The data also permit of the proper choice of substitutes for woods which have become scarce or unobtainable. Here again the airplane may be cited, since the supplies of some woods ordinarily used in airplane construction are insufficient to meet the present building program of the United States and its allies.

Among the relations between mechanical and physical properties of wood for which laws have been obtained are static bending-specific gravity, impact bending-specific gravity, compression parellel to grain-specific gravity, compression perpendicular to grain-specific gravity, static bending-moisture content; impact bending-moisture content, compression parallel to grain-moisture content, compression perpendicular to grain-moisture content, shrinkage-moisture content.

The bulletin, the authors of which are J. A. Newlin and Thomas R. C. Wilson, is entitled "Mechanical Properties of Woods Grown in the United States," and is No. 556 in the Department of Agriculture series.

SPECIAL ARTICLES

A CONVENIENT NERVE HOLDER

FOR several years past in this laboratory experiments on chemical stimulation have formed a part of the routine students' work on the physiology of muscle and nerve. In these experiments we have used a nerve holder

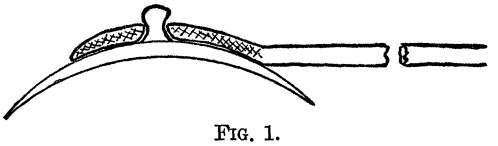

FIG. 1.

which has proved so simple and convenient that it seems desirable to suggest it to others. In its first form it consisted merely of a thin watch-glass 45 to 50 mm. in diameter, cemented by sealing-wax to the flattened end of a piece of ¼ inch lead wire 12 inches long.

If the muscle of a gastrocnemius-sciatic preparation is mounted on a muscle lever, the edge of the watch-glass may be brought very near to the muscle and the whole nerve may be allowed to lie in the liquid to be applied, as for example, a solution of sodium citrate or barium chloride.

The construction is so simple, requiring no special skill and only a few minutes of time, that it was used in this way for two or three years. Later, Mr. L. A. Ray, technician, devised the following more permanent construction. A small bit of glass rod is fused to the bottom of the watch-glass. The rod is then melted and pulled in two at a point about ⅛ to ¼ inch from the bottom of the glass, and is held in the flame till a small knob forms on the end. A hole is punched in the flattened end of the lead rod, the glass rod is inserted and the joint made fast with cement. The knob on the end of the glass is held firmly in place by the cement. The accompanying figure of a section of watch-glass and rod will make the whole arrangement perfectly obvious.

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THE URINE OF THE HORNED LIZARD

VAUQUELIN,[1] in reporting the first analysis of reptilian urine, in 1822, stated that it was composed almost entirely of uric acid, and since that time this fact has been interpreted by various observers as an adaptation to the conditions of life in arid regions, where animals obtain their only external water supply in very limited quantities in the food substances, as this type of nitrogenous excretion involves practically no water loss. The reptiles of arid regions have been known for some time to excrete practically all of their waste nitrogen in the form of uric acid and its salts, while, on the other hand, birds and aquatic and semi-aquatic reptiles may excrete considerable amounts of urea.

[1] Vauquelin, Louis Nicolas, "Examen des excrémens des serpens que l'on fait voir en ce moment à Paris, Rue Saint-Nicaise," *Annales de Chimie et de Phisique. 2me Serie,* Tome 21, p. 440, 1822. Two boas, species not stated, were the source of the urine examined in this case. Uric acid had also been associated with reptiles as early as 1793, when a "pasty deposit" found in the bladder of a tortoise by Vicq-d'Azyr was found to contain this substance.

The urine of the horned lizard is excreted in the dry form at the same time as the feces, from which it is separated by a constriction of the common mass, the material voided at any one time having roughly the shape of a dumbbell, one of the enlargements being composed of urine and the other of fecal matter. The following figures for the composition of the urine of *Phrynosoma cornutum* (specimens obtained at Alamogordo, N. M.) have been obtained recently in the laboratory of physiological chemistry of the University of Illinois, the work having been undertaken at the suggestion and under the direction of Dr. H. B. Lewis.

Constituents	Mg. per Gm. of Dry Urine
Total nitrogen	260
Urea + ammonia nitrogen	1.4
Ammonia nitrogen	1.4
Uric acid	765
Creatinine	Trace
Ash	87.5
Phosphorus as P_2O_5	3.5

It will be noticed from the above figures that uric acid accounts for practically the total amount of nitrogen present, and that there is no urea. The small amount of ammonia is probably present as ammonium urate. The ash present is mostly composed of foreign materials (sand grains, etc.) inseparable from the urinary mass and therefore weighed and analyzed with it.

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SOCIETIES AND ACADEMIES

AMERICAN MATHEMATICAL SOCIETY

The one hundred and ninety-third regular meeting of the American Mathematical Society was held at Columbia University on Saturday, October 27. The attendance at the morning and afternoon sessions included thirty-five members. Professor Oswald Veblen occupied the chair, being relieved by Professor L. P. Eisenhart. The council announced the election of the following persons to membership in the society: Dr. J. V. DePorte, State College, Albany, N. Y.; Mr. J. W. Lasley, Jr., University of North Carolina; Mr. Vincente Mills, Philippine Bureau of Lands; Professor B. M. Woods, University of California. Five applications for membership were received.

A committee was appointed to audit the accounts of the treasurer for the current year. A list of nominations for officers and other members of the council was prepared and ordered printed on the official ballot for the annual election at the December meeting. The Secretary was directed to procure insurance to the amount of $10,000 on the library of the society, which is deposited in the Columbia Library.

The following papers were read at this meeting:

R. D. Carmichael: "Elementary inequalities for the roots of an algebraic equation."

Louise D. Cummings: "The two-column indices for triad systems on fifteen elements."

G. A. Pfeiffer: "On the continuous mapping of regions bounded by simple closed curves."

J. F. Ritt: "On the differentiability of asymptotic series."

W. B. Fite: "Concerning the zeros of the solutions of certain linear differential equations."

J. E. Rowe: "Hexagons related to any plane cubic curve."

G. D. Birkhoff: "On a theorem concerning closed normalized orthogonal sets of functions with an application to Sturm-Liouville series."

Edward Kasner: "Systems of circles related to the theory of heat."

O. E. Glenn: "Systems of invariants and covariants of Einstein's theory of relativity."

J. K. Whittemore: "Theorems on ruled surfaces."

R. L. Moore: "On certain systems of equally continuous curves."

R. L. Moore: "Continua that have no continua of condensation."

J. R. Kline: "Necessary and sufficient conditions, in terms of order, that it be possible to pass a simple continuous arc through a plane point set."

Oswald Veblen: "On the deformation of n-cells."

Oswald Veblen: "Deformations within an n-dimensional sphere."

The San Francisco Section met at the University of California on October 27. The Southwestern Section will meet at the University of Oklahoma on December 1. The Chicago Section will meet with the Mathematical Asssociation of America at the University of Chicago on December 28–29. The annual meeting of the society will be held at Columbia University on December 27–28.

F. N. Cole,
Secretary