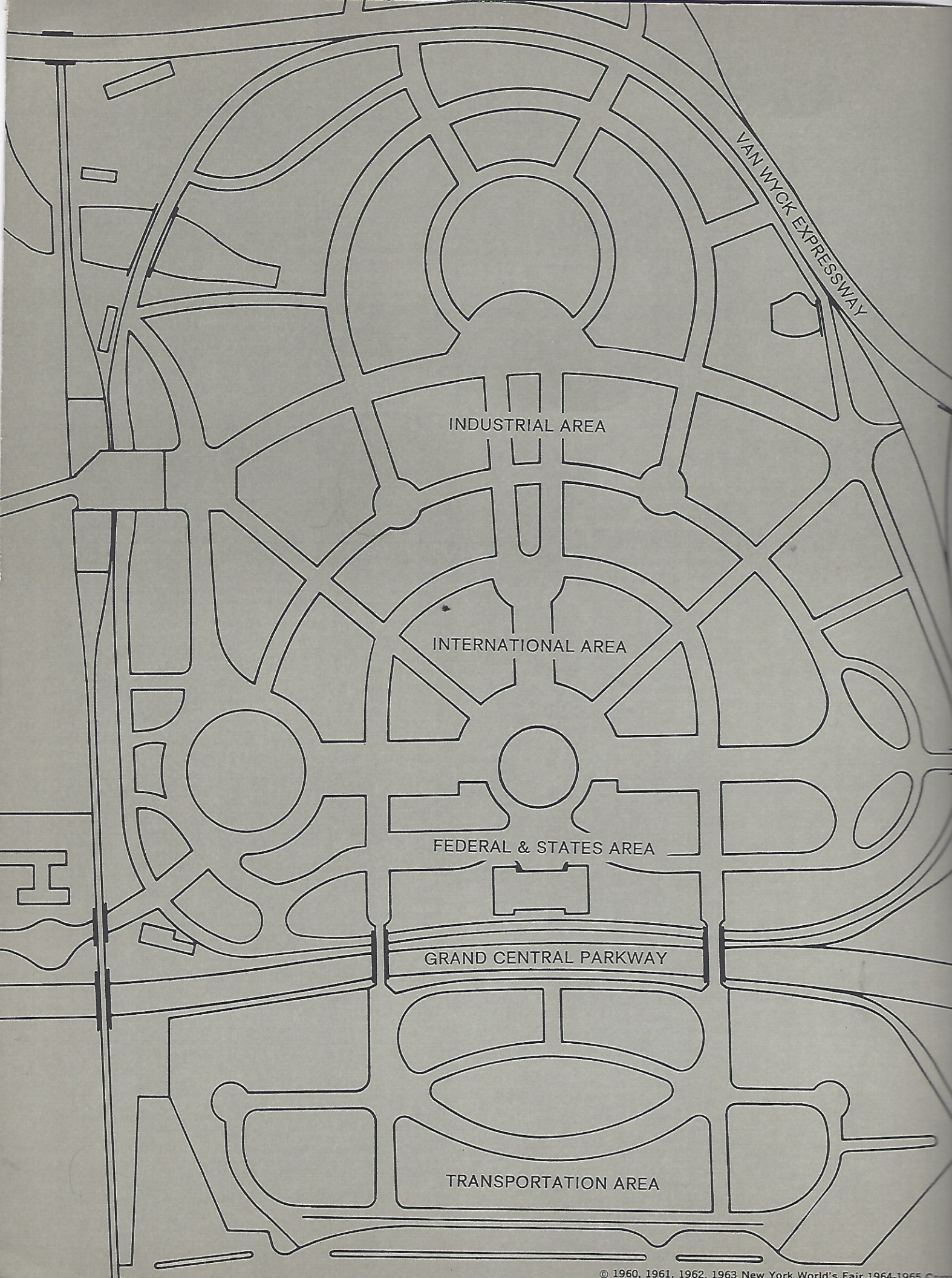


American Machine & Foundry Company  
Annual Report 1963

MONORAIL

This page is presented by United States Steel  
© 1963 New York World-Akron, 1964-1965 Corporation





INDUSTRIAL AREA

INTERNATIONAL AREA

FEDERAL & STATES AREA

GRAND CENTRAL PARKWAY

TRANSPORTATION AREA

VAN WYCK EXPRESSWAY





## Monorail

When the New York World's Fair 1964-1965 opens on April 22nd, American Machine & Foundry Company will operate its first AMF MONORAIL. This scenic ride is the forerunner in a family of monorail systems for the mass transportation field.

Encircling the Lake Amusement Area, the AMF MONORAIL will afford its passengers a panoramic view of the spectacular World's Fair scene. Seven two-car trains (similar to those seen on the cover) will operate continuously over the 4,000-foot closed-loop track, suspended 40 feet in the air. It is estimated that 15,000,000 passengers will ride the completely automated, air-conditioned system, embodying AMF designed fail-safe devices, during the two seasons of the Fair.

The AMF passenger station of contemporary design, with an inverted arch roof, is the outstanding landmark of the amusement area. It is 166 feet long and rises to a height of 80 feet.

Sverdrup & Parcel, architects and engineers of St. Louis, are assisting AMF in the structural design and construction supervision of the track and station, and Walter Dorwin Teague are industrial designers for the project.

AMF recognizes that rapid mass transportation is one of the most pressing problems facing the nation today. By 1985, more than half of our expanding population can expect to live in some 40 great urban complexes. The problem of mass transportation which is pressing today, will be acute tomorrow. Its solution can provide us with increasing monorail opportunities.

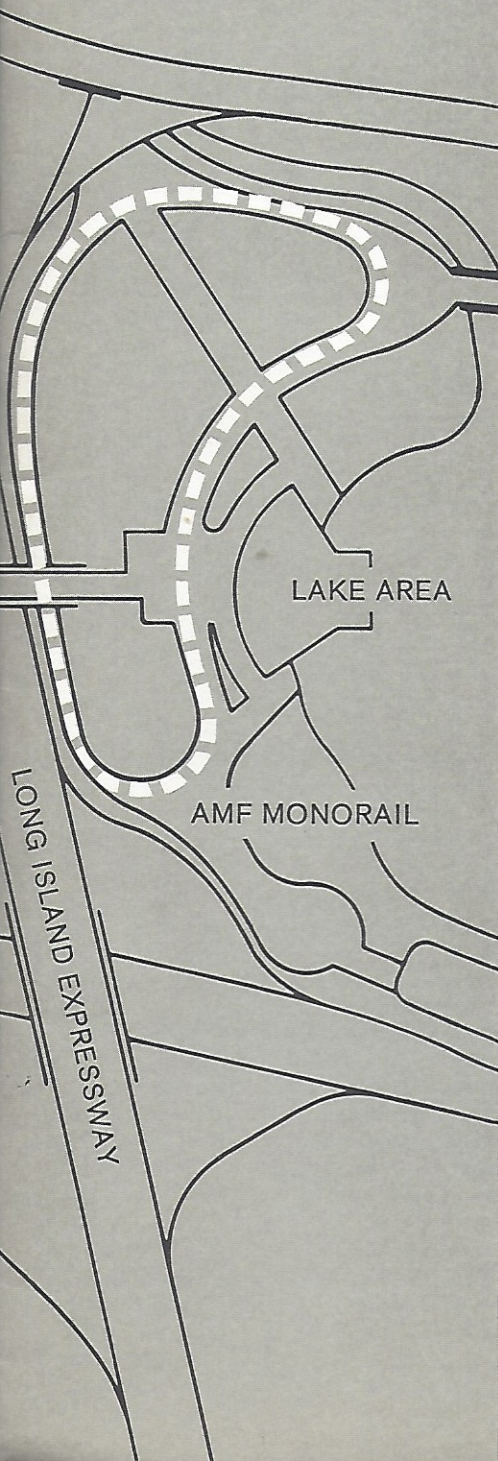
AMF is aware of this opportunity and has acquired a license to market the SAFEGE-Transport high-speed monorail system in the United States. This system was developed by Lucien F. Chadenson, world famed bridge designer, chairman and president of SAFEGE-Transport.

The SAFEGE monorail is a high-speed transit system of advanced design. The car is suspended from rubber-tired power units or bogies, which run on tracks enclosed within a box-beam structure. This exclusive patented feature provides a protection against snow and ice, assuring the safe and uninterrupted operation of the system in all weather.

The Company is interested in three prime areas in which the monorail principle can be applied:

- The closed loop automated system, similar to the World's Fair installation, is designed for use in amusement parks and as a scenic ride. It is also readily adaptable for the transportation of people and goods in large autonomous areas, such as large shopping centers, air terminals, and industrial complexes.
- The variable-speed suspended monorail, considered for intra-urban uses, is for short-haul and feeder-line systems.
- Long-haul and inter-urban monorail systems are for use between cities and long-haul runs where traffic congestion is a major problem. In this area, AMF has been working with a number of cities to show the advantages of the high-speed monorail for airport-city center transportation.

AMF believes that its monorail systems are the key to solving many of the high-speed, safe passenger transportation problems facing the traffic-congested cities of the country. Monorail is a different concept for mass transportation and it will take time and effort to demonstrate that such a system will provide unique financial and operating advantages.





# Contents

The Monorail Story .....	1
Highlights of Operations .....	2
Directors and Officers .....	2
Letter to Stockholders .....	4
AMF Group Operations .....	8 - 25
Ten-Year Record .....	26
Source and Disposition of Funds .....	27
Ten-Year Financial Summary .....	28
Financial Statements .....	30
Report of Certified Public Accountants .....	35
New Facilities .....	36
AMF Groups and Divisions .....	37

---

## TRANSFER AGENTS

Common and 3.90% Cumulative Preferred Stocks—*Bankers Trust Company, 16 Wall Street, N.Y. 15, N.Y.*  
5% Cumulative Preferred Stock—*Manufacturers Hanover Trust Company, 40 Wall Street, N.Y. 15, N.Y.*

## CO-TRANSFER AGENTS ★

Common Stock—*Continental Illinois National Bank and Trust Company of Chicago,  
231 South LaSalle Street, Chicago 90, Illinois*  
*Bank of America National Trust and Savings Association, 111 West 7th Street, Los Angeles 14, Calif.*

## REGISTRARS

Common and 3.90% Cumulative Preferred Stocks—  
*The Chase Manhattan Bank, One Chase Manhattan Plaza, New York 15, N.Y.*  
5% Cumulative Preferred Stock—*Chemical Bank New York Trust Company, 20 Pine Street, N.Y. 15, N.Y.*

## CO-REGISTRARS

Common Stock—*First National Bank of Chicago, 38 South Dearborn Street, Chicago 90, Illinois*  
*Security First National Bank of Los Angeles, 124 West 4th St., Los Angeles 54, California*

## TRUSTEE, REGISTRAR AND PAYING AGENT

4 $\frac{1}{4}$ % Convertible Subordinated Debentures Due March 1, 1981—*Manufacturers Hanover Trust Company,  
40 Wall Street, New York 15, N.Y.*

## STOCK EXCHANGES

AMF common stock is listed on *New York Stock Exchange, Midwest Stock Exchange,  
Pacific Coast Stock Exchange, 3.90% Cumulative Preferred Stock and 4 $\frac{1}{4}$ % Debentures are listed on  
New York Stock Exchange.*



## American Machine & Foundry Company

Executive Offices: AMF Building, 261 Madison Avenue, New York, N.Y. 10016



## To the Stockholders



Inspecting the AMF MONORAIL installation at the New York World's Fair site: AMF Chairman Carter L. Burgess (left) and President Rodney C. Gott.

The statement in last year's Annual Report that "—1963 will not be the Company's easiest year" was correct.

Sales, rentals, and profits were lower than in 1962.

Two conditions caused this:

- a lower volume of defense business; and
- less growth in bowling, with the need to establish a high level of reserves to cover the Company's bowling accounts.

The results of 1963 operations were:

- net income of \$19,010,000 or a \$1.09 a share on the common stock after preferred dividends. These figures **include** the accounts of the Western Tool and Tuboscope acquisitions, consolidated on a pooling of interests basis, and are **before** a \$9,500,000 after-tax special reserve, (55¢ per share) set aside for the Bowling Group;
- cash earnings from operations of \$48,467,000 or \$2.81 a share;
- gross revenues of \$359,429,000 with the rental portion of this figure amounting to \$72,721,000; and
- cash dividends of 90¢ a share on common stock amounting to \$14,932,000.

Operations for 1962, taking into account the poolings of interests mentioned above, were:

- net income of \$24,279,000 or \$1.40 a share after preferred dividends;
- cash earnings of \$54,922,000 or \$3.19 a share;
- gross revenues of \$445,616,000 with the rental portion of this figure amounting to \$76,980,000; and
- cash dividends of 90¢ a share on common stock amounting to \$14,646,000.

AMF entered 1964 with the fourth quarter of 1963 producing better results than were experienced in the last quarter of 1962. Unfilled orders of \$125,661,000 at year end 1963 were 28% higher than at the beginning of the year.

### BOWLING IN 1963

Through December 31, 1963, five-year extensions have been obtained on over 12,000 leased Pinspotters. Although new bowling machine and lane installations were at their lowest level in seven years, we enjoyed a good year for the sale of modernization kits and equipment to bowling establishments.

Also the newly developed AMF Sparemaker and the improved and faster Ball Door Exit System were installed on thousands of lanes during 1963.

We had an all-time high in the sales of AMF balls, bags, shoes, and lane conditioning equipment for the sport of bowling. To achieve this record we established many new market outlets for these items.

During 1963, the Bowling Group introduced its well-styled line of professional and home billiard tables and accessories. These represent a new business for the Company.

Bowling is a most important business to AMF and the opportunities for the Company to gain improved earnings in bowling are being pursued with effort and imagination.

### AHEAD FOR BOWLING

Bowling expanded rapidly in many areas of America, and in the process the business grew beyond the availability of capable and highly motivated personnel to operate and manage many of the new bowling houses.

To meet this condition, AMF is establishing Marketing Institutes in centrally located and well operated bowling houses in the United States. These Institutes fully instruct and demonstrate to present and prospective managers and proprietors the arts of successful operation and ways to gain new bowlers and maintain higher bowling lineage performance. In certain regions of the country where we have placed equipment in operation over the last few years, tenpin bowling is still a relatively new game. This has caused the AMF Bowling Group to re-orient its methods of promotion and instruction in order to build increased bowling populations wherever the sport is being played for the first time.

We have witnessed a steady rise in league bowling, the backbone of the sport, across the country. Since most new league bowlers, however, are recruited from the ranks of casual bowlers, this gain has contributed to a drop in casual bowling and in weekend and summer play. Therefore our present and extensive promotion efforts are targeted mainly at oppor-



tunities to develop new bowlers.

Whenever longer terms of financing are required by proprietors using AMF bowling equipment, these terms are being provided by AMF if warranted. Included at the Marketing Institutes are special programs in improved financial controls for successful bowling establishment operations.

Effective proprietor assistance programs are important to AMF and to bowling. Wherever possible, we are trying to be helpful and realistic with proprietors as merited.

Each of these problems and opportunities has caused readjustment and reappraisal. In the process, AMF bowling receivables have been under close scrutiny. It has been necessary for the Company to remove its equipment from a number of establishments in both 1962 and 1963 where our efforts to assist proprietors to remain in business have not succeeded. Here many factors of debt and location beyond AMF's control came into play.

#### **SPECIAL RESERVE**

Because of these conditions, and as we have previously stated, the Board of Directors on December 13 determined to make an extraordinary, non-recurring after-tax addition of \$9,500,000 to its regularly accumulated reserves for its bowling business.

This step was taken as a result of a continuing detailed analysis of the Company's bowling receivables and a careful appraisal of the conditions prevailing in the bowling industry. This addition, plus the unused reserves already set aside, is expected to be ample to cover all potential losses relating to the bowling accounts on the books at the year end.

The \$9,500,000 does not represent a write-off, but provides an addition to the reserves against which future write-offs can be charged if and when they are required. The establishment of this reserve gives strength to AMF's financial future, and the Company's ability to pay dividends is supported by its cash earnings.

#### **OTHER 1963 HIGHLIGHTS**

During 1963, the Company completed its program of organizing into eight operating groups, each with the responsibility to engineer, produce, and market the Company's lines of products and equipment systems in the United States and overseas. These groups and their product missions are a feature of this report.

Each of these groups was profitable in 1963.

Employment averaged 15,889 in 1963 as compared to 17,865 in 1962, and our U.S. payroll this past year was \$13,893,000 less than in 1962.

Research, development, and engineering expenditures Company-wide totalled \$14,116,000 for 1963. We are directing Research & Development efforts more closely to the product and equipment systems objectives and needs of the Company's operating groups. During 1964 we will continue to effect efficiencies and reduction in costs wherever possible within these vital programs.

Capital expenditures totalled \$8 million in 1963. In addition, construction was completed on a \$2.2 million addition to the AMF/Voit plant at Santa Ana, California, and a \$9.2 million AMF/Beaird plant at Shreveport, Louisiana, was practically completed by year end. Both of these facilities will be occupied under long term leases. Preparation for the moves into these two plants was a burden on profits in 1963.

Capital expenditures for 1964 are budgeted at a \$9.5-million level.

#### **WESTERN TOOL, TUBOSCOPE, YORK PLANT CAPABILITIES**

In 1963, management took several important steps toward improving the Company's profit potential for the future.

In July we acquired Western Tool and Stamping Company of Des Moines, Iowa, in exchange for 335,792 shares of AMF common stock. Western Tool is a major manufacturer of home-use lawn mowers, snow blowers, golf carts, and other outdoor equipment. Western Tool fits well into our Recreational Products Group from both the marketing and the manufacturing points of view. It sells lawn mowers, snow plows, and related equipment under the "Homko" and "Certified" labels, and we urge our stockholders to become customers for this new AMF equipment for the home.

In October AMF acquired for its Industrial Products Group the Tuboscope Company for 499,722 shares of AMF common stock. Tuboscope, whose head office is in Houston, Texas, operates an inspection service for oil field tubular products and oil and gas pipelines, although its market is not necessarily limited to these applications. Its Corrosion Control Division specializes in plastic coatings for tubular goods, storage tanks, and other metal products.



Tuboscope's services and products complement and provide a very fine mix with the products of three AMF subsidiaries, American Iron, AMF/Beaird, and Thermatool, all of which report to the Company's Industrial Products Group.

Last December, AMF signed a contract for the purchase of the York Naval Ordnance plant at York, Pennsylvania, for \$9,600,000 to add to the capability of AMF's Advanced Products Group. This plant was purchased as a going concern, including over \$25 million in unfilled orders. It comprises 750,000 square feet of floor area and 232 acres of land, together with all manufacturing equipment. It provides us a facility that we have long needed, particularly for combining certain engineering and production capabilities into a single location in order to make the Company more competitive in gaining defense, space, and nuclear contracts. Importantly, this transaction makes possible a turn-around in the decline in Government work experienced in the last two years. We can now confidently forecast higher revenues and profits for this group for 1964.

Western Tool, Tuboscope, and York will make important contributions to AMF's growth.

#### **NEW PRODUCTS AND SYSTEMS**

During 1963, the Company continued to develop and perfect its family of new products. Several of these were made ready for final marketing by the Commercial Development Department of the Research & Development division and AMF's product groups.

- There are about 100 of the new AMF/Voit Orbitread tire retreading equipment systems either installed or on order throughout the country. These automatic devices are designed to improve quality, reduce costs, and solve the inventory stock problems of the retread tire industry.
- AMF's Advanced Products Group is continuing to test the improved AMF/Chrom-alloy "Smog Burner" exhaust control device with the California Vehicle Pollution Control Board.
- During 1963 we purchased the rights to Fleximan. This is a smaller and lower priced device which with Versatran, our own development, helps round out our system of industrial automatic transfer devices.
- The R&D division transferred the automatic Friction Welder to the Industrial Products Group for production and marketing. Orders have been received from automotive and machinery manufacturers.
- The Company obtained and developed engineering capabilities in the design and erection of a system of AMF MONORAILS.

To achieve this we obtained the exclusive license to manufacture and market in the United States the monorail system designed and developed by SAFEGE, a French group. This transportation method is already in operation in Europe and we believe it to be the best monorail available for high-speed and all-weather mass transportation.

At the same time we have the monorail operating rights at the New York World's Fair for 1964 and 1965 where we will have an exciting AMF MONORAIL ride and exhibit. This is something our stockholders and their children should see and enjoy. We have undertaken this project on a basis that should not result in a net cost to the Company. AMF's location is one of the most prominent at the Fair.

#### **INTERNATIONAL AND WORLD TOBACCO**

The results of our foreign operations improved in 1963, and our export revenues were 35% over 1962.

Bowling installations overseas are increasing particularly in England, Scandinavia, Australia, and Japan.

The executive headquarters of AMF International are now located in London with offices in Geneva. We have achieved during the past year significant reductions in the overhead and expense of doing business overseas.

Our tobacco machinery operations both foreign and domestic, in the leaf, cigar, cigarette, and "Microflake" fields were placed under a World Tobacco Profit Center during this past year. This organization enables AMF to handle our tobacco engineering, manufacturing and sales programs around the world on a more effective and competitive basis.

Our forecast is for higher sales and earnings in AMF's International and World Tobacco group operations for 1964.

#### **ORGANIZATION**

The Company promoted several of our associates having long experience with AMF to key positions in its group and staff organization. These men and their responsibilities are highlighted throughout the report.



Last September the Company elected R. A. Correa to be Vice President for Business Development. He comes to AMF from the Radio Corporation of America where he was corporate vice president for Patents and Licensing. In his new position at AMF, Mr. Correa directs AMF's planning and expansion programs as well as the patents, licensing, and trade relations departments of the Company.

#### **TO OUR ASSOCIATES**

We again express special appreciation to all the men and women of AMF whose many contributions in 1963 are the Company's present strength and its promise for future growth. The past year, as we stated, has been a difficult one. However internal achievements on new facilities, operating efficiencies, and improved results within many of our business units, both here and overseas, are good signs for the future.

Important progress has been made in adding new businesses to our operating groups.

The AMF Research & Development team and our engineers throughout the Company have all successfully participated in AMF programs to move new products to our customers and other product additions are scheduled for 1964.

#### **GO BOWLING!**

While we have outlined for you our problems, opportunities, and sizeable commitments to bowling, we do wish our stockholders to recognize that it is AMF's most profitable and promising business.

There is a definite need for new bowlers and more prosperous proprietors and if AMF can help achieve these two objectives then future annual reports will make more pleasant reading for you.

We ask you to remember that AMF currently has about \$345,000,000 in minimum rental payments to come due over the remaining terms of existing Pinspotter leases, and this figure has not been reflected in past AMF earnings. This constitutes an asset of exceptional future value to AMF.

Our cash collections during 1963 from rentals and sales in bowling alone were in excess of \$100,000,000.

Bowling is the sport that is conveniently located near your home. The large majority of bowling establishments are modern and well and carefully operated. In this achievement, we salute the many bowling proprietors of America who are operating these fine centers. Bowling is the only sport that attracts people and families of all ages, and provides them with a year-round and day-round activity — rain or shine.

AMF also salutes the American Bowling Congress, the Women's International Bowling Congress, and the American Junior Bowling Congress for the motivation and high character they give to the sport of bowling, and for the popularity and competitive spirit which their many contests and tournaments bring to the game. To attest to these facts, the combined memberships of these three Bowling Congresses presently total nearly 8,000,000, and they are growing each year.

For good sport, better health, and trimness of figure, we invite you, your family, and your friends to go bowling.

#### **FOR 1964**

Again we thank you and our customers, suppliers, and neighbors for your continued interest and cooperation with AMF.

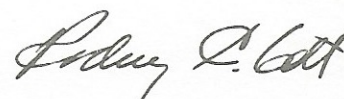
As stated, AMF commenced 1964 with unfilled orders 28% higher than a year ago. Our financial condition is excellent. The Company has a solid base of rental income from various lines of leased equipment of over \$70 million annually. Substantial reserves have been set aside to provide for losses that may occur in connection with business on our books at year end.

We note that 1964 will not be an easy year and recognize that certain of our 1963 problems will continue on into this year. However, if AMF's market places are blessed with a strong economy and if our plans go well, we fully expect this year to produce an improved profit for the Company over 1963.

You may be sure that your management has this as its first objective.



Chairman



President



# Bowling Products Group

AMF Pinspotters Inc.  
National Division  
AMF Pinspotter Division  
AMF Shelby Division  
AMF-United Block Division



Group Executive Andrew E. O'Leary (left) with Mineola, N. Y. bowling proprietor Frank Caprise.

*"Bowling continues to be the number one participant and family sport in the United States. Excellent growth in league play in 1963 furnished the best proof of the basic soundness of the bowling business. The buildup of casual play and weekend league are the areas of real opportunity for the bowling proprietors, AMF, and the entire sport."*

This year the Bowling Group has oriented its organization and operations into three major marketing divisions:

- Bowling,
- Proprietor, and
- Product.

These three divisions have the mission of providing imaginative programs and means for increasing the number of new bowlers, improving proprietor profitability, and continuing a strong marketing program for all of AMF's bowling products, including the renewal of machine leases, and the sale of modernization plans.

Construction in 1963 of new bowling establishments was the lowest in the last seven years. Although the installation of Pinspotters and lanes followed the same cycle, the sale of modernization equipment and of balls, bags, shoes, and lane conditioning equipment were the highest yet achieved. The increases in revenues and profits from these sales were not sufficient to offset the drop in Pinspotter and lane sales.

In 1963 AMF increased its share of the available market for Pinspotters with shipments of over 5,600 machines.

AMF's Ball Exit System, which reduces pin jams and speeds the return of the ball, and the Sparemaker, which indicates how the bowler can make the spare, were ordered and installed in many bowling establishments having AMF Pinspotters. The use of the precise and easily operated AMF Ball Drilling Units by department and sporting goods stores helped increase the sale of balls.

In 1963, the new AMF line of professional and home billiard tables and accessories was introduced. These were designed by Henry Dreyfuss, America's leading industrial designer. Particular emphasis will be directed in 1964 on the home market.

AMF equipped the "All Star" tournament of the Bowling Proprietors Association of America held in January 1964 in Dallas, Texas. The "Magic Triangle" was seen by millions of viewers on the CBS-TV "Sports Special" program, televised nationally. AMF also continued to co-sponsor "Championship Bowling" and "Make That Spare," and to sponsor "Professional Bowlers Tour" on the ABC-TV national network.

The civil anti-trust suit commenced in July, 1962 by the Justice Department against AMF, Brunswick Corporation, and the Bowling Proprietors Association of America, alleging conspiracy to prevent construction of bowling lanes in "overbuilt" areas, has not yet come to trial. The remedy asked is that the alleged conspiracy be discontinued. We are confident that we will prove the allegations to be unfounded.

AMF is expanding its promotion efforts, particularly at the local bowling establishment level, to help the proprietor increase casual and weekend bowling. Based upon the cooperative efforts of all those interested in the welfare of Bowling we are confident that 1964 will see an increase in the growth of bowling — the number one participant and family sport in the United States.

1. One of many new AMF "Magic Triangle" bowling fashions designed by world's top designers.

2. Dick Weber, voted "Bowler of the Year" for the second time, points to new AMF fool-proof bowling ball exit system, now part of AMF 82-70 Pinspotter.

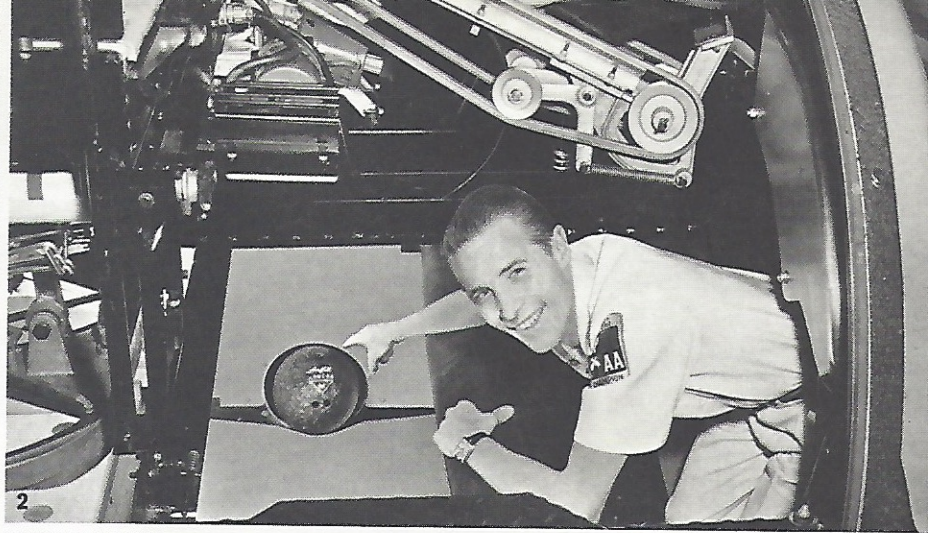
3. AMF billiard tables will be promoted by intensive professional and consumer programs for home markets.

4. AMF's Sylvia Wene bowls at 24,000 feet up, travelling at 600 mph, part of "Operation Astrobowling", as AMF and American Airlines air-cargoed lane to opening of All-Star Tournament in Dallas.

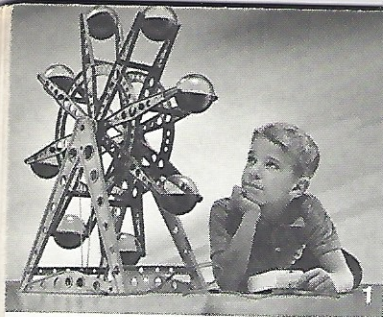
5. Earnest response was characteristic proprietor reaction during AMF Workshop sessions, presented as a service to bowling industry.

6. Long-time head of AMF bowling operations, Frank P. Downey was advanced from Executive Vice President to Vice Chairman of the Board of Directors in 1963. In the background are Clarence J. Johnson, Vice President and Secretary (left) and Group Executive John L. Tullis.











## Recreational Products Group

AMF Western Tool, Inc.  
AMF Wheel Goods Division  
Wen-Mac Corporation  
Ben Hogan Company  
Tire Equipment Division  
W. J. Voit Rubber Corp.  
Whitely, Inc.



Group Executive Richard J. Sargent (right), conferring with R. A. Correa, AMF Vice President.

*"1963 has been a year for improving marketing effectiveness, reducing costs, and increasing the new product development efforts of the Recreational Products Group. Sales and profits are projected to increase for all our product lines in 1964.*

*The fitness, recreation, and leisure time needs of America are growing with the expansion of population."*

Increased sales were recorded in 1963 by the AMF/Wheel Goods Division and by our subsidiaries Wen-Mac, Voit, and Ben Hogan.

The continuing and intensified search for new and improved products in the recreational field is a major objective of the Group. Several new products were introduced in 1963, and sales of these represented seven per cent of total Group revenue.

AMF/Wheel Goods introduced a line of children's wagons. Voit introduced its ColorGuard swim suits and jackets and produced new plastic bowling balls for the Company's Bowling Products Group. Wen-Mac produced a Walt Disney Space Carnival toy and also completed work on the Texaco Fire Engine premium which accounted for several million dollars of sales in 1963.

Commercial production and installation of AMF/Voit's new Orbitread automatic tire retreading system started in 1963. About 100 machines are now either installed or on order and an increasing number of installations will be made in 1964.

In January 1964, AMF/Wheel Goods introduced a line of AMFUN outdoor play equipment and a new style AMFLITE frame bicycle. Voit is distributing its new isometric exercise kit which includes a measuring meter. For the first time the user will have a simple means of gauging his muscle development.

In 1963 AMF/Ben Hogan introduced golf's first colored woods for women. Its new 1964 line of golf clubs features about 300 combinations. This will permit golfers to select clubs "tailored" to their exact measurements. Another outstanding feature of the new line is the Power Thrust III irons believed to be the longest hitting golf irons ever made.

In order to increase AMF's share of the large premium market and the extensive military post-exchange operations, premium and military sales departments were established within the Recreational Products Group. Substantial orders have already been received, and we expect an increase in sales from these sources in 1964.

AMF/Western Tool, acquired in 1963, is a major maker of lawn mowers, snow blowers, golf carts, and related outdoor equipment for family, home, and leisure time markets. Sales of the new subsidiary were not up to expectations in 1963, but with the introduction of several new products, including a 30" rotary rider mower, improvements are expected in 1964.

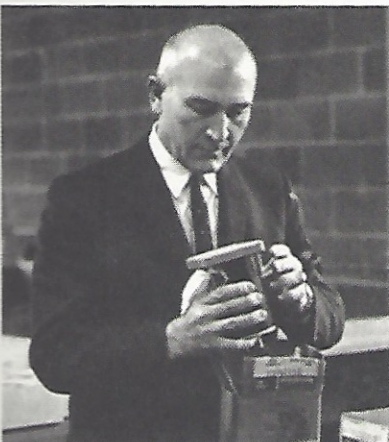
During 1963 consolidation of Voit sporting goods production started at the recently opened plant in Santa Ana, California. By mid-1964 this will be completed and AMF/Voit can then expand its production at lower manufacturing costs.

1. AMF/Wen-Mac's new Walt Disney Space Carnival.
2. Wheel Goods' new "Dome Climber" for kids, one of the new AMFUN product line.
3. Texaco Fire Engine premium by Wen-Mac produced several million sales dollars in 1963.
4. AMF/Voit ColorGuard Watersportswear brings fashion in color and design to waterskiing.
5. A bank of "Orbitread" automatic tire-retreading machines being assembled in AMF Brooklyn plant.
6. Ben Hogan, president of AMF/Ben Hogan, shows form at 1963 U.S. Open in Westchester, N. Y.
7. AMF/Western Tool products include power mowers, sweepers, edgers, tillers, snow plows, and golf carts.
8. Whitely General Manager Richard Kazmaier, All-American football great (left) shows new isometric equipment to Herman I. Jacobson of the H. Modell & Co., leading sporting goods firm.



# Electrical Products Group

AMF Instrument Division  
Leland Airborne Products Division  
Paragon Electric Company, Inc.  
Potter & Brumfield Division



Group Executive Joseph P. D'Arezzo inspects electrical units at AMF Instrument Division, Alexandria, Va.

*"1963 was another good year for the Electrical Products Group. 1964 will see the continuation of the introduction of new products and the adaption of existing ones needed to meet the constantly changing and highly competitive markets the Group serves."*

AMF's Electrical Products Group continued its steady pattern of growth in all its proprietary product lines. The year-end backlog and the bookings outlook indicate another good year for the Group.

Potter & Brumfield continued to be a leader in the relay industry and attained a new sales record for the year. Based on its large backlog and new business outlook, this sales momentum will be carried into 1964.

Among new relays developed by P&B were the stepping relay used to activate automatic vending equipment and a half-size crystal-can relay used where miniaturization is essential in military and space applications.

Recognizing the potential of solid state devices as an adjunct to electromechanical relays, P&B established a Solid State Devices Department to develop a new electrical switching line. Prototypes already developed to date include commercial and military time-delay relays, voltage sensing relays, and a close differential relay which requires but a small amount of energy to activate.

Paragon Electric Company, maker of automatic time controls, has doubled its rate of output in the three years since it joined AMF and in 1963 achieved a new high in sales. A Paragon product set the trend toward today's automatic defrosting of home refrigerators and in commercial refrigeration 96 per cent of the manufacturers using automatic defrost controls specify "Paragon."

Among Paragon's new products is a precision program instrument, ideal for programming automatic signals in schools, stores, offices, and institutions. Early in 1964, Paragon will market an attractive all-purpose household time control, which can be used to turn on automatically a number of household appliances.

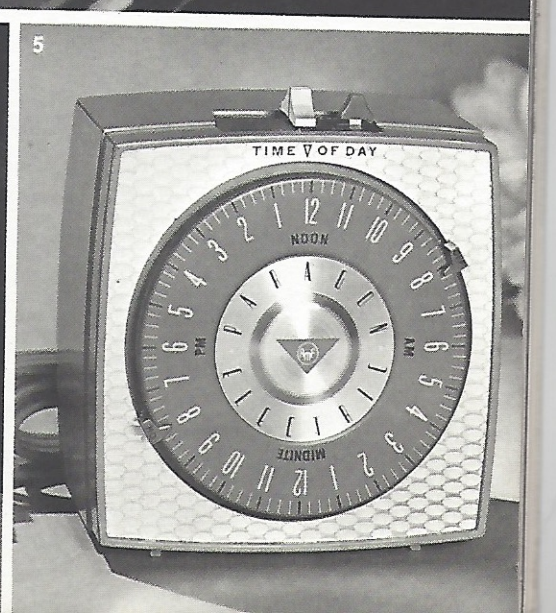
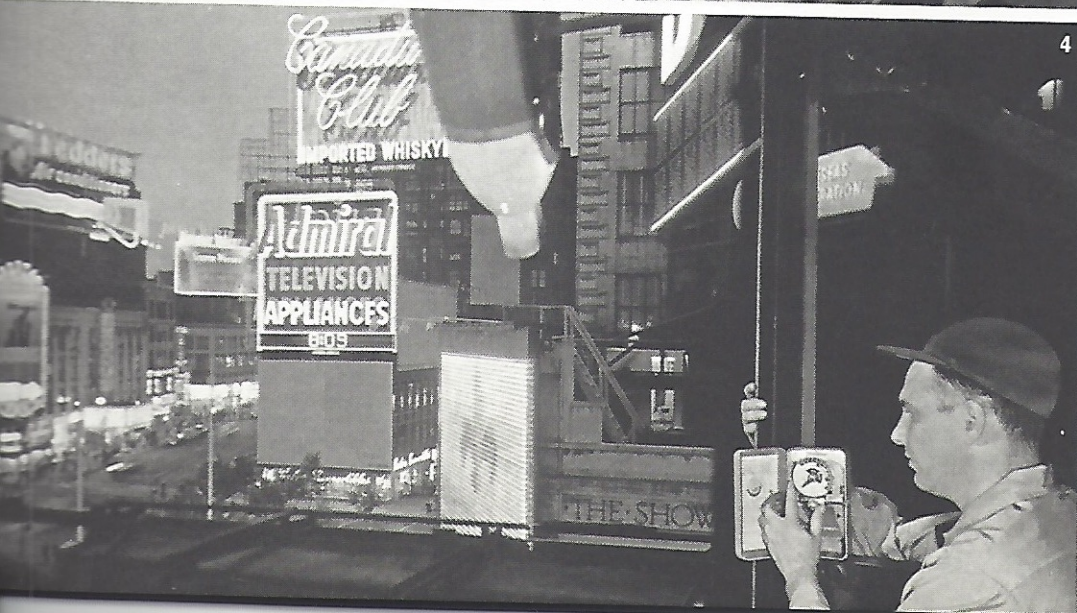
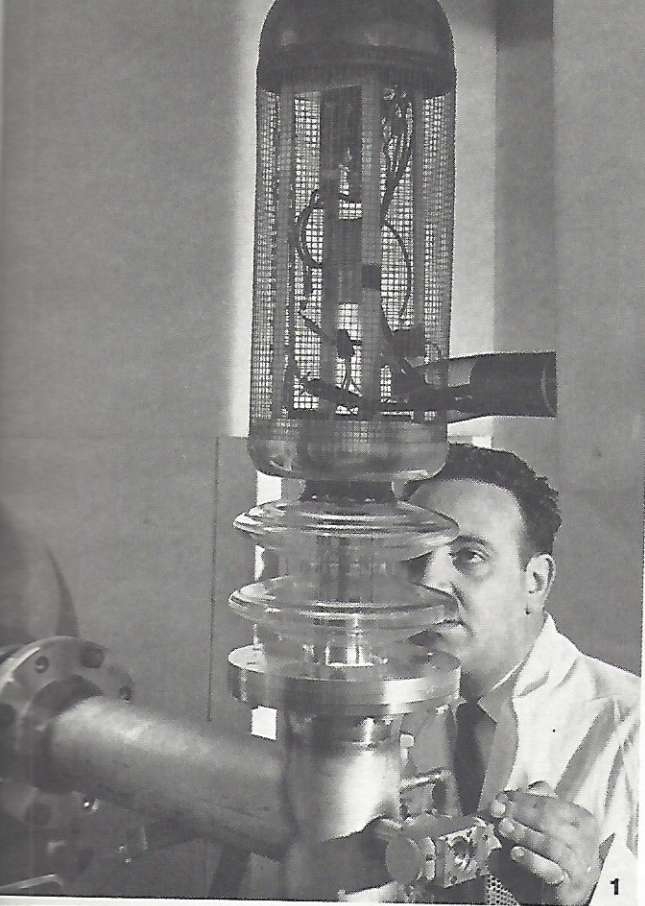
To keep pace with its expanded volume Paragon's 95,000 square-foot plant addition will be ready for use in March, 1964.

1963 marked the entry of AMF/Leland Airborne Products Division into the field of electrical propulsion for torpedoes. Leland's products are used primarily in aircraft and other military vehicles. These include alternators, generators, inverters, frequency converters, control systems, and related test equipment.

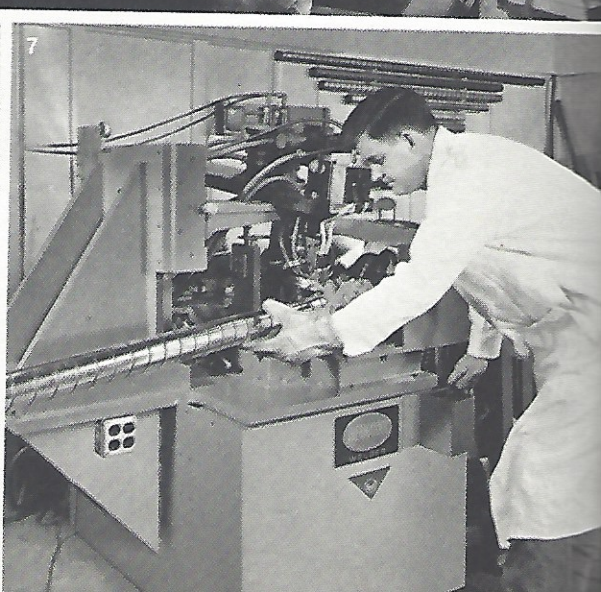
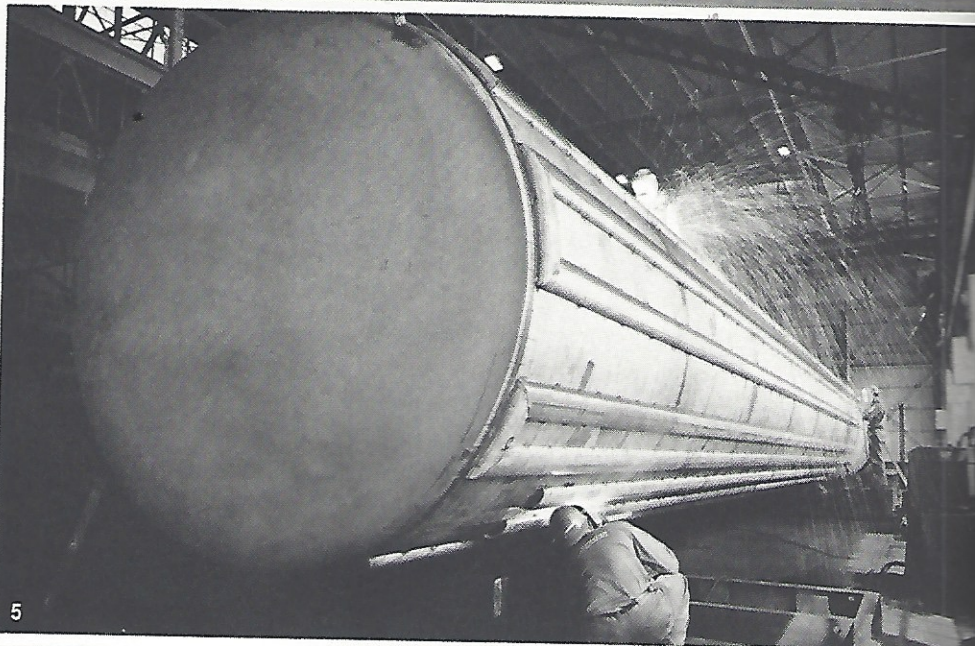
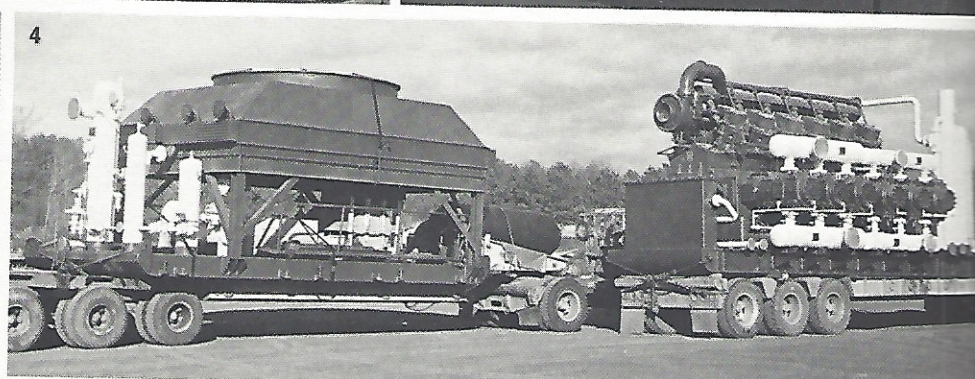
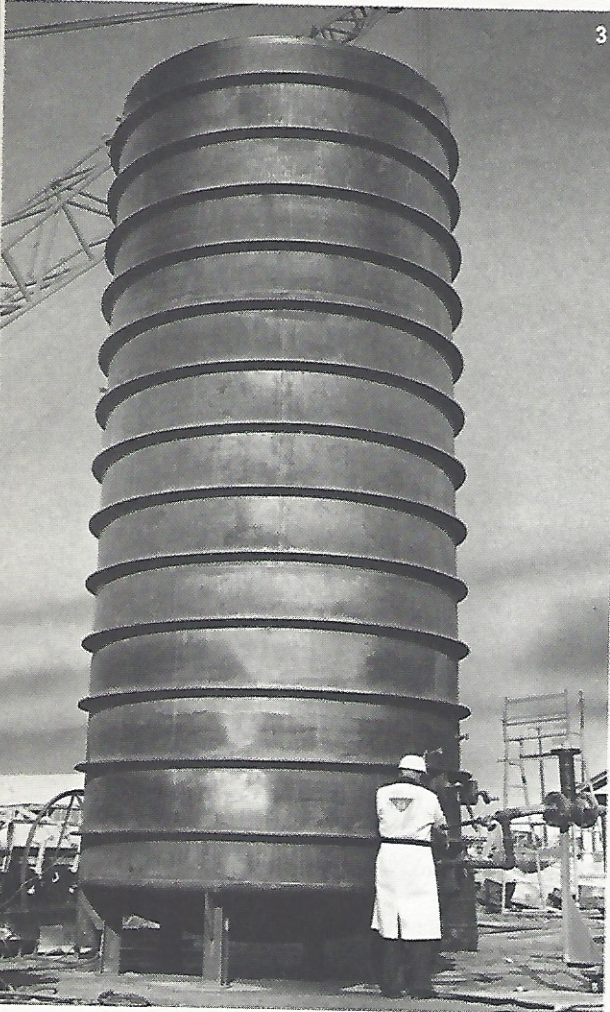
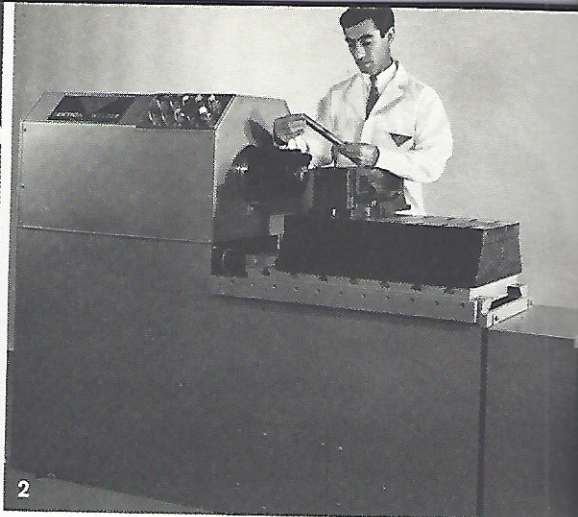
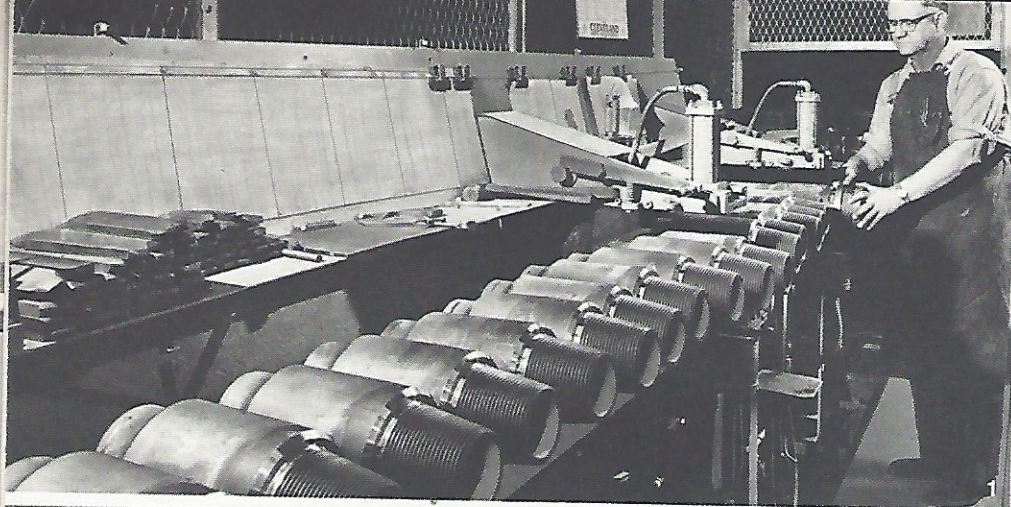
Leland is a supplier to AMF's Advanced Products Group for propulsion motors for the MK-44 Torpedo. The Division also developed and shipped the first production quantities of propulsion motors for the Navy's MK-37 Torpedo. Extensive engineering contract work undertaken during 1963 and anticipated orders give promise of an excellent 1964 for AMF Leland Airborne.

1. Soft X-Ray Generator simulating solar radiation is used for instrumentation alignment at Alexandria.
2. Comdr. M. A. Merrill, U.S.N. and Leland's general manager J. E. Mulheim discuss shipment of Mark 37 Torpedo propulsion motors.
3. At Potter & Brumfield machines verify dielectric strength of relays.
4. Many signs on Broadway's "Great White Way" are controlled by Paragon time controls.
5. This attractive all-purpose household timer will be marketed soon by AMF/Paragon.











# Industrial Products Group

AMF Beaird, Inc.  
AMF Tuboscope, Inc.  
American Iron & Machine Works Co.  
Friction Welding Division  
Thermatool Corporation



Shreveport discussion: John L. Tullis, (right), Group Executive, with Clayton DuBosque, Jr., AMF personnel and industrial relations head.

*"The acquisition of Tuboscope not only added a business unit with good growth potential, but provided a broader base for expanding the sales of AMF/Beaird, American Iron, and Thermatool in the oil, gas, chemical, defense, steel, and other industrial markets. Through careful planning and full utilization of our combined capabilities, with particular emphasis on the new AMF/Beaird facilities at Shreveport, the Group can effect economies, further its growth, and make a substantial contribution to profits for AMF. The Industrial Products Group had an exceptionally good year in 1963."*

1963 revenues and earnings for the Industrial Products Group were higher than in 1962. Year-end backlog and the outlook for bookings indicate further improvement of earnings in 1964.

AMF/Beaird experienced its greatest profit year in 1963. Contributing to the firm's success were substantial orders for stainless steel and aluminum pressure vessels and rail car tanks. In addition, excellent progress was shown in two new product fields: cryogenic vessels, for use at very low temperatures, and desiccant plants for liquid hydrocarbon extraction. This Company also produced in 1963 a high flux beam nuclear reactor for the AEC's Brookhaven National Laboratory, and received additional large orders for components used in launch control centers at Minuteman missile sites.

AMF/Beaird entered 1964 with a record backlog of orders. Included was an order for eight 165,000-gallon storage tanks, weighing 358,000 pounds each, the largest ever built by the firm.

AMF/Beaird will be moving into a new \$9.2-million manufacturing plant in Shreveport, Louisiana, in early 1964. Rated as one of the largest and most modern in the Southwest, this new facility will provide the company with expanded capabilities in the field of heavy metal fabrication and establishes AMF/Beaird as the largest industrial employer in the city of Shreveport.

AMF/Tuboscope, acquired in October, 1963, operates an inspection service for oilfield tubular goods and leads its field both in the U.S. and abroad. Its Corrosion Control Division specializes in plastic coatings for tubular goods, storage tanks, and other metal products. LINASCAN, an electronic system to inspect the weld of electric resistance welded pipe on a production line, was one of the firm's top developments in 1963. Another unique electronic device, also developed in 1963, can be inserted to travel through an underground pipeline and inspect its condition. This product will be marketed in early 1964.

The AMF Friction Welding Division, transferred in late 1963 from the Company's Research & Development Division, shifted its emphasis from product development to marketing. By the end of the year, orders had been accepted for machines to weld parts for automotive drive shafts, textile machines, truck wheels, and tractor components. The Division's Contract Welding operation gained recognition as a supplier of bi-metal motor shafts, bi-metal drill blanks, and flanges for chemical processing equipment.

In cooperation with the Friction Welding Division, American Iron & Machine Works Company developed a new type MT tool joint for a miniature rotary drilling string, capable of servicing the deepest oil wells. By the close of 1963, American Iron was credited with capturing a major portion of the expanding market for these "Slim Hole" tool joints.

Thermatool Corporation, another important unit in the group, introduced its newest and largest high-frequency industrial oscillator, which operates at approximately 450,000 cycles and is capable of welding steel pipe 1/2-inch thick at speeds of up to 100 feet per minute. Also during 1963, Thermatool perfected the application of its high-frequency contact resistance welding technology for the bonding of a wide range of structural shapes. This breakthrough is seen as offering great advantages to structural steel producers and fabricators.

1. Flash-Weld tool joints get final inspection at American Iron's Oklahoma City plant.
2. AMF's new friction welder model, used to join similar or dissimilar metals.
3. An 11,500-gallon Beaird cryogenic vessel for storage of liquid nitrogen at minus 320 degrees F.
4. 1,000-horsepower AMF/Beaird-Ingersoll-Rand turbocharged TVS gas compressor plant.
5. Welding steam coils on Beaird's 19,000-gallon stainless-steel rail car tanks.
6. Electronic end-area inspection of oilfield pipe by the Tuboscope Co., latest AMF member.
7. At AMF/Thermatool, a spiral mill for welding thin-wall small diameter tubing.



## Process Equipment Group

Bakery Machinery Division  
Cuno Engineering Corporation  
Food Service Division  
Dalkin Division  
Maxim Division  
Stitching Division



Group Executive Edward R. Corvey (left) and Carlton H. Winslow, AMF/Cuno President, examine industrial filter unit.

*"In the latter part of 1963, the benefits obtained through the integration of engineering, production, and marketing capabilities of our food, bakery, liquid conditioning, and clothing operations into the Process Equipment Group helped increase profits on a sales volume that was about the same as in 1962. Backed by an improved year-end backlog and the expectation of higher bookings, earnings should continue to improve in 1964."*

Profits for the Process Equipment Group, which was formed in March, 1963, increased over 1962 on a sales volume that was about the same in both years. The Group now includes eight plants producing machinery and equipment systems in the important areas of liquid conditioning, commercial baking, food service, and stitching.

AMF/Cuno, maker of liquid-conditioning products, showed significant increases in sales and profits for the year, and it has good potential for steady growth.

Aqua-Pure taste and odor water conditioning filters, introduced in early 1963, have been well accepted among homeowners, institutional and commercial establishments here and abroad. When municipally-treated water is passed through this filter, it emerges free of objectionable chlorine taste and odor. This product also removes a variety of unpleasant tastes and odors from well water.

Another new product with good profit potential is Cuno-Pore, an asbestos-cellulose filter which removes sub-micronic solids from liquid pharmaceutical and cosmetic products as well as from a wide range of fluids processed by other industries.

Cuno's Tech-Space Division has shown a steady growth with increased orders for control and guidance system filters used in defense missiles and for nuclear reactor filters. The Automotive Lighter Division also had an increase in sales and introduced a new, improved dashboard cigarette lighter.

Developments at AMF/Maxim included a new line of low-cost, compact distillers called Aquafresh Marine, which provide fresh water from sea water aboard hundreds of small commercial vessels and yachts. Of recent interest also is a Maxim sea water distiller which will receive free energy from heat released by the incineration of refuse. The first of its kind is being installed during 1964 in the municipality of Hempstead, Long Island, New York. The fresh water obtained from this unique application of waste heat will be used to control polluted air from the incinerators.

AMF's Bakery Division continued to be a major supplier of dough processing machinery to bakeries all over the world. AMF Bread and Roll Wrapping and Slicing equipment operates in the majority of these bakeries. The AMFlow Continuous Dough Fermentation System is now producing bread in over half of the 50 States and abroad in Australia, Brazil, Canada and Japan. The Uni-Pac Bun Packer, which packs hamburger and frankfurter buns into cartons automatically, is receiving wider industry acceptance. Sales of these units for 1963 were 50 per cent greater than in 1962, and unfilled orders indicate a further increase for 1964.

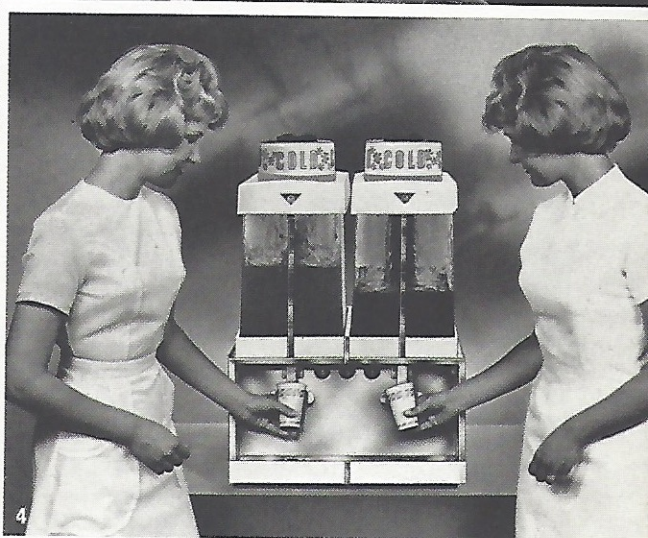
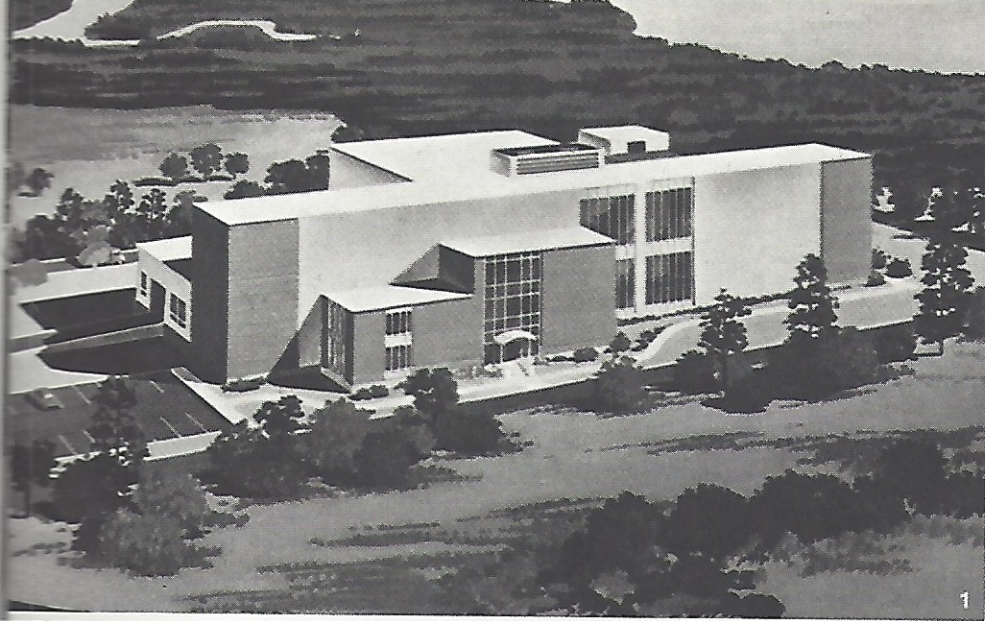
The Food Service Division introduced several new products during the year, including the AMF TWIN Beverage Dispenser, and the AMF Lowerator Dispenser for ice cubes, which is designed to transport and dispense 200 pounds of ice cubes at counter level.

The Stitching Machinery Division's Button Stitching Machine, which attaches buttons on suitcoats, is being well received in the industry here and abroad. A current addition to the line is a machine designed to sew buttons on topcoats and overcoats.

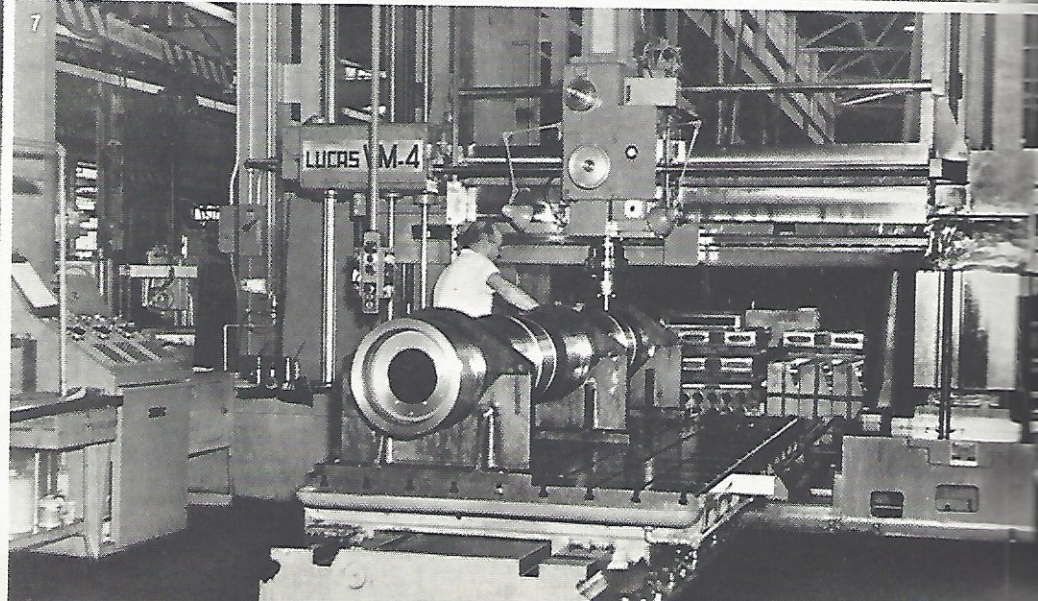
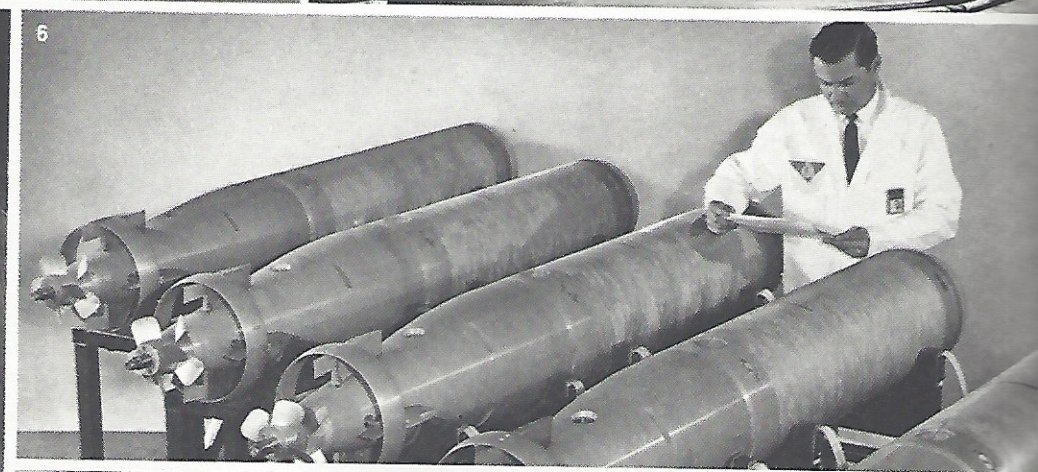
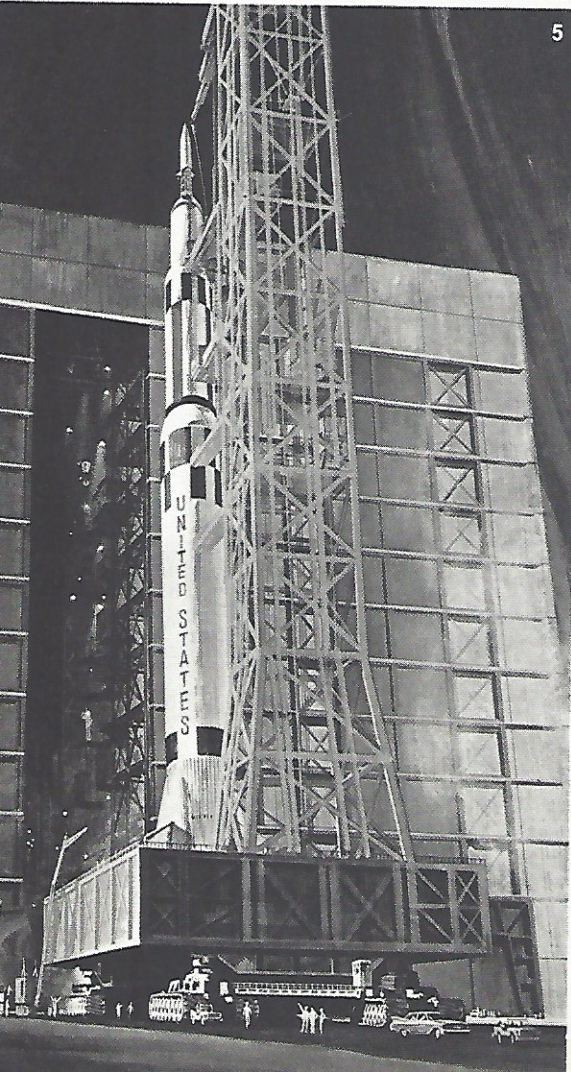
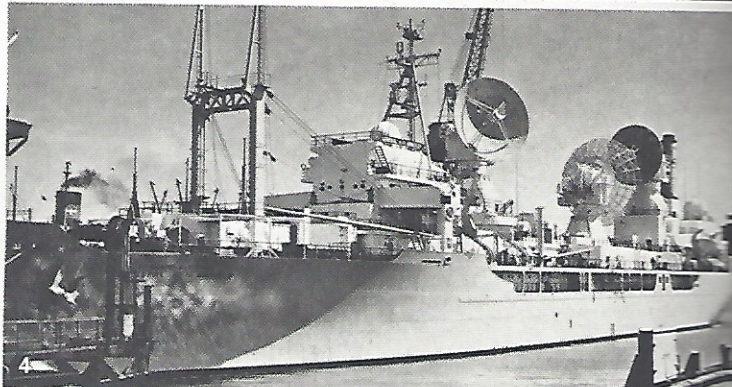
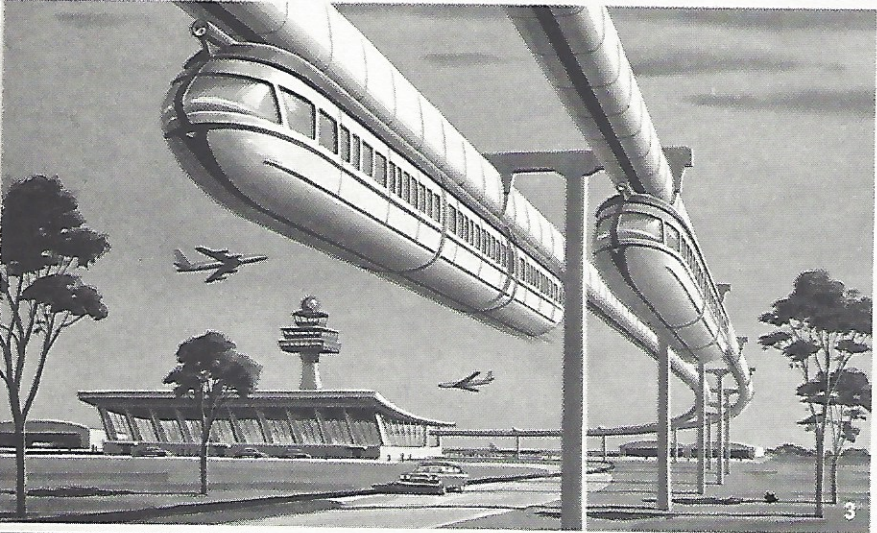
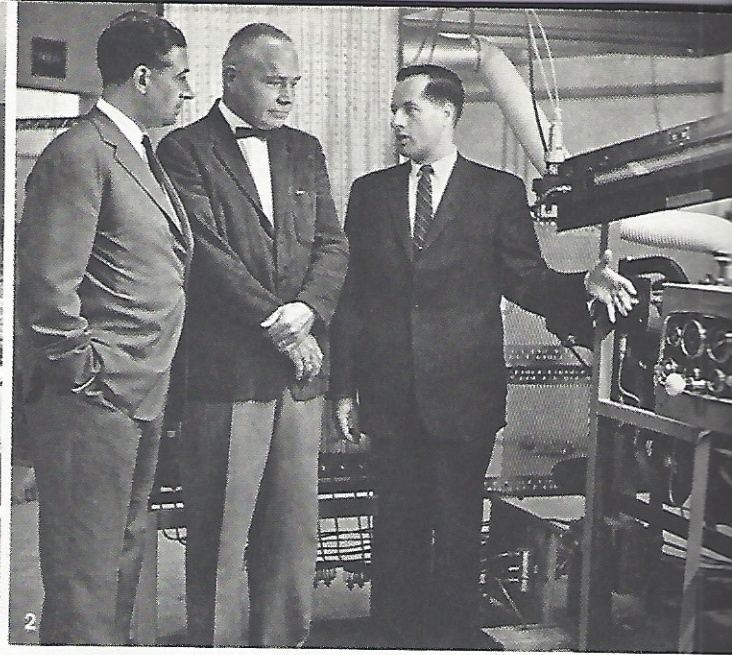
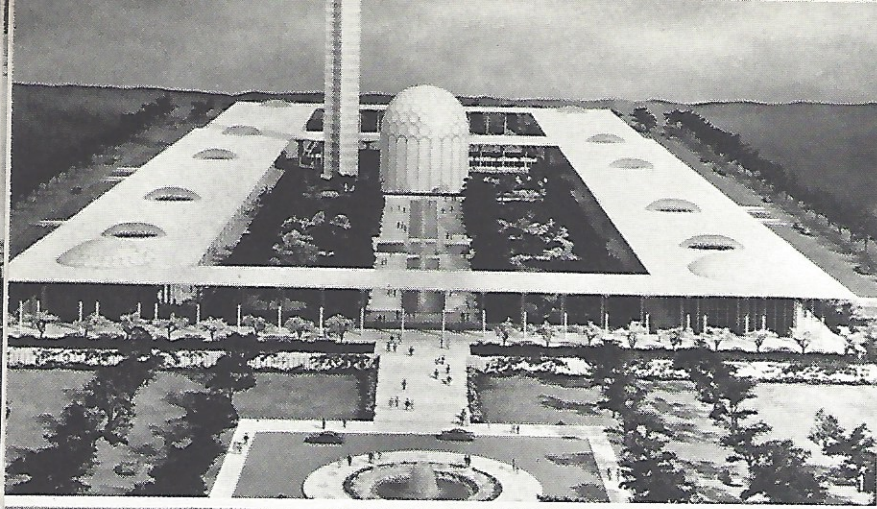
We are working on systems concepts using combinations of various items of AMF equipment to meet the improved productivity and higher volume requirements of industries served by the Process Equipment Group.

1. Architect's rendering of Maxim sea water distiller unit being installed for town of Hempstead, Long Island.
2. Aqua-Pure taste and odor water filters being assembled at AMF/Cuno plant.
3. In action, an AMF Uni-Pac Bun Packer which packs hamburger, frankfurter buns into cartons automatically.
4. AMF's new "beverage twins" demonstrate ease with which two drinks can be drawn simultaneously.
5. Lowerator stainless-steel tray and silver cart, introduced this month to volume feeding industry.
6. AMF Button Stitching Machines in operation at large suit manufacturer in Manhattan.











# Advanced Products Group

Atomics Division  
AMF York Division  
Brooklyn Division  
Field Operations & Engineering Division

General Engineering Division  
Hydrospace Division  
Monorail Division  
Western Division



Stanley E. G. Hillman (left), Group Executive, with David S. Meiklejohn, AMF Vice President and Treasurer, at group executive meeting.

*"The Advanced Products Group of AMF enters 1964 on a much firmer base than a year ago. The phasing out and completion of the large missile launcher contracts is behind us, and we have a year-end backlog of defense, space, and nuclear assignments that is 60 per cent higher than at the end of 1962. A major portion of this backlog is in areas which give promise of follow-on business over the next several years."*

Sales of Government products by this group in 1963 were substantially lower than in 1962 due to the large billings for the missile launcher orders phased out in the earlier year. An elimination of these billings shows that our sales from other sources were higher in 1963. Based on the increase in our year-end backlog, this upward trend is expected to continue in 1964.

Early in 1963 the former Government Products Group was re-designated the Advanced Products Group to reflect the broadening scope of this Group's activities in defense and industry. A major accomplishment in 1963 was the addition of three new divisions to the Group: AMF York, Western Division, and AMF MONORAIL.

The Group's newest facility at York, Pennsylvania, is a former Naval Ordnance Plant. It became available for purchase as the Government continued its program to return industrial facilities to the free enterprise system for competitive operation. Concurrent with this purchase, AMF received a \$25-million Naval supply contract for the production of anti-submarine rocket launching equipment, gun directors, and other Navy materiel.

The Group's new Western Division was consolidated in headquarters at Los Angeles, California. One of its most important activities is the design and development of the AMF Chromalloy "Smog Burner." This combined exhaust control and muffling device is undergoing final testing by the California Motor Vehicle Pollution Control Board.

Responsibility for the commercialization of the AMF MONORAIL system for fast and economical transportation was also assigned to the Group.

In May 1963 W. R. Grace & Co. and AMF announced the first privately-owned plant for the reprocessing of nuclear fuels. Nuclear Fuel Services, Inc., the new organization, will reprocess spent fuels for industry and the Atomic Energy Commission.

During 1963 the Group, through AMF Atomics, began work on two new nuclear research reactors, the Pressure Tube Reactor and the PULSTAR reactor. A \$1-million contract for the design of a unique four-in-one application of our Advanced Pressure Tube Reactor was received from the Italian Atomic Energy Commission. At the Western New York State Nuclear Center at the State University of New York at Buffalo, installation began on AMF's new PULSTAR reactor, which can create pulses of four million kilowatts of power.

Sales of AMF manipulators to handle nuclear active materials have reached 500 units. In nuclear aerospace activity, development of remote handling systems for NERVA (Nuclear Engine Rocket Vehicle Application) continued with sales for the year amounting to \$4.5 million. AMF was also selected by the U. S. Atomic Energy Commission to develop the first remote handling system for a radio-isotope-powered communication satellite.

Production commenced on a \$17-million contract for the manufacture of the MK-44 Torpedo for the Bureau of Weapons of the U. S. Navy. A \$1.6 million contract was received for the production of rocket motors for the Bullpup missile. Two important million-dollar contracts were received for highway trailers for NASA's Saturn Program. And other manufacturing contracts totalling more than \$1.5 million for the fabrication of components for three U. S. Army vehicles were received.

1. AMF construction has started on Pakistan's nuclear research center near Rawalpindi.
2. Group Executive S. E. G. Hillman (left), Donald Jensen, Executive of California Motor Vehicle Pollution Control Board (center) and AMF's Harold Lipchik discuss AMF/Chromalloy "Smog Burner".
3. AMF MONORAIL will work on box beam principle which keeps running surface of track dry; makes for easy all-weather operation.
4. AMF designed, manufactured 70-ton pedestal-and-drive units for Air Force shipborne radar antennas.
5. AMF has contracts for work on this Crawler-Transport for transfer of Apollo-Saturn to launch pad.
6. The first five MK-44 Torpedoes ready for shipment to the U.S. Navy.
7. Giant Lucas versatronic boring, milling, and drilling machine, an example of efficient equipment in new York, Pa. plant.



# World Tobacco Group

AMF Do Brasil, S.A., Brasil  
 AMF Maschinen G.m.b. H., Austria  
 AMF Microflake Division, So. Windsor, Conn.  
 AMF Tobacco Division, Richmond, Va.

AMF SASIB, S. p. A., Italy  
 D. K. Hamblin, England  
 International Cigar Machinery Division  
 Robert Legg, England



Group Executive Harry A. Hooper examines automatic tobacco machine at Group's Brooklyn test laboratory.

*"Foreign and domestic tobacco operations in the 'Microflake' tobacco, leaf, cigar, and cigarette machinery fields were consolidated under the World Tobacco Group in 1963. This will enable AMF to handle world-wide tobacco engineering, production, and sales on a more effective basis to meet the increasing competition from abroad."*

In May 1963 AMF formed the World Tobacco Group, a centralized organization, with headquarters in New York. It has complete manufacturing facilities in the United States, Italy, England, Austria, and Brazil. A worldwide network of sales and service personnel located around the globe provides customers with fast and efficient service.

Special emphasis is being given to tobacco machinery engineering. Key personnel from each of the manufacturing and development centers are members of a Group Engineering Panel which provides overall coordination and project assignment of American and European development programs to avoid duplication of effort, reduce costs, and speed their completion.

We have concentrated our development efforts for the cigarette industry in three major areas. First, we have introduced speed-up kits for existing machinery which provide greater productivity and efficiency with a minimum of capital expenditure by the purchaser. Second, we have directed our efforts towards new products such as a highspeed filter-tip attachment and a new cigarette making machine. Thirdly, we are planning for the future by designing new devices and refinements to work together as an automated system.

The cigar industry demonstrated in 1963 that AMF "Microflake" Cigar Wrapper has gained consumer acceptance. With this achieved, our engineering program is being concentrated on the automation of the cigar manufacturing process. In addition, we will have a new high speed cigar machine available in 1964. Again, our engineering targets include new developments for attachment to presently installed machines to increase their productivity, efficiency, and uniformity of product.

While there may be certain present problems in the industry, the outlook is favorable for the sale of the Company's machinery and systems because of the diversity of our lines and the extent of AMF's manufacturing and marketing operations.

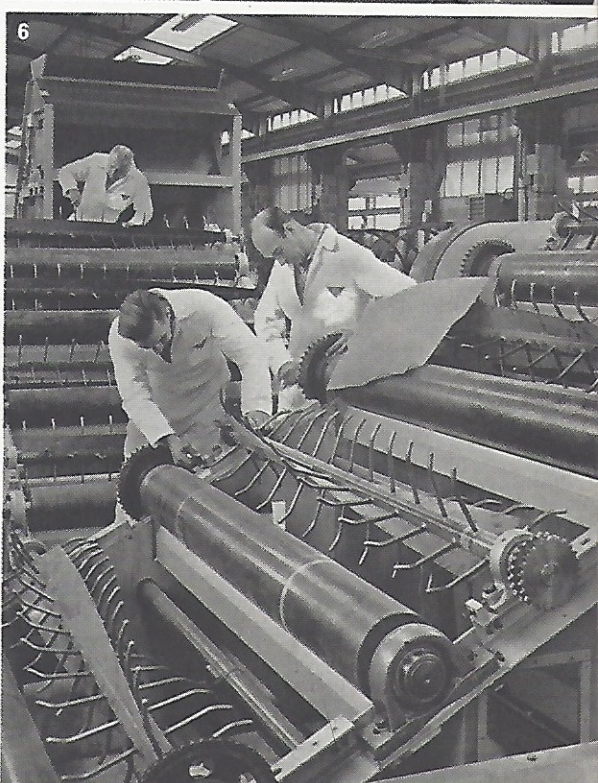
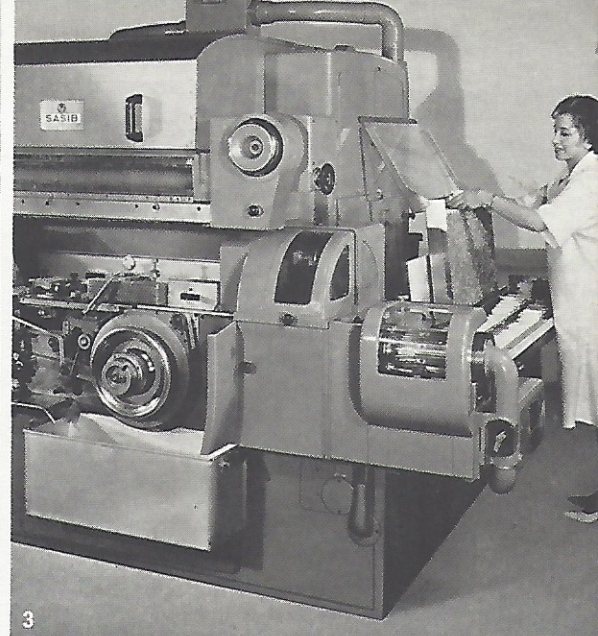
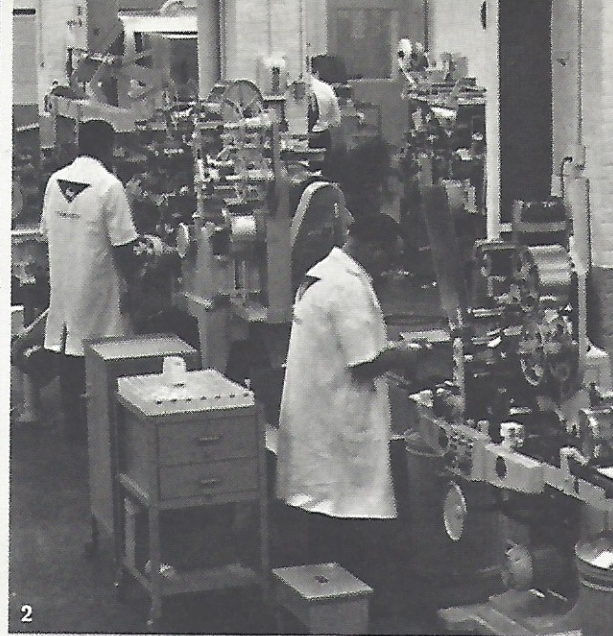
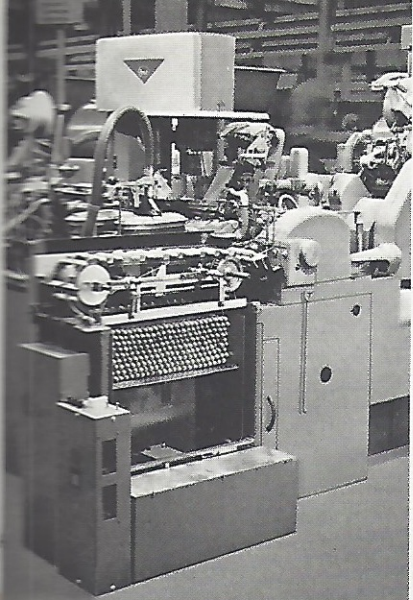
Working with World Tobacco Group engineers, AMF's Research and Development Laboratory biochemists, physicists, and engineers are designing and experimenting with new products and processes. AMF has been in the tobacco machinery business since the turn of the Century, and the Company's background and experience can be of great service to our many customers.

In a series of meetings held in 1963 with the leaders of the cigar and cigarette industries, the AMF programs were reviewed to assure that they were being directed at meeting the needs of these industries.

This Group offers a unique combination of skills and service in the engineering, production, and installation of cigar, cigarette, and leaf processing equipment and systems for the tobacco industry wherever it operates. AMF is presently building and equipping turnkey tobacco facilities in Korea and Thailand.

1. Fully-automated AMF cigar machine with accumulator. When used with "Microflake" tobacco no operator is required.
2. At AMF's Cigarette Machinery Development Laboratory in Brooklyn.
3. An AMF/SASIB "CS-10" cigarette making machine in operation. It can produce 2,000 cigarettes per minute.
4. Cigarette making section of Italian Tobacco Monopoly plant using AMF/SASIB "CS-9" Cigarette Maker.
5. First session of the AMF World Tobacco Engineering Panel in Brooklyn discusses the cigarette machinery industry.
6. Tobacco silo equipment undergoing final inspection at the Legg Division in England.
7. Cigarette factory under construction in Taichon, Korea. AMF engineered and will equip this complete





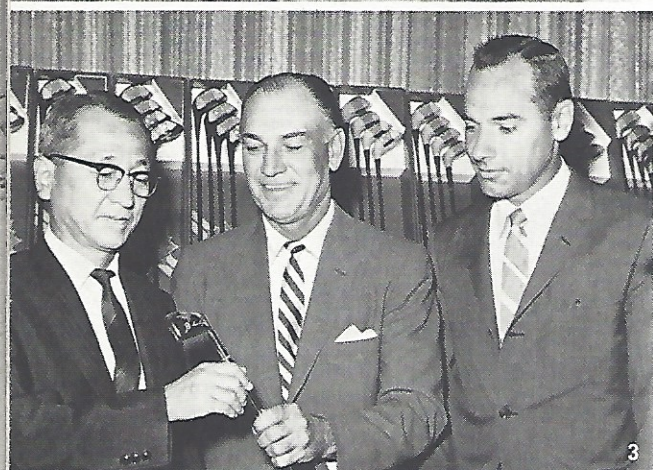




1



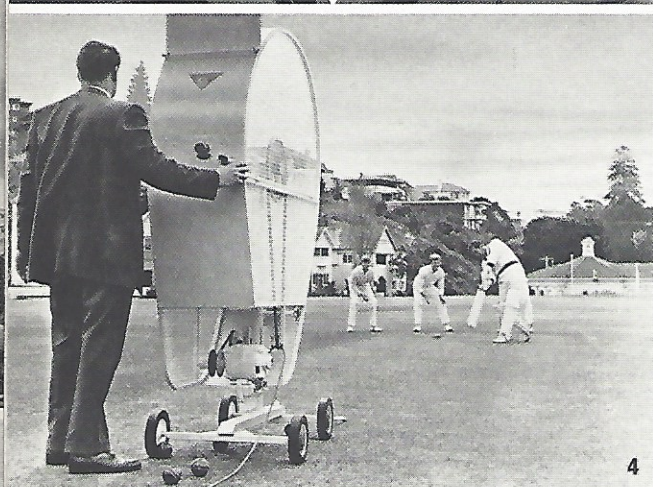
2



3



5



4



6



7



# International Group

AMF International Limited (London)  
 AMF Overseas Corp. (Geneva)  
 AMF International Export Division (New York)  
 AMF Japan Ltd. (Tokyo)  
 Bowling Products (London)

Electrical Products (Milan)  
 Recreational and Consumer Products (Paris)  
 Food Machinery (Dordrecht)  
 Australia Operations (Sydney)  
 Mexico Operations (Mexico City)



Merlin E. Nelson (right), Group Executive, confers with Matthew S. Stolarz, Vice President, AMF International.

*"The development of new foreign markets for our products presents opportunities for continued growth and profit. In 1964 revenues and earnings should show a further improvement."*

By establishing its International Headquarters in 1963 in London with offices in Geneva, AMF has placed the direction of its overseas engineering, production, and selling operations closer to the expanding market places of Western Europe and the adjacent areas of the world.

These moves have enabled the Company to lower overhead expenses significantly and the other costs of doing business internationally.

Bowling continues to expand overseas, and at the close of 1963 AMF International had shipped or had on order more than 8,400 Automatic Pinspotters for customers in 27 foreign countries. The game continues to gain in popularity throughout the world. Year-end sales backlog and the minimum rentals due over the remaining terms of Pinspotter leases overseas are one of the bases for predicting improved profits from overseas operations in 1964.

During the year, an agreement was reached with the British firm, Excel Bowling (U.K.) to supply 750 Pinspotters and lanes in the United Kingdom and Continental Europe. The jointly owned bowling sales company in Japan, AMF/C. Itoh, obtained a contract to install 74 Pinspotters and lanes in Tokyo, the largest AMF center to date outside the U.S.A.

Aside from bowling operations, AMF International obtained a \$5-million contract to build a nuclear research center in Pakistan and a \$1-million contract was received for the design of four Advanced Pressure Tube Reactors from the Italian Atomic Energy Commission.

Another AMF product attracting sports minded people abroad is the AMF Snowmaker, which makes ski resorts less dependent on the weather. AMF installations have been made at such places as: Garmisch, Germany; Chateau d'Oex, Switzerland; Mar Lodge, Scotland; and Mt. Fuji, Japan. It was used to construct the Olympic bobsled and toboggan installation at Innsbruck, and saved the costly and time-consuming need for trucking snow from the higher altitudes to maintain the surface of the runs.

A third "AMFlow" Continuous Dough Fermentation system for making bread was installed in Japan, and an agreement was reached with the Kondo Sewing Machine Co., Ltd. to market AMF Stitching machines in that country.

AMF/Ben Hogan continued to be the largest selling prestige line of golf equipment in Japan, the world's third largest golfing nation. In 1963 Hogan received the largest single order in its history — an order of over \$100,000 for clubs and golfing accessories from International Sports Corporation of Tokyo, Japan.

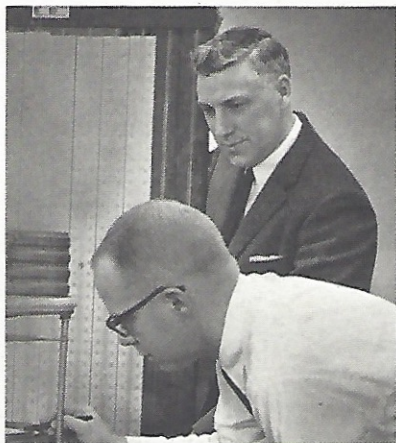
The group's revenues from exports and overseas subsidiaries again reached new highs in 1963. Based upon a record year-end backlog and the current bookings outlook, the results of overseas operations should show further improvement in 1964.

1. Huge AMF bakery oven and plant being shipped, with police escort, to Nagoya, Japan.
2. AMF Chairman Carter L. Burgess points to starting relay and overload protector, which AMF/Electrica supplies to Necchi company, Pavia, Italy. (L. to r.): AMF Electrica's director A. Chiappi; Mr. Burgess; Comm. Giuseppe Manidi, Necchi general manager; and Dr. Ing. Luigi Bono, AMF technical director.
3. Hiroshi Mizutani, International Sports Corp. president, Ben Hogan, and Matthew S. Stolarz, vice president, AMF International, discuss Hogan golf equipment.
4. For cricket practice, AMF's new automatic cricket bowling machine in Australia.
5. Employee at AMF/Electrica in Milan, Italy, checks out electrical assembly products.
6. Former world heavyweight champion Max Schmeling opens AMF-equipped bowling center in West Berlin.
7. Germany's first AMF Snowmaker installation, near Garmisch, gets a workout.



# Research & Development

The Morehead Patterson Research Center  
Alexandria Division



Hamilton Herman (top), R&D head, discusses progress of evaporator unit with engineer Arthur Adami.

*"The creative application of science and technology, in a continuing program for improving present products and processes and for finding valuable new products, represents a major source of strength and growth for AMF."*

The mission of the Research & Development Division is to support the growth of the Company by providing new products, processes, and methods as well as improving existing ones.

In May 1960 AMF acquired the Maxim Division and gave R&D the assignment to redesign and improve its product line. Early in 1963, the division finished its assignment and Maxim, which produces an extensive line of evaporators designed to desalinate and purify water, became a business unit within the Process Equipment Group. Almost the complete line of present Maxim products has been developed by AMF within the last three years, and this line has won substantial recognition and increasing markets in both the commercial and military areas.

During the year, the division successfully finished development and initial commercialization of the AMF friction welding process. Upon completion of machine design and pilot models, the friction welder was transferred to the Industrial Products Group for commercialization. The Research & Development Division will continue research work which is designed to broaden commercial opportunities for this new AMF process. AMF is the world leader in the development and application of this new process which is winning steadily increasing industrial acceptance.

The division completed laboratory evaluation of the AMF/Chromalloy Smog Burner, an automotive exhaust control device. This development was then transferred to the Advanced Products Group.

As a result of the exchange of ideas and engineering coordination between R&D and the World Tobacco Group, Microflake cigar wrapper has become a commercial product for AMF. This product has met with good market acceptance both here and overseas. R&D is continuing various projects on tobacco manufacturing processes which are planned to give this important industry new product dimensions for the future.

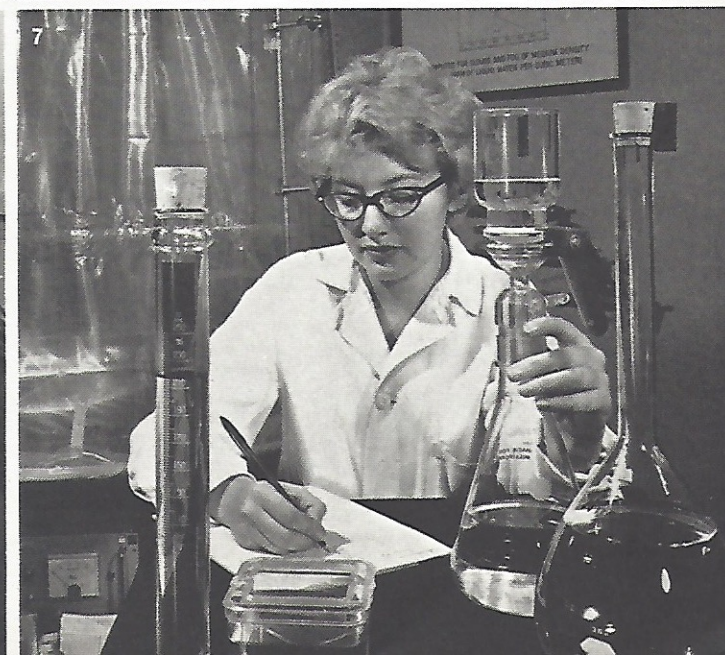
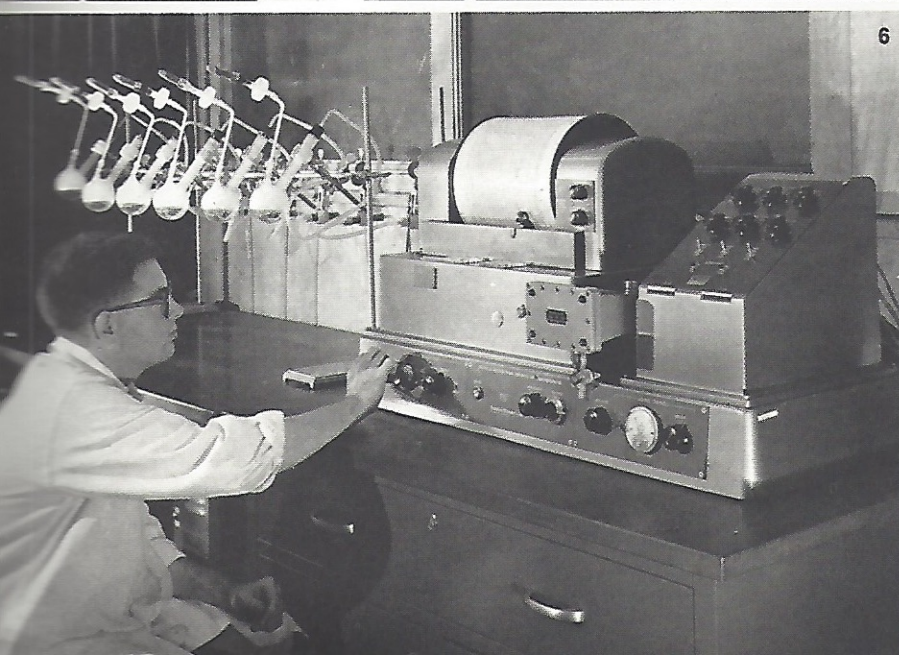
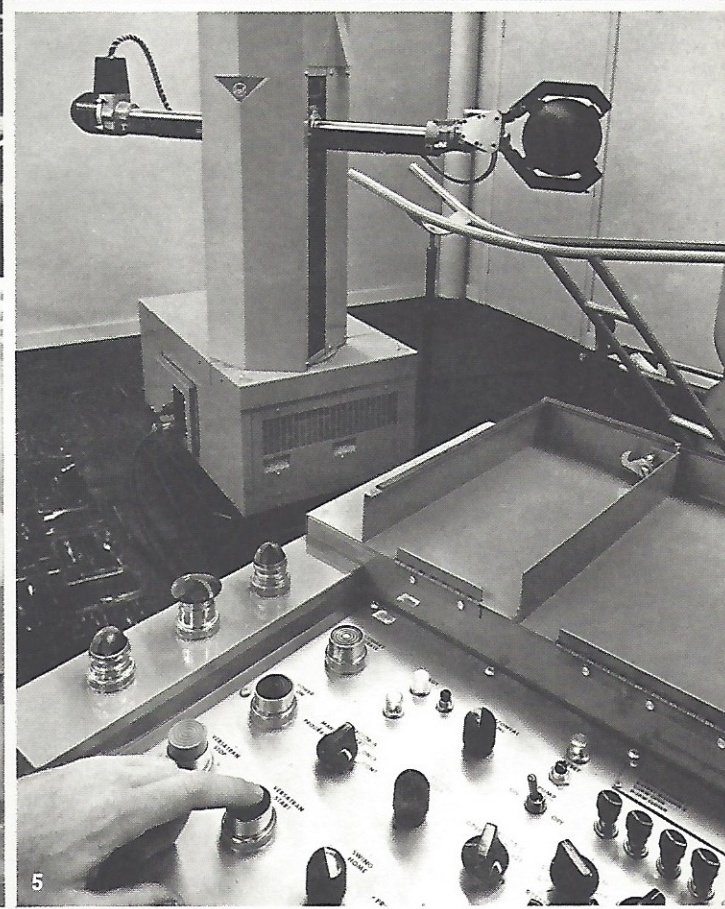
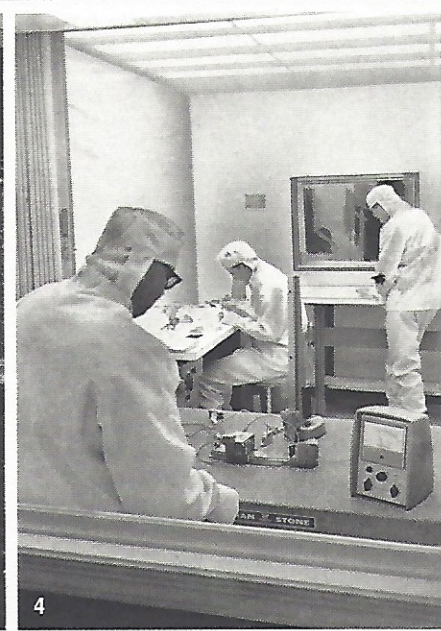
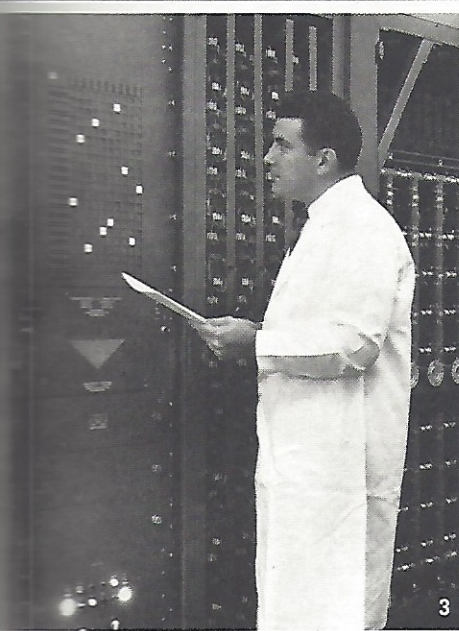
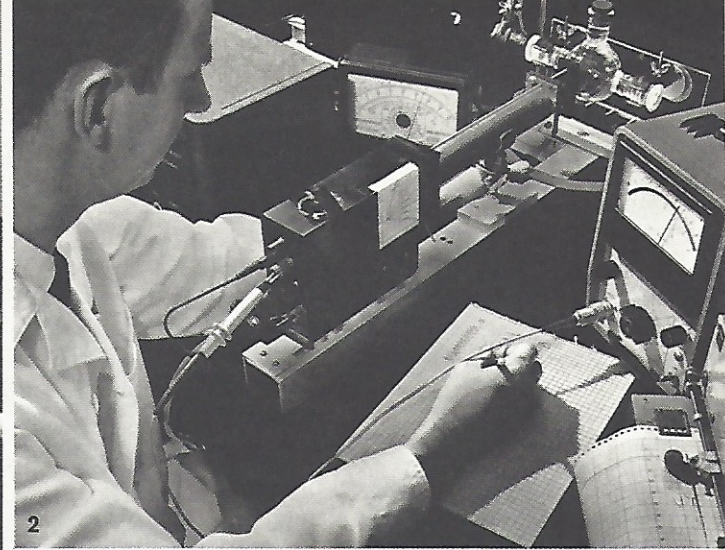
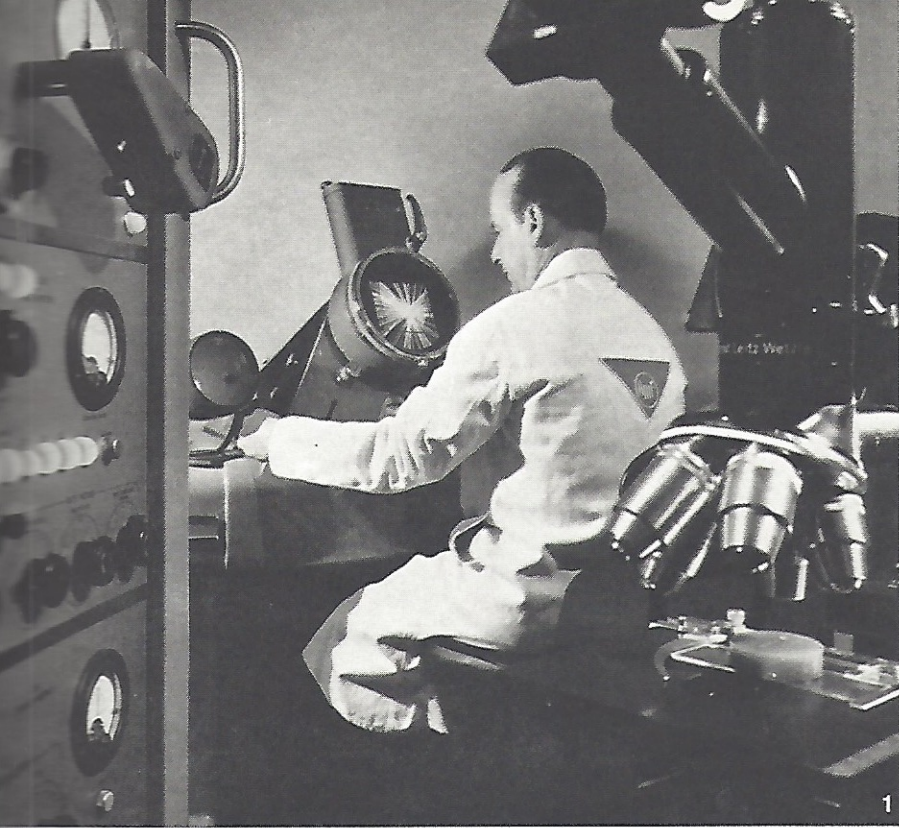
At present, AMF/Voit is producing a plastic, colored bowling ball which was developed by the Research & Development Division. The Bowling Products Group has been steadily increasing its sale of this new ball.

In coordination with the AMF business units, Research & Development has analyzed the needs and initiated research programs to bring forward the new developments and products required for our expanding economy. This important effort is necessary to provide continuing growth for the Company.

In addition to the long-range R&D effort, the business units within the product groups of the Company provide engineering in a continuing search for new products, product improvement, and cost savings. This effort, combined with the centralized activity of R&D, gives AMF affirmative product protection and future product opportunity.

1. Optical and electron beam microscopy and X-ray diffraction are among R&D tools available at The Morehead Patterson Research Center.
2. Research assistant uses light scattering photometer of AMF design to measure size and number of particles in solution.
3. Attendant inspects R&D's coaxial antenna control system at Alexandria, Va. laboratory.
4. An air-conditioned "white room" is utilized for assembly of space instrumentation in Alexandria.
5. AMF Versatran automatic transfer machine is tested for various performance capabilities.
6. Analysis of smoke from experimental cigars by infra-red spectroscopy is carried on under controlled conditions.
7. Filtering water for use in experiments in studies of ultra filtration.

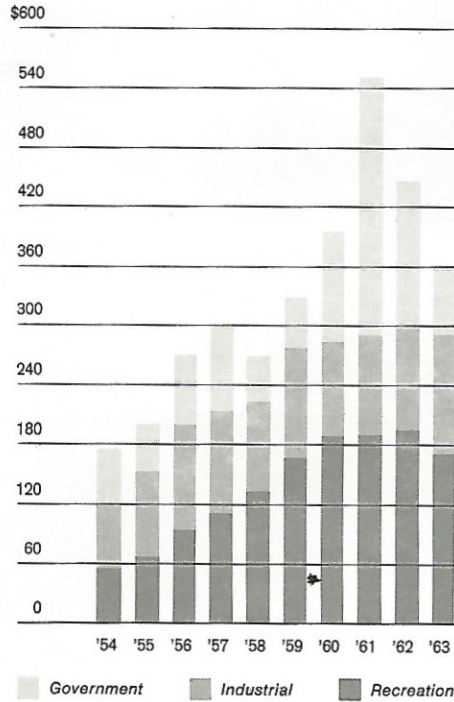




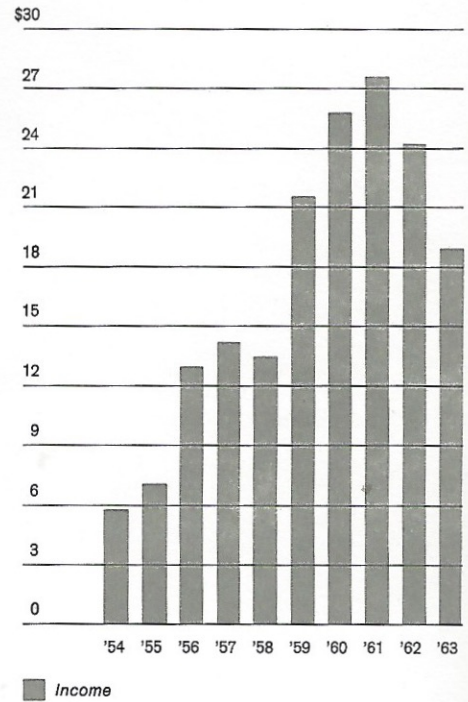


# Ten-Year Record

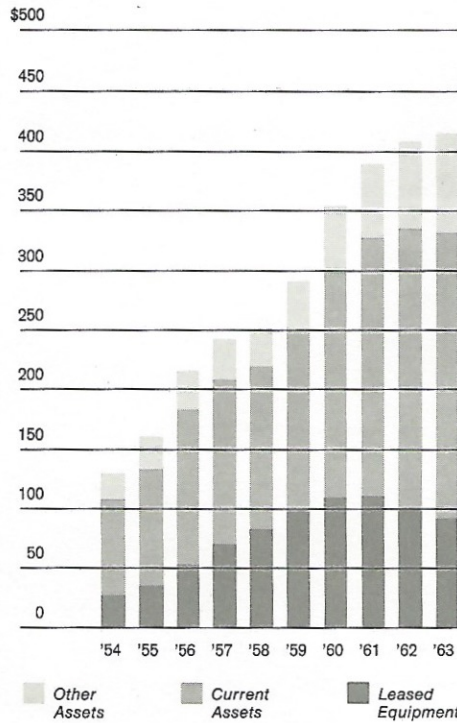
## REVENUE



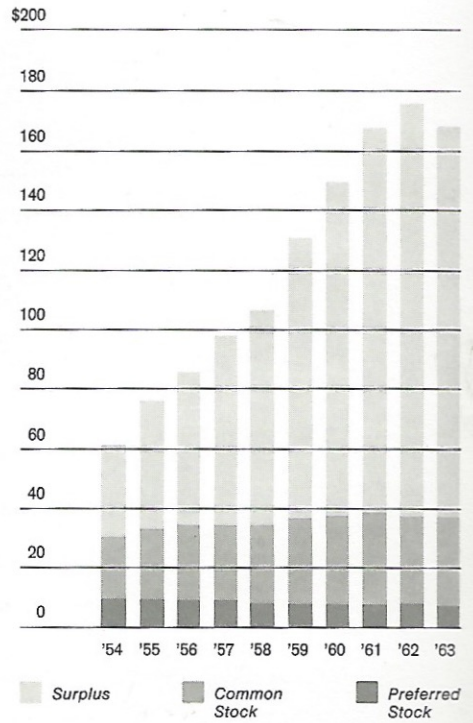
## INCOME FROM OPERATIONS



## TOTAL ASSETS



## CAPITAL AND SURPLUS



Dollar Figures in Millions



# American Machine & Foundry Company

and Consolidated Subsidiaries

## Statement of Source and Disposition of Funds

	1963	1962
<b>Source of Funds:</b>		
Net income .....	\$ 9,510,102	\$ 24,279,243
Depreciation and amortization .....	23,743,877	23,726,919
Federal income taxes deferred .....	5,713,000	6,916,000
Common stock options exercised .....	253,274	95,032
Short term borrowing .....	25,000,000	—
Long term borrowings .....	—	50,000,000
Amortization of debt expense .....	54,486	84,992
Total .....	<u>64,274,739</u>	<u>105,102,186</u>

## Disposition of Funds:

Leased machines .....	8,871,618	6,232,696
Property, plant and equipment (net) .....	11,339,359	5,991,476
Patents and developments capitalized .....	3,893,846	305,126
Investments .....	2,356,010	8,869,782
Preferred stock redeemed .....	441,735	101,817
Long term debt retired .....	—	14,775,100
Long term debt transferred to current liabilities .....	4,859,000	7,534,000
Repayment of short term borrowings .....	2,000,000	5,500,000
Dividends paid .....	15,603,474	15,610,218
Increase in working capital other than cash .....	23,165,136	38,326,177
Other items (net) .....	93,153	131,657
Total .....	<u>72,623,331</u>	<u>103,378,049</u>
Increase (Decrease) in Cash .....	<u>\$ (8,348,592)</u>	<u>\$ 1,724,137</u>

## Cash, Including Marketable Securities:

At beginning of year .....	\$ 25,632,277	\$ 23,908,140
At end of year .....	<u>17,283,685</u>	<u>25,632,277</u>
Increase (Decrease) as above .....	<u>\$ (8,348,592)</u>	<u>\$ 1,724,137</u>



# American Machine & Foundry Company

## and Consolidated Subsidiaries

	1963	1962	1961
<b>Results for Year</b>			
Sales .....	\$286,708,000	\$368,636,000	\$473,589,000
Rentals .....	72,721,000	76,980,000	76,437,000
Total revenue .....	359,429,000	445,616,000	550,026,000
Recreation .....	170,874,000	193,613,000	189,053,000
Government products .....	67,653,000	149,295,000	260,283,000
Industrial .....	120,902,000	102,708,000	100,690,000
Income before federal taxes .....	18,960,000	49,819,000	60,302,000
Federal taxes on income (including deferred taxes) .....	9,450,000	25,540,000	30,476,000
Net income (Note 2) .....	9,510,000	24,279,000	29,826,000
Depreciation and amortization .....	23,744,000	23,727,000	22,527,000
Federal taxes deferred .....	5,713,000	6,916,000	2,533,000
Dividends paid:			
On preferred stock .....	283,000	297,000	301,000
On common stock —in cash .....	14,932,000	14,646,000	14,010,000
—in stock .....	—	—	—
Dividends and transactions affecting surplus of companies combined .....	388,000	549,000	1,350,000
Total .....	15,603,000	15,492,000	15,661,000
Earnings (excluding stock dividends) reinvested in business .....	(6,093,000)	8,787,000	14,165,000
Earned surplus at December 31 .....	74,089,000	80,182,000	71,395,000
<b>Financial Position at December 31</b>			
Current assets .....	\$240,829,000	\$236,716,000	\$215,276,000
Current liabilities .....	79,603,000	63,533,000	83,607,000
Working capital .....	161,226,000	173,183,000	131,669,000
Working capital ratio .....	3.03	3.73	2.57
Machines leased to customers, less reserve .....	\$ 90,436,000	\$ 98,338,000	\$109,154,000
Property, plant and equipment, less reserve .....	38,173,000	32,665,000	32,897,000
Total assets .....	412,290,000	405,449,000	386,850,000
Long term debt .....	148,358,000	153,217,000	122,815,000
Stockholders' equity .....	167,499,000	173,808,000	166,722,000
<b>Per Share of Common Stock at December 31</b>			
Income before extraordinary item (Note 2) .....	\$1.09	\$1.40	\$1.59
Dividends paid —in cash (AMF only) .....	.90	.90	.87½
—in stock .....	—	—	—
Stockholders' equity .....	\$9.38	\$9.74	\$9.33
<b>Other Statistics</b>			
Shares of common stock outstanding at			
December 31 .....	17,140,866	17,115,366	17,092,535
Number of stockholders at December 31 .....	73,921	72,689	59,710
Average number of employees during year .....	15,889	17,865	19,760
Wages, salaries and employee benefits .....	\$119,402,000	\$133,295,000	\$138,992,000

### NOTES:

1. The figures in the above statement have been restated from those previously reported to include amounts for companies combined and to reflect effect of stock splits of 1961 and 1959.

2. Includes extraordinary items: 1963—Provision for potential losses on bowling receivables \$9,500,000 or \$.55 per share; 1961—Gain on sale of The Black and Decker Manufacturing Company common stock—\$2,420,000 or \$.14 per share.



# 10-year Financial Summary (Note 1)

1960	1959	1958	1957	1956	1955	1954
\$324,806,000	\$267,533,000	\$220,643,000	\$263,112,000	\$246,068,000	\$185,402,000	\$163,547,000
69,233,000	58,361,000	46,733,000	34,250,000	22,888,000	14,108,000	9,398,000
394,039,000	325,894,000	267,376,000	297,362,000	268,956,000	199,510,000	172,945,000
187,345,000	164,747,000	130,735,000	109,303,000	92,066,000	64,044,000	53,123,000
111,119,000	50,509,000	45,079,000	88,320,000	72,168,000	47,501,000	55,666,000
95,575,000	110,638,000	91,562,000	99,739,000	104,722,000	87,965,000	64,156,000
52,831,000	44,959,000	26,488,000	27,856,000	26,838,000	14,594,000	11,657,000
26,996,000	23,569,000	13,179,000	13,696,000	13,919,000	7,493,000	5,835,000
25,835,000	21,390,000	13,309,000	14,160,000	12,919,000	7,101,000	5,822,000
19,547,000	17,215,000	15,144,000	12,301,000	9,446,000	6,988,000	5,379,000
2,398,000	1,871,000	1,849,000	3,408,000	555,000	676,000	411,000
303,000	314,000	327,000	346,000	355,000	366,000	363,000
10,472,000	7,808,000	5,601,000	4,192,000	2,863,000	2,479,000	2,149,000
—	—	—	—	3,752,000	1,233,000	1,197,000
1,209,000	1,029,000	883,000	993,000	6,901,000	2,270,000	1,148,000
11,984,000	9,151,000	6,811,000	5,531,000	13,871,000	6,348,000	4,857,000
13,851,000	12,239,000	6,498,000	8,629,000	(952,000)	753,000	965,000
57,230,000	43,379,000	31,140,000	24,642,000	16,013,000	16,965,000	16,212,000
\$188,244,000	\$150,561,000	\$135,137,000	\$137,402,000	\$131,883,000	\$ 99,507,000	\$ 80,795,000
99,356,000	69,934,000	39,803,000	33,277,000	55,675,000	40,424,000	32,739,000
88,888,000	80,627,000	95,334,000	104,125,000	76,208,000	59,083,000	48,056,000
1.89	2.15	3.40	4.13	2.37	2.46	2.47
\$108,814,000	\$ 97,297,000	\$ 81,356,000	\$ 68,396,000	\$ 50,717,000	\$ 32,726,000	\$ 24,928,000
30,457,000	28,547,000	26,232,000	26,600,000	25,066,000	20,980,000	18,416,000
351,910,000	287,215,000	249,947,000	241,184,000	213,437,000	157,149,000	127,192,000
92,768,000	76,882,000	96,662,000	105,461,000	70,921,000	41,755,000	33,447,000
148,237,000	130,262,000	105,944,000	97,117,000	84,822,000	74,961,000	60,692,000
\$1.52	\$1.28	\$.86	\$.94	\$.89	\$.50	\$.47
.63¾	.53¾	.42½	.32½	.26¼	.25	.25
—	—	—	—	4%	2%	2½%
\$8.41	\$7.45	\$6.54	\$6.07	\$5.41	\$4.96	\$4.44
16,747,042	16,474,448	15,002,810	14,647,774	14,105,198	13,354,322	11,666,994
35,153	29,680	24,073	23,382	19,810	17,378	14,361
16,574	15,506	14,590	17,197	17,253	14,284	12,882
\$111,951,000	\$99,011,000	\$90,710,000	\$101,465,000	\$91,645,000	\$73,262,000	\$64,296,000



# American Machine & Foundry Company

*and Consolidated Subsidiaries*

## ASSETS

	1963	1962
<b>Current Assets:</b>		
Cash .....	\$ 17,283,685	\$ 25,482,006
Marketable securities, at cost .....	—	150,271
Notes and accounts receivable (Note 3) .....	149,728,062	145,545,574
Inventories, at cost ("first-in, first-out" or average) or market, whichever is lower:		
Raw materials and supplies .....	15,045,936	13,203,891
Work in process and finished goods .....	54,364,402	48,485,752
Total inventories .....	69,410,338	61,689,643
Prepaid expenses .....	4,406,632	3,848,921
Total current assets .....	240,828,717	236,716,415
*		
<b>Investments and Advances, at cost:</b>		
Foreign unconsolidated subsidiaries and 50% owned companies (Note 1) .....	29,936,934	29,049,314
Other .....	6,844,827	5,376,437
	36,781,761	34,425,751
<b>Machines Leased to Customers, at cost</b> .....	163,895,208	171,943,655
Less: Reserve for depreciation .....	73,458,716	73,605,973
	90,436,492	98,337,682
<b>Property, Plant and Equipment, at cost:</b>		
Land and buildings .....	14,167,458	11,267,809
Machinery and equipment .....	48,862,187	43,838,311
	63,029,645	55,106,120
Less: Reserve for depreciation .....	24,856,560	22,441,135
	38,173,085	32,664,985
<b>Patents, Licenses, Development, Goodwill, etc., at cost</b> ....	9,187,480	5,531,318
Less: Reserve for amortization .....	3,852,010	2,950,017
	5,335,470	2,581,301
<b>Debt Expense, less amortization</b> .....	734,482	723,137
	<u>\$412,290,007</u>	<u>\$405,449,271</u>



# Consolidated Balance Sheets

at December 31, 1963 and 1962 (Note 1)

## LIABILITIES, CAPITAL STOCK AND SURPLUS

	1963	1962
<b>Current Liabilities:</b>		
Notes payable to banks .....	\$ 25,000,000	\$ 2,000,000
Current maturities on long term debt .....	4,859,000	4,859,000
Accounts payable and accrued liabilities .....	31,425,046	30,811,547
Dividends payable on preferred stock .....	68,810	73,696
Federal, state and other taxes (including deferred taxes applicable to profits on customers' installment obligations: 1963—\$9,500,000; 1962—\$5,726,000) .....	18,249,864	25,788,632
Total current liabilities .....	79,602,720	63,532,875
 <b>Long Term Debt</b> , less current maturities (Note 2) .....	148,358,300	153,217,300
 <b>Deferred Federal Income Taxes</b> (due principally to accelerated depreciation) .....	16,830,000	14,891,000
 <b>Capital Stock and Surplus:</b>		
Capital stock:	Shares	
	1963	1962
Preferred stock, \$100 par value:		
Authorized .....	68,956	71,456
Issued:		
3.90% cumulative .....	54,000	56,000
5% cumulative .....	14,956	15,456
Common stock, \$1.75 par value (Note 4):		
Authorized .....	20,000,000	20,000,000
Issued .....	17,237,989	17,211,289
	30,166,481	30,119,756
Capital surplus .....	37,062,081	37,265,356
Earned surplus (Note 2) .....	56,784,529	56,543,847
	74,088,886	80,182,258
	167,935,496	173,991,461
Deduct: Capital stock held in treasury, at cost .....	436,509	183,365
Preferred (3.90%): 1963—2,600 shares; 1962—230 shares		
Common: 1963—97,123½ shares; 1962—95,923½ shares		
Total capital stock and surplus .....	167,498,987	173,808,096
 <b>Commitments and Contingent Liabilities</b> (Note 7)		
	\$412,290,007	\$405,449,271

See accompanying notes



# American Machine & Foundry Company

*and Consolidated Subsidiaries*

## INCOME

	1963	1962
<b>Sales</b> .....	\$286,707,907	\$368,636,295
<b>Rentals</b> .....	72,720,946	76,979,649
	359,428,853	445,615,944
<b>Cost of Sales and Expenses:</b>		
Cost of sales and operating expenses .....	232,114,622	303,502,990
Depreciation and amortization .....	23,743,877	23,726,919
Selling, general and administrative expenses .....	60,138,660	63,940,465
	315,997,159	391,170,374
<b>Profit from Operations</b> .....	43,431,694	54,445,570
<b>Other Income:</b>		
Interest income .....	4,949,307	3,187,915
Other (net) .....	54,614	1,249,036
	5,003,921	4,436,951
	48,435,615	58,882,521
<b>Interest and Amortization of Debt Expense</b> .....	9,675,513	9,063,278
	38,760,102	49,819,243
<b>Federal Taxes on Income</b> , before credit of \$10,300,000 applicable to extraordinary item shown below (including deferred taxes: 1963—\$5,713,000; 1962—\$6,916,000) .....	19,750,000	25,540,000
<b>Income Before Extraordinary Item</b> .....	19,010,102	24,279,243
<b>Extraordinary Item</b> —provision for potential losses on bowling receivables, less federal income tax credit (Note 3) .....	9,500,000	—
<b>Net Income</b> .....	\$ 9,510,102	\$ 24,279,243



# Consolidated Statements of Income and Surplus

Years Ended December 31, 1963 and 1962 (Note 1)

## SURPLUS

	1963	1962
<b>Capital Surplus:</b>		
Balance at beginning of year .....	\$ 56,543,847	\$ 56,588,889
Transactions in capital accounts of "pooled" companies prior to dates of combination (Note 1) .....	9,924	(160,590)
Elimination of minority interest in merged subsidiary .....	—	(6,559)
Excess of proceeds or conversion price over par value of common stock issued under stock option plan and upon conversion of subordinated debentures (Note 4) .....	206,549	82,665
Excess of par value over cost of preferred stock retired ....	24,209	39,442
Balance at end of year .....	<u>\$ 56,784,529</u>	<u>\$ 56,543,847</u>
 <b>Earned Surplus:</b>		
Balance at beginning of year .....	\$ 80,182,258	\$ 71,395,192
Adjustment arising from elimination of minority interest in merged subsidiary .....	—	118,041
Net income for year .....	<u>9,510,102</u>	<u>24,279,243</u>
	89,692,360	95,792,476
 <b>Cash dividends:</b>		
Preferred stock .....	282,564	296,676
Common stock — \$.90 per share .....	14,931,858	14,645,899
 Dividends paid by "pooled" companies prior to dates of combination (Note 1) .....	<u>389,052</u>	<u>667,643</u>
	15,603,474	15,610,218
 Balance at end of year (Note 2) .....	<u>\$ 74,088,886</u>	<u>\$ 80,182,258</u>

See accompanying notes



# American Machine & Foundry Company

and Consolidated Subsidiaries

## 1. PRINCIPLES OF CONSOLIDATION AND INVESTMENTS IN SUBSIDIARIES

The consolidated statements include the accounts of all U. S. and Canadian subsidiaries. The cost of the Company's investments in foreign unconsolidated subsidiaries and 50% owned companies exceeds its estimated equity in the net assets of such companies by approximately \$1,075,000 at December 31, 1963. The Company's portion of the net income of such companies during 1963 is estimated at \$400,000.

In 1963 the Company issued an aggregate of 835,514 shares of its common stock in exchange for the net assets and businesses of Western Tool and Stamping Co. and Tuboscope Company, and accounted for these transactions as "poolings of interests." Accordingly the figures for 1962, included in the financial statements for comparative purposes, have been restated from those reported in the 1962 annual stockholders' report to give effect to these transactions, resulting in credits as of January 1, 1962 of \$6,763,329 to earned surplus for the accumulated undistributed earnings of these companies, \$1,462,150 to capital stock account for the par value of the common stock of the Company issued in the transactions and \$2,280,963 to capital surplus for the remainder of the stockholders' equities in such companies at that date.

## 2. LONG TERM DEBT AND SURPLUS RESTRICTION

Long term debt at December 31, 1963 follows:

	Current	Long Term
American Machine & Foundry Company:		
5 1/4% notes payable (annual installments: \$2,500,000, 1967-1981; \$12,500,000, 1982) .....	\$ —	\$ 50,000,000
5% notes payable to insurance companies (annual installments: \$125,000, 1964-1969) .....	125,000	625,000
5 1/4% notes payable to insurance companies (annual installments: \$129,000, 1964-1974; \$123,000, 1975) .....	129,000	1,413,000
4 1/4% convertible subordinated debentures due March 1, 1981 (annual sinking fund payments commence March 1, 1972) .....	—	39,910,300
	254,000	91,948,300
Subsidiaries (guaranteed by the Company):		
AMF Pinpointers Inc.:		
5 3/4% notes payable to insurance companies (annual installments: \$2,000,000, 1964-1971; \$22,000,000, 1972) .....	2,000,000	36,000,000
5 7/8% notes payable to insurance companies due in annual installments of \$2,500,000 .....	2,500,000	20,000,000
AMF Beaird, Inc.:		
4 3/4% first mortgage note due October 1, 1968 (annual installments: \$105,000, 1964-1967; \$95,000, 1968) .....	105,000	410,000
	\$ 4,859,000	\$148,358,300

The agreements covering the Company's preferred stock and long term debt contain provisions restricting the payment of cash dividends on common stock. At December 31, 1963 earned surplus of \$12,800,000 was not subject to this restriction.

## 3. RECEIVABLES

At December 31, 1963 notes and accounts receivable (less allowance of \$20,836,675 for possible losses) include accounts with the U. S. Government of \$13,812,130, customers' installment obligations (less unearned interest thereon) due beyond one year of \$64,349,761 and accounts with foreign unconsolidated subsidiaries and 50% owned companies of \$4,827,262.

During 1963, the Company's continuing review of its bowling receivables indicated that an increasing number of bowling establishments were experiencing difficulty in meeting their obligations under long term installment receivables. As a result of this and its appraisal of current conditions prevailing in the bowling industry, the Company determined to make an extraordinary after-tax addition of \$9,500,000 to its regularly accumulated reserves in connection with its bowling business.

## 4. COMMON STOCK AND STOCK OPTIONS

At December 31, 1963, 625,582 shares of the Company's common stock (including 95,912 shares held in treasury) were reserved under an approved stock option plan for officers, executives and key managerial employees, against which options were outstanding for 374,285 shares at prices ranging from \$14.85 to \$37.63 per share (at 95% or more of the market price of the shares on the dates on which the options were granted). The options expire at various dates from February 27, 1964 to September 3, 1973. At December 31, 1963, options were exercisable with respect to 133,719 shares.



# Notes to Financial Statements

at December 31, 1963

At December 31, 1962, 652,282 shares of the Company's common stock (including 95,912 shares in treasury) were reserved under the plan, against which options for 431,810 shares were outstanding. In 1963 options for 5,000 shares were granted (at 100% of the market price of the shares on the date the options were granted), options for 35,825 shares were cancelled and the Company received \$253,274 for 26,700 shares issued on exercise of options.

At December 31, 1963, 691,926 shares of the Company's common stock were required for conversion of the 4 1/4% convertible subordinated debentures due March 1, 1981 at a present conversion price of \$57.68 per share. No debentures were converted in 1963.

## 5. RENEGOTIATION

A substantial portion of the sales during 1963 were under defense contracts which are subject to renegotiation and, in some cases, to price redetermination. Renegotiation proceedings through the year 1962 were completed with no refund required. It is believed that the amount, if any, refundable for 1963 will not materially affect reported net income or financial position.

## 6. RETIREMENT PLANS

The costs charged to consolidated income in 1963 of plans providing retirement benefits amounted to approximately \$3,893,000 of which \$446,000 was applicable to past service. Such costs have fluctuated and will fluctuate upon the admission of additional groups to the plans. Unfunded past service benefits at December 31, 1963 are estimated at \$13,800,000. While the plans do not require the funding of past service benefits, such benefits are presently being funded over a thirty year period.

## 7. COMMITMENTS AND CONTINGENT LIABILITIES

The aggregate annual rental payments on long term leases at December 31, 1963, including rentals on properties sold and leased back, approximate \$3,950,000.

Certain long term installment notes receivable were sold to banks without recourse. The unpaid principal balance of such notes at December 31, 1963 was \$15,297,000. Under the agreements of sale the Company may be required to purchase repossessed equipment at the amount of the unpaid balance of the notes involved.

The Company has guaranteed certain obligations of foreign unconsolidated subsidiaries and 50% owned companies aggregating approximately \$7,500,000 at December 31, 1963, \$3,000,000 of which arose in 1963.

In February 1964 the Company purchased, as a going concern, the York Naval Ordnance plant at a cost of \$9,600,000.

## ARTHUR YOUNG & COMPANY

Certified Public Accountants

U.S.A., Canada, Mexico, South America  
Great Britain, Continental Europe  
Middle East, South Africa, Australia

165 Broadway  
New York, N. Y. 10006

The Board of Directors and Stockholders  
American Machine & Foundry Company

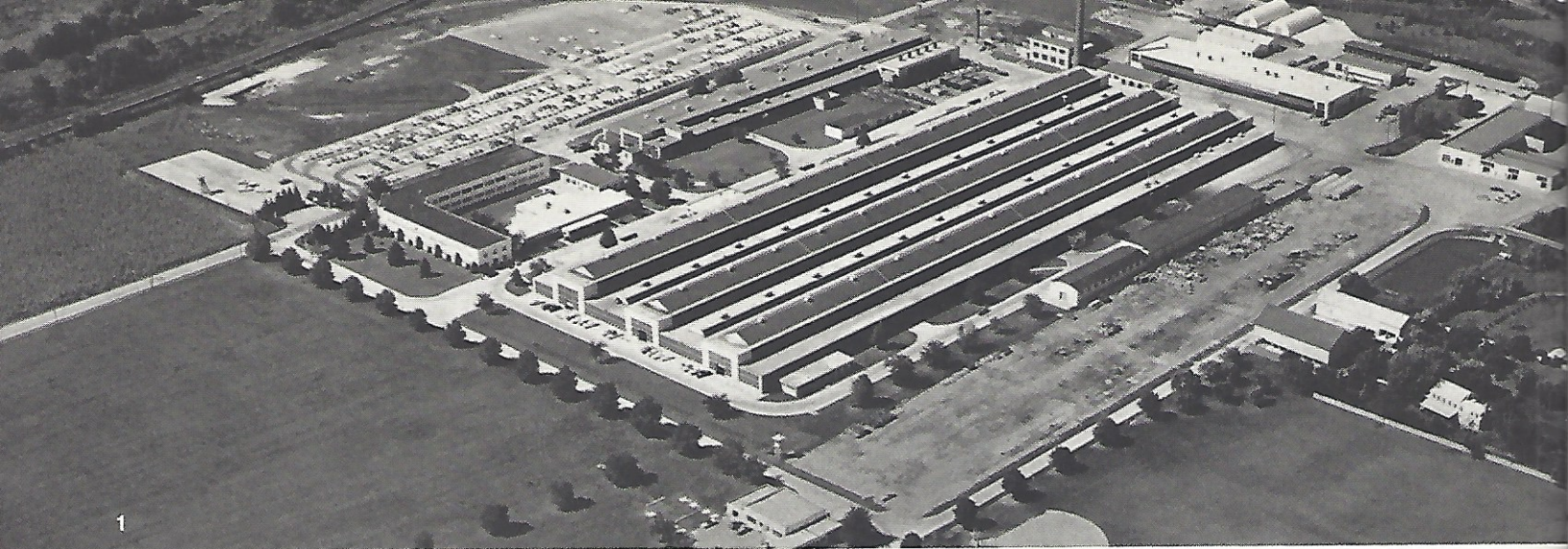
We have examined the accompanying consolidated balance sheet of American Machine & Foundry Company and Consolidated Subsidiaries at December 31, 1963 and the related consolidated statements of income and surplus for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. It was not practicable to confirm amounts due from the U. S. Government, as to which we satisfied ourselves by means of other auditing procedures.

In our opinion, the statements mentioned above present fairly the consolidated financial position of American Machine & Foundry Company and Consolidated Subsidiaries at December 31, 1963 and the consolidated results of their operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

*Arthur Young & Company*

February 20, 1964





## AMF PLANT EXPANSION HERE AND ABROAD

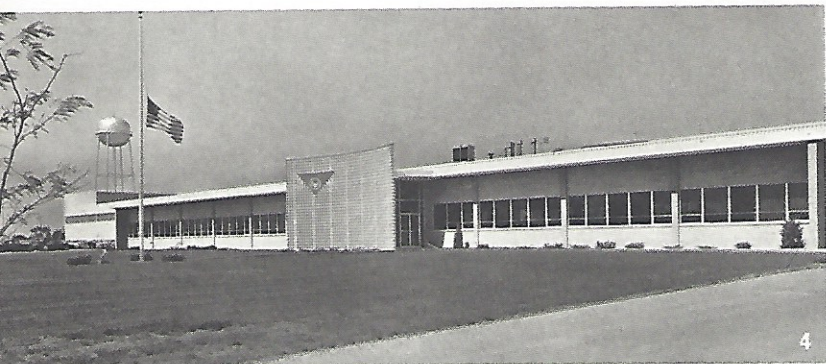
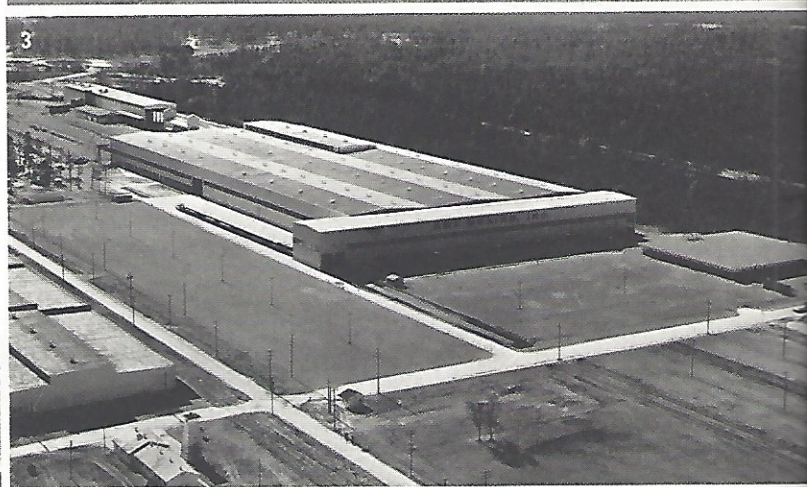
In order to increase its productive capacity, the Company, both in the United States and overseas, has built new plants and added to existing facilities. Aside from expansion to meet increased demand, outmoded facilities have been replaced and operations have been consolidated at single locations. With the inclusion of two acquisitions, AMF/Western Tool and AMF Tuboscope, the Company has over 3,000,000 square feet in added production facilities.

Pictured here are some of these new facilities:

1. The York, Penna. plant, a former Naval Ordnance facility, contains 750,000 square feet of floor space.
2. AMF/Voit Whitely's new plant was completed at Maywood N. J. in 1963.
3. Nearing completion is AMF/Beaird's \$9.2-million plant in Shreveport, La.
4. The AMF/Wheel Goods new plant in Olney, Ill. is now in full production.
5. AMF/Voit's new Santa Ana, Calif. complex will be completed by mid-1964.
6. 130,000 square feet were added to this AMF/SASIB plant in Bologna, Italy.

In addition to these expansions, the Paragon Electric Company is adding 95,000 square feet of floor space; an Essex, Conn. plant was reconditioned to produce food service products; and AMF/Cuno at Stafford Springs, Conn. completed a 32,000 square-foot manufacturing plant in mid-1963.

In the Netherlands, the Den Boer plant in Dordrecht will be expanded, and in England, Legg will add a 50,000 square-foot plant in Andover, and AMF Limited will increase its office space at Whitstable.







# Groups and Divisions

If you are interested in obtaining sales information on a specific product, write or call the particular division listed below.

## BOWLING PRODUCTS GROUP

Jericho Turnpike, Westbury, L. I., N. Y., (516) EDgewood 3-6900.  
Automatic Pinspotters, Bowling Lanes, Equipment and Supplies • Bowlers' Accessories • Billiard Equipment and Supplies.

- AMF Pinspotters Inc., Subsidiary
- National Division
- AMF Pinspotters Division
- AMF Shelby Division
- AMF—United Block Division

## RECREATIONAL PRODUCTS GROUP

261 Madison Avenue, New York, N. Y. 10016, (212) MU 7-3100.  
Bicycles, Juvenile Wheel Goods, Outdoor Play Equipment • Golf Equipment • Athletic and Water Sports Equipment, Exercise Equipment • Tread Rubber, AMF "Orbitread" Electronic Treadmaker • Engine-Powered Model Airplanes, Race Cars, Motorized and Mechanical Toys, Low Voltage Outdoor Lighting Systems • "Homko" and "Certified" Lawn and Garden Power Equipment, Snow Removal Equipment.

- AMF Western Tool, Inc., Subsidiary
- AMF Wheel Goods Division
- Wen-Mac Corporation, Subsidiary
- Ben Hogan Company, Subsidiary
- Tire Equipment Division
- W. J. Voit Rubber Corp., Subsidiary
- Whitely, Inc., Subsidiary of Voit

## ELECTRICAL PRODUCTS GROUP

1701 K Street, N.W., Washington 6, D. C., (202) ME 8-6505.  
Precision Meters and Special Indicators • Military Electrical Power Units, Systems (Generator, Inverter, Motor), Test Equipment, Semiconductors • Electrical Timing Devices and Clock Motors • Electrical Relays for Industry, Defense, and Space.

- AMF Instrument Division
- Leland Airborne Products Division
- Paragon Electric Company, Inc., Subsidiary
- Potter & Brumfield Division

## INDUSTRIAL PRODUCTS GROUP

P.O. Box 1115, Shreveport, Louisiana, (318) 868-4441.  
Capital Equipment for the Oil and Gas, Chemical, Transportation and Defense Industries • Rail Car Tanks • Maxim Silencers • LP-Gas Systems, and Contract Items • Inspection Service for Oil Field Tubular Equipment • Plastic Coatings for Tubular Goods, Tanks, and Other Metal Products • Drilling Equipment • Oil Field Equipment to Join Similar and Dissimilar Metals by Friction Welding, Contract Friction Welding • High Frequency Contact Resistance Welding Equipment.

- AMF Bealrd, Inc., Subsidiary
- AMF Tuboscope, Inc., Subsidiary
- American Iron & Machine Works Co., Subsidiary
- Friction Welding Division
- Thermatool Corporation, Subsidiary

## PROCESS EQUIPMENT GROUP

Fawcett Place, Greenwich, Connecticut, (203) NOrmandy 1-7400.  
Bakery Machinery and Equipment Systems • Filters for Liquids and Gases • Automotive Cigarette Lighters • Self-Leveling Dish Dispenser Systems, Beverage Dispensers, Work Positioners for Indus-

try • Sea and Brackish Water Conversion Equipment • Stitching Machinery for the Apparel Industry.

- Bakery Machinery Division
- Cuno Engineering Corporation, Subsidiary
- Food Service Division
- Dalkin Division
- Maxim Division
- Stitching Division

## ADVANCED PRODUCTS GROUP

Fawcett Place, Greenwich, Connecticut, (203) NOrmandy 1-7400.  
Missile and Space Ground Support Equipment, Torpedoes and Torpedo Launchers • Guns and Gun Directors, Gears and Gear Assemblies, and other Defense Items • Nuclear Reactors and Related Equipment • Monorail Transportation Systems • Smog Burners.

- Atomics Division
- AMF York Division
- Brooklyn Division
- Field Operations & Engineering Division
- General Engineering Division
- Hydrospace Division
- Monorail Division
- Western Division

## WORLD TOBACCO GROUP

261 Madison Avenue, New York, N. Y. 10016, (212) MU 7-3100.  
Cigarette Making and Packaging Machinery and Systems • "Microflake" Tobacco Products and Manufacturing Plants • Cigar Making, Packaging Machinery • Leaf Processing Equipment • "Guardite" Vacuum Conditioning Equipment.

- AMF Do Brasil, S.A., Brasil
- AMF Maschinen G.m.b.H., Austria
- AMF Microflake Division, So. Windsor, Conn.
- AMF Tobacco Division, Richmond, Va.
- AMF SASIB, S.p.A., Italy
- D.K. Hamblin, England
- International Cigar Machinery Division
- Robert Legg, England

## INTERNATIONAL GROUP

Headquarters, AMF International Limited, AMF Building, 25-28 Old Burlington Street, London W.1, England, Cable AMMAFOCO, London. AMF Building, Geneva 2, Switzerland, Cable AMMAFOCO, Geneva.  
261 Madison Avenue, New York, N. Y. 10016, (212) MU 7-3100  
Export Sales and Manufacture of AMF Products Abroad.

- AMF Overseas Corp. (Geneva)
- AMF International Export Division (New York)
- AMF Japan Ltd. (Tokyo)
- Bowling Products (London)
- Electrical Products (Milan)
- Recreational and Consumer Products (Paris)
- Food Machinery (Dordrecht)
- Australia Operations (Sydney)
- Mexico Operations (Mexico City)

## RESEARCH & DEVELOPMENT DIVISION

689 Hope Street, Springdale, Connecticut, (203) 325-2211.  
Proprietary Research and Development of New Products.  
The Morehead Patterson Research Center  
Alexandria Division





**AMERICAN MACHINE & FOUNDRY COMPANY**

261 MADISON AVENUE,  
NEW YORK, N. Y. 10016

RETURN REQUESTED

Bulk Rate  
U. S. Postage

**PAID**  
New York, N. Y.  
Permit No. 96

HOWARD ZIEFF  
29 E 32ND ST  
NEW YORK 16 N Y

