Gadgets

Many a boy who happens to be "mechanically minded" or handy with tools can help the biology teacher by making various useful articles. In most cases it it only necessary to suggest that such-and-such a "gadget" would be a valuable addition, and the boy will volunteer to make one. Here are three such laboratory aids made by tenth-grade pupils.

Microscope Lamp

Any boy who has done metal-working

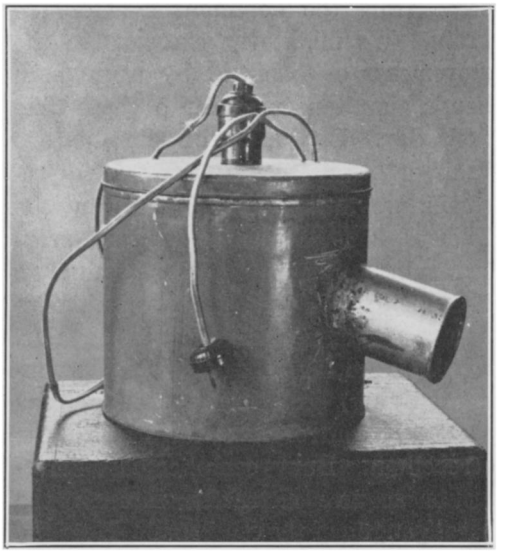

Fig. 1. A "home-made" microscope illuminator.

in a shop course can make up a microscope lamp similar to the one in figure 1. Merely fasten a lamp socket in the cover of a large can and solder a small can at an angle over a hole in the side of the larger can. A 60-watt bulb will furnish enough light shining down through the smaller can to the sub-stage mirror so that a student microscope can be used on dark days or at night.

Bottle Stand

A handy rack or stand for bottles of stain, dropper bottles and the like can

Fig. 2. A bottle rack for keeping staining solutions together.

be constructed from odds and ends of 3×4's and 3×8's. One 3×4 is glued to a 3×8. Using an expansion bit, holes of various diameters and depths can be bored to accommodate the bottles. See figure 2. This one has holes 2 inches in diameter along the top row and $1\frac{1}{2}$ inches in diameter in the lower row. The rack can be sanded and varnished for better appearance.

Test-tube Aquaria

Test-tube aquaria are interesting for

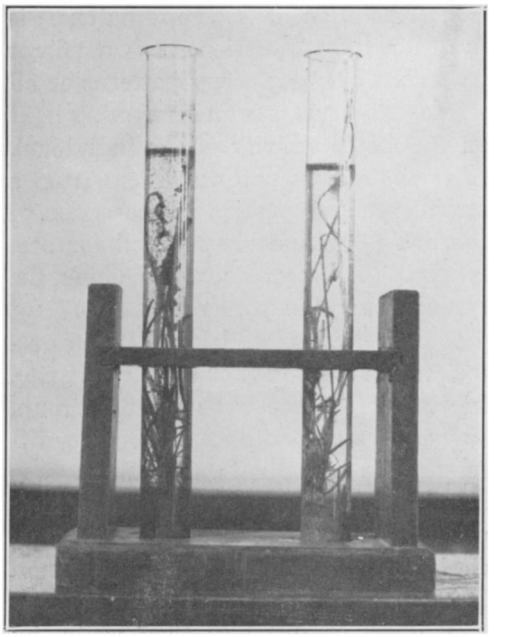

Fig. 3. Biology pupils made several of these racks for holding test-tube aquaria.

close study of algae, small water animals, and plants. Use the large tubes having a diameter of about one inch and a length of from eight to ten inches. Placed in home-made racks on the window-sill, they will provide many instructive minutes when examined with a hand lens. The rack shown in the photo (Fig. 3) is one of a dozen made up by three biology pupils who were taking a shop course in wood-working.

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BY THE WAY

A PROTOZOAN INFUSION may be started at any time—merely put a handful of dry grass or leaves in a quart jar and cover with water; place it where the light is good (not very much direct sunlight) and observe from day to day to see what kinds of microorganisms are present.

SEED COLLECTIONS can be made in the fall. Have the pupils collect as many different kinds of seeds as they can, both native and cultivated. Classify the seeds according to habitat, type of dispersal, economic importance, and the like. Some of the "seeds" are actually *fruits;* this adds an interesting phase to the study.

RUTGERS UNIVERSITY RESEARCH COUNCIL

Rutgers University has announced the creation of a Research Council to promote research in all departments. A survey is now being made of personnel and facilities to determine where new funds for research can best be invested. Representing the biological sciences are Dr. Walter C. Russell, Professor of Agricultural Biochemistry in the College of Agriculture, and Dr. William H. Cole, Professor of Physiology and Biochemistry in the College of Arts and Sciences. Dr. Cole, Director of the Council, will serve in a staff relationship to deans, department heads and faculty members concerning research programs, and will represent the university in developing reciprocal arrangements with governmental, industrial, business and professional institutions outside of the university.

A special research fund has been placed at the disposal of the Council, and applications for grants for next year are now being considered. Projects in biology will be emphasized especially as they may be related to any aspect of the war and of postwar development. Studies on the physiological value of proteins, being conducted by the Bureau of Biological Research, will be extended.

SPECIAL ISSUES

The Special Issues, which were started in Volume 4, have met with widespread approval and the series will be continued. Eleven have been published to date, as follows:

Field Trips—October 1941
Visual Aids—November 1941
Nature Study—February 1942
Biology Clubs—March 1942
National Defense—April 1942
Consumer Biology—October 1942
Health and Hygiene—November 1942
Conservation—January 1943
Vocational Biology—April 1943
Ornithology—January 1944
Gardens—February 1944

Other Special Issues now planned are *Photography,* with Richard F. Trump,* Ames Senior High School, Ames, Iowa, as