The American Ceramic Society

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CERAMIC ABSTRACTS[1]

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AMERICAN CERAMIC SOCIETY

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Vol. 13 September, 1934 No. 9

Abrasives

Abrasive-belt sheet grinder. Mattison Machine Works. *Metal Cleaning & Finishing*, 6 [6], 320 (1934).—A detailed description of a new grinder for grinding alloy, carbon, and other forms of sheets, employing factory-coated abrasive belts manufactured under controlled conditions, is presented. Illustrated. E.J.V.

Use of abrasive sleeves and belts. Fred B. Jacobs. *Metal Cleaning & Finishing*, 6 [6], 314–15 (1934).—The procedure to be followed in the application of various types of coated abrasive belts and sleeves to the polishing of metal products is presented. Advantages of abrasive belts and sleeves are listed. E.J.V.

PATENTS

Abrading and polishing composition. P. A. Patterson (McAleer Mfg. Co.). U. S. 1,965,299, July 3, 1934.

Abrasive articles bonded with a synthetic resin. Bakelite, Ltd. (Carborundum Co.). Brit. 411,846, June 27, 1934.

Abrasive or polishing roll. E. A. Filley (Wingfoot Corp.). U. S. 1,963,357, June 19, 1934.

Abrasive structure. M. J. Schneider. U. S. 1,963,154, June 19, 1934.

Abrasive tool. O. S. Buckner. U. S. 1,963,823, June 19, 1934. An abrading tool having a circular, peripheral working face is composed of a rigid, bonded mass of abrasive grains, a substantial portion of which are of elongated formation and are mainly arranged with their longer dimensions extending approximately radially with relation to the center of the face.

Art of grinding. Willetts Peaslee (Cincinnati Grinders, Inc.). U. S. 1,965,256, July 3, 1934. A grinding wheel for operation at a constant prescribed number of revolutions per minute comprises a composition of an abrasive material and a bond therefor, the grit and grade of the composition material progressively, continuously decreasing from center to the periphery of the wheel whereby the wheel when operated at constant r.p.m. will perform a prescribed grinding irrespective of reductions in diameter of the wheel resulting from wear, truing, etc.

Ball grinding machine. G. F. Matteson (Abbott Ball Company). U. S. 1,964,165, June 26, 1934.

Buffing machine. R. E. Duplessis (United Shoe Machinery Corp.). U. S. 1,964,043, June 26, 1934.

Buffing wheel, buffing wheel fabric, and method of treating the fabric. K. H. Barnard (Pacific Mills). U. S. 1,964,901, July 3, 1934.

Combined internal and face grinding machine. Fortuna-Werke Spezialmaschinenfabrik A.-G. Brit. 412,523, July 4, 1934.

Form grinding. S. J. Harley. Brit. 412,462, July 4, 1934.

Grinding disk. I. R. Shue (Gardner Machine Co.). U. S. 1,964,537, 1,964,538, and 1,964,539, June 26, 1934.

Grinding machine. Walter Ferris and J. P. Ferris (Oilgear Co.). U. S. 1,965,696, July 10, 1934. W. J. Guild and H. L. Blood (Heald Machine Co.). U. S. 1,964,433, June 26, 1934. F. S. Haas (Cincinnati Grinders, Inc.). U. S. 1,965,234 and 1,965,235, July 3, 1934. C. L. Schulte (Cincinnati Grinders, Inc.). U. S. 1,965,261, July 3, 1934. G. F. Yager (Bunting Brass & Bronze Co.). U. S. 1,966,194, July 10, 1934. R. W. Young (Charles H. Besly & Co.). U. S. 1,965,020, July 3, 1934.

Grinding of rotating eccentric knives. W. E. Molins. Brit. 411,440, June 20, 1934. W. E. Molins, F. F. Ruau, F. W. Hacking, and Molins Machine Co., Ltd. Brit. 412,222, July 4, 1934. E. C. Muhlbauer and Molins Machine Co., Ltd. Brit. 411,244, June 13, 1934.

Grinding of safety-razor blades. V. R. Cam. Brit. 412,223, July 4, 1934.

Grindstone. R. E. Read (International Paper Co.). U. S. 1,963,247, June 19, 1934.

Honing apparatus. J. H. Gettig and A. D. Gettig (National Tube Co.). U. S. 1,963,620, June 19, 1934.

Internal grinding and cutting tool. J. W. Bailey. U. S. 1,966,277, July 10, 1934.

Lapping machine. J. G. H. Budd. U. S. 1,963,884, June 19, 1934.

Manufacture of abrasive articles. F. A. Upper (Bakelite Corp.). U. S. 1,963,253, June 19, 1934.

Manufacture of grinding and abrading bodies. Deutsche Gold- und Silber-Scheideanstalt vorm. Roessler. Brit. 411,498, June 20, 1934.

[1] The bold-face number following the journal is the volume, the issue number is in brackets, followed by the page numbers, then the year in parentheses.

pigment containing zinc sulfide and requiring heat treatment for imparting adequate pigment properties thereto comprises carrying out the precipitation of the pigment at a temperature substantially in excess of 100°C and under a pressure of at least 200 lb./sq. in.

Method of producing chromates. J. B. CARPENTER, JR., AND E. P. STEVENSON (Arthur D. Little, Inc.). U. S. 1,964,719, July 3, 1934.

Process and apparatus for the production of barium oxide. KALI-CHEMIE A.-G. Brit. 411,402, June 13, 1934.

Process and apparatus for the treatment of boron minerals. BORAX CONSOLIDATED, LTD. Brit. 412,511, July 4, 1934.

Process for making pigments. H. A. DEPEW (American Zinc, Lead & Smelting Co.). U. S. 1,963,546, June 19, 1934.

Process for the preparation of pure beryllium compounds. WALTER ZISCH AND GUSTAV JAEGER (Deutsche Gold- und Silber-Scheideanstalt vorm. Roessler). U. S. 1,966,371, July 10, 1934. A process for the preparation of pure beryllium compounds from materials containing, in addition, alumina and silicic acid consists in converting the beryllium present into beryllium oxide insoluble in dilute acid, treating the reaction product with a dilute acid which is capable of forming soluble salts with ammonia alkaline earths and iron, separating the solution from undissolved silica and beryllium oxide, and separating the two latter compounds.

Process of producing crystalline anhydrous borax. L. G. BLACK (American Potash & Chemical Corp.). U. S. 1,964,902, July 3, 1934.

General

American Standards Association symbols for fluid measurements. ANON. *Bull. Amer. Ceram. Soc.*, 13 [7], 190–92 (1934).

Colloidal slurry, a new bonding material. KRAUS RESEARCH LABORATORY. *Ceram. Ind.*, 22 [7], 392 (1934).—Colloidal slurry is made by digesting halloysite in the presence of a small percentage of asphalt base oil. It is claimed that colloidal slurry improves plasticity, acts as a lubricant for extruded ware, makes cast ware stronger, does not reduce the melting point, extends the vitrification range, improves firing behavior, reduces the cost of bonding agents, acts as a fixative in ceramic bodies, gives a better structure to fired bodies, adds great strength to both raw and fired bodies, is not glassforming at high temperatures, has a low water dispersion, influences the uniformity of mixes, and reduces the amount of bond necessary in mixes. E.J.V.

Practical clayworking. XIII. ANON. *Brit. Clayworker*, 43 [505], 33–35 (1934).—A continuation of a discussion on humidity driers with special reference to the Keller drier is given. For Parts XI–XII see *Ceram. Abs.*, 13 [8], 217 (1934). R.A.H.

Silicosis. W. R. JONES. *Bull. Inst. Mining Met.*, No. 352, pp. 1–42 (1934); abstracted in *Analyst*, 59, 191–92 (1934); see also *Ceram. Abs.*, 13 [8], 227 (1934). H.H.S.

Silicosis in the pottery industry in Denmark. Examination of workers in Danish pottery factories. S. V. GUDJONSSON. *Arch. Gewerbepath. & Gewerbehyg.*, 4, 748–71 (1933); abstracted in *Jour. Ind. Hyg. Abs.*, 16 [3], 58–59 (1934).—X-ray photography carried out on 798 workers provided the data upon which conclusions are based in this investigation. No distinction is drawn between earthenware and china in the making of which the exposure to flint dust is entirely different. No dust estimations were made regarding either the amount of dust, its composition, or the size of particles. G. considered he found signs of silicosis in 58.6% of the 461 men examined, and in 27.3% of the 337 women, but he states that the wet processes (which should be dust free) seem to be just as dangerous as the dry. The incidence of illness for all the workers was high, while respiratory diseases were especially frequent among those having silicosis. Out of 46 deceased potters 21 died from some form of respiratory disease. Although active cases of tuberculosis were found among silicotics in an advanced stage, the occurrence of tuberculosis was not frequent. E.J.V.

Sodium silicate: increasing uses in the ceramic industries. J. G. VAIL. *Chem. Trade Jour.*, 94 [2446], 249–59 (1934). M.V.K.

BOOK REVIEW

Pneumonokonioses (Silicosis): Bibliography and Laws. GEORGE G. DAVIS, ELLA M. SALMONSEN, AND JOSEPH L. EARLYWINE. Foreword by E. R. Le Count. Published by Industrial Medicine, Inc. 482 pp. Cloth, $7.50. An exhaustive compilation of the references to the pneumonokonioses (silicosis) in the literature of the world, this book contains every available reference from the first published in Agricola's "De re Metallica" in 1556 to the last published articles in 1933. The authors, George G. Davis, M.D., Associate Clinical Professor of Surgery, Rush Medical College, University of Chicago, Ella M. Salmonsen, Medical Reference Librarian, John Crerar Library, and Joseph L. Earlywine, Attorney, give authority to the work by their standing in their respective fields. The book has two sections, the first, the bibliography, is followed by subject index, author index, a reference-year index, and an index of reference headings. The second part, the law, contains a summary of the occupational disease laws, workmen's compensation laws, and common laws of the states of the United States with decisions as they relate to pneumonokonioses (silicosis). The law summary is followed by an index of states and an alphabetical index of cases. The book is exhaustively cross-indexed. Supplemental volumes are planned for successive years, the first to appear soon after January 1, 1935. Industrial executives, industrial boards, state commissions, engineers, and research workers will find this book indispensable.

HENRY H. SMITH

PATENT

Method of calcining diatomaceous earth. MCKINLEY STOCKTON (Dicalite Co.). U. S. 1,966,362 and 1,966,363 July 10, 1934.

The PNEUMONOKONIOSES
(SILICOSIS)

Bibliography and Laws

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V. 1.

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CHICAGO 1934

Asbestosis

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On the pathology of miners' lung. *Canada M. & S. J.* Montreal, 4:145-168, 1875.

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its in so-called cultural subjects including economics, but not at the expense of science subjects. (3) We have increased the total credits in mathematics, physics, and chemistry. (4) We believe mathematics should be taught by mathematics specialists whether engineers or not, and our students are so taught. (5) We believe chemistry should be taught by chemistry specialists and our students are so taught. We are unalterably opposed to instructors in such departments as ceramics teaching anything but their own specialty and have successfully fought other departments here that attempt to do it.

(6) We do not look on "Occurrence and Properties of Clays" or as we call it, "Ceramic Materials," because we try to broaden the field, as a geology subject. Geologists, even of the Ries type, can not teach this course because I want to make it fundamental to all other courses in this department. Properly taught one can lay the foundation for all other ceramic courses. We devote only three credits to it and it follows and ties in with the first course in geology.

One other comment. My idea of the function of a college agrees with that of Roberts. My one aim is to teach students to think and to be self-reliant. I work at it from the time they enter as freshmen. It's a tough job with some, probably the majority, simply because I contact them so little during their four years here and there are too many instructors who teach on the "memory" theory who constantly tear down as I build up.

I have consistently attempted to stay clear of so-called practical courses and from teaching "practice." I do very often attempt to show the application of theory to practice. Like you, I believe the teaching of "practical" courses lowers college instruction to a trade-school level. My experience has shown me, however, that you must teach a certain amount of "applied science" in order to make the pure science of value to an engineer.

May 29, 1934. A. F. GREAVES-WALKER[1]

[1] Professor of Ceramic Engineering, North Carolina State College of Agriculture and Engineering of the University of North Carolina, Raleigh, N. C.

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NECROLOGY

ARTHUR D. FORST

Founder and, for forty years, president of the Robertson Art Tile Co., Trenton, N. J., Arthur D. Forst passed away on April 2. Mr. Forst received his early education in Trenton, and at the age of eleven went to New York to attend the Columbia Grammar School. He later entered Princeton University and was graduated with the class of 1888. In 1890 he became associated with the Robertson Art Tile Co. and later became its president. For some years he was president of the New Jersey State Hospital, Trenton, a director of the Y.M.C.A., a member of the board of managers of McKinley Hospital, and treasurer of the State Board of Park Commissioners.

NOTES AND NEWS

EDWARD ORTON, JR., CERAMIC FOUNDATION INAUGURATES RESEARCH

On January 1, 1934, the Standard Pyrometric Cone Co. and the Orton Memorial Laboratories were turned over to the Board of Trustees of the Edward Orton, Jr., Ceramic Foundation, but on request of the Probate Court, management was not assumed until May 1.

The Board of Trustees intends to maintain the high quality product associated with the Orton name for thirty-five years and to improve the product in keeping with recent theory and practice. On May 1 the Trustees appointed G. A. Bole, ceramic research professor of Ohio State University, as manager and research director, with Myril C. Shaw as his assistant.

With the available facilities and personnel of Ohio State University, the trustees have inaugurated studies with a view to improving the pyrometric cones and maintaining their quality.

The personnel of the Board of Trustees and the appointment of Dr. Bole and Dr. Shaw guarantee a thorough search for all possible improvements in the quality of the Orton Standard Pyrometric Cones.

George W. Rightmire, President of Ohio State University, is president of the Board. Other members are E. A. Hitchcock, Dean of the College of Engineering and Director of the Engineering Experiment Station of Ohio State University; Arthur S. Watts, Chairman of the Department of Ceramic Engineering of Ohio State Uni-

(13) "Effect of De-Airing Stiff-Mud and Dry-Press Bodies for Clay Products Manufacture," by W. C. Ruckel, Ohio State University, and R. B. Keplinger, Metropolitan Paving Brick Co.—A summary of the laboratory development and findings on de-airing of clay products and data relative to the improvement in properties of clay products obtained in commercial operation is presented. The authors describe the laboratory tests, placing particular emphasis on the improvement in fired properties (porosity, absorption, transverse and crushing strength, and modulus of elasticity).

(14) Report of Committee C-4 on Clay Pipe, by G. T. Hammond, Chairman.

CURRENT CERAMIC LITERATURE

New Abstracts of Silicate Literature (Referatkartei der Silikatliteratur)

According to information from Germany, the journal, *Feuerfest*, has ceased publication beginning with 1934. *Feuerfest* has been one of the few periodicals in the world devoted entirely to the subject of refractories.

To replace this publication, the Technical Bureau of L. Litinsky of Leipzig, Germany, is issuing a new journal, *Referatkartei der Silikatliteratur*.

These silicate abstracts are devoted to whiteware, structural clay products, refractories, cement and lime, glass, enamel, and allied fields, including raw materials, tests, standardization, etc. They will represent a review of the current world periodical literature devoted to silicates, *i.e.*, embracing about 100 periodicals containing yearly about 1200 to 1500 articles. (The number of cards for one year will apparently correspond to this figure.)

The silicate field will be divided into 25 groups as follows: (1) *General* (ceramics and the silicate industry in general; silicate systems and silicate melts, chemicophysical and mineral-chemical works). (2) *Silica Raw Materials* (quartz, quartzite, sand, sandstone, kieselguhr, etc.; geology, chemicophysical and thermal properties, etc.). (3) *Aluminosilicates* (clay, kaolin, diaspore, andalusite, corundum, bauxite, cyanite, etc.; geology and winning methods, chemicophysical properties, thermal behavior, etc.). (4) *Other Silicates* (feldspar, mica, pegmatite, asbestos, etc.). (5) *Different Raw Materials* (magnesite, dolomite, lime, fluorspar, chromite, zircon, graphite, rare earths, etc.). (6) *Preparation* (crushing, elutriation, sieving, grinding, etc.). (7) *Mass Preparation* (nonplastics, fluxing agents; mixing, dosage, weathering, kneading, etc.). (8) *Molding* (pressing, molding, models, etc.). (9) *Drying*. (10) *Firing* (heat economy, firing technique, gas producer, periodic and continuous firing furnaces, etc.). (11) *Porcelain, Earthenware, and Pottery* (utensils, insulators, sanitary ware, fired clayware, faience, Dutch tile, wall tile, majolica, etc.). (12) *Stoneware and Structural Clay Products* (sewer pipe, clinker, floor tile, apparatus for the chemical industry, common red building brick, tile, drain pipe, paving brick, building terra cotta, etc.). (13) *Decoration* (glazing, engobe, coloring, and decoration). (14) *Refractories: Properties* (strength, chemical, thermal and electric resistance, porosity, gas permeability, thermal conductivity, structure, molding of chamotte, silica, sillimanite, magnesite, zirconia, chromite, and carbon refractories, special methods of manufacture). (15) *Refractories: Application* (requirements, behavior, and use of different refractories in the metallurgical, gas, glass, chemical, and ceramic industries, for boilers, etc.). (16) *Special Masses* (steatite, grinding materials, heat-insulating materials, molding sand for foundries, etc.). (17) *Cement and Lime* (Portland cement, blast-furnace cement, fused cement, limes, mortars, etc.). (18) *Gypsum and Artificial Stones* (Alabaster, sandstone, rhyolite, Sorel cement; manufacture, properties, and uses). (19) *Glass* (physicochemical foundations, preparation of batches, melting, molding, annealing, optical glass, hollow and pressed glass, plate glass, etc.; special glasses, quartz glass, water glass, glassmelting furnaces). (20) *Enamels* (technology, firing, etc.). (21) *Testing* (examination of raw materials and products; plant control). (22) *Plant Equipment* (machinery, transportation, plant erection, and exploitation). (23) *Education* (congresses, societies, exhibitions, etc.). (24) *Public Economy* (statistics, labor, trade, duties, taxes, freight, etc.). (25) *Miscellaneous* (historical, normalization, bibliography, etc.).

A few cards obtained from the editor indicate that they are of a standard size, 29.7 x 21 cm. The size of the abstract is not standardized and fluctuates from a quarter of a page to a page and a half. Subscription, Rm 27. Foreign, Rm 27.50. The cards are sent out at nearly regular monthly intervals. S. I. PERKAL

Silicosis Bibliography Issued June 10

Pneumonokoniosis (Silicosis)—Bibliography and Laws, compiled by George C. Davis, chief surgeon, Illinois Steel Co., Chicago; Ella M. Salmonsen, medical reference librarian, The John Crerar Library; and Joseph L. Earlywine, of the Illinois Bar, Chicago, will be off the press about June 10 according to the announcement of A. D. Cloud, of the Industrial Medicine Publishing Co. The price will be $6.00.

The bibliography covers the literature of the world from the first modern reference in 1556 to January 1, 1934. It is intended to serve as an exhaustive and comprehensive summary of all the references in the world's literature on "pneumonokoniosis (silicosis)."

A section of the book is devoted to laws concerning the occupational disease, the workmen's compensation, and the common law in the United States. The state laws are carefully and plainly abstracted, and in every case the abstract is followed by citations to all adjudicated cases.

Doctors, lawyers, industrial executives, insurance men, industrial boards, state commission officials, research workers, and others connected with an industry in which the inhalation of dust is an occupational risk will find the book valuable.

The 2768 references in the bibliography will be supplemented by further material in 1935. Inquiries should be addressed to Industrial Medicine Publishing Co., 844 Rush St., Chicago, Ill.

The Potter's Art Issued in De Luxe Edition

The Potter's Art by Cipriano Piccolpasso (1524–1579), published by the Victoria and Albert Museum, London, in an Imperial Quarto $10.00 edition is now available in this country.

ERRATA

On page 61 of *The Bulletin* for March, 1934, in the Report of the White Wares Division Standards Committee the authorship of the treatise, "Standardization of a Silicate Terminology" should have been credited to S. I. Perkal, Kharkov, U.S.S.R.

The chart of Official Personnel for 1934–1935 published in *The Bulletin* for May, page 134, should have listed N. W. Taylor as third member of the Refractories Division Papers and Program Committee. D. W. Ross is chairman of the Rules Committee of this division. G. J. Bair has resigned as chairman of the Data Committee; his vacancy is not yet filled.

P. H. Bates advised that very little could be done at this time in all probability so far as increase in funds was concerned, there being every indication that the Administration did not contemplate the increase of such funds.

Coöperation with Ceramic Schools

The Chairman questioned whether the Committee desired to support cooperation with the schools. It appeared that the leading ceramic schools had been approached by the Chairman, with the result that Professor Parmelee of Illinois advised they had sufficient problems for one year, Professor Norton of the Massachusetts Institute of Technology did not reply, and the others approached were desirous of cooperation. E. H. Fritz appeared to express the opinion of the Committee by stating that the idea of coöperation with the schools was correct, but that the proper way of furthering such coöperation would necessitate having representatives of the schools meet with the Committee.

Investigations

Mr. Geller next reported on the investigations under his direction. It was stated that the determinations of phase equilibria in the system PbO–SiO_2 were practically completed with the establishment of the compounds $4PbO{\cdot}SiO_2$, $2PbO{\cdot}SiO_2$, and $PbO{\cdot}SiO_2$. The $4PbO{\cdot}SiO_2$ melts incongruently. The melting points of the compounds, of the end members, and of the eutectic compositions were reported also. No progress was reported on the investigation of effect of talc in whiteware bodies. In selecting the necessary talcs, Dr. Navias spoke of "slipperiness," which varies considerably among different talcs and which may be an important factor determining workability. He said also that American talcs give more color to the body, possibly because of the presence of TiO_2.

No detailed report of progress in the investigations under Mr. Klinefelter was necessary because, as he stated to the Committee, the work of Dr. Shelton on the glass phase in Ohio heavy clays and the work of Mr. Meyer on American kaolins and the nature of colloids in clays had been reported in the technical sessions.

R. F. GELLER, *Acting Secretary*

SILICOSIS*

Bulletin No. 3-R of Associated Industries of New York State, Inc., explaining "The Dust Hazard Racket in Manufacturing Operations" goes into some detail regarding the history of the subject since 1925 when the Association pioneered in an attempt to pass a law which would have prevented the bringing of the hundreds of suits at common law which now are pending and the loss of the hundreds of thousands of dollars (to date about $350,000, including costs) in those suits which already have been settled out of court or tried. The bill drafted in 1925 passed both houses of the Legislature but was vetoed by Governor Smith.

Law Suit Epidemic

Normally it might be assumed that the plants affected would include only those in the ceramic industries, the foundry industry, mining that encounters silica rock, stone cutting and polishing, sandblasting, tunneling, quarrying, and trade groups of that character. The "racket," however, has broadened out considerably and now includes every plant in which any sort of a dust hazard exists, all included under the general term pneumoconiosis, and the epidemic of common law suits has reached into plants which ordinarily would be considered immune.

The dust hazard has really reestablished the old Spanish custom of ambulance chasing in the legal profession, with the manufacturing industry the chief point of attack, rather than the public utilities. In justice to the legal profession, however, it may be said that there are comparatively few lawyers who now are specializing in these cases. This may be due to lack of knowledge of the possibilities or an adherence to a code of ethics. The assumption is that the business will grow, unless—and until—the more prevalent and serious of these diseases are written in under the workmen's compensation law. And of all the various ramifications of pneumoconiosis the most serious and costly is silicosis, which is caused by breathing into the respiratory tract and lungs the dust of silica.

Silicosis Compensation

The reason silicosis is not yet written into the workmen's compensation law is the well-grounded fear that the liberal administration would make silicosis the vehicle for compensating every case of tuberculosis that appeared in a compensation court, notwithstanding the fact that the tuberculosis was in no sense due to the fault of industry. The medical profession readily admits its general inability to diagnose silicosis so as to differentiate it from tuberculosis. In the whole United States there are less than a dozen medical authorities on the subject. For the past ten years the Association has been seeking a method which would permit writing silicosis into the compensation law and yet avert the danger of obvious abuses. The bill evolved this year is thought to have come closer to a fair and reasonable solution of the problem than anything yet done. It was a grave error not to have pressed that bill to passage. The full text of the bill was printed in the April, 1934, issue of *The Monitor*.[1]

Division of Opinion

There probably are good and sufficient reasons for objecting to the passage of this bill this year. There still exists a division of opinion regarding legislation on this

* Excerpt from the annual report of Mark A. Daly, General Secretary of Associated Industries of New York State, Inc.

[1] Official publication of Associated Industries of New York State, Inc.

subject among employers' representatives, and in a matter of such importance representatives of industry can not afford to be put in the position of fighting among themselves. This legislation can not be made retroactive and workmen's compensation can not become an exclusive remedy which would shut out suits at common law until silicosis is under workmen's compensation.

Those members of the legal profession who are specializing in these suits will not let the grass grow under their feet and before the next legislature meets there may be hundreds, perhaps thousands, added to the common law suits which already have been brought. These suits must be met, either tried or settled out of court, and when it is considered that the actual cost of preparation of a case for trial runs to three thousand dollars or more, the attorneys will probably do a thriving business in settlements out of court.

Insurance Costs

It is in no sense a loose statement to say that if silicosis, unqualified, is included as an occupational disease in the New York State law it will cost every concern in which this dust hazard exists, anywhere from five to ten per cent of the total payroll to properly cover by insurance the liability of the employer.

In Massachusetts where they have had some experience, a supplementary rate of $2.00 per $100 of payroll has recently been added to the manual rate of $2.70 per $100 of payroll ($4.70 in all) to cover the occupational disease hazard in foundries. In the Stone Cutting and Polishing Industry, in Massachusetts, a rate of $5.00, with a minimum of $500.00 together with a provision for a per capita charge of $300 in extreme cases, has been charged. Compared on a common level of benefits, stone cutting in Wisconsin has a rate of $8.04 as against $3.54 in New York State.

In the event of the inclusion of silicosis in the New York law, the liberal administration policy practiced in New York state, together with the possibility of benefits running into large amounts, will mean the application of rates in New York to those industries having dust hazards which conceivably might be double the rates in any of these other states. The actual application of the law in Wisconsin and Massachusetts has brought about a condition so acute that both states now are trying to find a measure of relief, and in Massachusetts, particularly, Governor Ely has appointed the members of his own cabinet as a commission to study the tremendous cost possibilities in relation to occupational disease.

MANY ADVOCATE OLD DOCTRINE OF THE SOCIETY

Ceramic Research Men Must Engage in Product Development and Promotion

Five practical ways in which any research department should be able to justify itself were recently stated by Foster Dee Snell. They are (1) reduced cost of product to consumer, (2) increased margin of profit to manufacturer, (3) increased appeal to consumer, (4) increased field for utilization of product, and (5) increased business through introduction of profitable new products.

Business Outlook Good

Pointing out that the business situation and outlook is increasingly favorable, Doctor Snell has also given evidence to show that such an optimistic statement is predicated not on theory but on statistics of business covering the past five years. "In considering our own economic outlook," he concluded, "we have the advantage as chemists and engineers engaged in analysis, investigation, and management, to know the outlook of executives in industries which range from soap to cement and from fabrics to wines and liquors."

Great Advance Promised in Next Half Century

It has also been stated recently that our present advance involving complex human relations requires new methods, generally different from those which have been taught for the manipulation of materials and machines.

The greatest advance in the next *fifty* years will be in discoveries in the realm of the mind and its working. The casting at Corning Glass Works of the world's largest telescope mirror disk is cited as a good example of correlated service, involving chemistry, physics, and mechanical and electrical engineering.

ORTON MEMORIAL PLANT TO SPEND PROFITS IN RESEARCH

In pursuance of the plan of the Board of Trustees of the Orton Memorial Foundation, a closer hookup between the plant and Ohio State University has been made, to bring about a more accurate technical control of the product and to help improve the quality of the cone service.

The entire profits of the plant are to be spent in research in the interests of ceramics. To start the program, two fellowships in the Ohio State University Engineering Experiment Station have been established for the purpose of studying improvement in cone body manufacture.

The fellowship awards are to be announced next month.

CERAMIC SOCIETY (ENGLAND) PUBLISHES BOOK OF HUMOR

"*Uncle Joe's Nonsense*" by J. W. Mellor, General Secretary of the Ceramic Society (England), a collection of material from letters written to intimates in various parts of the world during the last thirty years, has recently been published by the Council of the Society.

The book contains 129 drawings and two photographs in its 230 pages. Dr. Mellor's opinions on a wide range of subjects, are also included. The price is $4.25.

Inquiries of those in the United States interested in securing copies of this book should be addressed to Longman's Green and Co., 114 Fifth Avenue, New York, N. Y.

tion of ceramic welfare for thirty-five years has benefited and will continue to benefit all who are engaged in producing ceramic ware, ceramic materials, and ceramic equipment. The Society should be supported by each ceramic person and corporation. It is a well-rounded, going concern, devoted to a single purpose. It is the only such coöperative activity in this country. The Society covers the arts and sciences that are common to all ceramic manufacturing, clay, glass, and enameled ware. The virility of the American Ceramic Society is of vital concern to every ceramic person and corporation.

WESTMAN SHOWS HOW AMERICAN CERAMIC SOCIETY BENEFITS CORPORATIONS

The following classic story, told by A. E. R. Westman, applies to those corporations who insist that the American Ceramic Society contributes nothing to their progress.

A research man once visited a long-established plant where much advanced research work was done. In talking with the president concerning some of the recent findings of their laboratories he suddenly asked,

"Why don't you tell some of the other plants what you've found out?" The president of the corporation was shocked.

"We do all our own research," he boasted, "we don't owe any one anything for a single idea! Why should we give other plants our ideas? Let them work them out for themselves. It would be different if we hadn't reached the place we are today by our own research!"

Together they left the president's office and went on a tour through the plant. They came to the drying room.

"How do you run those fans?" asked the research man.

"With motors, of course," laughed the president amused at such a simple question from a scientist. They went into the mixing room.

"Do motors run those mixers too?" asked the research man.

"Certainly," said the president, a little puzzled. Throughout the plant they saw example after example of motorized operations. When they reached the exit, the scientist turned to the president of the "corporation that did all its own research."

"Congratulations!" said the scientist, "for having had Michael Faraday in your laboratories. Just what year did he work for you?"

OFFER TO THOSE WHO JOIN THE AMERICAN CERAMIC SOCIETY AFTER AUGUST FIRST

The Board of Trustees voted unanimously to prorate the membership fees of those who join as members and who subscribe to the Society's publications after August 1, 1934, if they elect so to do.

New members and subscribers received after August 1 and who elect to receive only the current monthly issues of the *Journal*, the *Ceramic Abstracts*, and *The Bulletin* will be recorded as 1934 members or subscribers on payment in full of their respective annual fees, of $10.00 personal, $25.00 (minimum) corporation, and $12.00 subscriber, the understanding being that the following amounts will be subtracted for the 1934 publications and the remainder applied to their 1935 annual fees:

Month in which subscription is received	Personal	Corporation (minimum fee)	Subscriber
August	$ 4.16	$10.42	$ 5.00
September	3.33	8.33	4.00
October	2.50	6.25	3.00
November	1.66	4.17	2.00
December	.83	2.08	1.00
Annual Fees in 1935	12.50	25.00 (Minimum)	15.00

Those who elect to receive all of the 1934 publications will be expected to pay the annual fees for 1934 in full—$10.00, $25.00 (minimum), and $12.00, respectively, and will pay in full their 1935 fees when bills for the same are rendered next December.