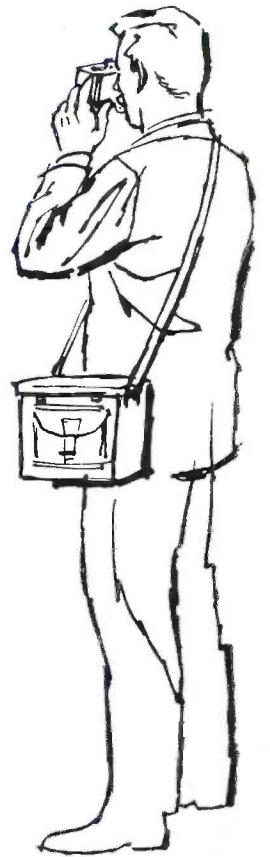
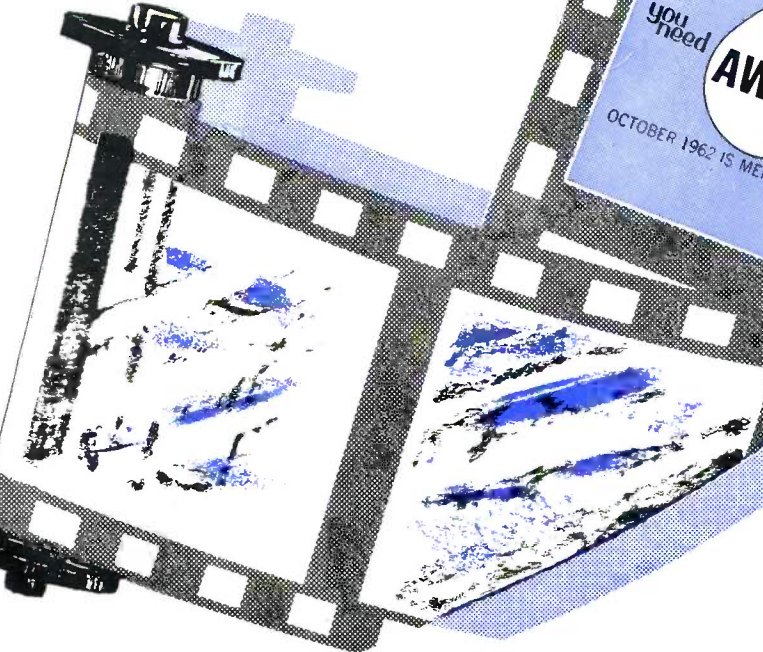


MUELLER
Record
OCTOBER • 1962



you need
AWWA needs you
OCTOBER 1962 IS MEMBERSHIP MONTH



MUELLER RECORD

OCTOBER • 1962

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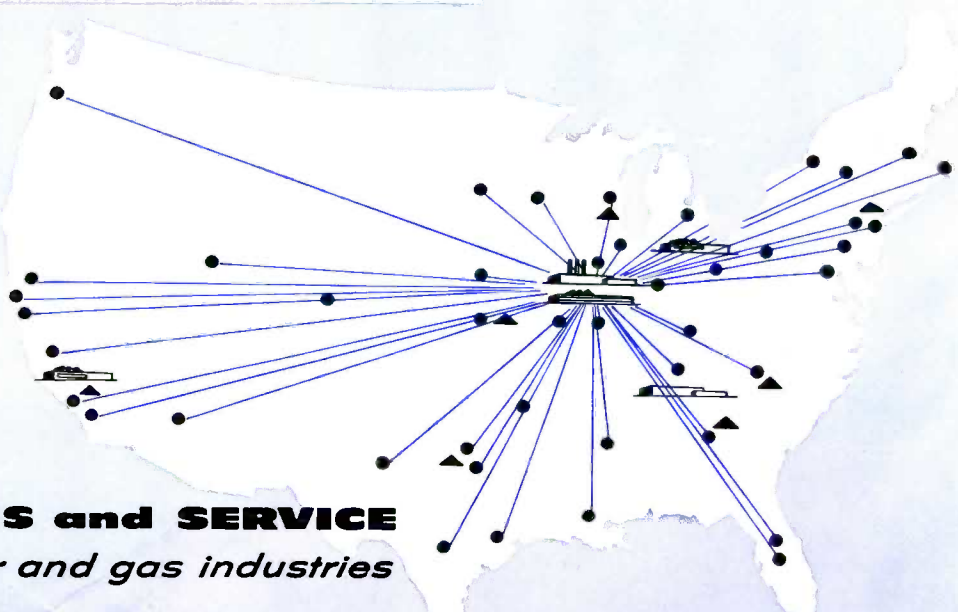
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- 24 **SERVICE CENTERS ON OPERATING CENTER**..... *describes Mississippi Valley Gas Co.'s new service center.*
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Since 1857

Quality Products for the
Waterworks and Gas
Industries

MUELLER[®] SALES and SERVICE
...serving the water and gas industries



It Was Mueller All Along the Line

It was Mueller all along the line recently in a fire hydrant relocation job in Decatur.

Due to the Mueller Co. expansion, a fire hydrant had to be moved from one corner to another and Mueller provided the tapping sleeve, tapping valve, fire hydrant, drilling machine and personnel to run the machine. The new hydrant was set on one corner of the Mueller Credit Union property.

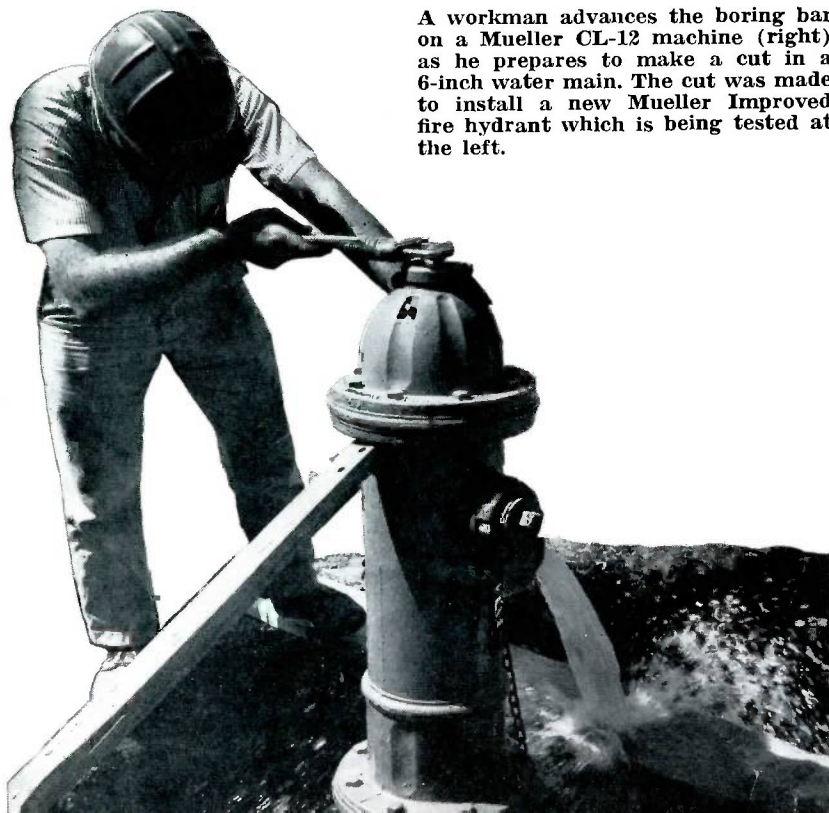
The six-inch by six-inch cut was made without the loss of water as the Mueller CL-12 machine, powered by a gasoline engine-drive unit, cut through the cast iron pipe.

The CL-12 machine can make cuts 2 inches to 12 inches, inclusive, under pressure, in any type of pipe, for lateral connections.

Used with Mueller equipment, it will insert a 4-inch, 6-inch, or 8-inch gate valve into a main of equal size under pressure.

Follow pictorially the step-by-step operation on these pages.

A workman advances the boring bar on a Mueller CL-12 machine (right) as he prepares to make a cut in a 6-inch water main. The cut was made to install a new Mueller Improved fire hydrant which is being tested at the left.





Unexpected obstacles often are found when excavations begin, and this job was no exception. The Mueller Tapping Sleeve and Tapping Valve are shown amid pipes and cables.



After the proper drilling equipment has been attached to the boring bar (above), a solid coating of Mueller cutting grease must be applied (right) to the shell cutter and pilot drill.

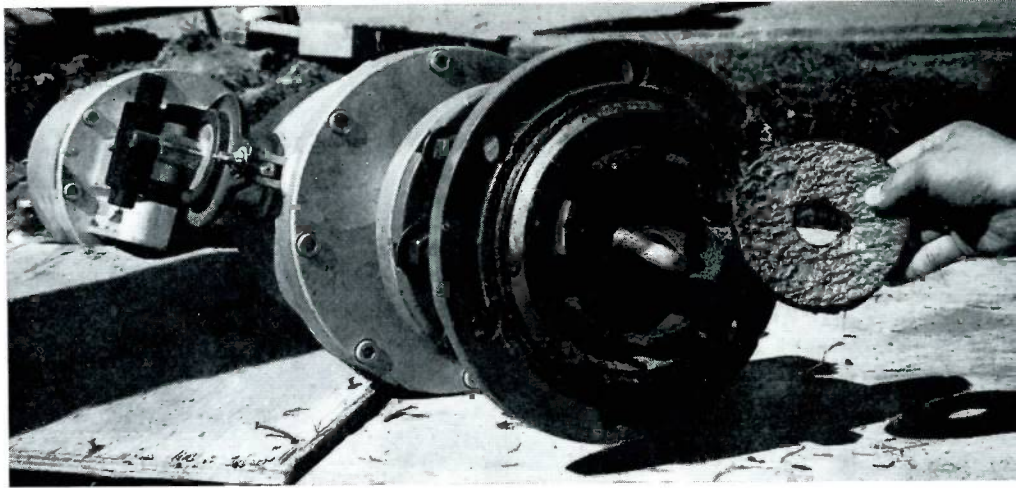


The gear drive box and flexible shaft on the gasoline engine drive unit are shown at left as the drilling operation begins (left). After the cut has been made, Mueller employee Lindle (Hap) Hockman closes the Mueller valve (above).

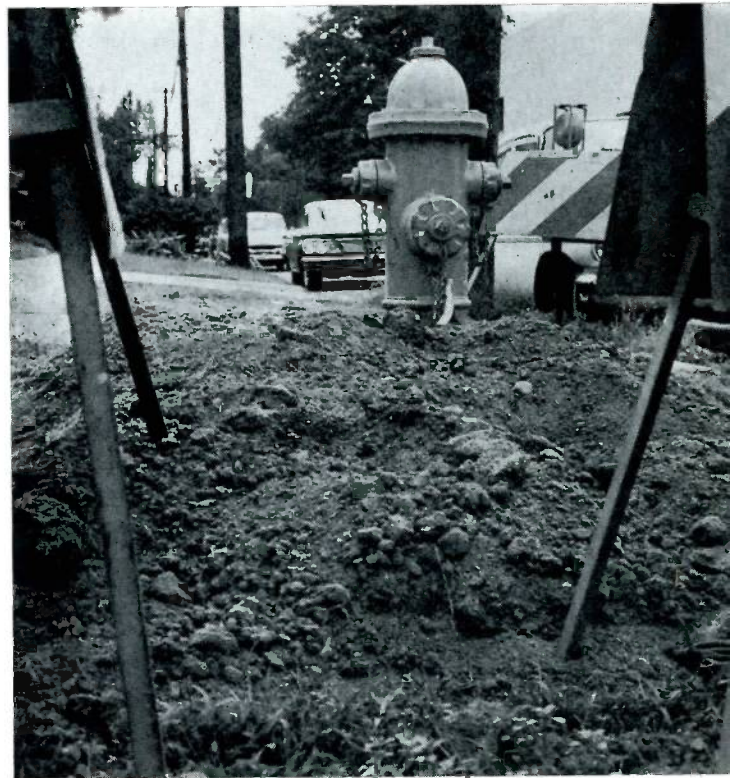


This closeup of a Mueller valve was taken after the drilling machine was removed and just before a piece of pipe was put in and the hydrant set.

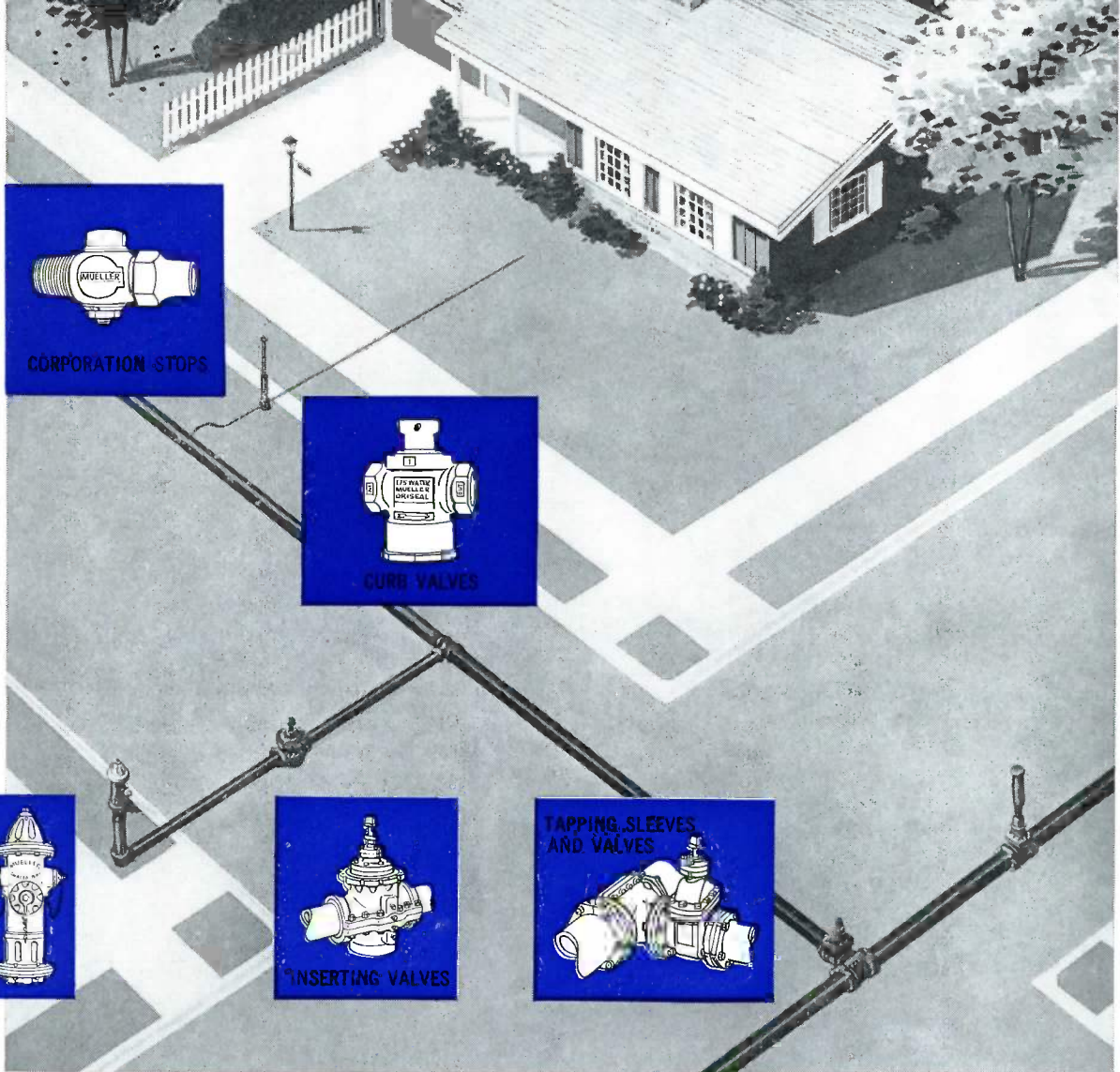
The shot at the right and below could be called before and after. The photo at the right shows the coupon that was just cut out of the pipe, but before the cut could be made the workmen had to grease the cutting edges (below).



The relocated hydrant stands ready for any emergency. This move was accomplished without any loss of water or shutoff of service as all the work was done under pressure.



Some members of the Sales Division, (from left), Jim Jones, Bill Knorr, Ray Gentry and Bob Johnston, intently examine a deposit of lime on the coupon.

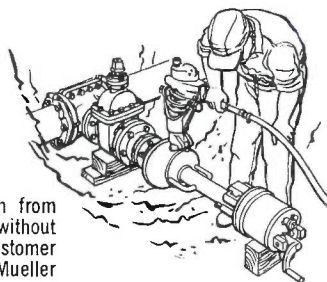


*When you **STANDARDIZE ON MUELLER**, you insure long life and dependability for your water distribution system...*

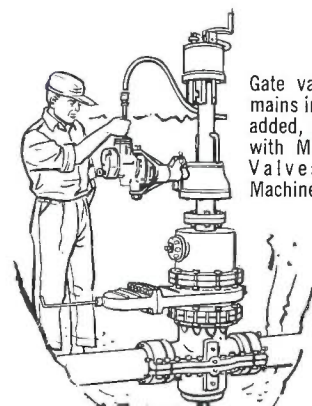
From the initial design to final testing, Mueller products and machines are built with your problems in mind. In many cases, Mueller specifications actually exceed exacting control and installation requirements. This is "quality" insurance built into every Mueller product.



Service connections are made to mains, under pressure, with the Mueller B100 Machine and Mueller Corporation Stops.



Laterals are run from existing mains without interrupting customer service with the Mueller Tapping Sleeve and Valve and CL-12 Machine.



Gate valve control for mains in service can be added, under pressure, with Mueller Inserting Valves and CL-12 Machine.



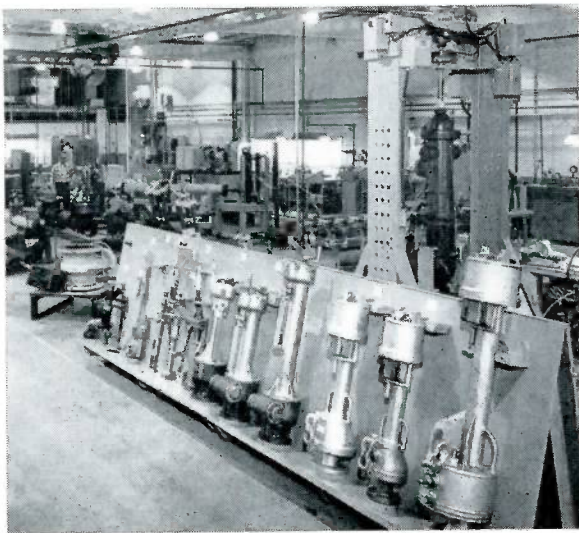
PRODUCT DESIGN

Over 100 years of experience goes into the design preparation of Mueller products. The objective of the Mueller engineering staff is to develop new products and methods and to improve current products and methods for ultimate lower cost in your distribution systems.



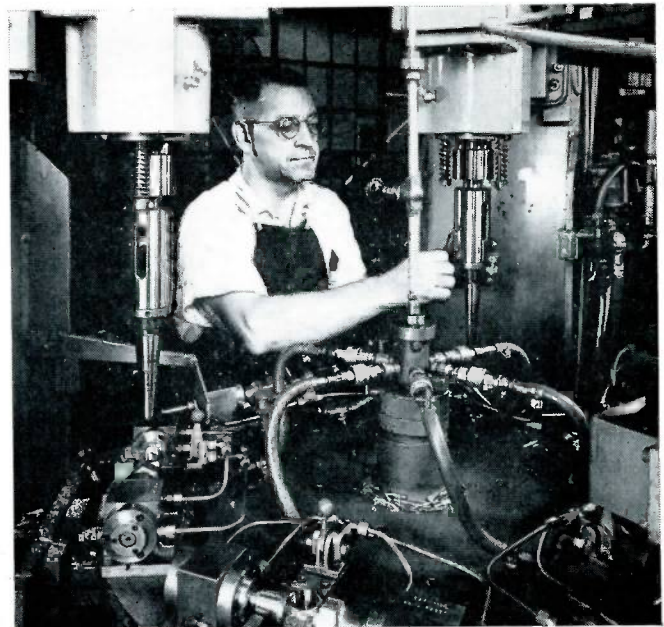
PRODUCT DEVELOPMENT

New or improved products progress from the drawing board to the handmade prototype permitting Mueller engineers to carefully test the product under extreme conditions. Many such tests and design changes occur before the "new" is accepted as part of the dependable Mueller quality line.



PRODUCT RESEARCH

Here your problems and needs are converted into product "ideas" that offer practical solutions. These ideas are tested, changed and retested until the solution is able to stand the test of time and the ultimate test of low cost operation.



PRODUCT MANUFACTURING

While exacting specifications and modern machinery produce precision components, it still takes true craftsmen in many skills to insure the finished quality of the complete product. Mueller Co. blends all these ingredients of quality — precision equipment, modern methods, experienced engineers and skilled craftsmen — to give you the assurance of dependability.

*Specify Mueller —
your assurance of long life and dependability
for your water system.*



MUELLER CO.
DECATUR, ILL.

Factories at: Decatur, Chattanooga, Los Angeles
In Canada: Mueller, Limited; Sarnia, Ontario

. . . . Around the Water Industry

Forrest Baum To Southwest



Forrest N. Baum

The appointment of a new salesman and the transfer of another in the Southwest Sales Section have been announced by Mueller Co. Vice President and General Sales Manager Dan R. Gannon.

Forrest N. Baum has been named the Mueller Co. Sales Representative in West Texas and New Mexico. He succeeds Lou P. Mautz who has moved to cover the Houston, Texas area.

Mr. Mautz moves into the territory that formerly was covered by Phil Tinsley. Mr. Tinsley left Mueller Co. to join a Mueller Co. distributor in the Houston area.

Mr. Baum, 28, joined Mueller Co. in 1953 and has worked in the factory as well as the office. Since the first of the year he had been in the company's sales training program.

Mr. Baum is married and has a three-year old son. The Baums live at 2618 48th Street, Lubbock, Texas.

Mr. Mautz joined Mueller Co. in 1955 and is living at 5250 Ariel, Houston 35, Texas.

East Bay's Giant Aqueduct Progresses

The last huge section of above-ground pipe was put in place recently on the lands west of Stockton, Calif., to move the East Bay Municipal Utility District's "Giant M" aqueduct a step closer to completion.

The new 87-inch Mokelumne River aqueduct, running 82 miles from Pardee Dam to Walnut Creek, is approximately 65 per cent complete. This third aqueduct, due for service in mid-1963, parallels East Bay's two existing aqueducts which supply the Oakland, Calif., area.

When completed the "Giant M" will deliver up to 181 million gallons of water each day. It will more than double the East Bay's transportation system for Sierra water from Pardee Reservoir, East Bay Water's storage facility on the Mokelumne River.

For most of its length, the "Giant M" tunnels through hills or runs unseen under farm land. At several points in the delta country it dips under rivers and at another point it rises above ground, mounted on concrete pilings driven 60 feet into mushy peat lands.

This aqueduct is the largest single project in the current \$283-million water development program undertaken by East Bay Municipal Utility District.

Unique Storage Plans Proposed for Hong Kong

Although the City of Hong Kong has an average yearly rainfall of 85 inches, it experiences such severe droughts that water is sometimes available for only a few hours each day during some periods. Most of the rain in this city of 3,250,000 falls between May and September, when as much as 10 inches has been known to fall in 24 hours and four inches in a single hour.

To create more storage within the territory available, British engineers have proposed a unique

plan. They envision isolating a salt-water bay from the sea, pumping out the salt water, and replacing it with fresh water.

Has Sewage Become A Dirty Word?

Some Canadian water officials feel that the title "sewage treatment plant" is not in the best interest of public relations for public works planning. Already several new facilities built for various municipalities in Ontario have been officially named "water pollution control centers."

O'Brien Named Acting AWWA Treasurer

Hubert F. O'Brien has been named acting Treasurer of the AWWA succeeding the late William J. Orchard. Mr. O'Brien is President of the A. P. Smith Co., East Orange, N. J.

Mr. Orchard has been a guiding and motivating force in the AWWA for many years. In all, he served on the AWWA Board for 16 years and on the Executive Committee for 10 years. During his 45 years of membership he has received nearly every honorary award given by the AWWA. He has been an honorary member since 1937.

Mr. Orchard had been in poor health for some time and missed this year's convention in Philadelphia. This is the first national AWWA conference that he has missed since 1915.

4,000,000 U. S. Homes Have No Running Water

More than 4,000,000 U. S. homes have no running water, according to the 1960 Census of Housing. The statistics, which cover 58,300,000 dwelling units, also reveal that another 3,300,000 homes have only cold piped water. There are about 7,000,000 houses with no bathtub or shower. Most of these homes with inadequate water and plumbing are in rural areas, but within metropolitan areas there are 500,000 homes without running water.

Boost Your Trade Association

Every AWWA Member,

Get A New Member

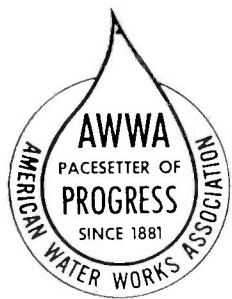
October is Membership Month for the American Water Works Association. President Hurst has set an ultimate goal of 25,000 members.

The MUELLER RECORD is pleased to reproduce on the following pages, the special membership supplement which was inserted in the August issue of WILLING WATER.

If you have been considering membership in AWWA, don't let the new month of November dissuade you. Every month is membership month.

The back cover of this issue carries a special coupon which you may use to request additional membership information as well as applications.

Read this special "Water Works Story" in the following pages, and then complete and mail the coupon. We think you'll be mighty glad you did!



The Story of **AMERICAN WATER WORKS ASSOCIATION**

ON Mar. 29, 1881, when there were fewer than 1,000 public water supplies and but a few rudimentary water treatment plants in the United States, 22 men gathered in Engineers Hall at Washington University in St. Louis, Mo., to organize an "American Water Works Association." The purpose of the organization, as stated in the preamble to its first constitution adopted on Mar. 30, 1881, was "for the exchange of information pertaining to the management of water works, for the mutual advancement of consumers and water companies, and for the purpose of securing economy and uniformity in the operation of water works."

The twenty individual and four manufacturer members who were enrolled by the end of that first convention thus formed the vanguard of what was to become the largest group of organized professional water supply men in the world. It was not until 1910 that AWWA membership reached the 1,000 mark, and it took another 14 years before that number had doubled. Yet today the Association's membership is more than 14,000 and almost 6,800 are utility executives.

Functional Divisions

In the early years, AWWA members assembled only once each year to exchange information and discuss the progress of the industry. Records of the technical papers presented, manufacturers' products exhibited, and business conducted at these annual meetings were published in a single volume of "Proceedings." By the time AWWA membership had grown to more than 1,000, however, a need was recognized for breaking up these meetings into separate discussion groups on specialized topics. Thus, in 1913, it was proposed that the Association establish topical divisions to consider matters of special interest. The first such divi-

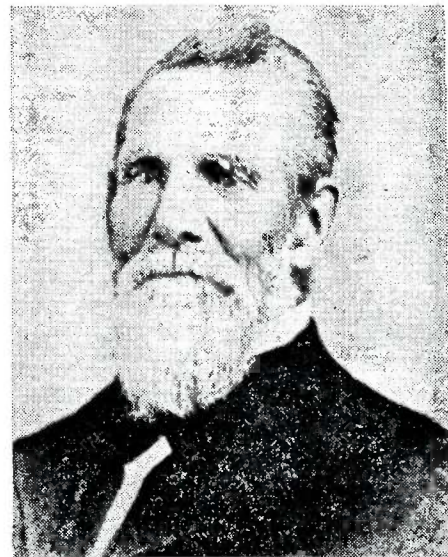


Pictured above is Col. J. T. Foster, first AWWA president. Foster, who was connected with Union Stockyards, Chicago, presided at the first annual meeting of the Association at Washington University, St. Louis.

sion was the Chemical and Bacteriological Division (now the Purification Division), formed in 1913. At present AWWA has four functional divisions—Purification, Resources, Distribution, and Management—each of which elects its own officers and task groups and may adopt its own bylaws. Although the Board of Directors may, at the request of 100 AWWA members, establish a new division representing a particular area of interest, the present four divisions have proved so workable that no new divisions have been found necessary for nearly ten years.

Regional Sections

An important step forward in the expansion of Association activity was the formation, in 1914, of its first regional section, the New York-New Jersey Section. As AWWA membership grew, the need for more regional sections, and eventually, for further



W. C. Stripe, founder of AWWA, was secretary and superintendent of Keokuk Water Co., Keokuk, Iowa. Stripe issued the call to the first convention in a letter circulated in January 1881. He was the first vice-president of the Association.

subdivision of the original sections was felt. Today there are 32 such sections, including one in Canada, each of which holds at least one annual meeting. Like the divisions, the sections elect their own officers and committees and may adopt their own bylaws.

Standing Committees

AWWA interest in standardization procedure resulted, in 1920, in the formation of a "Council of Standardization," under the chairmanship of George Warren Fuller. In 1925 the council completed work on the *Manual of Water Works Practice*, a milestone marking the progress of water supply practice to that time. In 1929, the Committee on Water Works Practice (later renamed the Committee on Standardization) replaced the council, and, in 1947, the Committee on Water Works Administration was set up to share its rapidly expanding re-

sponsibilities. Since 1947, the number of standing committees has been increased to six, including, in addition to those mentioned above, the Technical Program Committee, the Education Committee, the Research Committee, and the Advancement and Public Information Committee. The chairmen of these committees are ex-officio members of the Board.

AWWA Publications

Of all the contributions of AWWA to water supply progress, perhaps the most important have been those made by its publications, which have made available the latest and best information on water supply practice. It was in 1914 that the *Journal* first made its appearance as a quarterly, first to supplement, and later to supplant, the "Proceedings." By 1920, the *Journal* had expanded to become a bimonthly publication, and, in 1924, it began to appear monthly. Today, with an average monthly circulation of more than

Local Sections of AWWA And Their Dates of Formation

Section	Year of Organization
New York	1914
Illinois	1915
Iowa	1915
Canadian	1916
North Central	1916*
California	1920
North Carolina	1921
Wisconsin	1924
Indiana	1925
Kentucky-Tennessee	1925
Florida	1926
Montana	1926
Rocky Mountain	1926
Pacific Northwest	1928
Southeastern	1929
New England	1930
Southwest	1934
Virginia	1934
New Jersey	1935
Michigan	1938
Ohio	1938
West Virginia	1938
Cuban	1940
Kansas	1946
Missouri	1946
Alabama-Mississippi	1947
Arizona	1947
Nebraska	1947
Chesapeake	1948
Pennsylvania	1949
Intermountain	1958
Connecticut	1960
South Dakota	1960

*Originally organized as the Minnesota Section.

A Mark of Distinction—The AWWA Member Seal



Recognizing that individual and organization members do find occasion to exhibit notice of their membership in AWWA on letterheads and other printed matter, the Association has developed a special AWWA Membership mark (shown at left) for such purposes. This mark or the printed notice "Member American Water Works Association" may be used by any AWWA member in good standing on his letterhead, business card, or other printed matter, provided only that the statement reflect accurately the membership status. In other words, a partnership or corporation must not claim

membership on the basis of the Active membership of one of the partners or a member of the staff involved.

15,000, the *Journal* is the most widely read periodical in the water supply field. Furthermore, its 54 volumes collectively form the most exhaustive and valuable compendium of water supply information to be found anywhere in the world.

Although nearly always published initially as part of the *Journal*, AWWA manuals and standards merit special mention here. More than 60 standards for materials and equipment have been published and issued as separate documents. In addition, manuals on such subjects as public relations, water utility management, water distribution, safety, and meter installation and maintenance have also been published as separate volumes. Each of these documents represents months—and in many instances years—of dedicated work on the part of AWWA committees, working without monetary compensation.

In 1946 a new publication, *Public Relations at Work*, began to be issued at irregular intervals. Now circulated monthly to all AWWA members as *Willing Water*, it has become a vehicle of information on water utility public relations activities, "how-to-do-it" features, and current news of the industry and the Association.

Public Relations Aids

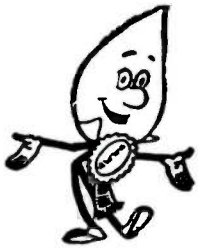
In addition to the *Journal*, *Willing Water*, a number of manuals and books, and more than 60 standards for water works equipment and materials, the Association has, in recent years, developed a large number of public rela-

tions aids for water utilities. Such things as customer leaflets, bill stuffers, service buttons, jewelry, postal meter slugs, advertising mats, uniform insignias, and mats and electrotypes of the cartoon figure, "Willing Water," are but a few of the many materials now available through AWWA, and more are being developed all the time.

Administration

Under the AWWA Constitution, the Executive Secretary, appointed by the AWWA Executive Committee with the approval of the Board of Directors, is the chief administrator of the Association. He is personally responsible for directing all staff activities, preparing the agenda for all meetings of the Board and Executive Committee, supervising the production and distribution of all AWWA publications, keeping the books and records of the Association, preparing the annual budget, acting as secretary of the various standing committees, and so on.

As the Association has grown, its programs and services to members have also grown and the administration of its affairs has become more and more complex. Accordingly, the size of the staff needed to handle administrative detail, edit and produce the various publications of the Association, answer countless requests for information and technical assistance, and plan and manage the annual conference has necessarily grown. Currently, the AWWA staff consists of 21 full-time employees in addition to the Executive Secretary.



AWWA MEMBERSHIP CLASSIFICATIONS

In order better to serve the industry, AWWA has, under its bylaws, established seven separate membership categories, comprising two individual and five organization membership classes, as follows:

Individual Membership

1. Active Members—Individuals, such as water utility personnel, municipal officials, public health workers, engineers, scientists, educators, and others who have a recognizable interest in the field of public water supply. (Dues \$15 per year.)

2. Student Members—regularly enrolled college or university students interested in public water supply. (Dues \$5 per year.)

Organization Membership

3. Utility Members—Organizations engaged in supplying water directly to the public. (Dues: fewer than 5,000 customer services — \$25 per year; 5,000–24,999 services — \$50 per year; 25,000–49,999 services—\$100 per year; 50,000–99,999 services—\$200 per year; 100,000 or more services — \$300 per year.)

4. Municipal Service Subscribers—Municipal water departments, boards, or commissions desiring to receive, without membership, all the publications and services offered to Utility Members. (Fees on same schedule as Utility Member dues.)

5. Consultant Members—Engineering and other firms (or individuals) engaged solely in consulting practice. (Dues \$50 per year.)

6. Associate Members—Firms or corporations engaged in the manufacture or furnishing of products or services to the public water supply field. (Dues: gross annual sales of less than \$1,000,000 to water industry — \$125; \$1,000,000–\$9,999,999—\$250; \$10,000,000 or more—\$400.)

7. Technical Service Members—Organizations wishing to subscribe to

the publications and services offered by AWWA, but not classified under any of the other membership categories. (Dues \$25 per year.)

All organization members are entitled to name one representative who receives the same benefits as an individual member. In addition, all organization members receive AWWA's standards service (a full set of standards in a binder, kept up to date with all changes and revisions).

Utility Members and Municipal Service Subscribers receive free copies of all new AWWA manuals and additional copies of a quarterly report on water supply for distribution to community leaders.

Consultant Members are entitled to a free listing in the AWWA Directory of Consultants, and Associate Members are given a free listing in the AWWA Buyers' Guide, as well as certain privileges relating to participation

in AWWA meetings, advertising in AWWA publications, and use of AWWA membership lists.

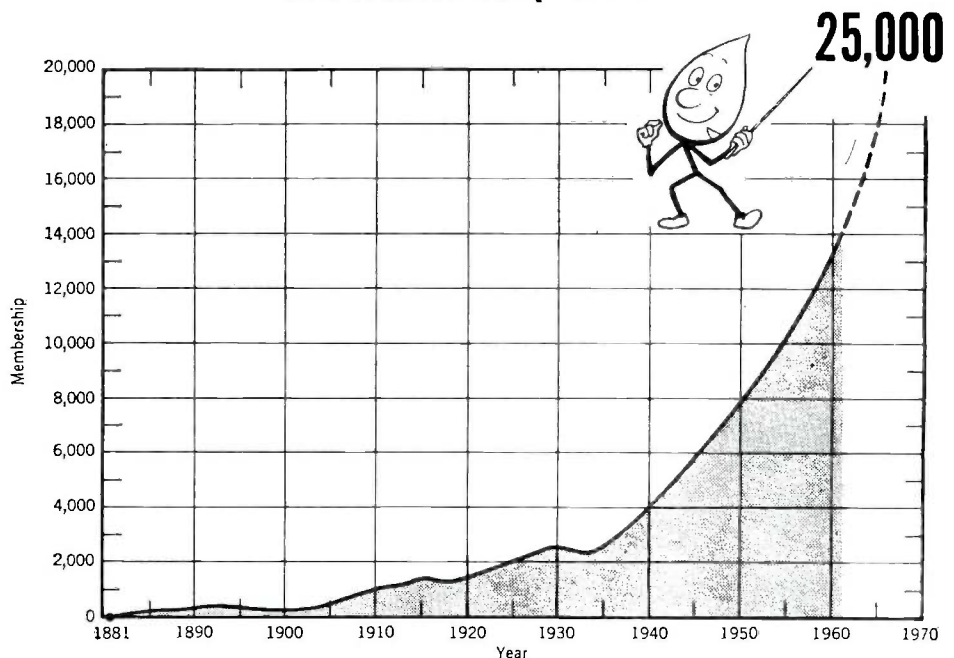
Section Affiliation

Each AWWA member is automatically made a member of one of 33 local AWWA sections, giving him opportunities to participate in both technical and nontechnical activities, establish close relationships with his coworkers in the field, and receive professional recognition for his accomplishments.

Division Affiliation

Each AWWA member is eligible for membership in any of the four AWWA divisions—Water Purification, Water Resources, Distribution, and Management—and may thereby establish contact with others with similar interests, obtain advice and assistance on special problems, and apply his knowledge or special talents by working on one of more than 100 committees.

AWWA Membership Growth



In his inaugural address at Philadelphia, June 21, 1962, AWWA President William D. Hurst set 25,000 as an immediate membership goal. As can be seen, AWWA membership has more than doubled in the past 15 years.



By providing a showplace for the latest and best developments in water works equipment, AWWA annual conferences and section meetings have brought the water works man and the manufacturer closer together, helping both better to serve the needs of the industry and the water consumer.

Meetings and Committee Activities

SINCE its first meeting in St. Louis in 1881, the Association has met each year to review its accomplishments, discuss the progress of current programs, and plan courses of future action. In June 1962, more than 4,000 registered at the 82nd Annual Conference in Philadelphia, making this the largest meeting of water works men in history.

The AWWA Annual Conference traditionally lasts six days, during which time members are kept busy attending technical sessions, committee meetings, and various social events; visiting more than 200 exhibit booths in which the latest and best of water works equipment is on display; making guided tours of local

water supply facilities; and renewing old acquaintances.

Section Meetings

Each of AWWA's regional sections also holds at least one annual meeting. The technical papers presented at these meetings, like those presented at the Annual Conference, are published in the *AWWA Journal*.

As AWWA has grown, the number of activities at the section level has also grown, so that today a large part of the responsibility for major AWWA programs is borne by the sections. This is particularly true in the areas of safety practice, operator education, management education, and public information.

AWWA Committees

Wherever there is a problem, AWWA committees are busy trying to solve it. For example, there are groups now seeking ways to cope with the problems of radioactive wastes, detergents, and insecticides; providing guidance in meeting new demands for more and better water; increasing and standardizing the licensing of operators; and working toward the achievement of better compensation for water utility employees.

Some idea of the scope of AWWA committee activity can be had from the list of committees presented on the following page.



Informal AWWA-sponsored seminars on such subjects as water utility management and safety are an important part of AWWA section activity.



At technical sessions like the one pictured above, water supply men have a chance to exchange ideas and experiences and thus improve their own professional knowledge as well as add to that of others.

AWWA Committees and Task Groups

Board Committees

Executive
General Policy
Joint Policy
Finance
Technical Program
Convention Place
National Water Policy
Water Utility Advancement
Joint Council on Advancement
International Affairs
Fluoridation Policy

Developmental Committees and Task Groups

Water Utility Management
Job Classifications
Rating Scale for Water Utilities
Financing, Rate Structure, and Metering
Accounting, Collecting, and Recording
Organization, Management, and Training
Supply, Transmission, and Pressure

Fluoridation Materials and Methods
Instrumentation and Methods of Testing Radioactive Contamination in Water
Synthetic Detergents
Effects on Water Supplies
Analytic Methods—Synthetic Detergents
Biologic Infestation
Manganese Deposition in Pipelines
Cold-Water Corrosion of Copper
Research on Coagulation
Diatomite Filtration
Filtrability Index Test
Impurities in Liquid Chlorine
Ion Exchanger Test Procedures
Water Distribution
Effect of Purification Methods on Water Main Carrying Capacities
Protective Coatings for Water Distribution Systems

Utility Organization
Radio and Mobile
Communication Facilities
Water Use in Fire Prevention and Protection
Taxation and Revenue Allocation
American Sanitary Engineering Intersociety Board
Public and Worker Relationships
Management Relations
Compensation of Water Utility Personnel
Pension, Retirement, and other Fringe Benefits
Safety Practices
Certification of Water Utility Personnel
Financing
Construction, Equipment, and Materials Contracts
Valuation and Depreciation
Cost Trends
Water Main Extension Policy

Deep Wells
Purification
Treatment
Water Conditioning and Prevention of Corrosion and Incrustation
Chemicals
Standards and Tests for Water Purification Chemicals
Review of Chemical Standards
Standards for Liquid Chlorine
Chlorine Supply
Quicklime and Hydrated Lime
Pollution and Quality Control
Oil Line River Crossings
Distribution
Hydraulics
Spillway Design and Channel Capacities
Code for Pressure Piping in Pumping Stations
Distribution System Maintenance and Operation
Backflow Preventers
Pipe



A sign of AWWA's growing stature is the increasing participation of government officials in AWWA meetings. Here Senator Robert S. Kerr addresses the Association.



More than 150 committees and task groups form the backbone of the Association's programs and accomplishments. Here the AWWA Executive Committee meets in New York.

Purification and Treatment
Distribution
Revision of System of Accounts for Water Utilities
Proposed Rules and Regulations Governing Water Service
Water Resources
Weather Control
Watershed Protection
Artificial Ground Water Recharge
Underground Waste Disposal
Operating Experiences Under New Water Laws
Raw-Water Quality
Monomolecular-Film Techniques for Evaporation Control
Water Purification
Chromium and Cadmium Solubility and Toxicity

Evaluation of Type K and L Copper Tubing for Water Service
Standard for Distribution System Maintenance and Operation
Report Form for Water Main Breaks

Research Committees

Viruses in Water
Saline Water Conversion

Professional and Administrative Practice Committees

Professional and Administrative Practice
Organization and Administrative Policy
Constitutional and Statutory Aspects of Municipal Water

Accounting and Statistics
Water Department Reports
Water Rates
Joint Administration of Water and Sewerage Facilities
Water Use
Revenue-Producing Water
Revision of Manual of Water Works Accounting

Education Committees

Education
Preparation of Training Manuals

Standardization Committees

Committee on Standardization
Resources
Watersheds
Public Use of Watershed Areas
Ground Water

Steel Pipe
Field Welding of Steel Water Pipe Joints
Concrete Pressure Pipe
Laying Cast-Iron Pipe
Asbestos-Cement Pipe
Plastic Pipe and Fittings
Water Line Crossings of Highways and Railroads
Hydrants and Valves
Hydrants
Sluice Gates
Valves
Butterfly Valves
Meters and Services
Meters
Service Line Materials
Storage
Steel Standpipes and Elevated Tanks
Publications

sociation meeting or, if not so presented, at the time their papers were offered for publication.

Fuller Awards

These awards were established in 1937, and are given each year to members of the Association, designated by the sections, for their distinguished service in the water supply field and in commemoration of the sound engineering skill, the brilliant diplomatic talent, and the constructive leadership of men in the Association which characterized the life of George Warren Fuller—one of America's most eminent engineers.

Each section, each year, may designate one of its members to receive a Fuller Award. Such designation is presumed to recognize publicly the contribution toward advancement of water practice the individual has made within the particular section selecting him for the award. If two members have joined in a common project which the section wishes to recognize, both participants may be jointly designated for the award.

These awards are in the form of an engraved certificate signed by the President and Secretary of the Association.

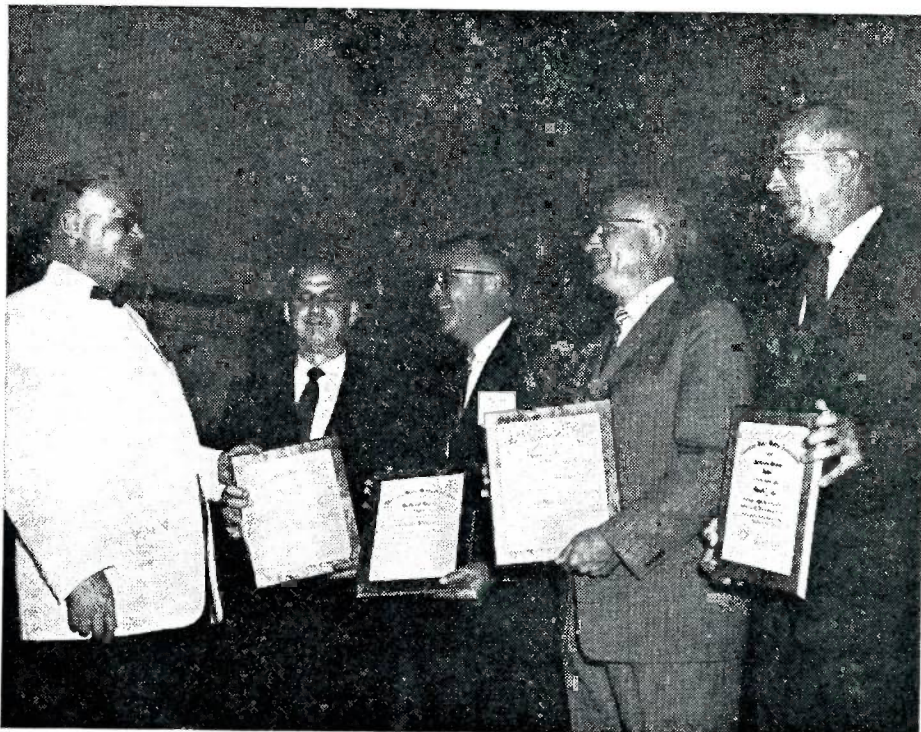
In 1942 the Fuller Awardees formed the "George Warren Fuller Award Society" which gathers each year in a breakfast meeting during the annual convention.

LaDue Safety Awards

The Wendell R. LaDue Awards are granted to water utilities for outstanding accomplishment in the field of safety during a calendar year. For award purposes, utilities are classified into three groups, according to number of employees (Class 1, less than 10; Class 2, 10-100; Class 3, more than 100), and competition restricted to utilities within each class.

Murdoch Advancement Award

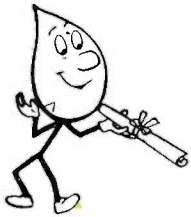
The John H. Murdoch Advancement Award is made annually to a water utility in recognition of outstanding achievement in the fields of community relations and professional advancement. The awardee is selected at the annual conference from among the winning entries in the local section competitions held during the preceding year.



Here coauthors of a *Journal* paper are congratulated on having won the Association's Purification Division Award.



As his wife looks proudly on, an AWWA member is congratulated on his nomination for the George Warren Fuller Award. AWWA wives traditionally have taken an active interest in Association affairs. Because of this, full-scale programs of ladies' social events are arranged for every AWWA meeting to keep the ladies busy and entertained while their husbands are attending technical sessions or business meetings.



Professional Recognition

MOST of all, it is through active participation in the programs of AWWA—through attendance at its meetings, service on its committees, and holding office—that an AWWA member derives real benefit from his membership. The personal satisfaction and professional recognition that can be thus achieved have caused many men to consider their membership in the Association to be their greatest professional asset.

By getting involved in committee work, a member can discover engrossing new fields of study, advancement, and achievement. The opportunity to exchange information and ideas at section and national meetings can lead to great discoveries and accomplishments at home. And the acquaintance and fellowship with other members makes it possible to work with the ablest men of the water supply profession.

Membership in AWWA alone is proof of a man's interest in self-improvement, but that is only the beginning. The local and national awards, prizes, and offices that he can earn in AWWA bring recog-

nition both at home and throughout the water supply field.

Although the AWWA sections each have established special awards of their own, the most important Association awards are those described below:

Honorary Membership

Honorary Membership in AWWA is conferred on individuals whose knowledge and accomplishments in the field of water supply entitle them to special recognition. Honorary Members have all the rights and privileges of Active Members and are exempt from paying dues.

Life Membership

Life Membership in AWWA is conferred automatically on individuals who have been members in good standing continuously for 30 years. A Life Member is entitled to all the rights and privileges of an Active Member and is exempt from paying dues.

Jordan Achievement Award

The Harry E. Jordan Achievement Award was established by the Association in 1951 to recognize, as circumstances warrant, distinguished public

service by a member of the Association outside the line of duty. The award was named for the Association's secretary at that time in tribute to the service he had rendered from the time he took office in 1937. Nominations for the award may be made by any member and are transmitted by the Executive Secretary to the General Policy Committee for consideration.

Diven Medal

The John M. Diven Memorial Medal was established by the Association in 1925 in memory of John M. Diven, a water works superintendent of many years' experience who served as the Association's President in 1892, Vice-President 1887-89, Treasurer 1890-91 and 1903-13, Secretary 1890-91 and 1903-23, and Editor 1914-16.

The award is made each year to the member who has rendered the most outstanding service to the Association during the year, as determined by a committee appointed to submit a report which is subject to ratification by the Board of Directors. The medal is a bronze plaque of Diven.

Publications Award

The AWWA Publications Award is made annually to the member whose paper, published by the Association, represents the most notable contribution to the science or practice of water works development. The selection is made by a committee, appointed for the purpose, which submits a report subject to Board ratification.

Division Awards

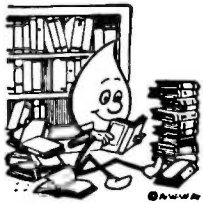
Established in 1954, these awards, in the form of certificates, may be granted annually at the discretion of each of the four Association Divisions to the author of the best paper in its respective field of interest published by the Association. Eligibility for the awards is limited to those who were members of the Association at the time their papers were presented at an As-



George W. Fuller, AWWA President
1923-24.



John M. Diven, AWWA President
1891-92.



AWWA Publications

THROUGH its many publications, AWWA has done much to advance the science of water supply and treatment over the years. Although the services provided by the Association are constantly expanding, it is primarily through its publications that AWWA has achieved what it has achieved. Although all AWWA publications, except the annual Directory, are available to the general public, AWWA members can receive a 20 per cent discount on books, manuals, and reprints, and, of course, automatically receive subscriptions to periodicals.

Journal AWWA

Every AWWA member automatically receives a subscription to the AWWA *Journal*. The most respected publication in its field, the *Journal* contains technical discussions of every phase of water works activity, abstracts of world-wide water supply literature, and a monthly review of the news of the field. New AWWA standards and manuals are first published as part of the *Journal* so that members may have access to important information at the earliest possible date.

Although it would be an impossible task to list all the subjects covered in the pages of the *Journal* over the years, a few of the topics that would be included in such a list are:

- | | |
|----------------------------|------------------------------|
| Accounting | Hydrology and conservation |
| Aquatic organisms | Industrial water use |
| Automation | Laboratory and field methods |
| Bacteriology | Laws and litigation |
| Chemical Analysis | Metering |
| Chemical treatment | Personnel relations |
| Corrosion control | Pollution control |
| Dams and reservoirs | Public relations |
| Distribution system design | Radioactivity |
| Filtration | Resources |
| Financing and rates | Safety practice |
| Fluoridation | Saline-water conversion |
| Ground water | Tastes and odors |

AWWA Directory

Also a part of the *Journal*, but issued as separate volumes, are the AWWA membership list and the reference edition of the AWWA Directory. The membership list, issued in even-numbered years, contains an alphabetical list of all AWWA members as well as a geographic list, so that anyone using the directory can quickly identify other AWWA members in his hometown or wherever he may be.

The reference edition, issued in odd-numbered years, is a gold-mine of useful information to the water works operator. In addition to more than 40 pages of statistical and descriptive information concerning AWWA, the directory contains:

1. A complete listing of AWWA committees and their personnel.
2. A complete list of AWWA publications and prices.
3. A "Water Supply Library," containing a selected bibliography of the most useful references on every aspect of public water supply.
4. A "Water Works Buyers' Guide," listing, by type of product, producers and suppliers of water works equipment and materials.
5. A "Directory of Consultants," listing the names of consultants alphabetically within the states and indicat-

ing the type or types of consulting services offered by each.

Standards

To date, the Association has produced 22 standards for treatment chemicals; one for vertical-turbine pumps; one for deep wells; seven for flanges, joints, and fittings; eleven for pipe and its installation; six for valves and hydrants; four for lining of pipe and fittings; one for disinfection of mains; six for meters and meter testing; and three for construction, maintenance, and painting of steel tanks.

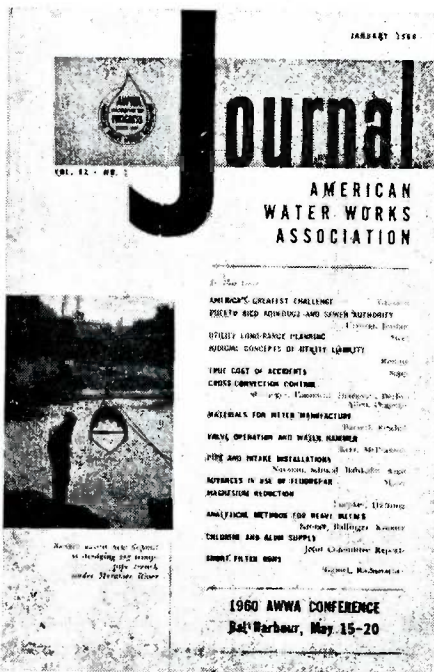
Books and Manuals

The Association publishes four cloth-bound books: *Standard Methods for the Examination of Water and Wastewater*, a standard laboratory manual published jointly with the American Public Health Assn. and the Water Pollution Control Federation; *The Quest for Pure Water*, a history of water treatment by M. N. Baker; *Survival and Retirement Experience With Water Works Facilities*, prepared by a joint committee of AWWA and the Institute of Water Supply Utilities; and *Water Quality and Treatment*, a comprehensive survey of water quality standards and treatment methods.

In addition, nine manuals, on such subjects as water rates, public relations, safety practice, water utility management, water meters, aquatic organisms, distribution systems, and concrete pipe, have been published, and more are in preparation.

Willing Water

A monthly bulletin devoted to public relations, safety, defense, and Association news, *Willing Water* is mailed free to all members. A quarterly report directed at municipal leaders and entitled "Advancing Your Water Service" is published as part of *Willing Water* and reprinted for distribution to community leaders. Several municipal league publications and national magazines are cooperating in the distribution by carrying the quarterly as an insert.



A BRIEF HISTORY OF AWWA STANDARDS

THE Association's first venture into the field of standardization is recorded in the proceedings of its fourth and fifth annual meetings, during which there was much discussion of a material known as "Kalamein," then being sold for use as a water distribution pipe. In a formal report presented at the fifth annual meeting, held at Boston in 1885, a special committee appointed to investigate the pipe expressed "grave doubt as to its [Kalamein pipe's] fitness for the purposes for which it claims a place in the construction of permanent water works." Time has borne out the conclusion reached by that committee, the forerunner of the present AWWA Committee on Standardization, and

Kalamein pipe has long been a forgotten material.

At the same meeting, a paper prepared by Phineas Ball of Worcester, Mass., discussed the proper thicknesses of cast-iron pipe to withstand various operating pressures and water hammer and provide security from breakage in handling. Then, in 1886, the first "Proposed Specifications" for cast-iron pipe were published in the "Proceedings." It was not until 1889, however, that S. B. Russell of St. Louis, who served as chairman of the Committee on Standard Specifications for Cast-Iron Pipe, presented that committee's first report. The report consisted of a single page of text and a page of tabulated dimensions and

weights for pipe from 3 in. to 48 in. in diameter. In 1891 a further report established a series of test bar and pressure requirements.

Perhaps the most important step ever made in AWWA's technical progress was the formation, in 1920, of the "Standardization Council," under the chairmanship of George Warren Fuller. Malcolm Pirnie succeeded Fuller as council chairman in 1928 and, in 1947, was in turn succeeded by Louis R. Howson, who ably directed this work as chairman of the Water Works Practice Committee and continues to do so as chairman of the Standardization Committee, as it is now called.

Value of AWWA Standards

The public water supply industry in the United States and Canada is made up of more than 20,000 suppliers serving populations ranging from a few hundred to several million. Many of these suppliers, particularly those serving small populations, are unable to describe, in accurate and adequate terms, equipment and materials needed for the most reliable and economical operation of their water systems. Then too, even if only 10 per cent of the water utilities in the nation insisted on writing individual standards of their own, the confusion would make economical manufacture impossible.

Thus AWWA, through its years of study and evaluation of the primary materials used in water works construction and water supply treatment, has met two important needs: (1) it has, by preparing minimum standards for such materials as pipe, valves, fittings, hydrants, meters, and treatment chemicals, provided the local water utility executive with reliable yardsticks to apply to his purchases, and (2) it has reduced the number of special requirements that manufacturers may be called upon to meet, thus bringing about the greatest economy to the manufacturer, engineer, the water utility, and the water consumer.

Through its record of increasing activity in the field of standardization, AWWA has rendered and will continue to render an invaluable service to the industry and the public—a service which no local or regional organization can render with equal authority.

VOL. 8, NO. 6—June 1962



Willing Water

Reg. U. S. Pat. Off.

PHILADELPHIA
JUNE 17-22

PUBLISHED MONTHLY BY THE AMERICAN WATER WORKS ASSOCIATION, INC., 2 PARK AVE., NEW YORK 16, N. Y.

NATIONAL PUBLIC WORKS WEEK SET FOR OCTOBER 14-20

The third annual observance of National Public Works Week, during which APWA and Kiwanis International jointly sponsor tours of municipal plants, exhibits of public works equipment, open houses at utility plants, and a competition to choose the "Top Ten Public Works Men of the Year," is scheduled for the week of Oct. 14-20.

The objectives of the observance are threefold: (1) to increase public awareness of the importance of public works programs; (2) to recognize outstanding achievements of individual public works officials; and (3) to encourage talented young people to consider careers in public works fields.

Last year's observance was marked by the issuance of formal proclamations by the governors of 35 states and by the mayors of many communities across the nation.

A fact of which AWWA can well be proud is that four of last year's "Top Ten" were AWWA members. Thus, in large measure, National Public Works Week can be your week, if you act now.

For more information on how you can help plan a National Public Works Week observance in your community, write to APWA at 1313 E. 60th St., Chicago 37, Ill.



Pictured above is Secretary of the American Water Works Association, Stewart L. Udell, who will address AWWA's 82nd Annual Conference in Philadelphia on June 20, speaking on the Delaware River Compact and the nation's water resources. A record registration of 4,000 is expected at the fall meeting, which promises to be a record breaker in many important ways. A complete rundown of major happenings at the conference will be published in the July issue.

NEW QUEBEC BRANCH FOR CANADIAN SECTION

One of the important decisions reached at the 42nd annual meeting of the Canadian Section at Toronto on Apr. 5 was that of the Quebec members to form a Quebec Branch, similar to its Maritime Branch.

The proposal, which received the endorsement of the execution of the section, as well as the required 40 signatures of the Quebec members, is being brought before the AWWA Board of Directors for approval at its meeting at Philadelphia.

Anticipating Board approval, the members of the proposed Quebec Branch have elected the following officers: Marcel Blais, president; Eugene Bernard and M. Tremblay, first and second vice-presidents; Robert Giguere, secretary; Dominic Lamouroux, treasurer; Norman Hobbs, Wilfred Drasser, Garmine Frappier, M. Giguere, and E. Monroir, trustees.

It is thought that formation of the new branch will make possible greater participation in section and Association affairs by the province's many French-speaking members.

Dutch Water Supply Engineer to Lecture in U.S.

Dr. Cornelius Biemond, director of the Amsterdam, Holland, water works and a past president of the International Water Supply Assn., will conduct a six-week lecture tour at nine United States universities next fall. The tour is part of the visiting-engineers program being sponsored by the Engineers Joint Council and AWWA and financed by a grant from the National Science Foundation.

Among the topics to be covered in Biemond's lectures are salt water intrusion, artificial ground water recharge, and the public health aspects of water supply. Biemond, who speaks fluent English, is well qualified to lecture on these subjects. He was Amsterdam's chief engineer of public works from 1923 to 1927, since which time he has served as director of the municipal water works. As a consult-

ing engineer, he has worked on many projects outside Holland including the California Water Plan and a dam supply in Oregon.

Biemond is an honorary member of the International Water Supply Assn., the British Institution of Water Engineers and the British Waterworks Assn.

Date	Location
Oct. 14-16	AWWA headquarters
Oct. 17-18	Harvard Univ.
Oct. 22-23	Johns Hopkins Univ.
Oct. 25-26	Villanova University
Oct. 29-30	Univ. of No. Carolina
Oct. 31-Nov. 2	Ohio Section Meeting
Nov. 5-6	Ohio State Univ.
Nov. 8-9	Purdue Univ.
Nov. 12-13	Univ. of Illinois
Nov. 15-16	Northwestern Univ.
Nov. 19-20	Univ. of Wisconsin
Nov. 21-24	AWWA headquarters

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Public Relations Aids

CREATED to help sell water conservation during World War II, the cartoon figure, "Willing Water," has since become the industry's super salesman. The Association has registered "Willie" as a service mark and copyrighted the figure in his various poses. Thus, rights to the use of the cartoon are restricted to AWWA and its members.

Willie is currently available in more than 100 different poses in electrotypes and mats. The popularity of the cartoon has led AWWA to develop a long list of Willing Water public relations aids, including booklets, decalcomania's, ashtrays, uniform patches, electric clocks, service buttons, postal meter advertising slugs, cigarette lighters, and several jewelry items—all bearing the figure of Willie.

Story of Water Supply

Willing Water is the star of AWWA's popular documentary cartoon booklet, "The Story of Water Supply," designed to acquaint junior high school students with the history and workings of public water supply. To date, more than 2,250,000 copies have been distributed.

A 35-mm, sound, color, slidefilm, based on the booklet and narrated by Willing Water, has also been produced.

Your Water Supply

Willing Water is also featured in "Your Water Supply," the Association's water conservation guide designed as an envelope stuffer for quantity distribution. The booklet contains how-to information on reading meters, detecting leaks, replacing faucet washers, and so on.

Customer Leaflets

In 1962, a series of "Notes From Willing Water," customer information leaflets designed for use as bill stuffers and handouts, was developed. Further leaflets in the series are being planned.

Advertising Mats


A series of thirteen newspaper advertising mats, all bearing the slogan, "Plenty of Water Makes the Difference," is also available through AWWA. The advertisements are designed to create public awareness of the value of the service provided by the local water utility.



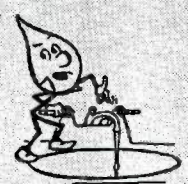
One of the more popular Willing Water items is the AWWA "At Your Service" ashtray, shown above.

Your Water Supply

Pay for what you USE!



Not for what you LOSE!

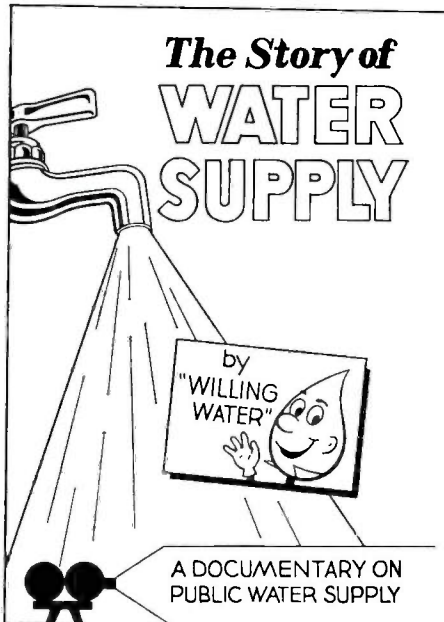


USE IT WISELY!

"Your Water Supply" is an ideal mailing piece for creating customer awareness of the value of water service.

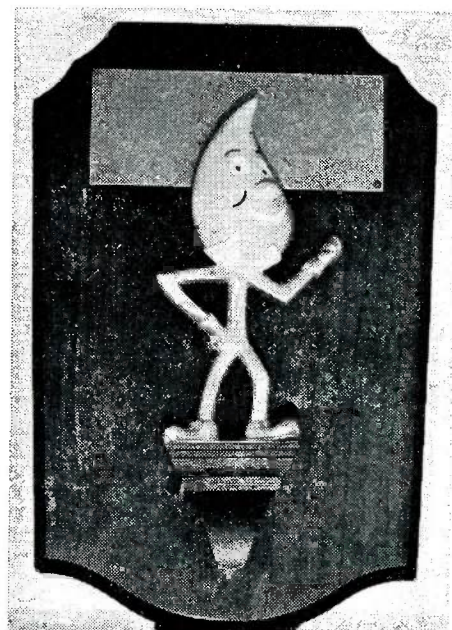
The Story of WATER SUPPLY

by "WILLING WATER"



A DOCUMENTARY ON PUBLIC WATER SUPPLY

Used as a textbook in elementary and junior high schools all over the country, "The Story of Water Supply" is AWWA's best-selling publication.

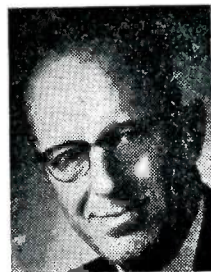


Willing Water award plaques, like the one shown above, can be used for any special award to, or from, water supply men.

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J. C. Copley



J. W. Cramer



H. F. O'Brien



R. J. Faust

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AMERICAN WATER WORKS ASSOCIATION

Code of Practice

As one engaged in providing public water supply for the people whom I serve and as a member of the American Water Works Association, I hold to these principles:

- 1** To the best of my ability I shall conduct all operations under my control in such manner as will, as far as the means made available permit, provide adequate water service, preserve the public health and furnish protection to property.
- 2** I shall consider that in performing this service I am required at all times to act within the bounds of local, state and national law and within the field of orderly procedure among free men.
- 3** I shall, therefore, extend my own fund of technical and professional information to the end that the procedures which I advocate are based upon well grounded information.
- 4** In every legitimate manner, I shall encourage the construction of water works structures, the use of materials, as well as management practices and operating procedures, which are economically sound and in the public interest.
- 5** I shall at all times discourage exaggerated, unfair or untrue statements concerning any operation or material connected with public water supply. In conformance with this principle, I shall endeavor to assist my associates as well as the public in obtaining a correct understanding of water works operations and materials.

6 I shall not accept any remuneration or benefit from any interested party other than my employer or my client. Neither shall I accept any collateral employment which might in any degree adversely affect my performance of my duties or obligations to my regular employer or client.

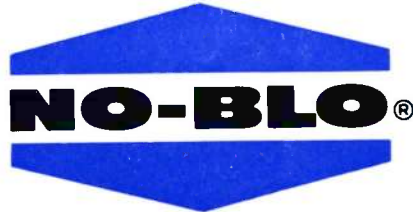
7 If I have a financial or personal interest in any invention, apparatus, device or procedure, which may be offered for sale to, or considered for purchase by, my employer or my client, I shall disclose that interest fully and shall participate in no decision related to its purchase or use by that employer or client.

8 I hold to the opinion that honorable competition for advancement and for opportunity to render more responsible service is an essential part of democratic civilization—upon which rests real improvement and progress. But I shall not permit my own ambition for advancement to cause me to act unfairly toward others associated with me.

9 I shall by all legitimate and reasonable means strive to improve the public appreciation of the services rendered by myself and my associates—to the end that employment in the public water supply field is recognized by all as a legitimate and lifetime career for well trained and industrious citizens.

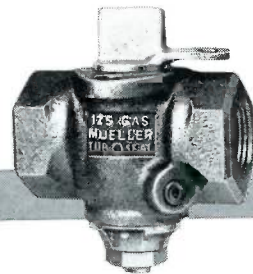
10 I shall not, as an incident related to discussions of rates of pay or conditions of employment, suspend or fail to perform the duties entrusted to me, nor permit water service to fail the citizens who depend on me. I shall, having associated myself with public water supply operations, hold the public interest superior to my personal interests and I shall by my acts and by my leadership see to it that water service is maintained under both normal and emergency conditions.

In short, I understand my obligations to my community and having accepted responsibilities upon which depend public health and safety, I shall not fail.



LubOseal[®]

GAS METER STOPS



In just ten years, **MUELLER**[®] LubOseal Gas Meter Stops have earned a reputation for absolute safety and dependable performance in high pressure lines.

The perfectly matched, individually ground and lapped iron body and bronze key provide a pressure seal, preventing leakage through the port. Gas-resistant O-ring seals prevent leakage at top and bottom of key. Sealing surfaces and O-rings are easily relubricated through an independent port. A complete range of styles, end connections and sizes from 3/4" through 2 1/2" are available for pressures to 500 p.s.i.

Ask your Mueller Representative about the advantages of LubOseal Meter Stops or write direct for complete information.

GEM Sponsor



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In Canada: Mueller, Limited, Sarnia, Ontario

6667



Exterior view of Mississippi Valley's new Bailey Avenue Service Center.

Jackson, Miss.

SERVICE Centers in Operating Center

*New Building
Has Latest
In Equipment*



Gas service centers have one primary function—service to the customer.

With this in mind, the Mississippi Valley Gas Co. of Jackson, Miss., made an exhaustive study of needs and of economic growth in the area before it built the recently opened Bailey Avenue Service Center.

The surveys predicted heavy growth in the service area for the next 10 to 15 years, following the growth pattern that has seen Mississippi Valley Gas expand to include 155,000 customers in 112 towns, cities and communities within the State of Mississippi. About 50,000 of these customers are in the Jackson area.

The Bailey Avenue Service Center houses the Jackson District operations consisting of District Engineering, Construction and Service Departments, the Jackson Central Storeroom, and the state-wide meter repair shop.

Approximately 125 employees work at or out of the center, and by 1972 it is expected that this will expand to about 200.

The 60,000-square-foot building

includes an auditorium which seats up to 125, a modern gas kitchen and lunchroom, modern communications, a gas sign and 33 gas lights, in addition to the storage and repair areas.

The meter repair shop is designed with maximum efficiency and minimum lifting in mind. Assisted by two conveyor systems, lift trucks, hoists and racks, workmen check, clean and repair about 16,000 small meters a year. By 1972 this is expected to increase to 25,000.

This air-conditioned shop has three automatic electronically operated provers for checking small meters and two provers for testing larger or industrial-type meters.

Thousands of items, ranging from air conditioners and gas ranges to tiny valves and bolts are stored in the neat warehouse-storeroom area.

A unique feature of the storeroom is an issue counter with 36 cabinets under the counter which are provided for use by the Jackson District Construction and Service Department. Each crew and each service man has an individual

MUELLER RECORD

cabinet where his new supplies are checked out.

The nearby loading platform or dock area of 4,270 feet makes it convenient to load and unload material and supplies.

Customer service at its best cannot be provided without complete communications, whether between customer and service departments or inter-departmental. Mississippi Valley Gas Co. has attempted to fill these needs with its system introduced for the Bailey Avenue Service Center.

Special "incoming only" lines speed calls around the switchboard from the customer to the dispatching centers. For transmitting set and remove orders from the Application Clerk in another location, a direct teletype order is sent to the Service Center to avoid delays.

A 60-watt radio transmitter is also used to provide immediate contact between the Service Center and 30 mobile service units that operate in the Jackson metropolitan area.

Naturally, natural gas is used for heating, cooling and some lighting.

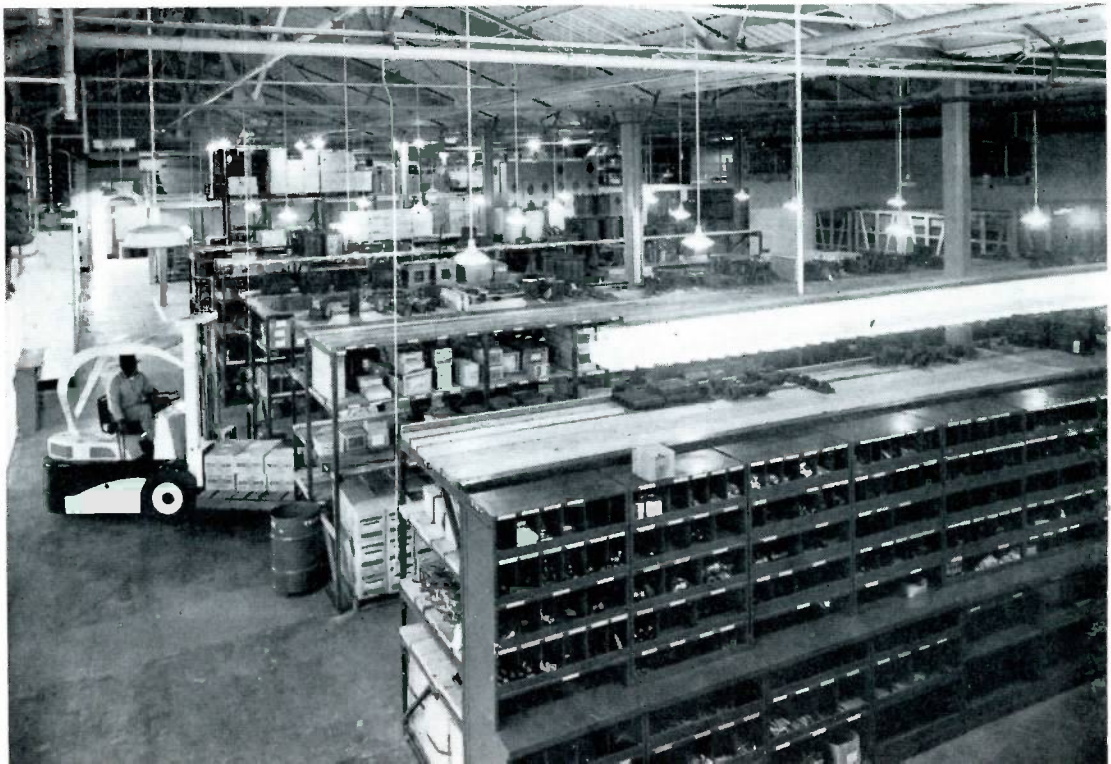
One notable feature is that the heating and air conditioning systems are so arranged as to provide some offices with cooling while others are being heated.



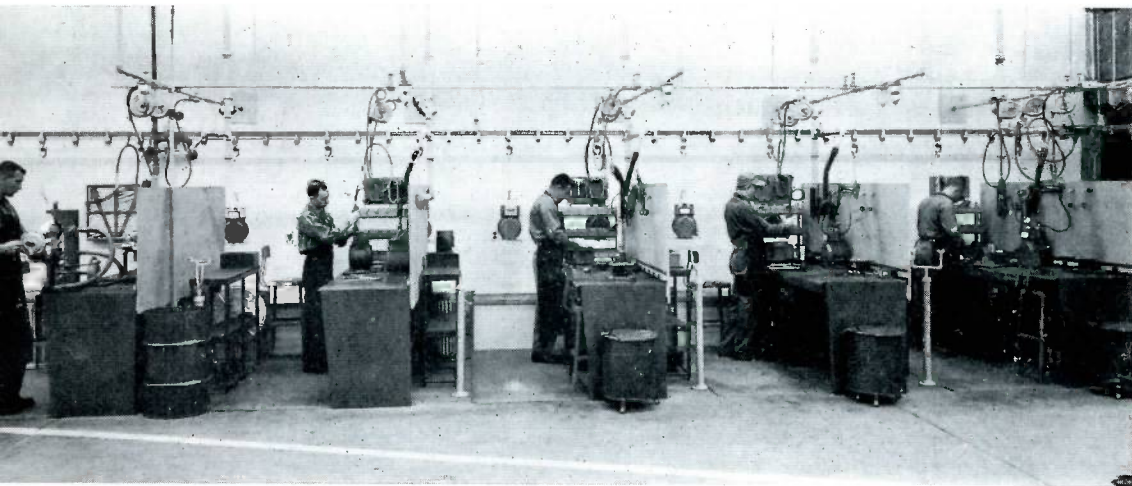
Unique two-way bins are assigned the service crews where equipment and supplies are checked out of the storeroom shown above.

Parts are stocked for service so that there is no delay in repairs or service. This storeroom contains everything from a small washer to air

conditioners and heating units for use in Jackson or for other offices located over the State of Mississippi.

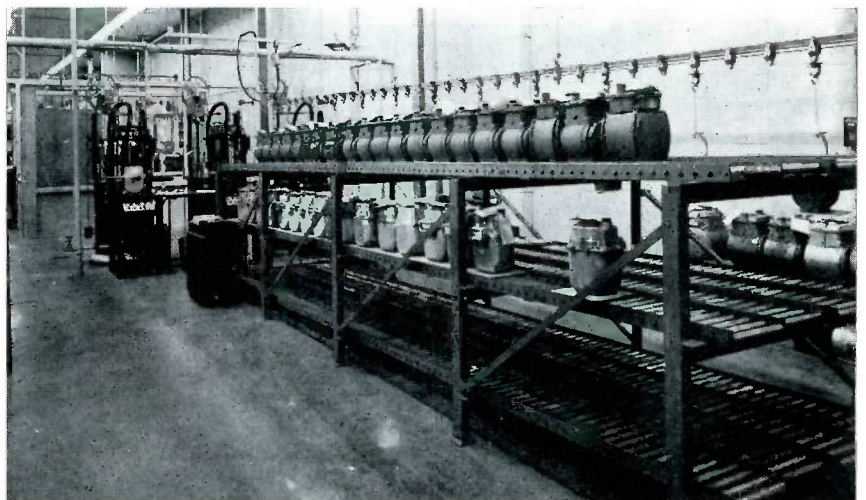


Fred Guice (left) Mississippi Valley Gas Co. Chief Engineer, talks with J. D. Perkins (right) Foreman of the Small Meter Shop, and T. F. Larche (center) Measurement Superintendent.



Meters from all customers in Mississippi are repaired and checked in this central shop on Bailey Avenue. This modern air-conditioned repair area has an anticipated capacity of about 65 small meters a day.

Roller-type racks hold meters that await testing that have been renovated and repaired. In the background is part of a 238-foot conveyor system which operates in the main shop area. A second conveyor operates entirely within the paint booth area.



Natural Gas Helps Grow Your Food



Hundreds of years ago the American Indian buried a fish in each hill of corn. That's how he fertilized his crop.

Today it would take a lot of fish to fertilize America's vast farmland. And you'd probably smell the Iowa cornfields in Southern California.

But thanks to the marvels of natural gas and petrochemistry, fertilizing—and most other farm chores—is faster, easier and much more efficient in 1962. Even more important, natural gas, directly and indirectly, helps fewer farms produce more food than ever before.

Actually, natural gas got down to the farm in a big way as a rehabilitated veteran of World War II.

The first commercial fertilizer sold on a large scale was natural nitrate mined in Chile. For many years Chile retained a virtual monopoly on the world's supply of nitrogen which is also needed for explosives.

Early in the century, a Scandinavian process for "fixing" synthetic nitrogen was developed. Later the Germans worked out a cheaper process for combining air and hydrogen to make ammonia from which other nitrogenous chemicals could be produced.

America got into the synthetic nitrate business in the 1930's. Expanding the nation's arsenal of defense demanded that nitrogen

for explosives be produced cheaply and in great quantities. Through research and experiment it was found that hydrogen could be taken from natural gas and combined with nitrogen from the air to make ammonia and its "relatives" economically. Thus, natural gas went to war in the form of munitions.

After seeing "Paree" and most of Europe, natural gas returned home and switched from an additive for munitions to a raw material for fertilizer.

Although the production of fertilizer is one of the major agricultural jobs for natural gas, it is also the most versatile hired hand on the farm.

In rice-producing areas of Louisiana and potato fields of Idaho, natural gas-fired pumps keep millions of gallons of water flowing for irrigation. In the land of cotton, natural gas is turning the wheels of ginning machines. It is drying and in many other ways processing this snowy crop as it is prepared for use.

Freshly mowed hay and alfalfa are processed in gas-fired equipment to provide winter forage for livestock. These cattle in turn yield milk and meat to be pasturized and cooked with gas.

Gas dries America's grain so that it may be stored without fermenting. Billions of pounds of rice, poured into tall silo-like bins are fanned by gas-heated air as they hurtle down between screen

and wall. Hybrid seed corn, wheat and dozens of other crops are heat-treated by gas in similar ways to prepare them for storage.

From natural gas come liquefied petroleum gases that fuel weed-burning machines, operate tractors and various farm machines.

A device dubbed the "Whirling Flame" wards off damaging effects of winter cold snaps to Southern crops. Two arms, 46 feet across, are equipped with three jets burning natural gas. Each Whirling Flame casts warmth over an acre and a half.

Gas has maternal instincts too. Tiny chicks, piglets and other barnyard young are mothered in gas-heated brooders, barns and other structures under controlled temperature.

As an industrial tool, natural gas indirectly assists the farmer through production of farm machines, implements and replacement parts.

Gas also pre-processes much of our food on farms and in factories. It is used to burn hickory sawdust in smoke houses, curing and smoking hams and other meats. Hatchery equipment is disinfected in gas-fired sterilizers. Chickens ready for market are singed with gas flames to remove tiny pin-feathers.

In these and hundreds of other ways, natural gas helps the farmer achieve unequaled productivity—and Mr. and Mrs. America to live better.

Blue Flame Whispers

Fair Air Conditioning Powered by Gas

Nearly 80 per cent of the air conditioning at the 1964-65 New York World's Fair is expected to be powered by natural gas according to John E. Heyke, President of The Brooklyn Union Gas Company, which will supply gas to the fair.

Mr. Heyke made the prediction after two of the fair's largest exhibitors, Bell Telephone and General Motors, signed contracts for gas to power air conditioning equipment in their fair buildings.

He said the World's Fair will contain the largest concentration and variety of gas powered air conditioning equipment ever assembled. Approximately 20,000 tons of refrigeration will be required to cool the exhibit buildings and nearly all of it will be energized by gas.

Brooklyn Union is completing installation of 47,560 feet of gas mains to supply gas at the fair. Mr. Heyke said that although the gas distribution system, costing more than a half-million dollars will not be used only during the two years the fair is open, exhibitors will not be required to pay premium price for the fuel.

"Gallons" of Gas Flow From Faucet

One Southern Counties Gas Co., Los Angeles, customer must have been confused by the terms liquefied petroleum gas and natural gas.

A Southern Counties serviceman went to make a routine shut-off at a home but found something other than a routine service. He found that the home-owner had a water faucet connected to the outlet tee of the gas meter. A garden hose was attached to the water faucet and extended to the backyard barbecue.

Canadian Gas Assn. Elects Mr. Ostler

John W. L. Ostler has been elected President of the Canadian Gas Association, succeeding Oakah L. Jones, President and General Manager of The Consumers' Gas Company.

Mr. Ostler, who is President and General Manager of the Canadian Meter Company, Limited, was



Mr. Ostler

elected by acclamation at the association's 55th annual meeting held recently in Murray Bay, Quebec.

David Cass-Beggs, General Manager of the Saskatchewan Power Corporation was elected First Vice President, and J. W. Kerr, Chairman of the Board and President of Trans-Canada Pipe Lines, Limited, was chosen Second Vice President.

Pipelines Stretch To Meet Gas Demand

The nation's gas pipelines, which now total more than 632,000 miles, are expected to stretch some 926,000 miles by 1970 and supply an anticipated 33,150,000 residential heating customers of the gas utilities.

Gas now heats more homes than all other fuels combined, says the Gas Appliance Manufacturers Association. This year the total

number of gas-heated homes is expected to reach 23,200,000, the trade group says.

Sonic Leak Pinpointer Undergoing Testing

The A.G.A. has signed an agreement with a company to field test and produce sonic gas leak pinpointers.

A.G.A. has received a patent for the tracer technique used in the device, which was developed as part of the \$3 million research program.

The detector will enable utility distribution networks to quickly pin-point underground leaks. Under current methods, area surveys must be taken, followed by exploratory excavations.

The instrument operates by introducing a coded-tracer signal in a low-pressure system. Above ground, a portable sonic device "listens" for the tracer signal coming from a leak. For high-pressure systems, the sonic device operates without a tracer signal by actually detecting the noise of escaping gas.

Soviet Gas Experts Complete U. S. Tour

The chairman of a delegation of Soviet gas experts which inspected U. S. gas facilities said the tour was "very valuable" and that he looked forward to further exchange visits.

Speaking at the conclusion of the trip, Aleksei K. Kortunov, chief of the U.S.S.R. State Gas Office, said, "It wasn't in vain that we spent so much time visiting the United States."

"There was much freedom, and we saw quite a lot," Mr. Kortunov said, "but we think we could have seen more." He said the trip by the nine-member delegation, and the visit of U. S. gas experts to the U.S.S.R. last summer, were just the "first steps" and that future delegations would benefit even more from such visits.

He praised the "friendly people and good experts" whom he met, and said he found the Americans wanted "peace and friendship among the peoples of the U. S. and U.S.S.R."

7,000 Attend AGA's 44th Annual Meeting

About 7,000 persons visited the 44th annual convention of the American Gas Association Oct. 7-10 in Atlantic City.

The A.G.A. started its meeting with the opening of the "Greater Achievements with Gas" exhibit. This display in Convention Hall of the newest gas appliances and equipment was the last major exhibit of the gas industry until after the 1964-65 New York World's Fair. The industry is planning a \$6 million exhibit at the fair.

Mueller Co., a member of the A.G.A., was one of the manufacturers which exhibited at the meeting.

A special feature of the convention exhibit was the "Idea Fair" where projects developed by gas companies were displayed. These included new appliances, systems, methods, procedures, tools and devices which were not shown at previous A.G.A. conventions.

The session put increased emphasis on what lies ahead for the gas industry, with displays showing research work undertaken by the PAR research program and the association laboratories.

A highlight was the exhibit showing developments in gas utilization since Oct. 1960. These included models of residential, in-

dustrial and commercial equipment, including appliances, controls and ignition devices.

Developments in gas operating equipment included models of important technical developments in gas equipment from well-head to meters and new to the industry the past two years.

Headline speaker for the meeting was Joseph C. Swidler, Chairman of the Federal Power Commission. The FPC Chairman was formerly general counsel and secretary for the Tennessee Valley Authority.

Other speakers included:

Gardner Cowles, President of the Des Moines Register and Tribune Co., and of Cowles Magazines and Broadcasting, Inc., which publishes LOOK magazine.

Dr. Joseph H. Taggart, Executive Dean of the School of Business and Dean of the Graduate School of Business Administration at New York University.

Donald I. Rogers, Business-Financial Editor, New York Herald Tribune.

Morgan J. Davis, Chairman of the Board, Humble Oil Co.

HEYKE ELECTED NEW PRESIDENT

John E. Heyke, Jr., President, The Brooklyn Union Gas Company, was elected president of the American Gas Association recently.

Mr. Heyke, first vice president this year, and other nominees were selected by delegates at the annual meeting in Atlantic City.

Marvin Chandler, President, Northern Illinois Gas Company, and second vice president the past year, advanced to the first vice presidency.

Ed Parkes, President, United Gas Corporation, was elected second vice president and Charles H. Mann, Treasurer of the Columbia Gas System, was re-elected treasurer.

Edward H. Smoker, President, The United Gas Improvement Company, Philadelphia, became an A.G.A. Director upon completion of his term as Association president.

IT'S A FACT..

21 ATOMIC SUBMARINES COULD BE PURCHASED WITH THE \$641 MILLION IN FEDERAL TAXES PAID BY THE NATURAL GAS INDUSTRY IN 1960.



1 IN ADDITION, STATE AND LOCAL TAXES-- \$417 MILLION-- WOULD PAY THE AVERAGE SALARIES OF 90,000 SCHOOL TEACHERS.

MICE STRAUSS '62

SOURCE - AMERICAN GAS ASSOCIATION

A farmer's mule once kicked his mother-in-law to death. A tremendous crowd turned out for the funeral, all men, curiously enough. The minister during the course of the obsequies, commented: "This old lady must certainly have been very popular, when one looks about and observes the large number of people who have left their work to come to her funeral."

"They're not here for the funeral," observed one of those who had come. "They're here to buy the mule."

"Well friend," said the psychiatrist, "I think we have your kleptomaniac under control now."

The patient smiled gratefully and got up to leave.

"However," said the doctor, "if you do have a relapse, pick up a little transistor radio for me."

"Your wife used to be terribly nervous. Now she is cool and composed as a cucumber. What cured her?"

"The doctor did. He told her that her kind of nervousness was the usual symptom of advancing age."



"Oh, I like the different seasons. In summer I like winter, and in winter I like summer"

Strictly Off the Record

BIGAMY: Two rites that make a wrong.

BLONDE: An established bleach-head.

BLUNDERBUSS: Kissing the wrong girl in the dark.

BORROWER: One who exchanges hot air for cold cash.

BOWLING ALLEY: A quiet place of amusement where you can hear a pin drop.

BOY: A noise with some dirt on it.

BRAIN: The apparatus with which we think we think.

BRAT: A child who displays his pest manners.

"John," said the wife, "I'm ashamed of the way we live. Mother pays our rent. Aunt Martha buys our clothes, and my sister sends us money for food. I don't like to complain, but I'm sorry we can't do better than that."

"You should be," replied the husband indignantly. "You've got two uncles that don't send us a dime!"

A country boy went for an airplane ride. When he came down he said to the pilot: "Thanks for them two rides."

"Two rides?" asked the aviator. "You only had one."

"No, sir, two," he said. "My first and my last."

There is the one about the goose flying south for the winter who flew past a horror movie at a drive-in and was so frightened he got people-pimples.

A persistent salesman refused to leave when the secretary told him the boss was out. An hour passed . . . then two. Finally, weary of being a prisoner in his own office, the boss admitted the salesman. "My secretary told you I was out," the puzzled boss said. "How'd you know I was in?" "Easy" explained the salesman. "Your secretary was working."

A swift-driving motorist lost control of his car and ran into a telephone pole. When he came to, he was on the ground, clutching telephone wires.

"Thank goodness," he murmured. "It's a harp."

The staid old gentleman was acting as honorary judge at a fancy horse show. As he looked over the scene he was puzzled by the attire of many contestants in the show. He turned to the person sitting next to him and said: "Just look at that young person with a poodle cut, the cigarette and blue jeans. Is it a boy or a girl?"

"It's a girl," was the reply. "She's my daughter."

"Oh, forgive me, sir" apologized the old fellow. "I never dreamed you were her father."

"I'm not," snapped the other. "I'm her mother!"

My wife is just like Teddy Roosevelt's Rough Riders. Everywhere she goes she yells "charge."

Jimmy's father had been trying to curb the youngster's belligerent tendencies. One evening, after learning that Jimmy had given one of his playmates a black eye, the father took him upstairs for a talk.

"Why didn't you count to ten, son, like I told you?"

"I did, Dad," replied Jimmy. "I socked him at 14."

"How about buying some neckties?" the tie salesman asked the busy executive after barging into his office.

"Don't need any. Beat it."

"But look at this beautiful silk."

"I told you to scram."

"Look how these ties are lined."

The executive arose, picked up the salesman and tossed him outside. The sample case spread in all directions. The salesman picked up the neckties, brushed off his own clothes, and strode back into the executive's office.

"Now that we've had our little fun, Mac, how about buying some ties?"

A minister located in a small western town was recently approached by an Internal Revenue agent who made inquiries as to a \$425 deduction claimed for a church charity by a local taxpayer.

"Did he make this donation?"

small shots



inquired the agent.

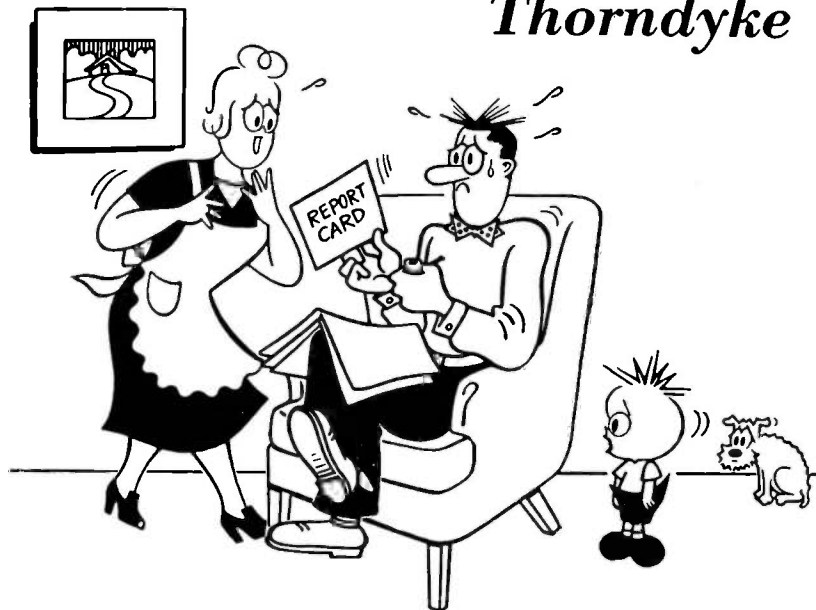
"He will," the minister replied. "He will."

Sam, the barber, seemed a little jumpy and it made his customer

nervous. "Sam," he said, "what happens if you cut a customer? Does the boss get sore?"

"Yes, he does," Sam replied. "He makes us pay a dollar for every cut we give a customer—but I don't care, I had a good day at the races yesterday."

Thorndyke



"I wish you two weren't always so surprised. Im smart enough to know I'm dumb!"

Two nurses were wearily folding diapers in the maternity ward. "You know," observed the one, looking over the room of squealing infants, "I just can't believe they're only 80% water!"

Husband to waiter: "Do you have a simple meal for people who don't have expense accounts?"

An official of a western railroad was checking the losses resulting from horses, cattle, and hogs reported killed on the right of way. The owners of the slaughtered animals had some very fancy ideas of the payment they deserved.

"It seems to me," said the railroad official to the attorney, "that nothing improves the blood of livestock as much as crossing it with a Diesel locomotive!"

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