MY COLLEAGUES in golf course maintenance I trust will accept my remarks about American methods with the understanding that I have my own reservations about my qualifications to comment. I have been in golf course work only four years and am a comparatively new member of the GCSA.

However, I have been in horticultural, landscaping and forestry work since 1914. I served five years' apprenticeship in Germany before I was considered to qualify for the profession which has been my life's work. In Germany and other European countries I was responsible for the construction and maintenance of grounds for national exhibitions and was in charge of maintenance of large public and private parks.

There the very finest in results were expected and I hope my friends in golf course maintenance in my adopted land will believe me when I say that the demands of the officials and estate owners in the European countries are not much more — if any more — exacting than the fine turf demands of American golfers. But we in this profession are often called upon to do the impossible. It is our quite frequent achievement of this difficult aim that gives us solid foundation for our pride in our profession.

What has delighted me and helped me beyond measure is the way in which my colleagues have extended to me the benefit of their own experience and the manner in which the research in all departments of turf have been made available to me for use on our municipal course at Amsterdam, N. Y., in the beautiful Mohawk valley at the foot of the Adirondack mountains.

Our problems are many and so are the ideas and methods advanced for their solution. In applying my own experience and that which my colleagues have generously given for my assistance I go back to a fundamental I was taught during my apprenticeship.

I was told to compare our vegetation with our own bodies, with respect to food, minerals and treatments. I was instructed to regard grass as a physician regards a patient — to cure the sick and keep the healthy well.

When I came to Amsterdam, four years ago, the course on heavy clay was ailing. The greens are Seaside. They were very sick and, as greens on many public courses, getting very heavy use. They were like a person of frail constitution who was unhealthy but still had to do heavy work.

The physician knows it is difficult, and possibly dangerous, to treat with violent stimulants. I apply fertilization lightly, never more than 10 lbs. per 1000 sq. ft., starting when weather is favorable, and continuing regularly, every three weeks throughout the season.

I change the dosage and composition of the fertilizer to give a balance and variety to the food treatment. I doubt that grass does any better than a human being would on a monotonous diet of the same elements year after year.

Now the turf on our greens is fine, healthy, sturdy and free from grain or thatch. This year we have had absolutely no brownpatch, dollar- or copper-spots.

One very valuable principle of good maintenance of which I am constantly reminded by my own experience and that of fellow members of the Northeastern Golf Course Supts.' Assn. is that of the ounce of prevention being worth a pound of cure.

Too often, it seems to me, the prevention is neglected with no more good judgment than one would exhibit in failing to be vaccinated when liable to exposure to an epidemic. It appears to be often the policy to trust to luck and after disease strikes and does its damage spend considerable for cure and repairs and have a bad course during an important period.

I know from observation and discussions with my brother superintendents that neglect in applying preventive treatment usually is the result of having to extend an insufficient budget and in many cases possibly is caused by the failure of those who are in higher authority to insist that
ample funds for preventive treatment are
provided. This past spring I started out with the
plan of spraying my greens every two
weeks with disease and insect preventive
treatment. I did not use the recommended
dosages of either material but cut the
amount to a third of each and applied in-
secticide and fungicide at the same time.
Treatment was applied every two weeks.
This was my first year of this practice
and the results have been completely satis-
factory all through the year. The pro-
cEDURE may not do so well next year. Who
knows? But on my patients, the greens at
Amsterdam, it has been successful.

Some Water System Answers
WATER QUANTITY and RATE OF
FLOW — One acre inch of water contains
27,080 gals. If you have a pond that meas-
ures 208.7 ft. by 208.7 ft. this would be
equal to one acre or 43,560 sq. ft. If this
pond was 15 inches deep, you would have
15 acre inches of water or 27,080 gals. times
15, or 416,200 gals. in your reservoir. If this
pond is stream fed and your rate of flow in
this stream is one cubic ft. per second, you
would be supplying one acre inch per hour,
or 450 gals. per minute to your pond. 27,080
gals. of water is the average amount used
in your home over a 5-month period.
HEAD PRESSURE, POWER and EN-
ERGY — If your water requirement of irri-
gation system is 300 gals. per minute and
suction lift is 12 ft. and the pressure gauge
at pump house is 80 lbs. per sq. inch, (p.s.i.)
and the 18th green at clubhouse is 69 ft.
elevation above pump house, your pressure
at the 18th green outlet would be 50 lbs.
p.s.i., i.e. if 2.31 ft. equals 1 lb. p.s.i., then
23 ft. equals 10 lbs. p.s.i., and 69 ft. equals
30 lbs. p.s.i. This means that your pressure
loss in 69 ft. is 30 lbs. p.s.i., or 50 lbs. p.s.i.
at the 18th outlet.
For practical measures, if electricity
costs .03 cents per Kilowatt hr. and you
operate this pump of 30 H.P. it would cost
you .03 cents times 30 H.P., or 90 cents per
hr. — PROF. H. N. STAPLETON,
Head of the Dept. of Agricultural En-
gineering, University of Massachusetts,
at Northeastern NY Golf Course Supts.'
Assn. meeting.

NEW 9-HOLE SHORT GOLF COURSE FOR L.A.
Golfers of Western Los Angeles, who have been without public golf facilities since the war-
time conversion of the old Santa Monica course into a defense plant site and the subdivision
of the former California Country Club, will again have a golf course if recently announced
plans of the City Recreation and Park Department bear fruit. The proposed Penmar Golf
Course, a 9-hole, 2504 yard layout, will be an integral part of Penmar Playground, a new
district park, which will include an athletic field, picnic and children's playground facilities
and attractive landscaping. Work is already in progress at the playground facility which
is being built on 26 acres of city-owned land combined with an adjacent 13 acres recently
acquired for the purpose. Actual work on the Penmar golf course is waiting on the result
of current negotiations for the purchase of an additional 18 acres of privately owned, unim-
proved land next to the playground which has been earmarked for the golf links. General
Manager George Hjelte emphasized that the Recreation and Park Department is entirely
satisfied that the expected patronage of the new course, particularly by golfers of Venice and
Paims-Mar Vista areas will support the new links without aid from tax funds. Yardage of
individual holes will be: No. 1—334; 2—265; 3—177; 4—294; 5—200; 6—352; 7—182;
8—320; 9—380.