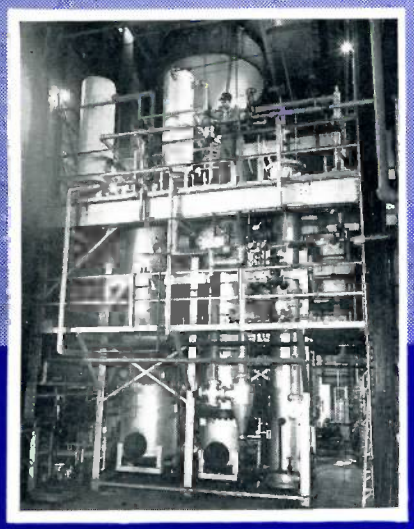
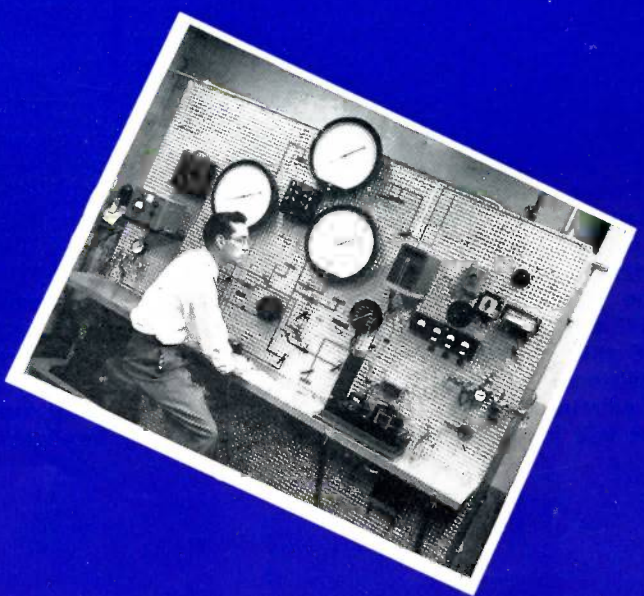
MUELLER
Record
OCTOBER • 1958



FACILITIES + RESEARCH = PROGRESS

see Page 4



Blue Flame Whispers

Construction is still the big news in the American natural gas industry. GAS Magazine, in its 11th Annual Survey of Gas Industry Construction Projects issued last April, reported that industry expenditures throughout 1958 would top $2 billion.

The July 22 issue of THE GAS INDUSTRY NEWS LETTER, published by the editors of GAS Magazine, described projects totalling $576.5 million, and all but one was additional to the previous $2 billion estimate.

Natural Gas Pipeline Co. of America will spend $82 million between August 1, 1958, and January 1, 1959, on a program which includes 493 miles of 36-inch and 21 miles of 26-inch line in Texas, Oklahoma, Kansas, Nebraska, Iowa and Illinois.

Transcontinental Gas Pipe Line Corporation will spend $167 million in two projects. Approximately $137 million is allocated for the construction of 556 miles of mainline loops, installation of 38,580 compressor horsepower, and construction of 345 miles of lateral lines.

The Houston Corporation filed its registration statement with the SEC on July 3, and expects to have natural gas available to nearly all of Florida next summer. Expenditure: $226 million!

Texas Gas Transmission Co. wants to spend $20 million in an expansion program to boost system delivery capacity 113 MMcf/day. The plan, which was before the FPC as this went to press, calls for 126 miles of new pipeline, and 9,040 additional compressor horsepower at existing stations. The new pipeline will loop the company's existing mainline in Louisiana, Mississippi, Kentucky, Indiana and Illinois.

Trunkline Gas Co. has requested FPC authorization for an $81.5 million expansion program which would enable that firm to make deliveries to Consumers Power Co., Jackson, Michigan. The project would provide consumers with an initial delivery of 135 MMcf/day, rising ultimately to 200 MMcf/day. Trunkline hopes to start construction by Janaury 1, 1959.

A revised edition of the Federal Power Commission's pamphlet, "Regulations Under the Natural Gas Act (With Approved Forms)," is now on sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

The revised edition contains Subchapters E and G—regulations under the Natural Gas Act, with approved forms, of the FPC's rules and regulations in effect as of June 30, 1958. The previous pamphlet edition was dated April 1, 1956.

Price of the new pamphlet is thirty-five cents a copy, and is sold exclusively by the Superintendent of Documents.

Our sincere appreciation to the personnel of the Institute of Gas Technology in Chicago for their cooperation on the story which begins on Page 4. This writer enjoyed his visit to IGT, and will never cease to be amazed by electronic computers such as that in operation there. It is always a little embarrassing to have a machine outthink you, but such a machine is certainly invaluable.

MUELLER RECORD

OCTOBER • 1958

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★

Editor
Jim M. Milligan

★

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SINCE 1857
Quality Products for the Waterworks and Natural Gas Industries

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Our Cover this month is devoted to the Institute of Gas Technology and its activities. The Institute was founded in 1941, and was affiliated with the Illinois Institute of Technology in Chicago.

Contents

Preview

Next on our publication agenda is the combined November-December RECORD, jam-packed with both water and gas stories, news of the industry, humor, and other interesting features. This issue will reach you in early December.

Among the stories contained therein will be a feature on Savannah Gas Co., Savannah, Georgia. This writer visited this progressive utility in late August, and marvelled at its colorful history. Of great interest is the slum clearance project undertaken by the gas company, and guided by the wife of the company's president.

Be with us next month for what we feel will be an exciting issue of the MUELLER RECORD!

Chicago, Illinois

Research Institution Furthers Industry's Ideals

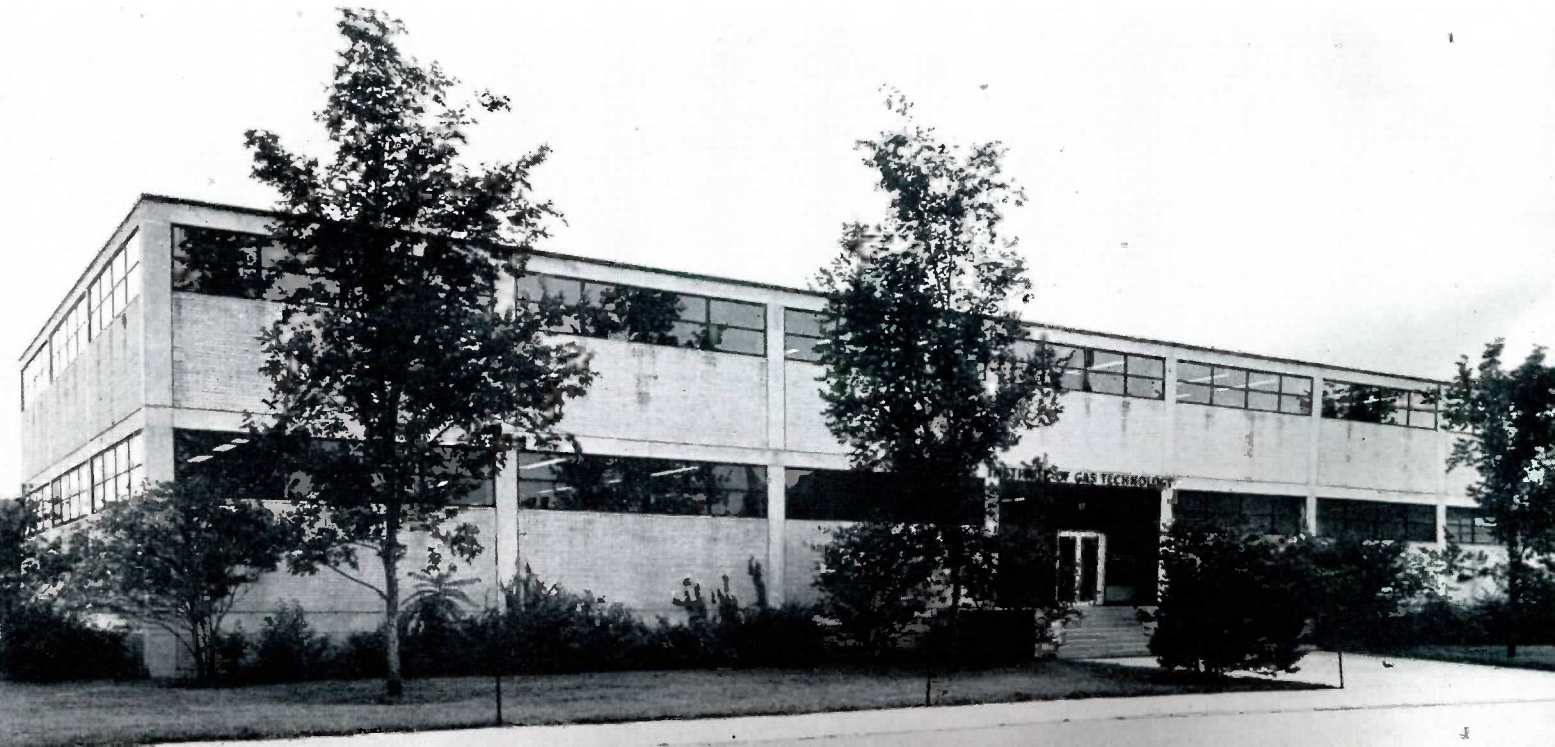
Provides Atmosphere For Advanced Study

IN 1939, the Executive Board of the American Gas Association appointed a Research Institute Organization Committee to investigate methods of advancing the technology of the gas industry. After a nationwide survey of schools and research organizations, this committee recommended consolidation of educational and research facilities in a single institution that would serve the entire industry. As a direct result of this recommendation, the Institute of Gas Technology was founded in 1941 and affiliated with Illinois Institute of Technology, one of the nation's largest engineering schools.

The four major objectives of the Institute are:

1. To train engineers in gas tech-

The Institute of Gas Technology building houses the administrative offices, classrooms, laboratories and library. The building, its equipment, and pilot plant facilities represent an investment by the gas industry of more than $1,500,000 for education and research.



nology at the undergraduate and graduate levels, and to offer home study and summer courses for Industry personnel.

2. To do basic research in, or closely related to, the fields of natural and manufactured gas production, transmission, distribution and utilization.

3. To do applied research for sponsors on their specific problems.

4. To collect and disseminate scientific information for the gas industry.

Forward-looking management today recognizes the importance of basic research and education to our technological progress. The Institute was born to fulfill these important needs.

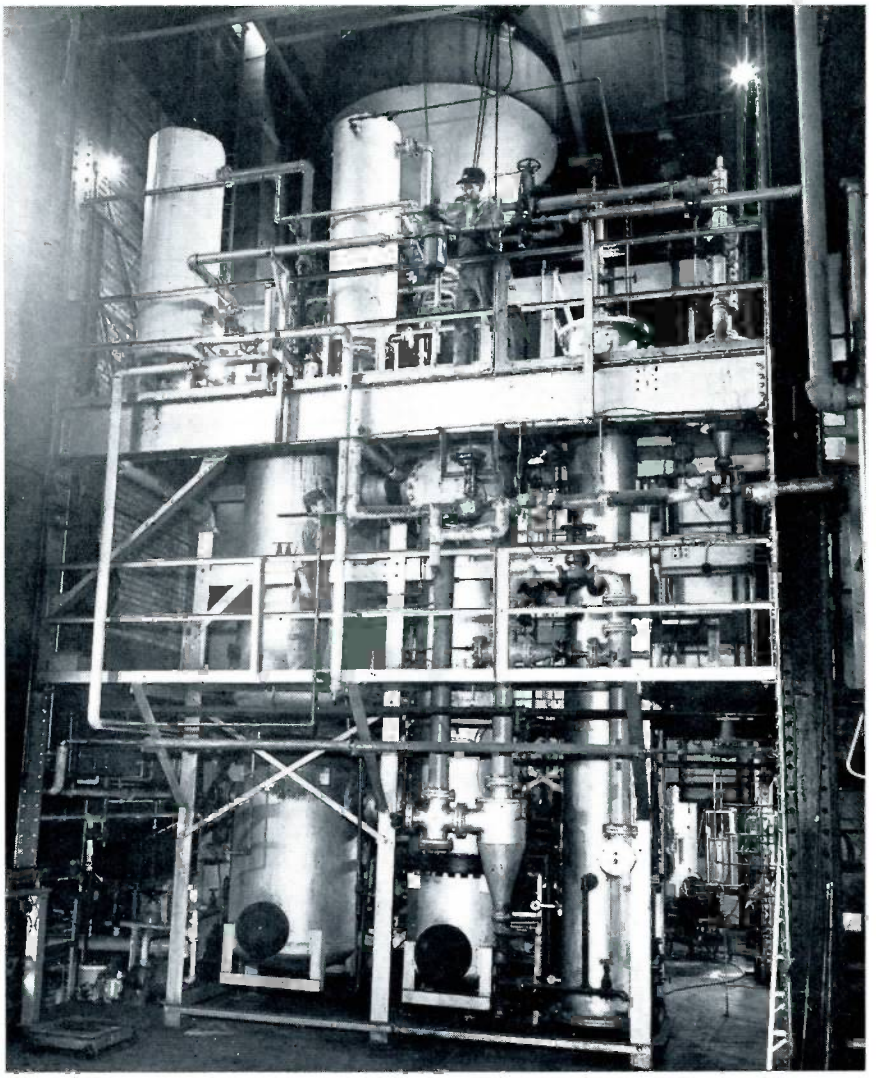
The Institute is a non-profit membership corporation with control vested in a board of twenty-eight trustees, twenty-two of whom are elected by delegates of the member companies at the Institute's annual meetings. The president and five members of the Board of Trustees of Illinois Institute of Technology complete the group. The members of the Institute establish the policy.

To implement these policies and to assist in accomplishing the objectives of the Institute, members give financial support through yearly dues. In addition, individuals, foundations or companies interested in the work of the Institute make contributions for specific purposes, such as scholarship or fellowship funds, the purchase of research equipment, or the general operating expenses.

Perhaps a general description of the various phases of operation of the Institute would be valuable at this time. The Institute's classrooms, library and laboratories are housed in a modern building, completed late in 1950, built with funds provided through subscriptions from 198 gas industry companies.

The library contains reference material that comprehensively covers the field of gas technology and related subjects. Some 10,000 bound volumes are now on the shelves, and over 125 periodicals are regularly received for general use and preparation of Gas Abstracts.

The laboratories are designed to serve the gas industry in analysis and research, and are available for basic research and thesis work. The equipment represents an investment of nearly a half-million dollars; it includes an electronic digital computer, mass spectrometer, electron microscope, X-ray diffraction apparatus, and emission and absorption spectrographs. A significant portion of the space is dedicated to appliance development and testing, equipment for studies of properties of fuel gases, and small-scale pilot plants.

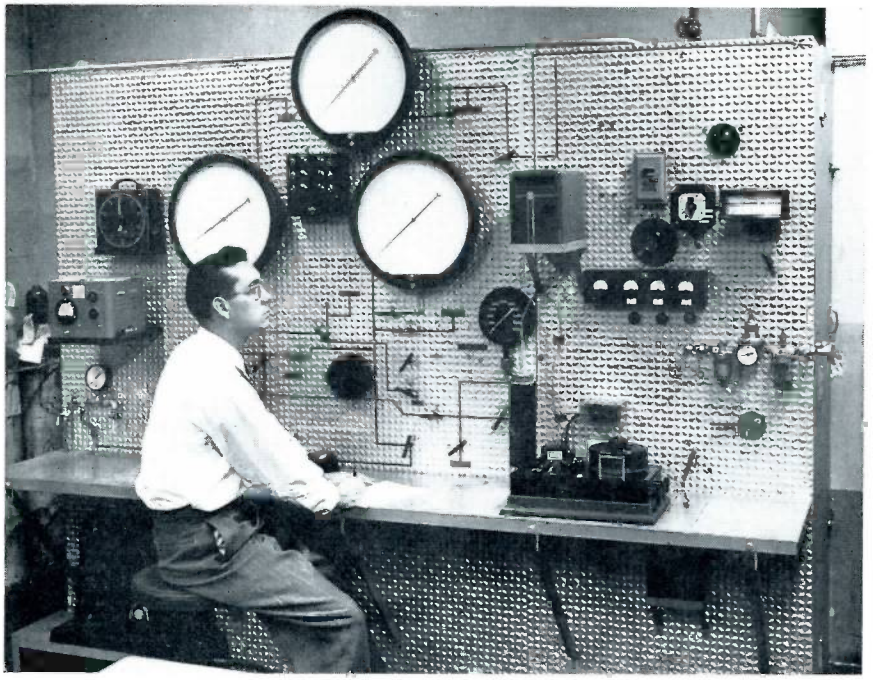


This is the Pressure Coal Gasification Pilot Unit. The large units extending upward from the floor are, left to right, the gasifier, heat exchanger, and washer-cooler.

The Institute operates several large pilot units, for semiplant-scale testing of new gas-making processes, in a building made available by The Peoples Gas Light and Coke Company of Chicago. Shop facilities adequate for the building of equipment and apparatus required in research are maintained in the building at Technology Center and in the Pilot Plant.

The Education Program, originally conducted at master's and doctor's levels only, now includes under-graduate courses in gas technology, home study courses, and intensive summer sessions for engineers from the gas industry. Members of the research staff are responsible for preparing and presenting instruction in their respective fields.

The Institute offers scholarships and fellowships to men interested in becoming gas engineers. The scholarships pay full tuition in the Gas Technology Option in



Above is the apparatus for determining the viscosity of gases at high pressure.

Chemical or Mechanical Engineering at Illinois Tech. The fellowships provide for stipends in addition to tuition and fees while the recipients study for Master of Science in Gas Engineering, Master of Gas Technology, and Doctor of Philosophy degrees.

The educational activities of the Institute are designed to train engineers for the gas industry, and in the case of the graduate program, to provide new information to the industry through basic research. In the undergraduate program, the Institute is trying to serve its members by offering four-year tuition-only scholarships to high school students in various cities in which member companies operate. This program keeps the member company in close touch with the prospective employee, and permits an early evaluation of his capabilities during required periods of summer employment.

The Institute's Information Service conducts literature and patent surveys, prepares bibliographies, makes translations of foreign scientific literature, and publishes the RESEARCH BULLETIN SERIES, GAS ABSTRACTS, and the NEWS LETTER.

The RESEARCH BULLETIN SERIES makes available the complete data obtained in each major project of the research program, presenting these data and their interpretation in greater detail than is possible through publication in the technical or scientific press.

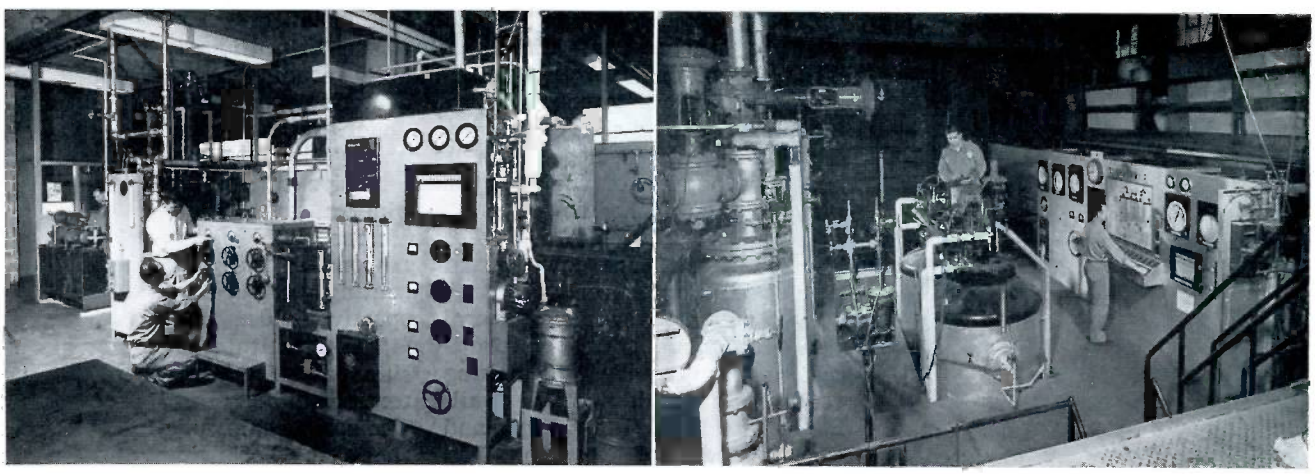
GAS ABSTRACTS, a monthly publication, presents in each issue 250 to 300 abstracts of the current literature on gas technology and closely related subjects.

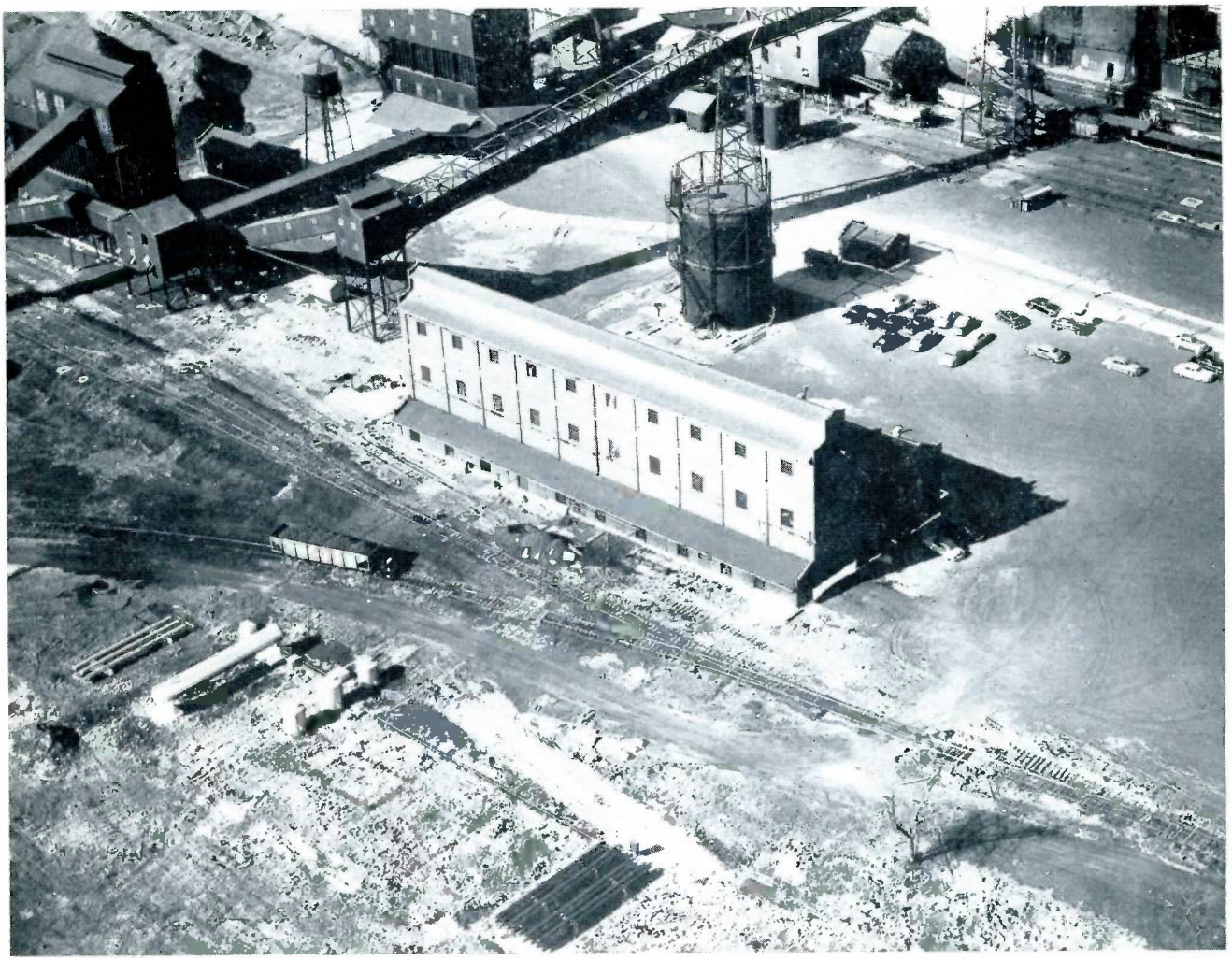
The NEWS LETTER reports to all interested companies and individuals the progress of the Institution and its programs.

The Institute strives to advance the technology of the gas industry by doing both basic and applied research. Basic research, which in most cases is conducted with Institute funds supplied by members, builds for the future by providing greater understanding of basic principles, and by developing new knowledge and data to form the basis for applied research. Applied research, which is usually done under contract with a sponsor, is aimed at developing or improving processes or products.

The major portion of this applied research is done in connection with the American Gas Association PAR Plan. Sponsored research usually involves handling of large amounts

At the left is the Institute's High-Temperature Thermal Cracking Unit. At the right, the operating deck of the Four-Shell Cyclic-Regenerative High-Btu Oil Gas Pilot Unit in the Institute's pilot plant, located at Crawford Station of The Peoples Gas Light & Coke Company.





The Institute's Pilot Plant facilities at nearby Crawford Station include most of this building, and the oil and LP-Gas storage tanks in the foreground, batteries of high-pressure oxygen and gas storage cylinders, and the 20,000 cubic foot gas holder in the background.

of materials and operation of large-scale equipment. Research activities of this type require a variety of supporting facilities. These include the necessary laboratory space, analytical laboratories, shops, drafting and duplicating, library and abstracting, and computational facilities.

ELECTRONIC COMPUTER IN USE

One very interesting and intricate item of equipment located at at the Institute is the electronic digital computer. In its operation, detailed instructions for solving a problem are typed and fed in by suitably perforated tape. These instructions are then stored on a magnetic drum in the form of coded impulses. The basic data for the problem are coded, fed in, and stored in a similar manner. The computation is then begun and proceeds in accordance with the instructions. The actual computation involves a series of high-speed arithmetic operations, storage of computed values, and comparison with previously computed values until the desired accuracy is reached. When the predetermined accuracy has been obtained, the computer furnishes a typewritten copy of the solution.

Digital computers can be used for computation work in a wide variety of problems. The major fields of use of the one at the Institute include: distribution network problems, composition of complex gaseous mixtures in equilibrium at high temperatures, determination of contents in equations of state, and calculation of results of mass spectrometer analyses. In addition, the use of the computer has greatly simplified and expedited research cost accounting at the Institute.

Since the problem of distribution network analysis is of such importance to the industry, you may be interested in a brief description of the computer's application to such a problem. Networks containing 1200 pipe sections can be handled in the computer. For a typical network containing 433 pipe sections and 102 loops, approximately 60 man-hours are required for preparing the map, coding the data on tape for the computer, computing and checking, and plotting results on the map. In this particular problem, the computer

makes 34 iterations at 14 minutes each. (The process by which the computer makes successive approximations is known as iteration). The results of the solution may be obtained to any desired degree of accuracy, depending upon the number of iterations. Each additional iteration requires computer time, so in the solution of a practical problem it is necessary to strike a balance between accuracy and computer time.

Dr. M. A. Elliott, Director of the Institute of Gas Technology, speaks of his research institution in this manner:

"These facilities have been provided by the gas industry for study of problems of interest to the gas industry. The industry can be justifiably proud of the adequacy of the facilities that it has provided, and the Institute is grateful for being made the custodian of such equipment. It is our sincere hope that a more detailed knowledge of the equipment available may generate ideas for future industry research, and that through the prosecution of this research the Institute may render increasingly greater service to the Industry."

American Gas Association Names Wikstrom PAR Head

S. F. Wikstrom, director of promotion and advertising for the American Gas Association since 1955, has been named director of the Association's PAR Plan. His appointment became effective August 1. He succeeds Allen D. Schrodt, who resigned to relocate in the Southwest. A major PAR activity is the $3 million-a-year national television sponsorship of "Playhouse 90."

Norval D. Jennings, A.G.A.'s advertising manager since 1953, will succeed Mr. Wikstrom as promotion and advertising director. Mr. Jennings' former post will be filled by Charles R. Bowen, promotion manager for the past three years.

A.G.A. also has advanced two other members of the PAR staff. Kenneth F. Muldoon, manager of the New Freedom Gas Home Bureau since 1955, has been appointed promotion manager. He is succeeded by Gerald P. Mullins, formerly assistant to the director of promotion and advertising.

J. Theodore Wolfe, president of Baltimore Gas and Electric Co., Baltimore, and second vice-president of the American Gas Association, has been nominated to serve as president of the Association for a one-year term beginning in October.

Mr. Wolfe is among 30 top executives from gas utility, pipeline and manufacturer member companies throughout the United States nominated to serve as Association officers, directors and section chairmen. Robert W. Otto, chairman of LaClede Gas Co., St. Louis, automatically joins the Board of Directors when his term as A.G.A. president expires in October.

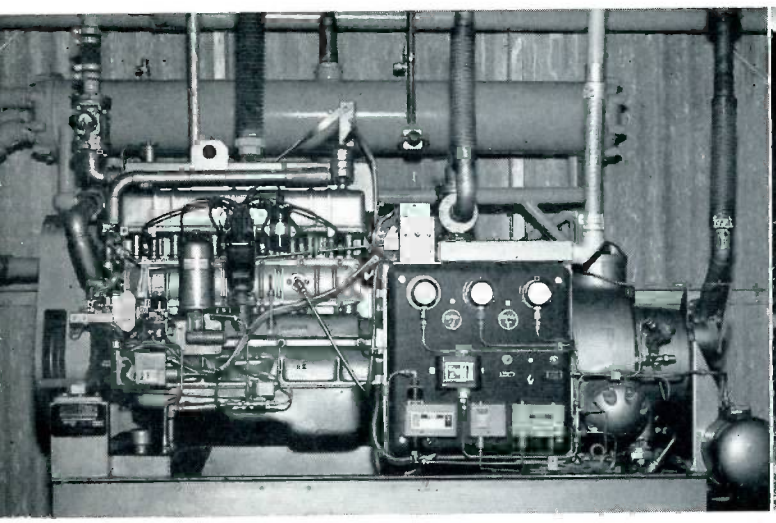
Wister H. Ligon, president of Nashville Gas Co., Nashville, was nominated for first vice-president; L. T. Potter, president of Lone Star Gas Co., Dallas, for second vice-president; and Vincent T. Miles, treasurer of Long Island Lighting Co., Mineola, N. Y., was renominated for treasurer.

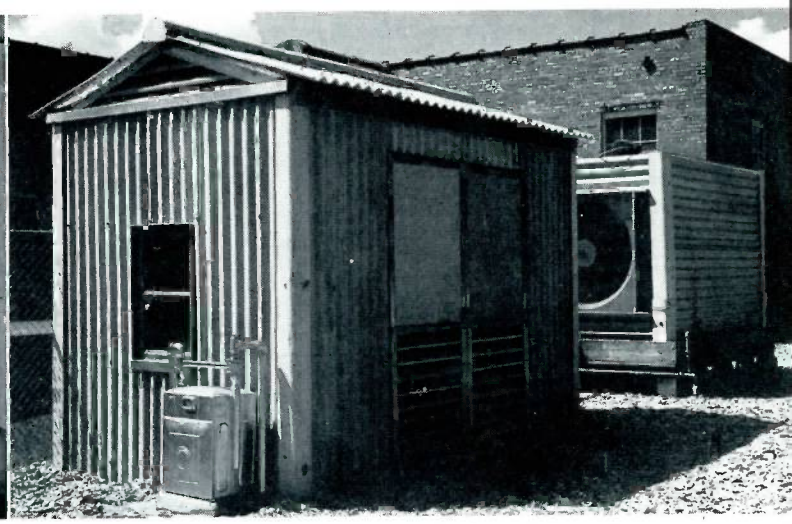
General view of the Appliance Testing Laboratory. The pipe-rack against which the units are placed carries city gas and IGT-produced High-Btu gas, and is connected to a mixing manifold in which a gas of any desired composition can be prepared from cylinder gases.

Gas Units Gain

A total of 3,436 year-round residential gas air conditioning units were shipped during the first six months of 1958, compared to 1,305 units shipped during the same period in 1957.

The industry forecasts shipments in excess of 7,000 residential gas units for 1958, compared with 2,467 shipped in 1957, according to W. W. Selzer, chairman of the A.G.A. air conditioning committee. Mr. Selzer said that the marked upturn in sales of year-round gas units was due to increased sales promotion efforts by gas utilities, to improvements in design and operation of units, and to a substantial reduction in unit prices this year.





Above left, the unit consists of a gas-fired internal combustion engine coupled to a compressor. The unit's capacity is 36 tons. Above right, the unit is housed in this building, which is protected by corrugated asbestos material. In the rear is the forced-draft cooling tower.

Utility Cools Meter Shop

At the United Gas Corporation's Houston meter shop, a recently installed gas-fired air conditioning system is expected to increase efficiency by making employees more comfortable, as well as to provide more effective temperature and humidity control.

A 36-ton Ready Power remote unit, using a gas-driven internal combustion engine to operate the compressor, was selected as the core of the air conditioning system. Located just outside the meter shop, it is housed in a small structure with corrugated asbestos walls, matching the adjacent water tower.

Inside the shop, the air handling unit is suspended from the ceiling in order to conserve floor space. For economy, the ducts are suspended from the ceiling in the cooled area, and therefore require no insulation.

The shop itself is insulated with four inches of glass wool over a ceiling of accoustical paneling.

To reduce the capacity of air conditioning required, a ventilating system was installed to exhaust the heat and obnoxious odors from the 11 soldering furnaces.

The three men in the Houston division of United Gas who are responsible for efficient operation of the meter shop have expressed their extreme satisfaction with the installation. They are C. C. McEachern, division superintendent; R. Frank Nowlin, engineer of operations, and W. P. LeBlanc, supervisor in charge of the meter shop.

"Before the shop was air conditioned," Mr. LeBlanc said, "it was ventilated by several large exhaust fans. While they provided some measure of comfort by moving the air, they did not actually cool the shop. As a result, the temperature during warm summer afternoons often reached the 90's.

"The installation of the air conditioning equipment now provides a uniform temperature of 75 degrees around the clock."

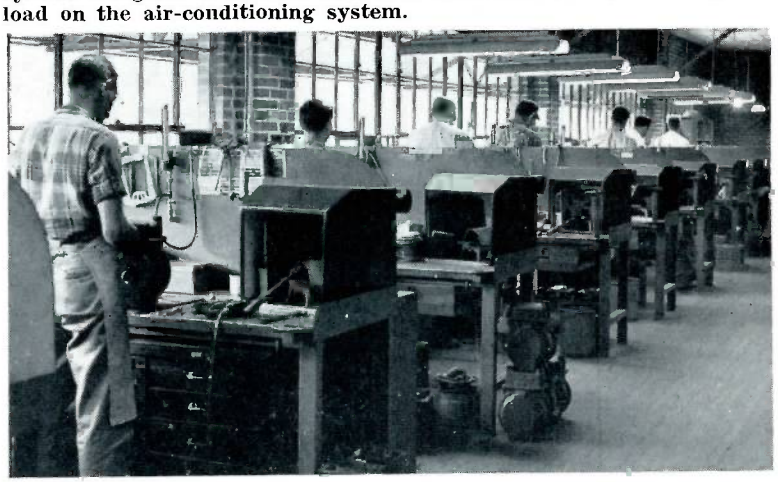
In addition to providing comfort, the uniformity of temperature and humidity is most desirable in certain of the meter shop operations.

For instance, in proving meters after they have been renovated or repaired, it is necessary that the meter bodies be the same as that in the proving room.

"Now that the meter shop and the adjoining proving room are uniformly air conditioned, we have eliminated long waiting periods while the temperature of the meter bodies reaches room temperature," Mr. LeBlanc explained.

Because all the air is filtered, housekeeping has been reduced, while the odors characteristic of an industrial neighborhood have been eliminated.

Hoods for the soldering furnaces are connected to a ventilating system designed to remove heat and obnoxious odors, reducing the load on the air-conditioning system.



Herman Niehaus Appointed: Into Indiana, West Ohio

Mr. Herman Niehaus has been appointed Mueller Co. Sales Representative in the state of Indiana and adjacent counties in Western Ohio, effective August 1, 1958. He replaces Mr. Lloyd W. George, who was accidentally killed in Indianapolis, Indiana, on July 1.

Mr. Niehaus, a 1957 graduate of Millikin University (Decatur, Ill.) with a Bachelor of Science degree in Business Administration, is a native of St. Louis, Mo.

Upon graduation from high school in 1947, he signed a professional baseball contract with the New York Giants, and was assigned to the organization's Erie, Pa., farm club. In 1948, his contract was purchased by the St. Louis Cardinals, and he was sent to Albany, Ga. In 1949, the big first-baseman led the Appalachian League in home runs. The Boston Braves (later the Milwaukee Braves) signed him in 1950, and he was assigned to their

Evansville, Ind., farm club.

The year 1950 also saw his marriage, and entry into the U. S. Army. He was discharged in January, 1952, after spending a year in Korea. More baseball — this time with the Decatur (Ill.) Commodores — preceded his enrollment at Millikin in September, 1953.

Mr. Niehaus joined Mueller Co. on February 3 of this year, and has been undergoing extensive sales training since that time. He, his wife, Pearl, and their four-year-old son, Eric John, will reside in Indianapolis.

Lloyd George Succumbs

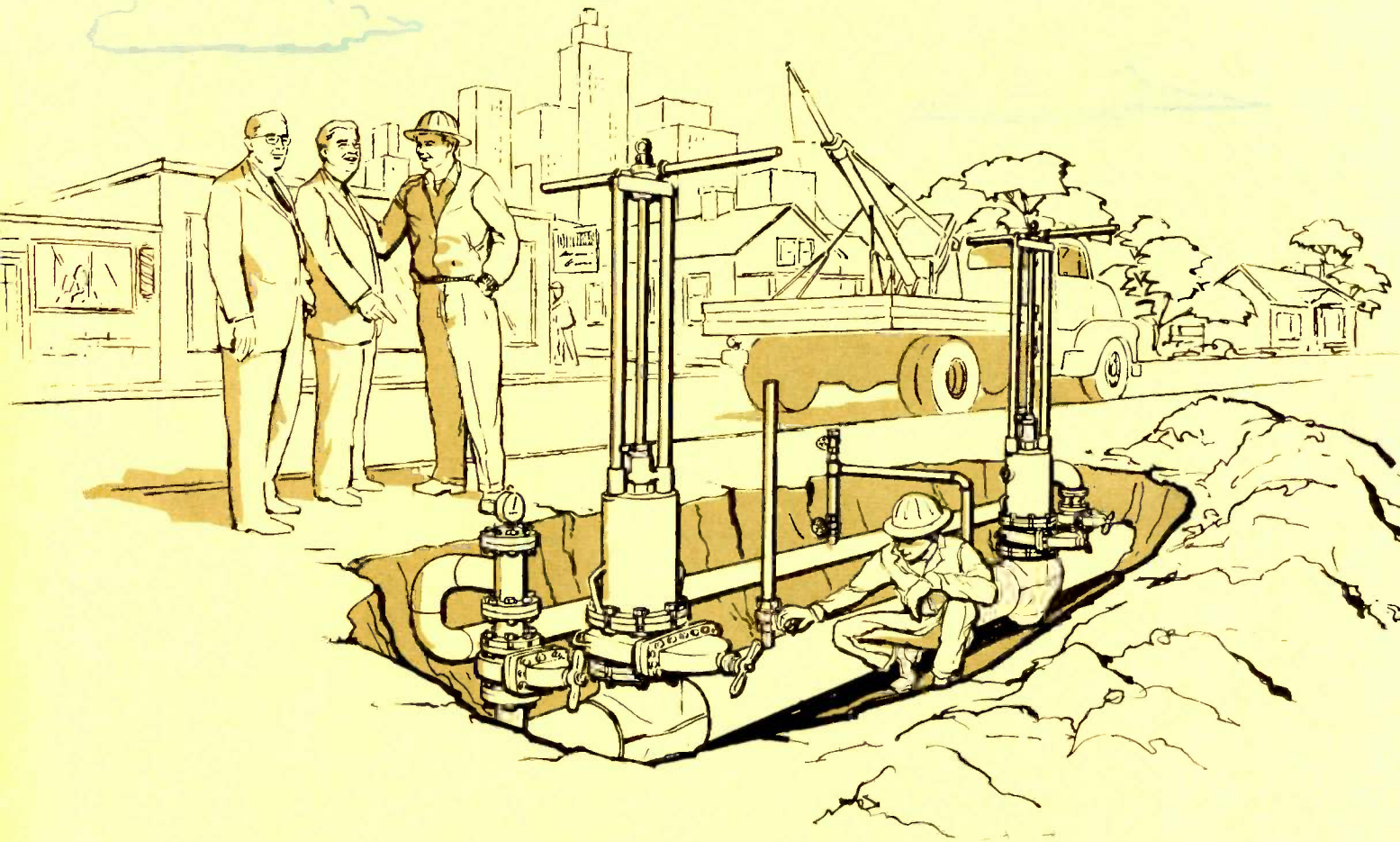
We regret to record the passing of Mr. Lloyd W. George, Mueller Sales Representative, on July 1, 1958. Mr. George was electrocuted in an accident in Indianapolis, Indiana, his home.

He joined Mueller Co. in 1930, and was assigned the sales territory of the city of Detroit, and the state of Ohio. In 1939, he was assigned

the state of Indiana and adjacent counties in the western part of Ohio, which territory he served at the time of his death.

For the past several years, Mr. George has resided in Indianapolis. He is survived by his wife, Hazel, and two married daughters.

The Mueller organization is proud of Lloyd George's long association with us, and we shall cherish his memory.



MUELLER® *line stopper fittings and equipment*

Stop-off lines Safely under pressure!

Eliminate many hazards and service interruptions on your gas distribution system. Mueller Line Stopper Fittings and Equipment permit you to safely stop-off your lines at any point — regardless of the location of regular shut-off valves. Line stoppers may be used *anywhere* on any type of line from ¾″ through 12″.

Yet, customer service need not be interrupted. Gas flow may be conveniently by-passed around the section of line to be worked on. A steady flow of gas downstream supplies customer's demands and keeps pilot lights burning during repairs or modifications. By purging air from the section after work is completed, even "slugs" of air in the line are eliminated.

All operations are performed under pressure without blowing of gas. There is no danger of ignition caused by static electricity that is often generated when gas is allowed to blow.

The use of Mueller Line Stopper Fittings and Equipment adds flexibility to your distribution system and reduces valve maintenance costs, too. Once installed, the fittings may be used to stop-off the line whenever necessary. And these installed fittings require no maintenance of any kind.

Turn the page for the illustrated story of a typical stop-off being made on an 8″ line.

MUELLER NO-BLO ®

MUELLER CO. Since 1857 SERVING the Water and Gas Industries QUALITY

MUELLER CO.
DECATUR, ILL.

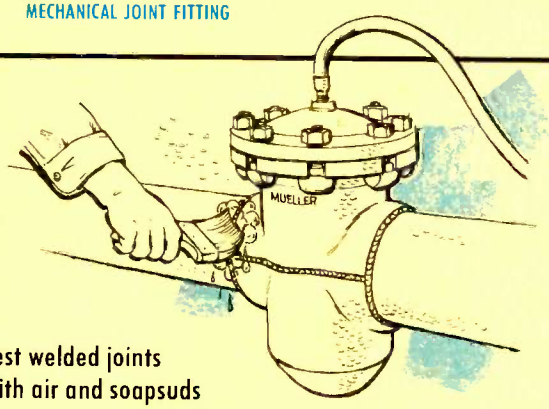
Factories at: Decatur, Chattanooga, Los Angeles;
In Canada: Mueller, Limited, Sarnia, Ontario

HERE'S HOW TO STOP-OFF AN 8" LINE **SAFELY** WITH MUELLER LINE STOPPER FITTINGS AND EQUIPMENT

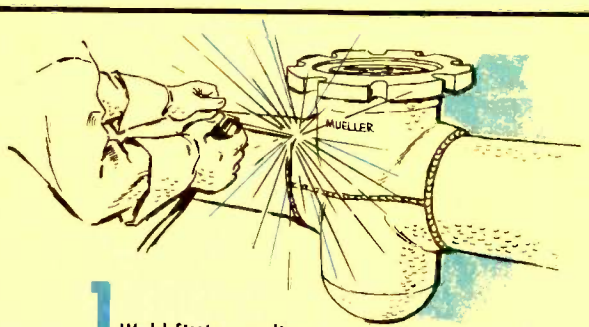
Here is shown the procedure used in stopping-off a line under pressure with Mueller Line Stopper Fittings and Equipment. A single stop-off is illustrated — such as might be used to extend a dead end or to transfer services. To completely isolate a section of main to repair leaks, make tie-ins, run laterals or install or replace equipment, two stop-offs would have to be made. A by-pass line around the isolated section would then carry the flow for uninterrupted service downstream.

WELDING FITTING

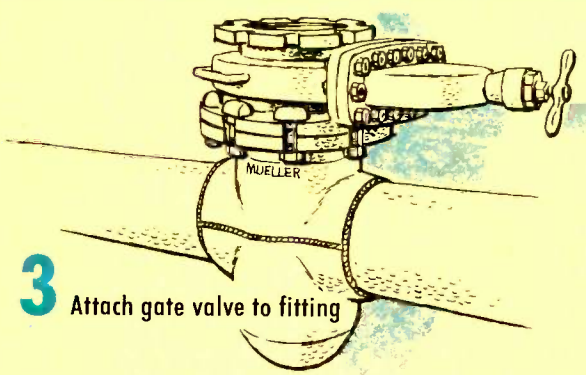
MECHANICAL JOINT FITTING



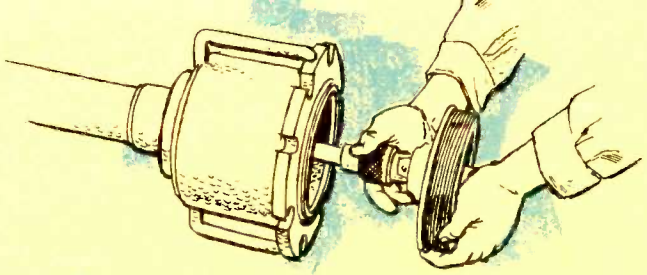
2 Test welded joints with air and soapsuds



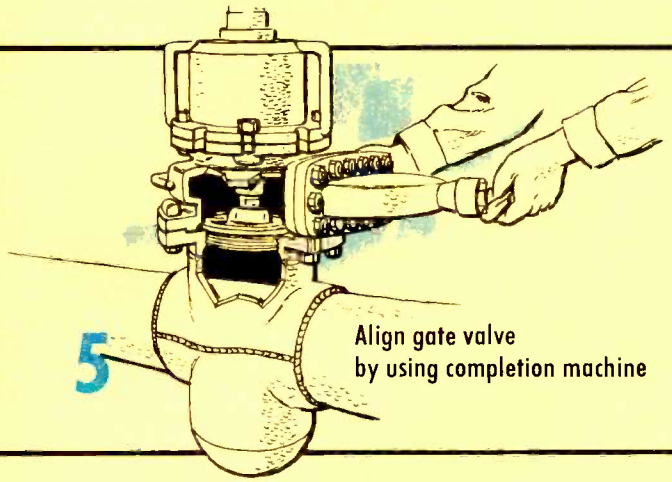
1 Weld fitting to line



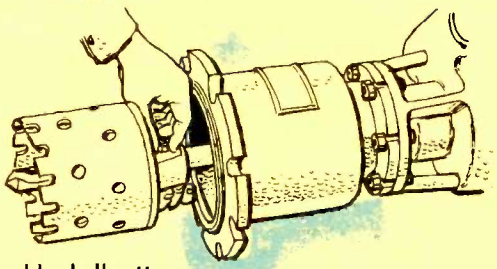
3 Attach gate valve to fitting



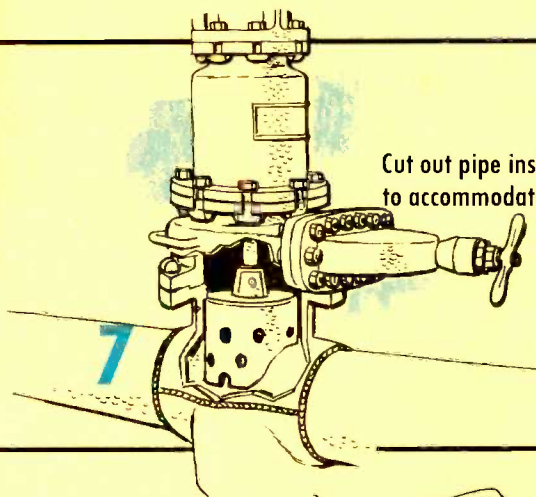
4 Assemble plug and aligning tool to completion machine



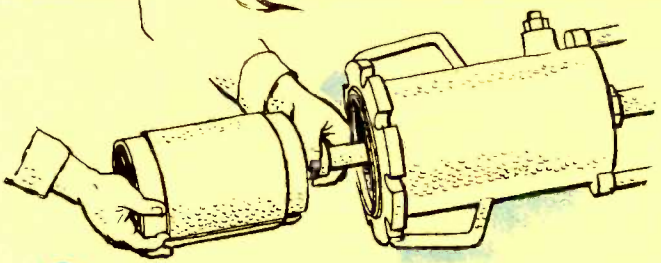
5 Align gate valve by using completion machine



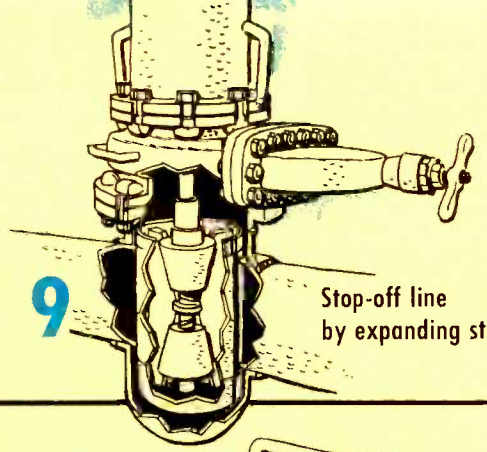
6 Assemble shell cutter, hub and pilot drill to drilling machine



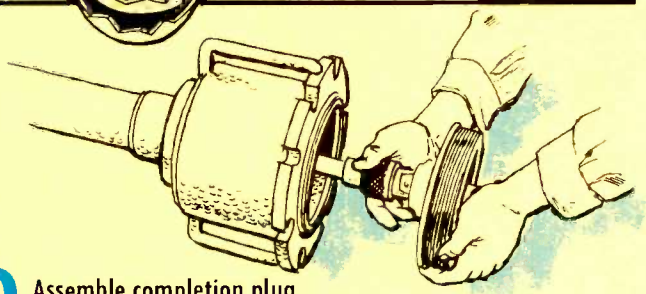
7 Cut out pipe inside of fitting to accommodate stopper



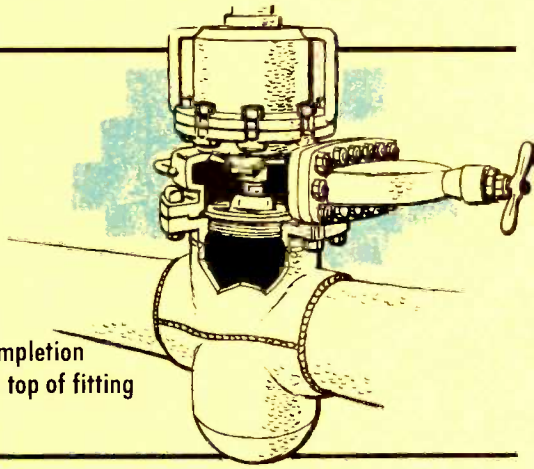
8 Assemble steel wedge stopper to stopping machine



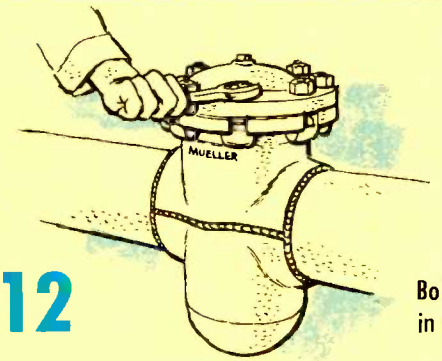
9 Stop-off line by expanding stopper



10 Assemble completion plug and inserting tool to completion machine



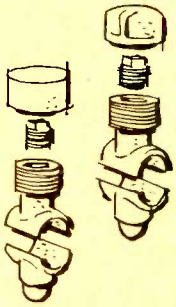
11 Insert completion plug into top of fitting



12 Bolt completion cap in place on fitting

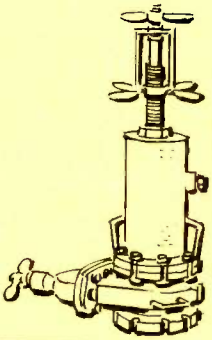
These illustrations quickly outline the major steps in the use of Mueller Line Stopper Fittings and Equipment. Operating instruction manuals, which give complete information, are furnished with each line stopper unit.

Stop-off any line from ¾" through 12"



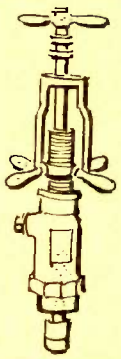
Service Line Stoppers

for ¾", 1", 1¼" lines
Welding fittings for steel pipe
Cast iron threaded caps —
for pressures to 250 p.s.i.
Steel threaded caps —
for pressures to 1200 p.s.i.
(Mueller E-4, EH-1 or T machines are used for all operations.)



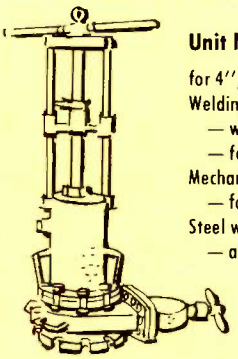
Unit No. 3

for 6" and 8" lines
Welding fittings for steel pipe
— with 150, 300, 400 or 600 pound flanges
— for pressures to 1200 p.s.i.
Mechanical joint fittings for steel or cast iron pipe
— for pressures to 175 p.s.i.
Stop-off pressures to 60 p.s.i.



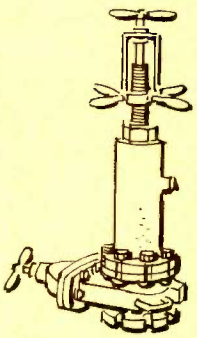
Unit No. 1

for 1½" and 2" lines
Welding fittings for steel pipe
Cast iron threaded caps —
for pressures to 250 p.s.i.
Steel threaded caps —
for pressures to 1200 p.s.i.
Mechanical joint fittings for steel or cast iron pipe
Solder-braze fitting for Type K copper pipe —
for pressures to 125 p.s.i.
Stop-off pressures to 125 p.s.i.
(Mueller D-4 or DH-2 machines are used to drill the pipe.)



Unit No. 3SW

for 4", 6" and 8" lines
Welding fittings for steel pipe
— with 150, 300, 400 or 600 pound flanges
— for pressures to 1200 p.s.i.
Mechanical joint fittings for steel or cast iron pipe
— for pressures to 175 p.s.i.
Steel wedge stopper used to stop-off
— at pressures to 230 p.s.i.



Unit No. 2

for 3" and 4" lines
Welding fittings for steel pipe
— with 150, 300, 400 or 600 pound flanges
— for pressures to 1200 p.s.i.
Mechanical joint fittings for steel or cast iron pipe
— for pressures to 175 p.s.i.
Stop-off pressures to 100 p.s.i.

Unit No. 4SW

for 10" and 12" lines
Welding fittings for steel pipe
— with 150 or 400 pound flanges
— for pressures to 800 p.s.i.
Mechanical joint fittings for steel or cast iron pipe
— for pressures to 175 p.s.i.
Steel wedge stopper used to stop-off
— at pressures to 500 p.s.i.

(Mueller CC-36 or C1-36 machines are used to cut the pipe when using units No. 2, No. 3, No. 3SW or No. 4SW. Fittings for these units are similar to those shown on preceding pages. Completion plugs for fittings from 3" through 12" have an "O" ring seal and built-in equalizing valve.)

For the full story and specifications on Mueller's complete line of line stopping equipment, consult your Mueller Representative or write direct.

Ask for your free copy of Booklet No. 5, "NO-BLO® Methods and No-Blo Applications", too.

MUELLER NO-BLO ®

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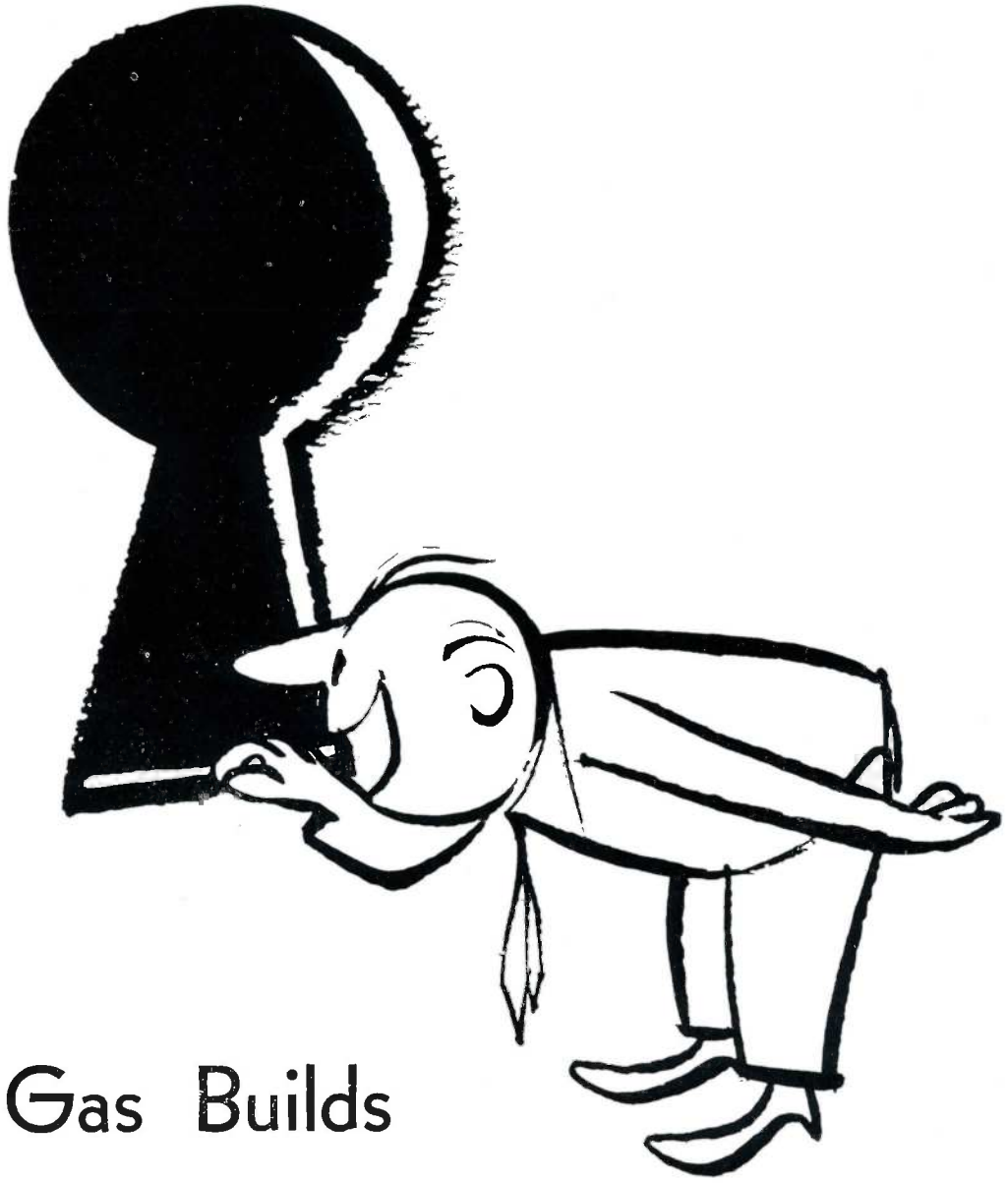
October 13-15



Gas Builds

A Greater America

Strictly OFF THE RECORD

A joint checking account is never overdrawn by the wife—it is just underdeposited by the husband.

Inflation: When you take your money out in a shopping bag and bring home your purchases in your pocket.

You will live longer if you don't drink, smoke, gamble or stay out late. Anyway, it will seem a lot longer!

Business is like an automobile; the only way it will run by itself is downhill!

A young man had to rush his wife to the hospital, but they didn't quite make it in time. The baby was born on the lawn outside the hospital. In time, a bill came and among the items listed was one which read: "Delivery Room, $35.00."

The new father indignantly returned the bill, pointing out the injustice and demanding an adjustment.

The bill came back with the following revision: "Greens Fee, $35.00."

One morning before breakfast a woman was rummaging through her husband's desk and came across a card with "Helen Gray, Belmont 4421" written on it. When her husband came down to breakfast, she asked: "What's this card?"

"Don't worry about that," he said. "It's a horse I bet on."

"So Helen is a horse, eh?" she exclaimed. "And what is this telephone number?"

"That's Belmont Park, and the odds are forty-four to one. See?"

So he got away with that and went to work. That night, when he came home, his wife was waiting at the door.

"Hello, darling," he said gayly. "Did anything happen today?"

"Nothing," she said sweetly, "except that your damned horse called!"

A woman driver is a person who drives like a man — only she gets blamed for it.

It is wondered why the government is withdrawing two-dollar bills from circulation, just at a time when a two-dollar bill comes in so handy for buying a dollar's worth of groceries.

Good vacation advice: Every time you feel the need of exercise, lie down and rest until the feeling goes away.

Middle age: When you divide your time between worrying how your children will turn out and when they'll turn in.

A Princeton psychologist declares that men know more about women than vice versa. Much of what men know, however, consists of what the women told them, and probably isn't so.

This is the time of year when people load up their cars with children, relatives, the cat and dog, the radio, the T.V. — and take it all with them. This is that famed American institution known as "getting away from it all."

A cranky old man invested in one of the new hearing aids that are almost invisible. A few days later he returned to the point of purchase to express his delight.

"I'll bet your family likes it, too," said the salesman.

"Oh, they don't know I've got it," said the old man. "And am I having a ball! In the past two days I've changed my will twice."

Johnny, who had acquired the habit of using profane language quite extensively, was warned by his mother never to say such words again, or she would pack his clothes and turn him out.

Johnny promised his mother that he wouldn't but it was not very long until she heard him swear. She immediately packed his clothes and put him out of the house.

The boy stood on the steps for approximately an hour, while his mother watched him from the window. Finally, she opened the door and asked him why he did not leave. He replied as only a five-year-old can.

"I was wondering where the hell I'll go."

Did you hear about the first grade teacher who sent her morning attendance report to the principal marked, "Help! They're all here."?

Gent weeping copiously in his Scotch and soda: "For twenty wonderful years my wife and I were deliriously happy."

"Then what happened?" asked the bartender.

"We met!"

Husband-hunting is probably the only sport in which the animal that gets caught has to buy a license.

Today's teen-agers have adopted a new form of 3-R's—reeling, 'rithing and rhythmatics.

I often try to argue with my wife, but every time I do, words flail me.

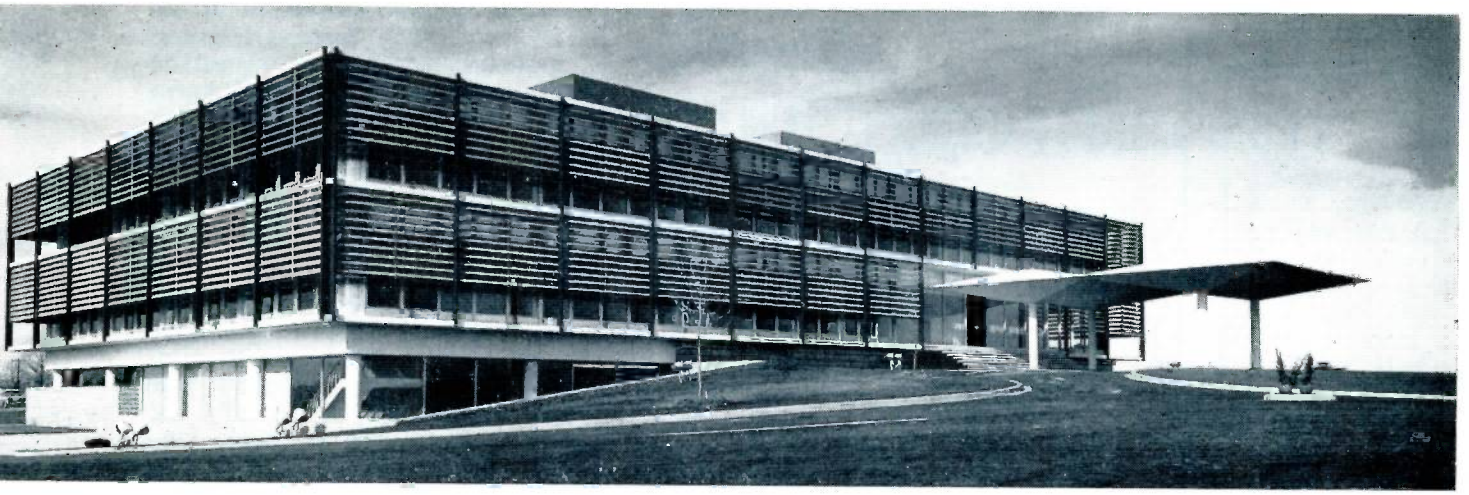
Reputation is character minus what you get caught at.

The lovely young model was looking very glum. "What's the matter, Tina?" asked the photographer.

"It's my boyfriend," said Tina. "He's lost all his money."

"Ah," said the photographer sympathetically. "And I bet you're sorry for him."

"Yes," said Tina wistfully. "He'll miss me."



The beautiful new general office building of the Missouri Public Service Company, near Kansas City.

Missouri Public Service Receives Architecture Award

Seated is Mr. Ralph J. Green, Chairman of the company's Board of Directors. Standing is his son, Richard C. Green, who has recently taken over operation of the company as its president.

AN intriguing and thoroughly modern general office building, which even during its construction, some 12 miles east of downtown Kansas City, evoked much passer-by comment, has received the top medal award for architecture in annual competition by the Kansas City chapter of the American Institute of Architects.

The Kansas City Star reported "the strikingly advanced design of the building makes the structure a new showplace on the metropolitan scene."

The building is the product of the forward thinking of a young group of executives of the Missouri Public Service Company, electric-gas utility serving 218 communities in 28 counties in Western Missouri and a part of Kansas City.

Compared with other buildings in the area, the structure is unique in its use of sunlight. The building's walls are of glass, shaded by long, flat canopies and horizontal suntronic louvers which are automatically controlled by the sun's rays. The louvers open and close according to the time of the day,

season of the year and relation to the sun's orbit. The building was erected at a cost of $1,000,000.

President of the fast-growing company is Richard C. Green, 32, a third generation of the Green utility family and prime mover in the decision to build a headquarters facility in keeping with the age and times in which we live.

Ralph J. Green, father of the president, is chairman of the board of directors and is continuing active in the company. Grandfather and father of the two officers was the late Lemuel K. Green, founder of the Missouri Public Service Company and a pioneer in central station electric service in Kansas and Missouri.

While concerned with modern application of exterior design and the most practical use of interior space, Richard Green also desired to acknowledge, in the building's overall effect, the stability of hallowed time which has passed. He commissioned Arthur Kraft, renowned Kansas City artist, to design a mural which adorns the entrance foyer of the new general office building.

Kraft's work on the mural is described as "one of the most colorful, imposing works of art in the Mid-West, a mosiac mural 30 feet long and 7 feet high composed of more than 350,000 tiles of Byzantine glass. Tiles for the mural were imported from Ravenna, Italy where artisans have been producing them for centuries. The tiles, or tessarae, are identical to those used in the Byzantine art of the sixth century and in medieval European art."

The subject matter of the mosiac is the history of the Green family in the utility industry since 1908 when Mr. L. K. Green bought a 10-kilowatt generator for his Osborne, Kansas, flour mill, became interested in the commercial use of electric power and started selling electricity.

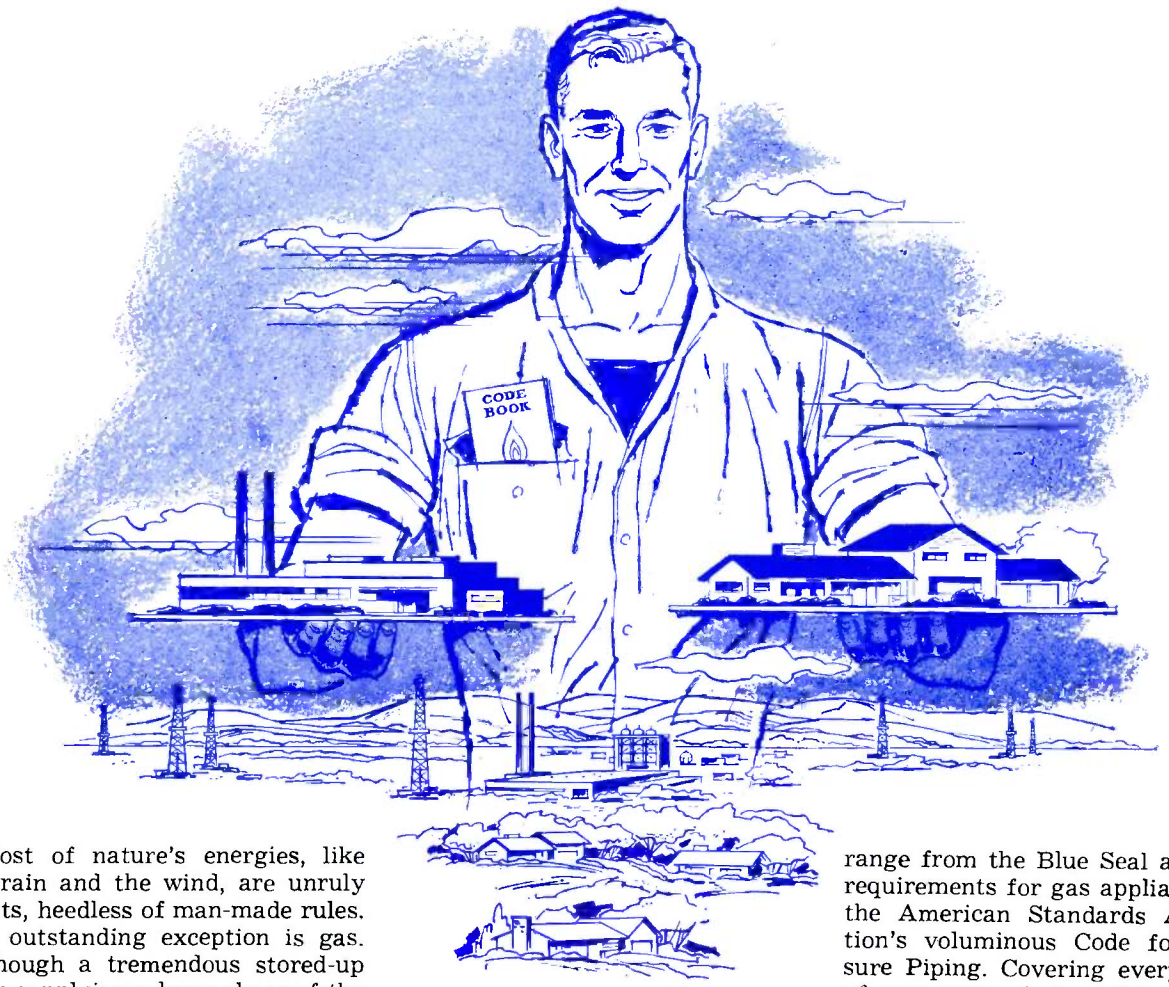
In naming the building for the top award in 1957, the judges had this to say of the structure:

"The circulation of the plan is well organized. There is a logical distribution of functions, all in pleasing relationship. The general structure is simple and positive. The use of color on the interior is exceptionally pleasing, and the use of mosiac decorative wall surfaces most commendable. In general, the relationship of the building to the site and the interiors to the building were so pleasing that the unanimous opinion of the jury was that this was indeed an outstanding accomplishment. The use of sun protection is one of the most practical and effective we had ever seen."

Architects retained by the company to carry out company planning are Kivett & Myers & McCallum.

This is a photograph of the front entrance of the new award-winning building. Behind the receptionist's desk is the Arthur Kraft mural described in the story above.

GAS the gentle GIANT



Most of nature's energies, like the rain and the wind, are unruly giants, heedless of man-made rules. One outstanding exception is gas.

Though a tremendous stored-up force supplying a large share of the nation's energy needs, gas is a gentle giant. While serving man in a thousand ways, gas is guided by intricate codes laid down by man for its safe and dependable behavior.

As a result, gas consistently ranks among the lowest of all known causes of fires and injuries.

You probably consider it most improbable, for instance, that you will ever be struck by lightning. Yet, according to statistics, more than three times as many homes and buildings have been set on fire by lightning as by gas or a gas appliance!

The few accidents which do occur are almost invariably due to noncompliance, by some communities, with the codes and standards which have been set up by the gas industry, in cooperation with other national groups, for its own regulation. If the gas industry succeeds in its efforts to secure uniform adoption of these codes everywhere in the country, gas will be able to achieve an almost perfect safety record.!

Gas already has gone far toward reaching this goal. Just as forest fire prevention depends on a combination of laws and voluntary codes of conduct observed by campers, so are the safety and convenience of gas guarded—but much more effectively—by a combination of legal and voluntary codes.

The voluntary codes—"codes of honor" they might be called—range from the Blue Seal approval requirements for gas appliances, to the American Standards Association's voluminous Code for Pressure Piping. Covering every detail of gas transmission, this code is observed by more than 95 per cent of all gas pipeline and utility companies.

Another code widely observed on a voluntary basis is the National Fire Protection Association's code for Gas Piping and Gas Appliances in Buildings. Detailed standards cover every item of gas equipment and service, at the point of use, which could possibly affect the health, safety or welfare of the final customer.

Other recommended codes widely followed are those prepared by national associations of architects, builders, plumbers and others concerned with safety and efficiency in home, office or factory.

Because of their thoroughness, expert preparation and wide ac-

Around the Gas Industry

The A.G.A. has chosen three leaders in the public relations and publications fields to serve as judges in its second annual PUBLIC RELATIONS ACHIEVEMENT AWARD competition.

Kenneth W. Haagensen, president of Public Relations Society of America and director of public relations, Allis-Chalmers Mfg. Co.; James L. Macwithey, president of the American Public Relations Society and director of public relations, Bristol-Myers Co.; and Francis X. Welch, editor of Public Utilities Fortnightly, will make the contest evaluations.

Trophies and certificates will be awarded at the A.G.A. Convention at Atlantic City in October for ". . . outstanding contributions to greater understanding of the gas industry and modern gas service." The awards recognize solution of a specific public relations problem during the past year, or positive achievement during the year in a continuing PR activity.

First-place winner last year was Southern California Gas Co. for its "Facts About Natural Gas" program.

The Federal Power Commission has authorized Southern Natural Gas Company, Birmingham, Alabama, to construct and operate about 12 and one-half miles of pipeline and a measuring station to enable it to receive into its system natural gas produced in the Tantine Field in Plaquemines Parish, Louisiana. The estimated cost of the facilities is approximately $886,510.

Direct assistance to gas companies in organizing and conducting speakers bureaus to promote public relations in their communities has been provided by the A.G.A. in a new "Speakers Kit" prepared by the A.G.A. Public Information Bureau.

A how-to-do-it booklet, titled "Face to Face," offers suggestions for setting up a speakers bureau. This sixteen-page presentation features practical pointers on how to get started, the methods of selecting and training company speakers, and suitable subject matter and techniques.

The kit also includes a number of sample speeches which can be easily adapted for local presentation, plus statistical and background information on the gas industry.

All types of gas-fired equipment for residential central heating scored gains in June, with furnaces up an exceptional 27.6 percent, it is shown in the latest GAMA summary of manufacturers' shipments. Gas water heaters also showed gains over June, 1957, while ranges narrowed the gap by which monthly shipments have been trailing last year's.

Manufacturers shipped 70,700 gas furnaces of the forced warm air and gravity type during June, Edward R. Martin, GAMA director of marketing and statistics, reported. This compares with 55,400 a year earlier and 56,600 in May of this year.

The 228,100 automatic gas water heaters shipped in June represented a 7.7 percent gain over the 211,700 for the same month last year.

Martin's statistics for each category are the result of telegraph surveys accounting for a majority of American production. Figures thus obtained are expanded to yield national shipment totals.

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ceptance, many of these voluntary codes are in turn adopted as part of the requirements laid down in the laws or ordinances of states and municipalities. Federal agencies such as the Federal Housing Administration, Corps of Engineers, Air Force and others also require conformity to the American Standards for gas and gas appliances.

As legal requirements, regulations on gas facilities may turn up in building codes, plumbing codes, fire prevention ordinances or zoning laws.

In all their city-by-city variations and duplications, gas codes and ordinances would fill a shelf many times five feet long. Therefore it is impossible to tell briefly of the multitude of details covered.

However, an example or two may indicate the scope and thoroughness of the codes.

Take the American Standard Code for Pressure Piping, for instance. In a chapter on Power Piping Systems, under one heading, "General Requirements," exact minimum standards are set forth under such subheadings as: Materials; Flanges; Valves; Fitting; Bolting; Pipe Threads; Joints; Gaskets; Cleaning; Tests; and so on through a long list. In its 136 pages, the code covers, as you may imagine, just about every nut and bolt connected in any way with gas piping!

The code on Installation of Gas Piping and Gas Appliances in Buildings, which is more likely to affect the average gas user, is less technical but just as exacting. Main headings cover Gas Piping Installation, Appliance Installation, Installation Requirements for Specific Appliances, Venting of Appliances, and Procedures to be Followed to Place an Appliance in Operation. Items covered go from floor clearances to burner adjustments at high altitudes, and include every related detail in between. This code has been adopted in the building ordinances of hundreds of towns and cities in the United States.

As more communities make law the codes so carefully worked out for the protection of the public, gas service will become increasingly standardized and dependable everywhere in the country. More and more, gas will earn its reputation not only as nature's perfect fuel, but as one of America's safest servants.

LOOKING BACKWARD

In the issue of the MUELLER RECORD dated **January, 1934,** we find this humorous anecdote about automobiles:

"Henry Ford tells this story on himself. He was in the habit of driving a Ford car to and from his factory in Detroit and his summer home just outside Detroit. One evening, on his way home, he came across a man on the road who could not get his Ford started. Henry Ford got out of his machine, and in a few minutes managed to get the other machine to move.

"The man, very much pleased, offered Ford two dollars for his trouble, but the money was promptly refused. The man, insisting, said that it would have cost five dollars to be towed back to town.

" 'Keep your money,' said Ford. 'I have more than I could possibly spend.'

" 'What?' said the man. 'You mean to say you have that much money and you ride around in one of these damn things?' "

We sometimes fail to appreciate what we have in the way of luxuries and even commonplace items today until we read what writers of twenty years ago wrote with such enthusiasm, such as the following from the issue of **January, 1934:**

"From cans we can now go to eating from collapsible metal tubes, the bill of fare including icing for cakes, fish pastes, honey, peanut butter, salad dressings, sandwich dressings and soup pastes. A radio dealer gives a year's insurance on each set against loss or damage by lightning, fire, theft, wind or explosion while in an owner's car.

"A Buffalo (N. Y.) dealer offers to place electric refrigerators in a home without cost for a given period. A trial by the housewife makes the closing of the sale easy.

"A new cigarette lighter, requiring only a few drops of lighter fluid, acts as a match.

"Retreading old tires is now accomplished by vulcanizing a new tread upon the worn surface of the old tire.

"Made of stainless steel, a new flexible, single-row ice-cube tray for mechanical refrigerators is now on the market. A simple flexing of the tray frees the cubes.

"Cupboards, dressing tables and hampers in various styles are now made for bathrooms."

Problems of water waste are not new to the industry, as pointed out by this entry in the **March, 1934** RECORD:

"The estimated average waste of water in New York is 200,000,000 gallons per day."

If you are one of those persons who takes great delight in between-meal snacks, this item from the issue of **May, 1934,** should make you feel good:

"And now comes a doctor who upsets a lot of beliefs regarding health rules which have been accepted since the pilgrims hit our shores. . . .

"He says piecing between meals is not harmful, which we believe. We never could understand why a man should eat at stated intervals, instead of doing as any other animal — grab a snack whenever hungry. Eating habits are "aesthetic and social habits" hedged in by a lot of crazy-shaped dishes for each course, and an army of spoons, forks and "jim cracks" to hamper a good old shoveler who in emergencies can do a first class, though rather noisy job with nothing but fingers and a spoon. . . ."

Remember how much fun we all used to have with such tongue-twisters as "Peter Piper picked a peck o' pickled peppers . . ."? This one, from MUELLER RECORD of **June, 1934,** tops them all:

"Sudden swallows swiftly skimming,
Sunset's slowly spreading shade;
Silvery songsters sweetly singing
Summer's soothing serenade.
Susan Simpson strolling sedately,
Stifling sobs, suppressing sighs,
Seeing Stephen Slocum stately,
She stopped, showing some surprise.
'Say,' said Stephen, 'sweetest sigher,
Say, shall Stephen spouseless stay?'
Susan, seeming somewhat shyer,
Showed submissiveness straightaway.
Summer's season slowly stretches,
Soul sought soul successfully.
Six September seasons swelter,
Six sharp seasons snow supplied;
Susan sat in sofa's shelter,
Six small Slocums side by side.

Are you hard on woman drivers? The same issue as above describes one man who wasn't:

" 'I'm so sorry,' said the woman. 'It was all my fault.'

" 'Not at all, madam,' the man gallantly responded. 'I was to blame myself.'

" 'But I insist the fault was mine. I was on your side of the road!'

" 'That may be true; but, my dear madam, I am responsible for the collision. I saw you coming blocks away, and I had ample opportunity to dart down a side street.' "

From the July, 1934, RECORD, come a few items for "Believe it or Not":

"You don't have to take our word for it, but here are some geographic oddities that we will wager you were never taught in school. The National Geographic Society is given credit for compiling them.

"The city of Reno, Nevada, is one hundred miles farther west than Los Angeles.

"Jacksonville, Florida, is farther west than Cleveland, Ohio.

"One travels south from Detroit to reach the nearest part of Canada.

"In Panama, the sun rises in the Pacific and sets in the Atlantic—due to a gigantic bend in the isthmus.

"The city of New York lies west of the Pacific — at least, that part that touches Africa."

LOOKING BACKWARD

From the **July, 1934, MUELLER RECORD** comes this tongue-twister:

"If a Hottentot taught a Hottentot tot
To talk, ere the tot could totter,
Ought the Hottentot tot be taught
To say ought or nought
Or what ought to be taught her?

"If to hoot and toot, the Hottentot tot,
Be taught by the Hottentot tutor,
Ought the tutor get hot, if the Hottentot tot,
Hoot and toot at the Hottentot tutor?

Did you have trouble concentrating in the classroom during your school-days? One young lady, mentioned in the **August, 1934, issue** certainly did:

"Someone once said, 'Men may come, and men may go, but mistakes go on forever.' Such were the thoughts of one of our city librarians yesterday when a timid-looking girl of perhaps nineteen years accosted her, asking if she had a book entitled 'Oranges and Peaches.'

"A most diligent search proved that no such book was in the possession of the library.

" 'Are you sure that 'Oranges and Peaches' is the name of the book?' asked the librarian.

" 'Yes, I believe that's what the professor said to get,' was the answer.

" 'Who is the author?'

" 'Darwin.'

"Imagine the surprise of the librarian when it dawned on her that the book desired was Darwin's 'Origin of the Species.' "

It is difficult to believe that a modern politician can claim brevity as one of his virtues. Perhaps this has always been a difficult claim to make, with one notable exception. From the **RECORD of November, 1934:**

"The late President Coolidge was a taciturn man. He was as thrifty in the use of words as he was thrifty in the use of money. We all remember how he ended his possible candidacy with: 'I do not choose to run.' Six small words. Most politicians, eligible to the high office, would have required several columns in a newspaper to explain why they did not choose to run. As quiet and unobstrusive as he was, he still had a sense of humor.

"Mrs. Ruth Hanna McCormick had been insistent that President Coolidge appoint a foreign-born man to a Federal judgeship, but failed to get an affirmation or a negative answer from the silent man in the White House. Finally, he consented to receive a foreign delegation from Chicago, which delegation was coming in support of their man for the judgeship.

"The men came in, shook hands, sat down, and remained silent. So did the President. The situation was somewhat embarrassing. Everybody, including the President, sat staring at the carpet.

"Finally the President broke the spell with: 'Mighty fine carpet.'

"A smile and silent assent by the visitors.

" 'New one. Cost a lot of money.'

"Continued silence.

"And the President again broke it with: 'She wore out the old one trying to get you a judge.'

"And the visit came to an end."

This item from the **May, 1935, RECORD** supports those who are disgusted by false advertising claims:

"A newspaper says, 'Our eggs are good. For example, someone brought in a hen's egg with three yolks. This happens, they say, once in 25 to 50 million eggs.' As Grandpa used to remark with rising inflection, and a decided twinge of sarcasm, 'They say?'

"More interesting than this to our persistent thirst for knowledge is the name of the person who counted 25 to 50 million eggs to determine the frequency of the triple-yolked egg. He must have been addled when he finished. Continuing in the presentation of poultry oddities, the newspaper says: 'In the mercantile exhibit in Chicago, is a jet black duck egg, laid by a white duck fattened on yellow corn and green grass.'

"In the absence of information on the color of the drake, we opine that the duck ate coal tar. Ducks, like pigs, are not very choicy or discriminating in the character of their food."

Just what we always wanted to know! The **July, 1935,** issue lists these things to do if you are trapped in a sunken submarine:

"Look for worms to fish with.

"Tell sea stories.

"Think how lucky you are to be inside, where it's dry.

"Re-write 'Twenty Thousand Leagues Under The Sea.'

"Take the temperature of the water.

"See how hard you can hit a torpedo without exploding it."

The **January, 1937,** issue of the **RECORD** carried an item which foretold a great catastrophe:

"In spite of peace protestations, various countries of the world are in pretty fair shape to battle, according to figures recently released by the League of Nations, which finds: 'Throughout the world 8,200,000 men are permanently under arms. Of this number, 545,000 are attached to navies. Since 1931-32 world armies have increased by 1,700,000 men . . . . The figures released by the League include only admitted permanent armed forces and not so-called parliamentary or semi-permanent military organizations, such as Germany's labor units.' "

Is this **YOUR** copy of the October **MUELLER RECORD?** If not, send your name, title and address (including zone number) to editor, **MUELLER RECORD,** Mueller Co., 512 W. Cerro Gordo, Decatur, Ill. We will be happy to add your name to our growing list.

The American Red Cross provides shelter to anyone in time of crisis. Remember its fine work, and GIVE GENEROUSLY!