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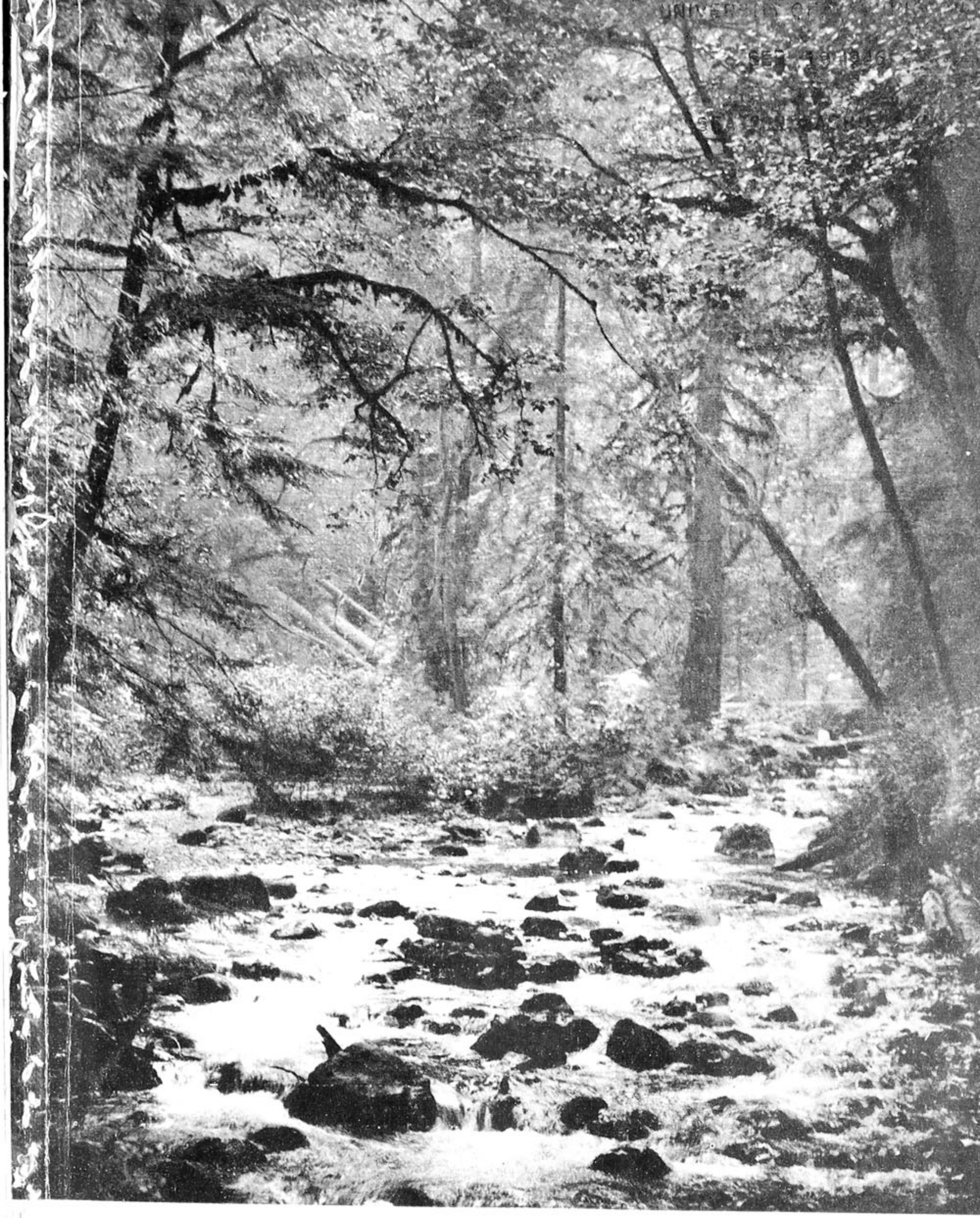


The PUGET SOUND CHEMIST

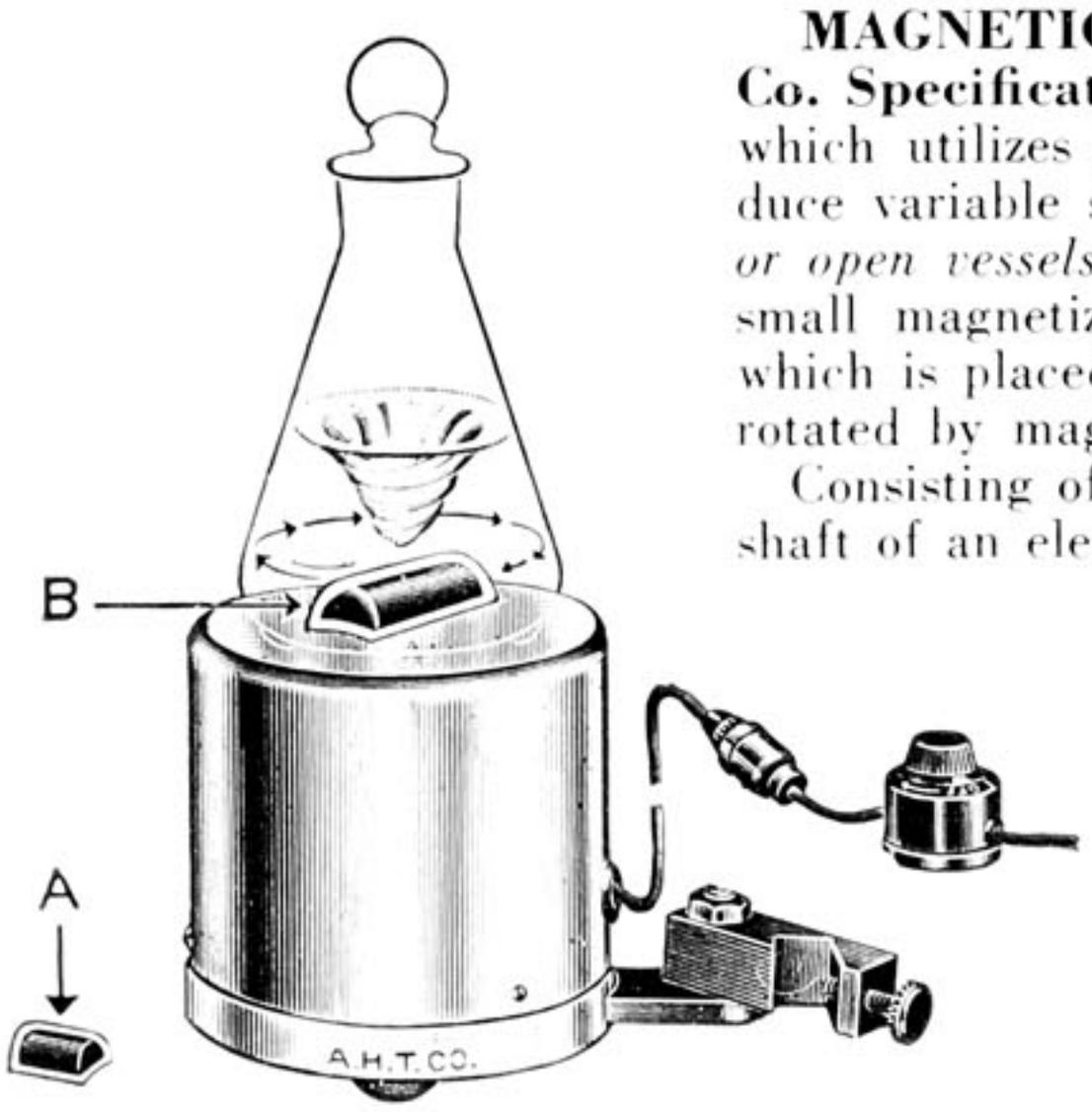
Bulletin of the Puget Sound Section of the American Chemical Society

VOLUME VII AUGUST • 1946 NUMBER 11

A. H. T. CO. SPECIFICATION

MAGNETIC STIRRER

For variable speed stirring action within either closed or open vessels



9235-3
Showing general stirring in a stoppered flask.

MAGNETIC STIRRING APPARATUS, A. H. T. Co. Specification. A compact, quiet-running apparatus which utilizes a rotating field of magnetic force to induce variable speed stirring action within *either closed or open vessels.* Stirring is accomplished by means of a small magnetized bar A or B, sealed in Pyrex glass, which is placed in the liquid to be stirred and which is rotated by magnetic force applied below the container.

Consisting of a permanent bar magnet attached to the shaft of an electric motor and mounted in an aluminum housing with a flat top 4⅜ inches diameter and 4¼ inches high. Can be used either on the table or on a support rod, attached by means of a clamp with swivel joint.

Suitable for any stirring operation which involves 1 ml to 1 liter of liquids with viscosities up to that of a 50% glycerol solution. Particularly convenient for use in closed systems where:

Gas volume changes must be observed, as in hydrogenation experiments;
High vacuum or overpressure should be maintained;
Moisture and air should be excluded, as in titrations involving the use of Karl Fischer reagent;
Gas phase over the surface of the liquid should not be mixed into the solution;
Change in turbulence is required without disturbance of heavier phase above stirred portion;
Small containers are used, as in microchemical procedures.

Any type of vessel of glass, porcelain or non-magnetic metal, can be used, i.e. flasks, beakers, culture dishes, crystallizing dishes, evaporating dishes, test tubes, weighing bottles, etc. A ring-type burner is suitable when stirring at elevated temperatures.

9235-R. **Stirring Apparatus, Magnetic, A.H.T. Co. Specification,** as above described with each stirring bars A and B, ⅜-inch and 1½ inches long, respectively, rheostat, 8-ft. connecting cord and directions for use, but without glass vessel. For 115 volts, 60 cycles, a.c. only 32.35

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Editorially Speaking . . .

A few days ago a local newspaper pubshed the following excerpt from the ranscript of a case in the Municipal ourt at Long Beach, California.

Question (*by attorney*): Doctor, in language as nearly popular as the subject will permit, will you please tell the jury just what was the cause of the man's death?

Answer: Do you mean proxima causa mortis?

Question: I don't know, Doctor. I have to leave that to you.

Answer: Well, in plain language he died of an edema of the brain that followed cerebral thrombosis, or possibly embolism that followed, in turn, arteriosclerosis, combined with the effects of gangrenous cholecystitis.

Juror: Well, I'll be damned!

The Court: Ordinarily, I would fine a juror for saying anything like that in court, but I cannot in this case justly impose a penalty on you, sir, because the Court was thinking exactly the same thing.

We may well share with the astonished ror and the judge the emotions aroused an "explanation" like this. There is doubt but that the doctor was a arned man, but it is equally certain that failed completely to clear up a baf- ng situation confronting these laymen. en though he obviously was in posses- on of the facts of the case.

Somewhat related to the above inci- nt (but at the opposite extreme) is the llowing gem which is quoted from a pular murder mystery which is now on ur bookstand: "Of the bottles, one was ear glass with a label bearing in heavy d letters the word: POISON, and, in a naller size, the symbol NaCy and the o words, *Sodium Cyanide* . . ."

Here we have the opposite extreme om the situation given above. The thor is giving an apparently straightrward and clear picture of a little mat- r which involves a common reagent emical. The only thing the matter with his explanation is that he is wrong! Yet how many of the lay readers of this book will feel that they have been given an authentic glimpse into the mysteries of chemistry—and that the symbol of an acid radical is derived by abbreviating its name to the first two letters.

We, as chemists, may gape in astonishment at the good doctor's explanation, and we may be tolerantly amused at the technical mistakes of an author—but aren't we really getting dangerously close to the attitudes and actions of many of the members of our chemical profession?

Aren't we as chemists many times called upon to make "explanations" to laymen. Possibly it is your non-technical plant superintendent, a board of regents, a board of directors, or your neighbor who has just bought a gallon of a "new plastic paint." Do they ever come to you seeking an "explanation" and go away with their heads ringing with meaningless words and phrases—awe-struck at your profound use of words and yet, somehow doubtful that any real worth or value resides in those words.

The ability of the chemist toward self-expression in straight forthright language may well be the answer to the question of unionization. Avoiding for the moment the pros and cons of unionization, let us simply leave this thought with you: Unions, in and of themselves, have no value to a chemist beyond the objectives which they seek and achieve. Presumably if these objectives are worthy, they could be sought after by the chemist himself. Could it be that we chemists at this point become unintelligible in the manner of the learned doctor and thus must turn to an organization which will glibly say the "right" words to the "right" people and thus secure for us our rightful inheritance.

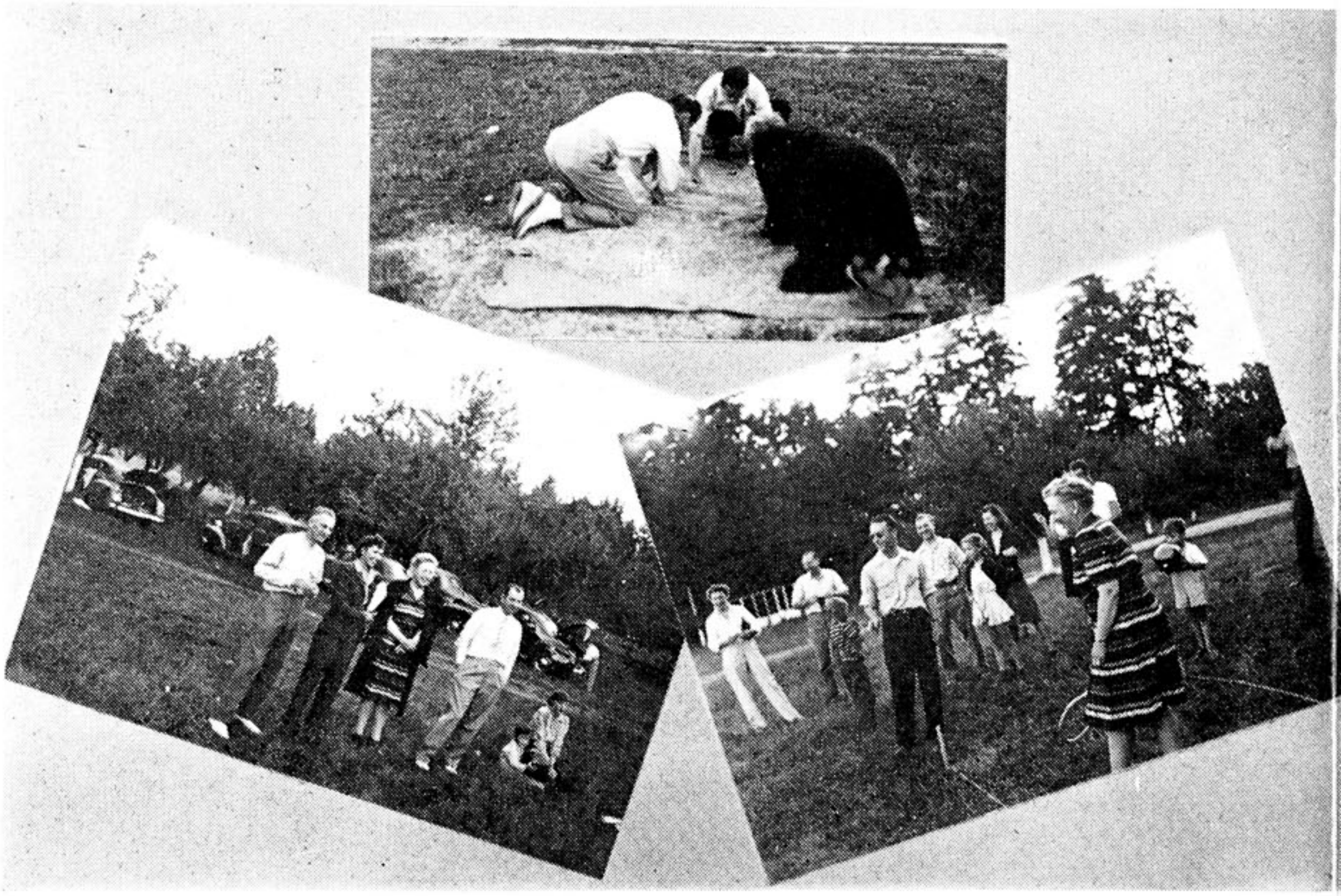
In addition to the language of chemistry we must not forget to cultivate the language of man.

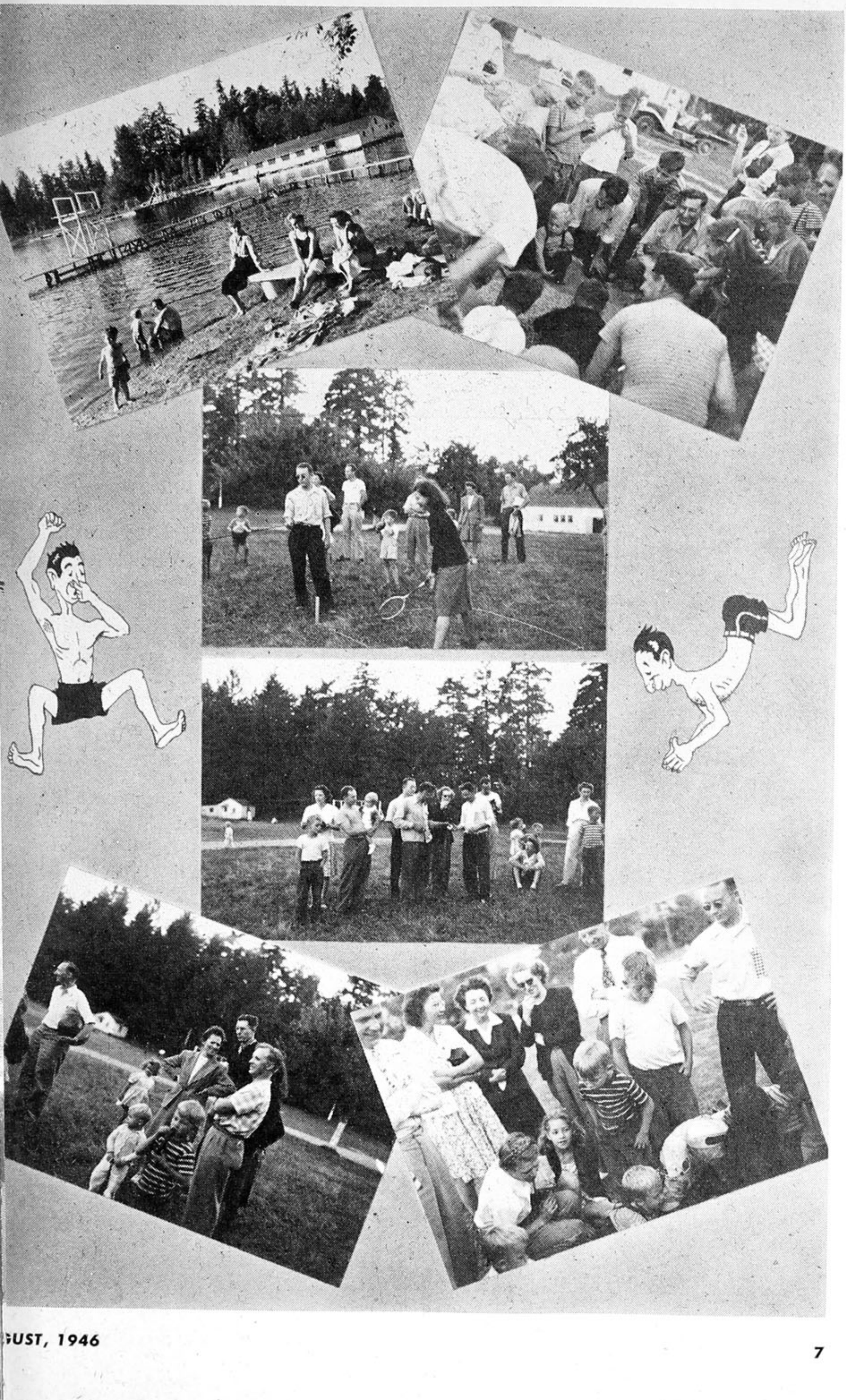
SUMMER PICNIC

Hats off to Don Redfern, chairman of our hard working social committee, and his colleagues, Hugh Rippey, John Scott, and John Bogner. They did a wonderful job of planning for our summer picnic which resulted in lots of fun for those who attended.

Games and contests were in order, under the direction of the calico-badged officials. The women discovered how difficult it is to drive a shuttle-cock to any great distance. The men revived such old time tortures as sack races and three-legged races. (Those were a pretty nice looking pair of slacks when you arrived, Bob S.) Even the babies had their fling when they dug in a pile of sawdust for pennies. (Tch! Tch! We saw three *grown* persons sneak over there to rummage in the babies' sawdust pile. Don't you give your wife any pin money, Hugh?) Some of our chemists look actually handsome in bathing trunks. From the number of babies in swimming it looked as though the chemists are a prolific lot. We ca now truthfully say that men outclas women in throwing horseshoes — eve when the men give the woman exper coaching and advice while she is throw ing. Don't like to keep bringing the sub ject up—but isn't it illegal to cross th finish line on hands and knees to finis first in a three-legged race? We wu robbed!

Eating time found us ready and wil ing. The committee furnished ample sup plies of coffee and ice cream. The Ehret wandered up from Centralia and he suc cessfully demonstrated how to carr eleven plates of ice cream at the sam time. Orchids to the McCarthys who va iantly attempted to represent the entir University bunch. Orchids to Leo Living stone for his photographic prowess Onions to the apples growing all aroun us—they were too green for eating! Al in all, it was an Aug. 3 to remember See you there next year!





July Speaker

Dr. Hermann O. L. Fischer
Banting Institute
University of Toronto

Dr. Fischer was born in Wurzburg, Bavaria, on Dec. 16, 1888. He is the son of the famous organic chemist, Emil Fischer. He received degrees in Cambridge, Berlin and Jena.

He has served as assistant prof. organic chemistry, *Berlin*, '22-'32; associate prof., *Basle*, '32-'37; research prof. organic chemistry, *Toronto*, '37-....

He is a member of American Assn. for Adv. of Science; American Chem. Soc.; Soc. Biol. Chem.; fellow, Can. Inst. Chem.; Royal Can. Inst.; Deuts. Chem. Gesell.; N. Y. Acad. of Sciences; Harvey Lecturer, 1945.

His work includes syntheses of depsides, amino acids, intermediates of fermentation and glycolysis; optically active glycerides, glycero-phosphates and glycerol ethers; configuration of plant acids; hexoses, various sugar derivatives, nitrosugars and nitrosugar alcohols; conduritol, allo- and mucoinositol; configuration of mesoinositol and inositol synthesis from glucose.

CYCLIC PLANT ACIDS INOSITOLS AND CARBOHYDRATES

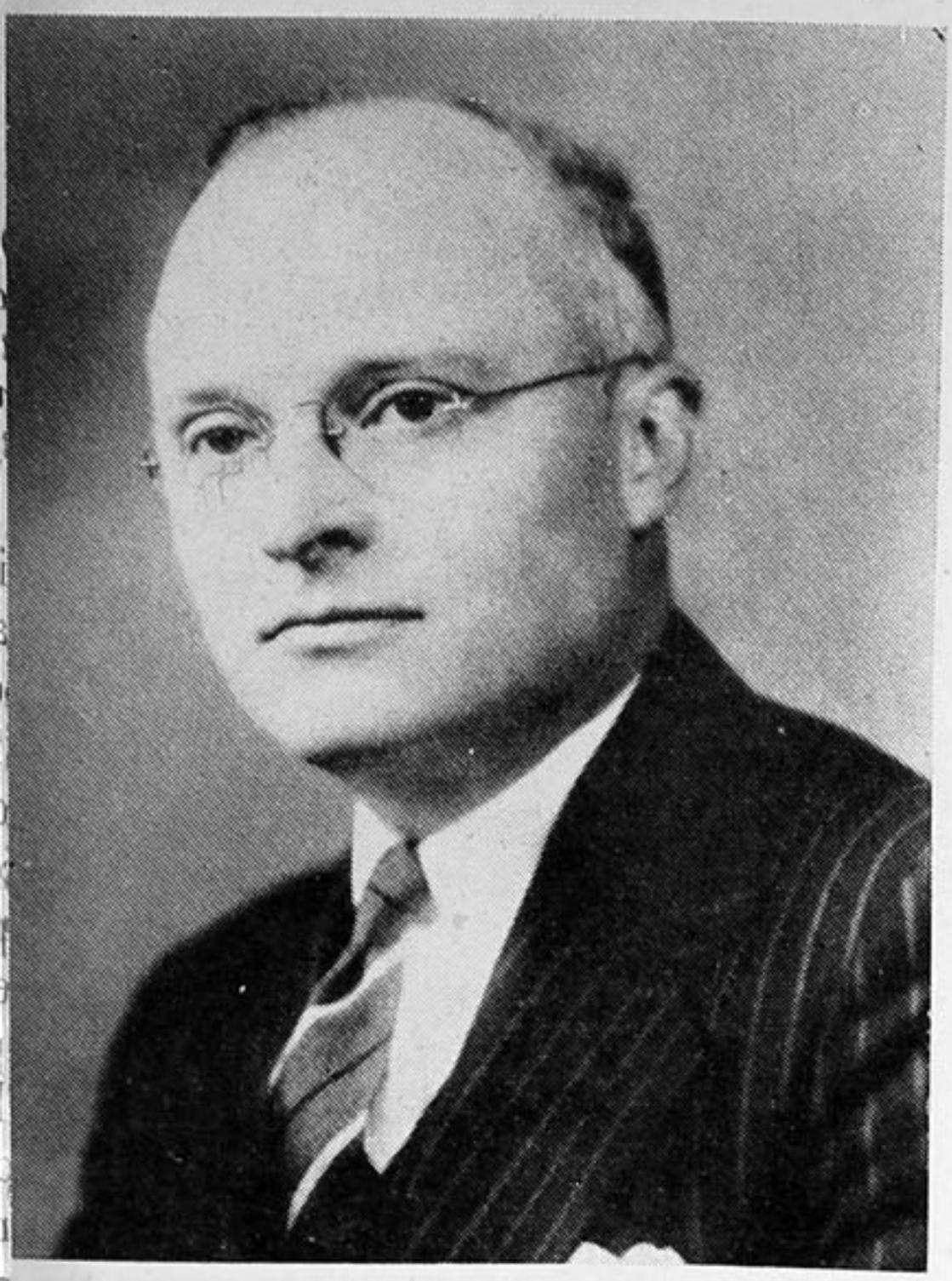
Abstract of an address delivered by Dr. Hermann O. L. Fischer, research professor of organic chemistry, Banting Institute, University of Toronto, to the Puget Sound Section of the American Chemical Society Tuesday evening, July 30, 1946.

Dr. Fischer gave a review of how i his laboratory certain methods of suga chemistry have been adapted to the spe cial field of polyhydroxylated cycli plant acids. A method found to be o particular value in these studies was ace tonization to cover up hydroxyl group on adjacent carbon atoms so that the will be preserved during subsequent op erations of oxidation, etc., and can finall be released in unchanged configuratio in the degradation products for compari son with substances of known structure Acetonization is of particular value i that only hydroxyl groups on the sam side of a saturated ring structure reac readily so that differentiation can b made between this above and "opposite configuration. Also a glycol grouping when protected by acetonization and sub jected to oxidation by lead tetra-acetat or periodic acid, does not undergo cleav age of the carbon to carbon bond a occurs with the free glycol. Using thes tools, together with more usual opera tions of acylation, esterifaction and ox dation, the author succeeded in establish ing the structure of quinic acid and shi kimic acid and demonstrated their rela tion to glucose (i. e., that the configura tion of the three adjacent hydroxy groups in these acids is the same as fo hydroxyls in the 3, 4 and 5 positions o glucose).

Together with Mrs. Gerda Dangscha Dr. Fischer applied these methods to th study of cyclitols, including conduritol and meso inositol. It was shown that con duritol when oxidized by potassium per manganate can be converted to either allo- or muco-inositol, depending on th reagents used for protection of hydroxy

(Continued on page 21)

LDEN H. EMERY VISITS PUGET SOUND SECTION



lden H. Emery, Secretary of the American Chemical Society

n June 23rd, Alden H. Emery paid first visit to the Puget Sound Section e his recent appointment as Secretary the American Chemical Society. On afternoon a reception was held at home of Professor Victorian Sivertz re he was introduced to some of the nbers of the Section, members of the ılty of the University of Washington their wives.

dinner meeting was held on June at the College Club at which he met the Councillors and the Members of Executive Committee of the Section. ing an informal discussion Mr. Emery ined some recent activities and actions ne Society and what was being done ssist the different local sections.

ne recent increase to $2.50 of the te made on the annual dues from the onal to the local sections will be d on the number of members listed f December 1, 1945, and will be to the local section on July 1, 1946. e funds will be of great help in car- g out the activities of our section.

discussing the coming National ing in Chicago, Mr. Emery told of the Hancock Survey which is being made by an impartial group to see if there are any changes which might be made in the organization of the Society to enable it to better serve its members, the chemical industries, the scientific educational institutions and the other phases of its activities. It is expected that this report will be completed in time for presentation at this meeting.

Because of considerable local interest, he went into considerable detail on the NLRB decisions on the petitions for union recognition of salaried professional men at the Shell Development Company, Emeryville, California, and the Monsanto Chemical Company plant at Everett, Massachusetts. In the case of the Monsanto decision, which for the most part duplicated the Shell decision, there was one very significant point in which the NLRB held that any group of two or more professional men who had hopes or opportunities of one day assuming positions of executive or managerial capacity need not be forced to join a union whose membership included non-professional men, but could form a union of their own for collective bargaining purposes.

Considerable time was devoted to a discussion on means of broadening the scope of our Sections' activities with the mention of such things as regional meetings such as the one held in the fall of 1945, Meetings in Miniature, Symposia in various fields, and a greater emphasis on social activities. (*Ed. Note*: See items elsewhere in this issue regarding positive steps which have since been taken with regard to these suggestions.) Mr. Emery promised the assistance of his office in providing promotional literature and suggestions to assist the Membership Committee in their work.

At the present time the Society is planning on holding a National Meeting here on the West Coast either in 1948 or 1949. In line with this, Mr. Emery spent the last day of his visit checking the facilities available here in Seattle.

(Continued on page 20)

OUR COVER PHOTO

Courtesy of

NORTHWESTERN MUTUAL FIRE ASSOCIATION

Sun-flecked streams and stately, burgeoning trees beckon many a chemist from his sultry, smelly lab. Small wonder that Elmer Ehrlenmeier is inspecting his tackle and dreaming of the elusive trout that he hopes to catch. (See cartoon, page 11, opposite.)

SEPTEMBER MEETING

September 17, 1946

★

KERMIT M. BLEEZE

CHEMIST FOR

NORTHERN PACIFIC RAILWAY CO.

Will address the Section on

"The Low Temperature Carbonization of Sub-Bituminous and Lignite Coal"

News Items . . .

Drs. Benson and Moulton to Give Papers at AIChE Meeting

Dr. H. K. Benson and Dr. R. W. Moul ton of the U. of W. will attend the AIChE meeting in San Francisco August 25 to 28.

Dr. Benson's paper on the subject "Re vised Chemical Engineering Curriculum at the U. of W." will be presented at the Symposium on Chemical Engineering Education on the Pacific Coast.

Dr. Moulton's paper is "Phosphat Fertilizers by Electric Furnace Fusion o Olivine and Phosphate Rock."

Eric Ericsson of Puget Sound Pul and Timber Co., Bellingham, will appea on the West Coast Industry Panel wit a description of the Alcohol from Wast Sulfite Liquor Process.

Chemical Engineer Returns to the Pacific Northwest

Robert M. Williams, a chemical engi neering graduate of the University o Washington in the class of 1938, recentl resigned his position with the E. I. Du Pont Company at Huntington, West Vir ginia, and has accepted one with the Ad hesive Products Company of Seattle. A the present time he is engaged in researc and development work in their labora tories.

ACS Exempt from Federal Income Tax

Of interest to all members of our Se tion is the recent ruling of the Commi sioner of Internal Revenue who has fo mally ruled that the American Chemica Society and its local sections are entitle to exemption from federal income taxe This ruling reaffirms previous decision but for the first time extends the exem tion to all local sections.

This Section to Be Well Represente at Chicago ACS Meeting

The Puget Sound Section will be we represented at the Fall meeting of th American Chemical Society to be held

Chicago. Dr. H. V. Tarter, Dr. George H. Cady and Dr. R. G. Robinson will attend, while Dr. D. M. Ritter and Dr. Q. Peniston of Pulp Mill Research Group will deliver a paper before the Cellulose Division on "A Diffusion Study of Lignin Sulfonic Acids in Sulfit Waste Liquors" and one before the Organic Division by Dr. Ritter on "Oxidation Potentials of Some Compounds Related to Vanillin."

Dr. Ernsdorff of St. Martin's College Awarded Ph.D. From Stanford

The Reverend Bede Ernsdorff, Benedictine monk of St. Martin's college, and eacher of chemistry there, was awarded he doctor of philosophy degree in abentia at the Stanford University commencement exercises in Palo Alto, California, recently.

Dr. Ernsdorff's field is organic chemstry and his research was carried on luring the war years as a part of the nternational search for new malaria remedies. The title of his thesis, under the direction of Professor Carl Noller, was "The Synthesis of New Combinations of Pyridine and Quinoline as Possible Antimalarial Drugs." A significant, though incidental, contribution of this work was the demonstration that the pyridine portion of a molecule could be successfully hydrogenated over a copper chromite catalyst without notably affecting the analogous quinoline structure in the same molecule.

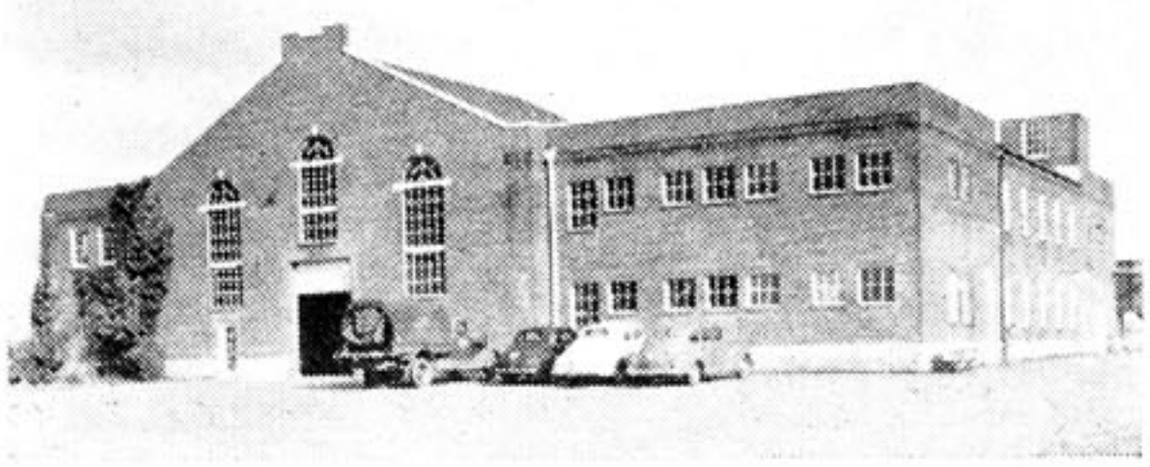
Dr. Ernsdorff received his bachelor of science degree, summa cum lauda, from St. Benedict's College, Atchison, Kansas, in 1934 and his master of science degree from the University of Michigan in 1936.

While at Stanford, which he entered on leave of absence from the St. Martin's teaching staff in 1942, he held successively the John M. Switzer Fellowship and the du Pont Fellowship. Dr. Ernsdorff will continue his teaching and laboratory work at St. Martin's.

ELMER EHRLENMEIER . . . Vacation Daze!

The Northwest Electrodevelopment Laboratory of the U. S. Bureau of Mines, Albany, Oregon

The Northwest Electrodevelopment Laboratory of the Federal Bureau of Mines was established by act of Congress for the purpose of conducting research on methods utilizing the power available



Exterior of Operations Building Where Large Scale Experimental Equipment Is Used

from the Bonneville system for the development of the mineral resources of the Northwest.

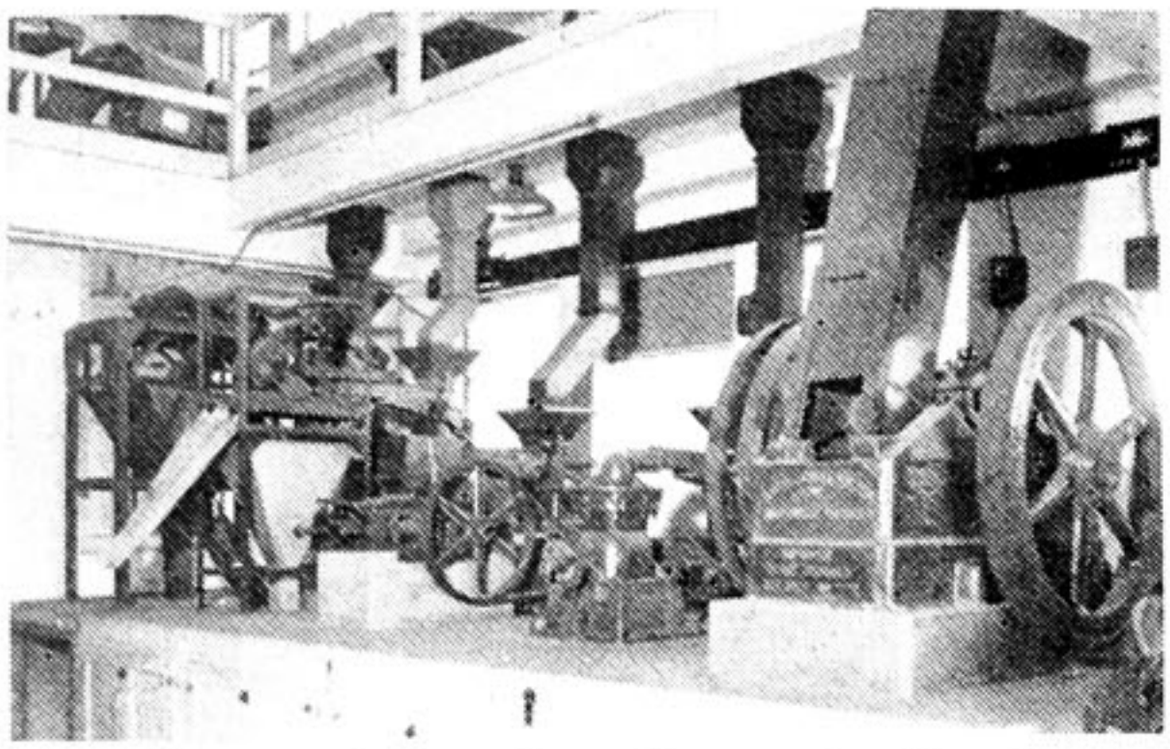
Although the establishment of such a laboratory had been agitated in the Northwest for some time, an appropriation for the purpose was not passed until after the war started. After some negotiation, the Bureau of Mines acquired in 1943 the property at Albany, Oregon, formerly occupied by Albany College—now Lewis and Clark College at Portland. Four suitable buildings were on the grounds. The Bureau remodeled three of these at once and recently undertook to prepare a fourth for occupancy. Experimental work began in the early fall of 1944. Because of war conditions, great difficulty was experienced in finding men and equipment but the laboratory is now almost in full operation.

The equipment includes almost all items necessary to research on ores and metals. A complete modern chemical laboratory has been installed. Spectrographic, x-ray, and microscopic facilities are available. Considerable progress has been made on a general physics laboratory. The ore dressing laboratory contains practically all types of equipment used, as does the metallurgical laboratory. Among the heavier types of equipment may be noted high frequency and electric arc furnaces and several sizes of electrical resistance furnaces. A power hammer capable of forging blocks five inches thick and a 50 horsepower rolling mill will be available as soon as they are installed. A physical testing laboratory includes the usual hardness, impact, and tensile testing machines.

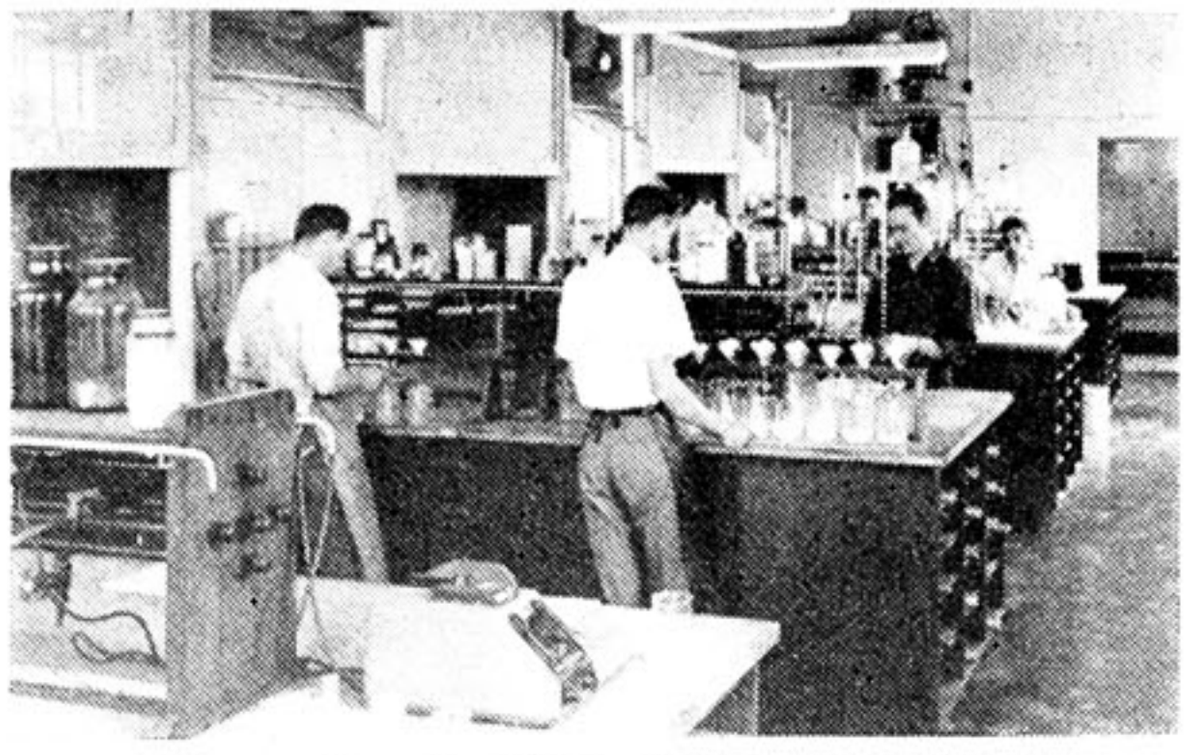
Special apparatus can be made in the laboratory's shops which include facilities for metal working, welding, pipe fitting, electrical installation, wood-working, and other crafts needed about a laboratory.

The metallurgical investigations conducted at the laboratory are mainly of regional interest, and include such projects as the manufacture of nickel steel or of chromium-nickel steel from the ores of the Cle Elum area, the treatment of the high phosphorous Scappoose iron ores, the production of ductile zirconium from Oregon beach sands, and the treatment of lead-zinc ores. In addition to these, there are investigations under way of a more general nature such as the production of vitreous silica from quartz sand, the carbothermic reduction of magnesia, and the development of vacuum metallurgical methods. A staff of technical men is assigned to each project, and they have the assistance of the service department of the laboratory for analyses and the construction of equipment.

Of the projects that are under way one of the most interesting is the production of ductile zirconium metal. The beach sands in the region of Coos Bay, Oregon, contain an appreciable amount of zircon, the silicate of zirconium, in addition to other heavy minerals such as chromite. During the war two plants were established to recover chromite from the beach sands. It was found that in the final separation the reject material contained about 28 per cent ZrO_2 in the form of zircon. A pile of several thousand tons of this zircon sand was a

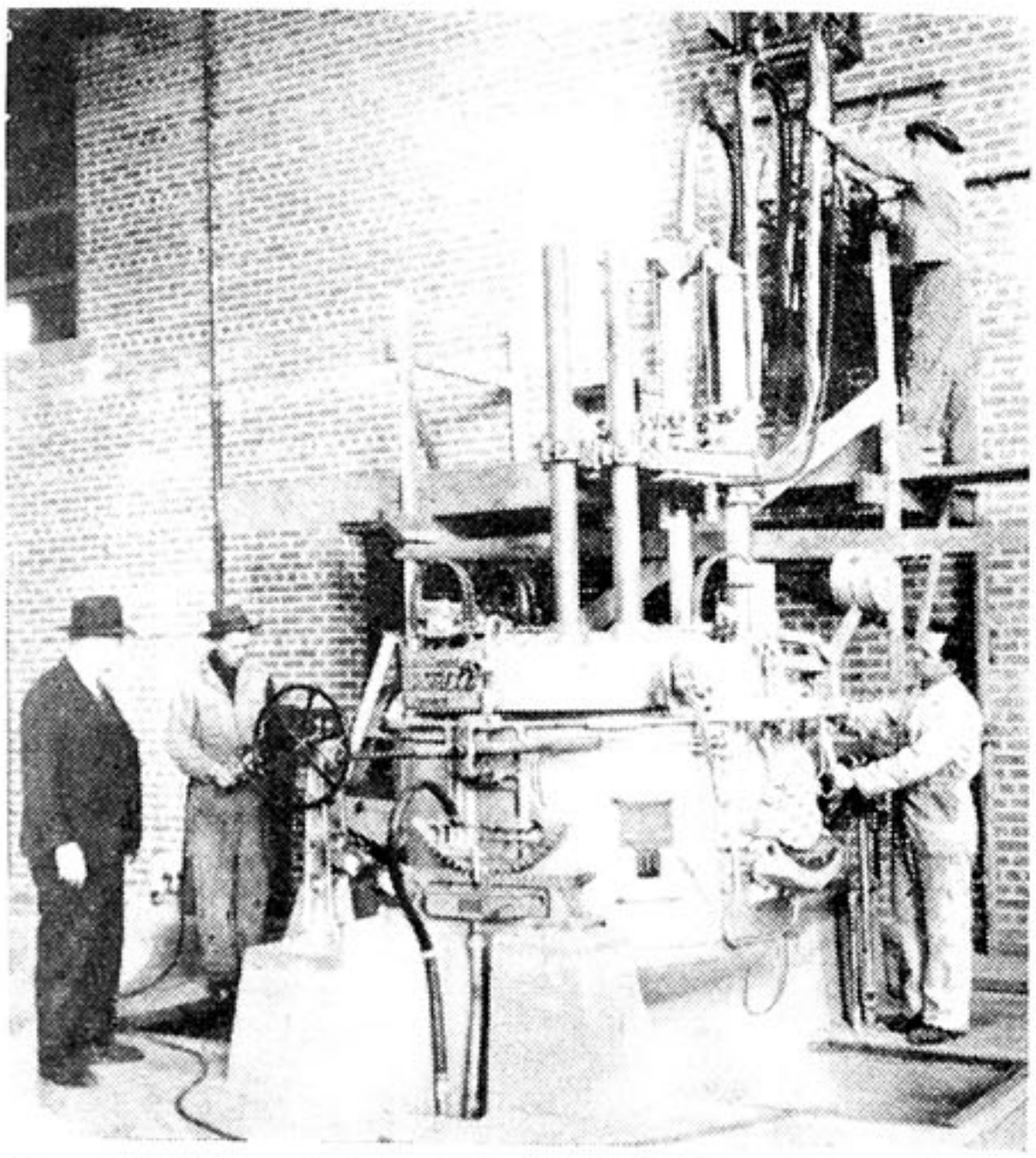


Crushing and Sampling Apparatus for Ores



View of a Portion of the Analytical Chemistry Laboratory

cumulated. The possibilities of making zirconium metal from this supply of raw material were especially interesting because of the limited production of that metal at the present time. Zirconium is of great value because of its resistance to chemical action and because of its unusual properties as a getter in the manufacture of radio tubes. Its commercial use is limited because of its extremely high price which is now in the neighborhood of five hundred dollars per pound. This price is almost entirely the result of complexities and difficulties of the metallurgical operations for the production of the metal, not because of scarcity of raw materials. It was felt that if the methods of production could be simplified the price of the metal could be lowered and there would be a greater demand for zirconium.



Completion of Installation of Three-Phase Arc Furnace for Melting Steel and Other Alloys

A method has been worked out which promises to be highly successful. It consists of converting the zircon to zirconium chloride, reduction of the chloride to metal with magnesium, and the melting of the raw zirconium to ingots in specially designed vacuum furnaces. Equipment is now being constructed to carry out these operations on a pilot plant scale in order that cost data may be accumulated.

After such investigations are completed the results are made known to the public through the publication of articles in technical journals or in the publications of the Bureau of Mines. If results are obtained which are promising, every attempt is made to accumulate sufficient facts so that it will be possible for private concerns to take over the processes and to put them to use. It is believed that the industrialization of the Northwest is dependent upon the utilization of its mineral resources to the greatest advantage. In many cases, private concerns cannot risk the capital necessary for the development of new methods and uses, and it is the role of the government agency to give the assistance and encouragement that will lead to establishment of new industries.

The Northwest Electrodevelopment Laboratory is under the immediate supervision of Dr. B. A. Rogers, chief of the Albany Division of the Metallurgical Branch of the U. S. Bureau of Mines. The Albany Division includes the states of Washington, Oregon, Idaho, and has, in addition to the Albany Laboratory, the laboratories at Seattle and at Pullman, Washington.

CHEMISTS' CONTRACTS*

By ARTHUR J. NORTON

Are contracts between chemists and employers necessary? First, with regard to patent rights and ownership of inventions, the answer would be no. State laws in most cases amply protect the employer by ruling that all discoveries made by a salaried employee, whether the work was done on the premises or not, belong to the employer. With hourly wage earners, the wage earner is entitled to his invention if he can prove it was done on his own time. The salaried chemist therefore has no rights to any discoveries or inventions he may make during a term of employment. With such a definite understanding well established by practice, it is not necessary to have individual contracts covering such rights, although it may be desirable to call the attention of a young chemist to such laws.

Second, with regard to definition of terms of employment, the individual case should be the deciding factor. It seems desirable for a chemist with specialized knowledge particularly desired by an employer to insist on a term contract. Otherwise his term of employment may be restricted to the time necessary to obtain such specific information. Such cases are not common for, as a rule, a chemist is not hired for his knowledge, but for his ability. The background of knowledge necessary to develop his ability comes from the firm employing him.

Third, as a protection to the firm or employer, a contract seems desirable. It is often true that a firm gives a man a long term of valuable experience before he is competent to give results commensurate with his salary. It is also true that such a trained employee might be of value to a competitive firm, not because of specific knowledge, such as formulae, but because of the general background of knowledge inbred through years of contact with all phases of the industry. And it is a further threat that such an experienced employee may start a competitive business of his own.

The desirability and necessity of contracts between employers and chemists seems therefore to be entirely on the side of the employer. Except in specific instances, where term employment is specified, the employee receives no direct value as a result of the agreement. His value or consideration, aside from what is given to make the agreement binding, is in the job itself. It is difficult today, especially among the chemical manufacturers and the older, better established chemical industries, to get a job without signing some sort of an agreement.

This situation, where the chemist is practically required to sign a contract before he can work, and where the manufacturer rightly insists on protection, presents a most interesting and important problem. It seems perfectly fair and reasonable that an employee should be protected. On the other hand, restraint of practice of his profession is distinctly disadvantageous to the chemist as it tends to keep his salary low, to narrow the scope of his activity and to prevent true development of the chemist in industrial work.

Common commercial contracts include:

(Continued on page 16)

*This article first appeared in *Chemical Industries*, February, 1934. At that time Mr. Norton was Chemical Director, General Plastics, Inc.,

Phone MAin 0680

NORTHWEST TESTING LABORATORIES

Hartford Building

Second Avenue and James Street
Seattle 4, Washington

ENGINEERS ASSAYERS
CHEMISTS METALLURGISTS

Student Activities . . .

University of Washington Ammonii Socii

Amonii Socii has been meeting regularly this summer, there being enough members in school to make its activities worth while.

Russell Nelson was appointed secretary pro tem to replace A. Boyd Snider, who is not in school this quarter. Howard Clukey was appointed treasurer pro tem to replace Harvey Mashinter, also not in school this quarter.

Committees are working on various projects to be carried out this coming school year, including constitutional revision under Dan Pastell, lemonade machine by Dave Whyte, mixer dance arranged by Tom Secrest, publicity by Dick Brooks, and freshman welcome week activities coordinated by Theo Bierlien.

Under the supervision of "Keeper of the Dumbbell," Britt Kellogg and his committee, including Al Wilcox, Ernie Wenkert, and Frank Owen, eight pledges were initiated into the club. The eight were R. S. Hogg, J. M. Mason, J. Leeds, W. Wamsley, H. O. Blair, R. Benson, R. G. Parks, and J. A. Nelson. Initiation was Saturday, July 20th, and was followed by a highly successful picnic at Saltwater State Park, arranged by Don Bartholomew.

Club excitement now centers about the exchange with the Harborview Nurses Club to be held in Eagleson Hall Saturday, August 10, 1946, with Kermit Bengston in charge of operations. That will end this summer's activities.

—D. D. Drowley.

Student Chapter, American Institute of Chemical Engineers

The last meeting of the student chapter, July 24th, featured an address by Mr. R. E. Chase, chemical engineer from Tacoma, on "Tips on Finding a Job." The members were quite interested in this subject and the speaker answered questions relative to his subject.

At the business meeting prior to the address, a nominating committee was appointed to select a list of officers for the next school year. The next meeting will be a joint meeting with the local section of the American Institute of Chemical Engineers. The speaker will be Mr. James G. Vail, president of the Institute. He will speak on the subject "A Scientist in the Community." This meeting will be held Thursday evening, August 15th.

—Tom Secrest.

Graduating Seniors — Summer Quarter 1946

CHEMISTS: William De Hollander, Lloyd Fry, Richard Hildebrandt, Jerry Allen Nelson, Lindsay Rusch, Robert H. Wade.

CHEMICAL ENGINEERS: Edward H. Bunker, Paul W. Conolley, Paul A. Apostoli, Frederick A. Ferguson.

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CHEMISTS' CONTRACTS . . .

(Continued from page 14)

1. A resume of patent and invention rights.
2. A compensation clause.
3. A restraint of trade clause.

The first of these is innocuous and of possible educational value.

The second is necessary for legality of a simple contract, although in most states, a sealed contract implies compensation and requires no statement of such.

On the third subject, the general knowledge of the law is hazy. Spencer says—to quote freely:

"Contracts that tend unreasonably to restrain persons from engaging in any lawful business, profession or employment are contrary to public policy and void; (1) because they tend to injure the parties making them by diminishing their means of livelihood; (2) because they deprive the public of the services of the parties on what is presumed to be the lines of their greatest usefulness . . . (3) because of their tendency to enhance prices and create monopolies. . . . Yet not all restraint is unlawful. A business man may restrain himself from practicing his trade in competition with the purchaser of his business. . . . Thus an agreement that one will never again carry on or be concerned in the business of an iron-founder is illegal, but a lawyer may legally sell his practice and agree not to practice again in the same city."

The status of an employed chemist may be open to discussion. If he is restrained from working with competitive industries, it may be interpreted as the case of the iron-founder. On the other hand, if he did not restrain himself, his services would be of lessened value.

Commercial contracts generally state that the chemist will not engage in an allied or competitive industry for a term of two or three years. Sometimes direct compensation is made at the time of signing the agreement. Other times it is implied on a sealed contract, and a third method consists of a salary guarantee during any time of unemployment resulting from the observance of the contract. Still other clauses merely state that

the employee will not violate confidences or secrets obtained while in the employ of a firm.

Obviously, everything that can be done to educate the chemist to this phase of his relationship to business is part of the duty of this institute. It is just as much a part of our duty to insure adequate protection for the employer.

The interpretation of the law and the application of contracts at present is still largely a personal matter. It is probable that certain groups of employers in the chemical industry have deliberately taken advantage of the situation in order to subjugate the chemist. In fact, they have occasionally helped create the necessity for contracts by espionage. On the other hand, the chemist himself, by unethical practices, has been to blame for creating a distrust among employers. Some employers honestly use the contract only to protect themselves, and pay a chemist accordingly.

Neither side has much actual redress at law—the chemist cannot successfully sue the corporation—and the corporation is undoubtedly at the mercy of unethical chemists.

The answer seems to lie in educational work to create better mutual confidence and understanding. The chemist too often sees large business develop as a result of his work and forgets the years of unfruitful investigation and investment. At the same time, the chemist must be taught to recognize the danger of his position and have available for presentation, through such an organization as ours, constructive, fair contracts. When a chemist is in doubt, if he could turn to us for information, he would appreciate it. Also, I believe the employer would avail himself of some satisfactory solution to this troublesome problem. Many an honest employer is puzzled by the difficulty of being fair to the chemist and to his organization at the same time.

If we could draw up and adhere to and advise non-members on a real code of fair competition, it would be of great advantage to the industry.

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EMPLOYMENT . . .

In the June issue of this publication we carried a request from Dr. Meiler, chairman of the Employment Committee, for response from companies in this area needing chemical personnel. The Employment Committee has a number of applications of men and women looking for positions in this area but unfortunately has not been able to secure information from laboratories in the Northwest as to their needs.

Will companies requiring services of additional chemists please write

DR. JOHN G. MEILER
620 East 26th Street
Tacoma 4, Washington,

giving the requirements of chemists needed.

New Chemistry Building University of California

A $730,000 chemistry building to be erected on the University of California Berkeley campus topped the list of Northern California construction projects authorized by Ninth Region Civilian Production Administration office in the week ending July 11.

This project, first denied, was approved on the urgent appeal of the university that the present 50-year-old structure was inadequate in view of the anticipated 20,000 student enrollment this fall.

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Social Hour . . .

In response to the wishes of many members, and in line with suggestions of Alden H. Emery, our program for the July30 meeting was radically changed. This included the elimination of the dinner which customarily preceded the talk. the moving up of the meeting time from 8:00 p.m. to 7:30 p.m., and offering a social hour just after the regular talk and meeting.

This arrangement went along nicely due to the excellent preparations of our social committee. The July meeting was surprisingly well attended and the majority of the crowd stayed on for the social hour which featured light refreshments and heavy talk.

National ACS Meeting Here?

The recent visit of Alden H. Emery gave impetus to the move which has been underfoot here regarding the advisability of attempting to secure a national meeting of the American Chemical Society in the Northwest.

Mr. Emery personally inspected the facilities available in Seattle and announced that they would be adequate for such a meeting. This announcement was followed by prompt action on the part of various society members and officers which led to the formal approval of such an invitation by the local section at the July 30 meeting.

As the matter now stands, our section has extended an invitation for holding the Annual Meeting in Seattle in either 1948 or 1949. In the event that the invitation is not accepted for Seattle, we have pledged our full cooperation to the movement already under way for having the meeting at Portland.

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President of AIChE Visits Seattle

Chemical Engineering Society of Washington Petition for Local Section Approved

Mr. James G. Vail, president of the American Institute of Chemical Engineers visited Seattle August 12 to 18. The Chemical Engineering Society of Washington arranged a special mid-summer meeting in order to take advantage of the opportunity of meeting Mr. Vail and to hear him address the group.

The dinner was held on Thursday, August 15, at 6:30 p.m., in the Gold Room of the Edmond Meany Hotel. The dinner was followed by a short business meeting. The members then convened in Room 140 Bagley Hall on the University of Washington campus to hear Mr. Vail's address on the subject, "A Scientist in the Community."

The Chemical Engineering Society of Washington had just been advised prior to Mr. Vail's visit that their petition to the American Institute of Chemical Engineers for a Washington-Oregon Section of the AIChE had been approved. Notice of approval was made by Mr. S. L. Tyler, executive secretary of the AITChE.

The meeting August 15 marked the first as a local section of the institute and was well attended.

Dr. Emery's Visit . . .

(Continued from page 9)

On leaving Seattle, Dr. Emery travelled to Portland, where he also looked at meeting facilities. On June 26 he visited Mt. Hood and dined at Timberline Lodge during a snowstorm. On June 27 he visited the Oregon Capitol at Salem and inspected Oregon State College at Corvallis, where he attended a dinner meeting with some of the Oregon Section members.

Before returning east Dr. Emery visited in Sacramento and Palo Alto and spent July 1st and 2nd in San Francisco, from where he flew east the night of the 2nd.

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CYCLIC PLANT ACIDS . . .

(Continued from page 8)

groups during the permanganate oxidation. The configurations of the hydroxyl groups in the original conduritol was established by this work as well as that in the two new inositol isomers. Neither of these isomers was related to meso-inositol which occurs widespread in both the plant and animal kingdoms. The configuration of this substance was later established by Fischer and Dangschat through acetonization using zinc chloride as a catalyst. It was found that the configuration is consistent with the idea that meso-inositol may be formed in nature from glucose.

In collaboration with Dr. John M. Groscheintz a model experiment was carried out *in vitro* showing for the first time that 6-nitro-6-desoxy-glucose can be cyclized with great ease to a mixture of nitro-desoxy-inositols. This suggests that in nature analogous cyclization of carbohydrates to inositols might take place, the mobilizing group presumably being phosphoric acid residues. Dr. Fischer is now conducting *in vivo* experiments using the dog fish in attempting to establish such a mechanism. The dog fish does not store glycogen as a reserve source of carbohydrates but does have a large concentration of inositol and inositol monophosphate in its fins.

Dr. Fischer concluded his address by pointing out some of the implications of this postulated interconversion between carbohydrates and inositols. Such a mechanism could readily explain the interconversion of various carbohydrates such as that of glucose to galactose and also the formation of aromatic substances in nature since inositol derivatives are readily dehydrated to aromatic ring structures.

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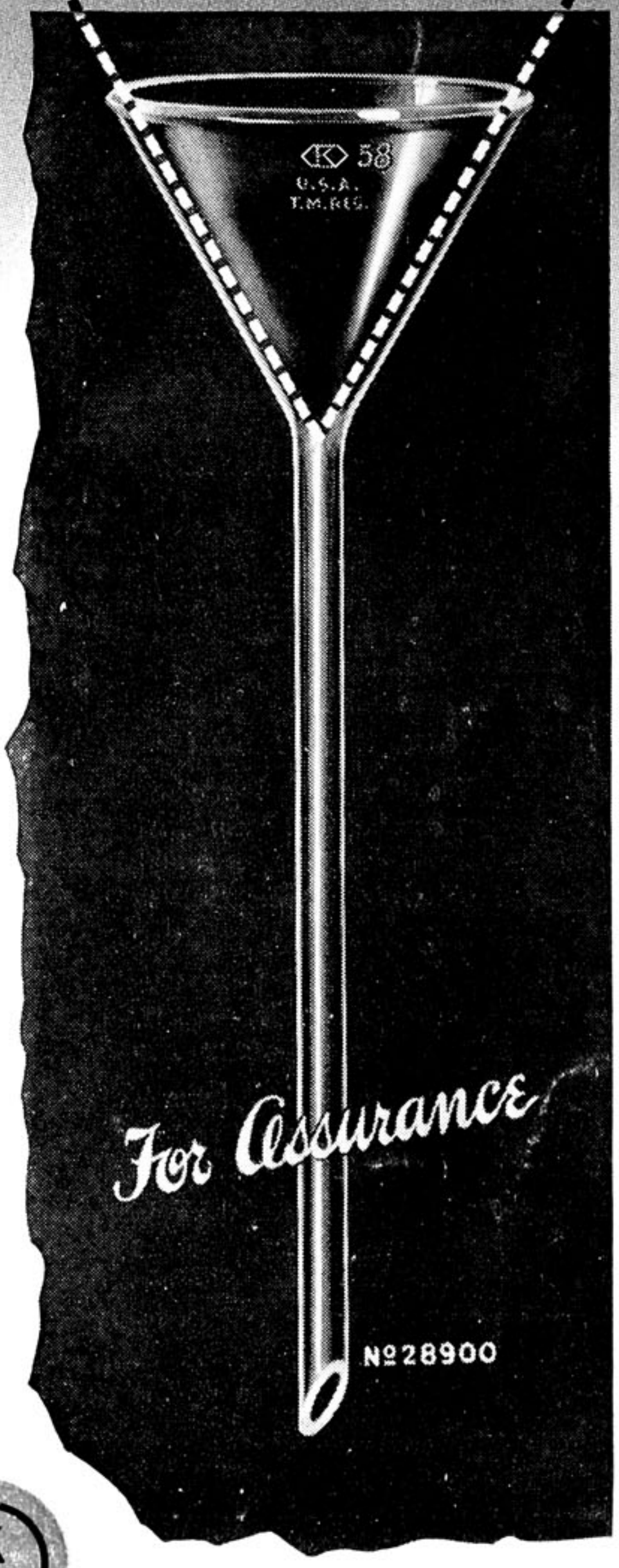

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