If the surface is clay, then sand is mixed with the manure; if the underlying surface is sand, then clay is mixed with the manure. Compost piles may often be placed close to fairways or greens where most needed, thus reducing the cost of hauling to the course.

An efficient method for the construction of compost piles is the layer system. The ground is first plowed and a layer of manure or any green material which will decompose is spread over the surface in a layer about eight inches in thickness. For the first layer green-clippings, clover cuttings or leaf mould mixed with sand may be substituted satisfactorily. Then is applied a layer of similar thickness of top soil, followed by another layer of organic material. These layers may be built up to a height of about four feet.

While the sizes of compost piles vary, a most practical area is 20 feet wide by 80

feet long. These dimensions make it possible to build a shed covering over the top at a height of about 12 feet at a minimum of expense. Of course, the sides are left open, thereby permitting free circulation of air, which assists decomposition. The floor may be of either dirt or cement. A pile in such a space will contain about 236 cubic yards of compost.

In the construction of such a compost pile the far-sighted greenkeeper will eliminate expensive hand labor as much as possible. To accomplish this purpose the use of four-up fresnos or dirt scoops is recommended. These slips will cast and spread the top soil more evenly in layers than any other equipment. They may be used to spread the other ingredients of the compost pile also. Wherever practical, it is economical to haul the ingredients right to the spot and spread them directly upon the pile.

In order to maintain the highest fertilizing power of compost, it is necessary that the material should be remixed twice yearly. The season when this is done is immaterial. This action, which is purely a manual labor operation, assists decomposition.

Before use, of course, the compost must be screened. There are a number of efficient screeners on the market, ranging in price from \$100 to \$700 and having various capacities. A few of the smaller ones may be turned by hand, but most of them are rotated by power from either a stationary engine or a tractor.

The cost of making compost involves a number of factors, some of which are usually overlooked.

Many greenkeepers consider the cost of materials and the labor charge as the only expenses. There are several other charges. Cost Factors

"Rental" of the compost shed is chargeable to the cost of compost, inasmuch as this structure has no other utility. The probable life of the shed must be divided into the original cost, which includes both

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labor and material, in order to ascertain the rental per year. This amount must be multiplied by the number of years or fractions that the same pile of compost remains in the shed before being used. The result is the rental charge against the compost pile. This sum should be divided by the number of cubic yards in the pile to ascertain the rental charge per cubic yard.

The cost of compost itself varies greatly, as some courses are fortunate in having some of the essential materials close at hand. In some cases the only expense for the ingredients is the charge for freight and hauling. These expenses must not be overlooked when calculating the cost of materials.

Making a compost pile of 200 cubic yards would take two four-ups and one plow team two days, provided top soil was adjacent to location. The subcontract cost of this work, including labor and equipment, would be about \$85.

The cost of remixing the compost is easily calculated, as this involves labor only. The easiest method is to estimate the amount of time required to remix one cubic yard and multiply by the average wage. This will give the cost of remixing each cubic yard.

The calculation of the cost of operating the screener also is complicated. Although the life of screeners and tractors is almost indefinite, the life of golf course equipment generally is estimated at five years. Therefore, one-fifth of the cost will give the amount of depreciation each year. The number of hours that these machines are operated each year divided into the amount of depreciation will determine the overhead expense per hour. To this sum must be added the wages per hour of the labor necessary to operate the screener and the cost per hour of the gasoline and oil consumed. The total should be divided into the production of the machine in cubic yards per hour to find the cost of screening each cubic yard.

The figure desired is the cost per cubic yard of compost. By using this unit and estimating the fertilizing value in terms of nitrogen, phosphoric acid and potash it is possible to make an accurate comparison between the cost of compost and commercial fertilizer. It is possible also to compare the cost of compost piles per unit, provided all of the factors are taken into consideration in each case.

To summarize, the cost of producing

composts includes the following items: Rental of shed, overhead on account of equipment, cost of materials, cost of labor and cost of gasoline and oil. The following theoretical calculations may simplify the problem:

Typical Case

An example of figuring compost cost, where top soil exists on club property, follows:

Cost of lumber for shed.....\$ 500.00 Cost of cement for shed......\$ 150.00 Cost of labor for constructing shed 350.00

Total cost of compost shed.....\$1,000.00 Estimated life of shed, 10 years.

Yearly rental = \$1,000 ÷ 10 or \$100.00.

Average length of time compost remains in shed, 2 years.

Rental chargeable to compost pile 2 \times \$100 or \$200.

Contents of pile = 200 cubic yards.

Rental per cubic yard = \$200 ÷ 200 or \$1.

Cost of Material-

Manure per cubic yard \$	1.00
Hauling manure, cubic yard	.50
Freight on manure	1.00
Sand laid down, per cubic yard	2.00
Top soil laid down	0.00

\$4.50

Cost of 3 cubic yards of manure, sand and top soil, \$4.50.

Cost of 1 cubic yard of material = $$4.50 \\ \div 3 = 1.50 .

Cost of constructing pile, 200 cu. yds., \$85.00

Cost of constructing 1 cubic yard, \$0.421/2.

Labor cost of turning one cubic yard of compost, \$.25.

Number of times same yard of compost is turned = 4.

Labor cost of turning one yard of compost $= 4 \times .25 =$ \$1.00.

Cost of screener, \$500.

Estimated life of screener, 5 years.

Cost of screener per year, $$500 \div 5$ years = \$100.

Number of days per year screener will be in use, 25.

Cost of screener per day = $$100 \div 25 =$ \$4.

Cost of screener per hour = $$4 \div 8$ hours = .50.

Cost of tractor, \$600.

Estimated life of tractor, 5 years.

Cost of tractor per year, $600 \div 5$ years = \$120.

Number of days per year tractor will be busy = 200.

Cost per day for tractor = $$120 \div 200$ = .60.

Cost per hour for tractor = $.60 \div 8 = .071/_2$.

Cost of gasoline and oil per hour = \$1.

Cost of screener, tractor, gasoline and oil per hour = $$.50 + .07\frac{}{2} + $1.00 = $1.57\frac{}{2}$.

Labor cost for operating screener per hour = labor 2 men \times .50c = \$1.00.

Cost of operation of screener per hour, $$1.57\frac{1}{2} + $1.00 = $2.57\frac{1}{2}$.

Production of screener per hour = 3 cubic yards.

Cost of screening cubic yard = $$2.57\frac{1}{2}$ $\Rightarrow 3 = .86$.

Total cost\$4.781/2

Managerial Secrets

By J. A. LEDWARD Mgr., Lake Oswego (Ore.) Country Club

T 0 my mind, the best way to make a booster out of a fussy member is to make him or her believe you value their suggestions and criticisms more than those of the president.

Building women's business at the club is rather difficult. I find that the best way to promote this is to let them help a little. If reservations for our club functions are slow coming in, I phone two or three of the ladies about it. They immediately get busy and the result is we have a full house every time. The women get a kick out of this; let them believe they are helping and they immediately become boosters.

. . .

Officers should outline the policy of the club, preferably in writing, and place it in the hands of the manager for action, holding him responsible.

I think it is bad to change officers too

frequently. Ofttimes a committee-chairman will only have got nicely started when a new president is appointed and someone else is appointed in the committee-man's stead. This is expensive in any club and an unsound business procedure.

Committees should be limited to three members each for efficient operation, and all matters between committees and the management should be handled by the chairman only. The reasons for difficulties in many clubs today is because too many people are trying to run them.

* * *

To increase house revenue, keep the members informed as to what can be had at the club, and with much less fuss than at home. Impress on them that they owe it to their club to do their entertaining in the clubhouse and to support all club functions. Acquainting members with what is going on stimulates business; remember the adage: "Monkey sees, monkey does."

. . .

The help problem cannot be fully solved. Help today are as temperamental as actors. However, I have found the situation materially benefitted by enforcing strict, but just, rules and furnishing healthy quarters and sufficient time for recreation.

Here's Something That We O. K., Too!

CINCE this has become the age of stand-I ardization, wouldn't it be more consistent to standardize the period of annual meetings of golf clubs, as well as state and district golf associations? A great majority of the clubs hold annual meetings in December at which the election of officers for the ensuing year occur-an ideal plan. A small percentage of clubs and associations, however, string these meetings and elections out from January to July, delaying the publication of annuals, and also causing much unnecessary correspondence. It would be very helpful to those interested in keeping records correct, if, for example, the clubs comprising the U. S. G. A. held their annual meeting and election during the same month as the U.S.G.A. meeting. This would be a step in the right direction. It would certainly be fine if all golf clubs held their annual election in December, the new executives to assume office on January first. Many already do this, so it is possible.-Golf Illustrated.

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Coast Pro Proposes New Salary Plan

O^{UT} of the golden west, which gets its "golden" designation so far as pros are concerned from the tournament pots rather than from the average annual earnings of its local pros at their home clubs, comes a thought that may have considerable influence in the future of pros.

Roy Tufts, professional of the San Diego Country club, is the author of the thought, which was first given publicity by Sherman Paddock in the excellent "Country Club" magazine where gems from the typewriters of Paddock and Scotty Chisholm twinkle.

Paddock tells something about this fellow Tufts by saying: "From the viewpoint of the entire membership there isn't a better professional anywhere. He is a happy combination of everything a man in his position should be, if satisfying the big majority of members, rather than winning national tournaments, is regarded as desirable.

"I dare say Roy would have as good a chance as anybody to win major events if he trained for them as consistently as some of the national leaders, for he plays mighty sweet golf. He doesn't train consistently doesn't train at all, in fact, because he is too busy taking care of the men who pay him to look after their golfing welfare. If a club wants publicity it should engage the services of a man like Walter Hagen or Leo Diegel. If it doesn't care a hang about publicity but is seeking someone to improve the games and add to the pleasure of its members it should employ a man like Roy Tufts."

The San Diego Country club is said to have more members who play in the 80s than any other club in southern California. As in all clubs where the play is heavy the club is in good shape in every respect. Now where the original idea advanced by Tufts comes in, is in raising the standard of play. Tufts' idea on this matter is described by Paddock as follows:

A Plan of Pro Payment

"I was especially interested in Roy's plan regarding the payment of professionals. Instead of allowing them to take a certain percentage of all the money derived from giving lessons he would assess each member so much a month to provide a salary fund for the professional. On this basis his services would be open to all members without additional charge.

"Directors of a club could decide on how much they wanted to pay their professional," said Mr. Tufts. "Supposing they thought \$500 a month sufficient, and that they had 500 members. Each member would then be assessed a dollar a month. If they wanted to pay more the assessment would be in proportion. Two dollars monthly, for example, would mean \$1,000 monthly for the professional.

"I fail to see where anyone could object to paying a dollar or two a month under this plan. If a man sought only one suggestion a month and his game was improved thereby he would be getting his dollar's worth. The entire membership would benefit equally under the plan. As it is now a lot of players do not take lessons because they feel they cannot afford it. They think one lesson would be of little or no benefit, and that a series of them costs more than they can afford. Under my plan they could take as many or as few as they wished.

"There are plenty of entirely competent professionals who are satisfied with an income of \$500 a month. The boys who don't want to put in their time for that wouldn't have to, if they feel their reputation entitles them to more. Lots of clubs are perfectly willing to pay more. But so far as teaching the game is concerned the \$25,000 professional is no better than any number of \$6,000 professionals, and not infrequently they are not so good.

"Personally I am of the opinion that Roy is thinking along the right line. Now and then we encounter a professional who is sincere in his desire to help all his members, whether they are paying him for lessons or not. This applies to some of the top-notchers with international reputations for their ability as players as well as to some of those whose reputations do not extend beyond their home district. But in most instances the member who doesn't pay for lessons gets no benefit whatever from having a professional on the ground. The latter makes his living by giving lessons and it would be unfair to expect him to pay the same attention to members who give him nothing as he does to those who add substantially to his income.

"While Roy agrees with this point of view, and doesn't advocate that others in line of work give their services to anyone without compensation, he himself is as free with his advice and suggestions as if the plan he endorses, of having the professional on a flat salary, were in vogue."

Pro and Con

Tufts himself admits that lessons alone don't do much good unless they are accompanied by practice, and is reluctant to instruct any member unless the member will practice two or three times between lessons. So many golfers are loathe to practice and even to receive instruction, and their number may militate against the plan, unless the majority is in favor and can swing over the contrary ones. Success of the plan calls for a high grade of pro instruction, and a versatility, for as Paddock points out, there are some pros who are wonders in bettering the games of fairly advanced golfers, but who are failures with beginners. In view of the number of lessons required under the proposed plan, it probably would be necessary to inaugurate group instruction sessions.

The plan has a lot of slants to it that call for serious study of detail by pros and by club officials. It may be the answer to the clubs' need of larger and steadier attendance on the part of members, with the consequent increase of house business. It also holds promise for the able pros for it provides an inducement of profit that will be earned only by considerable work, but which will be a substantial income. It is no secret today that the demand for good pros who are real assets to clubs, is greater than the supply. Many clubs may not realize this, or realize what a good pro really is, but after trying to get satisfaction from the services of a pro who is not making a good living wage, they learn.

The pros and the clubs have to get together better than they now are on a basis of mutual profit, and for that reason the Tufts idea is deserving of considerable study.

To increase the club income without increasing the congestion on the course, have you considered the possibility of nonplaying memberships? This applies particularly if the club has a swimming pool or outdoor dance floor.

This Is Way to Spell "Good Pro", Bob Says

B OB WHITE, of Spalding's New York office, is a good booster for his friend E. D. Van de Water, pro at the Meadowbrook Country Club, Hamden, Conn., and



E. D. Van de Water

one of the able business pros of the country. Bob sends us this to tell what kind of a talented gent Van de Water is:

- V ery conscientious.
- A fine instructor.
- N ever lacking in courtesy.
- D ependable.
- E nergetic.

W atchful of the club's interests.

- A consistently good player.
- T akes a personal interest in his pupils.
- E xtra well versed in course upkeep.
- R enders satisfactory service to all.

MANY green-chairmen think additional traps are the sole necessity when a hole is "too easy" and needs tightening, but many a perfectly designed hole has been rulned by this practice. It is generally better to change the location of the tee, which does not necessarily mean moving it back. Sometimes a shift to one side or the other for a matter of only fifteen yards will change remarkably the character of shot required.

Will Six-Hole Units Improve Course Routing?

By F. L. O. WADSWORTH

A CAREFUL study of many different golf links—and personal experience in the design of a number of courses —has convinced the writer that the great majority of these links occupy much more ground than is necessary for the reception of the number of holes which are laid out on them; and that these links, if properly redesigned, would afford requisite playing facilities for a much larger number of golfers than are now permitted to use them.

One of the results of this study has been the development of the *hexaplex* system of golf course architecture, which is characterized by the arrangement of successive holes in groups or units of six holes each instead of in loops of nine or eighteen holes—with the starting tee and terminal green of each hexaplex unit in relatively close proximity to the main buildings or to the locker-rooms of the club.

The sextuple, or hexaplex arrangement of holes-as exemplified in either the one group (six holes), the two group (twelve holes) or the triple group (eighteen holes) of playing units is an ideal one from several standpoints. Any course which is thus laid out offers diversified opportunities to the several classes of players who may use it, and who may play one hour, or two hours, or three hours, or more, as they may desire or as they may be given the opportunity, without interfering with each other (by "cutting in" on the regular sequence of play), or without having to walk back to the clubhouse from some distant part of the course when they have become tired or have been overtaken by darkness or by storms.

Each six-hole loop will accommodate a maximum number of forty-eight players (twelve foursomes) per hour if the players start at the usual five-minute intervals; and a total number of nearly one hundred players—starting between 5:00 P. M. and 7:00 P. M.—can play a single round over a six-hole course before dinner, while another fifty players—starting between 7:00 P. M. and 8:00 P. M.—can complete a similar round after dinner, during the summer months. A somewhat smaller number of persons can also play one round on a six-hole course in the morning before leaving for their places of employment, when it would be impossible, or impracticable, for them to find the time for playing nine or more holes before beginning the day's work.

In the case of twelve-hole and eighteenhole courses, the sextuple grouping of the units presents another very important advantage in that it permits the links to be completely filled with players in one hour if matches are sent off from the starting tees of each group at the usual five minute intervals, whereas it requires over an hour and a half correspondingly to fill a ninehole links, and not less than three hours for the complete occupation of an eighteenhole links, if only one starting tee is provided.

This reduction in what may be termed the *initial period of occupation* represents a very material increase in the number of players who can be accommodated in a restricted time, and therefore the hexaplex arrangement of playing units will increase the capacity of an ordinary eighteen-hole course from 50 to 100 per cent or more during the periods of greatest congestion, and will permit a corresponding increase in the membership of a club which adopts this simple and logical improvement in the design of its links.

Another attractive feature of the hexaplex arrangement of the holes is that each loop may be made to offer widely varying conditions of play; and the course as a whole may therefore be made to present, in effect, a combination of two or more distinctively different circuits of six, or twelve, or eighteen holes in length.

For example: One loop—which, for convenience, is designated as loop (a)—may consist of six holes having a total length of 2,000 yards (varying from 150 to 500 yards) with a par of 23. Another loop (b) may be made up of six quite different units —varying from 200 to 450 yards and totaling 2,200 yards in length—with a par of 24 or 25; and a third loop (c) may com-

prise another still more difficult combination of holes having a total length of 2,400 yards (ranging from 130 to 600 yards or more) and a par of 25 or 26. A twelvehole course, consisting of loops (a) and (c), offers two different combinations of an eighteen-hole round, viz., the combination of loops (a), (c) and (a), which is 6,400 yards in length with a par of 71 or 72; and the combination of loops (a), (c) and (c), which is 6800 yards long and has a par of from 73 to 75. An eighteen-hole course-comprising loops (a), (b) and (c) -presents not only three different six-hole rounds of varying difficulty, but also offers three distinctive combinations of 12-hole circuits, varying in length from 4.200 yards (par 47 to 48) to 4,800 yards (par 50 to 52); and it further offers a choice between not less than ten varied combinations of eighteen-hole rounds of widely different character. One can, for example, play in succession:

			1	ength, yds.	Par	
Loops	(a),	(a)	(b)	. 6,200	70 to 71	
Loops	(a),	(a),	(e)	. 6,400	71 to 72	
Loops	(a),	(b),	(b)	. 6,400	71 to 73	
Loops	(a),	(b),	(c)	. 6,600	72 to 74	
Loops	(a),	(c),	(c)	. 6,800	73 to 75	
Loops	(b),	(b),	(e)	. 6,800	73 to 76	
Loops	(b),	(c),	(c)	. 7,000	74 to 78	

These features of advantage become still more pronounced in the case of links which comprise more than three six-hole loops or groups. A twenty-four hole course—consisting of four loops, (a), (b), (c) and (d), having, for example, respective lengths of 1.850, 2,000, 2,200 and 2,450 yards, and respective pars of 22, 23, 24 and 25—presents a combination of four entirely separate and distinct eighteen-hole circuits, none of which include any twice-played loops. These are:

Length, yds. Par

Course	А,	loops	(a),	(b).	(c)	6,050	69
Course	В,	loops	(a),	(b),	(d)	6,300	70
Course	С,	loops	(a),	(c),	(đ)	6,500	71
Course	D,	loops	(b),	(c),	(d)	6,650	72

It also presents not less than twelve additional circuits of still more diversified characteristics—each of which comprise one doubled loop—which may vary in length from 5,850 yards (par 68) to 7,100 yards (par 74); and four more circuits of thrice played loops, of which the shortest is 5,500 yards (par 66) and the longest is 7,350 yards (par 75).

The hexaplex grouping of twenty-four holes offers the further opportunity of playing six distinctly different twelve-hole rounds, which have the respective length of 3,850 yards (par 45), 4,050 yards (par 46), 4,200 yards (par 47), 4,300 yards (par 47), 4,450 yards (par 48), and 4,650 yards (par 49), and also presents four doubled loop circuits of the respective length of 3,700 yards (par 44), 4,000 yards (par 46), 4,400 yards (par 48), and 4,900 yards (par 50).

If we designate those combinations which do not comprise any repeated or replayed loops as primary circuits, and those which require the double or triple play of one loop as secondary and tertiary circuits, the striking potentialities of such an assemblage of four six-hole loops as we have been considering may be briefly summarized by stating that it affords opportunities for playing four primary six-hole rounds, varying, for example, from 1,850 to 2,450 yards in length; six primary and four secondary twelve-hole rounds, of from 3,850 to 4,900 yards in length; and four primary. twelve secondary and four tertiary rounds of eighteen holes, each one of which is of a different length, ranging from a minimum of 5,550 yards or less (par 66) to 7,350 yards, or more (par 75 or over). Or stated in another way, this guadruplehexaplex assemblage of twenty-four holes may be so designed and used as to present, in effect, the widely diversified characteristics of twenty different eighteen-hole courses, and to also offer the varied attractions of ten independent and distinctive rounds of twelve holes each, and of four separate and very different circuits of six holes each, a range and variety of playing conditions which are far greater than are afforded by a thirty-six hole links even when the latter is subdivided into four nine-hole groups.

A thirty-hole course-if laid out in five six-hole loops-can be completely filled in one hour with a maximum number of 240 players (if they are sent off concurrently from the five starting tees at the usual five-minute intervals), and such a course will, therefore, permit 120 foursome matches (480 players) to each complete a full round of 18 holes in a seven-hour period, or will permit a correspondingly larger number of persons to play shorter rounds of six or twelve holes in that same time. A course of this character (having five balanced loops (a), (b), (c), (d) and (e), of progressively varying length and difficulty) will present a combination of ten primary, twenty secondary, and five tertiary courses of eighteen holes each; of ten primary and five secondary rounds of twelve holes, and of five primary rounds