

Problem of Sewage Disposal Demands Club Attention

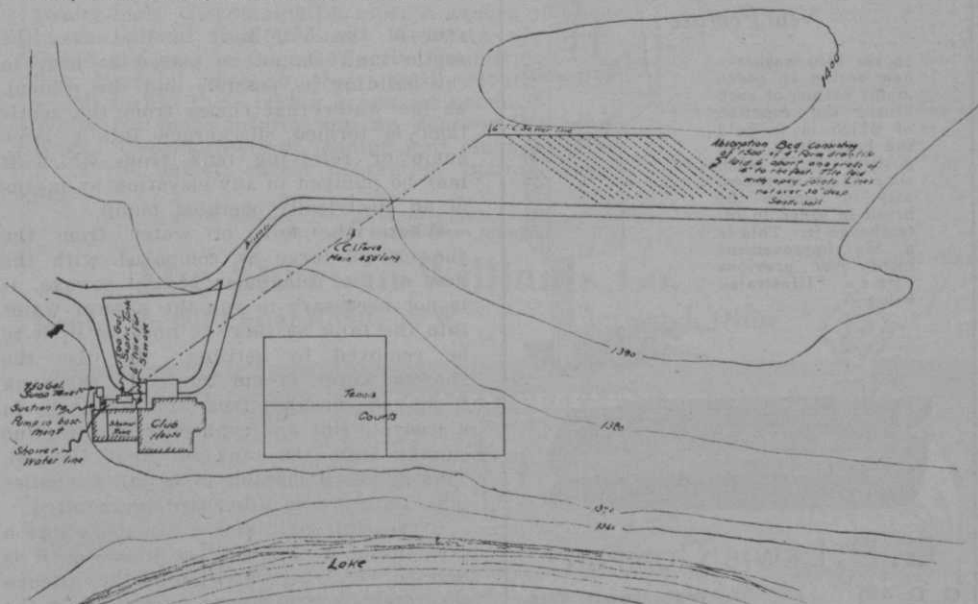
By J. WARREN FORTENBAUGH*

HAVE you ever stopped to consider what conditions would exist around the clubhouse were some modern means of sewage disposal not available? Picture the discharge of wash water, bath water and kitchen wastes upon the surface of the ground or into a stream which flows through the course, making it an open sewer, the landscape marred with unsightly and unsanitary toilet houses, reeking with the foul and dangerous germs of disease. All of this has been banished from the environs of clubhouses by the installation of sewage disposal plants.

There is no reason for any clubhouse, no matter how remotely situated, not being provided with proper and sanitary means of sewage disposal. Any country club, in fact, any rural institution or residence may be equipped with all the sanitary conveniences as if it were situ-

ated in the most modern city. This method of disposing of the sewage consists of the septic tank method of sewage treatment. A septic tank is a water tight container constructed, in installations of this type, preferably of a rust resisting metal such as Armeo ingot iron. The tank should have a capacity equivalent to one day's flow of sewage. By this arrangement sufficient storage will be provided to allow for the settling out of the heavier solids and at the same time furnish proper space for the digestion of the solid matter. This digestion is commonly known as decomposition or putrefaction and is due to the action of myriads of microscopic organisms known as bacteria. In this process the complex sewage matter is broken up into the simpler forms of a liquid and a gas. The gas passes off into the air and the liquid flows off with the water from the tank. The residue of the solid matter considerably reduced in form and in

*Chief Sanitation Engineer, Kaustine Co., Inc.



Plan of a successful golf club sewage disposal layout.

The Correct Way to Install a LEWIS GOLF BALL WASHER

To get the utmost efficiency from a Lewis Golf Ball Washer, place the stake deep into the ground so that the top of the handle on the washer is 35 inches above the ground. This permits a free movement in operating the paddle that rotates the ball so effectively against the brushes.

An ordinary golf ball can be given 5,000 strokes in a Lewis Washer without removing any paint—No sand is used—just pure soap and water.

Order your Lewis Washers now—and be sure to provide one at every tee and two at the first and tenth.

You Will Appreciate This New Feature

In the 1930 washer a new spring is added at the bottom of each brush, the function of which is to hold the brush in a fixed position until such time as it is necessary to remove the brush in order to interchange it. This is a big improvement over previous types. Illustrated below—



G. B. LEWIS COMPANY

G. D. 430

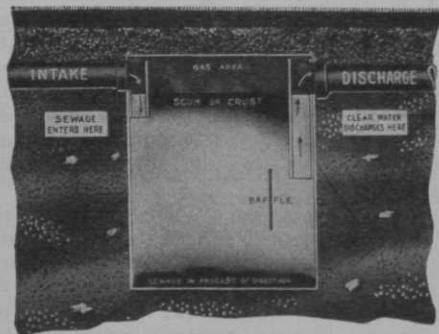
Watertown, Wis.

volume takes up very little of the space in the tank.

The accompanying illustration indicates graphically just how the process of disintegration takes place in the tank.

Installation Factors

All of the sewage arising in the clubhouse such as kitchen, laundry and toilet water may be run into the tank. If the club is so situated that the sewage may be run into the tank by gravity and from there to the place of final disposal, the solution is an easy one. If, however, the clubhouse is situated on the side of a hill facing on or adjacent to a body of water, it is more desirable, from a standpoint of sanitation, to dispose of the wastes to the



How disintegration is accomplished by septic tank.

rear of the building. In that case the septic tank should be placed as near to the building as possible and the effluent, as the water that comes from the septic tank is termed, discharged into a large sump or receiving tank from which it may be pumped to any elevation by means of an electrically operated pump.

Where the flow of water from the showers is large as compared with the flow of the remainder of the sewage, it is not necessary to run the shower water into the tank as there is nothing in it to be removed by settling. In case the shower water is not run into the tank it may be brought from the clubhouse in a separate line and connected into the line coming from the tank for final disposal. This makes it possible to install a smaller tank than would otherwise be required.

If the club maintains a kitchen where a great number of meals are prepared, it is best to run the water from the kitchen separately into a grease separator for the

(Continued on page 102)

(Continued from page 96)

removal of the grease before it is discharged into the septic tank. Grease seriously interferes with septic action if present in large proportions.

After the treatment of the sewage in the septic tank whereby the solid particles of sewage are removed, the sanitary disposal of the clarified effluent is of importance. Although the solids have been removed from the sewage, it must be remembered that the waste is not necessarily pure and in any installation of this sort the sanitary disposal of these wastes is of great importance. If there is a stream which is not used for recreational purposes or as a source of water supply and where the flow during the dry weather is large as compared to the flow of sewage so that the dilution of the tank effluent is many-fold, the effluent from the tank may be discharged into this stream. If, however, the stream meanders through the golf course or if there is a lake nearby which is used for bathing, some further treatment of the effluent will be required.

In country clubs and rural residences, where the soil conditions are such that the water is readily absorbed, the disposal may be done by absorbing it in the upper layers of the earth. This is accomplished by means of a series of tile lines laid with open joints. This method of disposal applies whether the flow is one of gravity or if the tank effluent must be pumped.

In some locations, where the supply of water, particularly during the summer season, greatly falls off, the absorption field may be laid on the golf course in the fairways or such other locations where the texture of the grass need not necessarily be fine.

A Typical Installation

The diagram accompanying serves to give a comprehensible idea of a sewage treatment plant installed at a clubhouse in New York state. You will note the location of the tank, the by-passing of the shower bath water around the tank and its being conducted into a sump tank. The electric pump is situated in the basement of the club, under the shower room. By this arrangement it is accessible during all seasons of the year. From the tank the settled sewage is pumped up the hill, where it is discharged into the absorption bed situated under the golf course.

The foregoing descriptions and illustrations are some of the tentative arrangements for club layouts.

Honor Ross. 30 Years at Pinehurst

ONE of the most unusual golf gatherings in American history of the sport was that which met at the Pinehurst C. C. on the night of March 20 for a complimentary banquet to Donald J. Ross, noted golf architect, who this season is rounding out 30 years as head of Pinehurst's golf department.

Nearly two hundred prominent linksmen gathered at the Ross testimonial banquet.

Rev. T. A. Cheatham of Pinehurst, himself an ardent linksman, was toastmaster, and seated at the banquet tables were many of the Tin Whistle club, Pinehurst's famous organization of golfers formed there more than 26 years ago. The general chairman was Mr. George W. Statzell of Philadelphia. With him on the committee were Mr. Henry C. Fownes of Pittsburgh, member of one of the country's oldest golfing families; Mr. Charles B. Hudson of North Fork, L. I., secretary and treasurer of the Tin Whistles club; Charton L. Becker of Philadelphia, captain and manager of the Tin Whistles club, and John J. Fitzgerald of Osterville, Mass.

Donald Ross has made many notable friends in his time, and they did not forget that they knew him, though they were far distant, when the banquet was on. Edgar A. Guest, Detroit's homespun 'Homer, sent a touching telegram of congratulation. So did Frank B. Kellogg, Frank Presbrey, Professor John Bassett Moore and numerous others not so well known.

The principal speaker at the banquet was John H. Fahey of Boston, former president of the United States Chamber of Commerce, a very old friend and comrade of Mr. Ross. Mr. Fahey declared emphatically that the game never would have been what it is today in America but for the pioneering of Donald Ross. He recalled how Ross had built the No. 2 championship course of Pinehurst and how its trapping had set the golf world bubbling over. He lauded the geniality of the veteran Scotchman, declaring that it was the winning Ross smile that had added to the happiness of the country by helping the cause of golf.

Mr. Arthur S. Creamer of Southern Pines said that the building of great courses was only secondary when thinking of Donald Ross. It was, he declared, the great modesty and fine character of the man that was of the most importance.