

age is poor and ice forms in the pools there is a decided tendency for the turf to begin to grow, since the ice and water act in the same way as a window pane. Such ice should be removed or drainage ways opened through the ice as soon as possible, particularly from the greens, as the grass is rendered more tender and may be severely injured by a sharp cold wave. The theory that ice acts as a lens to concentrate the sunlight and burn the turf has not been proved and it seems hardly a plausible explanation of the damage which may result in such cases. Skating rinks located on turf have caused little noticeable injury provided drainage conditions were good.

It may be feasible to open trenches in late fall to drain pockets in the green or fairway. By next winter these pockets should either be filled or a worth-while channel should be cut out and the sod replaced. Seepage from shelves of rock or hard pan may water-log a large portion of a fairway or green for a month or more in the spring and so provide ideal conditions for fungus growth as well as prevent the roots from penetrating deeply. It must be remembered that water excludes the air from the soil which is needed by the root as well as the top of the grass plant. Drainage of such areas by means of tile lines which intercept the seepage above the wet area is a good remedy.

Drying of Turf: The drying action of cold winds has been found to injure exposed greens or parts of them where

the snow blows off or where the fall of snow is light. Under these conditions it is a good practice to hold the snow or even shovel damp snow on them since these greens are usually free from snowmold disease. Injury of this type is particularly common in the western States. Where this type of surface drying occurs, the greens should be watered late in the season and occasionally during the winter if it is practical. Snow fences and light covering with brush may be useful to prevent the snow from being blown off and exposing the turf to excessive drying.

Winter Play: In a survey of the causes of winter injury on the golf course, the player also must receive some attention. Ordinary winter play will cause no serious damage to turf wherever the topsoil is not too heavy. There are, however, critical periods during the winter when the grass is apt to be injured and at such times players should not be permitted to use the regular putting greens. On some courses with sandy soil it may not be necessary to take play off the regular greens at any time. On most courses it should be necessary to close the greens only for a few days at most, and this is usually at times when weather conditions are such that there is little play. In placing the cups for winter use it is well to choose places near the front of the green and, wherever feasible, toward the side nearest the next tee. Such positions will tend to reduce the trampling across most of the putting green area.

WINTER SPORTS FOR THE GOLF CLUB

THE golf club located in the belt in which winters are mild to severe, particularly if located close to a city, should find several advantages in encouraging winter sports. The popularity of winter sports seems to be decidedly on the increase among both the younger and the older groups. If the club is readily accessible to the members much can be done to interest them in a program of winter sports. Even though the days for winter sports may be limited in the milder regions, the members could be advised by notices whenever conditions for winter sports are favorable. Much has been said about more time for recreation, and golf courses can be made to provide the proper facilities at moderate expense. Even if a sports program does nothing more than stimulate some off-season interest in the club it will have been worth while.

Accommodations for winter sports can readily be provided by the greenkeeper and his staff. In addition to extending the use of the course to members for a larger period it provides worth-while work for the greenkeeping staff so that the most desirable workmen may be occupied throughout the season. This provision often saves the greenkeeper from the unpleasant job of "breaking in" an entirely new personnel in the spring when the busy season opens.

Coasting and skating are welcomed by the entire family. It is not as simple to find the proper place either to coast or skate as it was some years ago. On many golf courses there are places that can easily be used for skating rinks or for coasting.

Skating is usually the leading winter sport. Ordinarily the tennis courts located near the clubhouse can be flooded to form a rink. The flat surface and the accessibility of water at the courts make these areas particularly desirable for conversion to skating rinks. Any flat area on lawns, fairway or rough where water is readily available may be flooded for skating. The turf will not suffer from the ice covering provided the ground is frozen well when it is flooded and if provisions are made to allow the water to escape quickly

during thaws. If there is snow on the ground it should be removed before flooding. The best skating ice is made by repeated light spraying rather than heavy flooding. The latter tends to produce "shell ice," which is an abomination to skaters. Boards 8 to 10 inches wide are high enough around the outside of a rink to build the ice against. A small hockey rink with stake and board sides 3 to 3½ feet high should be provided for the children and possibly a larger one for the grown-ups.

Ponds and lakes on the course may be used as skating rinks. Bad cracks may be sealed with snow and hot water. Occasional planing, brushing and spraying of the ice will keep it in good condition at little cost.

To provide maximum enjoyment of the sport the skating rink should be provided with a heated house which need not be large but which should include toilet facilities. Light and music amplified from a phonograph will add much to the popularity of the rink, as will contests of various sorts. It may prove advisable to have a skating instructor available.

Coasting downhill on sleds or toboggans is a popular sport and there need not be any expense involved — only a hill well covered with snow. Many fairways with long hills may be used to advantage for such slides and the turf will not suffer provided no bare spots are used. Occasionally during the middle of the day small areas on the run which had a thin covering of snow may become nearly bare. Such areas may not be important enough to stop the use of the slide but they may result in some injury to the turf. By shoveling a thin layer of snow over such areas the grass can be protected and the slide greatly improved.

The skier can often be provided with a hill steep enough for an exciting ride at no expense. A ski trail or run cut through timber or smaller growth on a steep hillside will be even more appreciated. Small jumps properly placed can be provided with small cost and will give the skiing members some good fun and exercise. A long hill sloping towards the north or northeast is ideal.

GREENKEEPERS' CONVENTION

THE eleventh annual convention of the National Association of Greenkeepers of America will be held in Washington, D. C., February 2 to 5, 1937. The plans include a three-day educational program and an extensive exhibition of equipment and materials used in golf course upkeep. John Anderson, President, has arranged a new and varied educational program which should be of much interest and value to those who attend.

As has been the case in previous conventions, the Green

Section is glad to cooperate with the Greenkeepers' Association in this program. Since the 1937 convention is to be held in Washington, the Green Section will welcome the opportunity to have attending greenkeepers visit the Green Section office or its turf experimental work at Arlington, Va., just across the Potomac River. If weather conditions permit, visitors will be shown the turf experiments at the garden and the greenhouse, laboratory and office activities of the Green Section.