

March — 1962



H. B. Musser

## Failures in Course Construction Result of Corner Cutting

*Numerous mistakes are due to ignorance, incompetence, dishonesty  
... It's time investors started demanding performance bonds*

**By H. B. MUSSER**

Author of "Turf Management"

**T**he increase in the number of new courses that already have been built in the past decade, are under construction, or are on the drawing boards, has almost reached the proportions of a crash program. But mistakes have been and are still being made. They will have to be lived with for a long time to come or it will take costly correction to fix them. Some of these are honest. They are due to

hazards of weather, errors in judgment which can be forgiven, or to changes in organization or demands that couldn't be anticipated when the original plans were made.

Unfortunately, there is another class of mistakes that can't be readily excused. These are errors of ignorance, incompetence, or of dishonesty stemming from the opportunity to make a "fast buck"

in cutting construction corners. They are the underlying causes of most of the dissatisfaction and irritation which results when new courses do not measure up to expectations.

### **Expert Guidance Needed**

When greens have to be rebuilt, fairways drained and renovated, or tees reconstructed within a year or two after the course has been opened, it is almost a foregone conclusion that "somebody goofed". Such things should not happen. When we try to justify them, we aggravate a situation that won't be resolved until there is full recognition that the extremely important items of site selection, course design and construction should be placed in the hands of someone whose experience and performance has demonstrated his ability to handle them. It has been shown over and over again that a very moderate increase in the cost for competent course maintenance supervision — the employment of a good superintendent — will be saved many times over in increased player satisfaction, operating efficiency and avoidance of costly repairs. The same applies as well to the establishment phase. Invariably, the very modest increase in the cost of top design and construction will return a handsome profit within the first few years of operation, both in reduced maintenance and repair and in better playing conditions.

### **Mistakes of Ignorance Avoided**

Let's examine the avoidable and largely inexcusable mistakes. Poor courses may be the result of errors due to ignorance. These must be classed as avoidable. Architects and contractors should have the experience and technical information that are necessary to escape such mistakes. The selection of an architect should be predicated upon a demonstrated ability to handle all elements of design. The fitting of the course into the terrain, understanding of strategy of play, adjustment within reasonable limits, without sacrificing basic concepts to budget limitations all are essential to a well planned course. These must be given important consideration when a man is selected who will have the responsibility for turning out a good job.

This is not the whole story. The best design will not compensate for poor construction. Failure to understand the need for good drainage and soil modification

---

H. B. (Burt) Musser is qualified to speak with authority on the problems of golf course building. His extensive experience includes heading turf research and development and turf management instruction programs at Pennsylvania State College, providing turf consultant service to the American Society of Golf Course Architects and to military turf development during World War II.

---

on greens and tees and how to provide for these can completely offset the value and pleasure of a good design. A lack of knowledge of the ability of grasses to adjust to differences in climate, soils, and maintenance, of how to meet fertility needs, correct soil acidity, etc., results in "hit or miss" construction.

### **Demonstrated Ability**

No individual should be given the responsibility of planning and supervising the building of a course unless he has demonstrated an ability to prepare a sound, practical set of construction specifications. These must contain all details of proper soil preparation, drainage, and modification; of the quality and quantity of all materials (lime, fertilizer, seed, etc.); and directions as to exactly how and when each is to be used. If specs are clearly written and there is proper supervision of how they are carried out, chances of poor construction results are negligible.

Errors of ignorance resulting in poor or mediocre courses are not confined to planning and supervision. Those charged with original site selection must take some responsibility. The National Golf Foundation has had for some years a publication, "Planning and Building the Golf Course", which emphasizes the extreme importance of soil adaptability.

In many instances, considerations of first cost and accessibility are permitted to completely outweigh adaptability for the production of good turf. It may become so expensive to move or adequately modify sufficient soil to improve natural defects, that the cost of such modification may compensate for the higher price

*(Continued on page 112)*

## Construction Failures

*(Continued from page 32)*

of a more favorable site. Too often, these things are not sufficiently considered when a site is selected. When the final estimate comes in, the usual decision is, "We can't afford it, but let's go ahead and get the best we can with what is available." This creates an almost impossible situation for the architect and builder and results in a mediocre course that satisfies no one.

### Changes Are Costly

There is another area where ignorance is sometimes responsible for the failure to achieve expected results. This is a lack of understanding of problems and costs of making major changes in design after construction is under way. It results from a lack of study and understanding of plans and specifications before they have been approved. Often changes are demanded which not only greatly increase costs but delay completion dates.

Increased costs, if recognized, can be provided for. But reconstruction that throws seeding schedules into unfavorable periods for germination and turf establishment can't be compensated for by in-

creased appropriations. When a contractor is pushed to complete the job he will take a chance. If the hazards are not thoroughly understood and he is not permitted to delay seeding or planting, a poor thin stand of grass usually is the penalty.

Often there is failure to apply even ordinary, simple business caution in consummating contracts as an assurance of acceptable performance. In what other construction undertaking of similar size is there found such a widespread disregard of the general practice of requiring an adequate performance bond as a prerequisite for acceptance of the contract bid? "Shake-hands" agreements may be okay for bets on golf scores but they have no place in the design and building of a course. When a bond is required it must not be forgotten that it protects only against failure to carry out the provisions of an accepted contract. It cannot be used, and rightly so, to force later changes in design or construction that would materially increase costs or throw the entire project off schedule. From this standpoint, it actually represents a two-way obligation and is a protection to both contracting parties.

Poor construction may be the result of



*Introducing . . .*

**NEW 8 FOOT**

**PROFESSIONAL SPREADER**

**Scott's**

plain incompetence. This takes various forms. It may be due to inability of the contractor to accurately estimate construction costs. If his bid is too low, he will try to get "out from under" by cutting corners. To save time and labor, he may handle soil when too wet, operate seeding and fertilizing equipment too fast, or take other short cuts. It also may be the result of indifference or a lack of appreciation of the care required to do a job right.

### Disregard of Specifications

An illustration is the failure to thoroughly mix the ingredients used for modifying the surface layer of soil on a green. Pockets of peat or sand invariably result in poor quality turf and playing conditions. The placing of tile lines that do not adequately drain wet areas on fairways is another example. Such illustrations can be endlessly multiplied. The "letter of the law" may be thoroughly understood, but carelessness in applying it can result only in disappointment with what has been produced.

It is difficult to judge the dishonesty factor as a cause of poor construction.

It exists, but where nature plays such an important role in the success or failure of a job, it sometimes is hard to define the line between honest errors and intentional acts that produce poor courses. Low bidding to "freeze out" competition is a factor. This can only happen when specs are so loosely drawn that cheap substitutes in materials can be used, or operating methods modified. Or, it may occur during the course of construction when unanticipated problems arise that require added expenditures that the contractor can't recover.

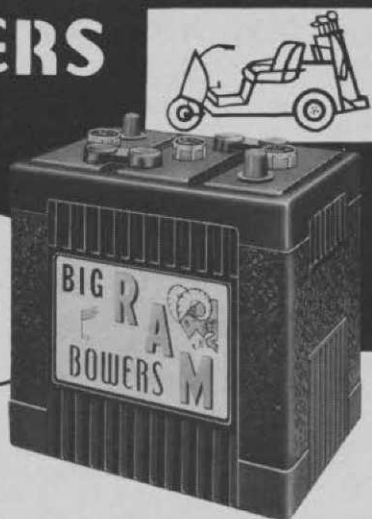
It may take the form of reduced operations of seedbed preparation or the cutting on quantities and quality of fertilizers, seed, and other materials. It may be due to burying of stones and trash under an inch or two of soil instead of following specifications for their removal. Almost invariably, the covering layer of soil settles or washes away within a short time, leaving a mess that can only be corrected by a major repair job. Dishonesty may occur in the installation of inferior drainage or irrigation equipment that will keep costs within bid figures.

Poor or mediocre courses are not always

## REPLACE WITH **BOWERS** **BIG RAM** **BATTERIES**

...and end your **GOLF CAR**  
**BATTERY Troubles**

Forty years' experience building quality batteries for battery-driven equipment—industrial material handling trucks, mine locomotives, mine shuttle cars—is built into every Bowers Golf Car Battery. You can be certain your current battery problems will end when you change to Bowers Big Ram Batteries. Their Extra Quality means Greater Power, Longer Trouble-Free Life ... and at a lower initial cost.



**BOWERS**  
**BATTERY & SPARK PLUG CO., READING, PA.**  
(Div. of General Battery and Ceramic Corp.)

PLANTS: Reading, Pa.; Greer, S. C.; New Philadelphia, Ohio  
BRANCHES: Charlotte, Baltimore, Philadelphia, New Haven,  
Buffalo, Pittsburgh, Macon, Columbus



THEY'RE EASY TO SELL  
GOLF GLOVES BY CHAMPION

**the**  
**Sta-tite**

The wonderful wrinkle-free grip Sta-Tite glove has a patented lastick back of extruded rubber strands completely covered with nylon for softness. Every golfer enjoys the tight-yet never binding feel of this excellent glove. This model is available in solid or two-tone color combinations of black, red, buttercup and white.



model No. 191

#### SIZES:

Left Only: Men —  
S, M, ML, L, and  
XL . . . Ladies —  
S, M and L.

**\* Sell the Gloves that are Preferred by Most Golfers . . . CHAMPION GOLF GLOVES. Order Now!**

**Champion**

**GLOVE MFG. CO.** 309-11 Court, Des Moines, Iowa

due to the items we have considered. In some instances sufficient funds have not been made available to build a first class layout. The chief concern here is that whoever undertakes the planning and construction job is obligated to explain the limitations and to be doubly alert to see to it that the buyers get the best possible return for their investment. If they are willing to go ahead on "half-a-loaf" basis they must accept the results. Courses of this class are not sources of most of the criticism and dissatisfaction over failures to meet expectations. The real problem arises in cases where courses have failed to come up to standard, even though there haven't been serious financial limitations.

#### Who's to Blame?

When this happens, we invariably look for someone on whom to place the blame. Usually, the architect or contractor, or both, are the targets. In many cases they must accept responsibility. But the trouble often goes much deeper than this. They may be only partly to blame for the final result, rather than the main cause. Who insisted that the course be built on a poor site: Who was responsible for approving a contract, often purely on a price basis, without a thorough

check on the competency of the individuals who were to do the job: Who okayed a set of plans specifications so loosely drawn that anything could happen? Who insisted on changes in design that threw construction programs off schedule? Who failed to require continuous and thorough supervision of operations?

Responsibility for shoddy results is not always a "one way street".

#### Reducing the Risk

It is obvious that risk of getting a poor course, due to avoidable mistakes, can be reduced. The principal requirement is the application of the same sound business principles and common sense that are inherent in any major construction project.

First of all, the selection of a site should be contingent upon the approval of someone (usually a competent architect) who understands the relation of the terrain and soil to the construction of a good course.

Just as important is insistence on the preparation of a detailed set of plans and specs which are so clear and specific as to leave no opportunity for misinterpretation. If there is any question about their content, they should be submitted

# For the Very Finest



Truly the finest . . . bags bearing this famous Tufhorse label have stood for the exceptional in quality and craftsmanship for over 40 years. Tufhorse bags are sold only through pros, marketed exclusively by Dunlop.

*\*Remember, it isn't a Tufhorse-Dunlop bag unless it bears the above Trademark.*

DUNLOP TIRE AND RUBBER CORP.  
Sporting Goods Division  
500 Fifth Avenue, New York 36, N. Y.

Made by  
DES MOINES GLOVE & MFG. CO.  
Des Moines, Iowa

to a competent person for review.

The contractor should be chosen with care. He should be selected on the basis of his demonstrated ability and willingness to adhere strictly to the contract terms.

## Continuous Supervision

Finally, there should be continuous supervision of the building operation through all its stages. If the architect can't do this, the alternative is for the owner or club to employ someone competent to do it, and give him the authority to see that the job is done in a workmanlike manner. This often is desirable even though there may be competent supervision by the architect. If an arrangement can be made with an individual so employed to assume management of the course after completion, he will be in a better position to do an efficient job.

If these relatively simple rules are followed, a great deal of the continued criticism of poor course construction can be avoided. There always will be some failures because of accidents of weather, and mistakes due to honest errors. Also, there are bound to be cases of poor management that will cause a course with a good potential to deteriorate. But these are not the principal causes of dissatisfaction. They can be accepted as the ordinary hazards in such undertakings.

## Called in An Expert

A supt. and pro at an Illinois course were allowing golf car maintenance problems to ruin a fine friendship until they solved them by hiring a neighborhood mechanic to take charge in the evening after he got through with his garage job. Complaints and costs were reduced by the services of the mechanic who knows how to organize the job and handle it, using the simple procedures of automobile maintenance and repairs.

## Crabgrass Control Idea

Emil Roewert, golf writer for the Shenandoah (Ia.) Sentinel, has contributed this idea in his column to crabgrass elimination research: "It's not necessary to replace your fairway divots if all are crabgrass instead of part bluegrass. In fact we should make it a rule not to replace divots of crabgrass. It would help get rid of some of that abnoxious turf that way." Emil may not be a turf scientist but he sure looks at the cheerful side.