

are placed. In addition, many instruments are devised to assist in the study of light and sound, as well as in mechanical experiments.

One of the most notable pieces of work was the making of a pair of optical benches by an undergraduate. The set is used in the university laboratory for the study of lenses in connection with experiments in light.

The purpose of the course in physics mechanics is to teach the construction of apparatus rather than its use. Since the work is intended for those who expect to teach physics in high schools it is highly important that the prospective teachers be able to carry on laboratory work with many instruments of their own making. With this end in view, the majority of those who have taken the course have kept the apparatus which they have made. This practice of construction has also been followed by those doing research work.

It is the plan at present, according to Dr. W. P. Boynton, head of the physics department, to have a machine shop designed for instrument making. In connection with the shop there would be an expert in manufacturing apparatus. In addition to making instruments for the physics department, the man in charge of the shop would also make apparatus for other science departments of the university.

EUCLID DRAMATIZED.

By MARGARET GRAFF,

South Philadelphia High School for Girls.

Whoever thought of dramatizing Euclid? This was done recently by girls of the South Philadelphia High School. The girls in two of the writer's classes in geometry asked if they might not dramatize and present before the school some of the stories of early mathematicians told them in the course of their regular work in order that they might show the pioneer spirit in mathematics. They were told that they might do so if they wished and if they would work out their plans themselves. This they did faithfully, except at the end the head of the English department supervised a number of rehearsals and the head of the art department inspected the costumes. Their classroom teacher referred them to Ball's History of Mathematics, also Cajori's History and Smith's Teaching of Geometry. They found other material for themselves in various places.

The performance started with a five minute account of the life of Thales. Immediately afterwards, the curtain was drawn, revealing King Amasis seated upon his throne with two slaves back of him holding gorgeous fans and other attendants standing about. The king lamented that no one had been able to measure the height of the pyramids and promised to reward richly any one who could do this. One of the court then told the king that there was in their midst a Greek scholar who could do this by a simple method. Amasis commanded that the Greek be summoned.

Thales appeared and explained to the great satisfaction of Pharaoh his method of measuring the height of the pyramid by comparing the shadow of the pyramid to the shadow of his staff placed upright at the end of the shadow of the pyramid.

This truly beautiful scene was followed by an account of Euclid's life and his elements. This time the drawn curtain revealed a class of Greek students waiting for the great master Euclid himself. With two crossed sticks, Euclid demonstrated that the vertical angles are equal, using the modern method of the socialized recitation. Having finished, he asked if there were any questions. One youth then asked "Is there no easier way to learn geometry?" to which, of course, Euclid made his famous reply about there being no royal road to geometry. Another student wished to know what good geometry would do him anyway, and to him the master sent by the slave three pence because "he must be paid for all he learns."

The third scene followed an account of the life of Archimedes, the speaker stressing the fact that, while Archimedes was interested in mathematics for its own sake, his work had great practical results. Archimedes was shown drawing circles in the sand. When two Roman soldiers appeared, he called out to them not to disturb his circles. A soldier, ignorant who he was and thinking him merely insolent, killed him. The body was found by the Roman general Marcellus, who mourned his loss, paid tribute to his greatness, and vowed to erect a monument in his memory. The girls found an account of this as well as of the Thales story in Plutarch's Lives.

These three parts were prepared and acted by the girls of one geometry class, each member having a part as soldier, student, or attendant upon King Amasis. The girls themselves selected those with the best voices for the speaking parts, one of their number being stage manager as well as author of the scenarios. They had a beautiful time working out the parts and getting into the spirit of early geometry.

The last scene was given by eight girls of a different class. These girls decided that instead of giving a life and illustrating it in a scene, they would develop it as a lesson conducted by Plato himself in his famous Academy with the sign "Let no one ignorant of geometry enter my door." This scene was preceded by a delightful appreciation of geometry itself. The students were Eudoxus, Menaechmus, Aristotle, and others who discussed the life and words of Pythagoras. The climax came when Aristotle questioned Plato upon the occupation of Deity. To him Plato made his well known observations about Deity being the first to invent numbers, arithmetic, astronomy and geometry and that Deity continually geometrized. He then urged his class to go to nature to discover the truth of what he said.

GRACE JEAN BAIRD.

In the death, February 22, of Miss Grace Jean Baird, of the Bowen High School, Chicago, the biology teachers of the Central West have met with a great loss. Miss Baird took her Bachelor's degree at the University of Illinois and her Master's degree at the University of Chicago.

She was a very active member of the Central Association of Science and Mathematics Teachers, last year serving as Chairman of the Biology Section.

For sixteen years she had been a continuous subscriber to *SCHOOL SCIENCE AND MATHEMATICS*.