

LEAD INDUSTRIES ASSOCIATION

292 MADISON AVENUE

NEW YORK 17, N. Y.

May 24, 1960

SUBJECT: BATTERY-POWERED
INDUSTRIAL TRUCKS

To Members of the Lead Industries Association:

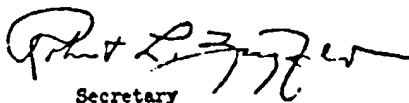
We are enclosing a copy of the current issue of the "New York Purchasing Review" published by the Purchasing Agents Association of New York. In it you will find bound our complete, recently issued brochure setting forth the advantages of storage-battery-powered industrial trucks. The magazine has a circulation of 5,000. The only cost to LIA was a little over \$300 to supply the 5,000 copies of the brochure, which occupies 12 pages in the magazine valued at over \$2,000 at the current advertising rate. We do not believe that the magazine would have included this brochure were it not for the high quality of the treatment accorded the subject.

This brings total circulation of the brochure to approximately 61,000 broken down as follows:

By Lead Industries Association.	10,000
By manufacturers of lead-acid industrial batteries	38,000
By electric utility companies	8,000
"New York Purchasing Review".	5,000

In addition, through the sale of copies to others as indicated above, LIA has recovered part of its original \$2,500 budget appropriation.

Very truly yours,


Secretary

Enc.

100-1000-1000

MAY • 1960

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May Meeting
Bulletin Pg. 17

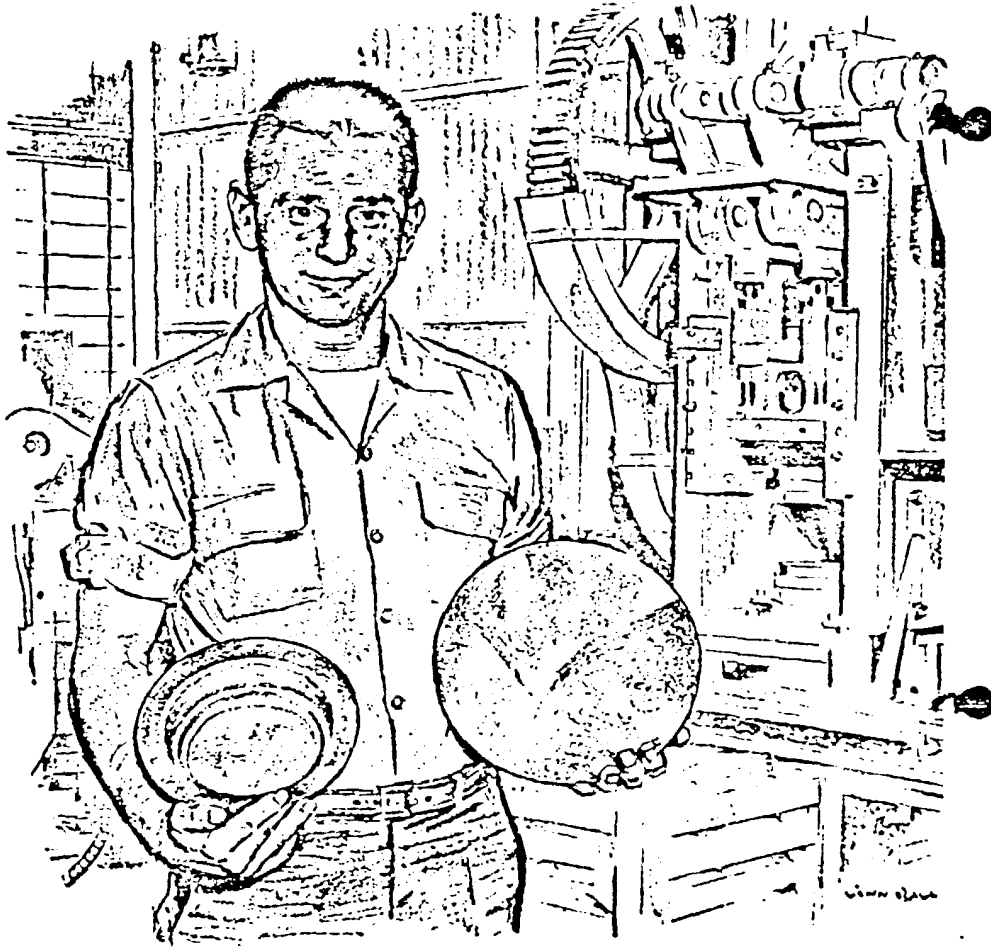
Materials You Buy
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Undeveloped
Purchasing
Gold Mines Pg. 45



All roads lead to the 45th International N.A.P.A. Convention in Los Angeles, May 22-25

THE PURCHASING AGENTS ASSOCIATION OF NEW YORK, INC.



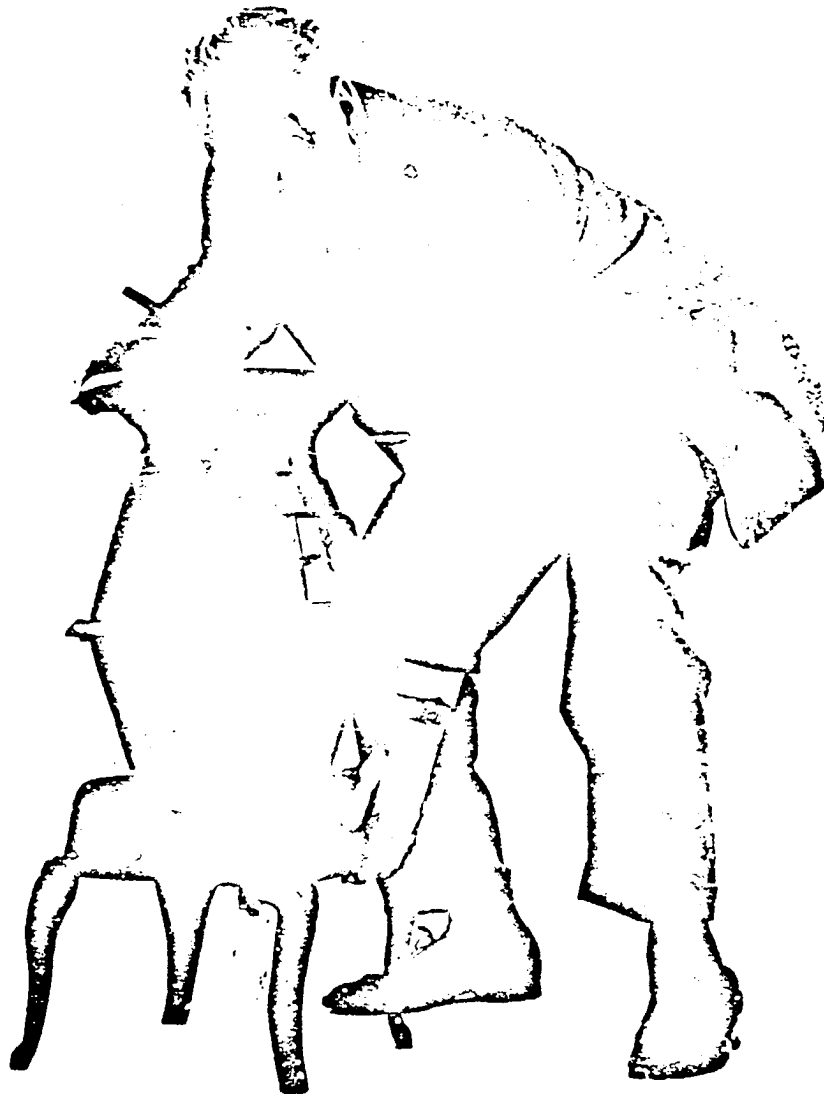
**"We have learned to rely on Sharon for
top quality Stainless Steels" —** JOHN SHRAGG, Foreman of the
Press Dept., Ekco Products Company

"Modern utensil design calls for real workable stainless steels," says John Shragg, press room foreman at Ekco Products Company's Mansfield, Ohio, plant. "For consistently fine quality," he continues, "we have found we can always rely on the Sharon Steel Corporation, Sharon, Pa."



SHARON *Quality* **STEEL**





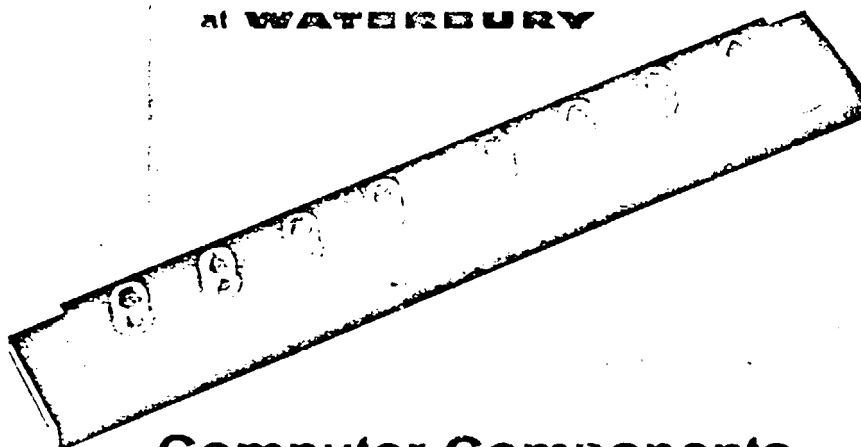
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Associated Purchasing Publications

Vol. 5, No. 7

May, 1960

new york PURCHASING REVIEW

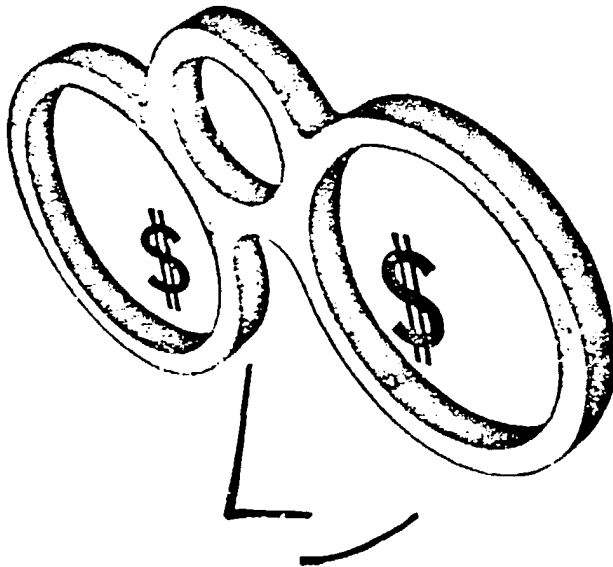
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Now ... Look to Lukens For Steel Shape Savings



Looks like a steel freight savings of \$1663.47

The owl-eyed steel shape pictured above is a 3 1/2" gage shackie plate. It weighs 483 lbs. and was flame cut to special tolerances in one of Lukens' fabricating shops. A customer ordering 50 of these from ... 600 miles away would pay a freight charge of only \$493.89 on the pieces.

However, if the same customer decided to flame cut the parts himself, 106,800 lbs. of 3 1/2" gage steel plate stock would be required. Cost of shipment ... \$2157.36. Extra cost to the customer on freight alone ... \$1663.47. Plus ... the

expense of his equipment investment ... the tie-up of his capital in plate stock ... the cost of handling 75% scrap ... the problem of shop spoilage.

Moral: Don't pay freight on scrap. Contact Lukens for Steel Plate Shapes Service ... flame cutting, shearing, blanking, bending, pressing, welding ... of carbon and alloy plate produced on our own rolling mills. Call or write Fabrication Building, Lukens Steel Company, Coatesville, Pennsylvania.

LUKENS STEEL COMPANY
BB-50 Fabrication Building
Coatesville, Pa.

Please send me your free booklet on Steel Plate Shapes.

Name _____

Company _____

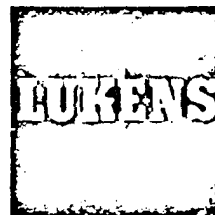
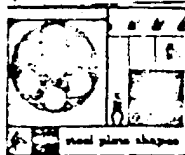
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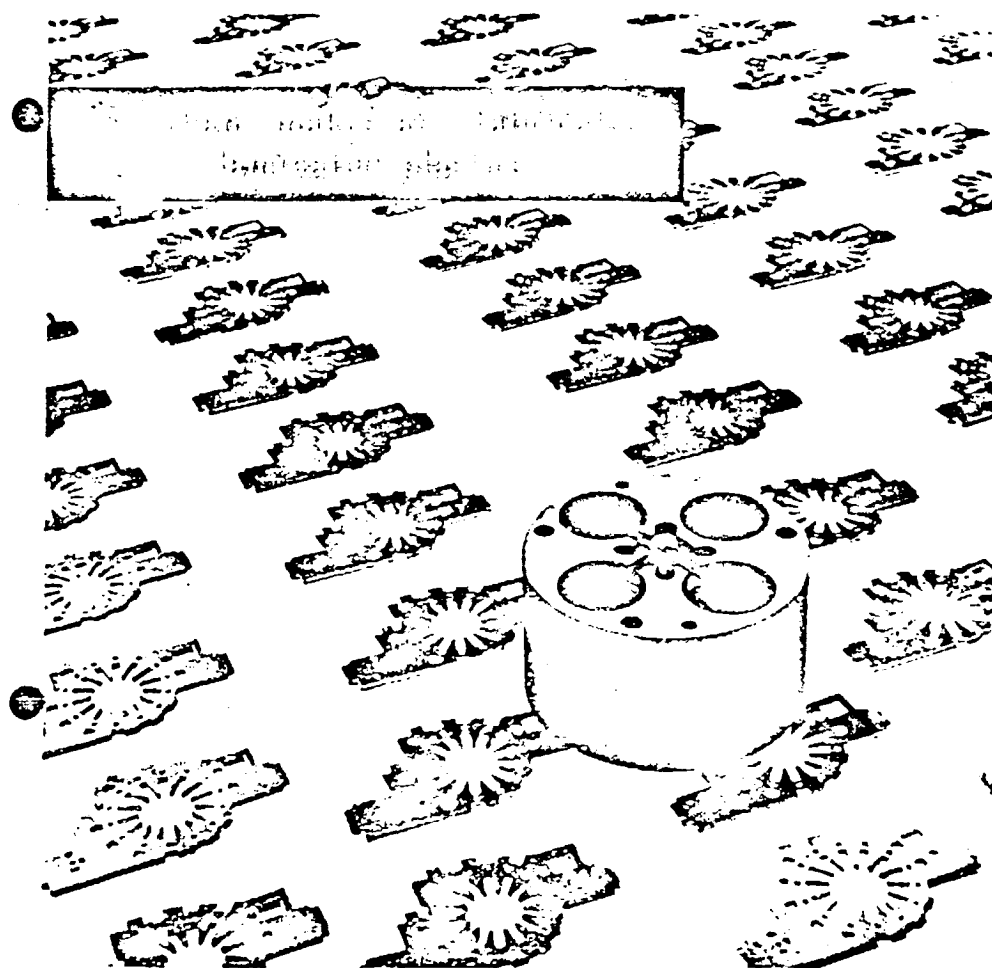
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N. Y. PURCHASING REVIEW



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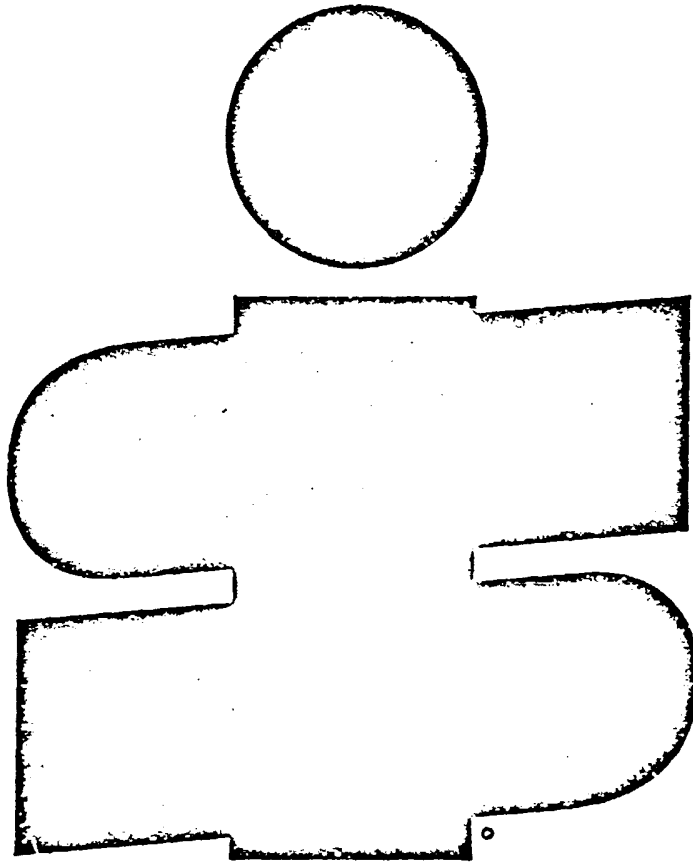
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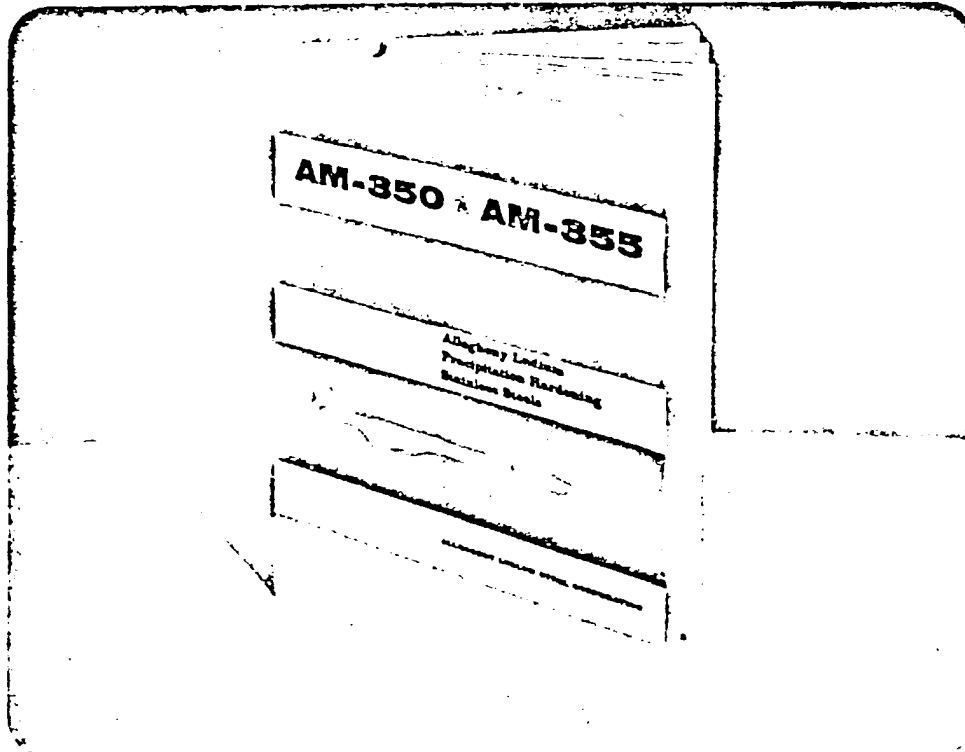


A TRANSPORTATION SYSTEM

Circle 10 on Reader Service Card

May, 1960

Experience—the added alloy in Allegheny Stainless



New booklet on A-L's precipitation-hardening stainless steels, AM-350 and AM-355

A tool for anyone interested in high strength-to-weight metals

In this technical booklet, you get the facts on Allegheny Ludlum's precipitation hardening stainless steels, AM-350 and AM-355, metals developed for space age requirements.

AM-350 and AM-355 combine these unusual qualities. They are easy to fabricate. Have high strength-to-weight ratios at room and elevated temperatures

combined with excellent resistance to corrosion.

The physical and mechanical properties of the two metals are described in 33 charts and tables. Included are heat-treatment and fabrication data, eight photomicrographs and a section on corrosion resistance with representative values in selected environments.

It's jam-packed with data. For your free copy, see your A-L representative or write *Allegheny Ludlum Steel Corporation, Oliver Building, Pittsburgh 22, Pa. Address Dept. RP-3.*

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ALLEGHENY LUDLUM



N. Y. PURCHASING REVIEW

The President's Review



G. W. Baker

Are You Guilty?

"For want of a pen, it would appear, many American businessmen are losing out on potential sales to buyers abroad." Thus reads the lead paragraph in the front page editorial of the April 25th *Journal of Commerce*. The article goes on to point out that the Commerce Department gets complaints daily about the failure of American firms to even acknowledge correspondence from companies abroad. As a result many companies are losing out on potentially profitable transactions.

This failure to communicate is not only an inexcusable discourtesy, but also it is plain stupidity when it involves potentially profitable business transactions. Even worse, when it affects relationships with citizens abroad (most of whom are more sensitive than we are to the social and business amenities) it can have a profound effect on their opinions of the United States and in turn seriously harm our efforts toward harmony and peace in the world.

Although the *Journal of Commerce* article seemed to be aimed at sales executives, we purchasing officers should not be smug. It is quite possible that many of us have been equally guilty in the course of our investigations into purchasing foreign goods and equipment. In any event we should re-examine our own practices and make sure that in the future we do not neglect the important function of communicating.

This, of course, applies to all our dealings—with all of our vendors. It is very easy to put aside a communication from a vendor with the mental note that, "I'll discuss it with him the next time he calls." Far too often, the letter is completely forgotten—and perhaps with it an idea or an item that might have saved us money or improved our operation. And how often has it happened that our failure to respond to a letter or a phone call has resulted in an idea or a new item getting away from us into the hands of a more alert competitor?

One of our most important management responsibilities is the development and constant maintenance of effective communication of ideas and information, whatever the form, with our vendors, our employees and our colleagues in other units of the company. Let's make sure we are doing the job properly and completely.

Sincerely,

President

IPCO

SUMMER SAFETY

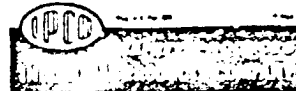
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"Jep" Recalls

Some historical notes on the early days of the
Purchasing Agents Association of New York

By James H. Leonard

EXECUTIVE SECRETARY—1920-57



JAMES H. LEONARD

Restrictive Purchasing Laws

Older purchasing agents will recall a pair of Federal laws affecting the job of buying and selling that engendered much confusion for PAs and vendors. One, the Robinson-Patman Act of 1936, amended and strengthened the price discrimination phases of the Clayton Act; the other, the Miller-Tydings amendment to the Sherman and Federal Trade Commission Act, led to the fair-trade laws.

The Robinson-Patman Act made price discrimination illegal. It prohibited the buyer from knowingly inducing or receiving a discriminatory price which the seller, on the other hand, was prohibited from giving him. Previously such price discrimination was considered only unfair practice.

For seventeen years the courts and administrative agencies, as well as the buyers and sellers, had difficulty agreeing on an interpretation of what constituted unlawful discrimination. At the 1953 convention of the National Association of Purchasing Agents, Secretary George A. Benard expressed concern that real competition might be affected through "fear of getting entangled in discrimination controversies." Shortly after his remark, the Supreme Court decided in favor of the Automatic Canteen Company in a case charging that the company had "knowingly induced and received discriminatory prices."

The decision was characterized by a prominent antitrust lawyer as a "red letter day for purchasing agents" for it put the Supreme Court on record that it would not

read the ambiguous language of the Robinson-Patman Act "as putting the buyer at his peril whenever he engages in price bargaining."

A noted attorney, speaking at the Southwest Purchasing Conference in Tulsa, said: "The decision in the Automatic Canteen case stopped in its tracks the efforts of the Federal Trade Commission to fasten upon buyers and particularly upon professional, expert and knowledgeable purchasing agents, a legal strait jacket that threatened both effective competition and the usefulness of the purchasing agent in our industrial society."

The Canteen court opinion laid down two basic principles. "First, that a buyer does not violate the law unless he induces or receives a discriminatory price that is in fact illegal for the seller to give and which the buyer knew or should have known was illegal."

"Second, that a buyer cannot be saddled with the burden of defending the case merely by the Federal Trade Commission's proving that he knowingly took a lower price. Before the buyer can be made to defend, the Commission must first demonstrate that he either knew, or as a reasonably prudent businessman should have known, that under all of the circumstances there was no likelihood that the lower price to him could be cost justified."

The outcome of the Canteen case seemed to have stopped the flood of Federal regulations of the Thirties many of which hampered the purchasing agent if carried out to the letter.

When Cotton Was King

Before the advent of the synthetic fibres of recent years, cotton seems to have been as troublesome as steam coal for the purchasing agent. One of our New York members in the Twenties who bought large quantities of cotton for a group of mills — always with a sharp eye on crop conditions—became quite cynical about the commodity. He bought on the basis of the cost of raw cotton plus cost of construction of the fabric. He dabbled a bit with futures.

Under the glass top of his desk was this printed comment: "Cotton is an overcoat of a seed planted and grown in Southern states to keep the producer broke and the buyer crazy. The fibre varies in color and length and the man who can guess nearest the length is called a cotton man by the public, a damned fool by the farmer and a poor businessman by his creditors. The price of cotton is fixed in New York and goes up when you have sold and down when you have bought."

On one occasion this member, in answer to an inquiry, gave us the following advice: "Some think it will go up, some think it will go down, whatever you do will be wrong. Act at once."

Some Old Gags

During the years between World Wars, when industry alternated between a *buyer's market* and a *seller's market*, corny jokes in the trade publications reflected the economic situation of the day.

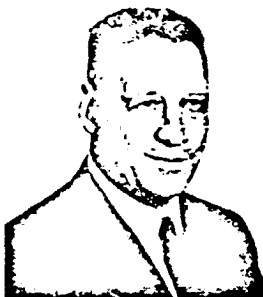
In the *buyer's market* of '26-'37 this went the rounds:

PA: "Young man, do you know that today I have refused to see seven salesmen?"

Salesman: "Sure I know, I'm them."

In the *seller's market* many gags were bandied about the PA handing out cigars to salesmen and begging them to accept orders. One of the tall tales concerned a salesman who entered the PA's office on a hot summer day, stopped short and exclaimed, "What! No air conditioning," then turned about and stomped out.

Engel Named Agrico Purchasing Mgr.



Leonard Engel, former assistant purchasing manager for The American Agricultural Chemical Company, has been named manager, purchasing department.

Mr. Engel joined the Company's purchasing department in 1914, and has been assistant manager of the department since 1940.

Insulators of Electrical Conductors— Buyers Group Elects

The Insulators of Electrical Conductors—Buyers Group, NAPA, has elected the following officers for the year 1960-61: Chairman, Elmer R. Johnson, American Steel & Wire Div., U. S. Steel Corp.; Secretary, John R. Garvey, William Brandt Division, American Enka Corp.; and Treasurer, Tim Woodcock, The Okonite Co., subsidiary of Kennecott Copper Corp.

Executive Committee members include Richard Moeller, Collyer Insulated Wire Co.; Joseph A. Hevern, General Electric Co.; and Kinsey S. Dickel, John A. Rockbling's Sons Div., Colorado Fuel & Iron Corp. Publicity Chairman is Stanley Elmer, Columbia Cable & Electric Corp.

Membership Committee members are Ray Minter, Rocklston Wire & Cable Co.; Walter Raueh, Acme Wire Co.; and Ronald Genereux, Arizona Wire & Cable Co.

Wallis Promoted at Emery Air Freight

John H. Wallis has been appointed Director of Purchase and Supplies for Emery Air Freight Corporation.

Mr. Wallis joined Emery in 1947 after serving as a captain in the United States Air Force.

May, 1960

"Where in Kalamazoo
could I find unbleached muslin?"



"I FOUND OUT IN THE YELLOW PAGES"

says Mr. Jack Hartung
National Purchasing Agent of St. Regis Paper Co.,
New York City

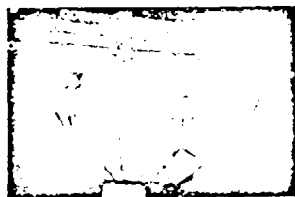
"You can't beat the Yellow Pages of the telephone directory to find even out-of-the-ordinary items and new types of equipment," says Mr. Hartung. "When I was plant purchasing agent back in Kalamazoo I got a hurry call for some unbleached muslin for sutter straps. I checked the Yellow Pages and found an ad mentioning industrial cloth. Result: A quick purchase of the material I needed."



Like Mr. Hartung, most purchasing agents are consistent users of the Yellow Pages to find the industrial products and services they need. Keep your directory handy, to find suppliers quickly and easily.

America's Buying Guide for Over 60 Years!

P.A.A. of N. Y. News



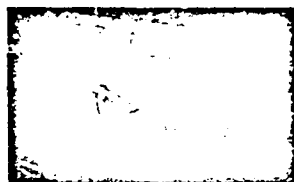
Certificate of graduation from Cornell University is presented to Anne D. Repko, Austenal Co., Div. of Howe Sound Co., by Instructor Malcolm E. Shaw, P.A.A. of N.Y. President George W. Baker, The Port of New York Authority, (right) waits to present certificate awarded by the Association. H. Lewis Wiener, United Nations Children's Fund, (left) awaits his turn.

Communications Course Graduates 20

Twenty registrants of the Communications for Purchasing course received certificates of graduation at dinner ceremonies on March 21st.

Graduates include W. H. Andresen, American Cyanamid Co.; W. A. Coskie, PRD Electronics, Inc.; B. Freinfeld, Avien, Inc.; R. Gallagan, Walworth Co.; M. H. Jaffe, Hess, Inc.; J. E. Johnson, The American Oil Co.; G. E. Kievnig,

Worthington Corp.; C. Kornhauser, Revere Copper & Brass, Inc.; E. McGuinness, Union Carbide Corp.; J. L. McIntosh, Merck & Co., Inc.; E. Marshall, Federal Electric Corp.; J. F. Moore, Jr., American Car and Foundry Div., ACF Industries, Inc.; E. B. Prindle, American Cyanamid Co.; J. Newman, Avien, Inc.; Anne D. Repko, Austenal Co., Div. of Howe Sound Co.; H. P. Schaeffer, Jr., Worthington Corp.; T. G. Taney, Western Electric Co.; H. L. Wiener, United Nations Children's Fund, D. Wittenberger, Union Carbide Corp.; and C. F. Wolff, Ford International Div., Ford Motor Co.



Paul B. Butterweck, Merck & Co., Inc., subchairman, Malcolm E. Shaw, Instructor, and William J. Heubach, Union Bag-Camp Paper Corp., chairman of the Committee for Professional Development, shown at the graduation ceremony.

Steamship Group

"Psyda" will be the topic of Charles O. Minot, Vice President in Charge of Purchasing, A. H. Bull & Co. Inc., at the American Steamship Purchasing Agents Group meeting set for Wednesday noon, June 1st.

This group comprises purchasing agents from over twenty American-owned dry cargo, tanker, and towing companies. They meet on the first Wednesday of each month, except during the Summer, at the Maritime Exchange, 50 Broad Street. Luncheon is served beforehand at George's Restaurant in the same building.

The topics discussed so far this year include "Requisition by Brand Name, Right or Wrong" given by Fred Schneider of American Export in January and concluded in February by Ted Young of American Oil. "F.O.B. Means a Lot More Than Free on Board" presented by Al Gartland of Moore-McCormack at both the March and April gatherings. In May, John Teslakh, Moran

Towing, discussed "Fuel Oil."

Guests are invited to join these meetings, and to participate in the spirited discussions which follow the speaker's presentation.

Labor Unions vs. Stable Prices

John H. Morse, attorney and a member of Bethlehem Steel's negotiating team, told members at the April dinner meeting that 80 per cent of the cost of an average item today is labor.

Touching on the recent steel negotiations, he mentioned that the rate of percentage increase under the present contract, approximately 3 1/2 per cent, was less than half that of previous settlements. Although this reduction was not as great as industry's original aim, it does serve to a degree in holding down the inflationary trend.

He felt that big unions and inflation go hand in hand as they are operating currently; that bargaining must be returned to the local level.

Mr. Morse went on to present a picture of the current shipyard hassle, pointing out that this industry has been in an extremely depressed state for the past decade. In spite of this, however, the union has point blank refused to compromise or negotiate on any of the issues involved.

April General Forum

Paul V. Farrell, Editor of *Purchasing* magazine, and Harry J. Moore, Director of Purchasing, IBM Corporate Staff, discussed *Eliminating the Bottlenecks to Cost Reduction* at the April general forum.

Mr. Farrell pointed out that one of the most important cost reduction techniques—value analysis—does not receive the full support it deserves. Three major opponents of value analysis are often management (which feels it would reduce quality as well as cost and looks upon it as an expensive gimmick), engineers and operating people and powerful sales people.

Decreasing profit margins, however, are bringing increased acceptance of value analysis as cost reduction grows more important.

Four main necessities for successful operation of value analysis program are participation, integration, mutual respect and teamwork.

Mr. Moore felt that the granddaddy of all bottlenecks is so-called *purchasing professionalism* which is nothing more than the voluntary isolation of purchasing people from the other management functions.

Purchasing should be integrated as part of overall management and should start talking management language.

He also felt that too many purchasing men do not have a thorough knowledge of their suppliers and industries.

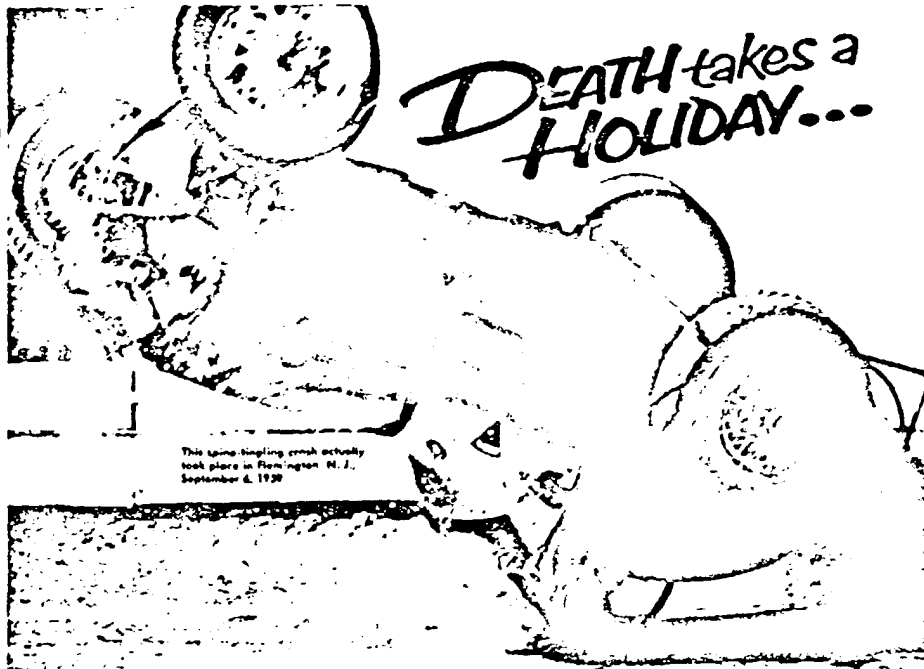
Association Calendar

May 22-25, 1960

N.A.P.A. Convention
Los Angeles, California

Tuesday, June 21, 1960

Annual Meeting
Aboard Day Line Sightseeing
Yacht Knickerbocker VII



This same shingling crash actually took place in Flemington, N. J., September 6, 1930.

DEATH takes a HOLIDAY...

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Stainless Seamless Tubing
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Aluminum Tubing, Pipe & Fittings

**Call FRASSE ^{1st}
for tubing**

Spectators gasped when this sprint car skidded—at 95 m.p.h.—into a series of flips that seemed certain to demolish both car and driver. Yet—miraculously, the driver walked away from the wreck with only minor bruises. His roll bar—made from Frasse tubing—had shielded him by taking the full impact of the car...not once, but *four times*.

The capacity to take such abuse is inherent in seamless tubing. It combines the ability to absorb and localize shock, with the ultimate in strength and rigidity in proportion to size and weight. Then too, it possesses superior welding and machining properties. That's why more and more engineers specify seamless tubing... for structural and mechanical applications.

Every tube in Frasse stocks meets the rigid quality specifications set by Frasse tubing specialists. So, if you use tubing in your product—and want trouble-free quality in a hurry...it will pay to make Frasse your source for tubing. There's a size on hand to meet every need...delivery is immediate...and Frasse engineers are available to assist you with any problem involving a tubular product.

Peter A.



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MAY, 1960

13

PICTURE REVIEW

*of the April 19th dinner-meeting of
the P.A.A. of N. Y.*



Clockwise from lower center: W. A. Caskie, PRO Electronics Inc.; R. Jarboe, Utility Brass & Copper Co.; J. H. Hall, J. W. Bion and M. Koppinger, all with the Consolidated Co. of N. Y.; A. K. Ettlinger, Fischbach & Moore Inc.; A. G. Pangle, Vanadium Corp. of America; K. de F. Carpenter, Jr., Permatex Co. Inc.; N. R. Smith, Refused Syrups & Sugars, Inc.; and H. Schoenfeld, Borgat Mfg. Co.



Honorary member William Schwalli receives congratulations from 1st Vice President Carlton C. Fordyce upon winning one of the three prizes at the meeting. Bill stated it was the first time in thirty years in the Association that he had won a prize.



New members of the Association who attended their first meeting in April are shown from left to right, front row: H. S. Barnes, The Atlantic Co.; K. Wodzie, Amers in Bosch Arms Corp.; W. Rothenbush, Chas. I. Hunsing & Co.; E. J. English, Novamont Corp.; I. Engel, The American Agricultural Chemical Co.; I. Radkover, Sangline Industrial Corp.; A. T. McLoughlin, International General Electric Co.; O. E. Smith, Delmar Co. Back row, left to right: E. R. Bender, Joseph E. Seagram & Sons; W. J. Hann, Union Carbide Corp.; G. Arrick, G. C. Dewey Corp.; J. R. Finnegan, Hayward Mfg. Co.; R. P. Spaeth, Detroit Scales, Inc.; and M. F. Berman, Service Leasing Corp.



Carl A. Lindmark, Jr., of Old Town Corp., addresses the Office Supply and Equipment Forum on problems involved in the purchase of office machine ribbons and carbon papers, while E. F. Dusky, A. S. Beck Shoe Corp., moderator of the session, listens intently.



Clockwise from left center: D. S. Gibson and T. F. Griffin, Worthington Corp.; T. N. Carrone, Allied Chemical Corp.; A. Biese, National Lead Co.; R. J. Unger, Dragon Cement Co.; C. G. Fallon, The Holbrook & Wilson Co.; J. Stranich, National Lead Co.; F. C. Karl, International Paper Co.; J. Eschewer, Walker Engraving Corp.; and G. M. Caldwell, National Distillers & Chemical Corp.



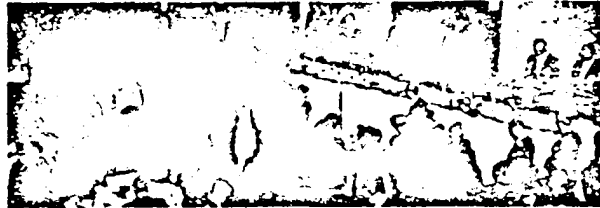
Everett W. Noble, Eighth District Vice President, N.A.P.A., speaks to members on the value of publications issued by the National.



Paul V. Farrell, editor of *Purchasing* Magazine, answers a question from the audience at the General Forum on "Cost Reduction" as Harry J. Moore, Director of Purchasing, International Business Machines Corp., second speaker at the Forum, looks on.



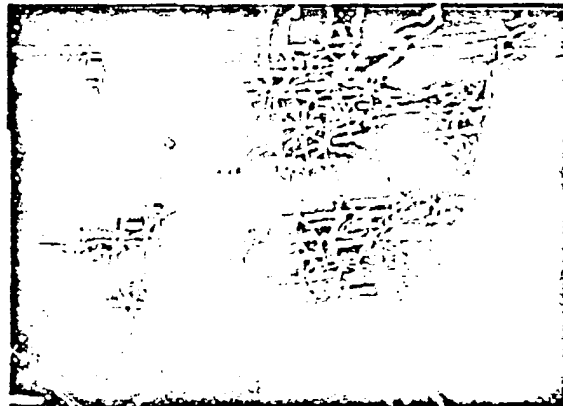
Clockwise from left: T. W. Maynard and E. A. Holman, Universal Atlas Cement, Div. U.S.S. Corp.; C. W. Neilson, Todd Shipyard Corp.; C. M. Ward, The Singer Mfg. Co.; F. A. Schreff, Combustion Engineering, Inc.; E. A. Bantel, National Bureau of Casualty Underwriters; Anne D. Repko, Austenal Co., Division of Howe Sound Co.; I. G. Calish, American Radiator & Standard Sanitary Corp.; O. A. Jillion, U. S. Bulb Co. and N. Dentschman, Morningstar-Parkley, Inc.



Members stand for moment of silent prayer in memory of Edward B. Fuchs, Treasurer Emeritus, Ordine C. Ferns, Schering Corp.; George E. Campbell, The American Agricultural Chemical Co.; William C. Dunlap, The New Jersey Zinc Co. and Eugene Platt, Detroit Scales, Inc.



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P.A.A. of N.Y. News

Metropolitan Purchasers Club

Robert F. Ames, Purchasing Representative, U. S. Steel Corp., will speak on "The Art of Interviewing" at the May 10th meeting of the Metropolitan Purchasers Club.

Mr. Ames, is vice Chairman of the N.A.P.A. office Buyers Group and chairman of the P.A.A. of N.Y. Office Supply and Equipment Buyers Group.

Mr. Ames will base his talk on the experience he has gained from numerous national and local association activities.

A Quiz for Busy PA's

1. Where can I go to keep pace with progress so that I can make my contribution to company profits?

2. Where can I hear the ablest industrialists, economists and purchasing executives, who from their experience derived from years of management and training share their wisdom and practical knowledge and methods?

3. Where can I be brought up-to-date with discussions of problems and practices pertaining to my particular type of buying?

4. Where can I acknowledge my association with the professional society to which I belong?

5. Where can I learn of new products and new procedures at an Inform-A-Show?

6. Where can I find specific approaches to cost reduction, such as, re-examination of traditional purchasing practices, work simplifications, standardization and value analysis of purchased materials?

7. Where can I find the latest technological advances, business outlooks, market trends and other educational subjects of interest to Purchasing?

8. Where can I be on common ground with the friendly P. A.s of many firms to whom our company

sells its products and thus help remove some of the resistance our company's sales forces run against at times?

9. Where can I learn of the services N.A.P.A. has to offer?

10. Where can I learn more about Purchasing—and still have fun?

The correct answer to all of the above questions is the "N.A.P.A. Convention." If you answered the "45th. Annual International National Association of Purchasing Agents' Convention and Inform-A-Show" to be held in Los Angeles, May 22nd. through May 25th. 1960, you are still correct. Award yourself ten points for each correct answer, and if you scored seventy points or more, reward yourself by registering for this forthcoming Convention. If you scored sixty points or less, you need to attend the 1960 Los Angeles Convention to improve your purchasing knowledge and to obtain all the above benefits.

N.A.P.A. Convention Workshops

After Breakfast workshop sessions will be inaugurated at the 45th International National Association of Purchasing Agents' Convention and Inform-A-Show in Los Angeles May 22nd through May 25th.

Topics for discussions at some of these workshop sessions are: Transportation and Traffic, Salvage and Surplus Materials, Problems That Got Worse, Inventory Control for Small Companies, Vendor Performance, Purchasing Manuals and Lease vs. Purchase of Equipment.

Special consideration will be given to the small company purchasing agent with these sessions geared to be informative to all N.A.P.A. members. Other meetings include: Workshop for the New Purchasing Agent and Buyer, Workshop for Teachers of Purchasing Classes, Are These Purchasing Functions?, Evaluating Purchasing Performance, Selling Value Analysis to Company Management, Selecting Purchasing Personnel, Reports to Management and Quality Control

40 Years Ago

In the P.A.A. of N. Y.

At the May, 1920, meeting of the Purchasing Agents Association of New York, in the fifth year of the Association's existence and in the Presidency of the late Frank M. Rowe, purchasing agent of the Johns-Manville Corporation, a resolution was approved to provide the Association with a paid full-time staff and office. It was stated by President Rowe that "in view of the growth of membership and the burden of work that could no longer be handled satisfactorily by the volunteer services of members, it was necessary to set up an office and staff."

Said the resolution in part: "The best development, continued progress and full utilization of all the opportunities for growth and use to our members will be accomplished by a full time staff."

President Rowe described the employment of a staff as a most courageous decision.

The membership of the Association was then 357 and of the N.A.P.A. 2,230.

The Secretary who was appointed is the writer of this column and his assistant, Miss Schert, is still serving efficiently as assistant to the Executive Secretary, Bob Davis.

William C. Redfield, U. S. Secretary of Commerce, addressed the May meeting on "Principles of Modern Trade" and the Hon. James A. Caffery spoke on "New America Leading a New World."

New members elected at the meeting included C. H. Baldwin, Morris & Co., Inc.; A. Cordes, Jr., The American Law Book Co.; A. W. Griggs, C. Kenyon Co., Inc.; J. A. Gerhauser, The Liberty National Bank; F. S. Lunt, Dept. of Charities & Corrections; S. L. Parker, Stevens & Co.; R. B. Ronaldez, Chas. Corry & Son, Inc.; J. H. Trowbridge, Atlantic National Bank, and H. A. Clementsen, Hercules Paper Corp.

Plan now to attend
the Annual Meeting
in June aboard the
Day Line Sightseeing
Yacht Knickerbocker VII

N. Y. PURCHASING REVIEW

PURCHASING AGENTS ASSOCIATION OF NEW YORK, INC.



Affiliated with the National Association of Purchasing Agents

BULLETIN

Dinner Meeting

May 10, 1960 - 6:15 P.M.

Grand Ballroom - Hotel New Yorker



MARK STARR

"Business Unionism" vs. "Social Unionism"

by MARK STARR

Former National Education Director
International Ladies Garment Workers Union
Author of "Labor and the American Way"

Will Give the Labor View On Questions Posed at the Last Meeting.

Is the Wage-Push the Cause of Inflation?

What Is Labor's Role in Free Society?

Are Labor Unions Becoming Too Powerful?

What Is Labor's Outlook On Featherbedding - Automation - Government Control of Unions.

GEORGE W. BAKER, Presiding

YOUR ATTENDANCE IS IMPORTANT . . . Plan to Come to Hear Labor's Answer to Management's Challenge

General Forum 4:45 P.M. - North Ballroom

"You Can Hurdle the Roadblocks to Cost Reduction"

Case histories - presented by a panel of ten fellow members who will explain the techniques leading up to effecting a cost reduction program in their own companies.

These case histories will be either a change in procedure materials, or a system change which resulted in a savings for their organization.

Attendance at the first and second sessions of the Forum seminars in March and April was outstanding. This third seminar type Forum has been planned to blanket the industrial field and will lend itself to substantial discussion. You cannot afford to miss this one.

Panel members are listed on next page.

DONALD T. KILHUR, Chairman Forum Committee

MAY MEETING PROGRAM

Dinner Meeting
Grand Ballroom - 6:15 P.M.

General Forum
North Ballroom - 4:45 P.M.

Office Supply
& Equipment Forum
Panel Room - 4:30 P.M.

New Member Orientation
Washington Room - 5:45 P.M.

New Member Reception
Parlor A - 5:45 P.M.

Members who cannot come for dinner will be equally welcome for the meeting and forum.

TUESDAY, MAY 10, 1960
DINNER at 6:15; MEETING at 7:30

Grand Ball Room
Hotel New Yorker
34th Street at 8th Avenue
Telephone: LOngacre 3-1000
\$5.00 per cover

Candidates Named

The Nomination Committee of the Purchasing Agents Association of New York, Inc., has reported a slate of candidates for office for the association year June 1960 to June 1961. The nominees will be voted on at the Annual Meeting of the Corporation to be held Tuesday, June 21, 1960 on board Dayline yacht.

The Candidates are:

For President:

GAILON C. FORDYCE
American Cyanamid Company

For First Vice President:

DONALD T. KELHER
U.S. Metals Refining Company
Subsidiary of American Metal
Chemical, Inc.

For Second Vice President:

CHARLES B. ADAMS
General Electric Company

For Treasurer:

LEWIS A. NORRIS
Dreyfus & Co.

For Member of Board of Directors:

THREE-YEAR TERM

ROBERT F. AMES
United States Steel Corporation
ANNE D. REPKO
Austenal Company
Div. Howe Sound Co.

ONE-YEAR TERM

THOMAS PARISE
Allen Industries, Inc.

(Signed) **WILLIAM F. RAE, JR.**
Chairman

EDWARD M. KROEN
LOUIS A. SCUTTEN
FRED H. SCHUMANN
V. ERIC JOHNSON

The nominations for office in the Corporation are here published in accordance with Section 4, Article VIII of the By-Laws of the Purchasing Agents Association of New York, Inc., which follows:

"The Nomination Committee shall send to the Executive Secretary on or before May 1st of each year the names of its nominees for the elective offices, including directorships, next falling vacant under the By-Laws. The written consent of each nominee to such nomination shall be forwarded to the Executive Secretary together with such names. At least four days before the May meeting of the Corporation the Executive Secretary shall mail to the members the nomination made. In addition to the Nomination Committee provided for in Section 1 of this Article VIII, any twenty or more active members may constitute themselves an independent nomination committee and may present to the Executive Secretary on or before June 1st of each year the names of the candidates whom they nominate, together with the written consent of such nominees to such nomination."

For brief biographies of the above candidates see New York Purchasing Review for June 1960.

May Speakers

Our speaker at the general meeting, **Mark K. Starr** is a native of Wales. He was working as a hod carrier at the age of 13 and the next year went into the mines in Somersetshire. He became active in the workers' education movement in Great Britain and wrote many pamphlets that were used in English labor colleges. In the early Twenties Mr. Starr was teaching English labor history at Brookwood Labor College, Katonah, N. Y. In January 1935 when the ILGWU Education Department was reorganized he became its director. The ILGWU educational program, in turn was widely admired and emulated.

In January of this year, Mr. Starr retired from his post as Director of the ILGWU education department after twenty-five years of service.

A well-known author, some of his recent publications are: "Labor in America" (with H. U. Faulkner); "Labor Looks at Education"; "Labor Politics in the United States." Co-author: "House of Labor"; "Labor and the American Way"; "Creeping Socialism vs. Lumping Capitalism" and many others.

General Forum

In trying to blanket the Association membership and give all in attendance a topic within their industry we have chosen the following panel representing various fields:

Harold W. Macintosh

L. O. Krown & Bro., Inc., Heavy Mfg.

Herbert E. Parker

Russell & Stoll Co., Inc., Light Mfg.

William E. Zimmerman

Hess, Inc., Oil

George M. Cudwoll

National Distillers & Chem. Corp., Chemicals

Sloan O'Donnell

Merck & Co., Inc., Pharmaceuticals

Harry A. McArdle

N. Y. C. Housing Authority, Gen. Constr.

Fred W. Livingston

The Williamsburgh Savings Bank, Banking

David A. Benoit

Cerro de Pasco Sales Corporation, Mining

Walter E. Willets

Conover-Mast Publications, Inc., Publ.

James M. McTernan

Commonwealth Services, Inc., Pub. Util.

This seminar type forum is the kind of meeting which lends itself to substantial discussion within the meeting. We are certain that with the outstanding panel of ten selected to tell their particular approach to Cost Reduction, it will be a worthwhile meeting.

If you can take but one idea away with you after attending the Forum, it will be rewarding.

We anticipate that other members attending will have case histories to present from the floor. Sufficient time will be allowed anyone who cares to make a presentation.

Annual Meeting

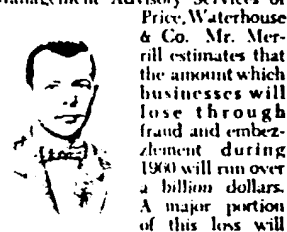
The Annual Meeting held aboard the Hudson Dayline Cruiser, **Kneckerbocker VII** last year was so enthusiastically acclaimed by those attending, your program committee has again this year planned to hold the Association's annual meeting aboard the **Kneckerbocker VII** on Tuesday, June 21st, 1960.

Look for the announcement.

Office Supply and Equipment Forum

"The Art of Interviewing"

Walter W. Merrill is a director, Management Advisory Services of



Price, Waterhouse & Co. Mr. Merrill estimates that the amount which businesses will lose through fraud and embezzlement during 1960 will run over a billion dollars. A major portion of this loss will occur in the office. He will describe to us some typical case histories of embezzlement and the lessons to be learned therefrom.

Mr. Merrill is a graduate of Princeton and the Harvard Business School; is a Certified Public Accountant in Massachusetts. He is a member of the American Institute of Certified Public Accountants; and the Massachusetts Society of Certified Public Accountants.

Applications for Membership

EMANUEL BLUMBERG

Terminal Electronics Inc.
(Distributor Electronic Equip.)
236 West 17th Street, New York, N. Y.
Proposed by George Arrick

JEROME E. SATON

Vitro Laboratories
(Research & Development)
200 Pleasant Valley Way,
West Orange, N. J.
Proposed by J. L. McIntosh

KENNETH C. BENTLER

Entesta Welding Alloys Corp.
(Welding Alloy Rod Manufacturer)
40-40 172nd Street, Flushing, N. Y.
Proposed by J. M. McTernan

ABRAHAM M. WEITNER

Tek Prompter Corporation
(Group Communications)
111 West 43rd Street, New York, N. Y.
Proposed by Arnold Kephik

JOHN B. SMITH

Serge Elevator Company
(Installation, Repair & Maintenance)
1001 Brook Avenue, New York 51, N. Y.
Proposed by J. M. McTernan

Transferred Members

BENNETT SMITH (see Andrew F. Hing The News)

JAMES M. BATTIN (see Odine C. Ferris Schering Corporation)

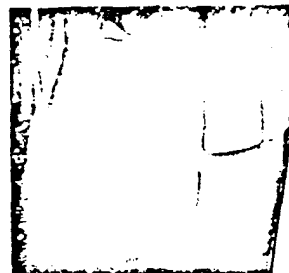
J. J. MCCARTHY (see H. W. Edwards Lever Brothers Company)

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Coils

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Plates

Thicknesses from .250 to 4". Also tooling plates.

Rod

Rounds, $\frac{1}{8}$ " to 8" dia., cut or stock sizes; hexagons, $\frac{1}{8}$ " to 3" dia.

Bar

Squares, $\frac{1}{8}$ " to 4" dia.; rectangles, $\frac{1}{8}$ " x $\frac{1}{8}$ " to 3" x 6".

Structural Shapes

Angles, channels, tees and I-beams.

Extruded Architectural Shapes

Angles, channels, tees, I-beams, brackets, sills, handrails, gravel stop, and coping.

Tubing and Holebar

Round, $\frac{1}{8}$ " to 6" diameter. Also square and rectangular tubing.

Pipe

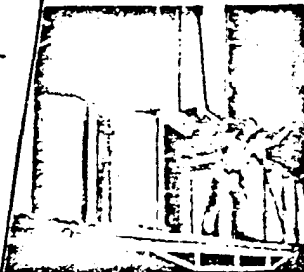
$\frac{1}{8}$ " to 6" diameter, to 20' lengths.

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JERSEY CITY — HENDERSON 4-1123, NEWARK — MARKET 4-1111, ROCHESTER — BAKER 3-4980

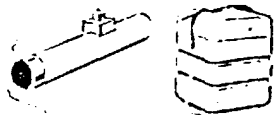
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product? Base is a special Riegel glassine, made for converters who do the metallizing. We'll gladly tell you where you can get it.

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superior uniformity. Unusual use in lens assembly housing in guided missile, where light weight and high impact strength are important. Dollar-minded designers will find tooling costs lower when they use Glacel.

* Valentines for next year are being printed right this month on a bright-white paper made by our new "216" paperboard machine "Carolina Belle."

* Can we do something unusual for you, too? Write Riegel Paper Corporation, P.O. Box 250, New York 16, New York.

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we do for you?

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TECHNICAL PAPERS FOR INDUSTRY

The Observation Post



D. T. Keliber

Are You A Good Listener?

If your answer to the above is "Yes", chances are that you will be a success in purchasing or any other field in which you are qualified for it shows that you are still willing to learn and have not reached the *know-it-all* stage.

Human beings, as we purchasing people are (although some people might take issue with this statement), with the normal amount of grey matter, which is called brains, have three basic organs which lend themselves to communication and learning. They are the eyes with which we see, the ears with which we hear and the mouth with which we talk.

God in his wisdom gave us these three organs for the above reasons and he undoubtedly desired that we would use them equally. If this is so, then we would listen a third, read a third and talk a third. But do we? Most of us do not, for the greater percentage of us like to hear ourselves talk and undoubtedly the percentage thus allocated in one's normal life is 75% talking and the remainder is given to listening and reading.

Think back to your school days when you were being educated. How did you learn? You did so by reading and listening to a lesson of the teacher or through the lectures of your professor. When you talked you proved the fact that you had or had not studied and had learned that which the instructor desired. You did not learn by talking but only related a fact or gave an opinion based upon your experience.

Some purchasing people think that they have to be the finest of orators and public speakers and in a discussion with salesmen, operating people, engineers, lawyers, accountants, finance people and others will practice their newly acquired virtues. There are also those who feel that the road to glory will be achieved through the medium of oratorical conquest. With this we disagree.

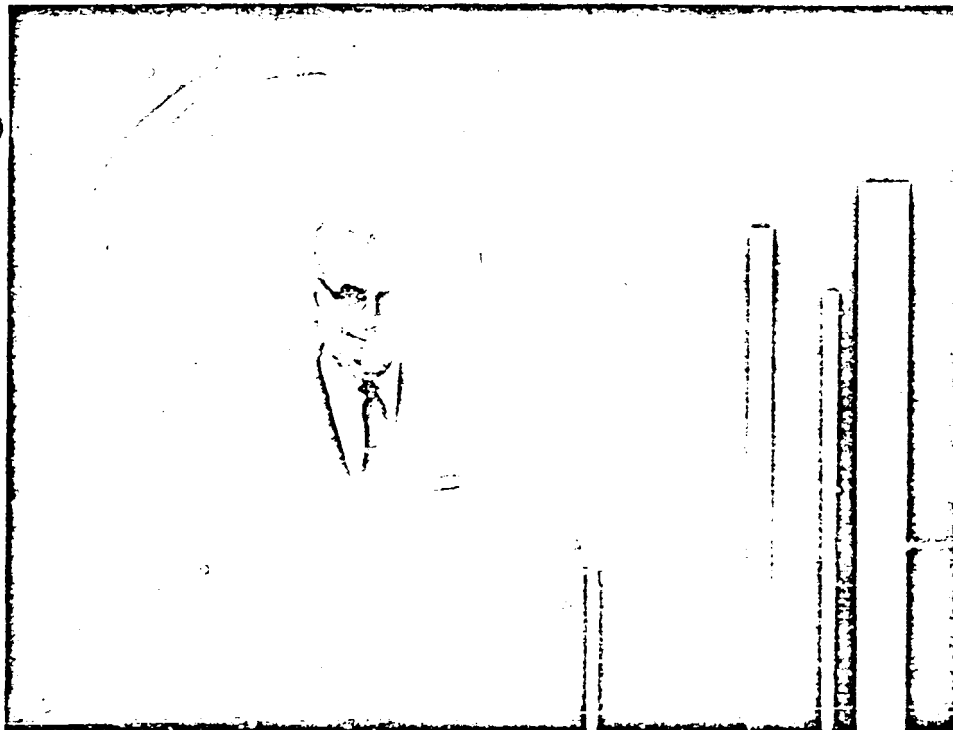
We feel that there is much to learn in the field of purchasing where we must, by nature, be a *Jack-of-All-Trades and a Master of None*. Our contention is that one cannot learn if he is not a good listener and he will not be able to do his purchasing job effectively if he will not listen to the man sitting across the desk from him.

Do not misunderstand. We do not wish to belittle or condemn the man who is a fine speaker, for when he opens his mouth there generally pours forth words of wisdom based upon years of experience and an ability to express his point. However, we do disagree with the individual who at the drop of a hat will pour forth with a multitude of words on any subject. Just name it, that's all it requires, no knowledge is necessary.

Remember, Purchasing requires good listening and reading ability for knowledge. Excessive talking will not allow you to acquire knowledge.

D. T. K.

N. Y. PURCHASING REVIEW



The Aluminum Man... he supplies your wire, rod and bar — fast

Alcoa® Aluminum Wire, Rod and Bar... light in weight, easier to handle, and offering you important cost advantages... is now readily available from local warehouse stocks. You can now receive immediate "from-stock" delivery of a wide variety of sizes, shapes and alloys from your local Alcoa Distributor Salesman—The Aluminum Man!

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anything concerning aluminum. He can give you specifications, technical data and many valuable suggestions. His advice and help, reflecting the treasure of technical knowledge amassed by Alcoa, the aluminum pioneer behind these products, are yours for the asking. Always specify *Alcoa Aluminum*—the light metal with the bright future that's being seen in more places—more and more! Aluminum Company of America, 941-E Alcoa Building, Pittsburgh 19, Pa.



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Adam Metal Supply of New Jersey
500 York Street, Elizabeth, N. J., Phone: FLandover 1-7500

Whitworth Metals, Inc.
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De the Steel Company, Inc.
40 Montgomery Street, Elizabeth, N. J., Phone: WAlcott 5-0000

Whitworth Metals, Inc.
300 West 10th Street, New York 14, N. Y., Phone: WAlcott 4-1500



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Steel Sheet Division, Remscheid Plant
750 Boulevard, Remscheid, N. J., Phone: MUlford 4-0900

Brooks Aluminum Company, Inc.
800-810 Broadway Avenue, Princeton, N. Y., Phone: BRowning 2-7000

Adam Metal Supply, Inc.
40th Ave. at East River, Long Island City 1, N. Y., Phone: STAnford 6-7727

Materials Handling in Product Finishing

J. C. Somers

President

Industrial Products Engineering Co.

Some operations encountered in a finishing layout are (1) loading, to include sorting, feeding, hanging or supporting; (2) surface cleaning, to include such operations as degreasing, washing, rinsing, drying or blowoff; (3) materials protection, such as bonderizing, chromating, rinsing and blowoff; (4) coating, spray painting, electrostatic painting, flowcoating, automatic spraying; (5) baking, to include air or hot drying, oven baking, infrared baking; (6) finally, unloading, to include cooling area, hand, or automatic removal and feeding into assembly.

History

During World War II, a great need was created for improvement in methods of consolidating all related operations of finishing into one complete system for each manufactured line. Such systems existed previously in certain lines of products, e.g., automobiles, washing machines, some items of machinery. However, in many of these systems the principal operations involved were merely painting and baking. With many manufacturers, until recently, this work was done in the manufacturing plant on a jobbing basis, using positioning equipment, benches, trucks. Only a few years past, very few of the air conditioning equipment builders used continuous methods. Hand operations such as washing, painting, and baking were very common. The tendency now, where a large quantity of product is turned out daily, is to consolidate all of the related operations into one continuous system. Great improvements in degreasing, washing, automatic painting, con-

veyors, carriers, and the like, have made this a reality.

Most of the equipment involved in a system of this kind is special. The user may make only one purchase in a decade. Thus production engineers and methods engineers have limited background in these operations. The job is therefore one of adapting handling equipment to the problem and of specialized experience in materials handling. The plant engineer, a consultant or engineer from an equipment supplier is faced with the problem and related difficulties of integrating many pieces of equipment. The materials handling engineer very frequently lays out the system to meet requirements of all operations. This necessitates some general knowledge of all equipment involved on the part of the materials handling engineer.

Examples of Systems

To illustrate problems of design and engineering in the layout of a finishing system, the following three systems are outlined briefly.

Special Machine

The company had received a contract to manufacture a large quantity of an assembled product. This was an operating mechanism which consisted of approximately 700 parts. Of these 700 parts, 450 had to be painted, some completely, others only partially. The production schedule was three of the assembled units per hour, that is, 1350 parts to be painted per hour. The parts varied in size from approximately 4 in. long to parts of 6 ft. long. A large number of the parts would come from the machine shop and would be coated with machine oil and

grease. Other parts would in storage and contain a certain amount of rust. This rust and grease had to be removed before the paint was to be applied.

We first proceeded to analyze the parts as to their weight and size. We found that approximately 75 per cent of them were 30 in. or shorter and that all of the parts were of relatively light weight, meaning that a dip-type washer could handle them easily. We therefore decided to concentrate on the 30-in. parts, in so far as the design of our system for painting was concerned.

These parts, 30 in. and shorter, were divided into two categories. Parts that would be spray painted and parts that would be dip painted. In this particular case, 60 per cent of the parts lent themselves very well to dip painting.

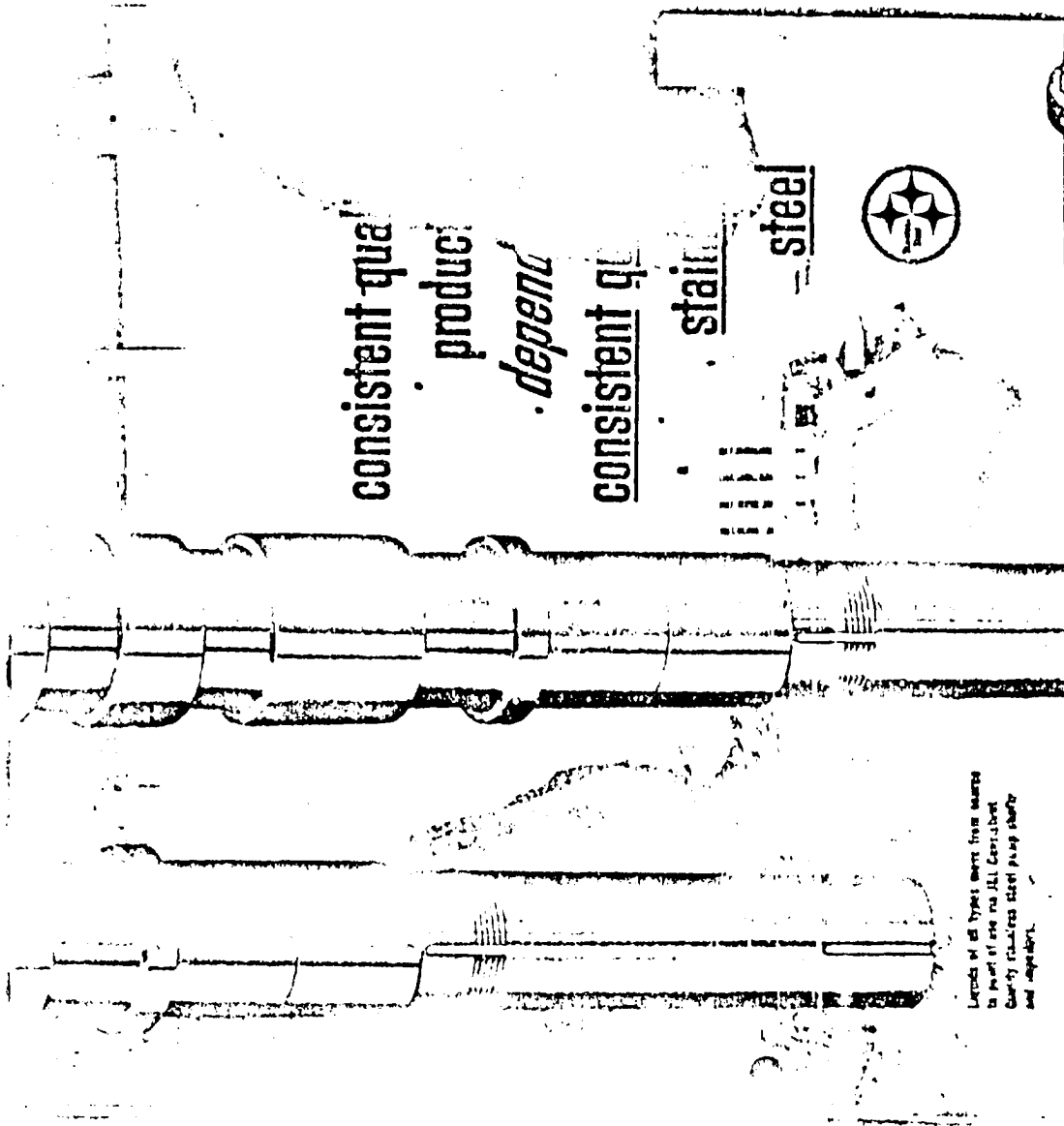
The quantity of parts was such that we conveyorized for both paint spraying and dipping. The cycle was: Cleaning in tank containing a solution which removed grease and rust, rinse in a hot-water tank, hot blowoff to remove all moisture, paint (dip or spray), and paint-drying chamber.

The load and unload portions of the conveyor were located and arranged so as to give ample room for the work, also room for skids of parts, racks for hangers, platform trucks, and adequate aisle space for this equipment.

Both conveyors went through the cleaning tank, the rinse tank, then the two conveyors parted, one going to the spray booth and the other to the dip tank, came "together" again went through the drying chamber and then to the load and unload

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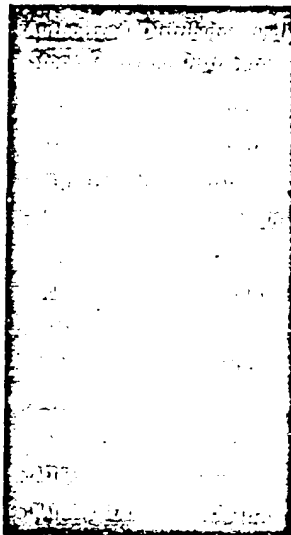
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area. The paint-spray booth had a gear rack and each trolley on the "spray" conveyor had a spinner to rotate parts automatically as they went through the booth. This gear rack was retractable for parts which did not lend themselves to automatic rotation. Between the water-blowoff unit and the painting (dip or spray) we left adequate room for the washing of some of the parts. Some parts needed no cleaning but had to be painted on certain portions in the spray booth.

What about the other 5 per cent of the parts which also had to be painted? All parts of 30 in. or larger, representing 5 per cent of all parts, were put through cleaning and rinse by use of an overhead monorail. The cleaning and rinse tanks were designed with an "extra" section of one side to allow for these parts to be dipped. The monorail passed by these extra sections and then to a point approximately 5 ft. 2 in. from the paint-spray booth. These parts did not go through the blowoff unit. The quantity of parts was small and after rinsing they were allowed to dry on platform trucks and then were wheeled to the spray booth for painting. After painting, these parts were returned to the platform truck and then to drying.

The total number of cubic feet of air being removed by the cleaning and rinse tank, exhaust from the blowoff unit, spray booth, dip-tank exhaust and paint-drying chamber was so great that we decided to install air makeup units to replace the volume of the air being exhausted. This was necessary for engineering reasons and also to conform with Labor and Health Agency requirements covering fresh air supply.

Castings

A certain company was producing castings and planned increased production. The castings were pump parts and varied in size from 6 to 60 in. diam. and in weight from 10 to 185 lbs. All castings had to be painted.

Increased production schedules were not being met owing to the painting method which was costly due to labor involved in the movement of castings.

The castings did not require degreasing or rust removal. The problem was to get them painted at as

fast a rate as possible and at the lowest operating cost.

An analysis of the weight of parts was made, segregating them into two categories; i.e., conveyor-weight parts and crane-weight parts. Most of the parts were conveyor weight, that is, in this case, they could be hung on a 75-lb. maximum load trolley and could be placed there manually. These parts were loaded onto the conveyor, the conveyor passed through the spray booth, if wet type, and the parts were then brought to an unload and sorting section by the conveyor.

Crane-weight parts were large heavy castings usually weighing between 100 and 185 lbs. These parts were brought to the painted area in box skids, containing up to as many as 20 of the parts. At the point where the skids were placed we had overhead service with a hoist and automatic tong. The parts were removed semi-automatically from the skids and placed on a pallet which travelled on roller conveyor through the paint-spray booth.

When the pallet was loaded with parts it was released and moved into the spray booth where a section of the roller conveyor in the spray booth was set on a turntable to aid in the painting. The parts were thus painted and pushed, while still on roller conveyor, to an unload section where an overhead hoist with automatic tong unloaded them from the pallet back into the box skids.

Electronic Units

This system was designed to paint up to ten electronic units per hour, including some 150 parts, each with prime and two finish coats. In addition some other subassemblies for future units were painted two coats simultaneously with the complete units.

The system consisted of two ovens and two chain-conveyor systems. One booth served for purpose of prime coat with chain conveyor passing from a dust-blowoff unit through the booth and triple-pass direct-fired gas oven.

The other conveyor system passed through three spray booths, one of which was for touch-up, thence through the four-pass direct-fired oven. The two conveyor systems consisted of No. 45S chain, especially laid out to accommodate roller

turns, take ups, drives and cooling and loading section in limited space.

Most interesting features were the types of hanger devices. These were conventional hooks with so called "Xmas trees," suspended pans, open baskets, suspended from conveyor hooks and designed to carry parts of 1/4 in. x 1 in. up to 3 ft. 6 in. x 2 ft. x 6 in. enclosures and small compressors. These hangers were specially designed and built.

Transfer from prime-coat conveyor to finish conveyor was possible by use of an overhead turntable timed and indexed, carrying a special pin at six points. The pin meshed into a slot on the hanger, removed the hanger from the hook and carried the hanger through 180 deg. where it was picked up by the hook on the other conveyor.

Equipment Notes

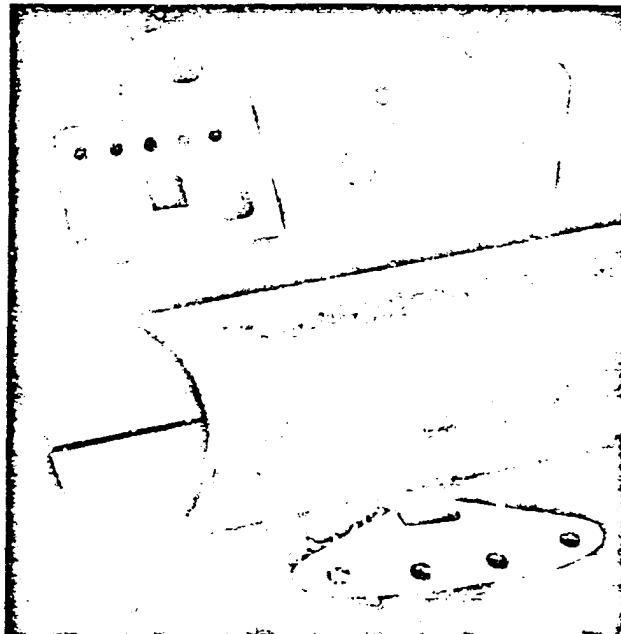
Some of the most important features of equipment from the view of the materials-handling engineer are highlighted in the following.

Spray Booths

Size and type of spray booth are determined by the painting operation. Spray booths are enclosures, with many special design features, exhausting a volume of air laden with solvent, fume, and excess spray. This volume is determined by the square feet of opening and velocity. Handling of the product determines some of the features of the booth. Positioning equipment, such as trucks, usually requires a relatively narrow booth opening, making a dry type of booth acceptable. On the other hand conveyorized booths, overhead chain or belt conveyors, imply time in the booth for painting, and thus a wide booth is required. Because of volume of excess spray, and other reasons a wet booth may be necessary. Where a turntable is used the booth may be a bench type and relatively narrow with limited low volume of air.

Paint Dipping

Most common method is to move through the dipping operation with a chain conveyor, although mesh conveyors, overhead hoists or special hand dipping may be used. Factors in design are width, depth, type of entrance and exit. In addition paint recirculating or mixing is required, which is a specialized opera-



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tion. On a production system where a good finish is needed, it is necessary to rotate the product on coming out of the tanks so as to eliminate driplets. This is usually in the form of an automatic rotating device, which is strictly a matter of design and experience with this problem.

Baking Ovens

Most common types of baking ovens are conveyorized, multipass, gas-fired, electric or steam-heated, using overhead or floor-type conveyors. Direct-fired, gas-burning ovens are usually acceptable with proper controls. Box ovens, using trucks, drag chain conveyors, portable racks, and so on, have definite applications.

Infrared panels, with or without conveyors, if economically justified, have many superior features in baking.

Many mistakes in materials handling can be explained on grounds of improper choice or design of ovens. Weight and type of materials play leading roles in bake ovens.

Correct data and number of lamps are the important factors with infrared units.

Washers

Used to remove by nozzle, pressure spray, using water or other liquid with or without agents, washers serve to remove dirt, oil, solder, flux, grit and certain chemicals in brazing, and so on. Washers are of two types; namely, (1) continuous conveyorized types, and (2) rotating types.

To fit the selected type of equipment into the system is important. Equally so is the problem of insuring that all operations are provided for in the particular washer, such as washing, rinse, blowoff or possible other steps such as rust inhibitor, hot-water rinse, and the like. These all consume time and must be allowed for in the speed of the conveyor.

Degreasers

This equipment is usually assumed to be of the hatch type. Continuous degreasing is today becoming more common, thus integrating the operation into an automatic continuous system. Methods of removing the product from the system and placing it in the hatch-type degreaser, then reloading onto the conveyor system are commonly used today where the degreasing operation is required. Automatic tongs or grabs have found application in this connection, as well as in many others.

Drying and Blowoff Equipment

Where the last washing stage is a few short feet from the painting or coating operation, this type of equipment becomes extremely important. Here the use of this equipment emphasizes need of proper engineering calculation.

Hangers or Carriers

Use of adequately designed hanging or supporting equipment may determine the success of the system, in terms of labor, production, and so on. Many occasions have arisen where the idea of a good continuous finishing system was abandoned because of lack of technical know-how of the problems of hangers, supports or carriers. It is not difficult on a single system to paint articles of 4 in. x 4 in. along with others 4 ft. x 3 ft. There are systems today in

operation where a wide range of sizes of parts is handled, with complete parts assemblies unscrambled, counted, grouped, carried through the system, painted, and baked all using special types of hooks, hangers and supports.

Conclusions

Certain information evidently is needed for proper planning, designing and making engineering drawings of finishing systems. The materials-handling engineer must therefore anticipate and assemble the following data:

1 Number and range of size and weight of products and or parts to be processed with related production and lead-time data.

2 Full information on all specific operations, such as, degreasing, washing, method of painting, and so on.

3 Data on functions and engineering of finishing equipment, with approval of manufacturing management prior to final layout.

4 Data on space available or to be allotted both vertically and horizontally.

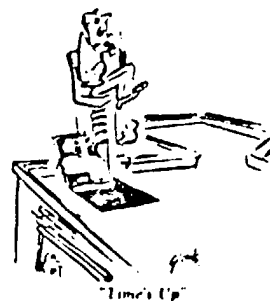
5 Data from proper source on possible (a) product changes, number, size, etc.; (b) new product design, including possible shifts in number and size of parts; (c) runs of spare parts, including those for obsolete or old models.

6 Necessary shop drawings covering the complete layout.

7 Advice on requirements and regulations pertaining to fire underwriters, insurance situation, state labor departments, and any local agencies.

Acknowledgment

Acknowledgment is due to P. R. Rizna, Process Engineer, Industrial Products Engineering Company, 29-40 Jackson Ave., Long Island City 1, N. Y.



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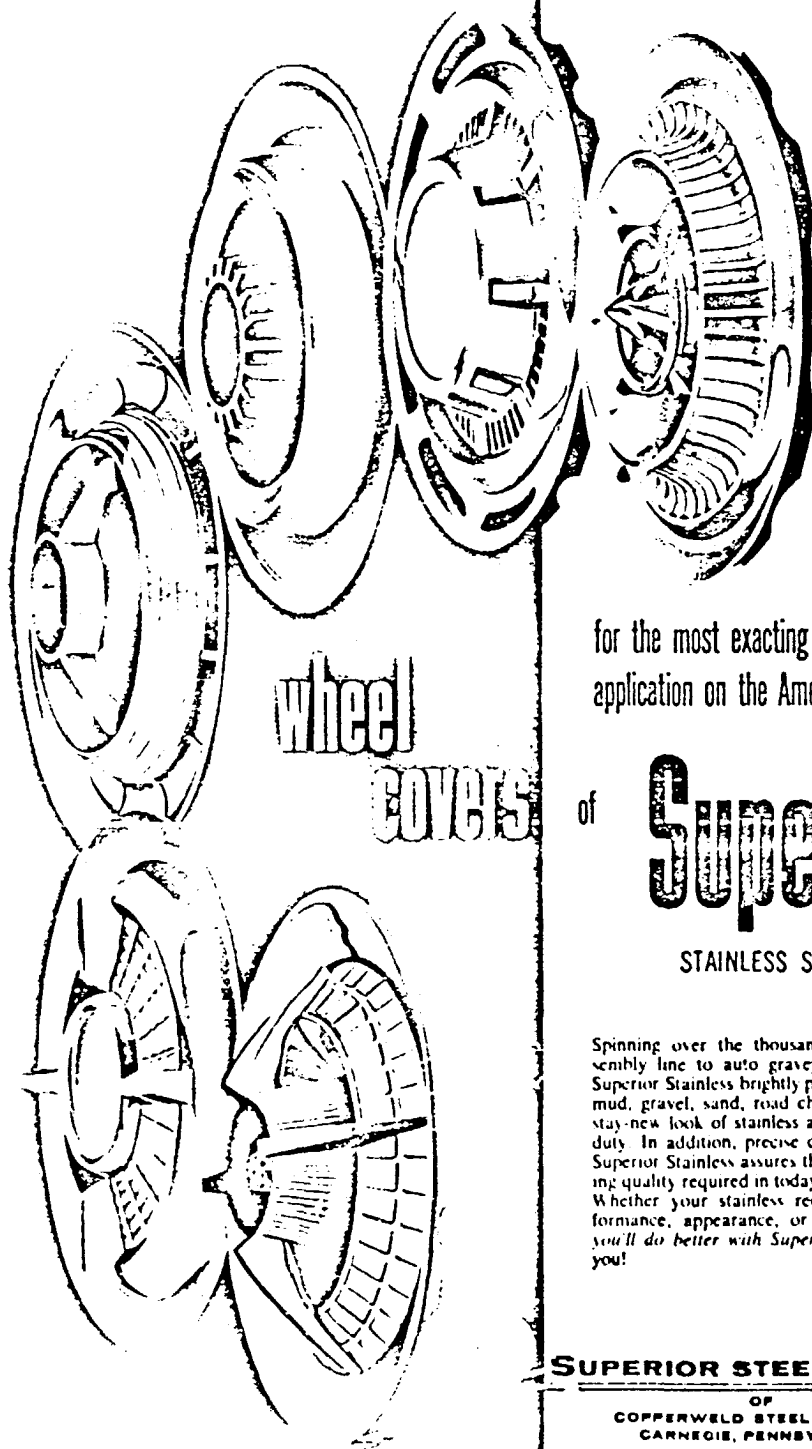
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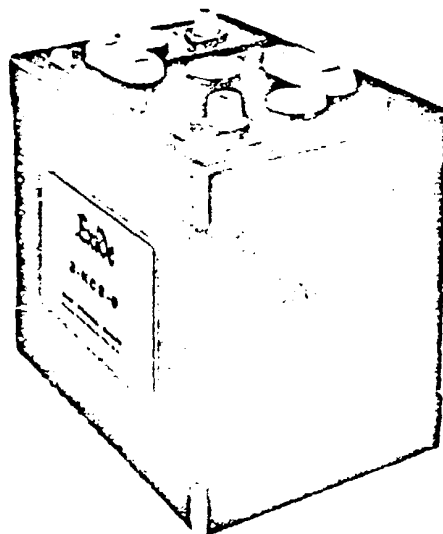
The Materials You Buy

Nineteenth of a Series

Industrial Trucks

Through the courtesy of the Lead Industries Association, the REVIEW presents on the following pages a comprehensive study pointing up the virtues of battery-powered industrial trucks.

The growing popularity of electric-powered equipment has been spurred by the development of high-capacity industrial batteries designed for long power drain service. One of these batteries is described in detail below.



An industrial-type battery developed for the growing genus of light-duty industrial trucks, personnel carriers and other small electrically powered utility buggies is shown at left.

Unit delivers 9 to 30 per cent more electrical energy than automotive types, yet is sized physically to substitute for them. Maximum dimensions are 10-11 3/4 inches long, 7-1 1/8 inches wide and 10-5 1/2 inches high (to top of terminal posts).

Electrical capacity of the battery is 180 ampere-hours at the 20-hour rate of discharge with electrolyte specific gravity of 1.280 at 77 degrees F. (rated according to automotive battery standards). Its capacity at the 8-hour discharge rate (used to rate industrial truck batteries) is 143 ampere-hours. Designed specifically for long power drain service, it has a predicted minimum service life of four years.

Battery comes equipped either with bare terminal posts or with wing nut terminals, either charged and filled with electrolyte or dry charged with electrolyte packed separately.

One of a series of articles on industrial trucks, published in the REVIEW.

N. Y. PURCHASING REVIEW

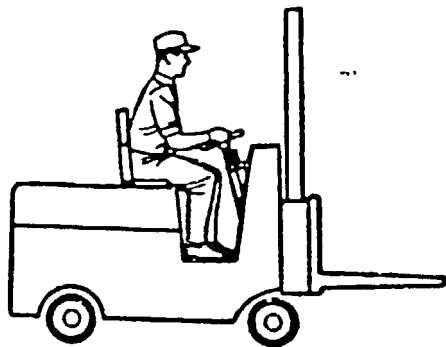
INDUSTRIAL TRUCKS:

What do they cost

—to own?

—to operate?

—to maintain?



With the aid of the handy calculator charts in these pages you can get the complete answers to these questions . . . accurately, and in a jiffy . . . these charts do the paper work that could mean substantial money savings in your operation.

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LOOK AHEAD 

A Cost Calculator

Studies of industrial methods have shown what a tremendous contribution to productivity industrial trucks can make. In many industries, a return to manual handling operations could erase the whole profit margin. And perhaps it is because these trucks are so profitable that their own economics are, to some extent, ignored.

Yet there are great differences in the cost of owning and operating trucks of the two main classes — battery powered and gasoline powered. In the calculator charts in this bulletin and the example shown, a battery powered truck is seen to cost less than 2/3 as much as a gasoline truck when all the factors are considered. But the real purpose of the charts is not to prove a hypothetical example. They are designed to let you arrive at your own cost factors quickly and without any great burden of computation. If your operation is typical of the hundreds surveyed in the study¹ on which this method is based, you have only to locate nine points in the charts on the following pages to learn what your total cost picture is for gas or electric trucks.

If the potential savings of using battery power seem too good to be true, consider some of the changes of the past few years and how they have affected the cost of owning and operating industrial trucks. Obviously the cost of gasoline and lube oil have been rising while the cost of electric power has declined. This, of course, favors battery power. Surprisingly, though, the cost of the energy as it is used at the wheels and forks of the truck amounts to only about one-fifth of the total cost for a gasoline powered truck and about one-third of the total cost for a battery powered truck. While the changing cost of fuel or power is significant, the more important changes lie elsewhere.

Studying the cost trend chart Figure 1, it can be seen that the

most rapid of the changing factors has been the cost of labor. Since both gas and electric trucks need drivers of comparable skill there is no advantage or disadvantage for either in the changing labor rate on that point. But when it is realized that the largest single item of expense for either type of truck is maintenance, the effect of labor becomes apparent.

For gasoline trucks, the cost of maintenance today is higher than the sum of all other costs they incur in general, two-thirds of the cost of owning and operating a gasoline-powered truck is chargeable to maintenance. The greater part of this expense is in skilled labor where the trend is to advancing wages.

While the largest single item of expense in owning and operating an

electric truck is also maintenance, it is far less (about one-half the total cost, as opposed to two-thirds for gas trucks) since the number of moving and wearing parts in an electric truck is reduced to a minimum. In terms of actual dollars per year, the cost of maintaining an electric truck averages about 40 per cent of the cost of maintaining a comparable gasoline truck.

And there are still other factors to consider in comparing overall costs. Accessory equipment is needed with both types of truck, for example. But where standard tools, facilities, and the cost of repairs have risen, the cost of battery chargers, as a specific example, has fallen drastically over the past few years.

Batteries, Too, Have Changed

Just as there has been an enormous change in the economics of battery and gasoline-powered industrial vehicles, there has been a change in batteries themselves. Purchasing decisions based on battery performance of ten or even five years ago leads to costly errors.

In the first place, today's heavy-duty industrial battery is not even made in the same way that lead-acid batteries were made a decade ago. In place of simple lead grids with lead oxide paste deposited in them, today's battery makes use of glass fibers and tough plastic internal retaining walls. In some designs the battery is made up of hundreds of individual small tubes which cannot be jarred loose, or bent or broken. And at the same time much of the space formerly needed for separators is saved.

The second outstanding advantage of today's lead acid battery stems from the space-saving design

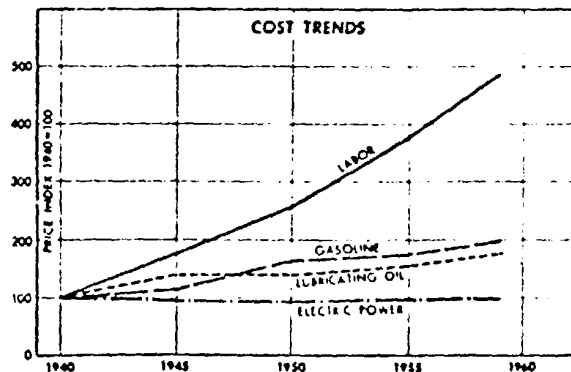


Figure 1—Cost trends source information, Department of Labor figures and earlier published information from several other federal agencies.

¹"Industrial Truck Costs," Trade Industrial Division, The Electric Storage Battery Co., Philadelphia 20, Pa.

for Industrial Trucks

mentioned above. In its more compact form, the modern battery can deliver more ampere-hours per cubic inch—or alternately, pack a given ampere-hour capacity into a much smaller space than its ancestor of a decade ago. For two batteries of the same size, the one of new design delivers up to 45 per cent more ampere hours of work than the old. And, of course, for the same capacity, the new design is less costly (Fig. 2).

Service records for the new batteries show that they are far exceeding the older design in ruggedness. A greatly increased life is expected.

There is, too, another important factor which is stretching battery life for industrial users. A number of postwar technical developments have made the automatic battery charger as inexpensive as the old equipment had been.

Operating unattended, the automatic chargers in use today feed power to the battery at optimum rates, detecting the exact needs of the battery and tailoring the charge pattern to match them. They have taken the art out of battery charging . . . and with it the guess, and the hunch, and the coffee break. For it is a fact that charging technique is one of the most important factors in the life of lead acid batteries. Indeed, other basic battery systems have largely staked their case on their ability to withstand charging

abuse and now they have lost this major point of contention.

YES, BUT . . .

Like politics and baseball the question of which type of industrial truck to use is rarely subject to the sole test of logic. Hence we are all prone to ignore some of the figures or facts, lean on personal experience and say, "Yes, but . . ."

Here are some of the "yes-buts" of the industrial truck question together with what may be a new insight:

"Yes, but gasoline-powered trucks are faster!" As your insurance company can tell you, this is almost invariably true. The internal combustion engine is characteristically able to develop high speed on the straightaway and tests by a manufacturer of both types of truck have shown that when the point to point travel is greater than 800 feet, a gasoline truck will generally get there before an electric.

If your problem is loading and unloading trucks, stacking pallets, etc., you may be interested to know that the same study shows the electric truck to be faster at this sort of work. There is a basically simple reason for this: Just as the internal combustion engine balks at low speeds (hence gear shifts and automatic transmissions) and develops maximum power at high speeds, the series starting DC motor used in electric trucks develops its maximum torque at low speeds. (Fig. 3)

This is why an electric truck uses such a small and comparatively simple mechanism—and why it wins the work race even though it loses on a race track.

"Yes, but electric trucks cost more than gasoline trucks!" Based on selling price, this is absolutely true. It is also true that an electric truck has at least twice the life expectancy of a gasoline-powered truck and may last three or more times as long. No matter how you amortize an electric truck, its long life pays for the difference in first cost.

"Yes, but even though the truck may last twenty years, the batteries have to be replaced." Actually the life expectancy of a correctly rated set of batteries cycled once a day is several years greater than that of a

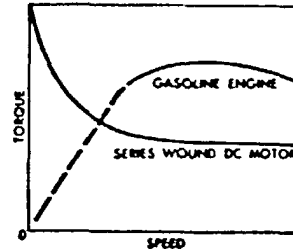


Figure 3—Comparison of characteristics of the internal combustion engine with a DC series motor used in electric trucks. Note the low speed characteristics particularly.

gasoline-powered truck.

In order to avoid guesswork in the calculations in this bulletin, the method now used by many truck users has been followed—the batteries are rented, thus being a predictable expense. Normally, this expense can be reduced, of course, by purchasing the battery. Therefore, in our calculations, electric trucks have been deliberately penalized by the difference between battery rent and actual battery cost if purchased. (The same was done with battery chargers.)

One final word on battery replacement: In the past twenty years, while inflation has forced other industrial prices to double, batteries have risen about 20 per cent in cost . . . and about 50 per cent in life expectancy!

"Yes, but recharging batteries is expensive and troublesome." Electrical power is not expensive and has not increased in price in the inflationary movement generally. Battery chargers are not expensive—even the fast fully automatic types cost only about \$600. But to prove that point, electric trucks are penalized (see above) by renting rather than purchasing chargers in the calculator charts. Finally, the "trouble" of recharging batteries consists of disconnecting the running plug, inserting the charging plug, and starting the charger. Elapsed time, 30 seconds. When the discharged battery is hoisted out and replaced by a fresh one, changeover time is about two minutes.

HOW NEW DESIGN HAS CHANGED INDUSTRIAL STORAGE BATTERY CAPACITY

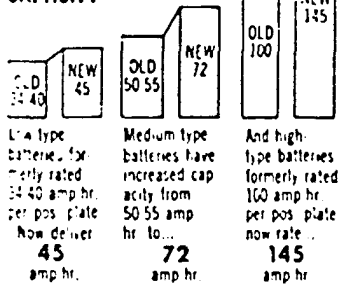


Figure 2

HOW TO CALCULATE THE COST OF OWNING AND OPERATING INDUSTRIAL TRUCKS

On this and following pages are calculator charts permitting an accurate and extremely rapid comparison of costs between gasoline-powered and electric industrial trucks. The three charts, or nomographs, perform the complex calculations involved in finding:

The cost of owning a truck (depreciation) . . . page 4
 The cost of operating a truck page 6
 The cost of maintaining a truck page 8

The Cost of Owning a Truck

The chart to calculate depreciation of industrial trucks (opposite) takes into account the initial purchase price of the truck and its useful life. If these two factors are known and points corresponding to them on the left and center scales of the chart are connected by a straight line, that line will cross the right-hand scale at a point corresponding to the cost per year. The calculation is a simple division of first cost or apportioning of it over the useful years of truck life. This calculation

does not take into account taxes, interest, sinking fund or any of the other common methods of amortization. It represents only the cost of owning the truck.

Where plant experience permits, it is best to use the actual life of trucks that have been tried. If this information is not available, use the indicated points on the center scale. These have been established by a survey of typical industrial operations which verify that an electric truck lasts at least

twice as long as a gasoline-powered truck of the same rating.

If actual prices of the trucks you use are known start with them on the scale at the left. If they are not known, Table I gives price ranges and averages of industrial trucks from truck manufacturers' price lists of January, 1959. Note that these are standard trucks (special attachments not included) and that the electric truck prices do not include the cost of the batteries.

TABLE I
PRICES OF STANDARD INDUSTRIAL TRUCKS — JANUARY, 1959

Truck Rating lb.	Gasoline-powered			Electric		
	Minimum \$	Maximum \$	Average \$	Minimum \$	Maximum \$	Average \$
2000	3850	4400	4100	5050	6000	5550
3000	4650	5700	5100	6400	7200	6800
4000	5200	6100	5700	7000	7750	7350
5000	5900	6700	6300	7600	8300	7950
6000	6200	7350	6900	8250	8950	8600

How to Find YOUR Depreciation Cost

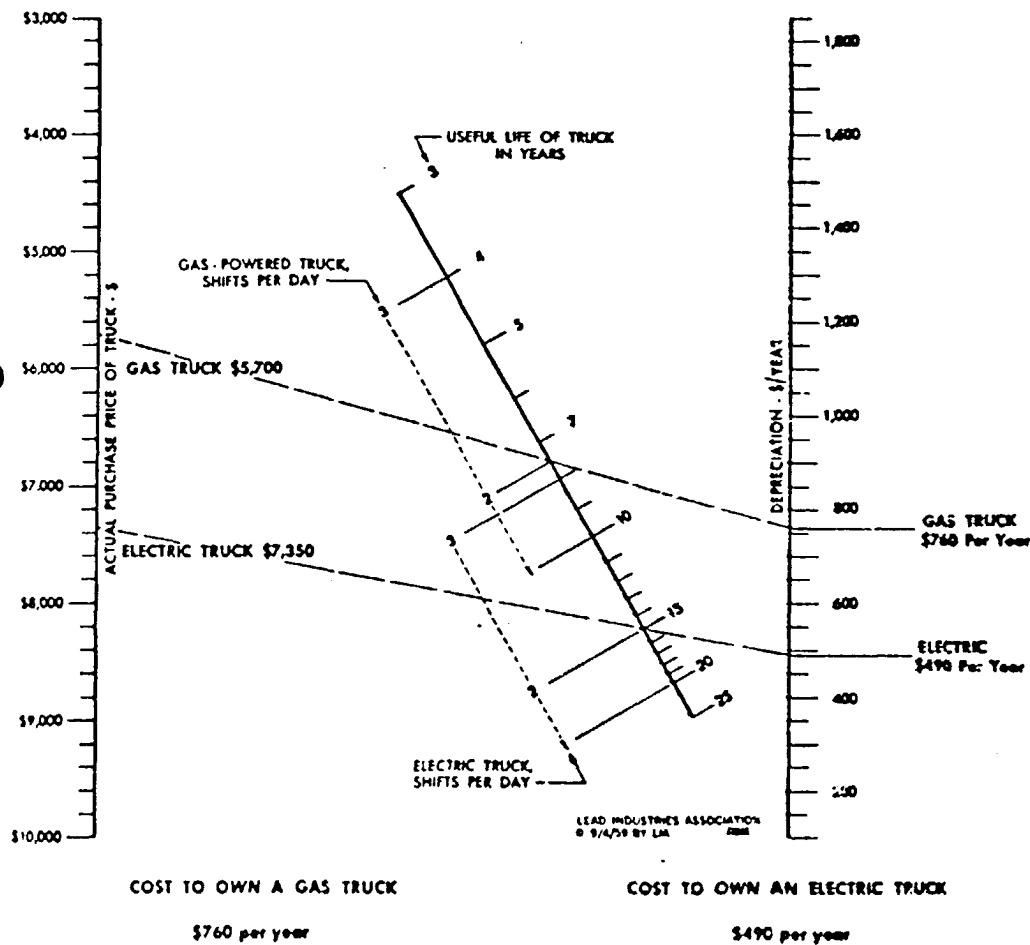
A Typical Example

Suppose that an industrial operation working a two-shift day required a new truck rated at 4000 pounds. From Table I, the average price of a 4000-pound gasoline-powered truck is \$5700, that of a 4000-pound electric is \$7350.

Find \$5700, the price of the gas truck, on the scale at left and place a straightedge through this point so that it falls at "Gas-powered truck, 2 shifts per day" on the center scale. As indicated, its life expectancy is $7\frac{1}{2}$ years. Note that the straightedge crosses the righthand scale at

\$760 per year.

In the same way, connecting \$7350 with "Electric truck, 2 shifts per day" (note that life expectancy is taken as 15 years though it may well be far higher) leads to an annual cost of \$490.



The Cost of Operating a Truck

One significant factor is omitted in this calculation of operating costs: the hourly wage rate of the driver plus fringe benefits and overhead. Since, in any plant, the same personnel would drive electric or gas trucks, this cost is not subject to comparison. In studies of total cost, however, it should be added to the final results.

Operating costs for gasoline-powered trucks are defined as the cost of gasoline consumed and cost of oil consumed. (Oil changes are covered under maintenance.) Gasoline is charged at 27.6¢ per gallon, the accepted average industrial bulk cost, and oil is charged at 19.0¢ per quart. Oil and gas consumption figures are given in Table II. These are average figures obtained by surveys of industrial users.

Operating costs for electric trucks include the cost of furnishing batteries, battery charging equipment, and the cost of electric power consumed. Since both batteries and a charger are capital equipment,

their cost per hour of operation is a function of their life. In order to eliminate any guesswork, the nomograph for operating costs is therefore based on rented batteries and chargers. The cost of renting these is significantly higher than the cost of owning them, thus indicating the most unfavorable cost performance for electric trucks. The actual rent figures are based on available leasing plans for batteries and chargers of the ratings recommended for the truck size in question. AC power is charged at the commonly accepted industrial average of 1.5¢ per kilowatt-hour.

Because the costs for the batteries and charger are based on a fixed monthly rent, the cost of using them becomes less as they are used more in any month. It is therefore necessary to set some basis of use. The operating cost nomograph is based on a plant operation of five days each week with six annual holidays.

Since it is easier to establish the cost of operating a gas truck, we

enter the nomograph with this cost. If the figure is available for your operations and is based solely on gas and oil consumption, use it. If the figure is not available, an average cost figure can be taken from the last column of Table II.

Locate this figure on the left scale, cost per hour to operate a gas truck, and lay a straightedge through that point so that it passes through the appropriate point in the center of the nomograph.

Note that the nomograph accommodates normal* one and two-shift operations. It also handles three-shift operations where three separate sets of batteries are used, where two sets and spares (figured here as 2½ sets), or two sets and no spares are used.

A straight line through the cost of operating a gas truck and the proper number of shifts will locate a point on the right scale corresponding to the cost of operating an electric truck of the same rating in the same service.

*One set of batteries per shift

TABLE II
OPERATING COSTS OF GASOLINE-POWERED INDUSTRIAL TRUCKS
(Gasoline @ 27.6¢/gal., oil @ 19.0¢/qt.)

Truck Rating	Average Gasoline Consumption		Average Oil Consumption		Operating Cost
	lb.	gal./hr. \$/hr.	qt./hr. \$/hr.	\$/hr.	
2000		0.63 0.174	0.076 0.014		0.188
3000		0.85 0.234	0.096 0.018		0.252
4000		1.07 0.296	0.100 0.019		0.315
5000		1.20 0.324	0.117 0.022		0.354
6000		1.45 0.400	0.120 0.023		0.423

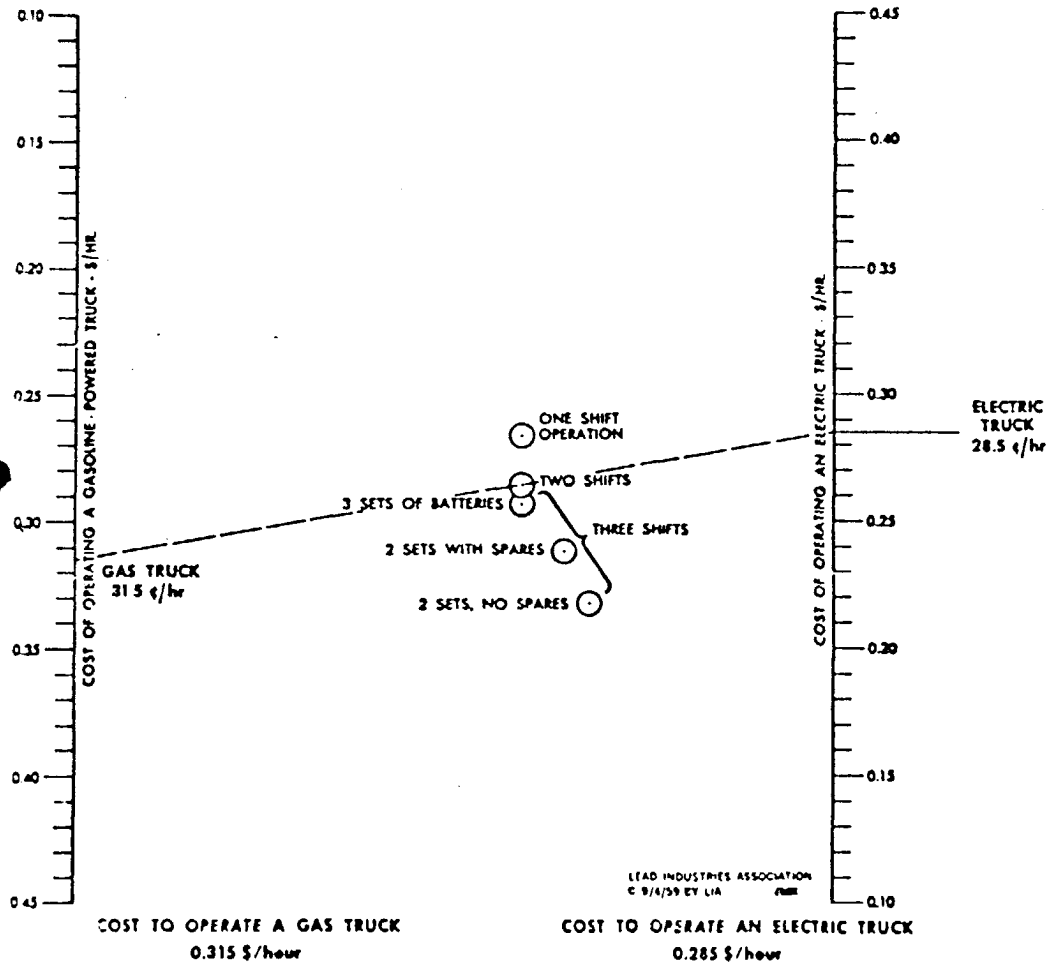
How to Find YOUR Operating Cost

A Typical Example

In the operation considered in the first example (cost of owning a truck) a 4000-pound truck was used for two shifts a day. If a gas truck were used under normal conditions,

the cost per hour to operate it (from Table II) would be \$0.315 per hour—or 31.5¢/hour. Find this point on the left scale of the nomograph. Lay a straightedge through this point so

that it falls on the center point "two shifts." The straightedge will cross the right scale at 0.285 \$/hour of operation.



And, in a year of operation,

$$8 \text{ hours/shift} \times 2 \text{ shifts/day} \times 255^* \text{ days/year} = 4080 \text{ hours/year}$$

$$0.315 \text{ $/hour} \times 4080 \text{ hours/year}$$

$$\$1285 \text{ per year}$$

$$0.285 \text{ $/hour} \times 4080 \text{ hours/year}$$

$$\$1163 \text{ per year}$$

*for a five-day week, six annual holidays

The Costs of Maintaining a Truck

The cost of maintenance found by the third nomograph includes oil changes, replacement parts, the labor costs involved in diagnosing troubles and installing replacement parts, and the costs of charging batteries and maintaining them and their charger.

Both the hours of maintenance and the value of replacement parts

attributable to an hour of operation are known for both gasoline-powered and electric trucks. These have been taken from the maintenance records of hundreds of industrial truck users. The values used as the basis of this calculator are average values reported in Table III.

The nomograph is quite simple to use. A known maintenance labor

rate plus fringe benefits and overhead on the left scale aligned with the proper point in the center will indicate the maintenance cost per hour of operation. If the hourly rate for maintenance labor plus its overhead and fringe benefits is not known, it is common practice to double the hourly rate to allow for these.

Table III
MAINTENANCE TIME AND VALUE OF REPLACEMENT PARTS PER HOUR OF OPERATION

Maintenance Time hours/hour of operation			Parts \$/hour of operation		
Minimum	Maximum	Average (Mean)	Minimum	Maximum	Average (Mean)
All Gasoline-powered Trucks:					
0.080	0.190	0.135	0.150	0.340	0.240
All Electric Trucks:					
0.020	0.081	0.055	0.050	0.130	0.090

How to find YOUR Maintenance Costs

A Typical Example

Continuing with the operation of the two earlier examples, suppose that the hourly wage rate for the mechanics at the plant in question is \$1.50 per hour. Since the over-

head and fringe benefit costs are not known, the wage rate is doubled and used to enter the left scale of the nomograph at \$7.00 per hour. Aligning this with the proper points for

gas and electric trucks, we find intersects with the righthand scale at \$1.185 per hour of operation for gas trucks and \$0.475 per hour of operation for electric trucks.

COST TO MAINTAIN A GAS TRUCK

\$1.185 per hour of operation

and for the same five-day week, 6 annual holiday year,

8 hours/shift $\times$ 2 shifts/day $\times$ 255 days/year = 4080 hours per year

1.185 \$/hour $\times$ 4080 hours/year

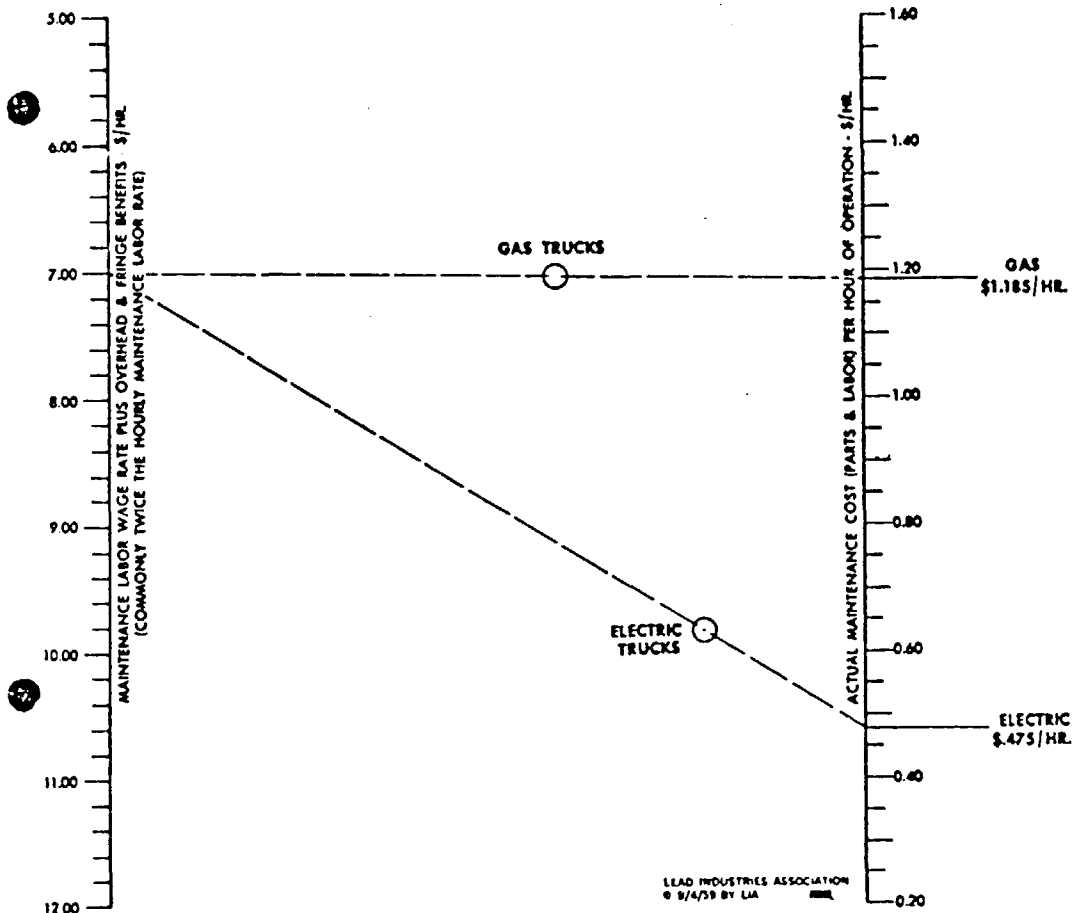
\$4835 per year

COST TO MAINTAIN AN ELECTRIC TRUCK

\$0.475 per hour of operation

0.475 \$/hour $\times$ 4080 hours/year

\$1938 per year



SO, TOTALING UP —

	Typical Example		YOUR PLANT	
	Gas	Electric	Gas	Electric
Cost to own, \$/year	760	490	—	—
Cost to operate, \$/year	1285	1163	—	—
Cost to maintain, \$/year	4835	1938	—	—
TOTAL, \$/year	6880	3591		
	3591			
SAVING, \$/year	3289 in favor of electric truck			

WHAT OTHERS HAVE FOUND

While the cost comparison method described in this bulletin will let you estimate costs for gas or electric trucks in your operation, it is based on averages of costs and, tacitly, on average working conditions. What about the special working conditions and problems of your operation? How do they alter the cost picture?

If your particular operation involves one of the specific problems described in the following case histories, you may be interested in what these truck users have found.

CASE II — SAN FRANCISCO WAREHOUSE COMPANY

Operation: General warehousing of palletized grocery products.

Significant job factors: Typical of many palletized operations.

Description: In 1948 at the beginning of a study made by San Francisco Warehouse Company six electric and five gas trucks were operating in two warehouses. Operations encompassed receiving of palletized grocery products, stacking, making up shipments and loading delivery trucks. The study ran from 1948 to 1952.

Results: In the five years covered by the survey, the company found direct annual maintenance and repair costs to average \$322.30 for gas trucks, \$60.75 for electric. Vice-president Lloyd Swayne, Jr. believes that these figures are still valid today. On the basis of the study, the company has turned to an increasing portion of electric trucks in its fleet. Today it uses 13 electric trucks, eight gas trucks, and one gas-electric truck. Mr. Swayne explains that "the low repair cost of battery powered trucks and their ability to keep operating without downtime are the reasons why we have been converting from gasoline to electric during the past ten years."

CASE IV — AUTOMOTIVE PLANTS

Operation: Varied—handling everything from heavy castings to containers of small parts and fasteners.

Significant job factors: Round-the-clock operation and the consequent need for reliability; large fleets; close cost control.

Description: Specific details of plant operation have not been divulged but it is known that cost studies have been made at Oldsmobile and Ford.

Results: As reported in *Iron Age**, "Oldsmobile Div. in the last few years has bought almost 400 electric units after a thorough, long term cost study. This started a trend at Fisher body. Sixty electrics were included early this year in plant expansions and equipment replacements. "Ford Motor has also bought about 150 electric trucks after finding a 4 to 1 ratio on maintenance costs."

*"Industrial Trucks: Price vs. Upkeep," Dec. 26, 1956

CASE I — THE BOSTON AND MAINE RAILROAD

Operation: Baggage and mail handling at a railroad terminal.

- Significant job factors: Heavy loads, fairly long runs including numerous ramps with grades up to 10 per cent.

Description: Previously, 34 gas tractors were used round the clock to load and unload baggage and mail. Though there were minor problems such as extreme heat for the drivers during the summer, gas fumes, and occasional fires, the change to electric trucks was spurred by a cold December morning on which 16 of the trucks would not start. The 34 gas trucks were replaced by 24 battery powered trucks.

Results: At the end of a year of operations, the Boston and Maine was able to show a reduction of 50 per cent in fuel-power costs, 75 per cent in maintenance part costs, and 60 per cent in maintenance labor. Net out-of-pocket savings for that one year were \$32,700.

CASE III — INDUSTRIAL MACHINERY MANUFACTURER

Operation: General handling in heavy machine manufacturing. Three trucks are used to receive, transfer between operations, load for shipping. Loads range from 1500 lb. parts to 6-7 lb. parts palletized.

Significant job factors: Typical of many plant operations where few trucks are involved.

Description: Switch from gasoline-powered to electric trucks was made in 1955. The three trucks are somewhat specialized: one is a high-lift model, one is specifically designed for loading over-the-road trucks, one is a general-duty lift truck.

Results: Management reports that *exclusive of major overhauls* the average monthly maintenance of the trucks has been reduced \$26.28. After almost five years of service, the original batteries are still in service. Furthermore, though fumes and noise were accepted as normal with gasoline trucks, they are now noticed by their absence.

CASE V — A PAINT AND VARNISH PLANT

Operation: In-plant handling of paint raw materials, finished products.

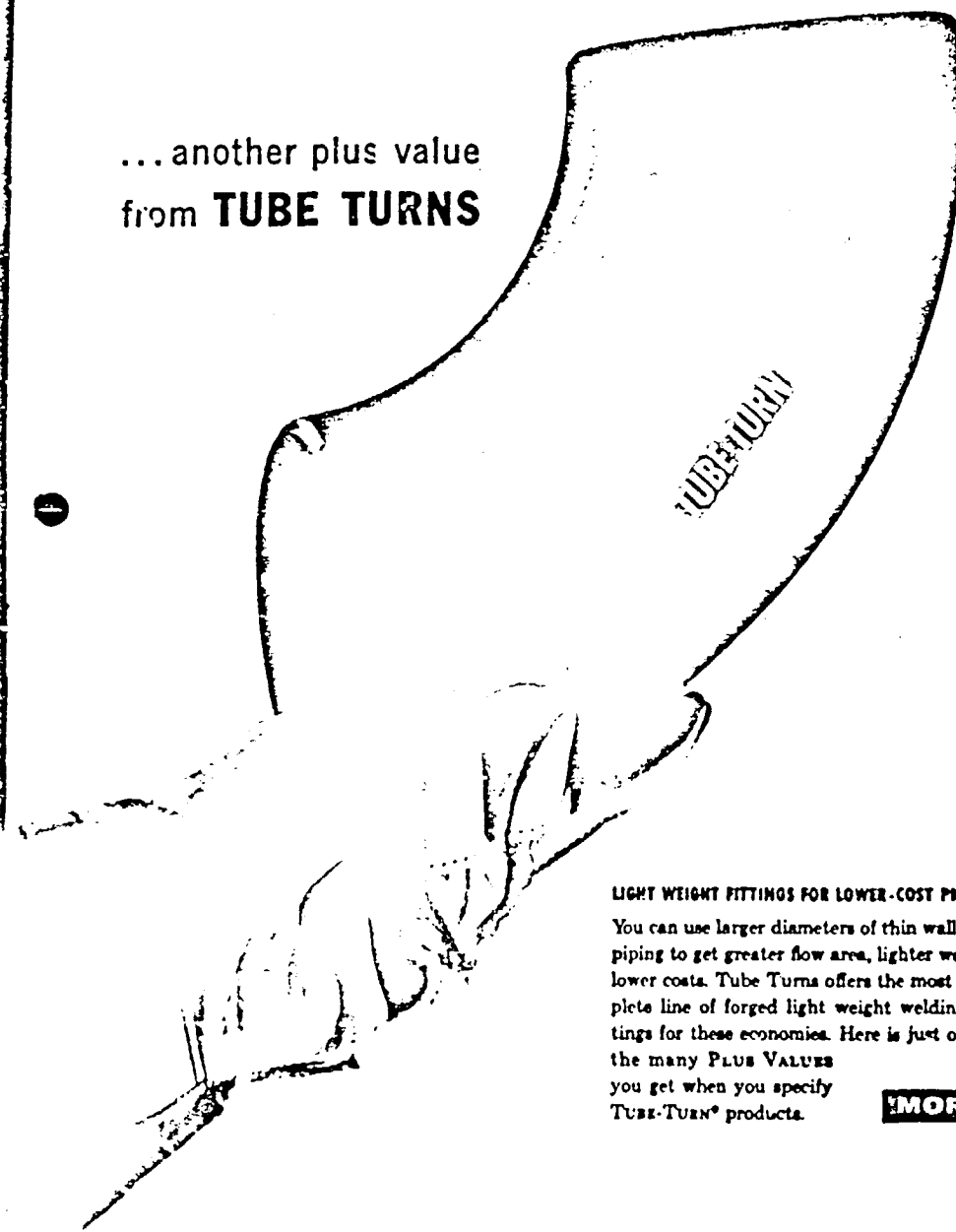
Significant job factors: General industrial use; fire and safety factors are important to management.

Description: Prominent paint maker has had experience with both gas and electric in-plant trucks. Trucks are used throughout the manufacturing operation—receiving, transporting materials for processing, handling finished paints, warehousing, shipping.

Results: Based on spot check comparisons, management finds that the use of electric trucks is at least 45 per cent cheaper than gas trucks. In commenting on such a comparison, the assistant superintendent pointed out that, "We have always felt that electric trucks are much better for inside operation and safer, too."

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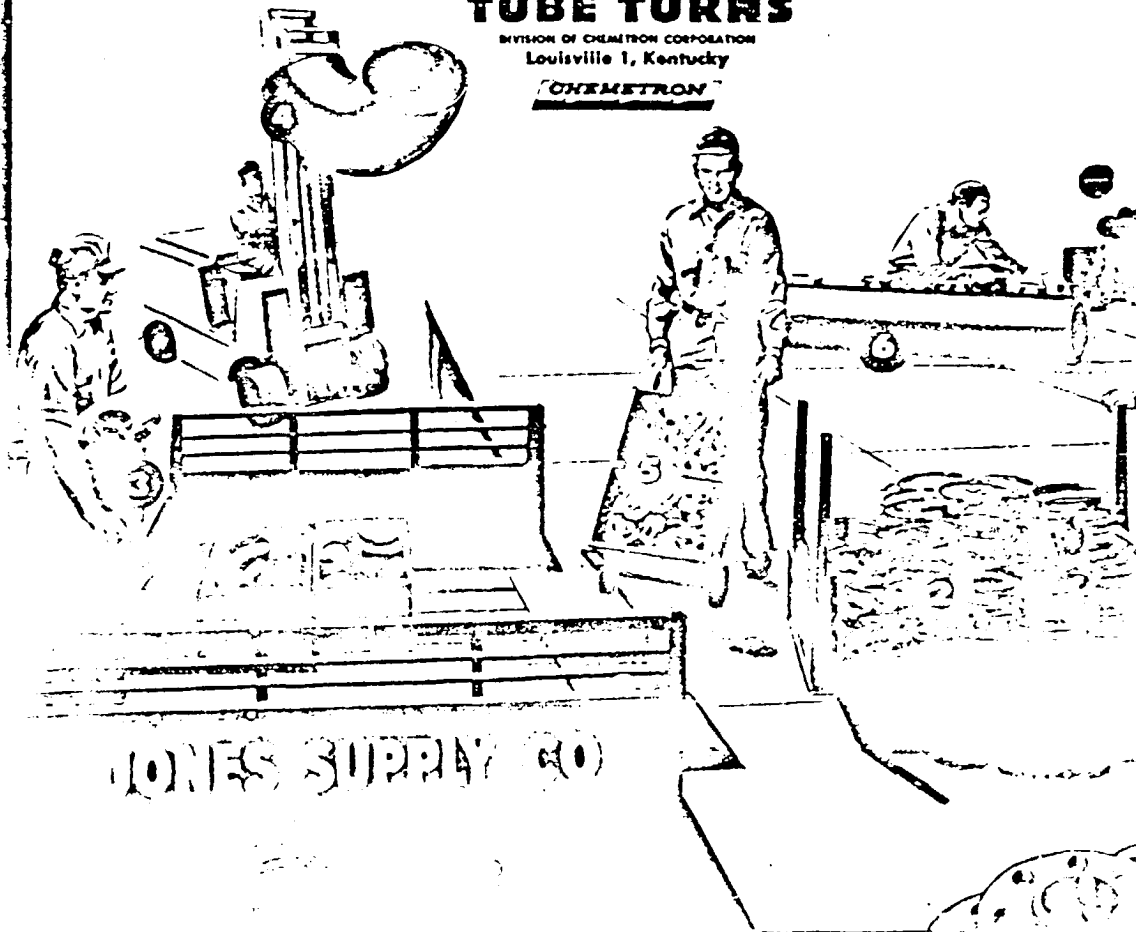
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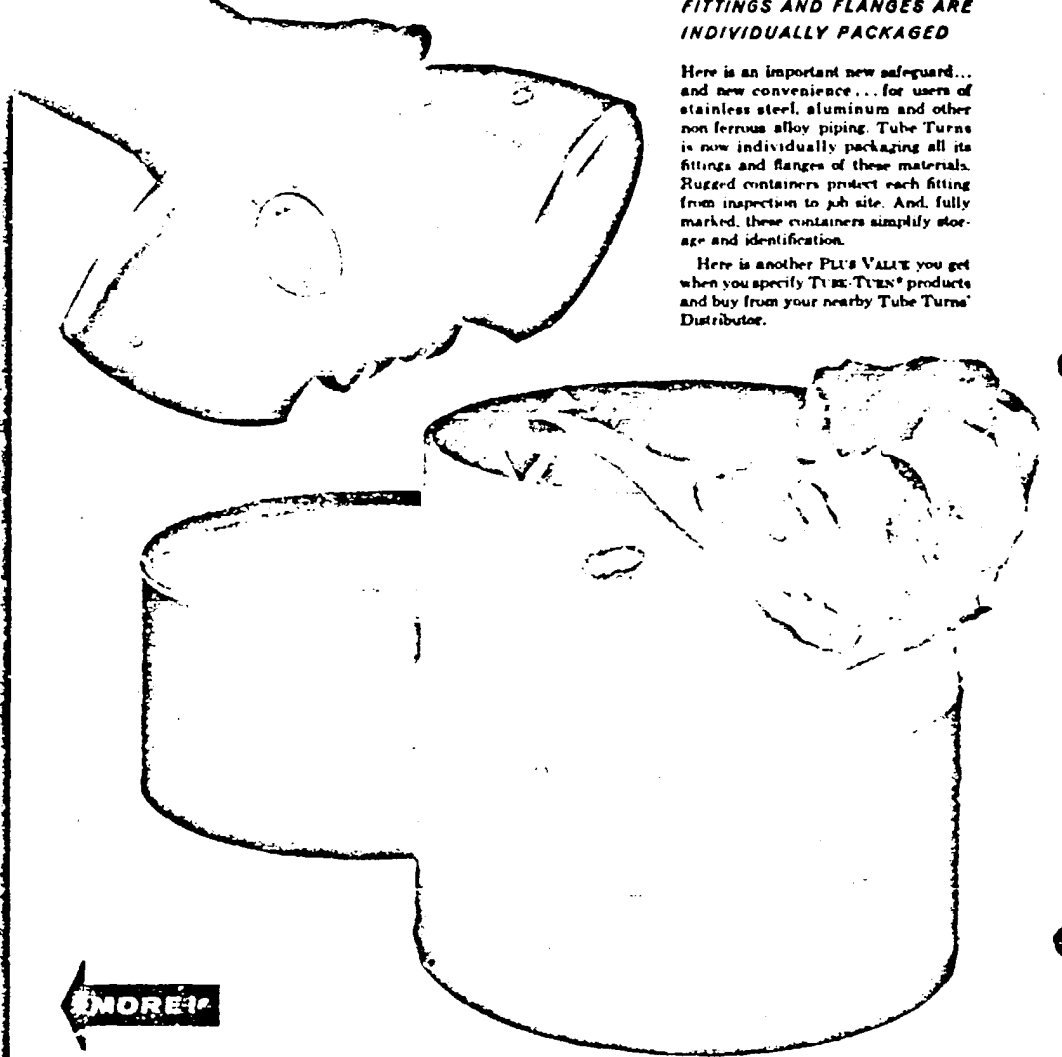
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Undeveloped Gold Mines in Purchasing

Richard W. Taylor
McKinsey & Company, Inc.

What would a 3 per cent cut in purchasing costs do for your profit showing? Not long ago, the senior purchasing executive in a big manufacturing company astounded a meeting of his company's top management by announcing that he could show before-tax profits equivalent to a 20 per cent sales increase or an 15 per cent decrease in manufacturing costs by reducing procurement costs 3 per cent.

What's more, he was in the process of doing just that. In the first phase of his program, he had achieved a reduction in purchasing costs that contributed almost \$3 million to annual corporate profits.

This is just one of many examples of how purchasing executives are helping industry improve profits and meet today's major challenge—cost reduction.

In the typical company, purchasing is probably the best place to go prospecting for unrealized savings. Here the potential is large and relatively undeveloped.

Purchasing in most businesses takes a big bite out of revenue. In the average make-and-sell business, purchased goods and services account for more than 40 per cent of the sales dollar. And in some companies, the figure rises to 60 per cent or more. Consequently, small percentage savings here can do a lot for profits—as much as a major

sales increase or a sharp cut in manufacturing costs.

Purchasing is also a good place to look for profits because its potential is still largely unrealized. Though purchasing has come of age in recent years, top management has not been interested in the function for very long. Traditionally, it has been a clerical job or service function supplementing the actions of the owner-manager, who made all the major buying decisions himself.

A "Stepchild" Function?

That is probably why many top managements still consider purchasing an undramatic, clerically-oriented function and why they often neglect it in favor of other, more "interesting" areas of the business. Too, very few top management men today have come up through purchasing. But purchasing people themselves are often to blame. Many of them, by confining themselves to selecting supplies and negotiating prices, have left themselves open to the charge that they don't understand the profit-making role of top management.

One typical senior executive puts it this way: "Purchasing people have generally not made top management aware of the potential in procurement because they haven't been speaking the right language—effects on profits."

Management Sees the Light

But despite this frequent criticism, competent purchasing executives in recent years have been gaining status in their companies.

For example, a senior purchasing executive in a large eastern processing business was recently included for the first time as a member of the corporate executive committee. He remarked that at last he had achieved a position enabling him to do "the right kind of a purchasing job for the company."

The frequent lack of any procurement planning and control also indicates that purchasing's profit-building potential has not been subjected to the same scrutiny as, for example, sales. In a recent study of nine manufacturing concerns, top executives readily admitted that they had set no targets and had no objective method of measuring purchasing's performance. Hence, many attractive programs and improvement opportunities are overlooked.

Today, enlightened top management is realizing substantial profit contributions in four purchasing areas, three of which are not usually considered purchasing's immediate responsibility:

• *Design or material specifications:* Purchasing's role here is that of adviser to technical personnel who

Where to Look for Savings



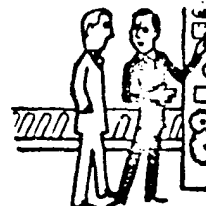
Specifications



Sourcing decisions



Buying



Materials control

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write the specifications. The objective is to prevent high procurement costs and achieve product advantages.

• **Basic sourcing decision:** Here, purchasing makes a contribution to make-or-buy decisions. The objective is to achieve lowest purchasing costs on items either produced inside the corporation or bought from outside suppliers.

• **Buying:** Here, purchasing has direct line responsibility for better application of its traditional skills in source selection and negotiation. The objective is to get maximum value by considering all significant elements of a "buy" in every purchasing decision.

• **Materials control:** Purchasing here is increasingly active in the efficient management of materials used in the business. The objective is to achieve minimum supply costs (costs of procurement, inventories, and physical movement) consistent with a given production plan.

One of the things management is *not* doing is to attempt to boost profits by cutting procurement overhead. This would be relatively unproductive, since most of the purchasing dollar goes elsewhere. Besides, indiscriminate cutting of overhead might be a short-sighted saving—dangerous in a competitive period.

In most companies, design and material specifications have been the job of engineers or other requisitioners. Yet the purchasing man, if he is called in at this stage, can often help reduce material and manufacturing costs or improve product design and performance.

During the specification-development stage, the purchasing man should act as an adviser or counselor who is qualified to contribute suggestions but does not have primary responsibility for results. He is mainly concerned with cost, while the engineer rightfully tends to worry about product performance. Also, since the purchasing man sees many salesmen daily, he can draw on their specialized knowledge of new materials, new applications, and new products. According to Andrew M. Kennedy, Jr., vice president of purchases and traffic at Westinghouse Electric:

Our major profit contribution has been achieved by having purchasing close to the engineer during design stages. The best way to begin reducing the cost of purchased items is to influence specifications in a way that permits buying of lower cost units.

Naturally, the purchasing department must be able to offer vendors some hope of reward for technical advice. It is a good plan to record special vendor contributions so these can be considered when picking a source. One major company uses the following policy to encourage vendor contributions:

For an outstanding design or other technical contribution acknowledged by the engineering department or by a using division, the company will give the contributing vendor, in order for a reasonable share of its first-year requirements of that item, at a total price that—considering the magnitude of the contribution—is reasonably in line with the total price of the lowest bidder. After the first year

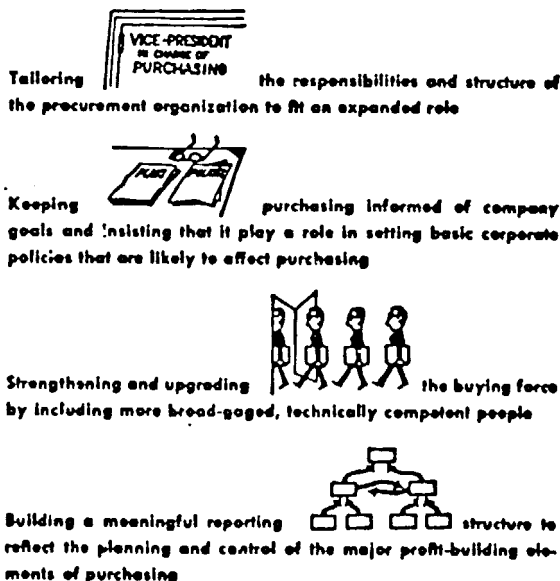
of use, repeat purchases of the same item will be bought strictly on the basis of competitive bids from approved sources—with the exception that a reasonable part of the new requirements will still be purchased from the designing vendor, provided his price is identical or virtually identical with that of the lowest bidder.

Learn the Language

If the buying organization is to be most helpful during specification development, it must understand product goals and company marketing objectives. At the same time, the other departments must be willing to take advice from the purchasing executive—although, as one purchasing executive said: "Purchasing itself must be product-oriented and speak the language of the engineers, while being careful not to assume more than the role of an adviser. In other words, the purchasing man

Getting the Most from Purchasing

According to Richard F. Neuschel, of McKinsey & Co., there are at least four ways a company can exploit its purchasing gold mines:



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must "earn" his own acceptance."

This means, in effect, that the purchasing representative should be a broad-gaged man, often with enough technical ability to talk their own language to a great many experts among supplier organizations.

There are several reasons why purchasing should be involved in basic sourcing (make-or-buy) decisions. First, it's importance to get the lowest short-term cost. Second, it's desirable to bring the competitive pressure of outside bids to bear on inside production costs. Naturally, to give outsiders an incentive to submit accurate bids, a percentage of total requirements should be purchased from outside vendors. A number of companies have, therefore, adopted a percentage-make percentage-buy policy to split sourcing of certain items.

One manufacturer of consumer durable goods uses a "source catalog" in which parts to be procured are classified. These items are

designated as "buy only," "make only," "percentage-make, percentage-buy," or "optional make-or-buy." Purchasing is responsible for procuring all "buy only" items and all "optional make-or-buy" items from any source on the basis of over-all value. (This is one instance in which purchasing plays more than an advisory role in basic sourcing decisions.) Hence, on "optional make-or-buy" items, an inside source must compete on price as well as nonprice elements.

Keeping Up on Market Facts

Its special knowledge of the market is another reason why purchasing should have a strong voice in sourcing policies. Purchasing's extensive contacts can help keep the company up to date on significant developments and trends in the outside supply market that could affect its production decisions.

To make sure these long-term considerations are included in facilities plans, one very successful company publishes its interplant

transfer prices and estimated outside purchase costs annually.

After a similar, though less formal, analysis, another manufacturer contracted to have a large assembly produced overseas rather than make it himself. The savings—\$80 per unit—had a healthy effect on the company's year-end results.

In another case, a large manufacturer of consumer durable goods decided to produce an important component formerly purchased outside the company. In addition to a small saving in unit cost, the company was able to protect its source of supply and capture a highly profitable market for replacement parts.

The main job of a purchasing organization, of course, is to pick vendors and negotiate prices. In recent years much has been heard of "value analysis" as a means of carefully weighing significant non-price elements of value, such as quality and delivery performance. But "value analysis" is little more than a refinement of the job done for many years by well-informed, analytical buyers.

Another profitable refinement has been the use of "target costs"—that is, estimates of what items *should* cost—to help the buyer obtain lower prices.

At one large metal-fabricating company this approach has been very successful in obtaining ultimate price reductions of more than 20 per cent on individual items. For example, this company had been buying one specialized type of assembly from three outside sources. On the basis of a detailed analysis of the material, labor, and overhead expenses, and a fair rate of return to the vendor, the assembly was found to be overpriced. The disparity of nearly 20 per cent between the "fair" price and the bid prices was eliminated after the company persuaded the vendors to replace obsolete equipment.

Admittedly, target costs are not practical to use for all purchases.

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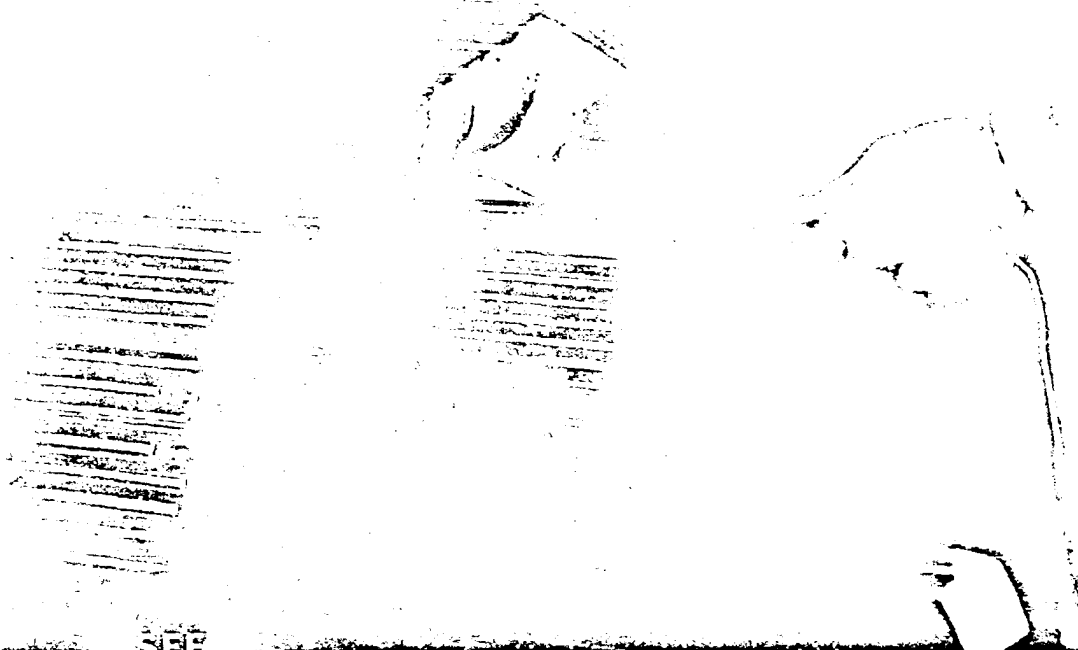
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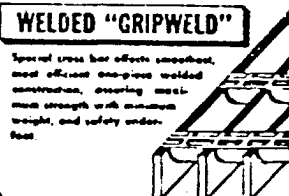
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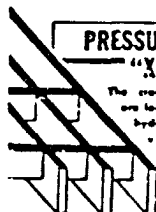
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And where free markets exist for standard commodities, actual prices paid can be compared with corresponding market quotations.

When price performance indicators are supplemented by yardsticks of delivery performance, quality, and special vendor contributions, a company has a valuable management tool for planning and control and for gauging over-all vendor performance. It also serves as a measure of purchasing department performance, and identifies the outstanding buyers, although it fails to take into account intangible factors. Good judgment must bridge this gap in any control system.

Many progressive companies have been taking a new look at purchasing performance indicators. Similar techniques involving comparison of goals or bogeys with actual performance have been successfully put to work in other parts of the business, such as marketing and manufacturing.

For example, one useful measure expresses purchasing's "quality" performance in terms of the value of material rejections as a percentage of the total value of purchases. This and other indicators also curb undue vendor favoritism because of reciprocity, since all vendors are judged on the basis of value performance.

But few companies have any accurate yardsticks of the buying effectiveness of their purchasing operation, either collectively or individually. A student of management has observed, "Purchasing departments are frequently evaluated by top management in terms of the apparent ability of the senior purchasing executive."

Watch Inventory and Production

In the light of the materials control concept, which views procurement as a single stage in the total flow of materials from sources to the final customer, it is clear that purchasing policies should be related to inventory levels and varying production schedules. This may mean, for example, more frequent ordering to reduce inventory levels, even though procurement costs are thereby increased.

Few companies as yet have put the materials control concept into practice, in the sense of centralizing the responsibility at a single point. Yet excellent results have been reported. At Massey-Ferguson Limited, third largest North American manufacturer of farm implements, responsibility for materials management is linked with production planning under a single executive, who coordinates the activities that go into the setting of the annual production plan and makes sure materials are available to meet the original plan. When actual sales vary from the forecast rate, he alters production schedules accordingly and adjusts purchasing and inventory levels.

The plant managements under this arrangement are responsible for carrying out production plans within approved limits of cost and schedule.

Senior executives attribute an increase in total inventory turnover from three times to five times annually to their materials management policies.

Single Responsibility

Under certain circumstances, it is a good idea to make one person responsible for maintaining the best combination of inventory position and purchase scheduling to serve a given production plan. In fact, for stocked items, a balance point theoretically exists between procurement costs and inventory expenses for a production plan, at which point the over-all costs to the company are at the optimum. Electronic data processing equipment is making it possible to control a balanced relationship for a large number of items. Successful installations in use today are simultaneously keeping inventory balanced and issuing purchase orders.

Better control of materials flow and inventories can be achieved in companies where purchasing plays a broader role in the materials cycle. By balancing the cost of acquisition with the cost of carrying inventory, undeveloped gold mines of profit can be exploited.

N. Y. PURCHASING REVIEW

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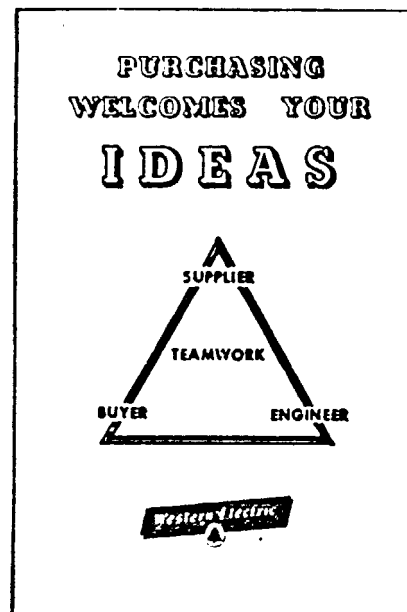
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Join the Team

The Review presents below excerpts from an outstanding purchasing brochure developed by Western Electric to encourage teamwork between the supplier, buyer and engineer. The Editor thought that this was a

good example of one way companies might hurdle the roadblocks to cost reduction. We hope that this brochure may prove helpful to other purchasing departments in the process of developing cost reduction programs.



Purchasing Welcomes Your Ideas

... because not one of us can do a good job for very long working alone and without the free exchange of ideas. The freedom we in America uniquely possess to exchange ideas, and the incentive we have to improve and originate, are important contributing factors to industrial progress and our Nation's material well-being. With your cooperation and interest we, together, can do a *better* job.

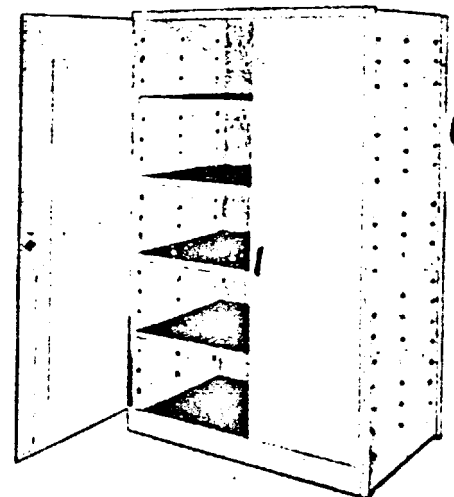
This booklet presents a small sample of cost reduction ideas adopted in 1957, arising out of the buying relationship between Western Electric's suppliers, buyers and engineers. The purpose of the booklet is to encourage your continuing participation in this cooperative effort.

We urge each of you to join with us in our efforts to reduce costs. We want to know where we can improve our job and we invite your suggestions on new materials, new products or new processes. Your ideas may concern an already existing product we now purchase from you. They may also involve other items which you feel should be brought to our attention. In either case and regardless of the results, we welcome your interest.

If you are a potential supplier, be assured that you will be accorded a courteous and prompt reception at any of the Company's purchasing locations. We're interested in knowing about what you have to sell. Western Electric gives fair and impartial consideration to any reputable concern, small or large, which is qualified to produce the material being purchased. Our business is awarded without favoritism on the basis of the best price for material of the required quality and quantity for delivery at the right time.

G. F. Raymond
VICE PRESIDENT
PURCHASING AND TRAFFIC

MARCH 1958



storage racks

A study by Indianapolis Purchasing and Engineering Organizations indicated that only the front 22 to 24 inches of our standard 30" tool storage rack was utilized. A new rack was designed with 24" shelves and other changes which provide greater rigidity and requires less floor space. Savings of \$70,000 will result on present requirements and substantial future savings are expected.

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point is always
the same at
Alan Wood"

"Doing business with Alan Wood,
we never have to worry about
variations in pricing policy. Whether
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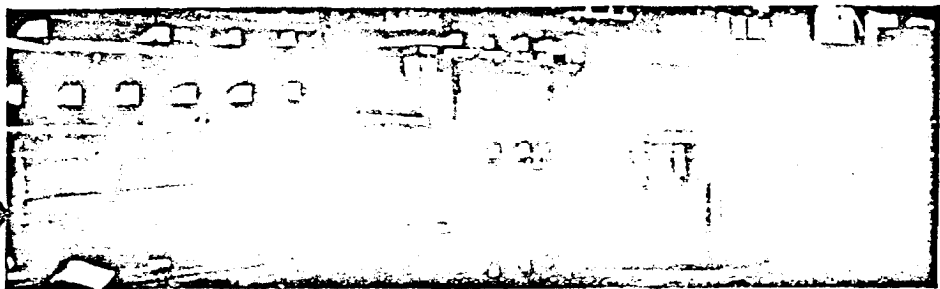
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May, 1960



steel cable drums

Tonawanda Purchasing and Engineering Organizations were able to introduce a sheet metal supplier who, with the use of simple punch press equipment, could slit, bend and spot-weld the sides from cold rolled galvanized sheet steel rather than the former procedure of rolling and welding sheet steel and then hot dip galvanizing the drum. Annual saving—\$25,000.



brass terminals for key equipment

The corporation of Kearny Purchasing, the Engineering Organization and the supplier resulted

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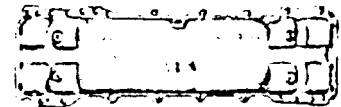
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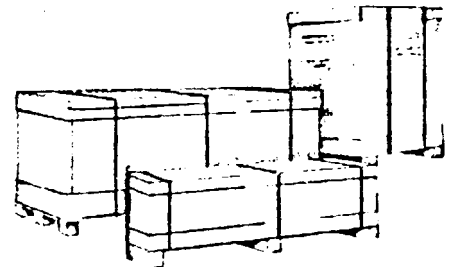
BARV SERVICE
—between the Mid-west and Eastern Seaboard.
—from the East and Midwest to all points in California, Oregon, Washington, Alaska and British Columbia.

in the adoption of new tooling which produced two terminals at a time and, in the process, utilized 17% less brass. The cost of brass represents two-thirds of the cost of the terminal. The raw material saving plus the doubled production rate resulted in annual savings of \$27,000.



gray iron splice castings

Because a water-tight requirement would permit no extra holes, this casting had to be galvanized by hand, using tongs. Acting on a supplier's suggestion, Point Breeze Purchasing enlisted the help of the Engineering Organization which modified the design by adding a tip which could be drilled to permit rack galvanizing. Annual savings—\$79,000.



multiple packaging of aluminum telephone booths

Our booth suppliers had been using five separate containers for packaging each booth. Our Telephone Packing Methods Organization worked with Headquarters Purchasing and the suppliers in designing a multiple package permitting six booths to be packed in three boxes. Annual savings—\$100,000.

Engineer — Buyer — Supplier
Teamwork Cuts Costs

JOIN THE TEAM

N. Y. PURCHASING REVIEW

Purchasing Pick-Ups

Success is the fine art of making mistakes when nobody is looking.

- ② When day is done, you frequently find out how much else has not been.

Middle age is the time of life when your idea of getting ahead is to stay even.

Some women take a man for better or worse; others for all he has.

Sometimes a milk coat comes from skinning a wolf.

Since the discovery of elastic, it is estimated that women take up one-third less space.

The moon not only pulls the oceans back and forth in the tides, it stops cars on the side roads.

Socrates was an old Greek philosopher who went about giving good advice... They poisoned him.

The Army psychiatrist wished to be sure that the newly enlisted rookie was normal in all respects. Suspiciously, he said: "What do you do for social life?" "Oh," the man blushed, "just sit around mostly."

Hummer: "never go out with girls?"

- ③ "Don't you even want to?" the man squirmed. "Well, yes, sort of." "Then, why don't you?" "My wife won't let me, sir."

Salesman: "I've been trying to see you for a week. When may I have an appointment?"

Executive: "Make a date with my secretary."

Salesman: "I did, and we had a swell time, but I still want to see you."

A very father to son: "Why don't you get out and find a wife? When I was your age I was working for \$100 a week in a store, and at the end of five years, I owned the store."

Son: "You can't do that today, Pop. They've got cash registers."

Doctor: "I don't like the look of your husband."

Wife: "I don't either, but he's all that was available."

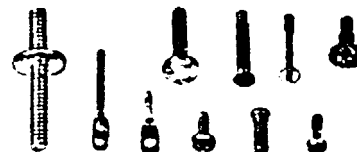
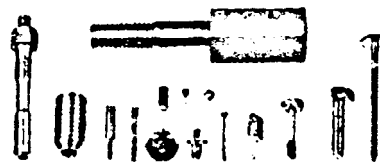
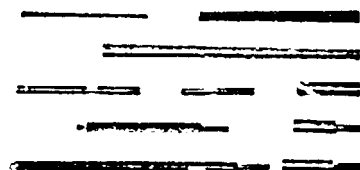
After the doctor checked the patient over, the physician asked: "Have you been living a normal life?"

Yes, doctor.

Well, you'll have to cut it out for a while.

- ④ Groom: "So you didn't know I wore elevator shoes?"

Bride: "No. But I have a couple of surprises for you, too."



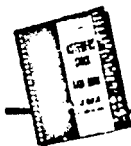
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NEW—cleaning phosphating process
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Now, by the tank-immersion method, you can get cleaning-phosphating efficiency comparable to pressure spray cleaning—with new Oakite-CrysoCoat 187.

This remarkable CrysoCoat process removes a variety of sludges and shop soils... converts steel surfaces to a dense phosphate layer that walls out rust, bonds paint tightly. Does both jobs in the same 3-to-10 minute operation.

The superior cleaning ability of CrysoCoat 187 is the result of a blend of special solvents and detergents, formulated to help keep pre-unit production costs low. Write for details.

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New Members

John Babik, Assistant Purchasing Agent, U. S. Metals Refining Co., joined the firm thirty-two years ago. He was named to his present position seven years ago. Born in Carteret, N. J., Mr. Babik studied at Carteret High School. He is married, has two sons and one daughter and resides in Colonia, N. J.

E. Raymond Bender, Purchasing Agent, Joseph E. Seagram & Sons, joined the firm fifteen years ago as a Production man. He was promoted to Purchasing Agent ten years ago. A native of New York City, Mr. Bender studied at St. John's University. He is married, has one son and a daughter and resides in Stamford, Connecticut.

Manuel F. Bocchini, Jr., Fleet Purchaser, Service Leasing Corp., joined the company five months ago. He was previously associated with the Picker X-Ray Corporation. Born in Paris, France, Mr. Bocchini studied at Fordham University. He is married, has one daughter and resides in New Rochelle, N. Y.

Edward J. English, Manager of Purchases, Novamont Corporation, has been with the firm for four months. Born in Jersey City, Mr. English studied at Stevens Institute. He is married, has one son and a daughter and resides in Lynbrook, N. Y.

John N. Fanelli, Purchasing Director, Colorforms, has been with the firm for four years. Born in New York City, he is married, has two sons and resides in River Edge, N. J.

Joseph D. Gollon, President, Bestcraft Products Co., joined the firm fourteen years ago as corporate secretary. He was promoted to President three years ago. Born in London, England, Mr. Gollon graduated from St. John's University and St. John's Law School. He is married, has one son and a daughter and resides in the Bronx.

John J. Hickey, Project Purchasing Agent, International General Electric Co., joined the firm 13 years ago. He became Project Purchasing Agent the early part of this year, has been in purchasing a little over three years. A native New Yorker, Mr. Hickey studied at Andrew Jackson High School. He is married, has two sons and two daughters and resides in Peekskill, N. Y.

William J. Landy, Purchasing Agent, The New York Racing Association, Inc., joined the firm five years ago as Supervisor of the payroll department. He was appointed to his present position in March of this year. A native of New York City, Mr. Landy studied at Evander Childs High School. He is married and resides in Crestwood, N. Y.

Keron O'Neil, Assistant for Purchasing—General Products Division, IBM Corporation, joined the firm 18 years ago. He was appointed to his present position three months ago. Born in Binghamton, N. Y., Mr.

N. Y. PURCHASING REVIEW

O'Neil studied at the University of Rochester. He is married, has two children and resides in Mount Kisco, N. Y.

Robert G. Rhett, Jr., Administrative Assistant, Kennecott Copper Corp., joined the firm two months ago having previously been associated with the Cerro de Pasco Corporation. Born in Charleston, S. C., Mr. Rhett graduated from Yale University. He is married, has three sons and two daughters and resides in Stamford, Conn. Mr. Rhett was a member of the Association from 1949 to 1953.

Charles Virga, Assistant Office Manager, American Metal Climax, Inc., joined the firm eight years ago. He was appointed to his present position a year ago. A native New Yorker, Mr. Virga studied at the New York School of Printing.

James R. Finnegan, Assistant Purchasing Agent, Hayward Mfg. Co., joined the firm four years ago as a clerk in the purchasing department. He was promoted to Assistant P.A. one year ago. A native of New York City, Mr. Finnegan studied at U.C.L.A. He is married and resides in the Bronx.

Javier Cuevas Benitez, Director of Purchasing, Puerto Rico Water Resources Authority, joined the Authority 25 years ago as a construction engineer. He was appointed to his present post seven months ago. Born in Luquillo, Puerto Rico, Mr. Benitez is a civil engineering graduate of the University of Puerto Rico. He is married and has one son and three daughters.

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P.A.A. of N.Y. News

B. L. Flynn Promoted at Lever

Bernard L. Flynn, former assistant general purchasing agent, has been promoted to general purchasing agent for Lever Brothers Company. He succeeds Harold W. Edwards, who retires after 40 years of company service.



Mr. Flynn started his Lever career in 1933 after graduating from Virginia Polytechnic Institute with B.S. and M.S. degrees in chemical engineering. He first worked at various plant locations in both manufacturing and research and development positions. He later was a buyer of fats and oils before being named assistant general purchasing agent in 1954.

In 1955 Mr. Flynn took part in

Call *Carpenter* for BI-METALLIC TUBING
MURdock 8-1540



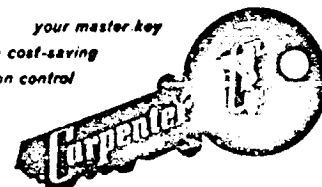
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your master key
to cost-saving
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Stainless Tubing & Pipe

N. Y. PURCHASING REVIEW

the Harvard Business School Advanced Management Program.

He joined the Purchasing Agents Association of New York in 1954 and is also a member of the Scientific Research Society of America and American Oil Chemists Society.

H. W. Christensen Named Fischbach & Moore VP

H. W. "Chris" Christensen, who has retired as assistant to executive vice president, United States Steel Corporation's Columbia Geneva Division, has been appointed Executive Vice President—Commercial of Fischbach and Moore Inc., a leading electrical construction firm. Mr. Christensen and his wife will move to New York immediately and reside at the York River House, 1175 York Ave., New York 21, N. Y.

"Chris" was the 1959 recipient of the J. Shipman Memorial Medal, purchasing's highest honor. He had retired from U. S. Steel's Columbia-Geneva Division after 40 years of service. He was Director of Purchases from 1939 until recently.

"Chris" served as N.A.P.A. president in 1952-53; two terms as vice president of NAPA's District One; and president of the Purchasing Agents Association of Los Angeles and Northern California.

A native of Brooklyn, N. Y., "Chris" attended Pratt Institute and served in World War I as a Captain of Field Artillery. He completed his education at the University of Southern California's School of Commerce.

Mr. Christensen has been a frequent guest lecturer at Stanford University and the University of California at Berkeley during the past 15 years.

Purchasing-Sales Dinner Moves to Waldorf

The 30th annual Purchasing-Sales Dinner and Executives Night will be held on Tuesday, February 14, 1961, in the Grand Ballroom of The Waldorf-Astoria.

MAY, 1960

IF YOU BUY METAL, YOU'LL GET *Matchless Service* FROM **MAPES & SPROWL**

Yes... from the girls at the switchboard to the men on the trucks... your order gets the Matchless Service that's the secret of Mapes & Sprowl's 35 years of success!

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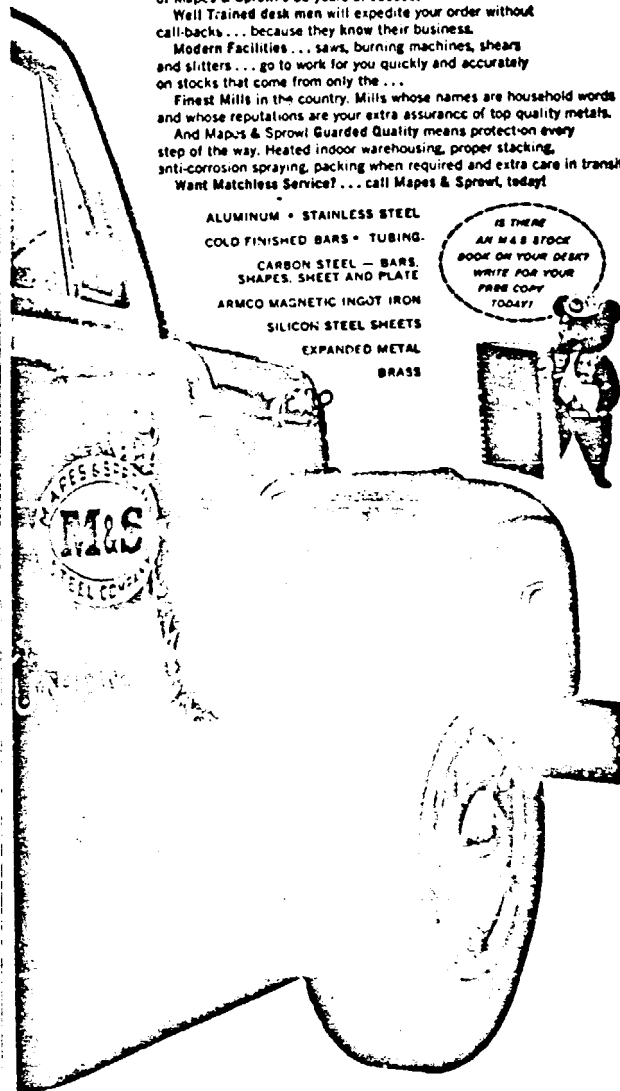
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George Aljian Retires

A long and outstanding career in purchasing with California & Hawaiian Sugar Refining Corp. came to a close in April when George W. Aljian retired after serving forty-one years. At the time of his retirement he was a vice president of C and H. Between



1945 and 1958 he was director of purchasing and packaging and had been purchasing agent from 1933 to 1945.

In 1951 Mr. Aljian was also named coordinator of the by-products project of the Hawaiian Sugar Planters' Association of Honolulu. On retiring from C and H he will continue this assignment, completing studies on the potential commercialization of the use of sugarcane bagasse for producing pulp and paper. His office will continue to be at 215 Market Street,

San Francisco.

During World War II, Mr. Aljian was a Dollar-a-Year man with the War Production Board in Washington, D. C., serving as a consultant on packaging problems. He organized the Containers Division of the U. S. Navy Office of Procurement and Materiel. Since that time he served for one year as president of the San Francisco Chapter of the Quartermaster Association.

He has been a member of the Purchasing Agents' Association of Northern California since 1933, serving as president, chairman of its Education Committee, among other assignments. Elected to the National Executive Committee in 1945, he represented the District #1 Associations and then became national president in 1948. Upon completion of his term of office, he accepted a 3-year assignment as chairman of the National Committee on Education. Under his able leadership, this Committee developed and carried out a program that is recognized as the outstanding activity of the Association, setting the keynote for Association work in the 90-odd local groups throughout the nation and contributing significantly to the spectacular advancement of purchasing as a vital and constructive function of management in the nation's industrial life.

Since 1952 he has served as Chairman of the Organization Planning Committee engaged in directing a long-range program for the NAPA. In 1953 he was recipient of the J. Shipman Memorial Medal Award of the NAPA for distinguished service and contributions to the advancement of purchasing.

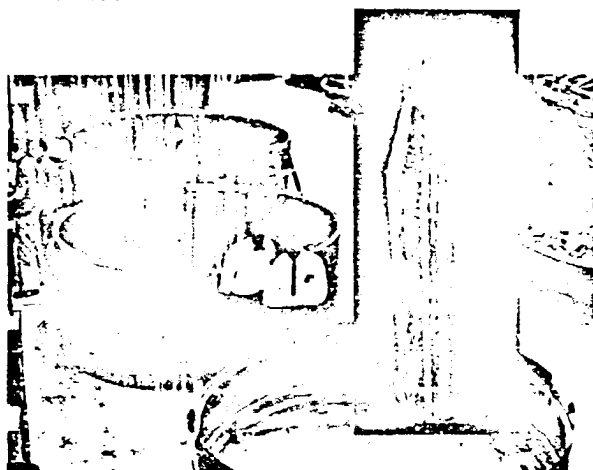
George Aljian's career in purchasing reached its climax with completion of the *Purchasing Handbook*, for which he was Editor-in-Chief. This 1500-page volume was published by the McGraw-Hill Book Co. in 1958.

ACF Names Hopkins Purchasing VP

Harvey C. Hopkins has been elected vice president for purchasing of ACF Industries, Inc., a new post.

A former P.A.A. of N. Y. member, he served on the Association executive committee from 1947 to 1950.

N. Y. PURCHASING REVIEW



"the life of an ATLAS tank section begins in the town of Washington, Pa.

... where the Washington Steel Corporation produces thin-gauge Stainless Steel in long, flexible bands about a yard wide."

Washington Steel Corporation is the exclusive supplier of stainless skin for the ATLAS program for a very good reason: it has been able to meet the exacting specifications laid down for this specific undertaking.

Washington Steel Corporation is the pioneer in precision-rolling of light gauge stainless sheets by the Sendzimir process.

"ATLAS—The Story of a Missile
by John L. Chapman, c 1960



WASHINGTON STEEL CORPORATION

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WASHINGTON, PA.

Political Education Reading Course

Politics, as practiced on a non-partisan, or bi-partisan basis, and at precinct and community levels, has become a rediscovered area of management responsibility.

The National Association of Manufacturers, recognizing the responsibility of businessmen to improve our business climate through political action, has developed a self-help political reading course, "Citizen Seven," designed to answer many questions relating to the participation of businessmen in public affairs.

The course is divided into seven parts: Practical Politics—Your Responsibility; Government Structure—National and Local; Where Politics Begins—The Precinct; Check Lists and Sources of Political Information; Major Political Issues; History of Parties—Democratic and Republican; and Sources of Freedom.

An accompanying *Reader's Guide* organizes the material under these seven, self-explanatory headings and the pamphlets themselves are packaged in seven similarly tabbed file pockets for the reader's convenience. The *Reader's Guide* and the tabbed file pockets containing the pamphlets in turn are packaged

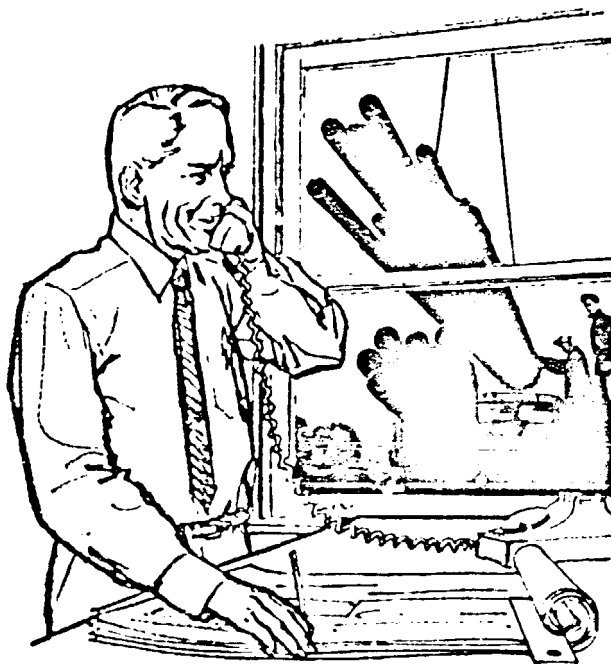
Smith Steel Named Kaiser Distributor

David Smith Steel Co., Inc., has been appointed a distributor of Kaiser Aluminum rod, bar, sheet, plate and extrusions in the metropolitan New York City and New Jersey area.

David Smith Steel Co., with headquarters at 234 46th Street, Brooklyn, and an additional warehouse and sales office in South Plainfield, N. J., has had a long history in the metals field. The company entered the steel business in 1894 when David H. Smith constructed his first warehouse on Pearl Street in New York City. The company is now owned and actively managed by David H. Smith's sons, Austin and Dudley, and by four members of the third generation of the family, David Smith, William Franklin, Richard Baumann and Harlow Falovsky.

May, 1960

"CALL FOSTER... THEY'LL SHIP PIPE PLUS"



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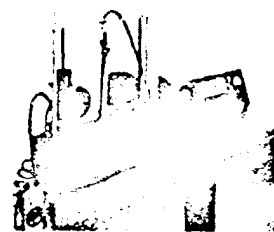
New Products

Electroplaters

A brochure covering three new models of tool room electroplaters, featuring an attachment which reduces set-up and stop-off time and assures precision plating, is available from Krome-King Div., National File Co., 530 N. Cedar St., Lansing, Mich.

Attachment consists of a hoist which raises and lowers a plastic coated table into a self-controlled hard chrome plating solution.

Table holds parts and acts as a current deflector—preventing buildup on ends and edges of the parts being plated.



Plastic Pipe Insulation

Foamed plastic pipe covering insulation, Armather 22, featuring a high temperature range, complete ozone resistance and smooth surface for easy handling, has been introduced by Armstrong Cork Co., Lancaster, Pa.

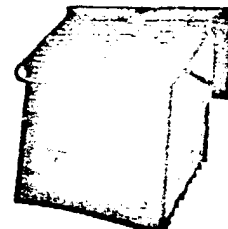
Product is widely used on liquid cooling and heating lines, chilled water lines, and other cold lines in plumbing, heating, air-conditioning, refrigeration, and industrial processing applications. Can be used from below zero up to 220°F and applied to sharp bends and elbows without danger of fissuring or cracking at the area under strain.



Blueprint/Drawing File

A wall-type file system for handling and storage of blueprints, drawings and other large sheet materials, is available from Lewell Industries, Inc., 59 Spring St., Scottsdale, Pa.

Construction features a steel tube frame hinged to a plywood mounting panel, with locking hanger support arms. Rubber-tipped lock-clips mount sheets in the clamp hangers. Many prints can be clamped firmly in each hanger and may be easily removed at any time.



Resuscitation Film

A film, "How to Do Rescue Breathing," specifically designed for mass education in the approved mouth-to-mouth method, is available from Ross Fire and Safety Equipment Co., 230 W. 37th St., New York 19, N. Y.

This 5-minute, 16mm black and white sound film can be shown in cafeterias, rest rooms, bookling lobbies and schools. Film deals only with method and leaves one with the impression that he himself can do it.



N. Y. PURCHASING REVIEW

Punch Press

A 10-ton punch press, 1012, equipped with precision gauging and tooling for hole punching in angles, channels, extrusions and sheets plus notching operations, has been announced by Punch Products Corp., 370 Balcock St., Buffalo 6, N. Y.

37 round punches and 74 dies with 4 hole punching units and one notching unit are available with this press. Press may also be used for punching extruded and countersunk holes, small louvers, and lanced holes.



For Old Economy
A S M E Steel
Reducer 12 large
diameter, 6"
small diameter,
12 high, 1/2"
steel throughout

Plastic Matte Finish

A finishing process that provides matte finishes on thermosetting molded plastics has been developed by Norton Laboratories, Inc., Lockport, N. Y.

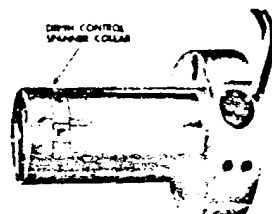
Because of its look of quality and resistance to smudging, a matte or satin finish on compression molded parts is reported to be often a more desirable sales feature than high gloss finishes. In the industrial field where non-glare is a desired characteristic for instrument covers, matte finish thermosetting molded plastics have made unnecessary the use of a supplementary painting operation and thus have yielded a cost reduction.



Boring Quills

Precision boring quills that allow infinite adjustments in controlling the size of holes without loosening or tightening screws have been announced by Brinley Manufacturing Co., 11655 So. Rd., Port Huron, Mich.

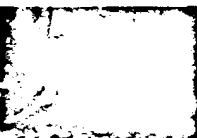
Quills also permit incorporating an integrally operated depth-control adjustment when required. With this new design, user can "split teeth" (adjust smaller than 1/10000 inch) to compensate for tool wear on ultra fine tolerance boring jobs simply by adjusting with a hex key. Units utilize ball bearings in an eccentric mounting within the boring quill as the means to provide tool adjustment.



Floor Patching/Resurfacing Compound

A highly adhesive, epoxy-type floor patching and resurfacing compound, BW Epo-Tec, having an impact and abrasion resistance said to be five to six times as great as concrete, has been announced by Tech Brothers, 2001 Richmond Terrace, Staten Island 1, New York.

The compound may be applied in layers as thin as 1/8" and is claimed to eliminate need for chipping, jack-hammering and time consuming preparation normally associated with concrete floor repair work. Available in gray, red or green.



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For Your Catalog File

Molded Polyester Housing

A case-history bulletin describing how housings made of *Thermoflow*, a reinforced polyester molding compound, allowed the development of a new line of speed-responsive switches more compact, versatile, and maintenance-free than their predecessors, has been issued by the Chemicals Div. Atlas Powder Co., Wilmington 99, Del.

Report describes switches in the line and provides a detailed cost comparison between housings made from molded *Thermoflow* and the cast aluminum.

Intercom Systems

How substantial savings can be effected in business and industry through planned use of internal communications, is described in a booklet, "11 Hidden Losses In Your Business," available from Dystograph Products Inc., 95-25 149th St., Jamaica 35, N. Y.

Describes 11 basic situations which can cost companies thousands of dollars each year as well as the goodwill of their customers and suppliers. Shows the role internal communication systems play in eliminating costly return telephone calls, improving customer relations, eliminating work-post absenteeism, cutting down mistakes, maintaining privacy, etc.

Photocopying Products

An illustrated catalog describing more than 50 diffusion transfer photocopying products, has been prepared by Ampex, Inc., Newton, N. J.

Included are ten different types and sizes of transfer photocopying machines and transfer processors, 25 transfer papers and films, photocopy chemicals, and a varied line of accessories for photocopying operations.

Industrial Fire Hose

A technical bulletin, D-115, on industrial fire hose jacketed 100% with *Dacron* is available from the Technical Service Section, Textile Fibers Dept., Du Pont Company, Wilmington 98, Del.

Industrial Diamond Data

The first issue of *Diamond Data*, a new technical periodical of the Industrial Diamond Division of Engelhard Industries, Inc., 115 Astor St., Newark 2, N. J., is now available to members of the abrasives, toolmaking, metalworking and other industries.

Lead article of the first issue, "The Total Economics of Tool Use," was authored by the noted metalworking authority Hans Ernst, engineering professor at the University of Cincinnati and formerly research director of The Cincinnati Milling Machine Co. Of extremely broad interest, Prof. Ernst's article is directly applicable to practically all metalworking operations, including tool and wheel materials other than diamond.

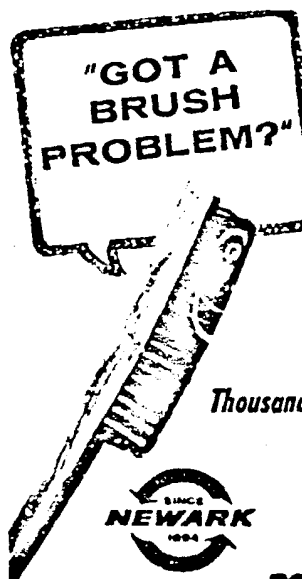
Closed Circuit TV

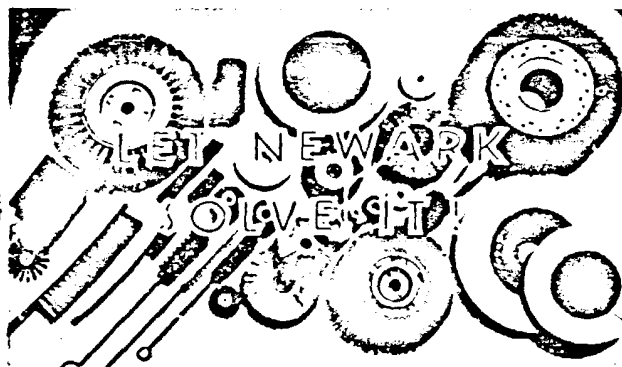
A 112-page catalog of closed circuit TV equipment for industry has been announced by Radio Corporation of America, ITV—Dept. 759, Bldg. 15-1, Camden 2, N. J.

Designed as an aid in planning TV systems for steel mills, railroads, metal working plants, public utilities, airlines, petroleum refineries and other industries, the catalog covers such TV equipment as cameras, housings, lenses, monitors, switches, microwave equipment and the new RCA TV tape recorder.

Reservoir Standpipes

A bulletin, 553, covering the design and fabrication of steel reservoirs and standpipes for water storage, has been announced by Korten Fabricators, Inc., 90 E. Dickerson St., Dover, N. J.





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Hot Work Tool Steel

A pamphlet on a hot work tool steel, *UHB CALMAX*, has been released by The Uddeholm Company of America, Inc., 155 E. 44th St., New York 17, N. Y.

Material is an air or oil hardening chromium-tungsten-cobalt steel especially recommended for hot pressing dies, mandrels, extrusion dies, die casting dies for copper, brass and similar alloys with high melting temperatures.

Insulated Riser Sleeves

A recently developed insulated riser sleeve, *Ris-A-Sleeve*, for non-ferrous castings, is described in a 4-page folder, IN-247A, published by Johns-Manville, 22 E. 40th St., New York 18, N. Y.

Photographs and tabular data show *Ris-A-Sleeve* improves non-ferrous castings by reducing loss of heat from molten riser metal. Physical data given includes composition, density, linear shrinkage, thermal diffusivity, dimensional tolerances, and transverse strength.

Semiconductor Products

A full line brochure covering industrial semiconductor products is available from Semiconductor Products Div., Motorola Inc., 3005 E. McDowell Rd., Phoenix, Ariz.

Brochure lists major specifications such as breakdown voltage, current capacity and operating temperature range on each product including germanium industrial power transistors, audio and switching transistors, Mesa transistors, silicon rectifiers and silicon Zener diodes.

Investment Casting

A brochure covering the latest methods of investment casting including a new ceramic shell investment casting process, has been issued by Hitchiner Manufacturing Co., Inc., Milford 30, N. H.

Metal Powders

A comprehensive directory of all commercially available powders used in powder metallurgy has been released by the Metal Powder Producers Association, 60 E. 42nd St., New York 17, N. Y.

Covers all types of ferrous and non-ferrous, granular metal powders and cerate powders used principally in powder metallurgy application, but including other areas such as flame cutting powders, coated electrode powders, filter powders, metallic hydrides, etc.

Molybdenum Products

A non-technical, descriptive booklet on *Clintel* molybdenum products containing full details on the various sizes, forms, conditions of use, tolerances, weights, and methods of identification, has been published by Clintax Molybdenum Co., 1270 Avenue of the Americas, New York 20, N. Y.

These materials—*Clintel* molybdenum metal and three molybdenum-base alloys—are made by the arc-cast process. This technique gives forgeable products of various shapes for industrial fabrication into finished parts.

Generator Brush

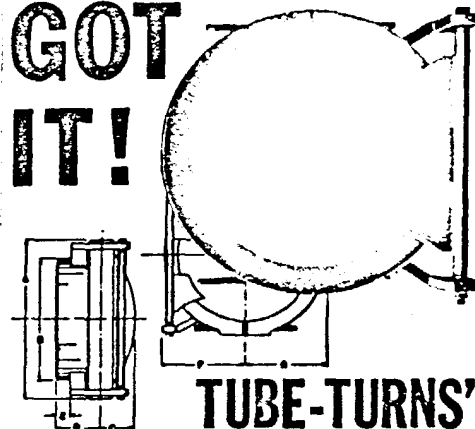
A bulletin, EB-100, covering a coated generator brush *Equalad*, said to reduce commutator wear and threading to a minimum, has been released by Hanson-Van Winkle-Manning Co., Church St., Matawan, N. J.

Stainless Wire

A manual containing technical data and practical information on the use and ordering of stainless steel wire has been published by the Stainless and Strip Div., Jones & Laughlin Steel Co., P. O. Box 4000, Detroit 34, Mich.

Includes data on the chemical analyses and mechanical properties of all grades of stainless steel used in wire, and recommendations for the application of representative grades in almost 400 common environments.

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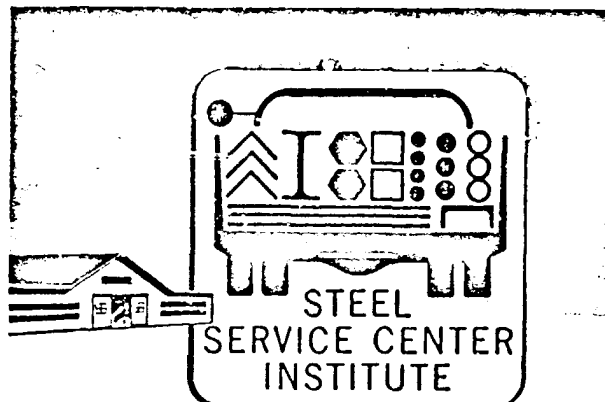
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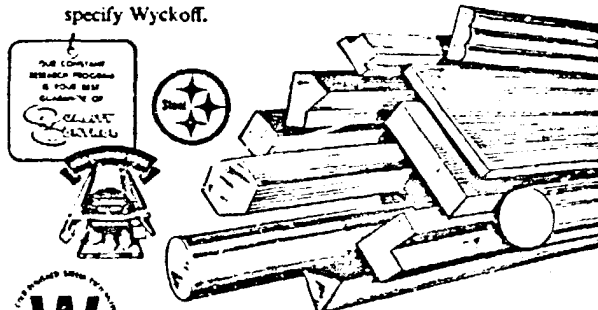
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MAY, 1960



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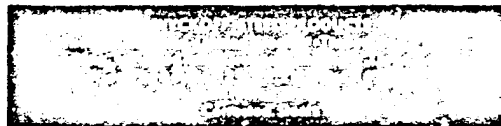


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