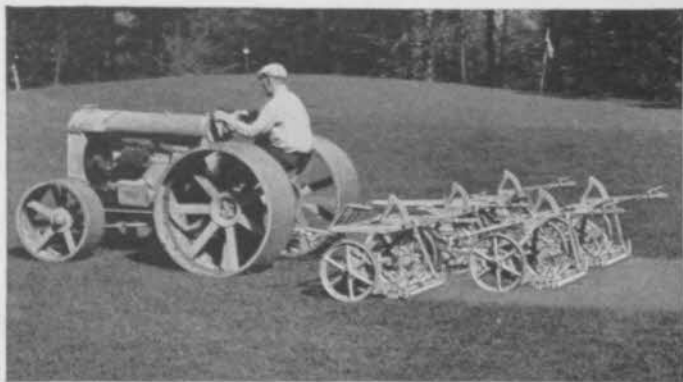




They're  
Self-  
Adjusting!

Smooth operation is permanently assured with F. & N. TITAN Fairway Mowers equipped with the patented F. & N. Self-Adjusting Device in the revolving reel.



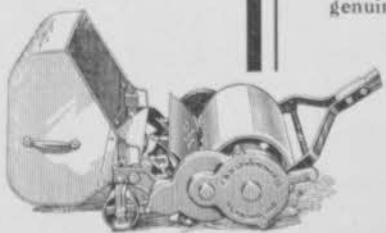
# The New F. & N. "Quintet"

## Fairway Equipment

New and greatly improved features are offered in the famous, trouble-free F. & N. Mowing Equipment for Golf Fairways for 1929. In addition to greater strength, more convenient and efficient operation, the new flexible, all-steel frame for 1929 has been considerably lightened in weight. The F. & N. "Quintet" is equipped with TITAN Mowers especially designed and built for this purpose. They embody the same superior points of construction as heretofore which have made the F. & N. Fairway Equipment famous. The patented inter-locking frame and cutter bar construction positively keep the mowers in rigid alignment and prevent the frame from becoming wobbly. The gears are *drop-forged steel*, with cut teeth, and heat treated. They revolve on genuine Timken Roller Bearings in a constant bath of oil. The five blades are made of *special analysis chrome vanadium tool steel*. *All parts are machined and fitted as precisely as those in finest automobiles.* Best of all, the reel bearings are equipped with the patented *self-adjusting device which entirely eliminates the troublesome adjustments of these bearings.* The F. & N. Fairway Equipment is supplied in gangs of three or five for any tractor.

Write today for full details, catalogs and special prices

The F. & N.  
Putting Greens  
Mower



Greenkeepers who have used the F. & N. Putting Greens Mower, frankly say that it is the finest on the market for producing those velvety smooth greens so necessary today. Here's why: Unbreakable, all-steel construction. Patented interlocking frame and cutter bar. Cut steel gears. Self-adjusting. Alemite oiling. Etc., etc. Furnished with rubber-tired carriage for transporting. Write for full details and prices today.



## The F. & N. LAWN MOWER CO.

RICHMOND, IND., U. S. A.



Please mention GOLFDOM when writing advertisers



## Drains can be Truck and Tractor-Proof

Rollers, tractors and heavy ground equipment severely test drains used in golf club service.

Armco perforated pipe is not damaged by impact because it is flexible—it cannot break.

Your name and address will bring complete information.

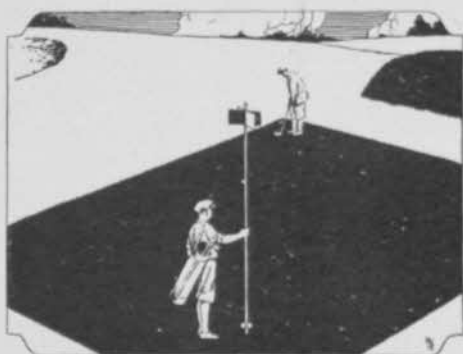
Armco culverts and drains are manufactured from the Armco Ingot Iron of The American Rolling Mill Company and always bear its brand.

Armco Culvert Manufacturers Association  
Middletown, Ohio

**ARMCO**  
Perforated  
**PIPE**



© 1929, A. C. M. A.



## For Profit Choose High Pressure

The best courses — where they get the heavy play — have discarded low pressure and have installed Kewanee high pressure water systems.

Consult the Kewanee engineer. Let him specify the right Kewanee high pressure system from our more than 200 models and sizes. Write us today.

**KEWANEE**  
HIGH PRESSURE  
WATER SYSTEMS

**KEWANEE PRIVATE  
UTILITIES COMPANY**

414 S. Franklin Street

KEWANEE, ILLINOIS

Manufacturers of a complete line of reciprocating pumps, water systems, electric light plants and sewage disposal systems; also centrifugal pumps and deep well turbines to fit all wells up to 36" diameter.

Dealer Correspondence Invited

Please mention GOLFDOM when writing advertisers

Put this  
SHELTER HOUSE  
on your golf course



Designed in the true Colonial spirit . . . and built as only the skilled craftsmen in the Hartmann-Sanders studios know how . . . this shelter

house will be appreciated not only for the useful purpose it serves as a shelter against sun and rain, but also for the classic touch of beauty it lends to the grounds of any golf course.



See our Exhibit, New York Flower Show,  
Grand Central Palace, March 11-16

A BOOKLET OF PER-  
GOLAS AND SHELTER  
HOUSES WILL BE SENT  
UPON REQUEST



In a comprehensive booklet is shown page after page of beautiful shelter houses, pergolas and other features. The booklet tells how the beauty of these features is given permanence through the use of famous Koll Lock Joint Columns, which cannot come apart. It also explains how they are built complete and painted, ready to erect by a handy man. Write for the booklet. No charge. Hartmann-Sanders Co., 2183 Elston Ave., Chicago. Eastern Office and Showroom: 6 East 39th Street, New York City.

# HARTMANN-SANDERS

Pergolas • Colonial Entrances • Koll Columns  
Rose Arbors • Garden Equipment

# Sooner or Later

all golf clubs will standardize  
on **HOLLOW ROLLER MOWERS**  
for **FAIRWAYS** and **ROUGH**  
*Because:—*

They build a dense turf

“ produce a healthy root

“ multiply the number of roots

“ “ “ “ blades of grass

“ **prevent scalping**

“ eliminate cuppy lies

“ seal up heat crevices

“ cause grass roots to spread and

“ cover blank spots and

“ **retain the moisture in the soil**

“ cut cleaner

“ are non-breakable

“ eliminate repair bills

“ “ separate rolling

“ **reduce maintenance expense**

“ outlast all other mowers

“ cost more to build, but

“ are most economical, and

“ are the only

**“TURF BUILDING MOWERS”**

They reduce greenkeepers' worries

“ mow both fairway and rough

**Buy now**

*and improve your course*

## Roseman Tractor Mower Company

*Makers of Roseman Hollow Roller Mowers for Fairway and Rough*

810 Church Street  
EVANSTON, ILL.

or

11 W. 42nd Street  
NEW YORK, N. Y.

Booth 22—National Greenkeepers' Convention, Statler Hotel, Feb. 13-16, Buffalo

Reg. U. S. Pat. Off.

# Golfdom

THE BUSINESS JOURNAL OF GOLF

FEBRUARY, 1929

## Last Year Showed Need for METHOD REVISION

By O. J. NOER

THOSE charged with turf maintenance look back upon the past season as the most disastrous in years. In fact, many old timers can recall nothing like it in their entire experience. That there are many problems relating to turf maintenance awaiting solution cannot be denied and if 1928 does nothing more than stimulate a critical overhauling and study of the basic factors underlying turf culture the past troubles may yet prove a blessing in disguise. Of necessity immediate solutions cannot be expected, yet an analysis of the unusual conditions existing during the past season may at least suggest corrective measures to lessen the possibilities of future injury, although so long as golfers persist in their demands for exceptional turf during the hot summer months the danger will persist.

### Too Much Moisture

In general, courses in the belt extending from Philadelphia and Washington across to St. Louis suffered most, but even to the north troubles exceeded anything previously experienced. Both small and large brown patch were severe and extremely difficult to control. Not content with these, attacks of pythium and leaf spot appeared and were especially troublesome because effective control treatments are not available. Turf on large areas, and in rare instances on entire greens, was wiped out completely. In some cases injury appeared to be the result of excessive moisture pos-

sibly aggravated by unfavorable soil processes which accompany water-logged condition; yet in other instances loss of turf must have resulted from other causes not clearly apparent or at present explainable. On the whole, weak, tender lush grass was far more common on greens than sturdy erect turf. There can be no question that such turf is very susceptible to disease and other forms of injury. The hope for the future must be in counteracting the factors which tend to encourage weak growth.

Unusual weather conditions were responsible for most of the ills, yet soil texture and overfeeding frequently were contributing factors. The Weather Bureau reported about 7½ inches rainfall during July in New York, which exceeds the normal precipitation by more than 3 inches. The mean temperature was also considerably above the average. Heavy downpours of rain were followed by hot, humid days. Similar conditions existed in other districts. Injury was not confined to turf. Many of the famous Japanese cherry trees along the Potomac in Washington succumbed. Investigators from the Department of Agriculture attributed death to the numerous torrential rains. The root systems were not able to withstand the exceedingly moist soil conditions resulting from excessive rainfall.

### Showed Need of Aeration

Water injury was aggravated by poor physical condition of the soil. Greens

which supported good turf in the past became troublesome. They remained saturated with water for days because the compact subsurface soil impeded or prevented the downward movement of excess water. This excluded air and thereby deprived the roots of essential oxygen. In the absence of oxygen undesirable putrefactive fermentation occurred in the soil, recognizable by the associated foul odors. This type of bacterial activity occurs only when oxygen is excluded and hence can be avoided by maintaining well aerated soil. The latter is also an essential condition for turf development.

Fertilizer programs, effective in normal seasons of more limited rainfall and lower temperatures, became excessive, and coupled with abundant moisture, encouraged unduly rapid growth. That nitrogenous fertilizers produce startling improvement of poor stands of grass, is familiar to everybody charged with turf maintenance. Nitrogen induces dark green color and rapid growth. Tender and weak stems usually accompany too much forcing. The wise market gardener, intent upon producing crisp palatable vegetables, forces rapid growth in insure succulent vegetable tissue and uses nitrate of soda or sulphate of ammonia generously. The effects of too much nitrogen can never be wholly overcome by applications of phosphate and potash.

### Practice Needs Revision

Strange as it may seem to some, highly maintained courses fared worse than those with limited funds for maintenance. This should not be cited as a reason for discontinuing the use of fertilizers. It might serve equally well as a plea for neglect and severely curtailed maintenance expenditures. Abrupt cessation of fertilization will eventually result in impoverished soil accompanied by thin, weed infested turf requiring rejuvenation. The constructive solution is rather one of overhauling and modifying present practices in the light of past experiences.

Prophesying is dangerous, yet definite changes appear inevitable. Since weather cannot be modified it seems reasonable that relief must come from practices which will

produce sturdy grass, particularly before the advent of hot weather, and then hold this condition during the extremely difficult months of July and August. From what has been said it follows that ample moisture, plentiful supply of plant food, especially nitrogen, and favorable temperatures conspire to promote rapid growth which is a forerunner of weak tender grass. The first step must be correction, or improvement, of faulty drainage. Not only surface run-off, but also downward movement of water, must receive attention. Soil texture is not easily modified on established greens, but installation of tile where the soil is heavy usually hastens the removal of surplus water absorbed by the soil. The possibility of detrimental seepage must be considered where greens are located at the base of hills or slopes. Tile lines placed outside the green, between it and the offending slope, will cut the line of flow. More careful watering, especially during the summer may prove helpful. Keeping the greens a little on the dry side, tends to inhibit growth and encourages stiffer leaves and stems. Need for plant food has been judged usually by color and amount of growth. Probably sturdiness and hardness is of even greater importance in determining both rate and frequency of applications. During the mid-summer only sufficient nitrogen to satisfy the minimum demands of the turf should be used; greater amounts may aggravate and accentuate brown patch and other troubles. When trouble develops, additional fertilizer should be used only when the evidence indicates that the turf requires and is able to utilize the additional plant food. Judicious nitrogen feeding undoubtedly depends upon a uniform and continuous supply in amounts simply sufficient to satisfy the turf demands. This may mean lighter applications, possibly at more frequent intervals when quick acting soluble fertilizers are used. In spring and fall when turf naturally grows well, rates will of necessity be greater than in mid-summer.

The hope of the future rests upon developing practices which will produce turf sufficiently robust to withstand disease.

## PRESIDENTS!

Reminding you to return to GOLFDOM the government postcard asking for 1929 mailing addresses of your officials

# New Indoor School Teaches GOLF with the MOVIES

By HERB GRAFFIS



DEPENDING on the accuracy of the old Chinese maxim that "a picture says more than a thousand words," Eddie Garre, pro at the La Grange Country club and Parker Nall, pro at Edgewood Valley, have started an indoor golf school specializing in golf instruction by motion pictures. The establishment is located on the fifth floor at 228 South Wabash Ave., Chicago. The location is in a new building with good light and excellent ventilation. The boys opened the school January 2 and intend to run through until the opening of the outdoor season in Chicago.

Much has been said about the potential value of motion pictures in golf instruction and several professionals have used the movies of their pupils with splendid results in outdoor work, but, so far as we know, the Nall-Garre team is the trail-blazing outfit in the indoor field. Just what the actual results of this instruction will be when the graduates are turned out on the course are naturally problematical, but the improvement in form of the students during the three weeks the school has been in operation is impressive, according to the instructors' judgment from the film and performances.

The charge for the motion picture instruction is very reasonable considering the investment necessary. Nall and Garre charge \$45 for 10 45-minute lessons and 100 feet of film. Twenty-five feet of film are shot with the first, third, sixth and ninth lessons. They also have charges for film, projection and criticism of \$6.50 for 25 feet, \$10 for 50 feet, and \$17.50 for 100 feet of film. The film costs them six cents a foot for the film and developing.

Their camera and projection outfit set them back between \$300 and \$400. The camera and projector are Eastman equipment. The Eastman experts are working closely with the men in the pioneer school for the company apparently appreciates the vast field for motion picture sales opened with the effectiveness of movies in golf instruction has been convincingly demonstrated.

## Lighting A Problem

Light problems are giving the boys plenty of trouble. The artificial lighting equipment suitable for catching each detail of the player's stroke on a motion picture film is something that remains to be worked out on a perfect basis. With the lens wide open the results are pretty fair under the artificial light they now are employing, but it is expected that trials of different equipment and the research work of the Eastman men will result in practical perfection. The camera they use shoots slow motion as well as normal speeds and their projector is so constructed that motion can be stopped or reversed at any point, thus simplifying the instruction.

The plan of instruction involves the use of the standard films of the stars such as Hagen, Jones, et al, which are available in film libraries. These films are used as models of form and are compared with the pupils' own films. One thing that Nall and Garre bumped up against right at the start of their operations is a scarcity of films, both normal motion and slow motion, of the foremost women golfers. They are having some shot for use in their school. The investment in equipment (in-



cluding nets, camera, projector, films, etc.) is around \$1,400. There is no putting course in the school.

Both of the fellows admit that there is much to be done with the plan and the equipment before it may be generally accepted as the model operation. When I dropped in to look over their layout they were experimenting with clubs painted white in order to get clearer definition on the pictures in the fastest part of the stroke. They have tried white screens back of the player and have found that this helps get better pictures due to its diffusion of light. They also plan to whitewash the floor of the net in which the picture instruction is given to help master the lighting situation.

### Hope to Profit Pros

For some time both Garre and Nall have been studying the motion picture golf instruction proposition and are hopeful of steering the pro field into more resultful and profitable teaching as the outcome of their well-received efforts in the Chicago district. Nall cites the case of Bob Jones' use of motion picture films of his own stroke in helping him out of batting slumps, and other cases of rank-and-file golfers who have worked some improvement in their own games as the result of using the home movie outfits.

It is the Chicago fellows' hunch that golf instruction is ripe for a drastic change. The orthodox tedious and generally haphazard method of golf instruction, they maintain, is too slow and uncertain in its results, and away behind the times in teaching work.

"They'll believe the camera when they won't believe you," said one of the boys, in telling how the film simplified explanation and diagnosis of the pupil's faults. "Adults usually haven't good muscular and mental co-ordination and when you keep talking and talking to try to get their swing right, they frequently say they understand just to keep from being considered 'dumb.' People generally expect results from golf instruction too quickly. When they see, in a film, their faults, they realize that it is because they are not doing what they have been taught, and not due to the pro's deficiencies, that they are not advancing as they hoped. In this way the motion picture instruction will undoubtedly stir up renewed interest in golf lessons, for I think that there has been a general let-down in the number of

lessons given by pros because the customer's wanted speedier results than they were getting by the usual manual and oral method of instruction.

"The movies are going to make teaching easier for the pro. He can go about his work with more certainty and a better understanding from the pupil. He will get more pupils and teach them more in less time."

One of the partners told me that he had proved to his own satisfaction that the student got more value and a far greater improvement in his game out of \$45 worth of movie lessons than out of the same money spent in the ordinary method of instruction. He had noted that for the advanced pupils who already were good players the films that were of most value to them were those shot from the back, but for the average student the film shot facing the player at right angles to the line of flight was more effective for teaching.

The school believes the best policy for winter instruction is to first sell the pupil a series of lessons without the movies as a limbering-up session.

### Roof-Garden Courses With Cotton-Seed Hull Greens



Shaw miniature course at St. Louis draws big play with its greens of grass texture



This Shaw course on a Dallas roof was one of the first of the now numerous installations





*Clubhouse photos courtesy Maritz and Young*

Westwood's plans call for big landscaping program around new clubhouse

# How experience taught Westwood to build

By HERB GRAFFIS

GOLF now is at the time in its American history when pioneer clubs are afforded the opportunity to "start all over," building their new establishments under conditions widely at variance with the factors prevailing at the time of the birth of the club. The land demands of suburban residential development, higher taxes, requirement for modern and extensive clubhouse facilities, the desire of members, in many instances, to have a more "countrified" aspect to their country and golf club properties, and the development of automobile transportation, all have combined to push veteran clubs out of their old homesteads. Despite the great increase in property value at the original establishment many of the clubs making the changes, after selling out their original sites and applying the sale price on the new establishment, find themselves in deep water financially.

When the announcement was made that Westwood Country Club was selling its original club site to buyers who would operate it as a daily-fee course and would move a few miles away from its first establishment at Webster Grove, Mo. (St. Louis suburb), Louis Rosen, now president of the club and a veteran in mid-west golf, was told by this cock-sure scribe that although he and his associated

executives were notable business men, they would dump into a rude awakening when they thought that the proceeds of their sale would give them the de-luxe new establishment they wanted without involving them in the usual heavy carrying charges of big golfing establishments put in during these active times. I lose. The new Westwood layout represents an investment of \$1,050,000 and the total bonded indebtedness is less than \$200,000. Annual net income estimates provide for quick retirement of these bonds.

## Westwood's History

Westwood was organized in 1907. Its first home was the 100-acre estate of a tobacco magnate. His home was remodeled and enlarged to form the clubhouse. The property was leased by the club, but later bought by its then president, David Sommers. An oil painting of Sommers now graces a prominent spot in the new clubhouse, for not only was he personally endeared to each member of the club, but he was the one who contributed largely to its new establishment. He bought the original property for \$100,000, intending to endow it eventually for a children's home. When the move to the new site was being promoted he sold the property to the club for what he paid for



Louis Rosen, Sr.,  
President West-  
wood Country  
club



At the left, overlooking this rich and dignified main lounge, is cozy balcony



Salon to east of main lounge is inviting spot for loafing and bridge

it, notwithstanding a great increase in value. The club then sold the property to the Westborough syndicate, now operat-



Men's lounge makes great spot for "taking it easy" after golfing.

ing it, for \$300,000. At new Westwood a landscape architect laid out 60 acres for homesites. These were sold to members at auction, bringing in \$240,000. An assessment of \$600 a member was levied on the original membership of 275, which netted \$165,000. This gave the boys an ante of \$705,000. Increasing the size of the membership brought the total up approximately \$200,000 more. The ultimate membership, of all classes, is 500.

### Starting Right

That figure of \$240,000 for the homesites carries a lesson to the private clubs that want to escape financial miseries.

Get enough land to reap some of the benefit of increased neighboring land values the establishment of a golf club always means. Make the clubhouse a family center with facilities for each member of the family. Restrict the sale to club members. Pick a site that is convenient and distinctive, preferably one not on a main road, for in a metropolitan district main road traffic is too heavy. Westwood carefully considered 20 selected sites before they picked, and then got one that wasn't in the 20 originally under consideration.

Property picked by Westwood was 300 acres and was chosen after a consideration of topography, soil conditions, water supply, public utilities, transportation, traffic conditions, probable trend of population, present taxes and probable future taxes, labor conditions and probable increase in land values.

### Has Board of Design

H. J. Elson was named Consulting Engineer and Director of Works for the enterprise. The Board of Design consisted of Elson, the golf architect, Harold Paddock; the drainage and irrigation engineer, Wendell P. Miller and his associate L. H. Koontz; building architects, Maritz and Young; and John Noyes as town-planner and landscape architect.

The Westwood ground is rolling, with a maximum difference in elevation of seventy-five feet. It was a series of farms, practically bare of trees except for a few scattered orchards. The soil was pretty well worn out, after being under sporadic cultivation for more than seventy years with only slight fertilization; only a small portion was cultivated in recent years, and this was used for berries and a small amount of truck gardening.

### Study Soil Needs

Analyses of soils and water were made