

steady. Put this piece of turf in the pail, being careful not to injure it in any way. Figure 2.

3. With the hole cutter remove the rest of the soil to proper depth, and empty this into the pail. Figure 3.

4. Put the cup in the new hole and drive it down solid with the top of the cup at least  $1\frac{1}{2}$  inches below the surface.

5. Fill the hole with the soil from the new one, using the piece of wood and mallet to tamp it down firmly. Add more soil, and tamp it until the hole is filled to within the thickness of the plug of turf from the top. Figure 4.

6. Put the plug of turf in the hole and press it firmly in place with the foot. If the top of this plug is not perfectly even with the adjoining turf remove it and add more soil, or remove the surplus, as the case may be. Figure 5.

7. Pour about a quart of water on the plug. This watering should always be done last and not put in the hole before it is filled and tamped. Figure 6.

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### Success With the Fertilizer Distributor

Under date of July 27, 1922, Mr. Harry F. Collis, of the Flossmoor Country Club, Flossmoor, Illinois, submits the following contribution:

"I thought the readers of the BULLETIN would be interested in a new way of applying sulphate of ammonia and other liquid fertilizers. At Flossmoor I used to employ three men when I gave the greens an application of sulphate of ammonia, two men being used to operate the pumping of the liquid from a fifty-gallon barrel, and one man spraying the green. The cost for spraying the eighteen greens was about \$35.00. Now I give the greens a thorough sprinkling once a week, without entailing any extra cost for labor. I have three fertilizer distributors, which are attached to the hydrant, and also the sprinkler. The water coming from the hydrant is run through the distributor, and the sulphate of ammonia is put on the green through the sprinklers. In this way three greens are sprayed in a night. We have to change our sprinklers four times to cover the green, and the man who does the sprinkling puts five pounds of sulphate of ammonia in the distributor every time he changes his sprinklers. This is the ideal way of applying any liquid fertilizer, as it gives an even distribution and is washed down to the roots of the grass."

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### Some Principles of Golf Architecture; Being the Opinions of Divers Amateurs

No two golf courses are alike. There is room for infinite variety. To some degree the extent of the variety is limited by the tendency to standardization in the modern so-called championship course of 18 holes. No matter how simple or how complex the construction may be, the players derive plenty of wholesome sport from playing any course. Even though this may be true, the evolution of the game and the opinions of the players point to some features of golf course construction as most desirable and to others as having little merit. Golf architecture will improve more

rapidly if golfers devote more attention to the principles involved. Even where there is disagreement, discussion will be helpful. As long as golfers remain ignorant of or indifferent to golf architecture, just so long will freaky holes be built.

#### GENERAL

1. Construction should harmonize or blend with the general topography.
2. Construction that permits of "tricky" shots is to be avoided.
3. Visibility is always desirable. Blind or half-blind shots should be avoided wherever possible. On a rolling terrain there will be enough blind shots that are unavoidable.
4. Some architecture is very deceptive. This is not desirable, as at best it can affect only the players new to the course.
5. Two short holes in succession are not advisable.
6. The theory of the rough most defensible is that it should be such as ordinarily to compel the use of a mashie or a niblick, but not to penalize more than this.
7. Out-of-bounds limits very close to a fairway are not desirable.
8. Dog-leg holes give much greater opportunity for desirable construction than do straight holes.
9. Desirable types of holes are as follows: One-shot mashie; one-shot midiron; one-shot wooden club; drive and pitch; two full shots; three shots, usually two full shots and a mashie or midiron approach. Intermediate lengths are as a rule objectionable.
10. Factors that influence the length of a hole are sloping ground, up or down; prevailing wind; and to a slight extent the kind of soil.
11. Shots that are too long, on a full 2-shot hole especially, should not be penalized more heavily by bunkers around the green than those that are too short.

#### BUNKERS AND HAZARDS

12. Blind bunkers are not desirable. A bunker should be both a guide and a chastener.
13. A cross bunker guarding the approach to a green is good architecture only when the normal shot to the green is a pitch shot, either of a mashie or of a spoon. It is hardly defensible in a full two-shot hole.
14. Cross bunkers on the fairway are commendable only in exceptional cases, such as a hazard for the second shot in a three-shot hole.
15. Bunkers which never catch shots are useless.
16. Hazards should be in proportion to the advantage to be gained from a shot, but hazards should never be unduly difficult.

#### PUTTING GREENS

17. Putting greens should be approximately level or, better still, slope toward the approach. They should never fall away from the approach.
18. Putting greens on the extreme top of a hill or ridge with surrounding ground sloping away steeply are undesirable.
19. Putting greens for mashie shots or drive-and-pitch holes should be smaller than other greens. Very large putting greens are rarely commendable.

20. Putting greens should never slope so sharply that a putted ball will continue to gain momentum.

21. Mounds or ridges to make a border of the green should be near the back. If near the front they often cause fluky shots.

### Rockefeller's Improved and Patented Comminutor

The outfit illustrated above was made out of an old thrashing machine which was purchased for \$35. The Green Committee of Inverness got more in weight and volume for this particular \$35 than it ever got for any other expenditure of double the amount of money. It certainly looked



ROCKEFELLER'S COMPOST COMMUNUTOR

like an awful lot of stuff for \$35 and the purchase looked so attractive that the Committee with great reluctance permitted the machine to be torn down to be made into a comminutor.

The thrashing machine was torn down to the sills, leaving the main shaft and the cylinder. A hopper was built over the cylinder and the straw shaker was replaced with a wire screen, which was carried on the hangers and operated from the crank shaft that had originally carried and operated the shaker. The rig was shortened up and the wheels were put back under. It was necessary to buy one belt to connect the main shaft