

better will the beer be that you pass over the counter. The blocked tin tubing from the storage vault to the box likewise should be well insulated, and a uniform temperature be maintained from the barrel to the coils in the boxes.

"I found a corner in both the cafeteria and kitchen soda-fountains which could be torn out and rebuilt so that I could insert a homemade box. In so doing I saved approximately \$1,000 and yet accomplished the result for which I was striving, and that was to establish a service bar in those two places.

"It would be difficult indeed to recommend a bar that would be suitable for each and every club, as the requirements and funds vary according to the size and desires of the club. If we have a repeal of the 18th amendment, a bar which would adequately serve present needs for beer only, would be entirely inadequate at a later day when the liquors and wine return, unless one cares to spend a considerable sum and is optimistic in regard to repeal. With conditions as they are and the clubs in financial straits, I would recommend the least possible expenditure and defer the installation of an elaborate bar until such time as we have the revenue-producing refreshments for sale on a legal basis.

Service Details

"I believe that the use of a Pilsner glass for service to the ladies is appreciated, while the men seem to prefer the old time stein or goblet.

"Another feature is that the bar be installed in a room where both the husbands and wives can get service, either at taps or at the beer tables, and with that in mind I would recommend a step rather than a rail. At some roadhouses you will have seen some very novel furniture made out of beer kegs which have been built into tables and chairs. I think they are as attractive and comfortable as any I have seen.

"Beer that is served too warm is not appealing, while it is equally displeasing to have a beer too cold, as it draws very flat and some claim it to be injurious to the system. It is commonly agreed, however, that a temperature of about 45 to 50 degrees is most palatable. A pre-cooled stein adds materially in the delivery of a real cool glass of beer to the customer, and I would recommend it, even though it requires a little more effort on the part of

the bartender. The washing and sterilizing of beer glasses must also be given consideration for if you use a soapy solution to wash the glass in, you will be unable to draw a good glass of beer thereafter.

"The old idea of a free lunch seems to have disappeared and I doubt if it will return unless we get liquors back, as there isn't enough money in the handling of beer to make it feasible or profitable. I would recommend pretzels or peanuts salted in the shell as a come-on to a thirsty one.

"One criticism I have to offer and which I doubt can or will be eliminated are the heavy taxes imposed by every legislative body who have been able to get their fingers in the pie."

SOIL MUST "BREATHE"

Lack of "Internal Respiration" Cause of Poor Greens Condition

By WM. H. TUCKER

Course Architect and Builder

PUTTING greens constructed on a heavy textured silt loam or on a heavy clay loam, gumbo, or adobe, should be tile-drained. The system should be of the herringbone type and trunk lines and laterals spaced correctly so they will draw the under-water 10 feet on either side of the tile lines.

In order to permit the under-water to gravitate and find its way to the tiling system, the soil structure between the laterals must be of a permeable nature, otherwise the tiling system is not worth the expense to dig the trenches. The tiling system can not collectively function, consequently all effort and expense have gone for naught.

Having emphasized the importance of the tiling system and the substructure, it is just as important to know what quantity of topsoil is desirable to put over the substructure for the completion of the final surface. This topsoil must be light and arable, and of such a texture that will permit of direct percolation.

When a putting green is correctly built, all excess surface water should slowly percolate through to the substructure to be taken up by both the top soil and the subsoil. The surplus will be taken up by both the topsoil and the subsoil. The surplus

will find its way to the tiling system to be carried away.

If the fundamentals are conscientiously carried out, what would be the ultimate result? You would have as a foundation a soil structure that permits the soil to breathe. There also would be a soil formation that would allow water to percolate through, which is absolutely essential for the development of any turf, as turf-forming grasses make matted root stocks in the ground. The depth to which the roots will go depends entirely on the porosity of the soil.

The surface of the green should be resilient and not require half the frequently used amount of food or water to maintain it in first-class condition. You would not have to worry about the burning up of your green in the summer time.

The vital factor in the production of a permanent first-class turf putting green is *internal respiration of the soil, as well as external*. These are imperative, and both must function if you expect to promote a healthy and lasting turf.

I have many times been asked the question, how can a layman determine by the examination of a putting green whether internal respiration of the soil functions or not?

New putting greens that do not have any underdrainage and have a soil formation composed of a dense clay loam or heavy silt loam must give the turf 3 to 6 months' time to develop naturally their root stocks. If forced by being over-watered, over-fed, or over-rolled during the first few weeks of their existence, the result will be surface cohesion, bringing about a hard, tenacious surface, shutting off the air and preventing free percolation.

When these conditions exist, there is nothing but grief for the greenkeeper and a perpetual expense to fertilize and top-dress. He must force the grass to grow to keep the green in playing condition; but ultimately the greens become infested with all kinds of grasses, especially *poa annua* and carpet grass.

There are many putting greens ruined in the first year of their existence by playing upon them too soon, which forces the necessary rolling of the surface to stand the wear.

Old putting greens will easily succumb to surface cohesion. This can be brought about by too much rolling, over-watering, and by consistently using a clay loam soil

for the topdressing of the greens. This so compacts and seals the surface that it makes the soil structure practically impervious to water. Under-drainage and percolation is shut off and the surface becomes hard.

Where internal respiration of the soil is cut off on any green you will notice, if you examine a newly cut hole plug, a decayed root strata. There are roots of your turf 2 or 3 years ago. They now are practically dead and so rotted that they form a fiber sponge, thus confining a certain amount of water, either by rain or sprinkling, to be absorbed. Therefore when this root layer or layers become saturated, there is no place for the excess water to go. The result is, in hot or humid weather, the saturated surface sweats, fermentation takes place, then you have trouble with brown-patch, sourness, algae, all of which reveal in such unsanitary surface conditions.

The point I want to make clear is, if the soil structure had been such that it would have permitted internal respiration of the soil to function, these decayed and dead roots would have continued to penetrate and grow deeper in the ground and be a part of the present turf today.

First Woman Secretary Breaks British Club Precedents

GOLF CLUB of Keighley, Yorkshire, Eng., has appointed a woman secretary, establishing a precedent for that country. Secretary's position with many British clubs combined duties of general management and official greeter. Retired army officers are secretaries of the majority of British golf clubs.

Mrs. R. Mozley, Keighley's new secretary, says she cannot make rules against "golfing language" as women now use about the same words as men when in course difficulties. She advises that the Keighley men prefer beer at their bar, adding, "I do not intend the supply ever to be short."

TO A PROSPECTIVE member, the annual cost of belonging to the club is much more important than the initiation fee. According to those in the business, it is much easier to sell memberships at \$1,000, with annual dues of \$125 than to sell memberships at \$250 with annual dues of \$200. Think it over.