

# Demand LEWIS

## TEE EQUIPMENT

Standard throughout the World

They serve better. They last longer. They lower your season-to-season operating costs! It's true economy to give the golfers on your course the convenience of Lewis Tee Equipment.

### LEWIS WASHERS

Lots of 1 to 10, each...\$6.00  
Lots of 11 to 20, each... 5.50

### LEWIS TEE ENSEMBLE

Washer, stake, waste container, data plate, towel and ring. COMPLETE, each .....\$10.65

See your dealer NOW—about Lewis Tee Equipment for your course.

**G. B. LEWIS COMPANY**  
Dept. 82 Watertown, Wisc.



# LEWIS

## GOLF BALL WASHER

Answer above ad with QUICKMAIL No. 5



**PUFF PUFF** EVEN the biggest budget will stretch only so far. But you can get more out of your budget by ordering pest destroyers during the off season, for spring or summer shipment. Raw material prices usually go up in the spring—rebates are often possible in the winter. How about dropping us a line about your spring needs? If you act promptly, you will save some money.

1937 Ground Maintenance Manual  
now in work — reserve a copy

**THE C. B. DOLGE CO.**  
WESTPORT, CONNECTICUT

applied to leaves only, may be used to kill plants without injury to neighboring vegetation, if used with care.

**Lawn Pennyworth**—If deep rooted, same treatment as for Yarrow. If shallow rooted, dust with fertilizer as for chickweed.

## WHAT HAPPENS INSIDE A GRASS BLADE

By E. KLAUCKE

The main difference between the nutritional processes of plants and animals is that plants manufacture their own foods from raw materials, whereas animals cannot. All living cells, whether plant or animal, require starch and sugars (carbohydrates), proteins and fats.

It is in the grass blade that photosynthesis, the process of starch and sugar manufacture, takes place. This process consists essentially of the following: carbon dioxide and water are synthesized to sugar and starch under the influence of the green coloring matter of the leaf (chlorophyll) and light. Oxygen is given off as a waste product.

Although photosynthesis is the most important blade function, the synthesis of fats takes place largely in the leaves as does a considerable quantity of the proteins utilized by the plant cells.

Transpiration or the loss of water vapor from the plant through the numerous small "pores" of the leaf is another very important blade function. The amount of water vapor passing from the leaves by transpiration is extremely large.

All living cells respire or breathe all the time. Thus, respiration is another process going on in the grass blade. Oxygen is taken into the cells and carbon dioxide and water are given off as waste products—the very reverse, it will be noticed, from photosynthesis. Photosynthesis and respiration go on simultaneously during the daytime, but only respiration goes on at night.

Certain conclusions are to be drawn from the above:

Mowing, particularly the close clipping of putting green areas, tampers in no small degree with the natural processes of a grass plant.

Dust collecting on the surface of leaves clogs the "pores" on the leaf surface, thus reducing photosynthesis.

Because turf grass is kept under unnatural conditions, the turfman should supply raw materials in the form of fertilizers according to a definite program to fit the

requirements of his grass. Whenever, possible, the clippings should be left on the area to decay.

The grass should be cut less often and the height of cut of the mower should be raised during very dry periods in the summer.

The grass should not be clipped late in the fall in order that the blades may make as much reserve food material as possible for the following early spring growth.

#### ARTIFICIAL WATERING OF TURF GRASSES

By L. S. DICKINSON

- I. Artificial watering should be considered only as a supplement to a deficiency in normal rainfall.

Unless water supply contains an excessive amount of any element, artificial watering affects soil similarly to rainfall, i. e.:

1. Makes plant food available;
2. Washes out plant food;
3. Increases acidity of the soil;
4. Puddles clay soils;
5. Starts erosion;
6. Accumulates in low areas;
7. Runs off to slopes, etc.

- II. Three periods in development of turf grasses:

1. Seed and seedling. Water requirement high.
2. Development or root training. Placing of water supply important.
3. Mature stage. Both placing and amount of water important.

- III. Considering mature turf:

Why water? 60% for color effect, 40% for health of grass.

When is water needed? Not until after wilting has started and soil supply of capillary water exhausted as determined by examination of soil.

- IV. Fundamental factors determining methods of applying water:

Is the soil condition practically uniform in all ways?

If yes, large coverage sprinklers permissible.

If no, small coverage sprinklers desirable.

- V. Quantity of water desirable and rate:

Enough to wet to a depth of 4 to 6 in.

## If your greenkeeper

could save the club money by using ALL of the raw materials when making his compost;

could overcome weather delays by making his compost from sod or lumps—wet or dry;

could save in time and labor by making compost faster and more uniform—and easier to handle—

wouldn't you want to talk the matter over with him?  
*Well—ask him about the*

# ROYER COMPOST MIXER

ROYERS are doing the compost making job on hundreds of the best kept courses in the country simply because they make the highest possible grade of compost at the lowest possible overall cost per yard.

Think it over . . . if you want your greenkeeper to show what he can do in improving your course and cutting maintenance cost—get him a ROYER.

A better season is beginning—now's the time to attract bigger play and a well conditioned course will do it.

Complete details of the ROYER will be supplied by leading supply house nearest you.

**ROYER  
FOUNDRY & MACHINE CO.**

158 Pringle Street  
KINGSTON, PA.