Surface Technology White Papers
100 (3), 20-34 (March 2013)

A Look at Early Advertising in the Surface Finishing Industry

by
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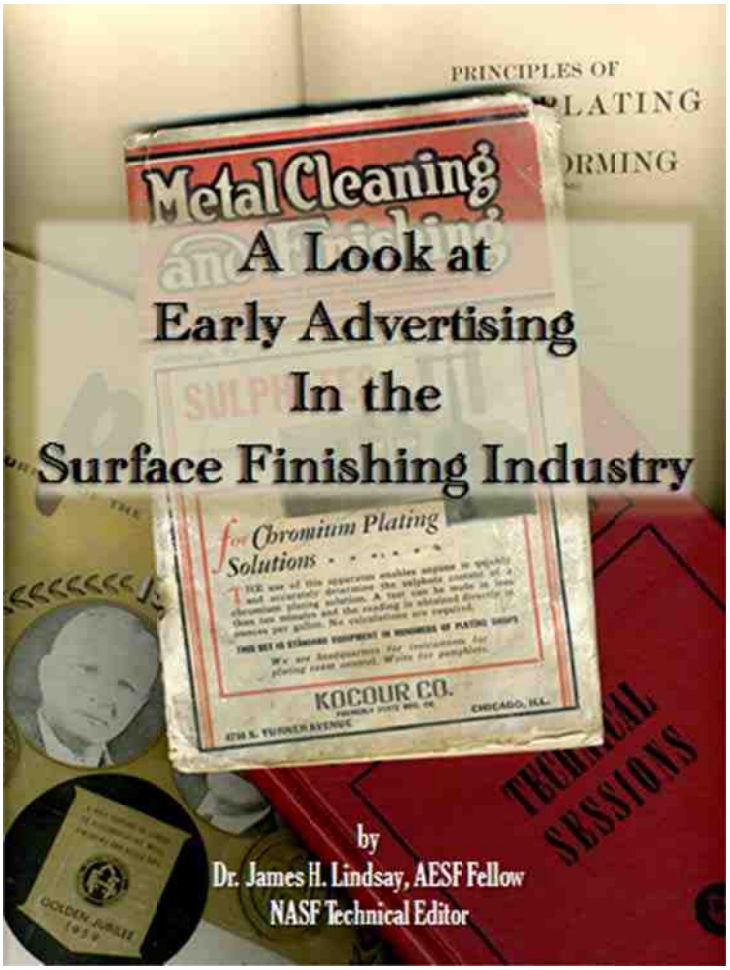
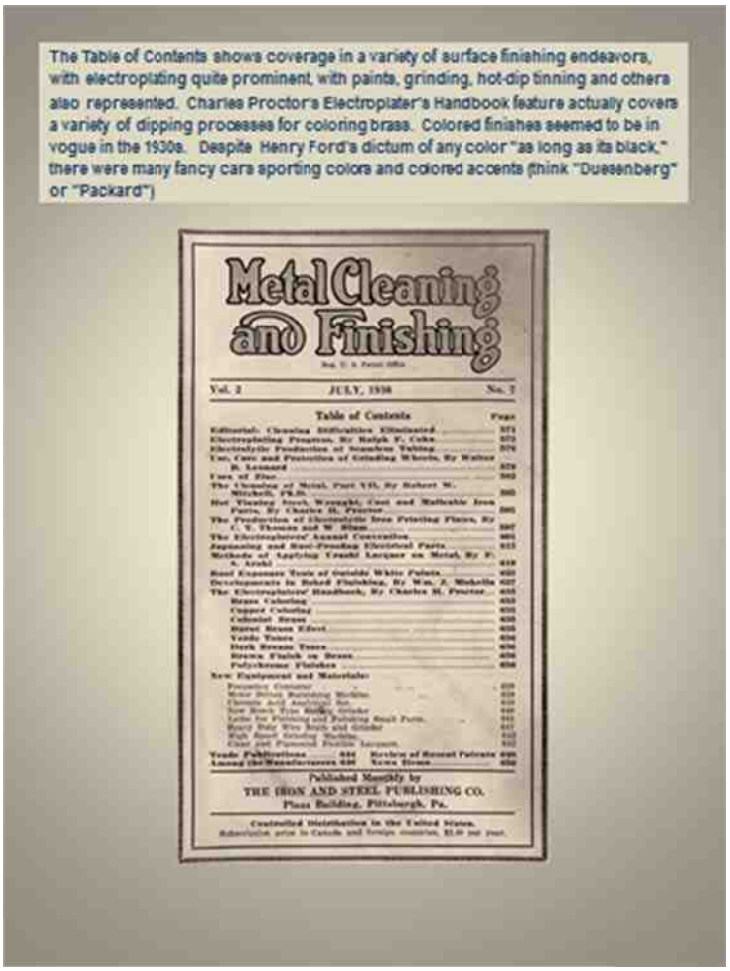


A favorite pastime of many, including this writer, is to wander about old antique malls, either locally or while traveling somewhere. One quickly learns the one person's trash is another person's treasure. One can also experience frustration at finding a childhood toy thrown out years ago selling for $100. Or a license plate that your dad threw in the garbage back in 1948 now worth a small fortune. Or a free gas station road map selling for $20! Nonetheless, exploring these places often kindles old memories of good times in one's life. They're living museums.

Evidence of the importance of the surface finishing industry is often visible in these places too. The chromium still sparkles on the legs of a Formica-topped kitchen table. Ladies' jewelry abounds, likely plated somewhere in Providence, Rhode Island or other major city in southern New England. A Ni-Cr-plated grille from a 1957 Chevy hangs on a wall, begging a few hundred dollars from a collector or car buff to take it away.

On the other hand, old magazines are everywhere, but rarely can you expect to find a collection of issues of *Products Finishing*, *Plating & Surface Finishing* or *Metal Finishing*. But it can happen. On one recent visit to a Michigan establishment, I looked through a stack of paper ephemera, and found buried therein, an ancient copy of an old trade publication, an 80 year-old issue of *Metal Cleaning and Finishing*.

The times were in the early days of the Depression, a few months after the stock market crash. Despite this, the industry seemed to be upbeat. An article on progress in electroplating talked of innovative methods, equipment and materials. A review of the 18th AES Convention in Washington, DC lauded the many papers that were presented to 300 attendees (not a bad attendance for the size of the industry in 1930).



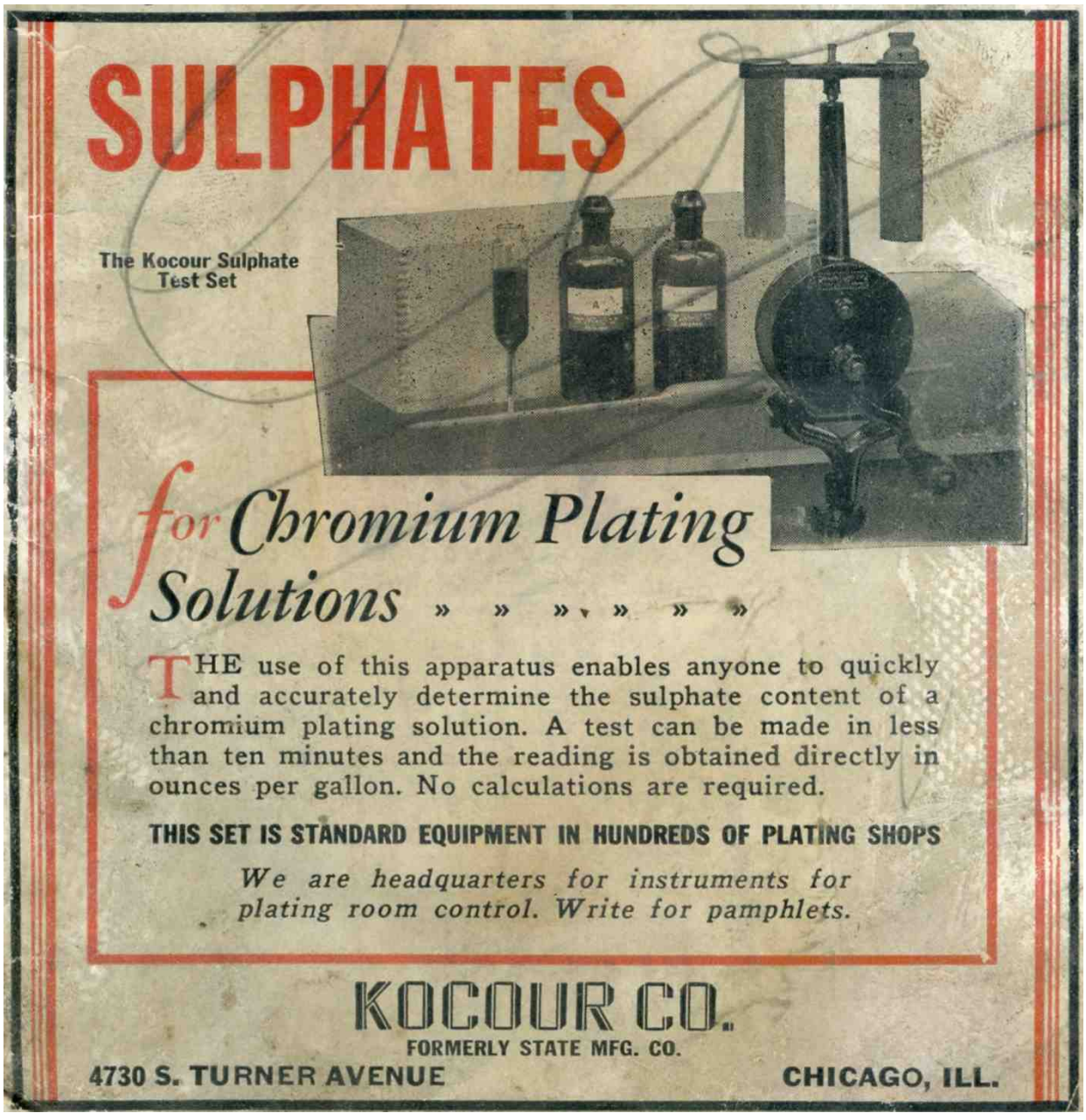
Most compelling were the advertisements contained in the journal. The collection of ads showed the state of the industry at the time. The industry was quite different than what was to come in the latter half of the 20th century, first with automotive, then later with electronics, aerospace and other critical segments emerging. Indeed, plating was a small part of a larger whole, with paints and lacquers a dominant segment of the trade.

Plating involved simple electrolytes, and game-changing research into additives, multilayers, current waveforms and nanotechnology, as well as the challenges of environmental concerns, regulations and substitutes, were off in the future.

What follows is a collection of the advertisements published in the July, 1930 issue of *Metal Cleaning and Finishing*. They capture an instant in time, when the surface finishing industry was quite different from what we find today.

Metal Cleaning and Finishing was published monthly by the Iron and Steel Publishing Company, of Pittsburgh, Pennsylvania. Charles H. Proctor, one of the founders of the American Electroplaters Society (shown lower left), was an Associate Editor of the publication. It's subscription price in 1930 was $2.00 per year. Its byline read, "*devoted to metal cleaning and finishing problems, including washing, tumbling, grinding, sand blasting, polishing, burnishing, plating, coloring, galvanizing, japanning, lacquering, vitreous enameling, etc*."

It was common practice in those days to offer advertising space on the front cover of many trade magazines. In this case, a familiar name graces the cover, a company that still serves the industry in Chicago today. Here, the determination of sulfate in a chromium bath is determined by barium precipitation, with separation and measurement achieved with a hand-cranked centrifuge. From today's perspective, one might look askance at safety issues, but in the day, this was state-of-the-art.



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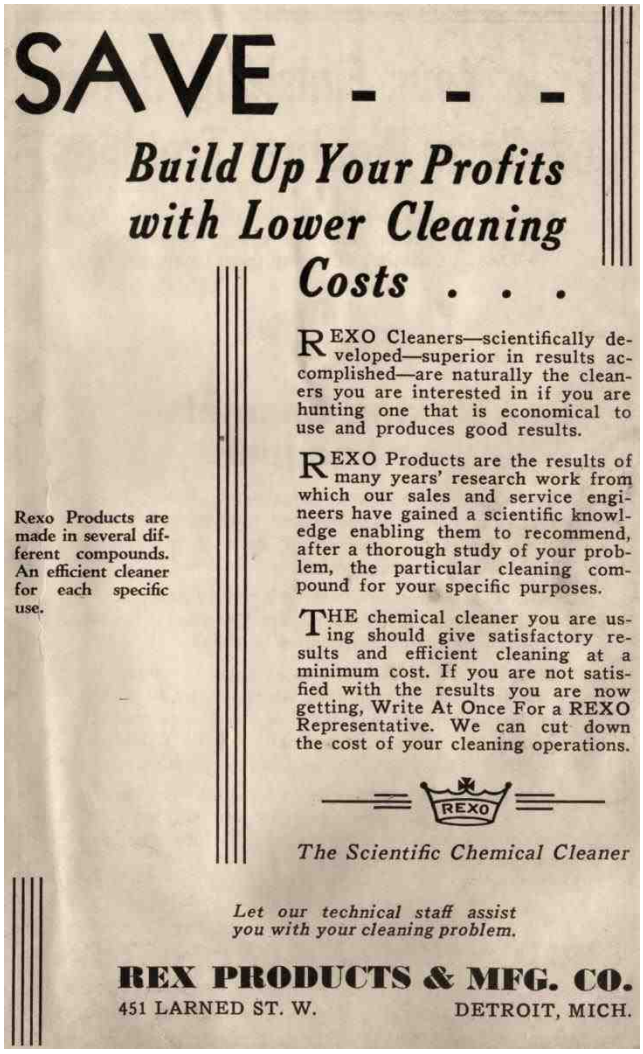
In today's surface finishing technology, substrate cleanliness is critical to performance. In looking through the ads in this issue, cleaning chemicals led the list of product categories. Surface cleanliness was no less critical in those days than it is today.



SAVE - - -

Build Up Your Profits with Lower Cleaning Costs . . .

REXO Cleaners—scientifically developed—superior in results accomplished—are naturally the cleaners you are interested in if you are hunting one that is economical to use and produces good results.

REXO Products are the results of many years' research work from which our sales and service engineers have gained a scientific knowledge enabling them to recommend, after a thorough study of your problem, the particular cleaning compound for your specific purposes.

THE chemical cleaner you are using should give satisfactory results and efficient cleaning at a minimum cost. If you are not satisfied with the results you are now getting, Write At Once For a REXO Representative. We can cut down the cost of your cleaning operations.

Rexo Products are made in several different compounds. An efficient cleaner for each specific use.

REXO

The Scientific Chemical Cleaner

Let our technical staff assist you with your cleaning problem.

REX PRODUCTS & MFG. CO.
451 LARNED ST. W. DETROIT, MICH.

Magnus CLEANERS

Another perfect plating job

A LARGE mid-western manufacturer encountered considerable trouble in plating automobile gasoline tank caps.

The trouble lay in the unsatisfactory cleaning results obtained before the plating. Various cleaners had been tested but with little success.

The job was particularly difficult. Mineral oil compound and loose rust had to be removed. The method followed was to first clean the parts in acid and then clean in a solution made from a prepared cleaner.

A Magnus Field Representative was called in. The whole problem was carefully analyzed and the correct Magnus Cleaning Material recommended.

After a thorough cleaning in the proper Magnus Product and a 15-minute plate, the work was pronounced perfect by their inspection department. Furthermore, the acid dip prior to cleaning, was eliminated.

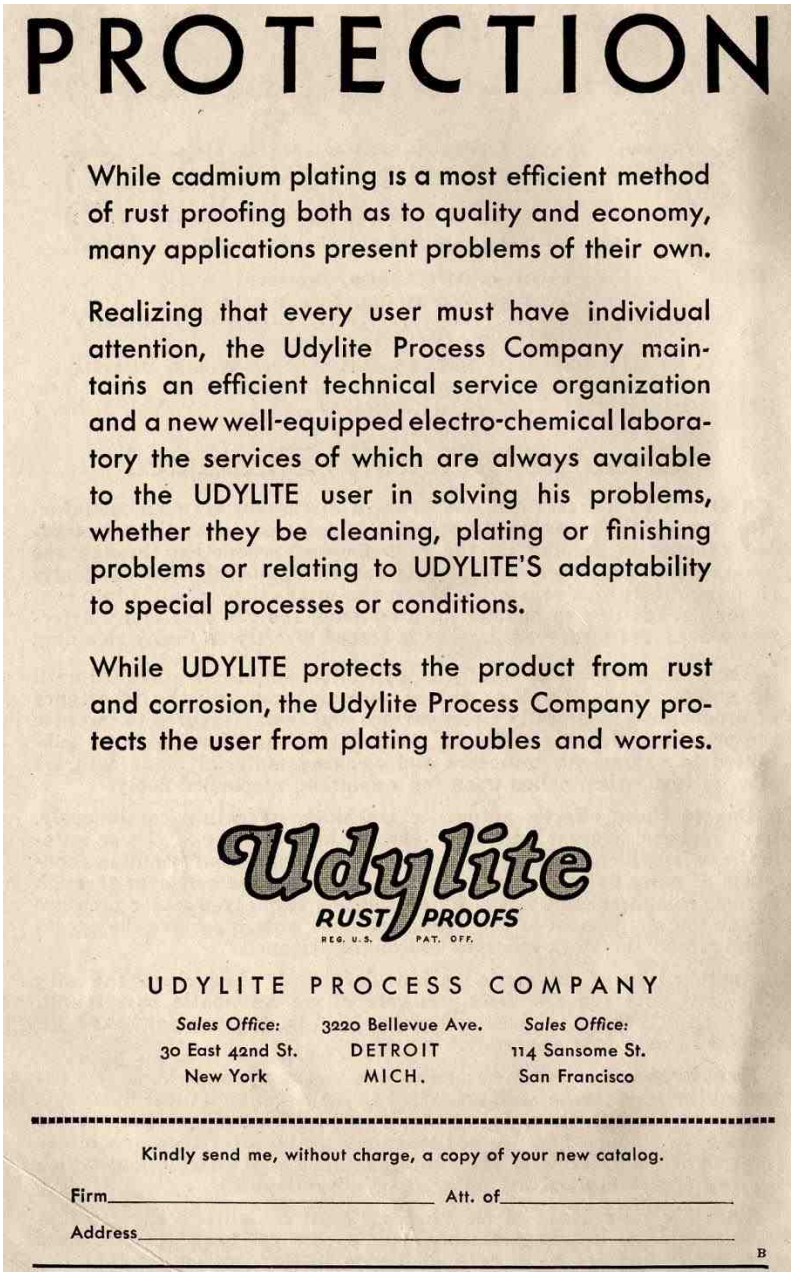
Magnus Cleaning Materials are proving an indispensable aid to perfect plating in hundreds of plants. The Magnus Laboratory, under the direction of R. W. Mitchell, Ph.D., a recognized authority on cleaning technology, is constantly at work, analyzing particular plating and cleaning problems.

When you are considering the subject of perfect plating, give a thought to perfect cleaning—it's a paramount factor.

Magnus Chemical Company
(Affiliated with DIF Corporation)
Manufacturers of Cleaning Materials
8 South Avenue Garwood, New Jersey

FOR A TROUBLE-PROOF FINISH, START AT THE BOTTOM

Familiar company supplier names were coming to the fore as the electroplating industry emerged from its early years. In the 1950s and 60s, advances in bright nickel –chromium would spur Udylite's growth to the point where they once billed themselves as "the world's largest plating supplier." The technology contributed by this and other major suppliers was pivotal to the industry. The name lives on as its heritage is now part of Enthone – Alent plc.



PROTECTION

While cadmium plating is a most efficient method of rust proofing both as to quality and economy, many applications present problems of their own.

Realizing that every user must have individual attention, the Udylite Process Company maintains an efficient technical service organization and a new well-equipped electro-chemical laboratory the services of which are always available to the UDYLITE user in solving his problems, whether they be cleaning, plating or finishing problems or relating to UDYLITE'S adaptability to special processes or conditions.

While UDYLITE protects the product from rust and corrosion, the Udylite Process Company protects the user from plating troubles and worries.

Udylite RUST PROOFS REG. U.S. PAT. OFF.

UDYLITE PROCESS COMPANY

Sales Office:	3220 Bellevue Ave.	Sales Office:
30 East 42nd St.	DETROIT	114 Sansome St.
New York	MICH.	San Francisco

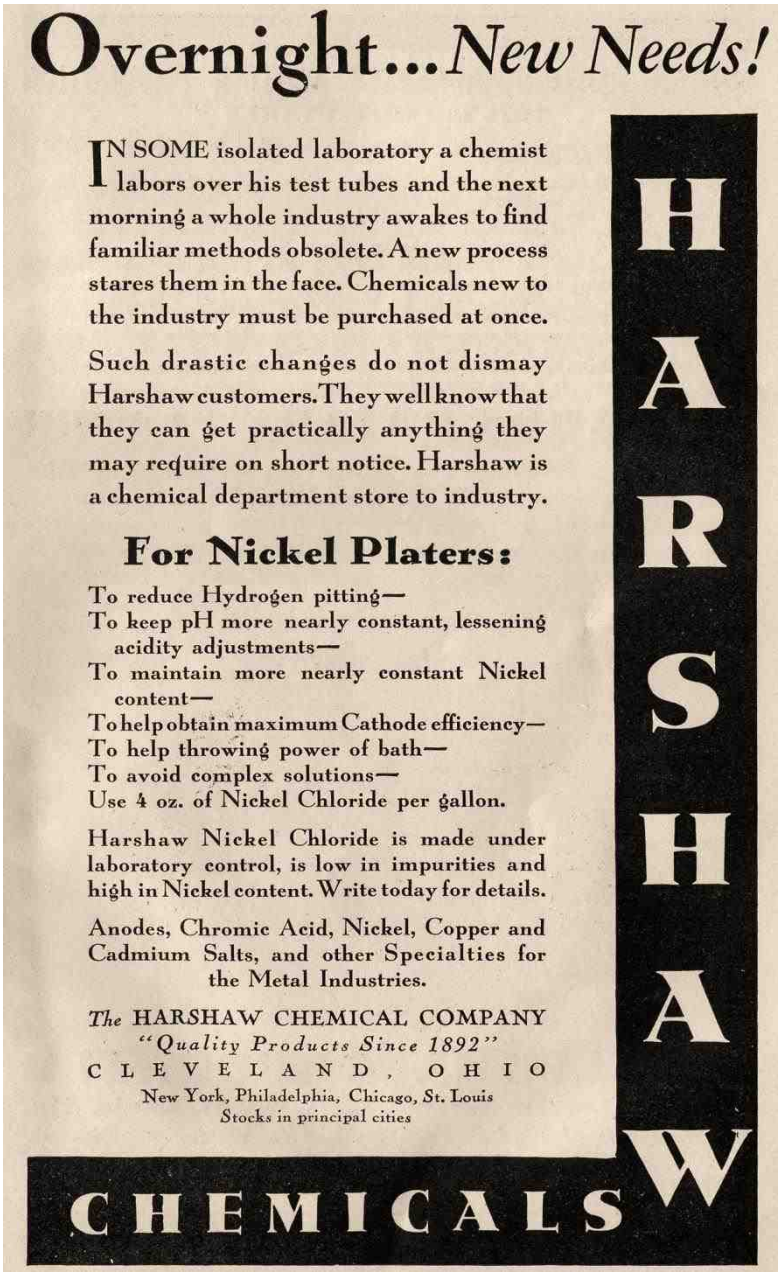
Kindly send me, without charge, a copy of your new catalog.

Firm_____ Att. of_____

Address_____

B

Another venerable name in the supplier ranks was Harshaw. This ad shows that Harshaw was already looking to innovations in the realm of nickel plating. The company made many contributions to modern plating technology. As with Udylite, the heritage of Harshaw lives on today with the global reach of Atotech.



Overnight...*New Needs!*

IN SOME isolated laboratory a chemist labors over his test tubes and the next morning a whole industry awakes to find familiar methods obsolete. A new process stares them in the face. Chemicals new to the industry must be purchased at once.

Such drastic changes do not dismay Harshaw customers. They well know that they can get practically anything they may require on short notice. Harshaw is a chemical department store to industry.

For Nickel Platers:

To reduce Hydrogen pitting—
To keep pH more nearly constant, lessening acidity adjustments—
To maintain more nearly constant Nickel content—
To help obtain maximum Cathode efficiency—
To help throwing power of bath—
To avoid complex solutions—
Use 4 oz. of Nickel Chloride per gallon.

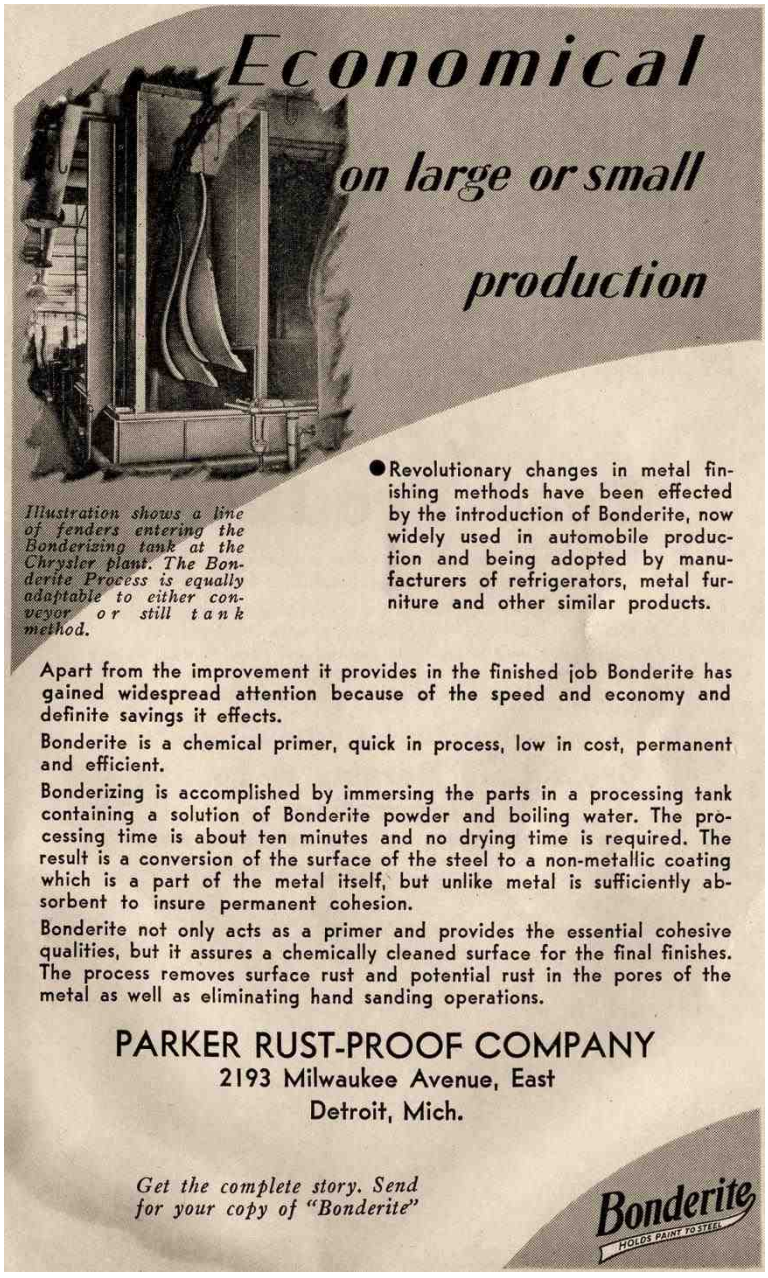
Harshaw Nickel Chloride is made under laboratory control, is low in impurities and high in Nickel content. Write today for details.

Anodes, Chromic Acid, Nickel, Copper and Cadmium Salts, and other Specialties for the Metal Industries.

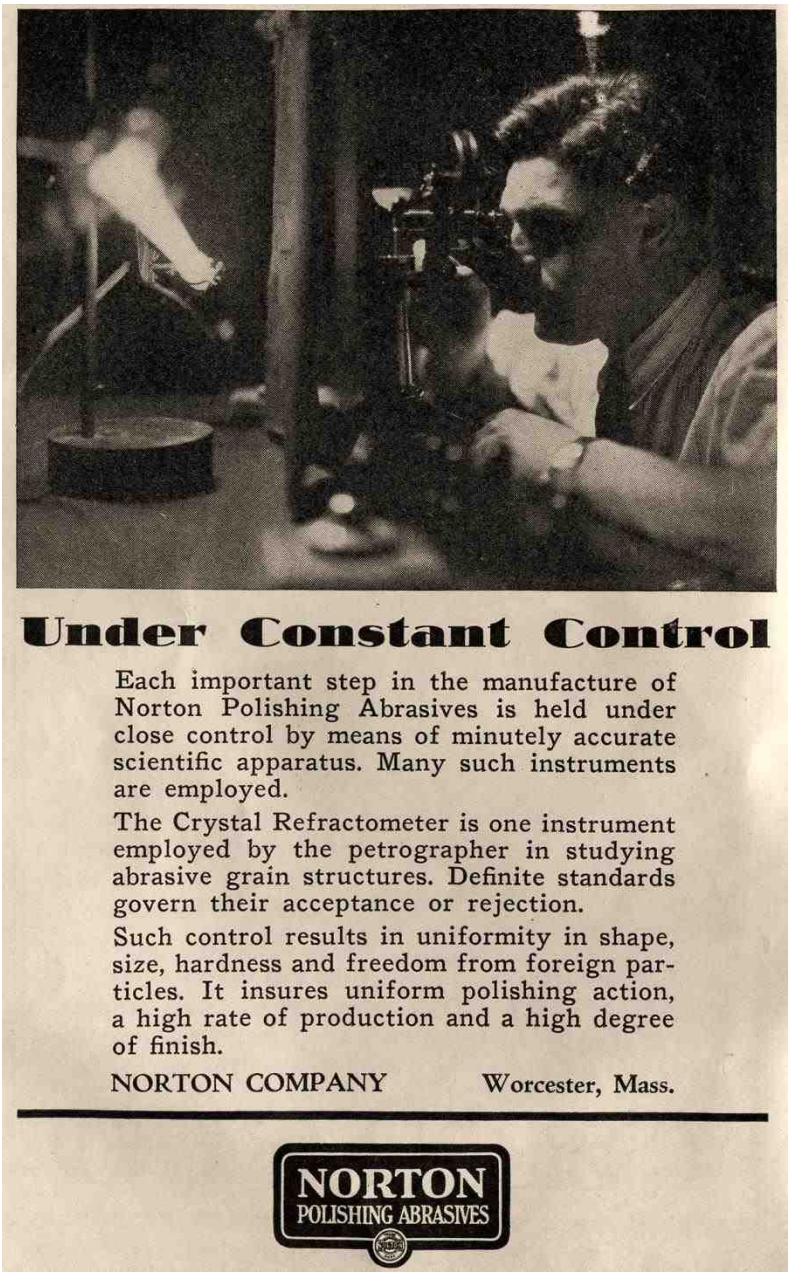
The HARSHAW CHEMICAL COMPANY
"Quality Products Since 1892"
CLEVELAND, OHIO
New York, Philadelphia, Chicago, St. Louis
Stocks in principal cities

HARSHAW CHEMICALS

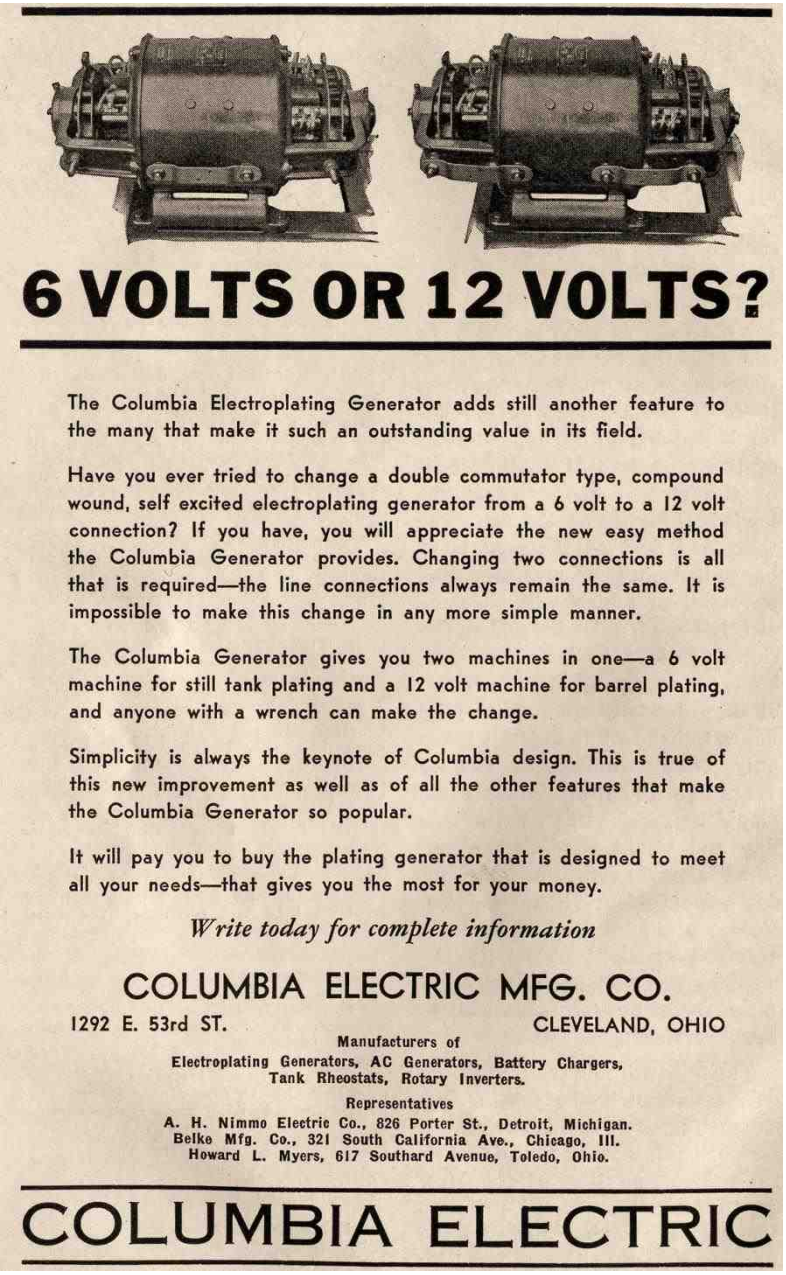
Just as the trade name “Kodak” became synonymous with cameras in the 20th century (at least until import competition and the digital revolution arrived), “parkerizing” and “bonderizing” were synomous with phosphate conversion treatments for surface preparation for paints. The Parker Rust-Proof Company was a going concern early in the game.



Polishing and buffing was an essential operation in any metal finishing operation. The finished surface was only as good as the substrate surface, and the polishing abrasives produced by the Norton Company were well known to practitioners in the industry.



Motor-generators were the technology of choice for plating in the 1930s. Large electric motors were used to drive mechanical DC generators. It would be twenty to thirty more years before rectifier technology reached the point of supplanting motor-generators in the industry.



6 VOLTS OR 12 VOLTS?

The Columbia Electroplating Generator adds still another feature to the many that make it such an outstanding value in its field.

Have you ever tried to change a double commutator type, compound wound, self excited electroplating generator from a 6 volt to a 12 volt connection? If you have, you will appreciate the new easy method the Columbia Generator provides. Changing two connections is all that is required—the line connections always remain the same. It is impossible to make this change in any more simple manner.

The Columbia Generator gives you two machines in one—a 6 volt machine for still tank plating and a 12 volt machine for barrel plating, and anyone with a wrench can make the change.

Simplicity is always the keynote of Columbia design. This is true of this new improvement as well as of all the other features that make the Columbia Generator so popular.

It will pay you to buy the plating generator that is designed to meet all your needs—that gives you the most for your money.

Write today for complete information

COLUMBIA ELECTRIC MFG. CO.

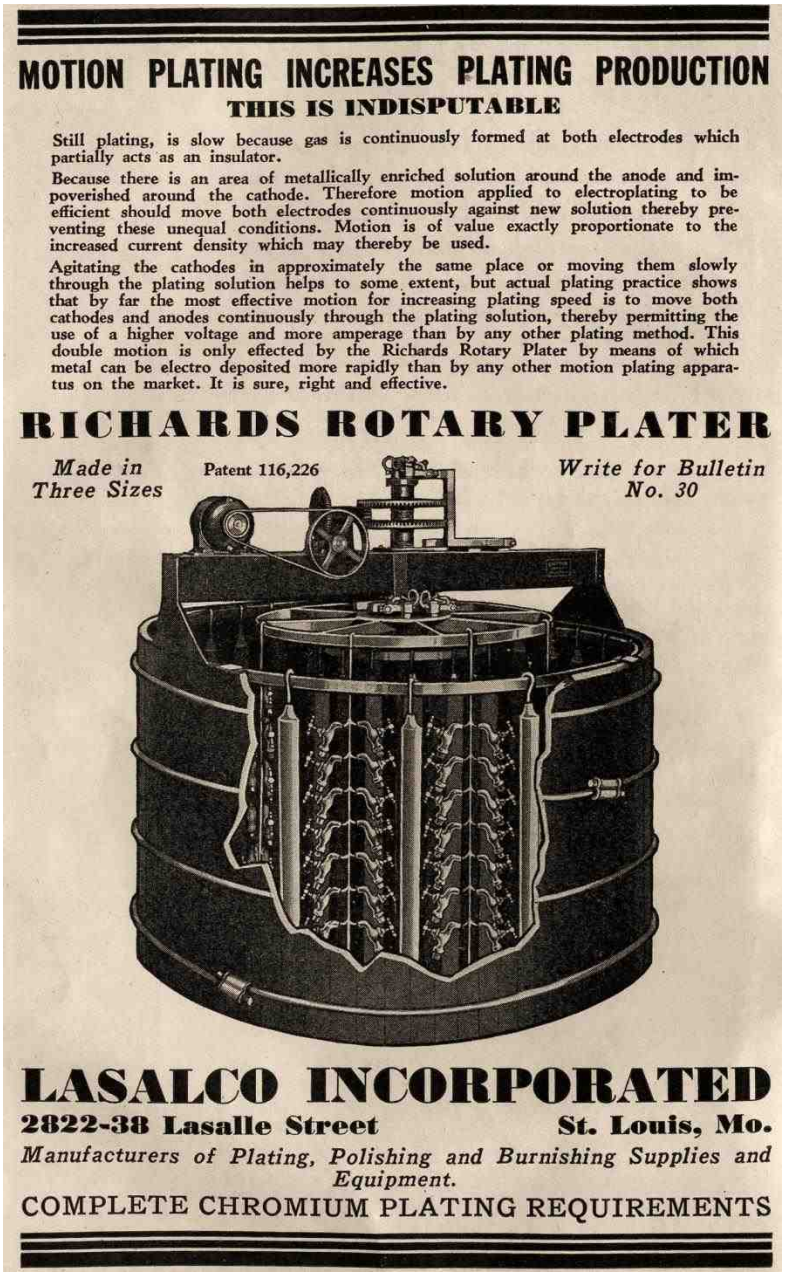
1292 E. 53rd ST. CLEVELAND, OHIO

Manufacturers of
Electroplating Generators, AC Generators, Battery Chargers,
Tank Rheostats, Rotary Inverters.

Representatives
A. H. Nimmo Electric Co., 826 Porter St., Detroit, Michigan.
Belke Mfg. Co., 321 South California Ave., Chicago, Ill.
Howard L. Myers, 617 Southard Avenue, Toledo, Ohio.

COLUMBIA ELECTRIC

In the 1930s, cartoonist Rube Goldberg entertained folks with his drawings of overly complicated devices used to perform absurdly simple tasks. The ad below suggests that the plating industry was not immune to Mr. Goldberg's influence. This rotary plater was intended to provide smooth mechanical agitation to prevent pitting. One wonders how much debris fell into the solution from the moving parts hanging overhead. Maybe they should have rotated the tank!



MOTION PLATING INCREASES PLATING PRODUCTION

THIS IS INDISPUTABLE

Still plating, is slow because gas is continuously formed at both electrodes which partially acts as an insulator.

Because there is an area of metallically enriched solution around the anode and impoverished around the cathode. Therefore motion applied to electroplating to be efficient should move both electrodes continuously against new solution thereby preventing these unequal conditions. Motion is of value exactly proportionate to the increased current density which may thereby be used.

Agitating the cathodes in approximately the same place or moving them slowly through the plating solution helps to some extent, but actual plating practice shows that by far the most effective motion for increasing plating speed is to move both cathodes and anodes continuously through the plating solution, thereby permitting the use of a higher voltage and more amperage than by any other plating method. This double motion is only effected by the Richards Rotary Plater by means of which metal can be electro deposited more rapidly than by any other motion plating apparatus on the market. It is sure, right and effective.

RICHARDS ROTARY PLATER

Made in Three Sizes

Patent 116,226

Write for Bulletin No. 30

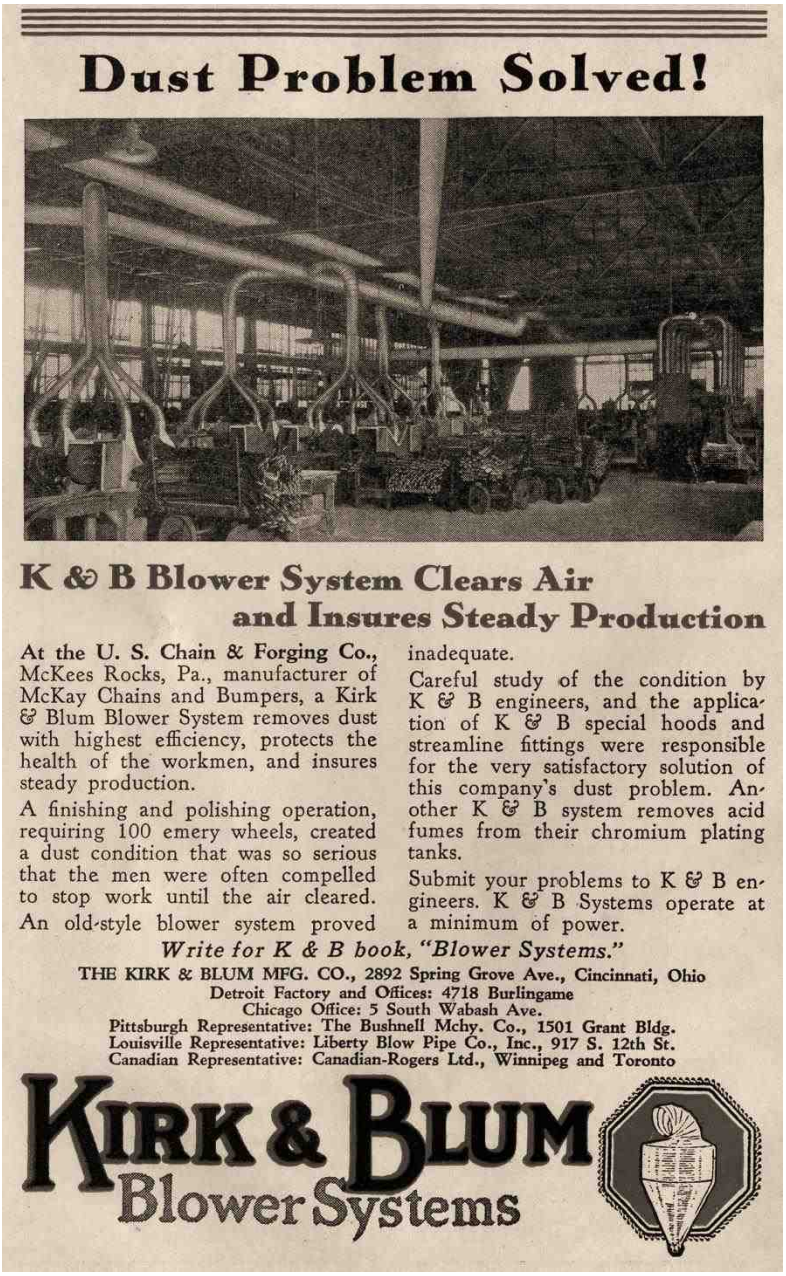
LASALCO INCORPORATED

2822-38 Lasalle Street **St. Louis, Mo.**

Manufacturers of Plating, Polishing and Burnishing Supplies and Equipment.

COMPLETE CHROMIUM PLATING REQUIREMENTS

Advances in plating equipment was no less important as the advances in plating chemistry. The handling of chemical fumes, particulates and simply adequate ventilation was essential to the health of the workers. Engineers specialized in equipment technology were on hand to answer these needs.



Dust Problem Solved!

K & B Blower System Clears Air and Insures Steady Production

At the U. S. Chain & Forging Co., McKees Rocks, Pa., manufacturer of McKay Chains and Bumpers, a Kirk & Blum Blower System removes dust with highest efficiency, protects the health of the workmen, and insures steady production.

A finishing and polishing operation, requiring 100 emery wheels, created a dust condition that was so serious that the men were often compelled to stop work until the air cleared. An old-style blower system proved inadequate.

Careful study of the condition by K & B engineers, and the application of K & B special hoods and streamline fittings were responsible for the very satisfactory solution of this company's dust problem. Another K & B system removes acid fumes from their chromium plating tanks.

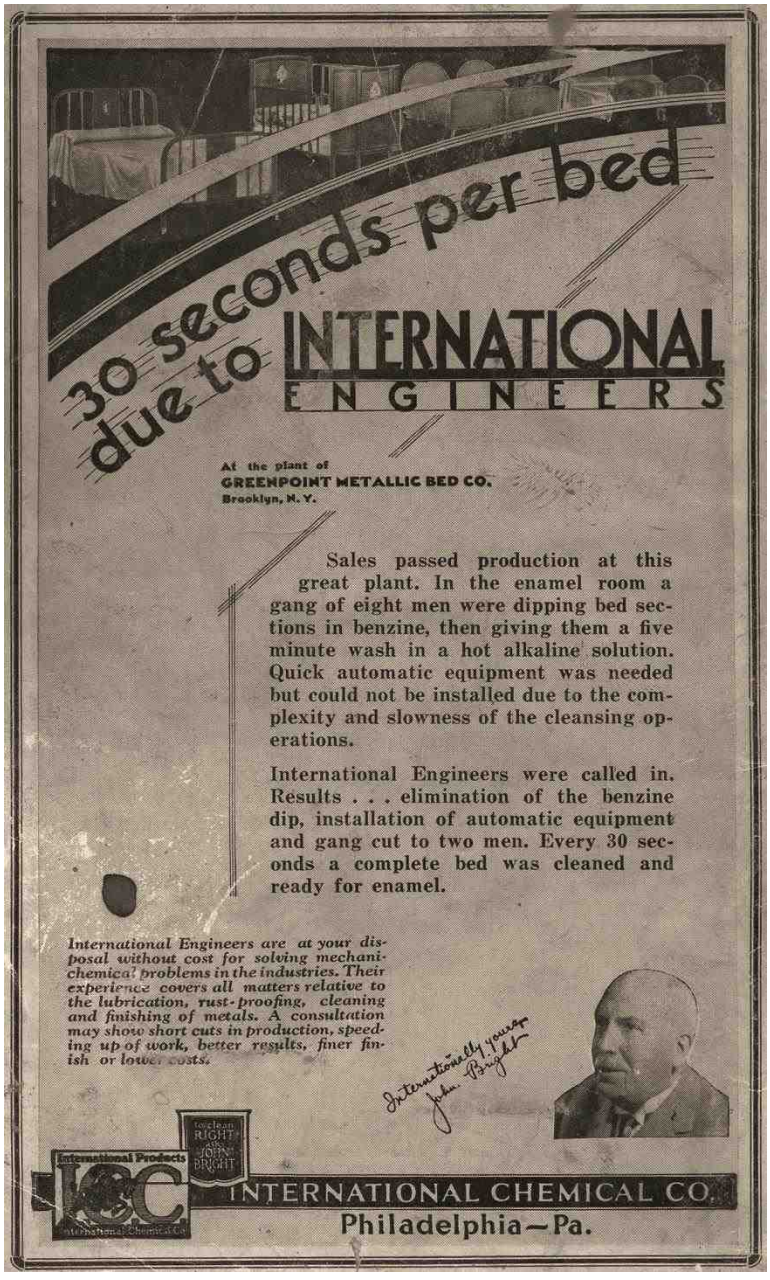
Submit your problems to K & B engineers. K & B Systems operate at a minimum of power.

Write for K & B book, "Blower Systems."

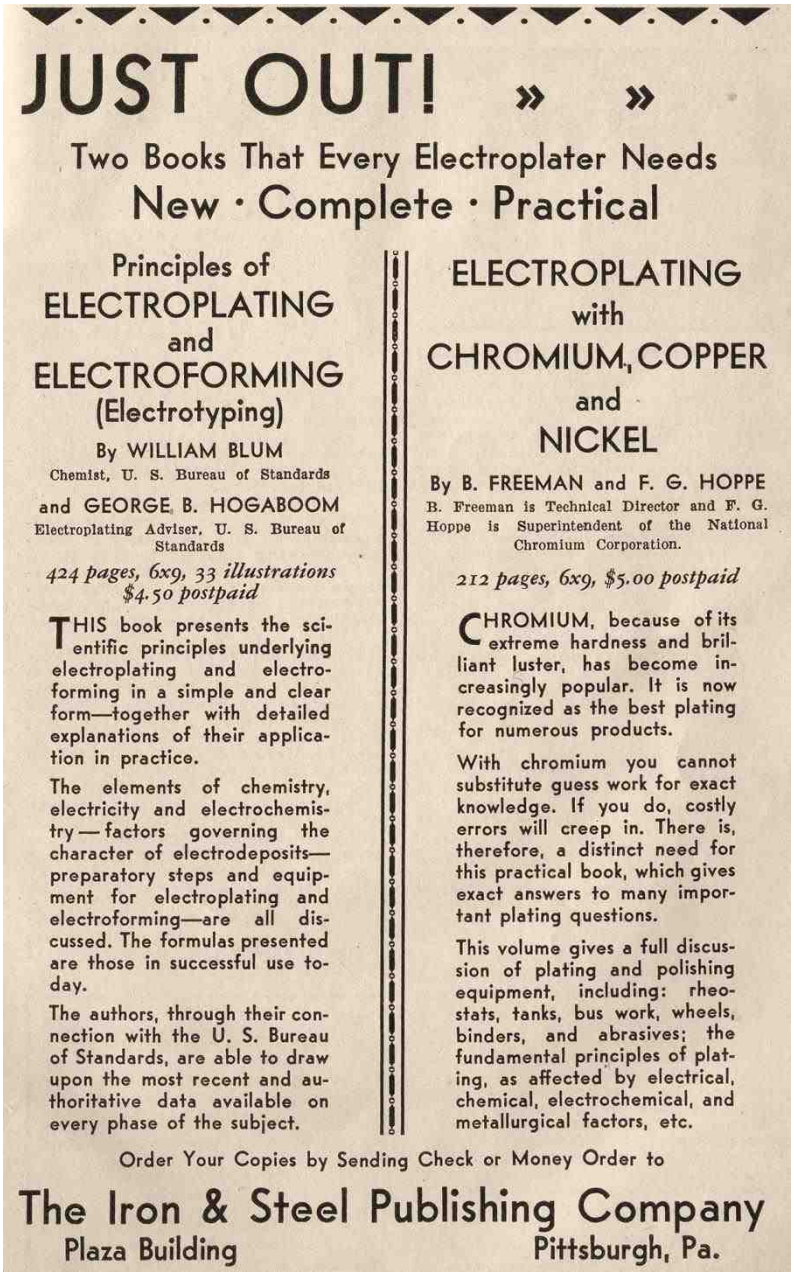
THE KIRK & BLUM MFG. CO., 2892 Spring Grove Ave., Cincinnati, Ohio
Detroit Factory and Offices: 4718 Burlingame
Chicago Office: 5 South Wabash Ave.
Pittsburgh Representative: The Bushnell Mchy. Co., 1501 Grant Bldg.
Louisville Representative: Liberty Blow Pipe Co., Inc., 917 S. 12th St.
Canadian Representative: Canadian-Rogers Ltd., Winnipeg and Toronto

KIRK & BLUM Blower Systems

This ad is another example of the emergence of engineering expertise and the capability to design and build entire metal finishing systems. The application shown involves the enameling of bed frames for hospital and domestic use. Structural and chemical expertise combined to increase productivity, as well as assure worker safety, with the elimination of a hazardous benzene dip.



This ad was one of the most interesting found in this particular edition of Metal Cleaning and Finishing. The book Principles of Electroplating and Electroforming, by William Blum and George Hogaboom has been considered to be "the Plater's Bible" for decades, and still serves as a treasured reference for many. The importance of this book to the industry cannot be overemphasized. It is therefore rather noteworthy that we have here an ad announcing its original publication in 1930.



JUST OUT! » »

Two Books That Every Electroplater Needs

New · Complete · Practical

Principles of ELECTROPLATING and ELECTROFORMING (Electrotyping)

By WILLIAM BLUM
Chemist, U. S. Bureau of Standards

and GEORGE B. HOGABOOM
Electroplating Adviser, U. S. Bureau of Standards

424 pages, 6x9, 33 illustrations
$4.50 postpaid

THIS book presents the scientific principles underlying electroplating and electroforming in a simple and clear form—together with detailed explanations of their application in practice.

The elements of chemistry, electricity and electrochemistry—factors governing the character of electrodeposits—preparatory steps and equipment for electroplating and electroforming—are all discussed. The formulas presented are those in successful use today.

The authors, through their connection with the U. S. Bureau of Standards, are able to draw upon the most recent and authoritative data available on every phase of the subject.

ELECTROPLATING with CHROMIUM, COPPER and NICKEL

By B. FREEMAN and F. G. HOPPE
B. Freeman is Technical Director and F. G. Hoppe is Superintendent of the National Chromium Corporation.

212 pages, 6x9, $5.00 postpaid

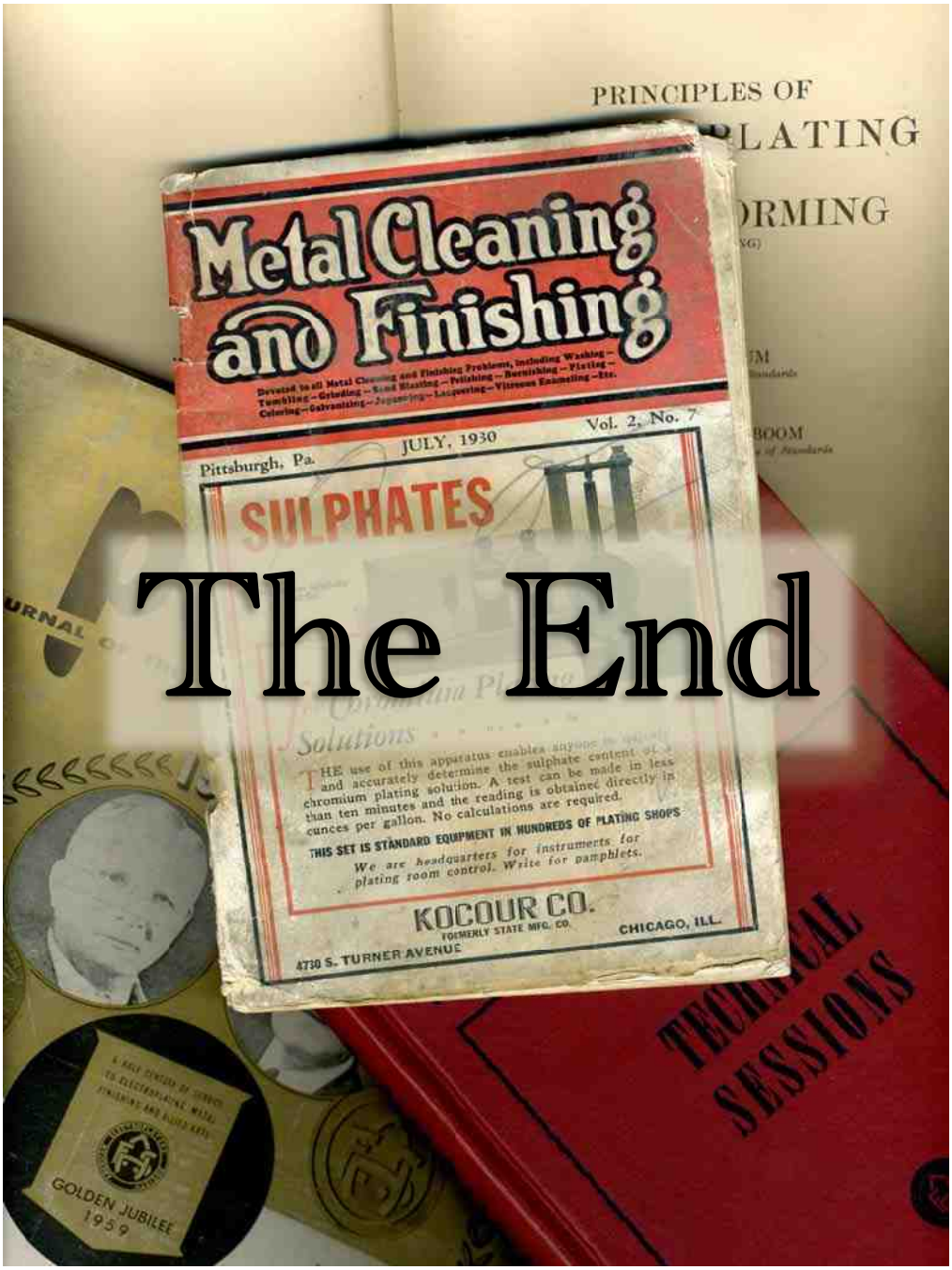
CHROMIUM, because of its extreme hardness and brilliant luster, has become increasingly popular. It is now recognized as the best plating for numerous products.

With chromium you cannot substitute guess work for exact knowledge. If you do, costly errors will creep in. There is, therefore, a distinct need for this practical book, which gives exact answers to many important plating questions.

This volume gives a full discussion of plating and polishing equipment, including: rheostats, tanks, bus work, wheels, binders, and abrasives; the fundamental principles of plating, as affected by electrical, chemical, electrochemical, and metallurgical factors, etc.

Order Your Copies by Sending Check or Money Order to

The Iron & Steel Publishing Company
Plaza Building Pittsburgh, Pa.


PRINCIPLES OF
Metal Cleaning and Finishing
Pittsburgh, Pa. JULY, 1930 Vol. 2, No. 7
SULPHATES
Solutions
KOCOUR CO.
FORMERLY STATE MFG. CO.
4730 S. TURNER AVENUE CHICAGO, ILL.
GOLDEN JUBILEE
1959
TECHNICAL SESSIONS
The End