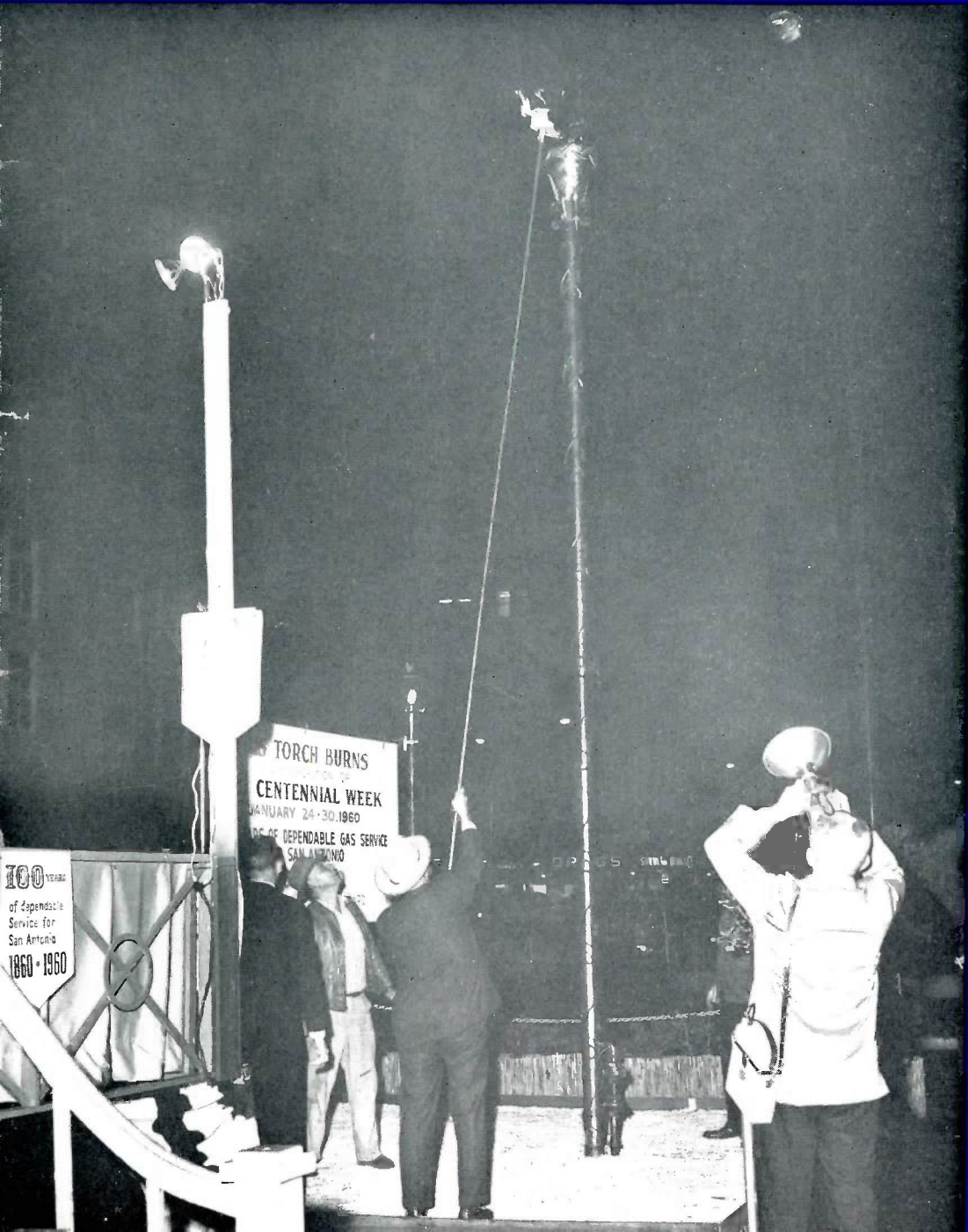


San Antonio Celebrates —



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JACKSON KEMPER

Mueller Co. is pleased to announce the appointment of Mr. Jackson Kemper as Executive Vice-President. Mr. Kemper succeeds Mr. W. H. Hipsher, who has resigned due to the condition of his health. Mr. Kemper was formerly vice-president and general manager of the Forge and Fittings Division of the H. K. Porter Co., Inc.

Mr. Kemper, 51, who has been living near Boonton, N. J., received a bachelor of science degree from Hobart College, Geneva, N. Y., in 1934. He holds membership in several professional organizations.

He and his wife, Ann Elizabeth, have three children: Jack, Jr., 18, who is a freshman at Hobart College; William Frederick, 13; and Timothy Wood, ten months old.

In announcing the resignation, Mueller President A. G. Webber, Jr. said: "During the more than fifteen years of service in the Mueller organization, Mr. Hipsher made a good record as a diligent, conscientious and competent executive.

"It is unfortunate for both him and the company that his ill health, which became a matter of concern about a year ago, has not responded to treatment and does not permit him to continue in his position.

"His resignation was accepted reluctantly and with regret."

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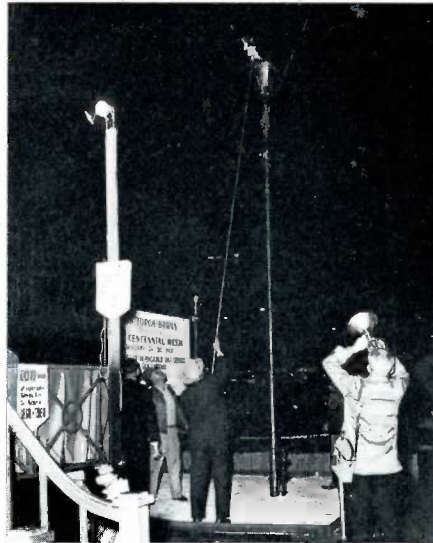


SINCE 1857

Quality Products for the
Waterworks and Natural Gas
Industries



The name **MUELLER** is a registered
trademark of Mueller Co.



OUR COVER this month shows W. E. Simpson, retiring chairman of the City Public Service Board, lighting the 20-foot gas torch that burned during the Gas Centennial Week in San Antonio, Texas, marking the 100th anniversary of the city's gas system.

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- 20 **A MESSAGE FOR THE FUTURE**



The best evidence of a growing gas distribution system is the laying of new pipelines for better service for the increasing number of customers. Workmen here are using modern methods to lay this 18-inch natural gas line as

the San Antonio Gas System begins its second century of service. The system now serves about 160,000 customers and its lines stretch a total of 1,700 miles.

San Antonio, Texas

One Hundred — And Still **GROWING**



Some dreams and foresight and \$120,000 were all that were needed 100 years ago to start a gas system which now serves 160,000 persons in San Antonio, Texas and represents an investment of more than 30 million dollars.

The 100th anniversary of gas service in San Antonio was marked earlier this year by a week-long observance that featured the lighting of a 20-foot tall gas torch in front of the historic shrine of Texas liberty—the Alamo.

The author of the story of gas in San Antonio was a man by the name of S. R. Dickson.

One hundred and two years ago, Mr. Dickson believed there to be a profitable future in the manufacture and distribution of gas and set himself to the task of raising enough capital with which to finance a small plant to accomplish this goal.

His money-raising efforts succeeded in getting together the sum of \$120,000. Having so girded himself financially, he applied to the city of San Antonio for a franchise to manufacture and distribute gas to the citizens.

His request was granted in 1858, but it was not until January 26, 1860, that his company finally incorporated by special act of the Texas Legislature.

Mr. Dickson built his plant on Houston Street, where the San Pedro Creek intersects. He made his first gas by distilling resin brought in from the north by boat to the old and no-longer-existent port of Indianola on the Texas coast. From there, the resin was transported overland by ox wagon to San Antonio.

The price of gas at that time was \$7 per thousand cubic feet. When the railroads came in, the company, known as the San Antonio Gas Company, began to manufacture gas from coal which was brought in all the way from Pennsylvania. The cost of gas then went down to \$5 per thousand cubic feet. Today, the same amount costs the residential user no more than 84 cents, and it contains twice the heat units as the same amount manufactured in the 1800's.

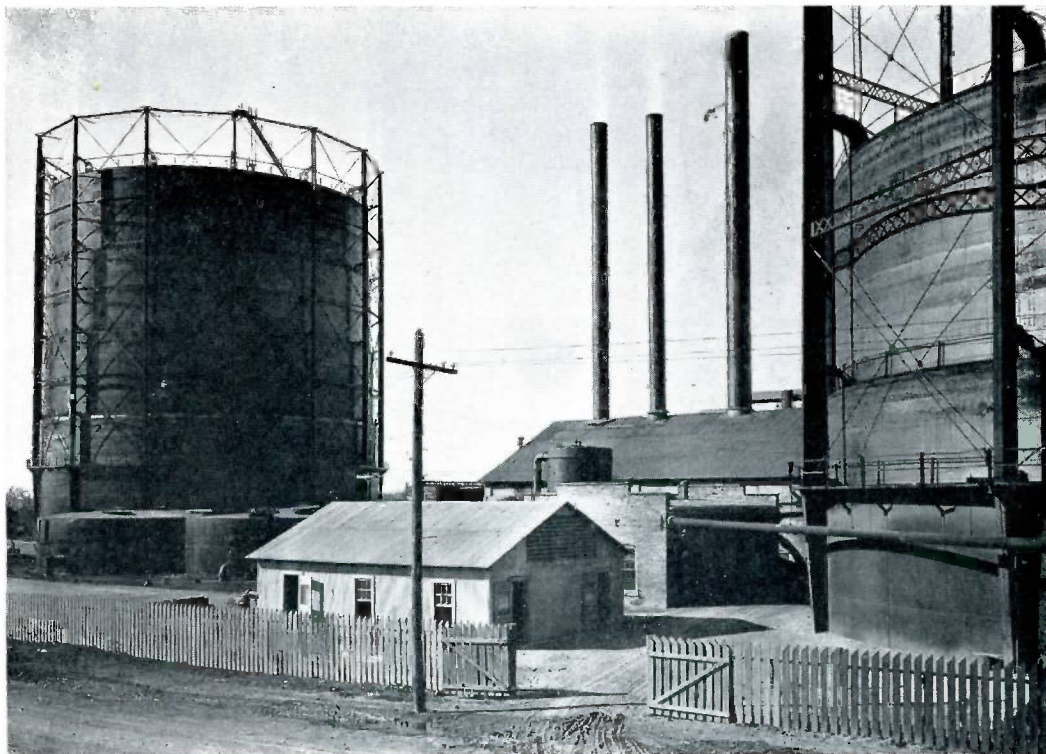
The early operations of the company were not too extensive and it appears that the business was not, on the whole, profitable. The invested capital after 40 years of operations amounted to only \$500,000.

In the beginning, gas was being used primarily for street lighting purposes, although some commercial houses and residences were being served.

The gas load wasn't too great because there just weren't many appliances around. Those that were here had to be imported all the way from England. By 1895, however, the appliances began to show up in large numbers and gas heating was introduced. This caused the company to grow and prosper.

So much so, that in 1907, the little plant was no longer adequate and a new and larger one built on south Salado Street, present headquarters of the gas system.

There, an oil gas was made and later gas was made by passing steam through incandescent hot coke or anthracite and then adding the oil gas to enrich it.



These huge gas holders were an integral part of the gas distribution system and plant of the San Antonio Company on Salado Street in the 1920's. It was during this period that natural gas was discovered in Texas and led to a complete revamping of the industry.

AN EARLY SERVICE TRUCK



In 1922, something happened in south Texas that was to completely revolutionize the gas industry. Natural gas was discovered near Three Rivers, Texas and almost immediately a pipeline was built to San Antonio by the Southern Gas Company, from whom the utility then made its purchases.

In 1930, the United Gas Pipeline Co., then known as the United Gas Public Service Co., assumed control of the Southern Gas Co. and continued to supply San Antonio with fuel. Thus, the association between United Gas and the system will have its 30th anniversary this year.

Before 1930, there was not always adequate gas pressure in the service that was being rendered in San Antonio. The United Gas Co., beefing up its pressures, corrected this situation and has been providing uninterrupted service ever since.

The discovery of natural gas in 1922 at first had something of an alarming effect on the San Antonio Public Service Company. Natural gas, as mentioned, contains twice the heat units as the fuel that was manufactured before 1922. As a result the company's sales were cut nearly in half.

But the 1920's proved to be good years and the company continued to prosper. The electric power plants began to use natural gas instead of oil as their fuel and this helped out considerably.

A discussion of the development of the gas industry in San Antonio would not be complete without delving into the history of other utilities such as electric and transportation as they are all interwoven.

Going back to the 19th century, in 1888, the San Antonio Gas Company took over the stock of the first electric utility to do business in San Antonio—the Electric Light and Power Company. The power company was incorporated in 1887, and was the fore-runner of the present system.

The gas company then began to generate and distribute electricity, still known, however, as the San Antonio Gas Company.

Great competition was encountered from other electric utilities that had sprung up and died during the period. Because of the rapid

failure and re-organization of electric utilities, the city in handing out franchises, wrote in some pretty harsh terms. The terms then stipulated that the company would be excused from service failure only in case of "fire, flood, tempest or irresistible mob violence."

At the turn of the century, the gas company, along with the other members of the electric and transportation family that had been started, was consolidated into the holdings of the American Light and Traction Company, controlled by Emerson McMillan and Associates of New York.

The utilities were then combined into two separate and distinct companies known as the San Antonio Gas and Electric Company and the San Antonio Traction Company, both controlled, however, by the same holding company.

In 1917, the Texas Legislature passed a law permitting all the utilities—gas, electric and transportation—to operate as a single entity and the organization then became known as the San Antonio Public Service Company.

In 1942, the city of San Antonio purchased the gas and electric systems and began to operate them under the name of the City Public

Service Board, the present-day organization.

The gas system today serves a total of 160,000 customers. Its gas mains have been extended from 729 miles in 1942 to 1,700 miles at present. Ten years from now, the trend indicates there will be 212,000 customers on a total of 2,500 miles of gas main.

To facilitate the transmission of gas in San Antonio, the United Gas Pipeline Co. has installed a large belt line that encircles the city. Gas is taken from that line at various points and distributed throughout the greater San Antonio area.

The history of gas development in San Antonio is punctuated by periods of good times and bad, by prosperity and depression, by chaos and orderly development.

The recent years have witnessed great expansion of the system, both in facilities and personnel. The promise of the future indicates even greater strides to be taken.

And the dream of Mr. Dickson in 1858, that there would be a golden future for the magic fuel of gas, goes on and on.

The photo on the next page shows the new and beautiful present-day headquarters of the gas distribution system. ➡

1929 GAS HOUSE GANG







The steel 30-inch gas pipeline in the tunnel was welded in place after being moved to its proper location on small track cars. The track was removed after the tunnel was completed by the contractor. The estimated cost of the tunnel was placed at \$481,000.

Chicago, Illinois

A Tunnel Was The Answer . . .

(Reprinted, with permission, from December, 1959 Gas News, published by Peoples Gas Light and Coke Company)

Unusual situations encountered in transmission system design require alert, creative, and enterprising thought, challenges well suited to Peoples Gas engineers.

In designing Chicago District Pipeline Company's Third Calumet Line, the Engineering Department was confronted with the problem of spanning the Calumet River, busy entrance to Calumet Harbor, a world port, and five other streams. The five other streams were in the open country, so the usual submarine crossings were designed. In this type of crossing, a trench is

dug or dredged across the stream bottom and refilled with the excavated materials after the pipes are in place.

Complicating the design problem for the Calumet River crossing of the new pipeline, which extends from a point near Joliet to the Calumet Station, were several factors.

These included a proximity of a railroad bridge between Torrence Avenue and the pipeline's right-of-way. Preliminary cost estimates of tunnelling under the river (unusual in transmission system design) and of dredging the bottom



The shafts of the tunnel under the Calumet River are concrete lined within steel forms as shown here. The shaft is nine-feet in diameter.

were comparable. Borings of the substrata under the river banks, obtained from the City of Chicago, which has a water tunnel at the same location, disclosed a two-foot layer of sand just below the foundations of the railroad bridge. Dredging for the usual type under water crossing would have cut through this sand layer.

Costly sheathing would have had to be installed to prevent the sand from running and undermining the railroad bridge's foundation. This would have placed the cost of a

submarine crossing considerably higher than tunnelling.

Thus, the Engineering Department concluded that tunnelling, with its attendant benefits, was the proper solution. Tunnelling would not interfere with the shipping entering Chicago's world port as would dredging operations in the narrow channel. Also, the tunnel would provide accessibility and ease of maintenance for the pipe.

Another important factor considered was that the tunnel could be (and was) designed to accom-

modate another line, thus tending to lower the unit cost of construction for future expansion projects.

The tunnel plans were submitted to and approved by the Army Corps of Engineers, who have jurisdictions over navigable streams, and the Port of Chicago authorities. Bids were sought from contractors and the contract was let.

Construction on the tunnel was begun simultaneously with the general contractor laying the 60-mile pipeline. Shafts, about nine-feet in diameter, were sunk 75 feet deep on the north and south banks of the river before work was started on the 687-foot drift. Excavation was done manually with jack hammers and a total of 2,650 cubic yards of earth was removed.

The tunnel is of reinforced concrete construction. The concrete in the drift was poured between the wooden shoring, used to hold back the earth and a metal shell. The floor of the dome shaped tunnel was laid first, followed by the arch shaped roof. Transmission pipe is shipped in 40-foot lengths, too long to be inserted into the tunnel. The pipe was cut into 20-foot lengths and a 45-degree angle cut-back was

The steel pipe is supported in the tunnel on concrete piers, shown in the lower left of the photograph. The tunnel was so constructed as to provide for a second line for future expansion projects, thus tending to lower unit costs of future projects.

View looking downward from the top of the 75-foot shafts on either side of the tunnel for the Third Calumet Line. One of the advantages of a tunnel is accessibility for inspection and maintenance. The steel ladder shown at the left was used by workmen and remains in place to provide accessibility.





Twenty-foot lengths of 30-inch steel pipe, weighing about $1\frac{1}{4}$ tons were lowered into the shaft by a dragline. The pipe normally is shipped in 40-foot lengths, but had to be cut on the job so it could be lowered and maneuvered into place and turned at the bottom of the tunnel shaft.

used on the inner wall of the shaft so the pipe would turn at the bottom of the shaft. Welding the lengths together took place in the tunnel.

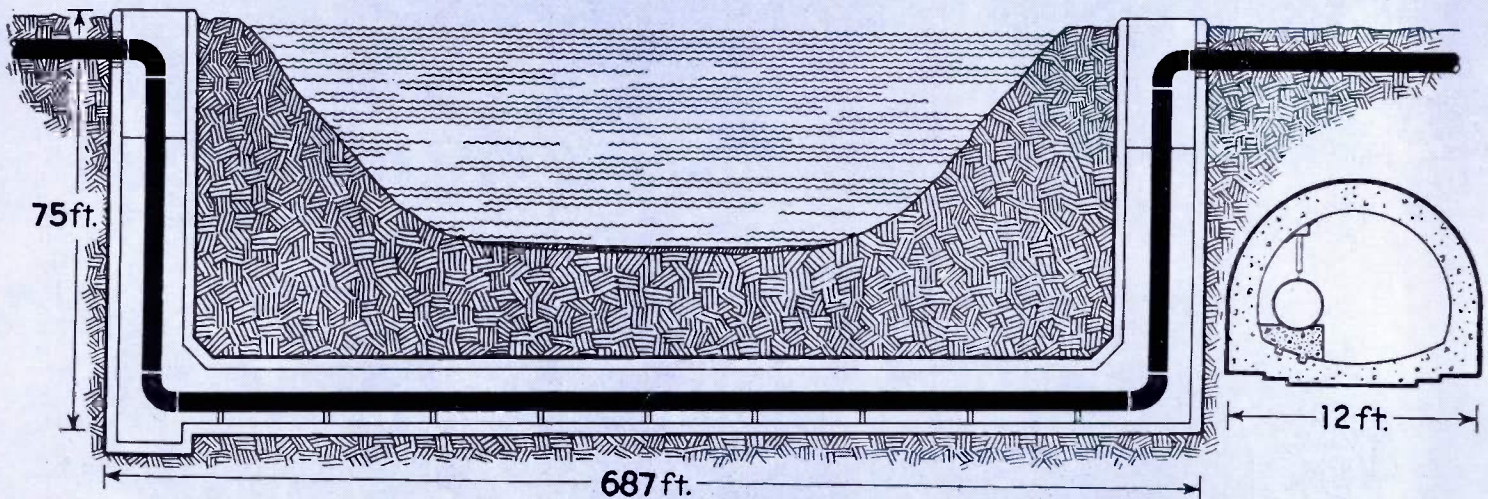
The 30-inch pipe is laid in the tunnel on small concrete piers and is held in place by jack screws welded at one end of the pipe and at the other to flanges attached to the tunnel arch.

Chicago District Pipeline's two other Calumet lines also employ tunnels. One tunnel, owned by Chicago District, is located on the Desplaines River near Rockdale. It was completed in 1931 for the original Calumet line.

The other tunnel used by Chicago District Pipeline, is under the Calumet River at 100th Street. Peoples Gas owns the tunnel at 100th Street as well as the newest tunnel under the Calumet River and leases them to the subsidiary.

Utilization of tunnels by Peoples Gas in its distribution system dates back to 1871 when a crossing was installed under the Chicago River at Dearborn Street. In addition to the two tunnels leased to Chicago District Pipeline, Peoples Gas owns and operates a total of 12 tunnels in the distribution system—10 under streams and 2 under railroad crossings—and leases some from private owners.

Artist's conception of the tunnel under the Calumet River near Chicago. Cross section at the right shows how provisions were made in the tunnel for future expansion of facilities.





The Greatest Race of ALL

To The Winner:

FREE WORLD LEADERSHIP

Who'll be the next President of the United States? This is the question on millions of minds now, but few people today realize how different the question was in 1787. Then, at the Constitutional Convention, one hotly debated question was this:

Should we have a President?

Many of the delegates were afraid that a single chief executive would have altogether too many chances to turn himself into a dictator, and favored the establishment of a three-man executive committee to carry out the will of the Legislature.

The most important reason why supporters of a one-man executive finally won out may well have been that everybody was sure that George Washington—whom all the delegates knew and trusted—would get the job.

Pierce Butler, a delegate from South Carolina, wrote a friend after the convention was over:

"Entre nous, I do not believe that the executive powers would have been so great, had not many of the members cast their eyes toward General Washington as President, and shaped their ideas of the powers to be given a President by their opinions of his virtue."

Even so, not everybody was happy.

Patrick Henry, of "give me liberty or give me death" fame, who was so opposed to strong central government that he had refused even to attend the convention, called the Presidency "an awful squint toward monarchy."

(As a matter of fact, there had been those who wouldn't have thought a constitutional monarchy was a bad idea at all—but Washington flatly turned down the idea of becoming King George I.)

The story of how Washington became the father of the U. S. Presidency as well as Father of this Country is just the beginning of "The Voter's Presidential Handbook" by John A. Wells, a new book that makes fascinating election year reading. It tells all about how the job of being President has evolved over the years and how party conventions work. It also includes short, non-partisan biographies of all the leading 1960

candidates and offers tips on what you can do to help your man.

Washington thought he had his hands full as President of a 13-state U.S.A. with a population of 3,900,000.

"These public meetings with reference to and from different departments of state are as much if not more than I am able to undergo," he wrote in 1790.

But over the past 170 years, the President's job has grown as fast as the U. S. itself.

Washington during a typical year of his administration, signed 44 laws and one executive order; President Eisenhower is maintaining an average of 944 laws and 60 executive orders a year. Washington granted nine pardons and gave Federal jobs to 65 people in 1791; Ike has averaged an annual 112 pardons and 43,537 jobs (including military and Post Office appointments) annually.

Washington's first budget was written on a single sheet of paper; the current Eisenhower budget runs, 1,030 pages, with a 188-page appendix.

Today's President holds down not one job, but five—and any one of the five could fill an eight-hour day. He is:

1. Head of State, the nation's chief ceremonial officer—a job that involves everything from presiding at banquets for visiting dignitaries to throwing out the first baseball of the season for the Washington Senators.

2. Chief Diplomat, the leader of the Free World and the U.S.' top representative in its dealings with all other nations.

3. Commander-in-Chief of our armed forces.

4. Chief Legislative Policy-Maker, with power to exercise tremendous influence on the making of our laws by initiating or amending bills, pushing them through Congress or vetoing them.

5. Chief Executive, the boss of all Federal employees (there are 2,718 in his own executive offices alone) and the top law enforcement officer.

He is also, of course, the head of his political party, and must often keep its welfare in mind.

The way we choose the man to

do this staggeringly big job has changed as much as the job itself.

The Constitution originally provided for election of the President by electors from each state, to be chosen "in a manner prescribed by the state legislatures," each of whom would vote for two men. The one receiving the highest number of votes would be President, the runner-up Vice President.

It didn't take long to prove that this just wouldn't work.

When political parties began to form in the 1790's, the two-vote system made it practically inevitable that the President would be a member of one party and the Vice President of another (as happened in 1796, when Federalist John Adams came in first and Democrat-Republican Thomas Jefferson second). Or the winner and the runner-up might be men who couldn't stand each other personally, even though they were members of the same party (like Thomas Jefferson and his Vice President Aaron Burr, elected in 1800).

So in 1804, the 12th Amendment to the Constitution provided for separate balloting for the two officers.

By then, electors from each state were being pledged in advance to the Presidential candidates already chosen by their parties.

And by the 1820's, most states had established universal suffrage and provided for popular election of electors—which meant popular election of the President. The balloting of the Electoral College had become the mere formality it is today.

Credit for the invention of the party nominating convention, that glorious three-ring circus of American political life, goes to a minor party with few other claims to fame—the Anti-Mason party. The Anti-Masons held the first convention in 1830, and the two major parties of the day, the National Republicans and the Democrats, both took up the idea in time for the 1832 Presidential elections.

Remember, when you go to the polls this November, you'll be an individual choosing the best man to handle one of the world's toughest jobs—President of the United States.

More than 200 of the newest and most significant technical developments in gas utilization and gas industry operation will highlight the "Festival of Flame" exhibit at the American Gas Association's 42nd annual convention Oct. 9 to 12 in Atlantic City.

Twice as large as the "Parade of Gas Progress" exhibit presented at the 1958 convention, A.G.A.'s dramatic "Festival of Flame" will occupy the entire 90,000-square-foot exhibition hall of Atlantic City's newly renovated Convention Hall.

Christy Payne, Jr., chairman of the Exhibit Planning Committee and manager of market development for the Consolidated Natural Gas System, reports some 100 new developments by nearly 50 manufacturers and gas companies already have been qualified and signed up for display in the 1960 exhibit.

More than a score of additional gas utilization advances and nearly 100 items of gas operating equipment also are expected by convention time.

Centerpiece of the exhibit will be a spectacular 30,000-square-foot mall-type educational display, arranged by A.G.A.'s Operating Section. Exhibitors will show the newest and most important equipment and control devices used in every area of gas operations, from the producer's wellhead to the customer's burner.

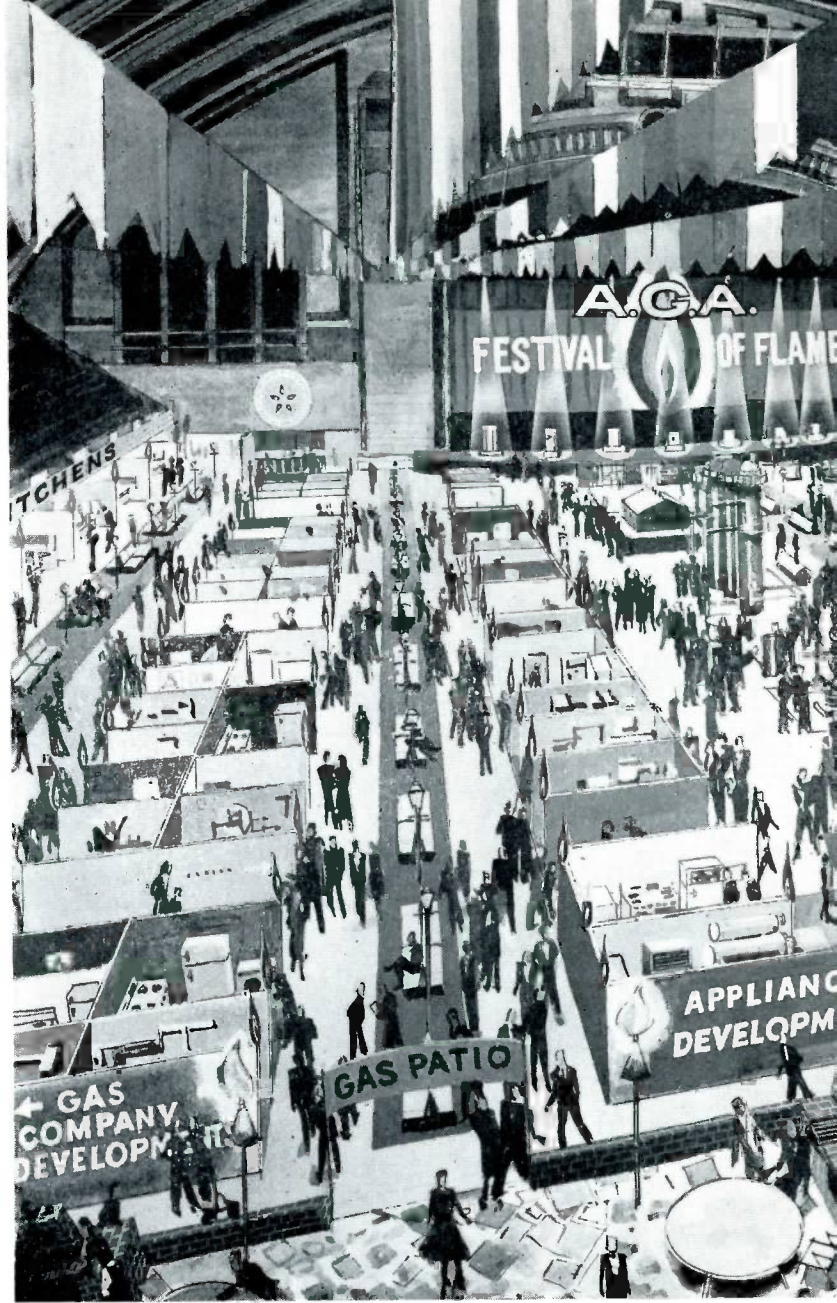
The Gas Utilization Section of the "Festival of Flame" will focus industry attention on significant new technical developments in residential, industrial and commercial gas equipment and appliances which have become commercially available since Oct., 1958, or which have become prototype or field test models since that date.

Mr. Payne adds that certain equipment categories—gas air conditioners, refrigerators, infra-red burners, and gas disposers—have been deemed so important to the industry that each manufacturer in these fields has been invited to exhibit one of his latest and most advanced models.

A number of gas utility companies have been invited to show

significant new developments they have introduced for their own use, including appliances, systems, methods and procedures, tools and special devices.

The "Festival of Flame" also will include a "Festival of New Freedom Gas Kitchens and Laundries," which will flank both sides of the exhibition hall. The best and most modern gas appliances and home equipment on the market will be featured in dramatic kit-



Atlantic City, N. J.

FEST
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FLA



FESTIVAL OF GAS

chens and laundries designed by nearly a dozen leading women's magazines.

A special gas "patio" on one side of the hall's main entrance will show delegates the newest outdoor applications of gas, including cooking, infra-red heating and water heating. Gas luau torches will ring the patio, and scores of modern gas lights will illuminate the five main "streets" of the "Festival of Flame."

Exhibits representing a cross-section of gas research projects conducted under A.G.A.'s promotion, advertising and research plan, will be featured in a 2,000-square-foot area opposite the gas patio near the exhibition hall entrance.

The grand opening of the convention has been set for noon, Oct. 9. The exhibit will be open to delegates and guests daily from noon to 5 p.m. through Oct. 12.

The convention opens Oct. 10, according to Marvin Chandler, chairman of the General Convention Committee and president of Northern Illinois Gas Co.

Following the convention theme, "The Soaring Sixties—Decade of Opportunity," nearly a dozen industry and guest speakers will address an estimated 5,000 delegates during the three morning sessions and final luncheon meeting.

Topics will include the gas industry's problems and progress, long-range goals, and relationships with other segments of the nation's economy.

A.G.A. Section and Home Service sessions will be held Oct. 10 at 2 p.m. in some of the Convention Hall's 33 new meeting rooms, completed this summer under a 3½ million dollar renovation program.

The Michigan Consolidated Gas Company's prize-winning "Gasarama" presentation, which earned A.G.A.'s Public Relations Achievement Grand Award in 1959, will be staged in two matinees.

Originally designed as a "panorama of the new gas industry" for Michigan school students, the dramatic hour-long education show will be jointly sponsored Oct. 10 by the Residential Gas Section and Industrial and Commercial Gas Section, and on Oct. 11 by the Operating Section.

The three-day convention also will feature a special program for ladies, including a morning general session, "get-acquainted" coffee break and luncheon party.

Mueller Co. is proud to be one of the gas equipment manufacturers selected to participate in the "Mall of Flame" exhibit, sponsored by the A.G.A. Operating Section at the convention.



a **GOLD STAR** lights the way

A radiant new star is brightening the gas industry's horizon.

It is the Gold Star, the industry's new symbol of excellence for gas appliances.

For many years, the Blue Star Seal of Approval, awarded by the American Gas Association Laboratories for compliance with high standards of safety, durability and performance, has been looked to by the public as its guide to dependable service.

Now the Blue Star has been joined by a brighter twin, the Gold Star—awarded for compliance with additional standards adding up to the highest appliance quality obtainable.

Where appliances bearing the Blue Star may be said to have passed their Laboratories tests with honors, appliances wearing the Gold Star are graduates *summa cum laude*—with highest honors.

Since January, 1959, the Gold Star is being displayed on gas ranges meeting a list of at least 28 new, extra specifications. Even-

tually, it is planned that the Gold Star will be awarded to other gas appliances, on the basis of similar extra standards of quality and performance.

As Americans advance in productivity and raise their living standards, they are coming more and more to demand not merely the necessities of life, but those products which offer a means to *better* living.

Under the Gold Star, the gas industry aim is to capture for gas a major share of this new quality-seeking market by making gas appliances synonymous with the *best* for modern living.

An idea of what the Gold Star will mean in gas appliances may be gained from a brief look at the extra requirements to which gas ranges must measure up.

To begin with, each range must, as a matter of course, meet all the basic Blue Star approval requirements. As of 1959, these include such features as completely automatic ignition for all burners, oven thermostats, adequate insulation, and a long list of other safety, durability and performance items.

Over and above these basic requirements, every Gold Star range

must meet 28 or more further requirements. Among these, to name just a few, are such features as thermostatic top-burner temperature controls (the "burner with a brain"); dramatic back rail panel with light, electric clock, automatic timer, and convenience outlet; oven lights; smokeless broilers; drawers mounted on ball or roller bearings; cooler exterior temperature at sides and tops. Large ranges (37 inches and over in width) must include one of the following additional features: an elevated broiler; or two ovens, one of which must have an automatic clock control and an automatic meat thermometer; or a thermostatically - controlled built-in griddle; or a thermostatically - controlled room heating section.

Other requirements cover a long list of technical specifications assuring the finest possible performance.

Besides the mandatory requirements, each gas range must also meet at least two out of five optional requirements to earn the Gold Star. These include: a "simmer" setting and a "keep warm" setting on top burners; giant burners, in addition to the "burner with a brain"; resilient sealing on oven

Around the Gas Industry

doors; built - in leveling; and an "oven-ready" light.

So many are the extra requirements, in fact, that most of us could not be expected to remember them all. What we *should* remember is the across-the-board kind of gas appliance upgrading and improvement which the Gold Star signifies.

Even the present high requirements are not the final word. Provision has been made for periodic review of Gold Star standards by gas industry approval committees, and for still further upgrading, to incorporate more new extra features and technical advances as they are developed through research. Soon after adoption of the initial set of requirements, a revised set of specifications already had been drafted and submitted for approval.

Gas ranges made by many manufacturers are currently winning this highest accolade of the gas industry. In fact, ranges built to Gold Star standards include the top models of most of the well-known brand names which already have gained customer familiarity and acceptance.

To inform the public on the new concept in gas appliance quality, the gas industry is conducting its greatest promotional campaign, launched after two years of study and research. Manufacturers, joining with A.G.A., local utilities and dealers, are investing more than \$30 million to tell the story of the Gold Star through television, magazines, newspapers, posters, displays and every other available medium.

By conclusion of the opening gas range campaign, it is expected that the Gold Star will be a familiar symbol to nearly every American.

As the Gold Star program broadens to include "top-of-the-line" models of other gas appliances, the industry may confidently look to this new star to guide it and its customers into an era of better living for all, with gas.

Three new staff members were added recently by the American Gas Association. Theodore I. Gradin, assistant director of the association's bureau of statistics for the past two years, was named director of the bureau. He succeeds Daniel Parson, who joined Northern Illinois Gas Co. as the company's first manager of rate and economic research.

Lester B. Inglis, Jr., formerly with the Columbia Gas System's United Fuel Gas Company of Charleston, W. Va., has been named assistant secretary of the association's 3,700 member Operating Section. He succeeds Fredric Moshier, who has entered private business.

G. E. (Ron) Judd, formerly assistant editor of Chain Store Age has been named special feature writer on the American Gas Association's public information staff.

The biggest construction push in the history of gas and pipeline companies is shaping up, with a record-breaking 2.333 billion dollars being spent in 1960 for new plants and facilities.

Nearly four million more customers will be heating with gas by the end of 1962, the American Gas Association reports. Two-thirds of the estimated 3.9 million new gas heating installations forecast during the next three years will be in new homes, while conversions from other fuels are expected to make up the remainder. The association reports that home heating customers advanced to an all-time high of 20.2 million in 1959, up six per cent from the previous year.

More than one-quarter of the heating customers the industry expects to add by 1963 will be located in Illinois, Indiana, Michigan, Ohio and Wisconsin where nearly 1.1 million installations are anticipated.

The 23-billion-dollar gas industry, currently serving 32.5 million utility users and adding a million more each year, will top its previous record construction year by 26 per cent. Up to now, the peak was 1.772 billion in 1957. Last year expenditures approached record proportions.

The new record probably will not stand beyond 1963, the American Gas Association says in summarizing an annual study prepared by its fact-finding division. Expansion activities three years hence will probably reach 2.38 billion dollars and for a four-year period through 1963, gas companies will invest 8.4 billion in new facilities.

Transmission systems will spend more than a billion dollars for new facilities this year. Major projects scheduled for completion in 1960, as the billion-dollar level is topped for the first time in the pipeline industry, include 169 million dollars for a Texas to California link.

As for distribution facilities, construction this year is put at 724 million, up 12.6 per cent compared with last year. Another 354 million dollars is being expended this year for production and storage facilities, compared with 306 million last year.

New evidence of the gas industry's ability to meet peak winter home heating demands was indicated in the American Gas Association's announcement that U. S. supplies of natural gas in underground storage reached an all-time high of nearly two trillion cubic feet last year. The gas trade association's annual underground storage report shows four states—Pennsylvania, Ohio, West Virginia and Michigan—accounted for more than two-thirds of the total gas in storage at year's end. According to the report 209 storage pools and 8,512 active wells were operating in 20 states in 1959, up from 205 pools and 8,237 wells in 19 states a year ago.

Strictly

Off the Record

A lady going from home for the day locked everything up well and, for the grocer's benefit, wrote on a card: "All out. Don't leave anything." This she stuck on the door. On her return home, she found her house ransacked and all her choicest possessions gone. To the card on the door was added: "Thanks! We haven't left much."

— :: —

In the office of an insurance agent, an applicant for insurance handed in his completed form, and the agent looked it over.

"This seems to be in good order, Mr. Green," he said, "except for one little item. Where it asks the relationship of Mrs. Green to yourself, you should have put 'wife,' not 'strained.'"

— :: —

An insurance agent, writing a policy for a cowpuncher, asked if he had ever had any accidents.

"No," said the cowboy, then added, trying to be helpful, "a bronc kicked in a couple of my ribs and a rattlesnake bit me a couple of years ago."

"Well!" said the agent. "Don't you call those accidents?"

"No," replied the knight of the branding iron, "They done it a-purpose."

— :: —

"Well, Doc," asked the applicant for an insurance policy, "how do I stand?"

"I don't know," replied the Doc. "It's a miracle."

— :: —

She: "I went to the doctor today and told him about my lapses in memory."

He: "What did he do?"

She: "He made me pay in advance."

"You know, dear," the young wife said to her husband, "you don't seem as well dressed as you were when you married me." "I don't see why not," he replied. "I'm wearing the same suit."

— :: —

Son: "Pop, what is creeping inflation?"

Father: "It's when your mother starts out asking for a new hat and winds up with a complete new outfit."

When the great Charles Darwin was visiting the country house of a friend, the two boys of the family thought they would play a trick on the scientist. They caught a butterfly, a grasshopper, a beetle, and a centipede, and out of these evolved a strange composite insect. They took the centipede's body, the butterfly's wings, the grasshopper's legs, and the beetle's head, glued them carefully together and presented it to Darwin for identification. Darwin looked at the bug and then at the boys.

"Did you notice whether it made a humming sound when you caught it, boys?" he asked.

"Yes, they answered.

"Then," said Darwin, with a twinkle in his eye, "It's a humbug."



"NO, NO, BARTON! I SAID TO THROW HIS 'BID' OUT!"

MUELLER RECORD

MUELLER®
LubOseal®
GAS
METER
STOPS

*Proved safe and dependable
 by industry acceptance and
 performance record!*

The LubOseal stop was first introduced to the gas industry in 1952. The many safety and operating advantages of this new stop created a great deal of initial interest. The Operating Management of many gas companies, whose systems were either under high pressures or changing to higher pressures, immediately requested samples for testing purposes.

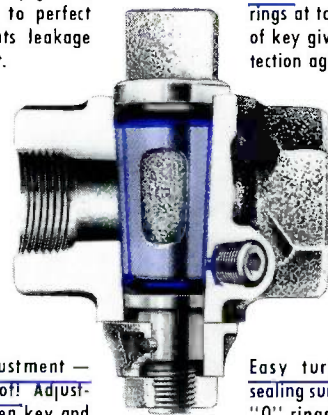
In almost every case the same pattern developed. First, the samples were tested in the system — then, after the new design had proven to be *safe and dependable*, the decision was made to replace existing stops and to standardize on LubOseal.

The gas industry has indicated by its acceptance and its satisfactory performance records that the LubOseal stop has earned its place in their systems as a *safe, dependable*, high quality product.



Perfect fit! Iron body and bronze key ground and lapped to perfect fit — prevents leakage through port.

Leak proof "O" ring seals! Gas resistant "O" rings at top and bottom of key give double protection against leakage.



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Easy turning! Entire sealing surface and both "O" rings relubricated through independent body port.

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