



Montclair's clubhouse soon will have the players of an additional eighteen holes alibiing and rejoicing within its walls.

RUSH COURSE CONSTRUCTION WITH Modern Machine Methods SETTING EFFICIENCY RECORD ON JOB

By Lester H. Burns

THE Montclair (N. J.) Golf Club has long been noted as one of the outstanding courses of the New York metropolitan district. Located on the western slopes of the Orange Mountains, it covers a rugged, broken terrain eminently suited for golf.

The Montclair course was originally 18 holes, but the large number of active golfers in the club made the construction of an additional 18 holes necessary. The first half of these new holes was completed several years ago; the second nine is now under construction and will be open for play in the spring of 1930.

The portion of the course now under construction is located on a heavily wooded slope. There were many boulders and outcropping rock ledges which had to be removed, many trees which had to be uprooted, and a number of small hills and streams which it was necessary to re-

locate. It will be appreciated that this is a big job requiring the use of the very latest equipment.

The removal of the trees and stumps was in itself a big job; but the real task of making the course began after the fairways had been cleared. Small hills and streams were often relocated, and it was necessary to install much til-

When a new course is to be constructed in a metropolitan district where land values are high it is wise, particularly where a tremendous amount of excavation and fill-in must be done, to employ the latest and best machinery for the job, even though construction costs are thus increased. By this policy valuable property can often be put in play a full season earlier than if ordinary construction methods are employed.



Clearing done in record time put ninth fairway at Montclair in shape for effective seeding.

ing in order to provide proper drainage.

Wherever possible, natural hazards were retained; but as is to be expected on a course of this caliber, many artificial ones were created. It is expected that these new holes will be thoroughly in keeping with the existing twenty-seven.

A Pawling & Harnischfeger No. 600 gasoline-driven excavator was used to excellent advantage for moving dirt from one place to another. Even though it was a dry summer, the ground was soft in many places, and trucks could not be used. As a consequence, a No. 20 Caterpillar tractor was used to haul Easton No. 40 rollover carts. In this way dirt was handled very rapidly.

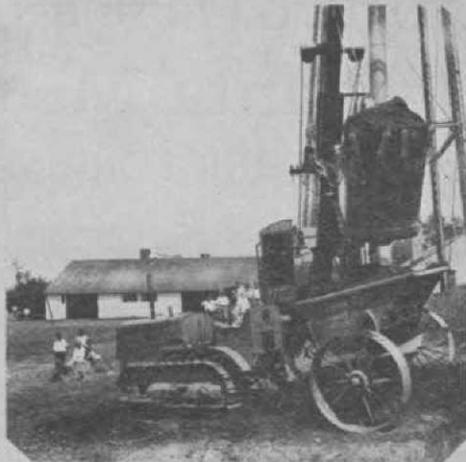
As is usual in districts where interesting golf courses are found, rock was encountered at very shallow depths; frequently only a few feet below the surface. Much drilling and blasting were necessary, and for this purpose Ingersoll Rand portable compressors, "jackhammer" drills, and paving breakers were used. It has been estimated that each of the portable compressors did the work formerly requiring ten or twelve men. Sizeable outcropping ledges were drilled and blasted in a day. Operating and maintenance costs were particularly low. Drill steel was sharpened on the job.

These summer months of 1929 will long be remembered for their prolonged drought. The Montclair fairways suffered as did all others in the section. To provide against a similar situation, the Montclair Club decided to install a water supply system for the fairways, as well as for the greens. A 6-in. cast iron pipe line was installed along each fairway and tapped at various points.

An F. C. Austin drainage excavator was used for trenching. This machine cut saplings and roots without tearing out the sides of the trenches. Frequently it would strike boulders and ledges; and when this happened, the portable compressors and "jackhammers" were immediately hustled to that point. A few shots generally allowed the excavator to continue.

The Montclair fairways have always been good because of the excellent top soil, and it is expected that the nine new holes will be equal to or better than the old ones. Extreme care has been taken by the contractor in the grading and drainage. The rainfall in this section is naturally heavy, and the wooded areas adjacent tend to store up moisture and feed it gradually to the sloping hillsides below.

Considerable care is being taken with the seeding of the course, and with favor-



Upper left—A jack-hammer drill cut costs in handling sub-surface rock.

Upper right—Minimum of man-power required by this trio of gas shovel, tractor and dump cart.

Lower left—A trench excavator made short work of the water and drain pipe ditching.

Lower right—The portable air-compressor paid its way in handling rocky soil.

able weather the fairways should develop rapidly.

Work was started in the early spring of 1928 and has progressed steadily since that time. The contractor, Mr. Charles Neal, of Westwood, N. J., was favored with an open winter during 1928-29, and

very little rain during the past summer. These favorable conditions have made it possible to finish the work within such a short time.

The cost of these new holes is estimated to be \$175,000. The architect is Mr. Charles H. Banks of New York, N. Y.

NO sounder advice can be given a group of individuals considering the founding of a club in a small way, than to make sure of their layout first, to see that it will grow with the club and not have to be scrapped as the course is developed. It has most likely come within the observation of many greenkeepers and course su-

perintendents who are called in for consultation that the club that starts off without a proper plan of expansion is put to greater expense and inconvenience during the enlarging of the course, than the club which at slightly higher initial cost, made provision for subsequent development.—*C. A. Tregillus.*