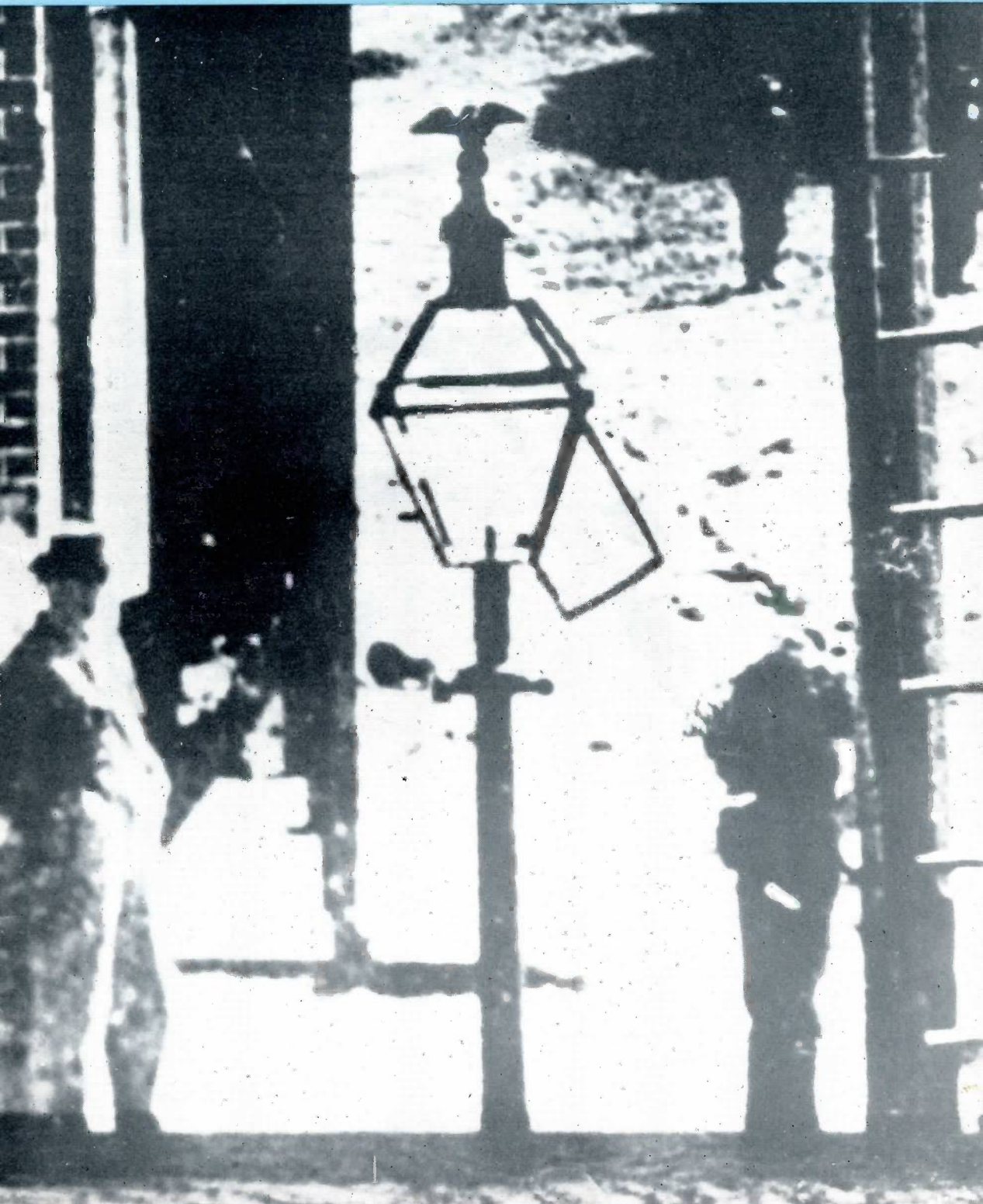
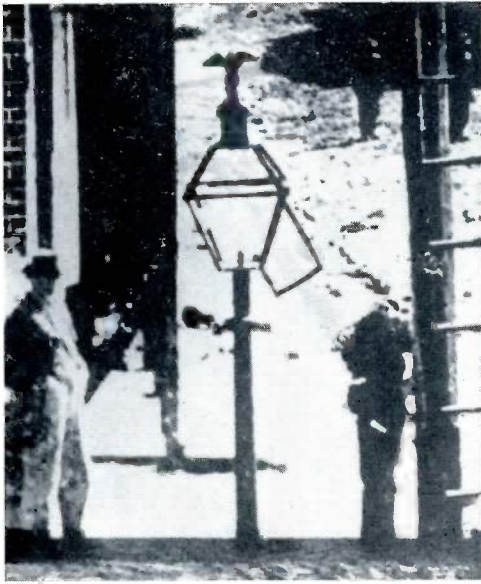


MUELLER *Record*

MAY • 1956





THIS MONTH'S COVER

This is the earliest known photograph of an Atlanta Gas Light street lamp, made during the occupation of Atlanta by Federal troops following the War Between the States. Two Federal soldiers can be dimly seen standing in formation in the upper right hand corner of the photograph. The lamp is one of Atlanta's first 50 gas street lamps installed in 1855.



May • 1956

WALTER H. DYER, Editor
LOUISE COLE, Assistant Editor

MUELLER CO.

MANUFACTURERS OF WATER AND GAS
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Recording Our Thoughts

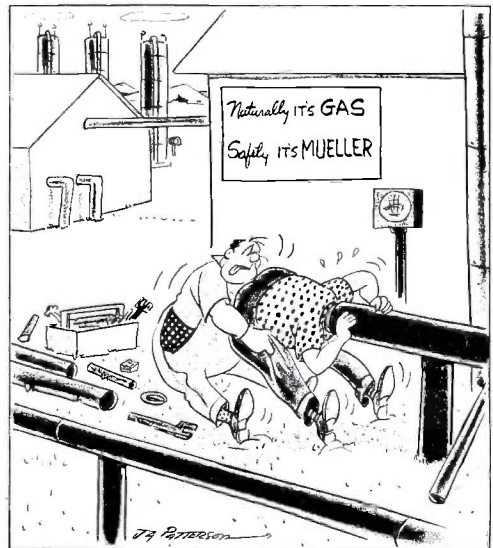
The March issue of the MUELLER RECORD has attracted considerable attention due to an article entitled "Drama In One Act." The article, which was narrative in form, described how best to meet gas main emergencies by means of a trailer storing Mueller equipment.

Several gas engineers have sent inquiries as to how the gas company in question accomplishes this job. A Mueller sales representative is now working with the utility and will acquire necessary information that will be available to interested companies.

With this thought in mind, we suggest you read the article in this issue, beginning on page 6. Entitled "San Diego Finds An Answer," it is written by T. M. Pinkerton who is gas meter shop engineer for the San Diego Gas and Electric Company.

Mr. Pinkerton, along with D. K. Madison, design engineer in the Transporta-

(Continued on page 18)



"Why in the Blue Blazes would you stick your head in there in th' first place, Nosey??"



Atlanta Gas Light President Rock G. Taber and Duncan A. Crawford, Executive Vice President, presented the company's 100th anniversary cake to these two little girls from Hillside Cottages home for children in Atlanta. The presentation was made on a television show.

Looking Forward

The Second Century

CHRISTMAS DAY 1855 the first 50 gas street lamps were lighted in Atlanta, lighting the way for a new era in public utilities. These lamps very briefly preceded the incorporation, by special act of the Georgia General Assembly, of the Atlanta Gas Light Company, the first Atlanta utility company and today at 100 it is the oldest continuously operated corporation in Atlanta and the second oldest in Georgia.

One of those 50 lamps first lighted in 1855 was destined to last through a war and stand a century, figuring as a symbol of its era in a movie celebration, and

now symbolizing Atlanta Gas Light Company's centennial year of service.

The other original lamps were destroyed or damaged in the War Between the States, and the Atlanta Gas Light Company suffered great losses, climaxed by Sherman's burning of Atlanta when the physical plant was destroyed.

Behind the lighting of those first street lamps was the perplexing question of lighting Atlanta's streets, under consideration for some time by the city fathers. They were having to depend on oil lamps, placed wherever the neighbors would agree to keep them filled and lighted.

William Helme in 1855 brought the problem to an end with his proposal to erect a gas plant, a coal gas works, laying down pipes for lighting the streets and public and private buildings under contract securing to him, among other things, the exclusive privilege of lighting them for a period of 50 years.

Shortly the city's mayor was authorized to close a contract with Mr. Helme, the city agreeing to take \$20,000 of the stock in the \$50,000 plant, and paying for it in bonds bearing seven percent interest.

Soon after the completion of this contract between the mayor and Mr. Helme, a contract was entered into with John S. and Joshua Schofield of Macon to make and deliver to the city 50 ornamental lamp posts, including lamps and burners, for \$21 each.

The growth of the young company was rapid and it prospered even during the first years of the War Between the States. However, on Aug. 9, 1864, General Sherman's Army began to bombard Atlanta with a battery of 30-pound Parrot cannons following a desultory shelling with light artillery for two or three

weeks. On that first day of bombardment practically every building in Atlanta was damaged, including the gas works.

A superintendent of the gas company and his six-year old daughter were killed when a shell hit their home. A barber was killed when a shell exploded against a gas lamp post at the corner of Alabama and Whitehall streets.

This damaged lamp post, the only one of the original 50 that remains in its same location, has been preserved as one of the mementos of the famous Battle of Atlanta. It was restored for lighting and on Dec. 14, 1939, it was relighted as an "Eternal Flame of the Confederacy," officially inaugurating Atlanta's "Gone With the Wind" festival.

Atlanta's gas supply survived the three battles and 40-day siege of the summer of 1864, but its plant was destroyed, along with 3,400 other buildings, when the town was burned by Sherman in November of that year.

Service was restored Sept. 15, 1866, and again growth of the company was steady. Progressively, in 1881 Atlanta Gas Light Company introduced the use of gas for cooking, a special range was



"Cooking with gas" may be modern but the expression has been around for years as this early 1900's photograph testifies. Made at the half-way mark of Atlanta Gas Light Company's first century of service, it shows a meter wagon and two employees (Shack Wallace left and C. M. Bagwell right) making their rounds in Atlanta. The company's present 400-vehicle fleet of transportation is an indication of the growth from one customer (the City of Atlanta for street lighting) to over 300,000 today.

put on the market, and a cooking rate of \$2 per 1,000 cubic feet was made effective.

Prior to 1884 Atlanta Gas Light Company had free run in Atlanta, but that year United Gas Improvement Company came on the scene, establishing a strongly financed company for the distribution and sale of "water gas" in contradistinction to the coal gas distributed by Atlanta Gas Light Company.

Two years of a bitter, wordy and disastrous rate war ensued, in which the newspapers and many citizens took part. The new company, in a final rate slash, reduced the price of its gas to 50 cents per MCF. It was too much for both companies and resulted in the consolidation of the two in 1886. The new company was absorbed by the old company under the original charter of the Atlanta Gas Light Company, with the control of the company passing to the U.G.I. company.

About this time the City of Atlanta experienced a rapid growth and a period of prosperity which taxed the city financially to keep pace with improvements. It was decided to hold the Cotton States Exposition in Atlanta and the stock of the gas company held by the city was sold piecemeal to finance various projects, among which was the building for the Georgia School of Technology.

The U.G.I. retained control of the company until 1902, when the Georgia Railway, Electric and Gas Company was formed and acquired ownership of the gas company by an exchange of its stock, share for share, common and preferred, for gas company stock owned by U.G.I.

Then in 1912, the Georgia Railway and Power Company was formed, taking over the stock assets of the older company and leasing its property including the Atlanta Gas Light Company plant. Another change in ownership, occurring in 1927, came when the present Georgia Power Company was formed, acquiring all the stock of the gas company and continuing to operate it until it was sold to Central Public Service Corporation in 1929.

With the bringing in of natural gas in 1930 gas for home heating came into general use in the city. The commercial establishments and industries in and around Atlanta also quickly made wide

use of natural gas, to effect greater efficiencies and economies in operation, and new industries started coming to the Atlanta area because of the availability of natural gas.

In August, 1932, the control of the company passed to Consolidated Electric and Gas Company under a plan for reorganization of Central Public Service Corporation and its subsidiaries.

In 1937 Atlanta Gas Light Company began an expansion that is still continuing with the purchase of the natural gas distribution systems of Georgia Natural Gas Corporation, an affiliate serving Carrollton, Cedartown, Forsyth, Milledgeville, Newnan, Rockmart, Calhoun, Barnesville and Thomaston.

The properties of the Macon Gas Company and Georgia Public Utilities Company, both affiliates, were acquired by merger in 1941. The following properties served by Georgia Public Utilities Company became a part of Atlanta Gas Light Company: Macon, Augusta, North Augusta, Aiken, Griffin, Payne City, Rome, Athens, Brunswick, Valdosta and Waycross.

Since then natural gas service has been extended to Bremen, Douglasville, Gordon, Hampton, McDonough, McIntyre, Sandersville and Tennille. The distribution system has been purchased at Aldora and Atlanta Gas Light Company is now serving natural gas there. As it has done since its beginning as a lighting company, Atlanta Gas Light Company is serving Atlanta's metropolitan area. Facilities for gas service are being continuously expanded in this area where the population now exceeds 800,000.

The following communities where Atlanta Gas Light Company formerly served manufactured gas have been converted to natural gas service: Athens, Augusta, Aiken and North Augusta, South Carolina, and Valdosta.

On Nov. 1, 1947, in compliance with a plan approved under the provisions of the Public Utility Holding Company Act of 1935, arrangements were completed for the distribution of all of the common stock of Atlanta Gas Light Company to the public holders of Consolidated Electric and Gas Company preferred stock.

(Continued on page 18)

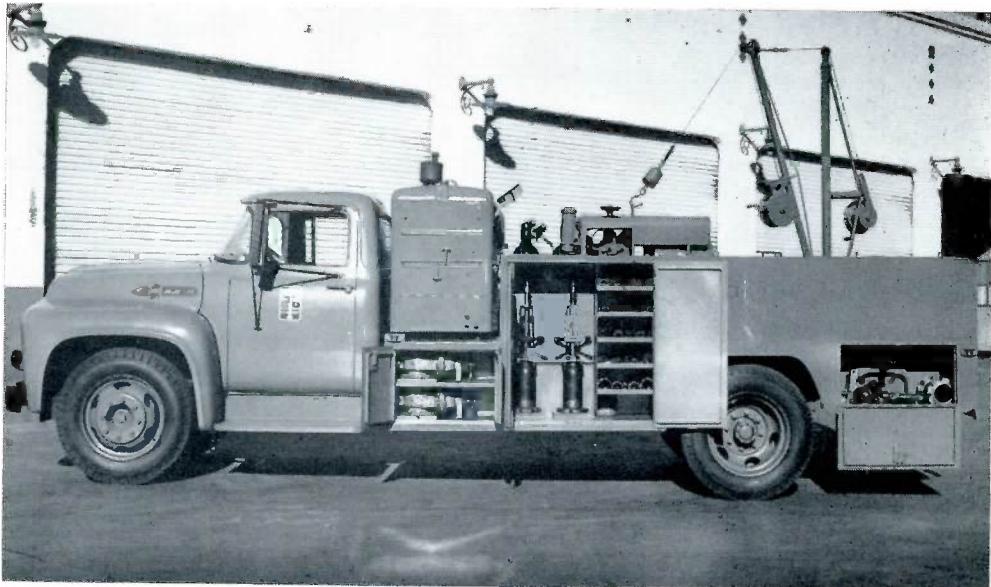


D. K. Madison, left, design engineer in the transportation department, did the actual designing of the truck, with the assistance of T. M. Pinkerton, who is gas meter shop engineer.

San Diego

Mueller Equipment Stored on Truck Of Unique Design

San Diego Gas & Electric Company, having their own facilities for the truck's body construction work, planned custom installation for nearly every tool. Here Mueller gate valves, two H-17235 machines, as well as the adapters and shell cutters are shown in niches designed for them.



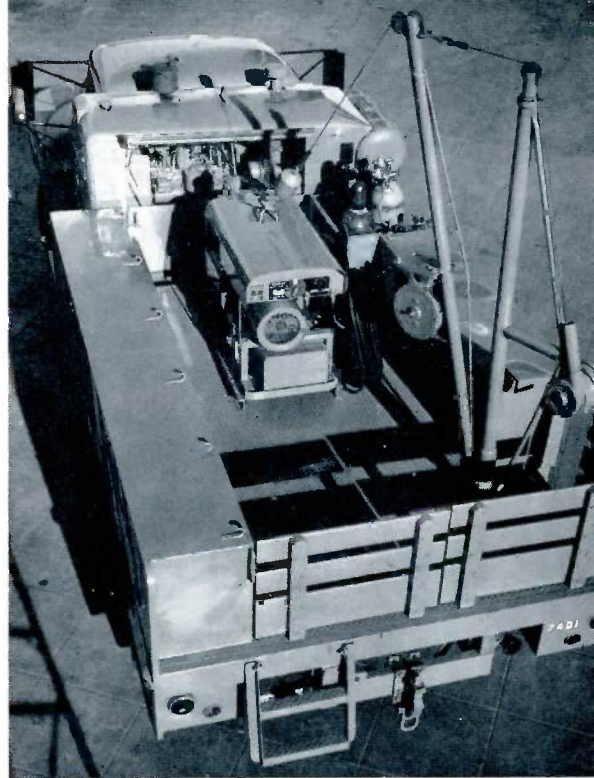
Finds An Answer

BY T. M. PINKERTON
Gas Meter Shop Engineer
San Diego Gas & Electric Company

ON FEBRUARY 3, the San Diego Gas & Electric Company's Transportation Department officially turned Truck No. 7401 over to the Gas Distribution Department. Truck No. 7401, as it is designated by the Transportation Department, is known in the Gas Distribution Department as the Mueller truck. This is the first Company-designed-and-built vehicle whose purpose it is to transport the necessary men and equipment to field jobs requiring the installation, drilling, and stopping of the 3", 4", 6", and 8" Mueller welding line stopper fittings.

Not too many years ago the equipment used in these larger Mueller operations was entirely stored at the company's main plant and used by each street crew in turn as needed. Since the installation of these large stopper fittings was infrequent, no particular crew was very well versed in the operation of the drilling and stopping procedure. As a result, many of these jobs were performed slowly and with some difficulty, resulting in occasional equipment abuse.

Due to this situation and the fact that large Mueller stopper operations increased in number, the use of the Mueller power-operated CC-1 drilling machine with air motor and associated stopping equipment was assigned to a small group of men classified as regulatormen. Also, at about this same time, the Transportation Department allotted the Gas Department the use of a small truck no



This is the "Mueller Truck," designed and built by the San Diego Gas & Electric Company, for the purpose of transporting the necessary men and equipment to field jobs requiring the Mueller drilling and stopping machines for installation on welding line stopper fittings.

longer suitable to the grind of daily street use but usable for the occasional requirement of the Mueller work.

Following the end of the '40's, San Diego's rapid growth began to show up in a housing shortage. By 1951, when material shortages began to be alleviated a rapid housing boom became evident. Naturally, the Gas Department's work increased along with Mueller stopping installations, and by the early part of 1953, preliminary work was started on the transportation and equipment requirements for a new Mueller line stopper truck.

Keeping in mind the valuable experience gained during the use of the Mueller equipment, it was decided that to save dispatching separate pieces of equipment (i. e., welding machine, air compressor, etc.), and to eliminate borrowing an air compressor from a street crew on the job, thus holding up their work, this equipment should be combined on a single truck.

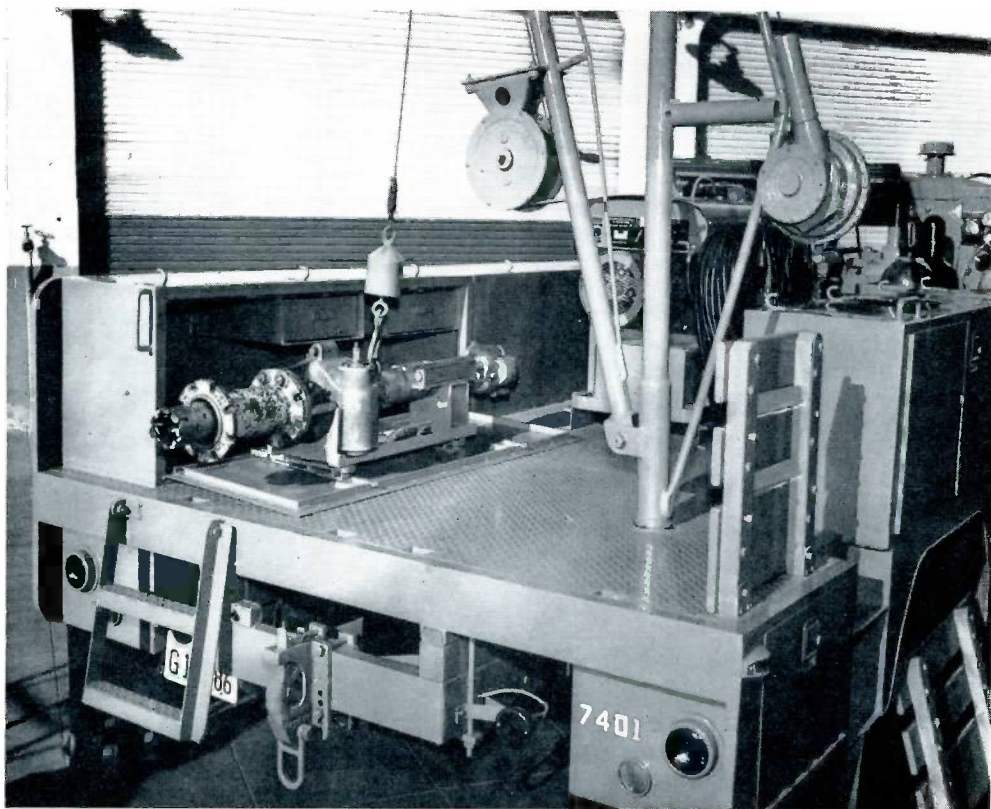
A number of tests were run on different size air compressors to determine the most efficient drilling operation. Selection of a 105-C.F.M. compressor was made, which later was changed to a 125-C.F.M. model due to a manufacturing change. An air-cooled, gasoline-engine-driven, 200-ampere arc-welding machine was selected for its light weight and wide welding range.

Other equipment to be housed on the truck was a complete acetylene-welding outfit consisting of tanks, torch, and 200 ft. of welding hose mounted on a roll-up reel, 100 ft. of air hose on a roll-up reel, two nitrogen tanks for gas-main purging, a crane with hoists, and the most important pieces of equipment connected directly with drilling and stopping, such as the Mueller power-operated CC-1 machine, and two complete Unit No. 2 line stoppers. Since 70 percent of the stopping units installed are in the 4" size, no provision was made to carry the

larger size stopping units. Ample truck-bed room, however, with tying cleats, was provided to carry this equipment when needed. Actual design of the truck was made by D. K. Madison, design engineer in the Transportation Department, with the assistance of T. M. Pinkerton, gas metershop engineer.

The truck selected to carry the complete equipment was rated at 18,000 lbs. gross weight, and the body design was to consist of a specialized platform-type-body with integral compartments.

Allocation of the equipment on the truck to provide the proper weight distribution was accomplished by mounting the air compressor transversely behind the truck cab and installing the arc machine lengthwise in the center of the truck with the heavy Mueller equipment mounted on the left side of the truck to offset the weight of the welding tanks, welding hose and reel, and hoist mounted on the right side. The left side,



The unique method of housing the Mueller drilling machine allows it to be easily rolled out onto the truck deck for installation of the adapter and shell cutter.

or street side of the truck, was selected for the Mueller equipment, since the welding hose and equipment and air hose, would be in practically constant use and should be readily accessible from the curb side.

The hoist used was one which was made up previously for the former Mueller truck and found to be satisfactory, except for a tendency to swivel the load unexpectedly when the truck was inclined. A locking pin was provided at the base of the hoist to prevent swiveling during raising and lowering operations.

The arc machine selected was a magneto type, which required no battery; however, the machine was purchased with starter and switch, operated from the compressor battery.

A rear ladder, as well as curb side recessed steps, was provided with appropriate hand-holds for an easy access-way up to the platform. Removable wooden stakes provided loading facility and loose-equipment transport. The platform consisted of 1/8"-steel four-way deck plate completely welded in place over tongue-and-groove lumber. The entire body and frame were arc-welded. In the case of the compartments, the arc welding was skip, or tack-welded.

The San Diego Gas & Electric Co., having their own facilities for body construction work, left some flexibility during fabrication to provide a custom installation for practically each tool. They take special pride in the unique method of housing the Mueller drilling machine, which is cradled so that it may be easily rolled-out onto the truck deck for installation of the adapter and shell cutter; also, in the convenient storage of the two Mueller H-17235 ma-

chines, as well as the two machine gate valves.

Since being put into use, the new Mueller truck has lived up to expectations in regard to equipment and manpower savings. A two-man crew handles the majority of Mueller jobs with no interruption of other street crew equipment usage. It is expected that with the rapid development of San Diego's new freeway road building program, the Mueller truck will be in constant use to provide gas main re-routing with a minimum of customer inconvenience.

* * *

Following are some of the statistics on the Mueller truck:

Truck: Ford F-750 w/175 H.P. Y-8 Engine, single rear axle, dual wheels, 5-speed transmission—5th direct drive.

Tires: 9-22.5, 10-ply tubeless.

Brakes: Vacuum actuated hydraulic.

Wheel Base: 175"

Cab-to-Axle: 103 1/2"

Body Length: 13 ft. 9"

Body Width: 94"

Gross Rating: 18,000 lbs.

Laden Weight: 14,900 lbs.

Sheet metal and channel iron used in construction (major items):

Cold Rolled Sheet Metal,
16-Gage 750 lbs.

Cold Rolled Sheet Metal,
14-Gage 250 lbs.

Cold Rolled Sheet Metal,
12-Gage 50 lbs.

1/8" Deck Plate 390 lbs.

14-Gage Deck Plate 56 lbs.

6"—8.2 lbs./ft. Channel 100 lbs.

5"—6.7 lbs./ft. Channel 40 lbs.

3"—4.1 lbs./ft. Channel 176 lbs.

(Main body frame stringer)

2"—2.57 lbs./ft. Channel ... 128 lbs.

8—93 1/4" x 10" Gage Body Channel

(Main body frame cross-members)

The quickest way to make yourself miserable is to start wondering whether you're as happy as you could be.

Chancing to meet after many years, two men stepped into a bar for a few drinks and a lot of conversation. One had become wealthy and after awhile he took his old friend out to see his new mansion. One room surpassed all the rest. Its walls were of glass and behind

the glass were hundreds of brilliant-colored tropical fish.

Awed, but kind of foggy from the visit at the bar, the friend said in reply to his host's question: "It's a wonderful room, but that wallpaper is driving me nuts!"

When adults act like children, they're silly. When children act like adults, they're delinquent.

Peoples Gas

THE PEOPLES GAS SYSTEM has announced plans for the largest single expansion in its history, designed to step up its long distance pipeline capacity by 40 percent and tap a new source of natural gas for the Chicago area.

The project would bring gas to Chicago from Rocky Mountain fields for the first time, making up to 435 million cubic feet more of this fuel available on a peak day in addition to the present Peoples system daily capacity, exclusive of storage, of 1,041 million feet.

Cost of the expansion to the Natural Gas Pipeline Co. of America, which filed the application, would be about \$80,000,000. With this sum Natural Gas would greatly increase the transmission capacity of its present line.

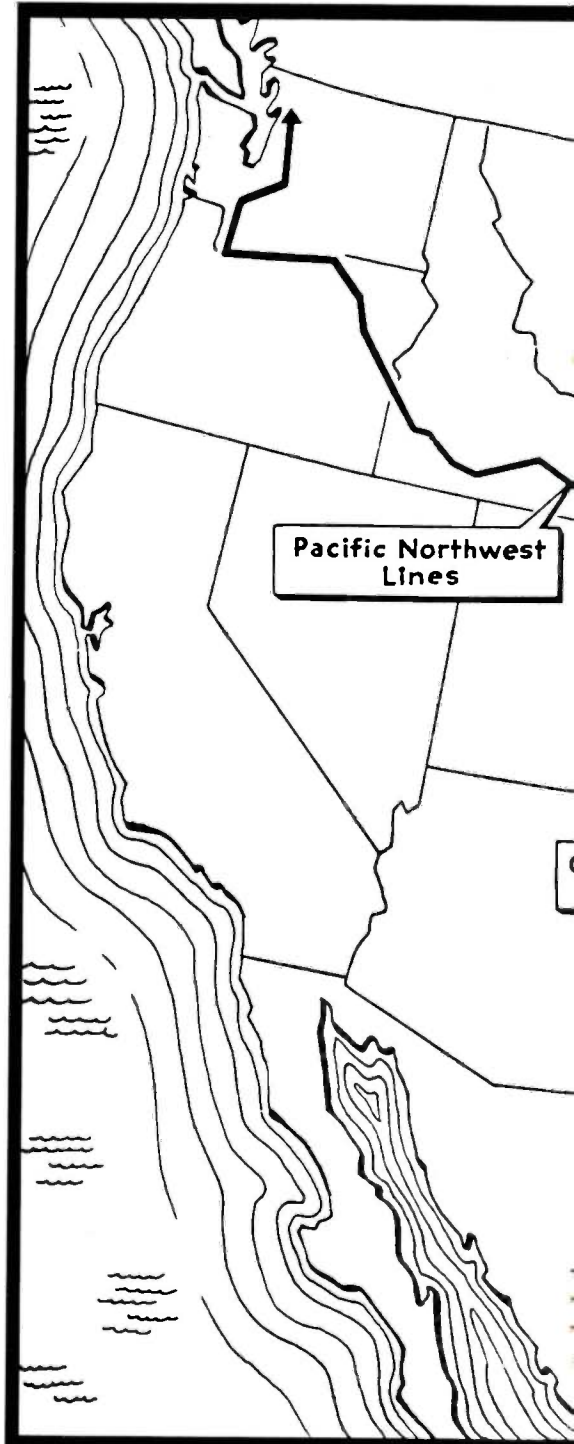
Most of the gas would be purchased from the Colorado Interstate Gas Co., which plans to build a connecting pipeline to join that of Natural Gas Pipeline.

The western end of this connecting line would be in Eastern Colorado, about 500 miles from Natural Gas Pipeline's route. Through it Colorado Interstate would move up to 350 million feet.

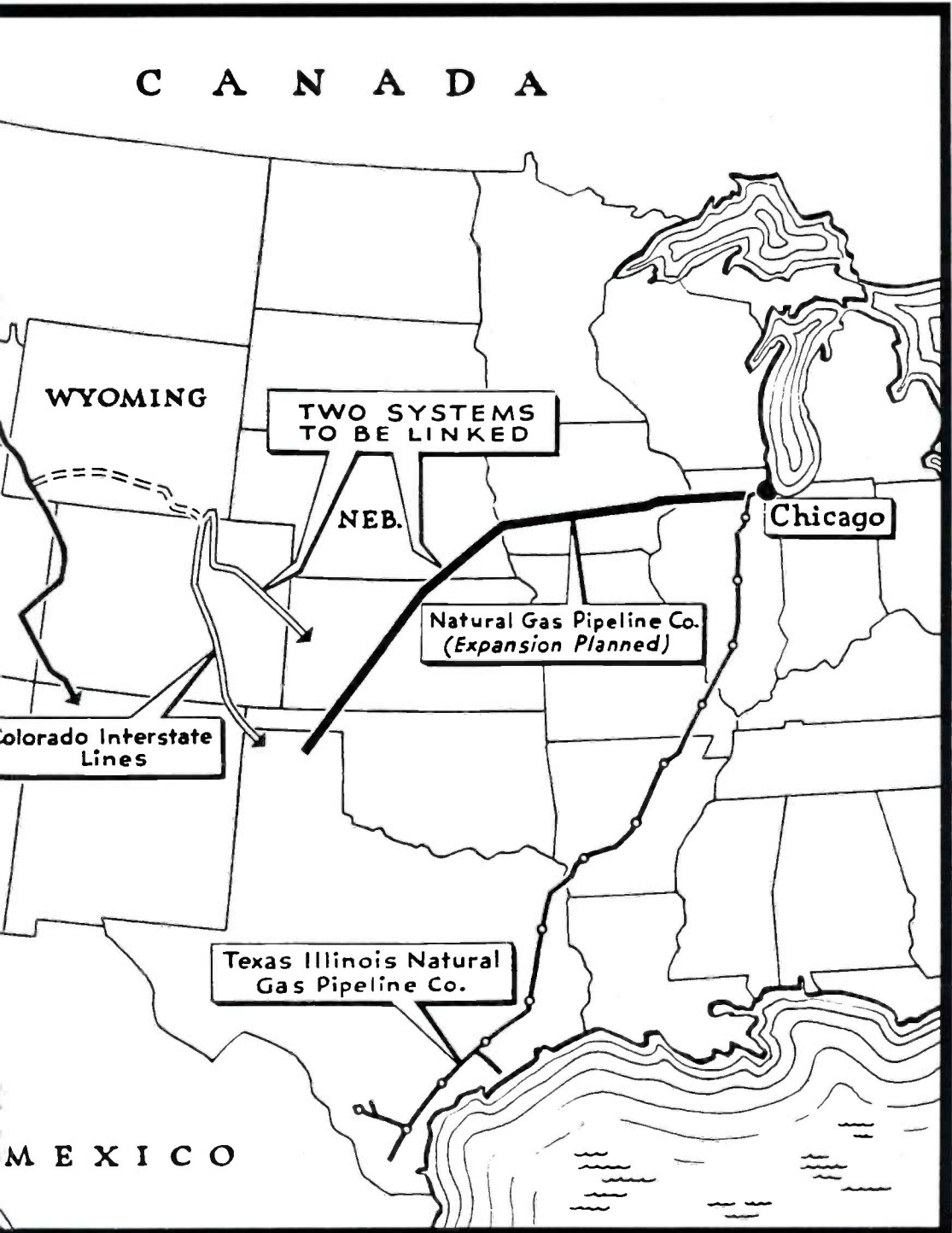
Colorado Interstate would in turn buy up to 100 million cubic feet from the Pacific Northwest Pipeline Corp. The FPC has already approved another connection, between Colorado Interstate and Northwest Pipeline, another 400 miles to the west. Lines of the latter company tap new supply fields in the Rockies.

The 85 million feet of additional supply required to bring the total increase

A major linkage of Rocky Mountain natural gas sources with the Chicago area market for the first time is proposed in an application filed with the Federal Power Commission by the Natural Gas Pipeline Company of America, a subsidiary of The Peoples Gas Light and Coke Company of Chicago. As shown, the connection would be with a new pipeline to be built by the Colorado Interstate Gas Co. Natural Gas Pipeline would expand its own line to bring 40 percent more gas into the Peoples Gas system. The dotted double line shows an already approved pipeline connecting Colorado Interstate with the Pacific Northwest Pipeline Corp. This line in turn makes connection with the major transmission line now being built from new Rocky Mountain gas fields by Pacific Northwest and connecting with lines being built from new fields in West Canada.



Taps Rocky Mountain Fields



from 250 to 435 million would come from other present sources of gas to Natural Gas Pipeline.

James F. Oates, Jr., Chairman of The Peoples Gas Light and Coke Company, said that if the plan is approved early enough, construction could start in 1957 with the first Rocky Mountain area gas delivered to Chicago as early as December of that year.

Of the new gas, Peoples Gas itself would get 160 million feet. Northern Illinois Gas Co., Aurora, Ill. would get 145 million. Other customer utility companies of the Peoples Gas System would get approximately 125 million cubic feet.

Mr. Oates said, "Development of additional sources of natural gas supply for Chicago and surrounding midwest areas has been for many years, a basic, continuing policy of the Peoples system.

"When the Colorado Interstate connection is approved Chicago consumers will have three distinct sources of supply from the west, the south and the southwest.

"By this continuing policy of expansion to provide multiple supply sources, we are keeping pace with the growth of Chicago and the nation.

"One of our main considerations in filing the application for this increased supply of gas is the fact we have waiting lists of customers who wish to use gas for house heating—more than 200,000 in number at the present time in the market area. There has been a steady increase in both industrial and normal residential demands.

"While we cannot now state exactly what the timing would be in making this large new supply of gas available to these customer groups, we certainly intend to make it available as promptly and as fairly as is possible.

"Our first purpose in this whole move is to satisfy the rapidly increasing needs of the public."

The Peoples Gas system is an integrated combination of gas production, transmission, storage and distribution facilities.

While gas from the southwest U. S. is available through the Natural Gas Pipeline route, a separate supply is brought into the midwest from the south, where producing fields along the Gulf of Mexico are connected with another Peoples Gas

subsidiary, the Texas Illinois Natural Gas Pipeline Company.

Natural's line runs in a general southwesterly direction from Joliet, Ill., to the Hugoton and Panhandle producing fields in southern Kansas, Oklahoma, and north Texas. It is the main line, with a capacity of 522 million feet, which it plans to expand to handle 957 million.

Capacity of the Texas Illinois line is 519 million, making today's total of 1,041 million for the Peoples system, exclusive of the extra "life" available on peak days from underground storage facilities at Herscher, Ill.

At present the Natural Gas Pipeline route has dual, interconnected transmission lines. Capacity would be stepped up by partial looping with a third parallel line of pipe over a major portion of the distance from Joliet to Texas.

This looping would be with 36 inch pipe for 389 of the first 476 miles west of Joliet. The balance of the looping would be with 30 inch pipe for 91 of the 415 miles of the remainder.

Compressors in nine pumping stations on the Natural Gas Pipeline route would be supercharged through stepping up horsepower on each of 86 engine units from 1,250 to 1,750 horsepower. In addition, two new 3,000-horsepower centrifugal gas turbine units would be installed at Beatrice.

The effect of the looping, with the increases in compressor horsepower, would be to give Natural Gas virtually a third interconnected line.

A continuing program on the part of Peoples Gas and subsidiary companies has increased the region's supply of pipeline gas from 279 million cubic feet daily, in 1946, to the present capacity of 1,041 million feet.

In addition to the pipeline proposal announced today, the Peoples system has been expanding storage facilities.

Completion of the last phase of a \$7,500,000 program now under way at Herscher is increasing the storage field's peak day deliverability to 430 million cubic feet from 300 million.

This will bring the system total to 1,471 million cubic feet of combined pipeline and storage capacity for the 1956-57 heating season.

INTRODUCING:

**GEORGE KNIPE, ASS'T
SALES MANAGER,
NEW YORK OFFICE**

George W. Knipe, destined to be a physician, assumed the responsibility of supporting his mother when he was 14 years old and went on to become, instead, assistant sales manager of Mueller Co.'s Eastern Section in New York.

Coming from a family of doctors, Mr. Knipe also planned to study medicine, but his father's untimely death left him with the responsibility of supporting himself and his mother and paying for his own education.

He graduated from Angelo Patri's Public School 45 and Paul Hoffman Junior High, when he had to begin working days and going to school at night. He was able to graduate from George Washington High School and the Mechanics Institute where he studied both commercial and art courses.

A native of Manhattan, Mr. Knipe has lived most of his life in the Bronx. Since his mother's death February 2, he has moved back to Manhattan where he is a few minutes walk from home to Mueller Co.'s Eastern Sales Office in the Empire State Building.

Mr. Knipe came to Mueller Co. in 1927 as an order drummer, later advancing to billing clerk and then head of the billing department. This was during the time Mueller Co. maintained a warehouse in New York.

From billing he was put in charge of the Eastern Section order department, also handling the export business, and



GEORGE W. KNIPE

in 1941 was made a salesman. He became office manager of the New York office in 1944, and was shortly promoted to his present position.

**Gas Appliances Must Pass
Rigid AGA Laboratory Test**

Last year manufacturers of gas appliances paid about \$1,250,000 in fees to the American Gas Association Laboratories in Cleveland and Los Angeles to cover costs of exhaustive tests given to more than 5,600 individual models of domestic gas appliances during the year. Appliances must pass all of these tests and meet American Standards Association requirements to carry the A.G.A. Seal of Approval signifying to the customer that such appliances are safe, durable and efficient. Nearly 95 per cent of the gas appliances sold today carry this Seal of Approval.

Smith Wins A Bet

Jones and Smith were sitting in their tent in the African jungle discussing their skill as hunters. Finally, Jones bet Smith ten dollars he could go out and kill a lion in 15 minutes. Smith took the bet and sat back to await results.

It was just 15 minutes later when the tent flap moved and a lion looked in.

"Do you know a fellow named Jones?" the lion asked.

"I do," said Smith, moving out of range.

"Ah," said the lion, "he owes you ten bucks."

A group of senators were discussing the qualities of a certain statesman who wasn't too popular. One was heard to remark: "Yes, he's guaranteed to find a difficulty for every solution."

Industry Expects Number Gas Heated Homes to Total 19.2 Million in 1958

The gas utility industry added 1,439,000 new gas househeating installations during the 1955-1956 heating season, the American Gas Association reports. The industry expects to add more than 3.8 million new installations during the next three heating seasons bringing the total number of gas-heated homes to 19.2 million by December 1958.

At the end of 1955 there were 15.4 million homes heated by gas, equivalent to 57.5 percent of all residential gas customers. Significant is the fact that existing househeating customers represented 69.2 percent of all residential users considered to be part of the potential market for gas househeating. Estimated gains for the next three years indicate a continuance of the post war trend in preference of the American public for gas heat. It has been shown by previous studies that obtaining the gas heating load usually results in higher frequency of installation of other gas appliances in the household.

The East North Central states will show the most significant gains during the next three heating seasons, where approximately 1,035,000 new heating customers will be added. This would represent a gain of about 38 percent in heating customers in that area for the three years.

In the Middle Atlantic states, additions of 490,000 gas househeating customers are expected during this same period, increasing heating customers by 28 percent. New gas heating installations in the New England area will aggregate 134,000 units, an increase of 85 percent over the 158,000 homes presently gas-heated in this region.

New home construction during the next three heating seasons will account for 62 percent of the new gas heating installations, with the remainder representing conversions of existing homes. Anticipated continuation of high new construction levels holds promise for the maintenance of significant new additions

to gas heating customers. Conversions from other forms of heating continue substantially to exceed new home installations in both New England and East North Central regions.

As of Oct. 31, 1955, there were 72 utilities, serving 6.7 million residential customers (equivalent to about 25 percent of all households served by the gas industry) which still had in effect some restrictions of new heating installations. Two years ago there were 88 utilities, serving 9.1 million families who were in a similar position. Increasing supplies of gas and greater utilization of underground storage facilities have been responsible for this improvement. It is expected that the frequency of restrictions will be further reduced in the near future.

The above report is based on data received from companies representing about 92 percent of the industry.

Intuition is the ability women have to read between the lines on a blank page.

Distraught mother to group of wild children at birthday party: "There will be a special prize for the one who goes home first."

Two inmates were talking. "I've made up my mind," blurted one suddenly. "Tomorrow I order my legions to invade England. History will never say that Julius Caesar faltered in pursuing the Britannic campaigns."

"England, eh?" mused the other. "Well, Julius, if I were you . . . and, incidentally, I am . . ."

A proud father was talking to his son recently graduated from college. The father, not a college man, was interested in the many phases of higher education. "And what was the toughest thing you had to learn?" he asked.

"How to uncap a beer bottle with a quarter," replied his son.

Gas Industry Facts

At the beginning of 1956 proved recoverable natural gas reserves in the United States achieved a new high level of 223.7 trillion cubic feet, an increase of 12.0 trillion cubic feet over reserves last year. This showed the second greatest increase since 1945.

Extensions and revisions of previous estimates, and new discoveries of natural gas in 1955 once again exceeded production which attained a new peak of 10.1 trillion cubic feet. This record production of natural gas was about 700 billion cubic feet more than the previous record of 9.4 trillion cubic feet of natural gas used in 1954, according to the American Gas Association committee on natural gas reserves.

Eighty-six miles of new pipeline facilities are to be constructed by Atlantic Seaboard Corporation of Charleston, W. Va., with a total estimated cost of \$8,521,000.

Thirty-one miles of the pipeline, to be constructed in West Virginia and Virginia, will parallel sections of the company's existing 26-inch pipeline, and the other 55 miles will extend from the company's Lost River compressor station to its Bickers compressor station, interconnecting the 26-inch and 20-inch pipelines.

The Federal Power Commission has authorized the construction to meet the needs of customers in the 1956-57 winter period, when a deficiency of 79,100,000 cubic feet of gas is estimated. With the new construction the capacity would still be 8,500,000 cubic feet short, but the company can curtail industrial load on peak days.

Gas contributes importantly in the fields of television and electric lighting. Glass is highly susceptible to breakage when submitted to uneven thermal stress caused by imbalance of heat input with varying thickness of glass. This shrinkage is minimized in heat-treating cycles employing gas as a fuel. Gas heat is frequently employed in production of television tubes and fluorescent lamps. Gas also may play a role in nuclear development since a new X-ray gas analyzer has been produced which can detect elements of high atomic weight in gas mixtures and determine the weight of each.

The American Gas Association Committee on Reserves estimates that proved recoverable reserves of natural gas in the United States at the beginning of 1955 totaled 211.7 trillion cubic feet. This estimate includes only known reserves in proved fields. Thirty years ago an unidentified geologist daringly estimated that there were 23 trillion cubic feet of proved recoverable reserves of natural gas in the United States. Today, with unexplored areas in known fields, with new fields and deposits being discovered in additional areas such as the Canadian provinces and the offshore reserves in the Gulf of Mexico, some geologists conservatively place our reserves at more than 500 trillion cubic feet.

Modern science contributes greatly to the safety and efficiency of natural gas utilization. Special high alloy steels are used to fabricate the pipe used in transmission lines. Welds where the long lengths of pipe are joined together are examined by X-ray to determine flaws, if any. The steel pipe is subjected to terrific hydrostatic pressure to eliminate any faults in the pipe. Then when the transmission lines have been laid, they are constantly patrolled by airplanes to detect leaks. Lines are re-tested at regular intervals at much higher pressures than they are subjected to in normal service. All of the measures known to modern science are utilized to make gas service truly safe for the millions of gas customers on utility gas lines.

TESTS TO PROVE

Can Average Home Be Heated, Cooled For \$120 Per Year?

TESTS HAVE BEGUN in Toledo, Ohio, on the first house in a two-year program to determine whether an average size American home can be heated and cooled for \$120 a year.

The house is one of about 125 in 21 major cities throughout the country

in all climatic zones to be used in the low cost comfort test program to determine costs for year-around comfort.

Predicted cost for heating and cooling the Toledo house over a one-year period is \$103.60, according to Tyler S. Rogers, technical consultant for Owens-Corning Fiberglas Corporation, which is conducting the program. This total is made up of \$84.80 for heating and \$18.80 for cooling.

When the prediction is adjusted to a base "standard test house" of 1,200 square feet with fuel cost of ten cents per effective therm and power cost of two cents per kilowatt hour, the average annual cost is predicted to be \$119.30 for heating and cooling.

The Toledo test house, occupied by Mr. and Mrs. Paul Gettings, is a one-story, ranch type dwelling with three bedrooms and 1,273 square feet of floor space.

Favorable features of the dwelling, qualifying it for use in the test, include the proper insulation, orientation, shade and ventilation in accordance with modern "comfort engineering" practices. These and other features help reduce heating and cooling costs, according to Mr. Rogers.

Separate meters have been installed on the fuel and power lines serving the heating and cooling units in the dwelling. This allows the Toledo Edison Co. and



Can his house, occupied by Mr. and Mrs. Paul Gettings in Toledo, Ohio, located in the tough climate of the southern Great Lakes region, be heated for \$84.80 and cooled for \$18.80 during the next 12 months? Engineers predict that it can. (Authenticated News Photo)



Otto Shook of the Ohio Fuel Gas Co. service department completes procedures which begin the flow of natural gas into the first house in the United States to undergo tests to determine whether an average size American home can be heated and cooled for \$120. Walter Weirich, service manager, looks on.

the Toledo area tests, to isolate heating and cooling costs from other household operating expense.

This test house, built by Scholz Homes, Inc., of Toledo, is the first dwelling to undergo actual testing in the program. Other test homes are under construction or are in the planning stages in Pittsburgh, Pa., Houston and Dallas, Tex., Phoenix, Ariz., Spokane, Wash., Sacramento, Calif., Memphis, Tenn., Minneapolis, Minn., and Wichita, Kan.

Candidate homes are under consideration in Louisville, Ky.; Kansas City, Mo.; Boston, Mass.; New York City; Baltimore, Md.; Atlanta, Ga.; Jacksonville, Fla.; New Orleans, La.; Denver, Colo.; Los Angeles, Calif.; Detroit, Mich., and other cities.

Objective of the test program is to find the actual average cost of heating and cooling a "comfort engineered" house in all climates of the United States. Ohio Fuel Gas Co., cooperating firms in

Phantasmagoric Drink

Two soldiers were boasting about the potency of the moonshine in their part of the mountains. "The white mule my uncle makes is so powerful you take one drink and see colored pictures on your television set," said one.

"That's nothing," said the other, "the moonshine my father makes is so powerful you see pictures on all 12 channels without a set."

"Won't you walk as far as the street-car with me, Tommy?"

"Nope, I can't."

"Why not?"

"'Cause we're gonna eat dinner just as soon as you're gone."

◆
"Have you seen Ruth's new evening gown?"

"No, what does it look like?"

"Well, in most places it looks quite a lot like Ruth."

Recording Our Thoughts . . .

(Continued from page 2)

tion Department, were largely responsible for the design and construction of a special truck featuring compartments for Mueller equipment of various sizes.

The truck has been designed not only for gas main emergencies but also for convenient storage and for routine service calls.

* * *

The American Gas Association Distribution, Motor Vehicles and Corrosion Conference is slated for May 7—at the Congress Hotel in Chicago. As in past years, Mueller Co. maintains an active interest in A.G.A. meetings and is sending a sizeable delegation to this year's convention.

Attending from Mueller Co. are: Frank H. Mueller, Vice President and Director of Engineering; Robert K. Levey, Assistant General Sales Manager; Walter J. Bowan, Chief Engineer of Research and Development; Robert L. Rhodes, Senior Engineer; and Lorin Grossboll, C. W. Auer, R. K. Morris, Ray Roarick, F. R. SeEVERS and J. E. Williamson, all Sales Representatives.



Second Century . . .

(Continued from page 5)

On that date the company's affiliation with any holding company ceased and it once again became an independent operating utility company.

Its common stock is now held by approximately 6,575 stockholders, 4,839 of whom are residents of the State of Georgia. The Georgia stockholders now own about 74 percent of the shares outstanding.



They tell the one about the landlord who, asked why he didn't light up his dark hallway, replied: "We had a light there for 3 years. No one fell, so we took it away."

Latest FPC Pipeline Map Available in Color

The latest revision of the FPC map of "Major Natural Gas Pipe Lines" in the United States has been issued, and copies may be bought from the Federal Power Commission, Washington 25, D. C., at 25 cents each. The order number is FPC M-45.

The map, 13 by 19 inches in size, is printed in five colors and shows major existing pipelines, those under construction, those which have been authorized and not yet started, and proposed lines which are pending Commission action. It also shows lines which are proposed to be abandoned.

Natural Gas Deposits Found Near Tel Aviv

Natural gas now is being found in many parts of the globe. Deposits were found recently by the Israel-American Oil Corporation near Tel Aviv. While the commercial value of the first petroleum wells in Israel have not been determined, New York financiers and Wyoming wildcatters who backed the prospecting are hopeful.

Gas also has been discovered in quantity in the Baluchistan desert in Pakistan, and a major transmission pipeline is being planned to carry the gas to the nation's industries. Proved reserves are estimated at 2,280 billion cubic feet.

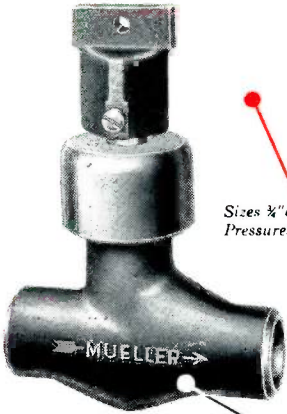
\$2 Million Gas Project Slated in Texas County

A \$2,790,000 pipeline and compressor station is to be built by Permian Basin Pipeline Company of Omaha, Neb., in Andrews County, Tex., to enable it to transport into its system an additional 25 million cubic feet of natural gas per day.

Permian will construct 19 miles of 16-inch pipeline and will purchase a 6,750 horsepower compressor station to receive and transport the gas from Phillips Petroleum Company of Bartlesville, Okla.

Both the pipeline construction and the purchase of the compressor station have been authorized by the Federal Power Commission.

MUELLER®



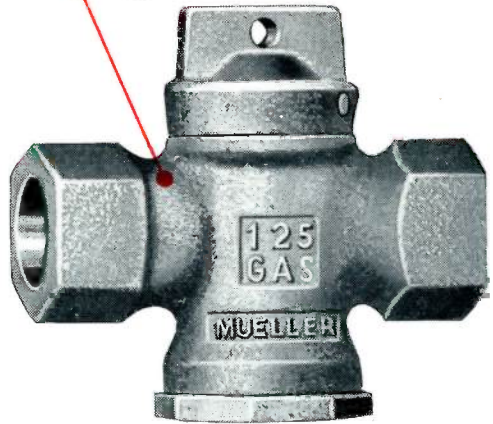
Sizes $\frac{1}{2}$ " and 1"
Pressures to 1200 p.s.i.

No-Blo® Steel Valve. For high pressure service lines. Machined from steel forging. Available with threaded or welding inlets and outlets. "O" rings around stem and in cap prevent leakage to the outside. Metal to metal line contact of stem and seat assures gas-tight shut-off. The No-Blo Steel Valve can be completely reconditioned under full line pressure without escape of gas by using the Mueller E-4 Drilling Machine and gate valve. Easily operated from above ground through curb box.

POSITIVE CONTROL at the curb

Inverted key curb stop

Positive shut-offs are assured with precision ground key which is individually lapped into the stop body. This assures pressure tightness at the port and prevents leakage through the stop when closed. Key is firmly seated with spring pressure and line pressure. "O" ring seals at top and bottom of key prevent leakage to outside. Light down pressure on shut-off rod unseats key for easy turning. A wide selection of inlets and outlets will easily adapt it to any type of service line.



Sizes $\frac{1}{2}$ " through 2"
Pressures to 125 p.s.i.

Contact your Mueller Representative or write direct for complete information.



MUELLER CO.

Dependable Since 1857

MAIN OFFICE & FACTORY DECATUR, ILLINOIS

MUELLER®

Lub-O-seal® meter stops...

ABSOLUTE PROTECTION

1 GAS TIGHT "O" ring seals at top and bottom of key offer absolute assurance against leakage to the atmosphere. The precisely ground key is lapped into the stop body, preventing leakage through the port when the stop is closed.

2 LUBRICATED KEY The entire seating surface of the key is pressure lubricated through an independent port in the body. Lubricant is stored under pressure by the "O" rings. Vertical grooves in key lubricate stop each time it is operated, assuring easy turning.

3 TAMPERPROOF Heavy bronze washer is secured to the lower end of the stem with a blind pinned key. The original factory adjustment is retained even if the nut threads are stripped or if nut is removed from stem.

These and other advanced features of the Mueller Lub-O-Seal gas meter stop can help you eliminate meter stop replacement. Consult your Catalog G-97, your Mueller Representative or write direct for complete information.

MUELLER CO.

Dependable Since 1857

MAIN OFFICE & FACTORY, DECATUR, ILLINOIS

H-11170 Plain Head
H-11175 Lock Wing
Black or galvanized
Sizes 3/4" through 2 1/2"
Working pressure to 125 p.s.i.

