tric bill every month. Also if more water ever was needed the pipes were large enough. It is cheaper to replace pumps than pipe lines.

When I submitted my plans and recommendations to the board of directors, I asked for a pump capable of delivering 100 gallons per minute against a 100 foot head. This would give me approximately 40 lbs. pressure at each outlet; this does not include friction loss in the hose.

These qualifications border on the line between a 1½-inch pump and a two-inch pump. I thought that if I could use a 1½-inch pump, I would secure the result I was aiming at,—low operating cost for watering one green as well as nine greens. If I was forced to use a two-inch, then it was questionable.

Fairbanks-Morse came forward with a 1½-centrifugal which was capable of delivering 100 gallons per minute against a 90 foot head and they guaranteed this to do the work for us.

Before making this guarantee, however, they asked to see my figures and checked the entire layout against all static and friction loss and corresponding pipe sizes.

This pump is a ball bearing, high head, single stage double suction, split casing and is directly connected to a seven horse power 220 volt, 3 phase, 60 cycle, Fairbanks-Morse ball bearing electric motor. It is a high speed pump turning at 3450 revolutions per minute under full load.

The pump is hand controlled by a push button automatic starter and is protected by an overload relay and fuses.

Galvanized wrought steel (screwed joints) was ordered with galvanized mal. iron fittings. Some of the 3½-inch fittings were cast iron galvanized.

Our specifications called for:

570 feet of 3½ inch pipe
1551 feet of 2½ inch pipe
1446 feet of 2 inch pipe
1870 feet of 1½ inch pipe
1986 feet of 1 inch pipe
295 feet of ¾ inch pipe

The ¾-inch pipe was used only in the line to the drinking fountains and of the 1,275 feet of this, 1,035 feet was inch-pipe, and the balance of the inch-pipe was used in short laterals to the tees. Nothing smaller than 1½-inch pipe was used to any of the greens.

We used the California type of hose connection using 1-inch screwed hose connections.

*(Continued next month)*

## Florida Finds Reclaiming Deserted Courses Pays

ALTHOUGH general conditions are not those that create a boom in Florida, this year the travel is up to a good normal year standard. Golf is the answer.

Back when the Florida fever was on, the municipalities put money into golf courses with a lavish hand. As the collapse came a number of the municipal courses were allowed to go almost out of business. During the past couple of years the courses have returned to operation and some of the most interesting and effective work in recent greenkeeping progress in the south has been that concerned with the rehabilitation of these languishing establishments. The case at Fort Lauderdale, Fla., is a typical one. The municipality built a fine course and clubhouse and then ran out of funds for the operation. A group of northern golf businessmen, headed by Joe Roseman, took over the plant on a rental basis and in a comparatively brief time had the course in the best shape of its history. Some income from local memberships and the income and municipal attraction of the course for outside play have made the Fort Lauderdale establishment a valuable civic asset.

Another such instance is at Sanford, Fla. The municipal course there was built at a cost of $150,000. When the boom banged up, the city dads, having other financial troubles, were ready to let the jungle reclaim the course.

A few vigorous golf enthusiasts under the leadership of Leon L. LeRoy, organized to operate the course. They got the city to contribute $2,500 annually toward the club's operating expense providing an equal amount could be raised privately. The Chamber of Commerce assisted in a membership drive. The playing privileges were set at $10 per individual per year, or $20 for an annual family membership. During the first two days of the drive $3,000 in cash was raised.

The course was put into shape under the direction of Allan Stewart, pro-greenkeeper, and an increasing volume of winter greens fees brought into the income side of the ledger. It costs around $8,000 yearly to operate the plant. The greens fee is $1.00 a day the year around.

Labor is inexpensive at Sanford and the course is so constructed and arranged that a maximum of maintenance work can be done by machine.