

An Improvised Motor Cart

Mr. Jesse Koshland, of the Kernwood Country Club, Salem, Mass., contributes the following under date of July 5, 1922:

"We bought a one-ton second-hand truck, of a well-known make, with pneumatic tires, at a cost of \$200. We took an old dump cart and set it up on the old frame, and we use this to carry material and tools to places where needed and for bringing supplies from the railroad station. This takes the place of a horse-drawn wagon and cart, and our work is done more expeditiously and at a lower maintenance cost as compared with the use of a horse."

Building and Maintaining an 18-Hole Golf Course on Moderate Memberships Fees Alone and Keeping Out of Debt

WILLIAM W. LONG, COATESVILLE (PA.) COUNTRY CLUB

Prior to the summer of 1921 Coatesville had no golf course. A city of 18,000, it naturally had its devotees of the game. The nearest course was that of the Tredyffrin Country Club, at Paoli, 20 miles away. This meant a round trip of 40 miles over a road which was bad in spots. In September, 1920, a meeting was held looking toward the formation of a club for Coatesville. Two well-known golf architects were secured to address this meeting, to look over available land, and to give estimates on the cost of a course. Their estimate was that a satisfactory course could be constructed at from \$2,000 to \$2,500 a hole, or for a total cost of about \$40,000. A club house would cost nearly as much more and a suitable farm about \$30,000, making a grand total of say \$100,000. Coatesville was not a bit feazed at the proposed cost. Its big steel mills, those of the Midvale Steel Company and the Lukens Steel Company, were running night and day and paying out salaries in excess of a million a month. Bonuses of from \$25,000 a year to \$100,000 a year to leading officials were not uncommon. But within a month after the meeting had been held the bottom dropped out of everything, almost over night. By March 1, 1921, these mills, which had employed more than 10,000 workmen, were shut down tight.

With the outlook so dark that it seemed doubtful if Coatesville could even support a base ball team, the writer made a canvass of the golfers of the city to find out how many had sufficient sporting blood to put up \$100 each toward building a course; this was to be in full payment of a family membership for a year. To interest them some rash promises were made. These promises included a temporary course of five or six holes, to be constructed on meadow land and made ready for play by May 1. A completed nine-hole course was promised them by September 1. About \$4,000 was raised in a few days as a starter. The writer knew he could turn over a lot of dirt with that amount of money; but it was not enough even to look at a suitable farm, let alone buy one; so he decided the best thing to do was to steal a farm.

The city of Coatesville has one of the finest water supplies in the state of Pennsylvania. A large lake, or rather reservoir, holding 330,000,000 gallons of water lies in a valley 2½ miles northwest of the city. A fine stone road leads thereto. Surrounding this beautiful lake to the

south, the city owned a farm of 135 acres, purchased so it might always protect its watershed. The city had been farming this land and making an unprofitable job of it. Cultivating the land also had a tendency to muddy the water supply. The writer, who had been a newspaper owner for many years and was also mixed up in politics a bit, held a conference with the City Council. He showed them how beneficial it would be to have this large lake surrounded by fairways and greens of velvety grass. He talked the city of Coatesville into leasing this farm for a rental of \$500 a year and then clinched the deal by having the lease made for 60 years. A large farm house, which would cost at least \$15,000 to build today, a tenant house, a big barn, and other buildings went along with the property. The lease provided that the club might do as it pleased with these buildings, even to tearing them down if so disposed.

A man who had laid out many of the leading courses in the United States was secured *without cost* to locate the first nine holes. When he was about to purchase seed to the amount of \$3,000 and was getting ready to send a golf architect at \$50 a day, he was thanked for what he had already done but told that the club could not stand for any fancy stuff. It was a hurry-up job; but nine fairways were plowed, harrowed, and seeded and nine greens built and sowed to grass in a little over two months' time. The cost of seed was less than \$1,000 and the cost of construction less than \$2,000. In the meantime the temporary course of five holes had been laid out in a twenty-acre meadow, and the members were kept interested while the grass was growing on the new course. The temporary course was so badly crowded and the fairways naturally had to be so close together that play thereon was as dangerous as going "over the top" in the late war, but it all added zest and enthusiasm to the club.

On August 6, or three weeks earlier than the date promised, the new nine-hole course was opened in the presence of more than a thousand people, including leading officials of the State. Dr. Edward Martin, Commissioner of Health of the State of Pennsylvania, and Richard J. Baldwin, Speaker of the House of Representatives and Chairman of the Greens Committee of the Springhaven Country Club at Media, led the field. They were followed by a professional foursome made up of Messrs. J. J. Dougherty, Andy Campbell, Walter Wood, and Bob Barnett, all in the near-championship class. Behind them went the amateurs and the dubs, to the number of sixty or more. The course was used incessantly until the middle of December, while thereafter temporary greens were used all winter.

In the fall of 1921, within a few months after the first nine holes were opened, work was begun on the second nine. This course was laid out by Mr. Cyril Hughes, of Cheshire, England. Every effort was made to correct mistakes which had been made in the construction of the first nine. The ground was plowed and permitted to lie fallow until spring. The greens were made with a putting surface of about 5,000 square feet and some even larger. Instead of being permitted to take the slope of the ground, as was done in some cases on the first nine, all were brought up level and the proper undulations put in. A heavy coat of manure was plowed down in the fall after the greens had been shaped. Then the best thing of all was done. The Club joined the Greens Section of the United States Golf Association,

and all winter the writer fired letters to Dr. C. V. Piper for the latest dope. All the Bulletins issued by the Greens Section since it was organized were read, reread, and then read some more.

Then in the early spring of this year work began in earnest. Not a thing was done except on the best information obtainable from Messrs. Piper and Oakley. The fairways were given seven harrowings, which saw them at the finish almost like ashes. Seed was sowed at the rate of 100 pounds to the acre by three wheelbarrow seeders, fourteen feet long each. The boxes on these seeders were made three times as large as the largest size made by the manufacturer, so each barrow would hold more than two bushels of seed. This was done to prevent stopping so often to fill up and to guard against all possibility of missing in seeding. All the wheelbarrow seeders on the market are made too small. In addition to tripling the size of the boxes, I had the holes made larger so they would throw more seed. I permitted seeding only when you could not see a ripple on the lake surrounding the course. No seeding was done when there was anything like a breeze blowing. It is hard to find weather like this in April; but the wind usually falls toward evening and we would sow at that time, keeping it up as long as we could see, and then bringing the men out at daylight the next morning. The seed was covered by a brush harrow made out of light twigs. We used two brush harrows and two light rollers. To take advantage of good weather I used as many as twenty horses in a single day. It cost no more to use twenty, when you considered the length of the job, than it did to use four. Ten double teams would harrow all our fairways three times and roll them once in a single day. Part of the ground used had been in wheat the previous fall and part in corn. It would have been better to have sowed the entire field to some good humus-making crop and then plowed it down; but that would have meant waiting another year. So we went to it, giving the fairways 800 pounds of fertilizer to the acre, taking the formula from the Greens Section Bulletin.

The greens, in addition to the horse manure plowed under in the fall, were given 100 pounds each of this fertilizer and about three cartloads of sieved mushroom soil worked into the surface. We sowed these greens to South German mixed bent and extra fancy re-cleaned redtop at the rate of six pounds to each 1,000 square feet. We used bent and redtop on a fifty-fifty basis. Dr. Piper said five pounds to each 1,000 feet was ample, and he is right; but we went him a pound better to guard against any mistake in weighing same. We sowed this seed with a wheelbarrow seeder, which puts it on very much more evenly than can possibly be done by hand. In fact if you sow by hand you will use twice as much to get the ground covered as we did with the wheelbarrow seeders. To put on six pounds to the green we had to go over the green in all directions at least six times with the wheelbarrow seeder and when we got through the entire surface of the green was gray with seed. We then dusted the green with sieved mushroom soil until it was black, raked lightly with very fine-toothed wooden rakes, and rolled very lightly.

At this writing, August 1, we have a stand of grass on both greens and fairways which has been mowed for more than six weeks and which could have been played on a month ago. We shall not open the course, however, until about September 1, owing to lack of a water supply and to the danger of the greens being burned when cut low enough for play. We have been

cutting them once a week with lawn mowers, setting the blades quite high. The grass on these greens is so very dense that you can't find ground by separating the grass with your fingers. It's so thick that little if any crab grass has crept in, although we have quite a bit of crab grass on our first nine greens. I am satisfied that crab grass is increased by short cutting. I cut one of the new greens a little shorter by way of experiment and immediately crab grass started to come in.

Ever since the grass on these greens was well established we have top-dressed them every two weeks with sieved mushroom soil and about once a month with a light coat of sand. The latter helps to hold the moisture and the mushroom soil stimulates growth and gives the grass a most wonderful green color. Of course we have been greatly aided by the rains, which have been abundant all summer.

We built these new nine holes, sowed them, and have maintained them to date for less than \$5,000. No better stand of grass could be had. I have mentioned the density of the turf on the greens and on the fairways. It is as thick as the hair on a dog's back.

We have had the advantage of cheap labor, 30 cents an hour up to July 1 and 25 cents an hour thereafter. I had the big steel companies haul all our fertilizer, mushroom manure, etc., for nothing; had them make us tee benches and sand boxes, and give us practically all our tools except mowers; in addition, they do all our repair work for nothing, and this helps a lot.

Our membership has reached the 175 mark and we are absolutely out of debt; in fact, never have been in debt. While we have three millionaires in our membership, not one of them has been called upon to pay a dollar more than regular dues.

In addition to building nine very fair golf holes and later nine more very excellent holes, the 18 with a total yardage of 6,200, we have remodelled the farm house into a most beautiful club house, attractively furnished, where dancing and social life is enjoyed along with golf and where most excellent meals are served. We placed a stewardess in charge of the club house, giving her rent, fuel, and light free, and all she makes. We have as many as sixty persons eat there a day. The food is fine and the service excellent. The club house is thus maintained without a dollar of expense and the members have every convenience and comfort they may desire. Almost every country club loses money on its club house if it attempts to operate it by hiring its own help.

Next year we will put in an irrigation system, and will have plenty of money to do it from regular membership dues, as our large capital expense is now a thing of the past.

Our dues are \$100 for a family membership, with golf privileges; \$60 for a single membership, with golf; and \$25 for a club membership, without golf. Almost all take the golf privileges, and we will have 200 members before the present season closes.

Our success has been due to the determination to keep out of debt at all times, to make one dollar do the work of five, wherever possible, and to do nothing whatsoever in connection with the greens or fairways except strictly on the advice of the Greens Section of the United States Golf Association. Our membership in the Greens Section costs us \$15 per year, and I am satisfied it has saved us more than \$1,500 this year alone.