

Reg. U. S. Pat. Off.

Golfdom

THE BUSINESS JOURNAL OF GOLF

AUGUST, 1929



Today's New Courses Provide for Landing Fields. There Is One at the Inviting New Juniata Colony Club, Mount Union, Pa.

FREQUENTLY TAKEN DOSES OF PLAIN

Clear Thinking

LIGHTEN THE GREENKEEPER'S LOAD

By T. H. RIGGS-MILLER

WHAT is needed from the greenkeeping fraternity today is "clear thinking." It would be a good idea for us at the start to get a correct idea of the meanings of *clear thinking*, and of *scientific training*, *knowledge* and *understanding*; a man may think clearly, and yet not be able to explain it. However, it helps to keep our thinking clear if we know exactly what it is and some of the difficulties in the way of it. The average man may suppose he is

thinking when he is only dreaming. Or let his fancy build castles in the air. Others suppose they are thinking when they are just sitting idly, letting images flit through their consciousness. They are not thinking at all—they are just enjoying a memory "movie."

Thinking is not an idle, lazy, passive mental occupation. It is strenuous work of the intellect. The aim of thinking is understanding. The mind is looking for an

explanation of something that it does not understand; it is seeking to throw light into a dark place.

Brown Patch? Maybe Not

When do we understand anything? When are we able to explain it? Not until we know precisely what is its cause. If brown patches appear on the fairways, everyone says brown patch. If crows come in swarms and start rolling up the turf like a carpet, you know that it was not brown patch, the fungus, but rather "brown patch" caused from dead grass, the roots of which have been chewed and thus killed by May or Japanese beetle grubs. Then we are satisfied, for our mind has discovered a "cause" which explains the "effect," that of brown patches on the fairways.

But our mind should not be too easily satisfied. We must be as sure as possible. If our thinking is to be clear, that we have found the real cause of the phenomenon we are studying. We should do some clear thinking about the word "cause." In the case of the grub it is easy, for we can see the cause and, thanks to trained investigators, we also have a cure; but as a matter of fact we know very little about real causes, that is, those forces which bring change into the world.

All we know is that under certain conditions certain things have always happened. We know, for example, that an application of sulphate of ammonia to a green in spring will give us the phenomenon of turning it a bright green. The first phenomenon—color—is caused by the second phenomenon—sulphate of ammonia. Our mind being still curious, asks why does the grass turn green? What is the cause of it? We discover that many substances are food for grasses, and that an application to grass which has lain dormant all winter will turn it a bright green within a short time after being applied. But the scientific mind is still curious. Why does sulphate of ammonia or any other substance turn grass green when it is applied to it? To find the answer, the mind has to go into the realm of speculation which the greenkeeper need not enter. But you are thinking when you are seeking the causes of phenomena. To make thinking clear, you must beware of conventional explanations and be certain of your facts. The well-known belief that a "wet" moon indicates rain, or that a dry spell cannot be broken until the moon changes, is not the product of clear and scientific thinking. Furthermore, the memories of the people that believe such things

cannot be trusted, as they fail altogether to note or remember the times when the so-called "law" didn't work.

What Is "Science"?

The word "science" is very loosely used in everyday speech. It is derived from a Latin word meaning "to know" and is commonly applied to any kind of knowledge that is believed to be exact or precise. As has already been shown, we do not understand any event or phenomenon unless we know the cause. Until we get the cause we cannot explain anything in a way satisfactory to ourselves or to other people. To the scientist any object or occurrence is a phenomenon, whether it be usual or unusual, ordinary or extraordinary. It is the scientist's word for thing or happening.

A science is any body of knowledge in a given field so arranged or classified that the phenomena can be understood. The goal of science is understanding. And a man is doing scientific work when he is searching for phenomena. If he is merely collecting facts and classifying his knowledge of them, he may be a statistician or historian or analyst, but not a scientist, for he may not be seeking to explain or interpret facts. The mind arrives at knowledge in three different ways: first through intuition; second by experience or, as the philosophers call it, induction, and third by logical reasoning or deduction.

Intuition tells us that there are certain truths which the human intellect perceives without effort. In mathematics such bits of knowledge are called axioms. We know that two parallel lines can never meet; that a straight line is the shortest distance between two points, and so on.

Deduction is a reasoning from the general to the particular. The stock illustration is: Steel is hard; A knife is made from steel; Therefore, it is hard.

But it is through experience or induction that most of our knowledge of the world we live in has been obtained, and that through our five senses. How do you know that by boiling an egg five minutes will make it hard? Or that boiling potatoes twenty minutes will make them soft and edible? You know solely because you have tried the experiment, or because someone else has. If you boiled an egg five minutes and found it soft then you would get a surprise. Yet nobody really *knows* that boiling an egg five minutes will make its contents hard. All we know is that in the past when eggs were boiled five minutes they did become hard. So we have assumed



This tractor outfit with scoop and loader is kept busy all through the season, and then some, at Medinah in the Chicago district. It handles material for road and trap maintenance, compost, and is a money—and time—saver on construction jobs.

it to be a law that to boil an egg for that length of time will make it hard.

How Greens-Lore Starts

All our knowledge of greenkeeping, and of the external world is of this sort, namely, *inductive*, for it is based upon experience. We assume that the laws of Nature will not change, and that things today will happen as they did yesterday if all conditions are the same.

For instance, over a period of time, a greenkeeper applies fertilizers to nine of his fairways, but not to the other nine, and uniformly gets better turf on the ones fertilized. He concludes that fertilizers are good and that he will get better turf on the other nine, if he uses fertilizer on them also. You will see that these conclusions have been reached by experience and observation.

Look Before Leaping

The great danger is that we are likely to observe a few facts and then "jump" to a conclusion. Our minds being untrained, we often cling to conclusions with great obstinacy and refuse to listen when anybody seeks to enlighten us. Hence we still find people carrying horse-chestnuts in their pockets to prevent rheumatism, wearing amber beads on their necks to ward off sore throat, believing confidently that a

"wet" moon means rain. Since all inductions are liable to imperfections, the scientific man submits them to tests before he accepts them as truths.

The scientific man, seeking an explanation of a phenomenon frequently recurring in Nature, constructs what is called an *hypothesis*, which is merely a guess at the truth. He assumes that the phenomenon is the result of certain conditions, and when these conditions exist this phenomenon will inevitably follow. Very often these guesses are wrong and more especially when it comes to greenkeeping.

Drs. Piper and Oakley's first hypothesis was quite far off: "That it was caused by a imysilam falling from the air." But on the other hand, the theory of gravitation was first an hypothesis or guess in Newton's mind.

Beware of Pet Ideas

One of the greenkeeper's worst enemies is prejudice, the cherished beliefs we pick up throughout life, based on hearsay or tradition. The average American boy grows with many beliefs firmly rooted in his mind. He is sure that the United States is the greatest country in the world. That its soldiers are the bravest, its trains the fastest, its boys the cleverest. Nobody could possibly beat his father, and his mother is

the best cook in the world. When he becomes a man he sheds many of these prejudices and takes on others. Very few men do any real thinking, yet all of them entertain very positive convictions on many subjects, and those who know the least are usually the most positive.

No man likes to part with an old cherished belief. It is as dear to him as an old friend. When he reads a book that knocks one of his pet ideas, he throws the book down and denounces the author as a mere theorist. You will hear them say, "He is all right as a professor, but he is too theoretical; he doesn't really know what he is talking about."

The greenkeeper must rid himself of any prejudice against the word "theory." All our worth-while knowledge of the outer world is based on theory. The law of gravitation is a theory; no man ever saw it in operation. Our railroads, steamships, bridges and factories with all their machinery have been constructed in harmony with theories that have been carefully thought out and tested. If man theorized no more and began to forget what theory has already been taught him, in a few generations the human race would again be in a state of barbarism.

Rewards of Study

Does it pay to study? The greenkeeper who studies and trains his mind to think clearly will have a better understanding of greenkeeping. He will see greater possibilities and be able to take advantage of them. He will be a bigger, broader, wiser man and so get more satisfaction out of life. As he begins to understand things that are now mysterious and puzzling, greenkeeping will begin to possess for him a fascination that he never thought possible, and its charm will be due not only to the number of dollars added to his surplus account, but also to the consciousness of power which successful conduct gives him. It certainly pays to study.

The opportunities of greenkeeping are increasing. Within the next ten years, when the technique of golf course construction becomes better understood by the average golfer, thousands of golf courses will have to be altered to bring them up to the degree of perfection which will be demanded. And this does not take into consideration the hundreds of new courses yet to be built. The greenkeeper therefore must prepare himself; but if you are asked to redesign a hole, and you feel you are not capable of it or that you would not do

your club justice if you did, don't be afraid to say so. Golf architecture is just as distinct from greenkeeping as the professional or managerial end.

A greenkeeper is perfectly within his rights to question methods of preparation and seeding, for he is the one expected to maintain the course long after the architect has left. But it must be his ambition to see the club get the best, and for him to interpret the architect's plans as near as possible. Very often it happens that a man is an excellent greenkeeper, but knows little of construction; under these circumstances the general shaping up may be done under a construction foreman and the finishing left to the greenkeeper. What I want to say is that we must know our own shortcomings and be frank with our club officials; they are bound to recognize your honesty.

Thinking in Fall

"Clear thinking" for greenkeepers and chairmen of green committees is very necessary at this season of the year. August and September are the great renovation months, when an ounce of effort is worth more than a pound at any other time. This is the time, for example, to weed the greens, and get the crab grass out; the only satisfactory way is down on the knees and dig. This ought to be followed by a thorough scarifying with rakes, the teeth of which have been sharpened. This leaves the green in an ideal state to seed.

Seed generously, especially the bare spots; seeding is the only way to make them heal. The chairman of the green-committee is wise if he makes provision to have temporary greens for at least one week-end during this period in order to give the young grass, which germinates very quickly in August and September, a chance to strengthen before being played on. If this work can be done before Labor Day much will be gained.

Naturally it is this time of the year that the "budget strings" are tightening and the "Nemesis" of chairman and greenkeepers, "Old Man Economy," pokes his head around the corner.

The cost of a given piece of work on a golf course varies very little over the country. If the neighboring course has good greens—the cost to you will be the same, providing conditions are equal. There is no poor man's grass; its costs are the same whether you can afford it or not. But once having a good turf, *maintain it.*