

and as much increased fall as is possible. Ready-made junction-tile or sewer-pipe fittings should always be used. Loose-fitting connections should be cemented.

To allow for expansion, soft clay tiles should be spaced at least  $\frac{1}{4}$ -inch between joints, and hard burned tiles at least  $\frac{1}{8}$ -inch apart. To prevent accumulation of silt in the lateral lines, it is good practice, where possible, to give them a gradually increasing rate of fall as the outlet is neared. Abrupt decreases in the rate of fall should never be made, unless provision is made for collecting silt that may be carried by the water. As far as possible the rate of fall should be kept uniform even though there are small surface irregularities. To prevent the roots of water-loving plants and trees from clogging the tile lines, all trees and brush should be cut along tile lines. Elm, willow, cottonwood, and elderberry are particularly troublesome. Where the tiles must pass under trees of these species the tiles should be incased in concrete.

### The Measurement of Golf Holes

By ALAN D. WILSON

So many questions are asked as to the proper manner of measuring golf holes that it has been suggested this article be written, not however to lay down any hard-and-fast rules but simply to give a practical method and one which we believe to be in the nearest accord with the best-recognized practice. In order to give the article authority, it has been submitted to Howard F. Whitney, Chairman of the Rules of Golf Committee, and it is published with his approval.

As discs and cups are constantly moved, no absolutely accurate measure of a hole can be had from day to day, but it would seem as if the fairest measure of the average distance would be from the center of the back or so-called championship tee to the center of the green. If also regular tees and short tees are used, the holes may likewise be measured from them if it is desired to give this information on the card. If these shorter tees are not measured, a player can approximate the length of the hole pretty closely from the measure given from the back tee.

The question is constantly asked whether holes should be measured in an air-line or along the contour of the ground. For practical reasons the contour of the ground is usually the better method. In the first place it is much easier, and in most cases it gives a result almost identical with that of the air-line method. If the play is over rising ground followed by falling ground and then another rise, it is true that the contour method slightly increases the length, but as a large part of the play is uphill, this seems entirely fair, because the hole plays long even as measured. Of course, in certain exceptional cases the air-line method should be used. Let us take, for instance, a one-shot hole of, say, 160 yards in a direct line, played from a high tee over a deep ravine to a high green beyond. The air-line measurement would be 160 yards. If a contour measurement were used, following down into the ravine and up the other side, it might show a distance of 200 yards, which would be entirely misleading, as the contour of the ravine in no way enters into the shot. In general, then, for the sake of practical convenience, holes should be measured on the contour of the ground; but in the unusual case where the contour does not enter into or affect the play of the shot, the air-line method should be used.

Dog-leg holes should be measured from the back or championship tee on the line of play which would be used by the standard good player—a

man, say, who could drive 225 yards—and not on the line taken by either the very short or the very long player, both of whom, due to their variations from normal, are more or less golfing freaks. The measurement, therefore, should be made from the center of the tee on the line indicated above to an angle point clear of the dog-leg which properly opens up the green, and from this point to the center of the green. If measurements are also to be made from the regular tee and from the short tee, the same theory should be followed; that is, one should measure on the line which would be taken by the standard player of regular tee-length or of short tee-length.

Holes with long diagonal carries, on which the player has the option of biting off just as much as he thinks he is able to chew, should be measured on just the same theory as above, namely: from the back tee, on the line which would be taken by the standard good player—one who could carry, say, 190 yards; and from the regular tee and from the short tee, on the lines which would be taken by the standard player of the class who would be expected to use these tees—let us say 160 yards and 125 yards.

There has developed in this country recently, probably due to the increased power of the modern golf ball, a desire for long golf courses, and due to this desire clubs have yielded, in some cases, to the temptation of what might be called artificially lengthening their holes by the use of such expedients as measuring from the back of the back tee to the back of the green. This would probably add 30 yards to the length of the hole, and while it may look pretty on the card and add 500 yards to the apparent length of the course, it not only adds nothing to the play but deceives the stranger as to the length of the hole, and also deceives the regular player by making him think that he is getting, let us say, 450 yards in 2 shots, when actually he is getting about 420 yards. This is, of course, a harmless deceit, but, all said and done, it is pretty bad practice in what we believe to be essentially a sportsman's game.

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### U. S. Golf Association Decisions on the Rules of Golf

**Question.**—In an open tournament conducted by a club, medal play, a player drove a ball from the fifth tee, making a poor shot. He immediately teed up another ball and took another drive, not with the idea of playing his second ball but presumably because, exasperated, he wanted to show himself and others that he could send it out. His first ball was in the fairway. He played his first ball, taking up the second. What penalty, if any, should be imposed?

**ANSWER.**—This situation is covered by Decision 267 of the Decisions by the Rules of Golf Committee of the Royal and Ancient Club of St. Andrews, which is as follows: "By the custom of the game the competitor is disqualified. After teeing his ball for the first stroke in a stroke competition, the competitor may not play a practice stroke at any tee or during the play of any hole." This applies to medal play only. In match play there would be no penalty, but the act of the player would be considered very bad form.

**Question.**—In the back of our 12th hole there is a deep ditch diagonally across which there is a water pipe  $4\frac{1}{2}$  to 5 feet above the ground. A's ball on the second shot landed in this ditch, directly under this pipe. Measured perpendicularly the pipe was therefore more than a club's length from the ball. The pipe was too low for A to take his stance thereunder, and the pipe would also inter-