

Fig. 1.

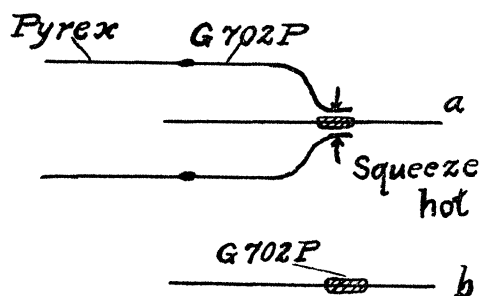


Fig. 2

A seal using only G702P and Pyrex may be made as indicated in Fig. 2. Join tube of G702P to Pyrex and draw down as indicated. The wire coated with a small bead of G702P (or even the bare clean wire) may be placed in position, Fig. 2-a, and the seal made by squeezing with tweezers when hot. Squeeze as soon as possible to prevent oxidation. This seal may also be made by squeezing a bead of G702P in a Pyrex tube but with less freedom from breakage.

To join copper to tungsten:

(a) electroplate tip of tungsten wire with copper or nickel and solder (silver solder for higher temperatures).

(b) melt nickel wire to tungsten in oxygen flame using borax as flux or even no flux. Nickel becomes very brittle and it is best to then solder to the nickel bead thus obtained.

(c) form arc of 10 to 20 amps. between tungsten and nickel wires to coat tungsten with nickel; solder.

(d) German silver (for this use of it I am indebted to Mr. Cummings of the Department of Chemistry of this University) flows much better than nickel. Use method (b) with borax as flux. Copper wire may be joined at once in flame just as in joining copper to platinum.

The method used will generally depend upon facilities available.

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A NEW SCLEROTINIA ON MULBERRY

A DISEASE of mulberry characterized by enlarged portions of the fruit has been noted by Orton¹ and more recently by Taubenhau.² The authors have found a species of Sclerotinia to be the cause of this disease and will describe it as follows in the *Journal of Agricultural Research*:

Sclerotinia carunculoides n. sp.

Apothecia one to several from a single sclerotium, disc cupulate to sub-cupulate; 4 to 12 mm. in diameter; inside snuff-brown,³ outside Prout's brown; stalk cylindrical, flexuous, smooth, attenuated downward, 15 to 42 mm. in length, reaching a diameter of 1.5 mm., color Prout's brown; asci cylindrical to cylindro-clavate, 104 to 123 x 6.4 to 8 μ , average 117 x 7 μ , 8-spored; ascospores uni-seriate, reniform, hyaline, 6.4 to 9.6 x 2.4 to 4 μ , average 7.6 x 3.1 μ , with 2 bodies on the concave surface; namely, a body more or less rhombic in shape as seen from above, 2 x 4 μ , and adjoining it, a more or less hemispherical body 3 μ in its longest diameter; paraphyses filiform to cylindro-clavate, simple or branched, septate or non-septate, 94 to 128 x 1.8 to 2 μ ; microconidia hyaline, sub-globose, 2 to 4 x 2 to 3.2 μ , average 2.8 x 2.5 μ ; sclerotia black, fairly regular, sub-spherical with depressed surfaces.

¹ *Experiment Station Record*, Vol. XIV, No. 6, pp. 351-352, 1903.

² *Nature Study Review*, Vol. 17, No. 7, pp. 282-285, 1921. Illus.

³ Ridgway, Robert, *Color standards and color nomenclature*, 43 p., 53 col. pl., Washington, D. C., 1912.

On fruits of cultivated *Morus alba*. Type material collected at Scranton, S. C., U. S. A., March, 1921. Specimens have been deposited in the Office of Pathological Collections, Bureau of Plant Industry, U. S. Department of Agriculture, Washington, D. C.

The manuscript giving a more complete account of this organism went to press November 26, 1921, but since congressional action has suspended the publication of the *Journal*, it is deemed advisable to publish this preliminary account at this time in order that plant pathologists interested in this disease may be on the watch for the apothecial stage at blossoming time.

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BUREAU OF PLANT INDUSTRY,
WASHINGTON, D. C.
FEBRUARY 1, 1922

THE AMERICAN MATHEMATICAL SOCIETY

THE two hundred and twenty-first regular meeting of the American Mathematical Society was held at Columbia University, New York City, on February 25, 1922. The attendance included seventy-five members of the society. The election of thirty-five new members was announced.

The secretary announced the gift, by an anonymous donor, of the sum of \$4,000 to pay for an additional volume of the *Transactions*, to be printed in 1922. The society adopted a resolution thanking the donor for this very generous gift.

Professor C. N. Haskins, of Dartmouth College, was selected to succeed Professor L. E. Dickson, of the University of Chicago, as one of the three representatives of the society in the Division of Physical Sciences of the National Research Council.

The afternoon session was especially marked by the presentation of a paper by Professor J. L. Coolidge, by request of the program committee, on *The basis of mathematical probability*. A number of members of the Actuarial Society attended, by invitation, to hear this paper.

The following papers were read:

- Invariant points in function space*: G. D. BIRKHOFF and O. D. KELLOGG.
A property of certain functions whose Sturmian developments do not terminate: O. D. KELLOGG.
The boundary problems and developments associated with a system of ordinary linear differential equations of the first order: G. D. BIRKHOFF and R. E. LANGER.
Developments associated with a boundary problem not linear in the parameter: R. E. LANGER.
Ricci's principal directions for a Riemann space and the Einstein theory: L. P. EISENHART.
Normal congruences and quadruply infinite families of curves: J. DOUGLAS.
Qualitative properties of the ballistic trajectory. Second paper: T. H. GRONWALL.
The reflection of X-rays in a finite number of equidistant parallel planes: T. H. GRONWALL.
The basis of mathematical probability: J. L. COOLIDGE.
On the "Alabama paradox" in the problem of apportionment of representatives: E. V. HUNTINGTON.
On the d'Hondt method of apportionment, and its counterpart: E. V. HUNTINGTON.
Theorems on sequences of sets of points: G. A. PFEIFFER.
The Fredholm theory of Stieltjes integral equations: C. A. FISCHER.
A closed set of normal orthogonal functions: J. L. WALSH.
Kinematics in a complex plane and some geometric applications: A. EMCH.
On functions with integrals of elementary character: J. F. RITT.
Geometrical properties of the system of all the curves of constant pressure in a field of force: E. M. MORENUS.
Spherical representation of conjugate systems and asymptotic lines: W. C. GRAUSTEIN.
The distribution of current in a long cylindrical conductor: C. MANNEBACK.
Operational solution of equations of nth degree: A. PRESS.
Maximal cuspidal curves: T. R. HOLLCROFT.
Method for the separation into partial fractions of powers of trigonometric functions: I. J. SCHWATT.
The expansion of the continued product, $\prod_{k=1}^n (x + k)$: I. J. SCHWATT.

R. G. D. RICHARDSON,
Secretary